Contents

Welcome
  Marco Buti Welcome Remarks
Panel 1
  Jean Pisani-Ferry and Adam Posen Paper
  Lorenzo Bini Smaghi PowerPoint
  Question and Answer Session
Book Launch
  Anders Åslund PowerPoint
Zsolt Darvas PowerPoint
Panel 2
  Bill Cline Paper
  Reinhilde Veugelers Paper
  Question and Answer Session
Keynote Address
  Mario Draghi Address
  Question and Answer Session
Panel 3
  Morris Goldstein and Nicolas Véron Paper
  Anil Kashyap PowerPoint
  Question and Answer Session
Panel 4
  Garry Schinasi and Edwin Truman Paper
  Question and Answer Session
Closing Panel
  Panelists’ Remarks and Question and Answer Session
Post-crisis EU Governance

Marco Buti, Director General
European Commission Economic and Financial Affairs

Welcome speech delivered at the conference “Transatlantic relationship in an era of growing economic multipolarity,” Washington
October 8, 2010

Ladies and gentlemen,

First of all, thank you for your kind invitation. It is a pleasure to be here today and to address such a distinguished audience. The topic I will be talking about is financial-economic governance in the EU. The EU is currently in the process of a major broadening and strengthening of the existing system. I will outline this process along the lines of a triangle of challenges and solutions.

First things first, let me start with the **challenges**. The crisis has revealed three main sources of weaknesses:

- the banking sector
- public finances and sovereign debt markets
- economic growth

The first weakness is **vulnerabilities in the banking sector**. Banks were severely hit and the public sector had to intervene to prevent the worst. Even after public interventions however, banks have been significantly weakened in their capacity to provide financing to businesses and households.

The second weakness is **public finances**, which found specific expression in the **sovereign debt crisis**. The crisis took a heavy toll on public finances via two channels: the fall in economic activity and the need to support the banking sector. Average deficits in advanced economies are now reaching 7 percent of GDP and debt levels have increased by 20 percentage points in two years, thus undoing 20 years of consolidation. Countries with weak fiscal positions before the crisis or with large exposure to the crisis saw investors' confidence waning and fell into serious sovereign debt crisis.

The third weakness is **growth**. The crisis has been the most severe economic crisis since World War II. World GDP saw the first outright fall on record. The EU and the euro area were particularly hard hit with GDP falling by 4 percent in 2009. It set industrial production back to the level it was at in 1990, two decades earlier! And it increased the number of unemployed by 4.5 million. And the crisis had a large negative impact on the productive capacity of our economies. The crisis will probably have negative implications for potential growth.

The three sides of the triangle—banks, debt and growth—interact strongly with each other:

- Weaknesses in the banking sector translate into sluggish credit growth and hamper recovery, but also pose further risks for the public sector.
- Public finances, in face of severe investors' pressure and the still uncertain situation in the banking sector, are in a strong need for consolidation, possibly delaying recovery and putting some constraints on growth.
Finally, growth will not take off without fully functioning financial intermediation while it is the key element to ensure credibility and sustainability of fiscal consolidation.

Which brings me to solutions. In other words: how to break the negative feedback loop? We do this by putting in place a new, stronger framework for economic and financial policy, addressing all three sides of the triangle.

Starting with the banking sector. The EU has agreed on a new architecture for financial regulation based on four priorities:

- the development of a more efficient supervisory response
- more and better capital in the banking system
- the extension of the perimeter of regulation and supervision
- the completion of the tools to ensure financial stability.

Secondly, to safeguard the stability of sovereign debt markets the EU has created two new lending facilities for eurozone countries in distress: the European Financial Stability Mechanism or EFSM and the European Financial Stability Facility or EFSF. The EFSM has a volume 60 billion euros. It is administered by the European Commission and is similar to the facility that had previously been set to help the non-euro area countries Latvia, Hungary and Romania.

The EFSF is a special purpose vehicle set up to make loans to euro area countries up to an amount of 440 billion euros, supplemented with a €250 billion IMF commitment.

To secure the stability of public finances, the Commission has recently proposed significant strengthening of the EU fiscal surveillance. The proposed changes include:

- Giving more attention to debt developments in fiscal surveillance. The focus over the past years has been very strongly on deficits, we will be paying more attention to debt developments also.
- Setting minimum requirements for national fiscal frameworks, to align them with the EU fiscal rules.
- Putting in place a wider range of incentives and sanctions to strengthen compliance with the rules.
- Reinforcing the role of Eurostat to improve the quality of statistical information (proposed already in spring).

Thirdly: reinvigorating growth is the main aim of the so-called Europe 2020 strategy—Europe's strategy for sustainable growth and jobs.

The Strategy was agreed this summer and brings together reforms efforts in various areas such as labour and product markets and innovation and education while at the same time paying attention to climate change and social inclusion.

To jump-start the Strategy, Member States have committed to "frontload" the implementation of key reforms that can have a positive impact on growth already in the short and medium term.

An important part of the Strategy includes the monitoring of macroeconomic imbalances such as large current account deficits or bubbles in housing markets. The crisis has also shown that these can be very harmful for growth and stability.
This is why the Commission has proposed a framework to monitor imbalances, including an alert mechanism comprising a scoreboard of indicators and thresholds and the possibility to issue policy recommendations and sanctions.

Finally, we have instituted a "so-called" European Semester, comprising the first half of each calendar year. The European Semester has two major aims:

- integrated macro-structural surveillance of fiscal policies, key structural reforms that address growth bottlenecks and macro-imbalances, and financial systems
- and ex-ante policy advice: Commission and Council prepare guidance, opinions and recommendations at a time when important budgetary decisions are still in a preparatory phase at the national level.

**Conclusion**

I have sketched the triangle of challenges that faces us and the triangle of policy solutions that the EU has instituted or is instituting. I thus see this crisis as an opportunity to advance our reform agenda and make inroads on structural reforms, permanent crisis resolution modalities for the euro area and economic governance framework. As a result, post-crisis EU governance will be deeper, stronger and more comprehensive. We have learned the lesson of the crisis and will not allow it to happen again.
From Convoy to Parting Ways? Postcrisis Divergence Between European and US Macroeconomic Policies

Jean Pisani-Ferry and Adam S. Posen

Paper prepared for Bruegel-PIIE conference, Washington, October 8, 2010. The authors are grateful to the European Commission for its support of this project, and to Christophe Gouardo, Tomas Hellebrandt, and Neil Meads for excellent research assistance. The views expressed here are solely those of the authors and cannot be attributed to the Bank of England, Bruegel, PIIE, or the Commission.

© Bruegel and PIIE, 2010.

The initial response in 2008–09 to the global financial crisis was in many ways a high water mark for transatlantic policy coordination—and as important for crisis resolution as for common economic understanding. The major economies of the European Union and the United States came to rapid agreement on a series of measures to limit the crisis. These included coordinated interest rate cuts by central banks, extension of deposit guarantees, provision of liquidity and in some cases capital to systemically important financial institutions, significant fiscal stimulus, increased resources for the International Monetary Fund (IMF), and resistance to trade protectionism or beggar-thy-neighbor exchange rate policies. These efforts, which paid off, were amplified through the establishment of the Group of Twenty (G-20) at heads of state and government level and the involvement of all its member economies, but they were undoubtedly driven by the common transatlantic approach.

The common EU-US approach to crisis response emerged in the few weeks after the Lehman Brothers debacle in September 2008, overcoming years of disagreement across the Atlantic on many of these issues (Cohen and Pisani-Ferry 2007). By the time the G-7 finance ministers met on October 10–11, 2008, agreement on the immediate response to the banking crisis had essentially been reached. By the time the G-20 leaders met on November 2008, there was agreement on the desirability of a budgetary stimulus. And by the time the G-20 leaders met again in London in April 2009, all the building blocks of the common response were in place.

This response also was forged as much by European leadership and creativity as by any initiatives from the US government, then in transition to a new presidential administration. Difficulties from divergences within the euro area that have emerged in 2010 should not obscure the degree of previous cooperation. In particular, the UK government showed leadership on the response to banking problems, while the European Central Bank (ECB) set a model for other central banks in terms of rapidly finding means to provide liquidity to the banking system. On fiscal policy, there was certainly less intra-EU coordination than was advocated by the European Commission in autumn 2008, and the discretionary component of the stimulus was smaller in Europe than in the United States—but most economies with fiscal space went well beyond the automatic stabilizers. Certainly, there were differences in the form of the policy responses, such as the adoption of quantitative easing by the US and UK central banks, and its rejection by the ECB. But they were not a source of tension, let alone of major divergence.

That agreement and common approach has since unraveled. Where the economic policymakers had been travelling in convoy in 2008–09, towards a common destination at a common velocity, protecting each others’ flanks, in 2010 policy divergences between the United States and Europe have emerged and dominated the international discussion on macroeconomic policy priorities. This is most visible in the budgetary field, where transatlantic divergences dominated international discussions in the run-up to the June 2010 Toronto G-20 Summit. US calls for a cautiously gradual exit from fiscal stimulus were rebuffed by the Europeans who put emphasis on consolidation, and the summit itself confirmed this trend with its all-encompassing, G-7-style communiqué. On the monetary side, the central banks’ stance also started to diverge, at least as regards announcements concerning inflation risks and imminent exit. True, the actual policies pursued to date were not as dissimilar as suggested by public statements. Especially Germany sounded very hawkish on fiscal policy in spring-summer 2010, but its actual consolidation program was markedly cautious for the short term. Nevertheless, words are indicative of differing policy directions.
Divergence was made all the more visible in Toronto in a context where discussions on policy priorities between advanced and emerging-market countries, which were expected to dominate the agenda, had become less pressing. Contrary to the initial assumptions behind the G-20-sponsored “mutual assessment process,” it became evident in spring 2010 that domestic demand in the emerging-market world was in fact as shockingly buoyant and that there was no urgency to stimulate it. The absence of a North-South rift made room for a more traditional, G-7-like transatlantic divergence.

The question, however, is why the initial “London consensus” has not survived for much more than a year, making room for the “Toronto divergence.” As often, several competing explanations are on offer. One emphasizes differentiated economic and financial structures as the origin of the dissimilar impacts of a common shock. According to this view, governments merely respond to different domestic economic developments—which a large part of the literature on coordination suggests is right as well as politically consistent. Another view stresses differences in the policy set-up arising from institutional constraints, especially though not only as a result of the European Union’s particular policy set-up. A third one puts the onus on doctrine and ideology and how that causes different perceptions of the policy challenges and risks faced by policymakers. Which of these have mattered and still matter, and which have not and do not, is what we aim to clarify in this paper.

From a policy standpoint it is indeed important to understand what motivates divergence, because different causes suggest different types of remedial actions, if any, and the desirability of so doing. To shed light on the issue, we start with an analysis of the different impacts across the Atlantic of the common shock from the financial crisis. We then take up successively monetary policy and fiscal policy. Findings are summarized in section 4, before we turn to international implications and policy recommendations in section 5.

Economic Developments

The first reason for policies to differ is that they have to deal with different problems. So the first question to ask is whether economic developments in the United States and Europe have warranted, or still warrant going forward, asymmetric policy reactions.

*Growth, Employment, and Productivity*

To start with basic facts, figures 1a to 1d compare the evolution of GDP, employment, output per hour, and nonresidential investment in the United States, the euro area, and the European Union. Both the common character of the shock and some significant differences in later developments are apparent:

- First, US GDP declined less and recovered faster than either in the euro area or the United Kingdom—though it remains early days for a recovery, which seems to be weakening in the United States and perhaps strengthening in northern continental Europe.
- Second, US employment declined much more than European employment and did not start exhibiting feeble signs of recovery until early 2010. Consequently, the 2008–09 employment decline was exceptionally deep and prolonged in the United States whereas in Europe (including the United Kingdom) it was by no means exceptional.
- Third, as a result, productivity developments have been strikingly divergent. Eight quarters after the start of the recession, output per hour had increased by about 7 percent in the United States whereas it was still below the initial precrisis level in the euro area and the United Kingdom.
- Fourth, there are no major differences in the behavior of investment, despite the differences in growth and in the financial system. Investment collapsed faster in the United States, but two years after the initial shock it was in all three cases about 20 percent below its precrisis level.

It is not entirely clear why a large divergence in employment and therefore productivity can be observed between the United States and Europe (where the evolutions in the euro area and the United Kingdom are remarkably similar). Part of the explanation is that US companies, which are less constrained by firing restrictions, traditionally adjust their payrolls faster than European counterparts. But if this was the only reason the evolution in the United Kingdom, where the labor market is
traditionally assessed flexible, should mimic that of the United States.\footnote{A country where employment has evolved in a similar way as in the United States is Spain, where employers have made use of the flexibility offered by temporary contracts.} Part has to do with specific shocks affecting the real estate and finance sectors, which had grown very large in the United States and on average much less so in Europe. And part results from the fact that in response to the crisis, several European governments introduced or strengthened schemes aimed at encouraging job preservation, such as the German Kurzarbeit (IMF 2010); those policies, however, did not include all countries with limited unemployment rises, such as the United Kingdom. The strength of the postrecession US productivity boom and the subdued productivity response in most parts of continental Europe (Spain being an exception) both remain puzzling (Wilson 2010).

**Private Deleveraging**

The strength of domestic demand in the short to medium run largely depends on the extent to which private agents will engage in deleveraging. To compare the situations in the United States, the euro area, and the United Kingdom, table 1 shows the changes in levels of indebtedness from 1999 to 2007 and from 2007 to 2009. These data seem to tell a pretty clear story.

In the 2000s households went much more into debt in the United States and the United Kingdom than in the euro area. The contrast is striking, with the rise in household indebtedness as a share of GDP in the United States and the United Kingdom three times larger than for the euro area—and in 1999 the initial levels of household debt in the euro area was already significantly smaller than in the United States. The change in nonfinancial corporate indebtedness offers a more comparable picture transatlantically, though the initial level of debt was again much higher in the US economy.

There are signs that the deleveraging process for households and perhaps nonfinancial corporations has begun in the United States, yet on a limited scale. It is not clear that such a process is inevitable for the euro area as a whole—though of course the divergences in indebtedness among member countries are quite enormous (and deleveraging has begun in Ireland and Spain). On the whole, balance sheet data do justify more concern about the risks of sluggish demand and recovery in the United States and the United Kingdom than in continental Europe, while also underlining the greater unsustainability of borrowing patterns on the American side of the Atlantic.

**Supply-Side Optimism versus Supply-Side Pessimism**

A key factor underlying policy reactions is the size of the negative supply-side shock resulting from the crisis—or at least the perceived size of this nonobservable shock. If policymakers believe—rightly or wrongly—that the GDP declines essentially result from a demand shock, leaving potential output unaffected, they will be naturally inclined to advocate further stimulus. If they tend to believe—again, rightly or wrongly—that the supply-side damage is significant, they will have less appetite for it.

Empirical evidence on the impact of financial crises strongly suggests that they tend to result in significant permanent output losses (see Abiad et al. 2009, Cerra and Saxena 2008, OECD 2010, Meier 2010, and Reinhart and Reinhart 2010). These losses are generally assessed to come through three channels: first, through the downward revision of precrisis potential output; second, through recession-induced damages caused to potential output; and third, through damage to the sustainable rate of trend growth. These tend to occur over time and in part depend on the effectiveness of initial policy response, as seen in the fact that there is considerable variance in country experience and some succeed in minimizing such losses. In the 1990s Sweden, for example, succeeded in entirely recovering initial output losses. Economic analysis indeed suggests that the magnitude of losses depends on institutions and policies, as well as on the global context.

Both official policy statements and available estimates from policy institutions suggest that supply-side optimism prevails in the United States whereas the opposite holds in Europe. In the United States, the administration does not consider that the recession resulted in lowering potential output.\footnote{As indicated by US Treasury Assistant Secretary Charles Collyns in response to questions after a talk given at Bruegel (Collyns 2010).} The Federal Reserve is more cautious in its assessment and does not rule out the possibility of an increase in structural unemployment, but it still regards the increase in unemployment as mostly...
cyclical (Kohn 2010). The Congressional Budget Office (2010) is more pessimistic but even it considers that the medium-term output loss in comparison to precrisis projections should be lower than 2 percent, half of which as a consequence of forgone investment. The view put forward by Minneapolis Federal Reserve Bank President Narayana Kocherlakota (2010), according to whom the equilibrium unemployment rate could have risen by three percentage points, remains a minority view.

In Europe, by contrast, official statements indicate much more concern about the supply-side effects of the crisis. For the euro area, the European Commission (2010) asserted both that precrisis potential output had been overestimated and that the crisis would result in a permanent lowering of potential output. As a consequence, it has significantly revised estimates of the output gap in the euro area and other EU countries downward (and therefore the structural deficit upward), as indicated by figure 2, which shows the evolution over time of the output gap estimates for 2007. In addition, the Commission expects postcrisis damages to potential output and therefore assesses the permanent output reduction to be on the order of 4 percent of GDP, again in comparison to precrisis projections. In the United Kingdom, the new Office of Budget Responsibility (OBR)3 created by the current coalition government estimated in June 2010 that potential output in 2015 would be 8.75 percentage points below the level implied by trend growth of 2.75 percent from the end of 2006. This was a downward revision in comparison to the 5.25 percentage points loss assumed in the preelection March budget (OBR 2010). These very large numbers, if determining policy, would significantly reduce the scope for demand-side policies and add to the urgency of consolidation.

Transatlantic differences in the evaluation of the impact of the crisis on potential output and equilibrium unemployment are first order in magnitude (table 2). Taken at face value, they are bound to have profound implications for the setting of policy objectives and policy strategies.

Is this difference justified? According to the Organization for Economic Cooperation and Development (OECD 2010), the reduction in potential output arises from a combination of three main factors:

- **A lower capital stock.** Forgone investment and a higher cost of capital negatively affect capital deepening and hence output per employee. The higher cost of capital is expected to result from a return of risk aversion to more normal levels and from the introduction of higher bank capital ratios. The latter effect, however, is likely to be small in the medium run (BCBS 2010). In a financially globalized context, there are few reasons why the magnitude of this effect should differ across countries—although the size of an economy’s small and medium-sized enterprise sector, with its dependence on collateralized bank lending for finance, may be one source of difference. In any event, figure 1d actually indicates that in the time since the crisis to date, capital expenditures have followed a similar evolution in all three cases; the impact on capital stock would accumulate over time.

- **Unemployment hysteresis affecting both equilibrium unemployment and labor force participation.** The magnitude of this effect depends on the size and composition of the unemployment shock. It is bound to be larger in countries that have suffered from larger and sectorally more concentrated employment losses and/or more regional divergences in employment markets. Going the other way, it is expected to be lower in countries with more responsive labor and product markets, where job reallocation takes place faster.4

- **Reductions in total factor productivity (TFP) resulting from sectoral reallocations from high-to low-productivity sectors, skill mismatches, and lower research and development expenditures.** The magnitude of this effect again depends on the size and the nature of the shock, as well as on the policies put in place to favor reallocation, skill acquisition, and retraining. The degree of financial dysfunction in a country would have a lasting effect via this mechanism.

---

3 The OBR was created on May 17, 2010 to “provide independent forecasts of the public finances and the economy to inform fiscal policy decisions.” According to the Chancellor of the Exchequer George Osborne (2010), its creation implies that “the power the Chancellor has enjoyed for centuries to determine the growth and fiscal forecasts now resides with an independent body immune to the temptations of the political cycle.”

4 In addition, migration can magnify employment shocks as discouraged workers may migrate to other countries with better employment outlooks. This factor, however, is second order in a comparison between Europe and the United States.
Taking these three factors into account, the OECD (2010) assesses potential output losses to be about 3 percent in the United States, between 3 and 4 percent in the United Kingdom, France, the Netherlands, and Germany, and a little more than 4 percent in Italy—thus, importantly, comparable for most major Western economies. The estimated loss is 9 percent in Spain, where the bursting of the construction bubble is expected to result in a severe increase in structural unemployment and a significant lowering of the labor force participation rate. As to structural unemployment rates, estimates from the OECD 2010 spring forecast put their increase between 2007 and 2010 at 0.7 percentage points for the euro area and 0.3 percentage points for both the United Kingdom and the United States, hardly a policy-significant difference. We are skeptical of these latter estimates and expect them to rise over time, both in reality as hysteresis kicks in and as data get updated—in fact, while the demand-driven rise in unemployment in the United States is the predominant share, the rise in unemployment is so high that it could well involve a one to two percentage points rise in structural unemployment, which longer-term persistence will worsen.

Differences in the nature and size of the shock, labor-market institutions, and the functioning of labor and capital markets are therefore not sufficient to explain away the observed difference in policy assumptions. Some more supply-side optimism seems to be warranted in the United States, given both the recent productivity numbers (even heavily discounted) and a history of full recovery following shocks—but there is little evidence-based justification to rule out permanent effects altogether in the US economy. Conversely, European pessimism may well be exaggerated, especially given the lesser rises in unemployment and in private leverage, and that pessimism may take policy ineffectiveness for granted. In both cases, the policymakers’ beliefs may in the end be self-fulfilling, as an active demand-side policy can help contain hysteresis and stimulate investment whereas a policy that starts from the opposite assumption may be vindicated ex post (Posen 2010a).

Summing up, differences in the magnitude and the character of the shocks and institutions may account for part of the contrast between US supply-side optimism and European supply-side pessimism. But beliefs about the supply-side effects of the crisis also matter, especially in how they will shape policy responses. Those differences in belief may help us understand why, in spite of having suffered an initially lower output shock than Europe, the United States has been consistently more in favor of stimulating aggregate demand through monetary and budgetary policies.

**Political Economics**

A last reason why policies may differ is that political economy constraints are not identical. Some of them are specific to policy fields, and they are addressed in the reminder of the paper, but one is general: the political cost of mass unemployment. In this respect the US and European situations differ on two accounts:

- First, unemployment in the United States is back to levels not seen since the early 1980s, close to postwar highs. In Europe, however, the employment recession is by no means exceptional, and unemployment rates in the euro area or the United Kingdom are essentially back where they were in 1996–97, significantly below postwar highs;
- Second, as well known, US unemployment insurance does not cover long-term unemployment whereas schemes to supplement the income of the long-term unemployed are widespread in Europe, making unemployment more tolerable.

In these conditions, Joseph Stiglitz’s saying, according to whom “our welfare state is our monetary policy,” applies in the United States. It results in a call for action, including as regards fiscal policy as monetary policy has hit the zero bound. In Europe, by contrast, the political urgency of action is much less. Political economics may therefore also help to explain different policy attitudes.
Monetary Policy

We now turn to comparing the actual policy responses, starting with monetary policy, for which we first look at institutional constraints before comparing actual behavior.

Institutional Constraints

There were several reasons for the US Federal Reserve and the Bank of England (BoE) on one side, and the ECB on the other, to respond differently to the crisis. To start with, they had (and still have) different mandates, most clearly as regards output stabilization and financial stability (table 3). The ECB has a notably more narrowly defined mandate than the other two central banks; it does not have explicit responsibility for financial stability nor a formal lender-of-last-resort role; and by its very nature, liquidity assistance is decentralized at the level of the national central banks.

The importance of stated mandates as determinants of central bank behavior, however, should not be overstated (Kuttner and Posen 2009). It is a general result of political economy that some institutions increase their mandates through activity in a crisis. It is well recognized that the Federal Reserve in fact did so during 2008–09, but so did the ECB: Its reach into financial matters has gradually strengthened throughout the crisis as indicated by the involvement of its president, Jean-Claude Trichet, in the rescue of the Fortis and Dexia banking groups in autumn 2008; the 2009 agreement to give it leadership in the European Systemic Risk Board in charge of macroprudential supervision; the role it played in the design of conditional assistance to Greece and providing liquidity to distressed banks in spring 2010; and the launch of a government bonds purchase program in May 2010. Similarly, the BoE is regaining control over bank supervision and created various new asset purchase facilities over the course of the crisis.

Second, as reflected in the financial stability aspect of their mandates (and ex post in their relative willingness to exceed those limits), there were significant differences in the three central banks’ relationships with their respective national governments and regulatory authorities. Times of acute financial stress require the sharing of information and the rapid making of unified decisions. In the United States and the United Kingdom the central bank is part of the government, though independent from elected officials with regard to specific monetary policy decisions. There are institutionalized and informal channels of regular communication between these two central banks and their nations’ treasuries and bank supervisors.5

The ECB, however, is not part of any member state’s government, and there are distinctly limited communication channels between the ECB and EU executives or national authorities. When the crisis broke out, the ECB had neither privileged access to needed information from national bank supervisors nor established channels of communication with them (Pisani-Ferry and Sapir 2010). Although some of these limitations have been overcome, ongoing consultations between ECB officials and euro area governments regarding financial stability remain much less intensive and ongoing than occurs in the United States or the United Kingdom.

Third, and most importantly, the central banks’ monetary policies followed different strategies and had different priorities going into and now coming out of the crisis. The US Federal Reserve has much more room for discretion than the other two central banks as it had neither been given nor adopted an explicit nominal target and instead has a commitment to a “dual mandate” of output and price stabilization. The ECB has an inflation goal set by treaty and a “two-pillar” approach based on both price developments and forecasts as well as on monetary developments. The BoE operates under a precisely defined inflation targeting framework. Thus, the BoE is most tied to its inflation forecast,

5 This point should not be taken to indicate an absence of coordination failures. As illustrated by the calls for consolidation of supervisors in the United States and by the recently announced replacement of the “tripartite” regulatory system in the United Kingdom, there were breakdowns. But these were seen as failures rather than inherent, as they would be in the euro area, and they notably did not extend to fiscal-monetary relations.

6 The president of the ECB attends the monthly meetings of the euro area finance ministers and the vice-president attends the monthly meetings of the state secretaries (Economic and Financial Committee). Also, the European Commissioner for Economic and Monetary Affairs may attend the monthly meetings of the ECB Governing Council. But there are no high-frequency multi-level meetings as in the United States or the United Kingdom.
while the ECB can always justify a deviation from its inflation goal with reference to its monetary pillar, and the Federal Reserve can change its intermediate target as suits a majority of the Federal Open Market Committee (FOMC), so long as either growth or prices are moving in the desired direction.

Still, all three central banks behaved similarly during the decade of Great Moderation (as estimated for example by reaction functions; e.g., Belke and Polleit 2007), given the demonstrated ability to maintain low inflation at no apparent cost to growth or volatility. All three were committed to opposing the risk of outright deflation in autumn 2008, consistent with the clear assessment of the imminent danger and their common commitment to price stability. Their strategic approaches, however, have led to different plans for coping with uncertainty about inflation postcrisis.

Fourth, the three central banks’ operational frameworks for providing liquidity to their respective banking systems differed as well. The ECB operated primarily through large-scale repo transactions prior to the crisis, and it was thus able to accept from the banks a very great quantity of a very wide range of collateral assets, which made the provision of liquidity particularly easy. The range of assets that are eligible as collateral for central bank lending was markedly narrower in the United States and the United Kingdom (where monetary policy essentially consisted only of buying and selling Treasury securities on the open market prior to the crisis). The Federal Reserve and BoE had to play catch-up with the ECB, adding a host of acronyms “facilities” to try to achieve the same effect once the zero-lower bound on nominal interest rates was reached.

**Similarities and Differences**

Against this background, the monetary and financial stability policies pursued by the three central banks have been in some respects remarkably similar, indicating that shared assessments of the risks to the financial system and the economy were strong enough to overcome institutional constraints. Interest rate policies were broadly identical, at least from the Lehman shock in September 2008 until summer 2010, as all three central banks brought policy rates de facto to zero within weeks (figure 3).

And responses to outbreaks of acute interbank market illiquidity were also remarkably parallel. Within hours after indications of paralysis emerged on the interbank market, all three central banks provided wholesale liquidity to the banking system. They expanded and rolled over their liquidity programs as much and for as long as necessary to ward off liquidity shortages. When interbank markets locked up again for several euro area banks in spring 2010, the ECB again intervened without hesitation.

There have, however, also been significant differences in the response, which have grown more important over time. The three most important are different attitudes toward quantitative and credit easing, different policies as regards partner countries, and different perspectives on the economic outlook.

**Quantitative and Credit Easing**

Probably the most notable difference among the three central banks is that the BoE and the Federal Reserve have undertaken significant quantitative easing, but the ECB has not undertaken any. The BoE and the Federal Reserve indicated in early 2009 that they considered it necessary to supplement interest rate cuts with loosening through unconventional instruments (Bernanke 2009, King 2009)—they both believed that the interest rate cuts were an insufficient response to the scale of the shock. The Federal Reserve has since proceeded to purchase vast quantities of mortgage-backed securities and agency paper as well as treasuries, while the BoE has purchased essentially only gilts (long-term government bonds), reflecting differences in the respective economies’ depth of markets and beliefs about which type of purchase would be more politicizing. Their general approach and scale of

---

7 Although the ECB’s policy rate was reduced only to 1 percent, the adoption of a scheme for unlimited provision of liquidity in September 2008 implied that the 1 percent level become a ceiling rather than a reference for market rates.
quantitative easing has been similar, however, and so are the estimated effects on interest rate spreads (Gagnon et al. 2010, Joyce et al. 2010).

At the same time, the ECB has consistently rejected the ideas that it had to either go beyond the provision of liquidity to banks, to overcome the zero bound through purchasing of government bonds, or attempt to influence the shape of the yield curve. The asset purchase programs it announced (a covered bonds purchase program in 2009 and a sovereign bonds purchase program in 2010) were intended to be of limited magnitude and to be sterilized so as to have no impact on aggregate money supply. Consistent with this approach, the ECB’s balance sheet expanded by far less than those of the two other central banks (figure 4).

Also, credit easing (i.e., specific asset purchase programs undertaken with the aim of restoring liquidity in asset market segments) was undertaken by all three central banks but to an uneven degree. The Federal Reserve undertook early on to unfreeze clogged market segments such as the commercial paper as well as student loan and other securitization markets. The BoE offered a commercial paper facility but had few takers. Through the early stages of the crisis, the ECB was satisfied with its liquidity provision measures to the banking system, perhaps because of the greater importance of bank lending versus securities markets in the euro area. As indicated already, the ECB did undertake credit easing actions, however, at a late stage after the Greek crisis erupted in early 2010 and it did it with evident reluctance, without having stated its aims, and only for a rather short period.

Such marked differences between the three central banks responses to a common simultaneous shock, and to one for which at least initially all three had the same assessment and interest rate response, merits understanding. It could be argued that these differences merely result from structural rather than policy factors. Certainly, part of the explanation has to do with differences in the transmission of the shock through distinctive financial structures. The US economy relies much more on securitized, market-based finance than the bank-lending–centered economies of continental Europe, with United Kingdom somewhere between the two. As a result, there was logic that in 2008—09 the Federal Reserve gave priority to restoring liquidity in key securities markets whereas the priority in the euro area was to ensure liquidity access for the banks and make sure that they were able to perform their credit distribution role.

For that reason, it is easier to explain the difference in credit easing across the Atlantic than in quantitative easing. It is perfectly reasonable for the central bank to try to end-run banks in an economy where a large number of nonfinancial agents borrow directly on the market, while it is just as reasonable for the central bank to act through the banking system in an economy that relies mainly on banks to channel credit to nonfinancial agents. Given that structural difference, it is clear that the money multiplier contracted more in the United States and the United Kingdom than in continental Europe—and as argued in von Hagen (2009), this could help to explain why the base money response had to be more aggressive in the former case than in the latter one.

Yet, the irony that the one major central bank with a publicly declared monetary pillar has countenanced a large and sustained decline in broad money (i.e., credit) growth, without any use of quantitative measures to offset said decline, is striking. As seen in figure 5, for all three central banks, broad money growth went way down after the crisis (less so on this measure for the United Kingdom than for the United States or euro area). In fact, the largest sustained decline in trend monetary growth versus precrisis average has taken place in the euro area, perhaps as a result of the lack of quantitative easing undertaken by the ECB. Remember, this is broad money, a measure of credit outcomes, not of an instrument like base money that the central bank controls.

Quantitative easing is a substitute for interest rate policy when traditional monetary stimulus has reached its limits and/or been frustrated by financial instability. The pros and cons of its adoption do not depend on the specifics of the monetary transmission mechanism. So the difference between the Federal Reserve and the BoE, on the one hand, and the ECB, on the other, is a genuine one. The ECB’s rejection of quantitative easing cannot be attributed to conditions only, nor can it be a question of greater faith in monetarism in the Anglo-Saxon central banks than in the continental ones. Rather, the lesser degree of activism on the part of the ECB was first and foremost a matter of political doctrine.

---

8 Observers used to refer to more “arm’s-length” financing in the United States and United Kingdom than in continental Europe, but developments in the 2000s leading up to the financial crisis indicate that concept misleads more than it elucidates, both positively and normatively.
The ECB could relatively easily embark on wholesale liquidity provision to the banking sector, but not on wholesale purchase of government bonds, because the former was not perceived as contradicting the spirit of the EU treaty, whereas the latter was seen as running against a fundamental treaty provision, the strict separation between monetary and budgetary policy.9

The Maastricht Treaty is very clear in the priority ascribed to protecting monetary policy from the consequences of budgetary policy. Although an outright purchase of government bonds on the secondary market does not violate the letter of the treaty, it is admittedly not in accordance with its spirit and this acted as a constraint. In the United States, however, management of the yield curve by the Federal Reserve is merely a return to the early 1950s when the Federal Reserve had an explicit mandate to ensure the stability of the long-term rates at low levels (Woodford 2001). Fiscal-monetary coordination is not alien to the US policy tradition nor does it evoke dreadful times. Indeed the lack of clarity of the EU treaty about the financial stability responsibilities of the ECB can be ascribed to disagreements over the vertical distribution of tasks within the Eurosystem, not to disagreements over the doctrine of central banking. This lack of clarity was overcome in the height of the crisis. On quantitative easing, however, there was little room for reinterpretation it seemed, at least as a political reality.10

The same can be said of targeted asset purchase programs like the one undertaken by the ECB in May 2010. Although this program was explicitly framed as qualitative rather than quantitative (and as all operations carried out within it were entirely sterilized), its adoption was controversial even within the ECB because it was regarded by some influential parties as implying the transformation of the ECB into a quasi-fiscal agent. Bundesbank Governor Axel Weber publicly opposed the measure. The ECB was quick to propose the creation of a European crisis management institution that would take over from the central bank the role of assisting sovereign issuers (ECB 2010). There was no expansion of mandate or tools undertaken or even attempted by the ECB in the situation.

International Swap Agreements

Turning to international aspects, another significant difference is that only the Federal Reserve embarked on significant cross-border provision of liquidity through swap lines. In 2008–09 the ECB remained much more guarded in its approach to cooperation with central banks outside the euro area, including critically not providing euro cash to EU members that are future euro area members and that had large outstanding euro-denominated (private-sector) debt (Darvas 2009). Some other EU central banks, like the Swedish Riksbank, provided euro lines to banks exposed in Eastern Europe and financed them through swaps with the ECB, but this did not fully substitute direct ECB liquidity provision.11

Frankfurt’s reluctance to embark on liquidity assistance outside the euro area in spite of evident needs and repeated requests from Central and Eastern European member states can be ascribed in part to institutional limitations. Unlike for the provision of liquidity to banks, the provision of cross-border euro liquidity would have involved taking risks outside the remit ascribed to the ECB by the EU treaty, which does not envisage any financial responsibility for it in the wider EU region. In the event of a loss, the ECB would have had difficulties giving a legal basis for its action. Only an encouragement by the EU budgetary authority, i.e., the Council, would have allowed the ECB to exceed its mandate, but this encouragement would probably have been considered in contradiction with the independence of the ECB. In the end the ECB entered into a semi-clandestine swap agreement with the Bank of Sweden, which in turn provided euro liquidity to some of the new member states. The disinterest of the political authorities to have the ECB provide such swap lines in turn reflected a long-standing reluctance to have the euro play a stronger global or regional role.12

---

9 This argument was echoed in various ways in the United Kingdom (where the government gave an indemnity for the BoE’s potential future losses on gilt purchases) and the United States (where some of the advocates of credit easing said extensive Federal Reserve purchases of government bonds would constitute an erosion of fiscal discipline) but too faintly to constrain policy.
10 Posen (2010b) makes a case for how such bond purchases do not compromise central bank independence.
11 For the BoE, such swap lines are not relevant given the pound’s limited global usage.
12 We do not pursue the discussion further here as it is incidental to the theme of this paper. For further discussion see Pisani-Ferry and Posen (2009).
Policy Outlook

The last but certainly not the least of the differences among central banks has been their perspective on the economic outlook. Whereas their policy stance had been remarkably similar in 2008–09, by spring 2010 the ECB, on the one hand, and the Anglo-Saxon central banks, on the other hand, started to adopt markedly different perspectives on their respective economic forecasts and assessments of risks.

In the euro area, the focus gradually moved toward emphasis on the need to exit the period of exceptional support whereas the Federal Reserve and the BoE were more willing to continue extending monetary support (or at least to hold off on exiting). This divergence had already emerged by early 2010, but it was overshadowed by mounting concerns over sovereign finances in the euro area and the ECB’s need to respond to the resulting stress in financial markets. As market participants became concerned about the fallout of sovereign downgrades and the possible consequences of potential defaults for national banking systems, the ECB had to resume direct liquidity provision instead of winding it down as expected. But by autumn 2010 the ECB’s focus was again on exit and markets expected a rise in interest rates in early 2011. By contrast the policy outlook in the United States and the United Kingdom remained markedly more tilted toward continued monetary support of recovery (figure 6).

Summing Up

In the end, central bank policy reactions to the crisis demonstrated both remarkable initial convergence in view of dissimilar traditions and institutional constraints across the Atlantic, and significant divergences in policy strategy, the instruments used, and ultimately on the outlook once the worst had passed. Even the sovereign debt crisis of spring 2010 did not prompt greater activism from the ECB beyond immediate and targeted liquidity provision. On the basis of the track record this far and the policy announcements made, we posit that divergences are likely to grow larger in the aftermath of the recovery.

Our reading is that two factors dominate. First, as documented in the previous section, central banks exhibit different stances as regards the desirability of stimulating demand. Analyses of supply-side developments and the assessment of the extent of slack that remains in the economy weigh significantly, as the magnitude of the output gap is a key determinant of the strength of deflationary pressures. Yet, this difference has more to do with the underlying assessment of potential output, how lasting the shock’s impact on potential would be, and the rightness of monetary ease in dealing with adjustment—that is, the degree essentially of a demand-versus supply-dominated view of monetary policy’s role—than with the outlook per se. Figure 7 shows comparable core inflation rates for the United States, the United Kingdom, and the euro area. While the United Kingdom has seen a spike in inflation passed through from sterling weakness and a value added tax (VAT) increase, in both the euro area and the United States core inflation is coming down to historical lows. In all three economies, the best single predictor of future inflation is lagged core inflation, so inflation would be well below target in both the United States and euro area (and coming back toward target in the United Kingdom).

The second main difference between the Federal Reserve and the BoE, on the one hand, and the ECB, on the other, has to do with their relationship with government. Where this relationship was unproblematic—in the United States and the United Kingdom—the central bank was much freer to go beyond its usual mission than where it was problematic—in the euro area. This is likely to continue weighing on the willingness to embrace nonconventional policies in continental Europe, even if the ECB is expanding its mandate on the financial stability side.
Fiscal Policy

Institutional Settings and Constraints

Institutional constraints matter considerably in the field of budgetary policy. Three are especially relevant to the transatlantic comparison.

To start with, US budgetary policy is carried out by the federal government while in the European Union, it is only the states whose budgets have a macroeconomic role. The traditional Musgravian allocation of responsibilities, which assigns stabilization to the central level, therefore does not apply to Europe, where the EU budget plays no macroeconomic role whatsoever.

A second difference is the role of automatic stabilizers. As indicated in table 4, the share of (general) government outlays in GDP is significantly larger in Europe than in the United States, which mechanically increases the impact of automatic stabilizers. Furthermore, more than 40 percent of current public expenditures in the United States are carried out by state and local governments, most of which are subject to some sort of balanced-budget rules and therefore cannot let automatic stabilizers play in full. The upshot is that subfederal budgets tend to behave procyclically and that as a consequence automatic stabilizers are markedly weaker in the United States than in the European Union on net, even more than relative size of the public sector would indicate.

Finally, euro area national governments are subject to common rules within the framework of the Stability and Growth Pact (SGP).13 Whereas the SGP does not preclude discretionary countercyclical policies, in practice it creates obstacles to them in countries whose initial budgetary situation is not strong and it can therefore induce procyclical behavior. These constraints, which tend to make European discretionary budgetary policy less countercyclical than in the United States, matter considerably because of the diversity of situations within the European Union. In fact, although the precrisis aggregate budgetary situation was roughly similar on the two sides of the Atlantic (table 4), the disaggregated picture was in fact strikingly different, with public debt ratios in 2007 ranging from 25–40 percent of GDP in Ireland and Finland (and even less in some non–euro area countries) to more than 100 percent in Greece and Italy.

Taken together, institutional constraints imply stronger automatic stabilizers in Europe and a stronger discretionary role for the US federal budget because (a) the latter has responsibility for overall stabilization and (b) must offset the procyclical behavior of state governments, while (c) EU member governments start from uneven positions and may be forced to consolidate either by the newly aggressive demands for enforcement of the SGP or by market pressures.

Fiscal Stance

As indicated by the discrepancy between traditional ex-post measurements based on the change of structural budget balance indicators and ex-ante measurements based on the evaluation of actual discretionary decisions, evaluating the fiscal stance in normal times is less easy than it looks. But it is even more challenging in times of financial and economic stress. Indeed, the usual structural balance indicators produced by international organizations such as the IMF, the OECD, and the European Commission are affected by assumptions made about the supply-side impact of the crisis and the timing of its effects. Changes in the structural balance are therefore not reliable indicators of the actual fiscal stance any longer.

For 2009, the IMF (2009) produced estimates of the discretionary stimulus delivered by the G-20 countries, which are broadly consistent with estimates produced independently.14 They indicate that consistent with what could be expected from institutional constraints and past record, the United States delivered more discretionary stimulus than the United Kingdom and euro area countries but that the broad gist of policies was similar (figure 8). This was in stark contrast with certain past episodes when attempts to coordinate policy responses resulted in failures.

---

13 The prevention of excessive deficits, which is enshrined in the treaty, nominally applies to all member countries irrespective of their monetary status, but sanctions can be applied only to euro area members. In practice, common budgetary rules have a stronger bearing on the euro area member countries’ budgetary behavior.

14 See, for example, von Weizsäcker and Saha (2009).
2010 has been a broadly neutral year in most countries as far as the fiscal stance is concerned, but debates have been taking place as regards the appropriate stance for the years ahead. The transatlantic difference in attitude became more and more apparent during spring and even resulted in an open rift in the run-up to the June 2010 G-20 summit, where plans for 2011 and beyond were compared. Discussions had been held by European ministers in autumn 2009 already on a coordinated “exit strategy” with the aim of reversing the stance of budgetary policy in 2011 at the latest. The actual pace of exit was accelerated by bond market tensions affecting Southern Europe and Ireland in spring 2010, which led to a series of policy U-turns in Greece, Spain, and Portugal and to policy adjustments in Italy.

Consolidation plans in Southern Europe affected the 2010 stance already. In other euro area countries (especially Germany and France), moderate consolidation measures are on the agenda for 2011. Overall, a fiscal contraction amounting to one percentage point of GDP is expected in the euro area in both 2011 and 2012. In the United Kingdom the Cameron government announced in June a major consolidation program over 4 years, the consequence of which is a reduction of the cyclically adjusted net borrowing by more than 2 percentage points per in the next two years.

In the United States, however, the debate is still about the continuation of stimulus, and the Obama administration agreed only reluctantly to the G-20 June commitment to halve budget deficits between 2010 and 2013 and to stabilize public debts by 2016. Plans released by the Office of Management and Budget in summer 2010 envisaged phasing out the fiscal stimulus over two years and stabilizing the federal deficit at about 4 percent of GDP in the years to come, without attempting to reduce the debt ratio. There are talks of medium-term consolidation plans but no concrete program at this stage.

Several explanations can be given for this difference in attitudes:

- A first motivation is that economic situations and the perception of them were different, as previously discussed—though as indicated the difference in supply impact across the Atlantic is exaggerated.
- A second explanation has to do with the differences in the fiscal space governments enjoy. Clearly, many smaller European countries “felt the heat” sooner and more distinctly than the United States because of the fragmentation of national budgets and the privileged status of US government securities. More generally, concerns over public finance sustainability are pervasive in Europe whereas they appear to be much less salient in the United States.
- Third, policy doctrines may differ. Confidence in the Keynesian effects of countercyclical fiscal policy is far from universal in the United States but it is more widely accepted than in Europe, where many policymakers are closer to the Ricardian or classical views of limited effectiveness of fiscal policy. This is in part related to supply-side pessimism but to a fragmentation argument as well: For small, open economies, the countercyclical effects of a stimulus are necessarily smaller, and the balance between Keynesian and Ricardian effects different, than for a large continental economy like the United States, whose financial assets are in global demand. Europe does not see fiscal policy on the aggregate but through the eyes of national policymakers (thereby often from a small-country perspective).
- Finally, political economy matters. Disagreements over the distribution of the budgetary adjustment burden are probably more significant in the United States than they are in the typical European countries and the preference for tax cuts is markedly more pronounced. Sustainability concerns are not overshadowed by disputes over taxation and spending as they are in the United States.

Fiscal Space and Sustainability

A potential motive for differing views on the urgency of fiscal retrenchment is that countries do not have the same fiscal space. Where sustainability is more remote a concern, adjustment can be more easily postponed even if another economy might not be able to similarly increase its debt burden. Cross-country assessments of debt sustainability are generally based on rather crude instruments such as medium-term projections of public debt ratios. These projections are based on necessarily
unreliable policy assumptions and sometimes arbitrary criteria. Furthermore, they give no indication as to what is the sustainable debt level.

A more satisfactory approach has recently been proposed by Ostry et al. (2010) on the basis of earlier work by Bohn (1998) and Blanchard (1984). The idea is that each country faces a debt limit that depends on the (nonlinear) reaction of the primary balance to the debt to GDP ratio and on the (nonlinear) response of market interest rates to the debt level. If this debt limit is exceeded, the debt becomes unsustainable because, barring an exceptional adjustment effort, normal budgetary responses are not sufficient to prevent the debt from expanding beyond market willingness to fund it. Debt limits differ somewhat from one country to another depending in part on past responses of the primary surplus to debt developments, which often reflect political institutions. The available fiscal space can then be defined as the distance of the current or projected debt level to the debt limit.

Figure 9 plots the fiscal space calculated by Ostry et al. (2010) for the United States, the United Kingdom, and selected euro area countries (we do not aggregate the euro area here because countries are separately liable for their debt. Averaging over euro area countries would amount to minimising potential problems).

According to this indicator the United States is not better placed than countries like Ireland and Spain that are under the threat of losing access to capital markets. If anything, the United States should move toward consolidation faster and more aggressively than a country like Spain, which enjoys significantly more fiscal space—whatever the immediate market concerns or lack thereof. Of course, this does not quantify the value of the dollar’s special status, and the additional fiscal space it gives to the United States, but that is subject to change and could even allow overextension by US government, which in turn erodes that status.

This indicator however depends on past behavior only and does not take into account longer-term, mainly demographic, factors that weigh on a country’s fiscal perspectives and may reduce its fiscal space further. It therefore needs to be complemented by a forward-looking approach like the one adopted by the European Commission (2009) in its annual sustainability report. The approach there relies on tax gaps à la Blanchard (1990) computed on the basis of long-term projections carried out by the European Union’s Aging Working Group (AWG). It results in two tax gap indicators called S1 and S2, which give the permanent adjustment to the primary balance necessary to reach a 60 percent debt-to-GDP ratio by 2060 (S1) or to meet the intertemporal budget constraint over an infinite time horizon (S2).

Equivalent indicators can be computed for the United States on the basis of the Congressional Budget Office’s (CBO) long-term budget projections. This requires making a number of adjustments to ensure that assessments made for the EU countries and the United States are based on sufficiently comparable assumptions. As observed by Cottarelli and Schaechter (2010), available projections in fact do not meet this requirement. Specifically and importantly, the CBO projections extrapolate trend changes in the relative price of health care services (called excess cost growth), whereas baseline EU projections are based on constant relative prices. Stripping out this relative price change and adapting to the EU framework results in considerable improvement to the relative US fiscal outlook. As indicated in table 5, expected aging and its consequences on public finances only results in a 2.1 percent of GDP tax gap for the United States, against 3.5 percent for the euro area, 3.6 percent for the United Kingdom, and 5.7 percent for Spain.

The upshot is that even assuming a similar relative health care price evolution in the United States and the European Union, the more favorable US demographic outlook results in a lower age component of the tax gap. The 1.5 percent of GDP difference, however, is not large enough to qualitatively change the conclusions of the previous analysis indicating that in view of its current deficit and debt level, the United States has less fiscal room than apparently presumed, when assessed on a comparable long-term basis.

---

15 Calculations do not include the effect of the bank recapitalization announced in Ireland in end-September 2010.
Events, Politics, Doctrines, or Institutions? Summary of Findings

Before turning to international implications and discussing the coordination issue, we summarize our main findings. We began with the question why postcrisis policy responses have started to diverge while the crisis response was remarkably symmetric. We have identified four nonexclusive explanations.

First, economic developments in the United States are in some respects more worrying than those in Europe and warrant more aggressive policy action. While GDP has rebounded faster, the sustainability of that recovery is now in question, while employment has declined significantly more, both in absolute terms and in comparison to previous experiences. Furthermore, the extent of deleveraging that remains to be completed in the nonfinancial sector is without doubt more important in the United States, which implies that the drag on domestic demand will remain for longer. True, euro area aggregates are of limited relevance as Southern Europe needs to deleverage while it is not clear that Northern Europe, especially Germany, will compensate through expanding domestic demand. Our assessment is nevertheless that the same policymakers approaching the situation with the same preferences would conclude that the US economy is in need of more support.

Second, political economy factors add to this objective assessment. For reasons that have to do both with its history and its limited institutions for social protection, the US polity clearly has a lower tolerance for unemployment than European polities, including that of the United Kingdom. So the pressure to stimulate is bound to be more significant.

Third, an important source of divergence could be laid to fundamentally different beliefs about the nature of the recovery from the common shock. The US government believes that the American growth trend and potential output have not been lastingly damaged by the shock, consistent with their postwar recessionary experience; the EU governments (including the United Kingdom) believe that their economies’ growth trends and aggregate supply have been severely damaged by the shock, consistent with their own past recessionary experiences.

As a result, the US government and Federal Reserve officials are far more inclined to maintain aggressively expansionary macroeconomic policies than their counterparts in Brussels, the ECB, and most European capitals. The difference in initial rebounds from the common crisis, with a sharper recovery and higher productivity growth in the United States than in Western Europe, seems to confirm the validity of these opposing views. We believe that the actual degree of lasting damage to the US economy is higher and to the euro area and UK economies lower than officials on each side of the Atlantic currently maintain. Given this fact, as we argue below, policymakers should be forced to reconsider before their divergent policies become self-fulfilling.16

Fourth, institutional factors play a major role as well. The absence of a central fiscal authority, the dispersion of national situations and the lack of global currency status make the euro area economies much more vulnerable to market attack for their fiscal situation than the United States. This has contributed to triggering a race to consolidation, which would not have happened had the euro area relied for stabilization on a federal budget in the same way the United States does. Similarly (though to a lesser extent), the more limited institutional remit of the ECB than of the Federal Reserve contributed to the sense of reaching an end on unconventional monetary policies. The uneasy relationship between the fiscal and monetary authorities, where testing the limits has reaffirmed mutual suspicions, has also contributed to limiting the euro area central banks’ margin of manoeuvre.

It should finally be added that the financial system rescue and restructuring policies also began to diverge as distance from the initial shock was felt. The false perception among policymakers in the euro area seemed to be that since the Anglo-Saxon type of finance was the source of crisis (a valid claim to a substantial degree), European banks were not going to suffer as much or require as much restructuring as banks in the United Kingdom or United States (a false hope). Again, institutional

16 We do not take the recent US economic performance at face value. We are, however, at least as dubious about the idea of an immediate sharp fall in productive capacity of the major EU economies. If the global financial crisis were to have persistent effects on growth, these should cumulate over time if the recession persists, by depreciating human capital and forgoing investment opportunities. They should not be seen as an immediate excuse for inaction nor as having had a significant negative effect within the four to six quarters of outright recession in most major EU economies. Claims that structural unemployment rates doubled or potential growth rates halved overnight are hard to substantiate.
structures limiting coordination within the euro area regarding application of banking standards or on fiscal expenditures, as well as a greater precrisis extent of semi- and fully public banks, reinforced this tendency to be less aggressive than the United States or United Kingdom in cleaning up banks on the continent. The Spanish government’s June 2010 initiative to start publishing real stress test results has led to a welcome cascade toward the top in transparency. That was insufficient, however, to bridge the gap between US-UK and euro area desires at the G-20 level for implementation of capital and liquidity standards (with delays admittedly abetted by other G-20 economies). While not strictly a macroeconomic policy issue, this difference reinforces the divergence politically and economically.

**How Transatlantic Divergence Matters**

If the major economies in the European Union and the United States are in genuinely different situations—in terms of demand growth, unemployment, adverse supply shocks, and fiscal space—it is not only likely but also desirable for macroeconomic policies to differ across the Atlantic. The same to a large extent applies to the consequences of institutional constraints such as central bank mandates or budgetary frameworks, though these cannot be considered entirely given. National interests would be expected to predominate among policymakers, and arguably should. In broad terms, this is why international policy coordination has been rare. This is also why, intellectually, the bulk of analyses of policy coordination in normal times conclude that beyond trying to achieve agreement on the nature of the economic challenges, policy may in the end be best served by each government doing what it thinks is best for its own economy. So why worry about divergence between the European Union and the United States following the initial joint crisis response?

There are four reasons why macroeconomic policy divergence may still matter in the current phase more than usually. First, and most importantly, spillover effects between countries’ policies, particularly through capital flows, are still not what they are in normal times. Second, there is the possibility of international commercial strife coming out of divergence during a period of austerity—that is, a spiral of protectionism or competitive depreciation. Third, transatlantic divergence could exacerbate imbalances globally, not just bilaterally across the Atlantic. Fourth, there remains the risk of a self-fulfilling, low-growth, or even deflationary scenario arising through premature withdrawal of policy stimulus, which coordination could diminish.

**International Spillovers in Postcrisis Times**

One surprising aspect of the crisis was the extreme degree to which all asset prices and all indices of real activity moved together. Unlike in the 1930s, which witnessed the low transmission of the depression across countries, in 2008–09 all firms reacted almost synchronously and identically. Trade and investment collapsed simultaneously around the western world, and there was little to choose between equities or bonds across countries. The lack of benefits from diversification across the Atlantic (as opposed to the decoupling of large emerging markets) revealed the far deeper integration of western financial systems and multinational production than seen in the trade data. This had the benefit that when the recovery came in any major economy, it was in large part shared. As policy rates remained at, or close to, the zero bound and bond rates at historically low levels, positive spillovers through product markets were not hampered by negative spillovers through capital markets. This meant that the impact of any given country’s policy measures was less at home and more abroad than in the past. That reality constituted a critical argument for a common stance on fiscal and monetary expansion when the crisis hit: Policies moving together would have offsetting leakage abroad and on net be far more effective.

The situation nowadays is less symmetric, but demand in all advanced countries still significantly falls short of potential output, inflation is in most cases below target, policy rates are still close to zero, and risk-adjusted bond rates are even lower than two years ago. These conditions imply that product-market spillovers continue to dominate capital-market spillovers.

So what might happen in such a world when macroeconomic policies diverge? Large economies that tighten fiscal policy will have less macroeconomic multiplier from their action, as part of it spills over to trade partners; and those doing fiscal stimulus would get less bang for their policy buck. Those tightening governments, however, would previously have expected to gain on net exports by relatively constraining demand in comparison to their trading partners, and that effect would be
diminished, too; the tightening country’s drag on demand in the other countries would increase, while the relative contraction on demand at home would decrease. It would depend on any given economy’s particular attributes and trade patterns to determine the net effect. The degree to which governments pulling in opposite directions offset each others’ desired policy paths, however, definitely increases. For governments who see a need for significant additional stimulus, this could lead to a greater uphill effort to get the same effect.

Furthermore, capital flows might well amplify, rather than offset, asymmetric policy moves. In normal times capital flows from tightening countries to stimulating countries as long-term interest rates respond to fiscal policy. But against a background of widespread rise of sustainability concerns, governments that loosen fiscal policy risk aggravating sustainability concerns, leading to speculations over a possible sharp depreciation of the currency as a consequence. While depreciation would usually aid in expansion, potential inflation pressures from depreciation and the likely monetary policy reaction could well swamp those benefits in the medium term if not immediately. Meanwhile, those economies that stick to fiscal tightening could find themselves facing additional capital inflows. Under the present circumstances when investment demand is low and financial intermediation is impeded, the likely further decline in bond rates, let alone investment expansion, is limited, so the drag from currency appreciation is likely to dominate for the relatively austere. Thus, there is a likely asymmetry whereby diverging fiscal policies will frustrate both sides of the situation: The austere governments will be put upon by competitive depreciation, while the stimulating governments will see less benefit from their efforts.

Monetary divergence will have somewhat similar effects, though they will be more in line with the standard experience than for fiscal policy. In the situation where some central banks would undertake additional ease—almost certainly in the form of large-scale asset purchases—while others would be exiting monetary accommodation through interest rate increases, capital would again be expected to flow from the stimulating to the tightening currency areas. This would abet the desired impact of policy on each side, so long as monetary ease did not lead to rising long-term interest rates. That would be highly unlikely so long as the easing central banks were doing to in the face of a low inflation or deflationary forecast. The issues arising from the divergence would be the extent to which such movements led to overshooting when monetary control is limited at best, and again the likelihood that the trade effects on currency are likely to dominate the interest rate effects on investment under present circumstances.

**Risks of Protectionism**

This scenario leads to the second concern about transatlantic divergence in macroeconomic policy: political reaction to perceived or actual competitive depreciation and the potential for protectionism as a result. It must be noted that the amount of protectionist policies undertaken as a result of the crisis was far lower than most expected, particularly between the European Union and United States. The G-20 agreements to prevent such actions and the role of the WTO in ensuring discipline merit praise for this success. At the time of writing this paper, however, protectionist risks seem to be rising. So far, they have been more acute across the Pacific than the Atlantic (not that such a geography makes them more welcome), but the bilateral surpluses of Germany within the euro area and with the United States are also gaining political salience.

If macroeconomic policy divergence meant that the major European economies would engage in budget cuts while the United States embarked on another round of fiscal stimulus, and if the ECB were to withdraw accommodation while the Federal Reserve and BoE were to extend quantitative or credit easing, we could expect capital flows into the euro area, particularly into those large members whose budget situations were seen as most sustainable. Already there are some signs that this is happening. Such capital flows could be seen as constructive, reducing imbalances, and abetting the respective desired policy stances. Whether the actual impact and political response would be taken that way is another matter.

**Impact on the Global Adjustment**

As noted, the question of current account imbalances is global, not solely or even primarily transatlantic. The third consideration for the international effects of transatlantic macroeconomic
policy differences is what impact this might have on global adjustment. This is primarily a question of
currency and trade relationships with China and the economies closely tied to it. For some years, the
lack of decisive Chinese action to end the undervaluation of the renminbi has benefited from divisions
between the United States and the European Union. Whether offering contracts for Airbus and Boeing,
or for power plants, or for construction materials, or for preferred access to domestic Chinese markets,
the Chinese government has taken advantage of playing commercial interests in the West against each
other. This has made it more difficult to get a common front on the currency issue, on which Europe
was slow to come to a common stance and to voice concerns to China. EU-US differences persisted
also for long on such matters as protection of intellectual property rights for technology, even though
the transatlantic economies have largely common interests in these areas.

On pure economics, the impact on trade balances of transatlantic macroeconomic policy
divergence is unclear, depending upon how the relative slowdown of the tightening countries affects
trade flows versus the net export impact of the likely associated relative appreciation. Divergence in
macroeconomic policies, however, is likely to worsen this political situation of division for China to
exploit, as the pressure will increase for elected governments to pursue bilateral trade deals (or to wink
at Chinese encroachment on property rights) and to seek direct adjustment of the bilateral exchange
rate.

Self-Fulfilling Prophecies

The final international concern arising from divergent macroeconomic policies is of a different nature.
As we discussed in earlier sections, there is genuine reason to pursue different monetary and fiscal
approaches in the major economies of the euro area and the United States, given the differences in
terms of household balance sheets and unemployment as economic pressures and in fiscal room and
central bank mandates in terms of policy measures. These differences should not be exaggerated—the
impact of the crisis on fiscal room and on potential supply lies somewhere between the stated positions
on opposite sides of the Atlantic, and the deflationary pressures on both sides are not dissimilar. Yet,
there remains the real possibility that past recovery patterns from noncrisis recessions or not as severe
shocks are a poor predictor for what is to come now. In fact, there is arguably a risk that premature
tightening or even insufficient macroeconomic stimulus could lock in subpotential growth for an
extended period. This could be self-fulfilling in perpetuating deflationary pressures and eroding
potential growth (see Posen 2010a and references therein).

If such a risk is real, a transatlantic divergence that increases competitive pressures for near-
term fiscal austerity or ratifies underestimates of potential rates of growth and current output gaps
could be corrosive to long-term performance—and thus to both price stability and fiscal sustainability.
Obvious transatlantic divisions in, if not public disputes over, the economic outlook and the rightness
of each others’ policies could erode confidence and limit the effectiveness of the policies undertaken,
particularly in their impact on investment. In essence, policymakers in the European Union and United
States have to make a judgment as to the relevance of the Great Depression, of Japan’s lost decade,
and of the previous experience of postfinancial crisis periods to today.17 The current policy discussion,
particularly in the euro area, seems to underestimate the relevance of this parallel and thus incurs risks
from pursuing policy settings as though facing a normal recovery. The lesser degree of leverage and
unemployment in the major euro area economies than in the United States is undeniable (though the
differences in financial-sector fragility are not so great), but it is not clear that is a free pass from
historical precedent, especially if other economies within the euro area and across the Atlantic are at
risk.

A Quantum of Ongoing Coordination

Given our assessment of the reasons for transatlantic divergence in macroeconomic policies since the
initial crisis response, we would suggest a few measures to maintain what could be termed a critical
quantum of policy coordination. The point of a convoy is to get all the ships in the flotilla to their
destinations safely, and our economies are not yet fully out of dangerous open waters. Moreover, the
respective destinations of the euro area, UK, and US economies are not as far apart as they are

---

17 See Abiad et al. (2009), Meier (2010), Posen (2010b), and Reinhart and Reinhart (2010), among others.
sometimes claimed to be at present, so the convoy keeping us together for a little while longer is at little cost.

- The euro area, United Kingdom, and United States should agree not to intervene unilaterally against each others’ currencies, making explicit what is already understood, and avoid other policies geared towards large-scale depreciation of their own currencies. This agreement could be extended to the other major economies. The monitoring of the consistency of actual policies with this commitment should be delegated to the IMF while the G-20 should serve as the venue for coordination.

- Comparative assessment of the fiscal room—including of potential growth—should be assigned to an independent multilateral assessor, like the IMF. Some framework akin to that we offered above should be the basis for the assessments.

- All countries should adopt and submit to parliament medium-term fiscal consolidation objectives and guidelines that ensure the sustainability of public finances under prudent economic assumptions. In practice, this would mostly imply adjustment on the US side.

- The European Union and the United States should agree that the Chinese undervaluation problem has to be dealt with in a multilateral framework but commit to undertaking joint action under the terms of such a framework and thereby limit the ability of the Chinese government to play each off against the other for commercial gain.

We have little illusion, however, that these measures will be adopted in the near term. We rather fear that the longer that policies diverge across the Atlantic, the more justified each policy stance will seem to their originators.

References


King, Mervyn. 2009. Speech at the CBI Dinner, Nottingham, January 20.

Kocherlakota, Narayana. 2010. Inside the FOMC. Speech at Marquette, Michigan, August 17.


Osborne, George. 2010. Budget Statement to the House of Commons, June 22.


Figure 1 Impact of the crisis on GDP, employment, output per hour and nonresidential investment in the United States, euro area, and United Kingdom (movements in quarters from prerecession output peak)

Note: Prerecession output peak is 2008Q1 for euro area and United Kingdom; 2008Q2 for United States.
Sources: National data, European Central Bank.
Table 1 Changes in indebtedness, 1999–2009

<table>
<thead>
<tr>
<th></th>
<th>Households</th>
<th></th>
<th></th>
<th>Corporate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>UK</td>
<td>EA</td>
<td>US</td>
<td>UK</td>
<td>EA</td>
</tr>
<tr>
<td>1999</td>
<td>68.38%</td>
<td>72.90%</td>
<td>49.86%</td>
<td>64.51%</td>
<td>21.75%</td>
<td>37.90%</td>
</tr>
<tr>
<td>2003</td>
<td>85.31%</td>
<td>92.13%</td>
<td>53.22%</td>
<td>65.86%</td>
<td>24.15%</td>
<td>40.35%</td>
</tr>
<tr>
<td>2007</td>
<td>98.15%</td>
<td>108.41%</td>
<td>60.45%</td>
<td>75.34%</td>
<td>35.02%</td>
<td>48.94%</td>
</tr>
<tr>
<td>2009</td>
<td>96.34%</td>
<td>109.94%</td>
<td>62.88%</td>
<td>77.15%</td>
<td>35.11%</td>
<td>52.73%</td>
</tr>
</tbody>
</table>

Change 1999-2007
-1.81% 1.53% 2.43%
Change 2007-2009

Sources: National central banks, Eurostat, authors’ calculations.

Figure 2 Evolution of European Commission estimates of the 2007 euro area output gap

Note: The graph give the evolution of estimates of the output gap for the same year (2007). Each point on the x-axis corresponds to the date when the estimate was published.
Source: European Commission, Economic Forecasts.

Table 2 National estimates of potential output losses and structural unemployment increases

<table>
<thead>
<tr>
<th></th>
<th>Potential output loss</th>
<th>Structural Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(in percent of pre-crisis potential output)</td>
<td>Pre-crisis</td>
</tr>
<tr>
<td>US</td>
<td>CBO</td>
<td>-1.75*</td>
</tr>
<tr>
<td>UK</td>
<td>OBR</td>
<td>-8.75**</td>
</tr>
<tr>
<td>EA</td>
<td>Commission</td>
<td>-3.7***</td>
</tr>
</tbody>
</table>

Sources: CBO August 2010 "Economic and Budget Outlook" (US); March 2010 Budget Forecasts (Initial) and June 2010 Pre-Budget Report (Revised) (UK); ECFIN June 2009 estimates, Spring 2007 and Spring 2010 Economic Forecasts (EA).
### Table 3: Main characteristics of central bank mandates

<table>
<thead>
<tr>
<th>Central bank</th>
<th>Price stability</th>
<th>Exchange rate stability</th>
<th>Output stabilization</th>
<th>Financial stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Federal Reserve</td>
<td>Yes</td>
<td>No, but may intervene on foreign exchange markets and NY Fed may also intervene on behalf of the US Treasury</td>
<td>Yes, on an equal footing with price stability</td>
<td>Yes, including supervision of major bank holding companies</td>
</tr>
<tr>
<td>European Central Bank</td>
<td>Yes</td>
<td>No, but may intervene on foreign exchange markets.</td>
<td>Yes, secondary to price stability</td>
<td>Not explicitly</td>
</tr>
<tr>
<td>Bank of England</td>
<td>Yes, Definition of price stability belongs to government</td>
<td>No, but may intervene on foreign exchange markets.</td>
<td>Yes, secondary to price stability</td>
<td>Yes, but no direct supervisory responsibilities (until 2012)</td>
</tr>
</tbody>
</table>

*Source: Adapted from Bénassy-Quéré et al (2010).*

**Figure 3 Policy rates in the United States, the euro area, and the United Kingdom, 2007–10**

*Source: Central banks.*
**Figure 4** Central bank balance sheets, 2007–10

Source: Central banks, authors’ calculations.

**Figure 5** Growth in broad money aggregates, 1999–2010

Source: Central banks.
Figure 6 Market expectations of money market interest rates on September 27, 2010

*Solid lines are 27-Sep*

**Sources:** Bank of England, Bloomberg.

Figure 7 Core inflation rates, 1999–present

*Source:* Central banks.

Table 4 Precrisis budgetary indicators, 2007 (percent of GDP)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>United States</th>
<th>Euro area</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross public debt</td>
<td>61.9</td>
<td>71.0</td>
<td>47.4</td>
</tr>
<tr>
<td>Net public debt</td>
<td>42.2</td>
<td>42.6</td>
<td>28.8</td>
</tr>
<tr>
<td>Budgetary balance</td>
<td>–2.8 –0.6</td>
<td>–2.7</td>
<td></td>
</tr>
<tr>
<td>Total outlays</td>
<td>36.8</td>
<td>46.0</td>
<td>44.2</td>
</tr>
</tbody>
</table>

*Source: OECD Economic Outlook database.*
Figure 8 Discretionary stimulus as a percentage of GDP in the G-20 countries, 2009

![Bar chart showing discretionary stimulus as a percentage of GDP in the G-20 countries, 2009.](source)

**Source:** IMF (Horton et al. 2009), Bruegel calculations.

Figure 9 Fiscal space in the United States, the United Kingdom, and select euro area countries

![Bar chart showing fiscal space in selected countries.](source)

**Source:** Ostry et al. (2010), authors’ calculations.

Table 5 Impact of age-related expenditures on the tax gap

<table>
<thead>
<tr>
<th>Country/region</th>
<th>Age-related component of S2 indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>2.1</td>
</tr>
<tr>
<td>Euro area</td>
<td>3.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.6</td>
</tr>
</tbody>
</table>

**Sources:** European Commission (2009), Bruegel calculations.
The Transatlantic Relationships in an Era of Growing Economic Multipolarity
Conference hosted by the PIIE and Bruegel

“From Convoy to Parting Ways? Post-crisis Divergence Between European and US Macroeconomic Policies”
By Jean Pisani-Ferry and Adam Posen

Discussion by Lorenzo Bini Smaghi
Member of the Executive Board, European Central Bank

Washington DC, 8 October 2010
Nominal GDP, Debt financing – EA

annual percentage changes, nsa

-5 0 5 10 15 20
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

-5 0 5 10 15 20

Source: EAA, ECB and Eurostat.
Note: * includes loans, ** includes loans, debt securities and liabilities for direct pension commitments of employers (i.e. not including other payables). The latest observation 2010 Q2 is estimate from BSI data.

*** Nominal GDP calculated as simple annual growth rates. Latest observation: 2010 Q2.
Nominal GDP, Debt financing - US

annual percentage changes, nsa

Source: Board of Governors of the Federal Reserve System, BIS.
Note: * includes credit market instruments (i.e. loans not including other payables) and debt securities issues by non-profit organisations, ** includes loans, debt securities and liabilities for direct pension commitments of employers (i.e. not including other payables). Latest observation: 2010 Q1.
*** Nominal GDP calculated as simple annual growth rates. Latest observation: 2010 Q2.
5-year real yield 5 years ahead in the EA and the US (%p.a.)

Note: 5-year 5 years ahead constant maturity zero-coupon yield based on triple A inflation-linked bonds for euro area. 5-year 5 years ahead constant maturity zero coupon yield based on TIPS for the United States. Source: Reuters, Bloomberg, FED staff calculations, ECB calculations. Latest observation: 5 Oct 2010.
Monetary policy and financial stability (i)

Corporate loans

Banks seem to be taking more risk (ease lending standards) when short-term interest rates are lower than what would be implied by fundamentals (for example implied by a Taylor rule)

Source: Maddaloni and Peydró-Alcalde (2010)
Monetary policy and financial stability (ii)

Mortgage loans

Source: Maddaloni and Peydró-Alcalde (2010)

![Graph showing the relationship between lending standards for mortgage loans and Taylor-rule residuals for the Euro area and US. The graph includes a line with an R^2 value of 0.11.](image-url)
Spring vintages of EA output gap estimates by IMF

Note: Output gaps are defined as the percentage deviation of actual output from potential output
Source: IMF (WEO)
Spring vintages of US output gap estimates by IMF

Note: Output gaps are defined as the percentage deviation of actual output from potential output
Source: IMF (WEO)
Lorenzo Bini Smaghi: It’s a very interesting paper with many ideas. I will not discuss all the arguments but only a few concentrating on monetary policy given that that’s my comparative advantage. And I would like to make three main observations.

The first relates to the role that underlying economic conditions play in explaining policy differences across the Atlantic, and the analysis has been done very thoroughly. But I would like to add one element, which may not be fully publicized, and this refers to the transmission of monetary policy—especially after a bubble economy. And in particular the flow of credits to the private sector in the euro area and in the US and there seems to be differences still at the present stage. If you consider the overall amount of lending to the private sector, this chart\(^1\) refers to the euro area. You see that—so the blue line is GDP. The red is the financing to household—both bank and capital market—which is more relevant for the green one, which is corporation. You see that there has never been in negative territory and there is a pickup already for a couple of quarters and even more if you look at the household. Now if you look—so this is the picture for the euro area. If you look at the US, the credit to households and to the corporate sector has been in negative territory for quite some time. So this may be explained both by demand and supply factors. And as the authors have shown before the crisis, the US households and corporations had a higher debt levels than their euro area counterparts and so they have to deleverage much more than in the euro area. And also on the supply side, possibly, US banks also have to deleverage much more than in the euro area.

So this difference in the flow of financing to the private sector may explain the different techniques also that have been followed in the implementation of monetary policy on the two sides of the Atlantic. It may also explain the results—the differences in results—that have been achieved. But to be sure, the ability to anchor inflation expectations in the euro area has enabled—you see the difference between the real long-term rates in the euro area; we have been able to maintain quite low real interest rates because of the anchoring of inflation expectations at close to 2.

The second point I would like to make is about the lessons that central banks have to take from the past to guide the future monetary policy. And Jean and Adam cite in particular three episodes that we should take into account going forward: the Japanese Depression—Great Depression—Japan deflation, and then all the analysis of postcrisis periods. Certainly these are very important periods and we have to look at that. But considering at these periods: What are the lessons? And at least I will take three main lessons. First after the financial crisis and house bubbling burst—a bubble burst, well growth potential is impaired, tends to be impaired and possibly even reduced for some time. And if you look at the major financial—international institutions, this is what they include in their projections. Second point: Monetary policy can certainly smoothen the transition to a new steady state, but it’s very difficult after a shock like this one to pull the economy back to where it was before the shock because the situation before the shock was not a stable equilibrium. And third: That recapitalization and restructuring of the banking system is very important, maybe even more important than monetary policy in avoiding a credit crunch.

\(^1\) See Bini Smaghi Presentation, page 1.
Now these are the lessons for past episodes. But in my view, there’s another period we should have to take into account to guide our future policy, which is the period before the crisis. I think if we understand what happened before the crisis we may avoid to make the same mistakes. And I think that this crisis has challenged all our thinking in economists but also central bankers. And we have to—we cannot be immune from an exercise of rethinking what has worked and what has not worked in our analytical thinking. And if we’re not afraid to look critically at the past, I would mention a few lessons from the past decade before the crisis.

First lesson is that we should have growth recorded in those countries—in those advanced economies—which experienced current account deficits. That kind of growth, I have to say, both in Europe and across the Atlantic, that growth was not sustainable. So if policies continue to aim at the same type of growth, we may end up with the same imbalances.

Second lesson: The very low level of interest rates for a prolonged period of time can result in a misallocation of resources and encourage risk-taking that fuel asset price bubbles. I think there is now quite some evidence if you look at this chart and at the next one. That’s the real strong correlation between level of interest rate and risk-taking attitude by the banking sector. So it’s not fair, I think, for central banks to just say that they have nothing to do with the crisis and this was all due bad regulation.

Third point: The view that monetary policy should not look at financial market conditions and should only intervene to counter the effects of the bursting of the bubble once the bubble explodes—what was called Greenspan Proof—actually proved not to be right.

Fourth lesson that I take—that interest rates were kept too low for too long before the crisis, mainly on account of fears that the economy would enter a Japanese-style deflation, fears that turned out to have been exaggerated and probably wrong. So the so-called risk management-type monetary policy aimed at avoiding deflation is not without risk and we have to be very careful.

Fifth lesson: Monetary policy cannot by itself transform a jobless recovery into a job-generating recovery. If anything, keeping the cost of capital very low may encourage capital-intensive investment rather than labor-intensive capital investment.

Sixth lesson: Core inflation is not a good predictor of headline inflation nor of underlying inflationary pressures emerging in a global economy.

Seventh lesson: It’s very difficult to measure output gaps. If you look at the past, the blue line is the measure of output gap in April 2003. And you see that in April 2003 the output gap for 2003 was about between –2 and –3, so –2.5. This is the US output gap. After a few years, even before the major crisis so in April 2008, it turned out that the output gap was half [of one] percent of GDP. So measures of output gap changed and it’s very dangerous therefore to calibrate monetary policy on the basis of this variable. So I think if we want to repeat the mistakes of the past, we have to keep these lessons in mind.

Third point I would like to make and final one, it relates to what has Jean called uneasy and the papers called problematic relationship with the central bank and government. And according to the paper, the ECB [European Central Bank] had a more problematic relationship with governments than other central bank. I would have to say that the institutional framework underlying the ECB does not prevent the ECB from taking nonconventional measures that all the

---

2 See Bini Smaghi Presentation, page 4 and 5.
3 See Bini Smaghi Presentation, page 6.
central banks have taken. The ECB did not embark on some of these measures, in particular quantitative easing, not because we could not do so or because of our uneasy relationship with governments, but because we did not consider that to be an appropriate instrument of conducting monetary policy. The nonconventional measure we adopted, which is a fixed-rate, full allotment in particular, was based on the fact that in the euro area, the transmission mechanism of monetary policy is different possibly from that of the US and relies mainly on the banking system. And as I have shown before, it seems to have worked. So these measures that we—our way of injecting liquidity in the system has nothing to do, I think, with our relationship with the government but with our way of considering most effective tools. I have to say that, in fact, we have decided to selectively purchase assets but for a very specific and very targeted amount. But this, I mean, leads me to the more general consideration that embarking a large-scale purchases of government bonds may affect the relationship between central banks and the fiscal authority. The problem—that is, I’m not sure when such a relationship can be characterized as problematic or unproblematic. And I had the impression that, in reading the paper, that a problematic relationship is one in which monetary and fiscal policies are distinct. And the unproblematic one is when they merge together. So I naturally asked in reading the paper: Where is the problem if monetary policy is kept distinct from fiscal policy and cannot be manipulated by the fiscal authorities to solve budgetary problems? Maybe it’s a problem for the fiscal authorities because they would like to use the instrument of monetary policy to inflate away the fiscal problems and have instead to resort to fiscal measures that are subject to parliamentary approval, are transparent, are democratic, and all citizens are able to judge and assess.

So it seems to me that this is not a problem, in Europe at least, to have a distinct central bank and fiscal authority. And the fact is fiscal problems are not solved through the inflation tax or by keeping the interest rate on public debt at a very low level—is not considered to be a problem in Europe. And for the European population, the role of the central bank has to be distinct from that of the fiscal authorities and monetary policy should firmly remain in the hands of the central bank, and this is why we have a treaty, actually, to avoid these things are changed. And this is why actually in Europe and in European countries in Greece, Ireland, Spain, France, Germany, the governments are adopting budgetary policies in full awareness of the fact that they cannot count on the inflation tax to solve their fiscal challenges—challenges that we all have across the Atlantic. So we don’t consider that to be a problem. I don’t think European citizens consider that to be a problem.

Final points: Let me say that I’m very happy to participate finally to a transatlantic relationship conference in which we don’t spend time discussing how irrelevant these relationships are. Actually at least in the monetary field, these seem to be relevant maybe because these are the only ones existing relationship. And we have a lot of attention to what I would call minor differences between policies, actually as the authors say, across the Atlantic while divergences may be much bigger with other parts of the world. And to the paradox of major emerging-market economies asking actually for a greater say in global governance, rightly so, but at the same time shying away from responsibility in monetary matters is not capturing sufficient attention and may be, as was mentioned, the elephant in the room.

Many important emerging-market economies either do not have any monetary policy at all because they are pegged to the currency of an advanced economy or impose capital controls and restrict the international use of their currency. And this creates monetary divergences that are
much larger in scale than those we discussed today with global repercussions. So there’s a lot of talk here around these meetings about monetary wars, which maybe makes little sense. And I’m more concerned about what I would call a monetary void in the world economy. As a result of this void, many of the problems experienced by advanced economies before the crisis, like very low levels of interest rates and the impact on the allocation of resources and potential bubbles, may now be migrating to emerging markets. And this may have potentially very critical consequences for these economies, but for the world economy as a whole. So I think we need to devote more attention also to these much bigger divergences and to the consequences that they may have for our recovery. Thank you.

Nouriel Roubini: I really enjoyed this paper. I think it’s interesting and important one and gives a lot of food for thought. In the paper, there is a discussion of the comparative response not just at the US and eurozone, but also the United Kingdom to the financial crisis and about the response and how exit might be. But in some sense, my view of it is that probably a more granular kind of analysis were distinguished within the eurozone among different types of countries, European countries, like Spain and Ireland that had housing bubble like the US and UK and you had countries like Portugal, Greece, and Italy that had fiscal problems but did not have housing bubble. So there are many dimensions in which actually the things can be sliced. If you ask yourself: Take this group of countries, which one of them had a housing bubble? That implies different responses here in the US, you had it in the UK, you had it in Spain and Ireland, but you did not have in the rest of the eurozone. If you ask yourself where fiscal problems were severe even before the crisis the answer even within the eurozone is that there was in Portugal, in Greece, and maybe in Italy fiscal problems while the fiscal problems of Spain or Ireland derived from the burst of the financial crisis and the housing bubble. And if you look at the issue of current account imbalances for example, again, US, UK, and the periphery of the eurozone had a relatively larger current account deficits while in the case of Germany and the core of eurozone here at the current account surpluses. So in some sense what I’m trying to say is that in analysis we would have to consider these aspects and within the eurozone the differences between the kind of cyclical and structural conditions of different countries.

Second point I think that’s important here is that the paper stresses the role of monetary and fiscal response. I think that the third element of the response to the crisis that could be fleshed out in more detail is the question of the backstopping and ring-fencing, if you don’t want to call it bailout, of banks and other financial institutions. And even within the monetary and the fiscal response, we can distinguish between traditional monetary and fiscal response, traditional monetary response being cutting interest rates, traditional fiscal response being raising spending or reducing taxes or making transfer payments. But in this economic and financial crisis, nontraditional responses became very important on the monetary side: combinations of quantitative easing, credit easing, lender of last resort support of the financial system, and even other forms of backstopping of the financial system. And as I’ll point out, this support is coming from monetary policy and elements of liquidity support and financial stability support, but also some quasi-fiscal activities. And for what concerns fiscal policy of course in relation to traditional fiscal policies with nontraditional fiscal policies in the form of a variety of forms of calling them bailouts of either banks and financial institutions but also households and even corporations.
That leads me to the point that when we think about the kind of a backstop and ring-fencing of the financial system, both monetary policy authority at central banks and fiscal authorities were involved in this activity. So the traditional distinction between fiscal and monetary policy becomes fuzzy when central bank: (1) have a financial stability role; and (2) when effectively they end up being involved whether they like it or not into quasi-fiscal activities. And I will argue that even the ECB, in spite of what it said, has been getting involved into those kinds of activities.

Now if I think about this question of financial stability, I think that first point that comes to mind is that central banks were not created to stabilize or smooth inflation and growth relative to some target. Central banks were originally created because you had bank runs and you had provision of liquidity support to avoid bank runs. The Fed was created in 1913 after the 1907 kind of bank run and panic. So whether central banks have an explicit role in financial stability or not, effectively they played that huge role. Remember, in the paper there is a chart that says that the ECB, technically speaking, doesn’t have an explicit kind of financial stability role. Did you think about what the ECB did? The first institution to start doing nonconventional monetary policy was actually the ECB on August 9, 2007, when there was this sudden shock of liquidity in interbank market and massively intervened before even the Fed and initially there was even some criticism. If you look at the ECB response, base money is more than doubled in the United States than in the UK, but has gone up by more than 70 percent even in the eurozone. Maybe it’s not in the form of QE [quantitative easing]. Maybe it’s in the form of support of the financial system, but that’s very unconventional. And even in the recent kind of bailout of Greece, part of the solution was, of course, a European stabilization fund, but the ECB was forced to be involved in the purchase of the government bonds of member states. And certainly this is a support that’s given to banks through the repo operations implies purchases of the bonds of member states those that are in trouble. So whether you like it or not, whether it’s explicit or not, that role of financial stability has been taken by every central bank regardless of what the official mandate may be.

Additional point in this context, I think, is that most of the central banks, whether they like it or not, had been involved into quasi-fiscal activities. Those quasi-fiscal activities may be more clear when you do quantitative easing and you’re purchasing government bonds in a massive scale like the US has done, like the UK has done—that’s effectively, whether you like it or not, monetization of fiscal deficits to me; that’s a quasi-fiscal role. It happens when you do credit easing and you buy even kind of more exotic or more risky kind of private sector assets that subject the central bank to losses. In the US, the Fed with the “Maiden Lanes” supporting AIG and Bear Sterns to that type of a fiscal and credit risk. There is even an element of it when you do traditional lender of last resort support because if you don’t know whether the financial system is just a liquid or is insolvent, massive purchases of a liquid or kind of risky assets of the financial system also lead to kind of quasi-fiscal activities. And I would even argue that even the traditional monetary policy of having policy rates close to zero is effectively a form of quasi-fiscal policy that has allowed banks to have a very large net interest margin. It has tax effective and the household sector is earning zero on its deposits and in saving. This implies the huge subsidy to the financial system that is being recapitalized through essentially zero interest rate policy if tradition is not considered its fiscal policy, but when you have zero rates for many years—that effectively is a transfer of income and wealth from the household sector to the financial system. That’s a quasi-fiscal activity that’s been undertaken by central banks.
Now if we think about this backstop or bailout of the banks and the financial system as I pointed out, those activities are being undertaken both by monetary authorities and by fiscal authorities. If you think about it during this financial crisis, every single piece both of the asset side and of the liability side of the financial system has been supported by either the government or central bank. If you think about the liability side of the financial system, you have capital, you have insured deposits, and you have other uninsured kind of debts of the financial system and whether through further deposit insurance, whether through private or public recapitalization of the banking system, and whether through guarantees of those unsecured claims of the financial system, massive support in the US, in Europe, in other countries are being provided. And on the side of the asset side of the financial system, a combination of lender of last resort support, market making of last resort, takeover or guarantees of bond assets is implied also either central banks or fiscal authorities supporting this financial system.

Now if you think about the response to the crisis as being different, of course, it was discussed in the paper. The reason why the ECB has been more cautious—cutting rates less, doing less QE—is the combination of their belief that the problem in the eurozone has to do with essentially structural rigidities in the labor markets or in the economy, meaning they look at supply curve in their view is inelastic, so increasing demand doesn’t make any difference for output, and of course, greater concerns in primacy of the inflation target. In part that response might be also due to the no bailout clause that implies essentially don’t want to monetize fiscal deficits. The question is whether the exit view in principle is different between the ECB and the US and whether in practice it’s going to be different. In principle it’s the different. The ECB is saying that we want to exit soon maybe because they worry about the inflation. Maybe because they worry about other asset bubble, maybe because they worry about not signaling that they want to bail out the financial system. But in reality, given the outlook even the ECB, with a lag, is going to be forced to do more quantitative easing. It’s going to do it after the US, after the Japan, after the UK. But I think there are significant risks of either double dip or continuation of the first dip in the periphery of the eurozone; Italy, Spain, Portugal, Greece, Ireland, you name it. The euro is going towards 140 and that’s becoming painful and you might have soon enough a stock market correction. So at some point whether the ECB likes it or not, it’s going to be forced unless it wants to let the euro appreciate further to do that response.

In the case of the United States, the monetary policy response has been more aggressive because traditionally that’s the way it’s done in the US to try to get the economy out of recession. There’s also more support of a fiscal policy response because if you don’t believe in an inelastic supply curve, then aggregate demand increases on the fiscal side helps you and in the US it has the—also the view that consumers are less Ricardian than in the eurozone. But even in the United States, given the rise in unemployment are becoming structural, unemployment benefits are becoming like Europe more permanent. So I think that aspect of it is changing. An additional observation I’ll make here is that massive quantitative easing is equivalent to FX intervention. If you’re trying to devalue away through growth, it’s effectively a form of intervention. It’s not formal intervention but that leads to the question of this currency or intervention tensions if you don’t to kind of call them kind of wars.

On the fiscal response, I would say the following points that are important. There is this gap between what the US claims to be doing and what eurozone is claiming to be doing. But even in the United States, there’s going to be a meaningful amount of fiscal drag, even unchanged.
fiscal policy. And in parts of the eurozone like Germany the fiscal austerity is not front loaded. So maybe the substantial differences are smaller than otherwise. Some of the responses in my view are driven on whether country can monetize those fiscal deficits or not; that’s something you can do in the US and UK. You cannot do it in the eurozone. Some of them depend on whether the bond market vigilantes have already woken up, such as they have in the peripheral eurozone; Spain, Portugal, Greece, Italy, Ireland, they did not in the UK or in Germany. And therefore, in those cases, frontloaded fiscal consolidation has to do more with political decision to frontload it rightly or wrongly. My concern about frontloaded is this results from the recent IMF study suggesting that however necessary fiscal consolidation in a short term, raising taxes and cutting spending has a negative effect on growth—doesn't crowd in growth, it crowds it out and if everybody does it then what’s going to be the outlook for economic outlook in the global economy?

So to just summarize, I think that there are many important points here. But the final point I would like to make is the following one. The financial crisis was caused by too much debt and leverage in the private sector and has now led to a massive releveraging of the public sector, automatic stabilizer Keynesian fiscal response, socializing of the private losses. And now in the countries like Greece and soon enough I worry about Ireland or Portugal where the national governments are in trouble, now you have supranational governments, be it the eurozone, the IMF, the bailing out the sovereign. You know at some point you cannot kick the can down the road, right? There’s not going to be anybody out of Mars coming to bail out the IMF or the eurozone if trouble occurs. So the point is: Is this response optimal or not? If you have excessive debt problems related to your income, you can try to grow yourself out of those problems. But growth is going to be anemic in the eurozone and US and advanced economies. That doesn’t solve your problem. You can save more, but if you save more in the private sector, you have the paradox of thrift, output falls, and you have a dynamic of debt destabilizing. And the same thing happens also on the fiscal side. There is a paradox of fiscal austerity. If it’s too much frontload that leads to recession, then you don’t resolve your problems. You can inflate yourself out of it by debasing real debt of the public sector. It has its own cost even if the US might be starting to consider that that’s different relative to eurozone. But if you don’t want to do any of these things and you have too much debt, eventually you need debt default or debt restructurings of households, of banks, and financial institutions, of local governments or central sovereigns or even of countries if they have too much foreign debt. And if you don’t do it, then the other options might be debasement of your currency or inflation. So at some point we’ll see how the policy response between different countries are going to imply different types of fiscal adjustment, different types of inflation taxes, or debt restructuring of one sort or another. Thanks.

Stanley Fischer: The paper by Pisani-Ferry and Posen is extremely interesting not least in describing and quantifying the policies that are being undertaken in Europe and in the United States. There’s a lot of talk always about policies that are out of control and so forth. But it’s good to see the numbers and to get some issues put very squarely on the table. Among the issues put very squarely on the table is: Why is US unemployment so much higher when output behavior is not so different? The answer that’s given is, well, American employers lay off people more easily. It’s a very big difference if that’s the whole story. There’s a question of US fiscal policy versus European with a claim that Americans are more Keynesian. I don’t think it’s
Americans that are more Keynesian. I think it’s the administration that’s more Keynesian than administrations abroad in the level of opposition to that proposition within the political system is part of what’s complicated in getting an American fiscal policy that promises plausible adjustment down the road.

And then there’s a policy coordination question on which the paper focuses, which is: How did the London consensus become the Toronto divergence? Well the answer actually is pretty simple and I think you could guess it at that time, which was in London, it was very clear that everybody needed to do approximately the same thing in their own interests. I think what was a bit more interesting—excuse me—what was more interesting was that the banking sector consensus on how to deal with the financial crisis, I think, was more of a policy coordination in the sense that people didn’t quite know what to do. And the G-20 led, certainly heavily influenced by the UK approach, did develop a common approach to this issue which, I think, they didn’t have before they started. And then there are questions—this ends up is Europe-US coordination—which ought to be done? And the answer is basically not very much. Don’t intervene in the foreign exchange markets. Let the IMF examine the issue and tell you whether the exchange rate is approximately right. I don’t think there’s a whole lot of desire on either side to intervene in the foreign exchange market in any case by either the US authorities or the European authorities, and so, I guess it isn’t going to happen. And the desired coordination will take place as suggested, namely, not to act. On the fiscal side, the implicit or explicit suggestion is don’t tighten too quickly and use the IMF’s calculations of how much fiscal room countries have to tell you how far you can go provided, and here comes the next part, condition three, there are medium-term fiscal consolidation programs put in place. And then the final one is sort of injunction, which I guess we all have to take. Don’t let pessimistic expectations become self-fulfilling. Don’t accept things which you may be able to change.

I think I’d like to make a comment on the fiscal adjustment issue and then turn to the foreign exchange issues briefly. On the fiscal adjustment consolidation programs, as was just said by Nouriel, the British program is not as frontloaded as they make it sound and that’s good because it shouldn’t be. And not much is going to happen this year or it wasn’t going to happen since the government was elected. Most of the adjustment is down the road. It’s bigger than the others, but it’s not—as we saw on the slide—it’s not massive. I think the key difference, and it really is a difference, is that it is very hard having seen what happened in the US in getting the fiscal expansion policy accepted to commit to anything. I don’t know what exactly the commitment would take that we’re going to straighten out the budget in five years on this particular path when the political process is nothing like that of a British government, which despite having a coalition can say with some credibility that they plan on straightening out the budget over three- or four-year horizon and you can probably believe that. We just don’t know what the politics and how it would be done in the Congress. And if at a time when it looked like the bottom was falling out of the world, it still took so much effort to get a program that I would say you don’t want to see how countries make either sausages or budgets. But sometimes you don’t mind eating the sausages. Eating this particular budget was a little harder. It wasn’t very nice and it wasn’t a very optimal fiscal program and who knows what’s coming down the road? So I think it’s just harder for the US and being harder at a time when the budget deficit is massive, being more difficult to commit to in adjustment probably has an impact on the effectiveness of fiscal policy.
I know it is said because I read the New York Times that there’s no evidence to think that what’s going to happen the road really matters. Long-term interest rates are very low. Therefore, the markets aren’t looking to what happens down the road, so you don’t have to say anything about what happens down the road. Well, I sort of like that story except that it comes from people who keep to telling you that the markets don’t know what they’re doing and you should pay no attention to market expectations. And we do have theories, which tell you these things matter, and it does matter how you look ahead at what’s going to happen and you don’t know. We used to have a saying in the 1990s that markets react much too slowly, but when they react, they react excessively. This was apropos financial crisis. And you really got to take that into account. So I think this sort of view that, while open ended as long as the interest rates stay low, you have all the freedom in the world to expand the deficit or to expand government spending is problematic suddenly for anybody planning over any horizon—any lengthy horizon.

Let me turn now to the foreign exchange aspect. I think the volatility in the euro-dollar rate is impressive. It was not so long ago that the euro was headed for one with probability one. And it not only didn’t get there, two days ago it was headed for 150 that was probability one and now it’s going down again. So who knows exactly what we’re going to get. And that’s very volatile. It is surprising, possibly less surprising than I find it in light of the fact that the economies are reasonably closed, that this hasn’t led to a great deal of noise about—I’m not saying that various policymakers aren’t complaining, but you don’t hear the problem of the exchange rate is being quoted as the predominant problem of the Europe-US relationship and of the Europe-US policy coordination. You do certainly hear it as the predominant problem of the emerging-market and developing countries. Every one of them is upset about the capital inflows, about the appreciations that are taking place. And they are also thinking about what to do about it. There’s a level of individual countries. Well there’s basically only two things you can do—or three. One, you can explain that fiscal policy should be adjusted to deal with the inflow, essentially reduce the interest rate by fiscal contractions or you don’t get so much money coming in. I think that’s a great story. The fiscal policy that I am aware of has enough trouble just getting itself straight as to not be willing—I wouldn’t prefer it to take on the exchange rate issue in addition to—if we can get it to be stable, which it is, and looking to a long term, I’d be very satisfied and I think most countries would be. So that leaves the other two things, which are intervention and capital controls. And we’ve seen them happening and we’re seeing them happening on a massive scale. And every day we follow these things for reasons you may appreciate when you intervene as well. And everyday some other country’s imposing capital controls and one day it was three countries, one in Asia, two in Latin America, and it’s just happening. Now we don’t have a good theory as to why countries shouldn’t do this except for the one that says it doesn’t work. But if you leave that aside and say it probably does work in the short run and that’s what people are concerned about, we don’t have a good theory of why they shouldn’t do it. I understand that they shouldn’t do it because there’s a global adjustment mechanism which takes place. And they have to contribute to the global adjustment. Well they’re contributing already because there’s a global recession going on which they didn’t start. So they think, “Well, gee, we gave it the office,” and then, boom, in comes this capital which is—you’re also going to contribute by adding a tax on exports and the subsidy for imports to the adjustment mechanism. They may say, “Well, it’s difficult enough as it is. We don’t need that. We’re going to try and do something else.” We have not solved this problem. I’m out of time so I can’t solve
in the next minute. We haven’t solved it for 60 years and we haven’t solved it for a hundred years because it was the interwar issue that, in part, the fund was set up to deal with.

It’s clear what we need. We cannot assume that countries will act against their own interests even in the relevant political horizon of two years and we just shouldn’t. What we need is a system in which when countries do what’s good for themselves they are acting in a way that reduces that is good for the system, which means we need a set of incentives and I don’t quite know what they are. And nobody knows because we haven’t yet figured out how to persuade the surplus countries to adjust. But we need a set of incentives that makes countries do what is good for the system when they do what is good for themselves in the relevant political horizon. By and large, the WTO does that. But the WTO issues are very small relative to the scale of the exchange rate problem. And I’ve heard people talking about applying WTO procedures in the case of the exchange rates. I think these issues are much bigger than what you could get out of a WTO dispute—get settled through a WTO dispute mechanism. But somewhere down the road, we need accepted rules of the road, which we don’t have. And when we get those accepted—it’s going to take a long time to get them. And until then, we’ll have pressures of the sort we have now and which are essentially driven by the fact that a lot of countries think they are being asked to take an excessive share of the adjustment burden because it isn’t being shared among all the countries in the system, and of course, we’re talking into a considerable extent, but not only about the role of the Chinese exchange rate in the adjustment mechanism and that is still out there. And it was part of the reason for this crisis and whereas the financial system is being fixed. This one isn’t being. Thank you.

**Rajiv Kumar:** Let me add my sort of kudos to the paper. Excellent paper. I enjoyed reading it. It covers a great deal of analytical regard and comprehensively and suggest some way forward. Let me sort of make essentially five points.

One from the Indian point of view and from the emerging economies point of view, I of course—you know it’s clear that any lack of coordination between two blocks which have 50 percent of the world GDP means a lot of trouble for us. And that trouble really is that—in one word if you like, the fear or the P word—protectionism because if there is lack of coordination and if these economies don’t get their act together, then of course the reaction would be increasing my protectionism and lack of market access. And for us in India it would perhaps come earlier because services are seen to be more high value-added jobs, and therefore, the reaction would start there. And I heard Barry Eichengreen’s talk yesterday saying that policy convergence is one of the necessary conditions for getting out of a global recession. And if there is no policy convergence—this is the 1930s lesson. And even if it doesn’t happen and there are chances of that, then of course we in India and all emerging economies get extremely worried. But apart from protectionism is also the great uncertainty which is introduced in the global environment and which will affect the financial flows clearly and this will become more volatile. And as Mr. Fischer just said, we have to bear the brunt of it and we don’t very often have the policy instruments to be able to do that quite efficiently and that means that you would be in trouble as well. But from the Indian point of view in a recent book *The Long View from Delhi* have taken the view that US resurgence is critical for us in the next decade, two decades, a decade and a half. And if the lack of policy convergence means that US has a greater probability of going through a Japan decade that means for India much more trouble than for perhaps any other
country. There’s an old saying that when two elephants fight, the grass is trampled. And we are very much the grass, maybe China is not, but we are very much the grass. So we are really concerned. And the final implication, which is really, I think, bodes very sort of not well is that this will surely mean the demise of the G-20. And that’s—Raghuram Rajan has been sort of predicting it. If this comes to pass, then let’s say bye-bye to G-20 and any ideas of changes in global financial economic architecture, governance, etc. and that’s a bad trouble.

So I think we really appreciate therefore the attempt by Adam and Jean to suggest the way forward. And essentially the way forward they’re sort of talking is like about a middle path, which is always very good, saying, “Europe, you guys have overestimated the loss of potential output. US, you underestimated it with what you’re doing. So therefore Europe, don’t tighten as much. US, please, you can have some sort of less degree of fiscal stimulus.” And I think that’s probably all very well. And the one point of course for the US is that any stimulus must be, of course, better targeted. It’s not painting bridges and it’s not dropping money from the helicopter, but it’s more like sort of education infrastructure, R&D, green technology. So I think that’s a fair point in that the paper could have made that extra point about how the US stimulus could be used. And two, the point that Jeffrey Frankel has been making that the current fiscal stimulus must be accompanied with a guarantee of fiscal discipline in the medium term, which I think they made the point also. But I think that if you suggest measures as to how that can be achieved, the medium-term fiscal consolidation for the US that would add to the paper.

The paper suggests that this could be done by the IMF being brought into the play to the mutual assessment process, I suppose. It’s a good idea, but already the mutual assessment process has become not individual country specific. It’s become regional. You got grouping countries with each other. And then, I suppose, I think it becomes pretty much irrelevant because you got to have country-specific strategies coming out of the IMF, what fiscal space, exchange rate, monetary policy, etc, unless the recipe is country specific. The IMF’s mutual assessment process cannot serve any purpose. And the second condition, I think, is that it should be made public. There is no reason of what the IMF finds to remain in the confines of the finance ministers. It should be out in the public so that the people can decide whether the IMF has taken the right view and is suggesting the right remedy. And the third, I think, is a suggestion that was made at a CGD [Center for Global Development] Conference in May, which is that the G-20 could think of establishing a committee of eminent economists to which the IMF recommendation could be submitted so that it is depoliticized, the whole thing is depoliticized because IMF is a political creature. So how do you get to the objectivity of it? Maybe that I think is a useful suggestion to have. The next sort of suggestion I think I would make is that the paper could have talked about how to sort out the imbalances within Europe itself and there are marked imbalances there. And there are some things that some European countries like Germany, for example, could do to ease the situation. And also that if there is a fiscal tightening in Europe, it cannot be across the board. It has certain spots which need less fiscal tightening that others which need more. So it has to be, I think, as Mr. Roubini said a more granular approach for Europe and that would come out quite clearly. And my own suggestion is that Europe could do the higher inflation target at this point of time because with the higher inflation target I think you would get if nothing else a clear sort of certainty, less uncertainty, about policy direction in Europe, monetary and fiscal policy, and that might help investment intentions at the moment which is, I think, in short supplies of capital. It’s not forthcoming as much as you like. The private sector’s response is not that large. And I think a
slightly higher inflation targeting, which would mean a greater room as it were now for the investment demand to come up, would help Europe in that sense.

On China, clearly you need a multilateral approach to China. My submission from having heard just recently in September and Jean was there, Andrew Sheng, Yu Yongding, Huan Yu Ping, and several Chinese economists that is perhaps counterproductive to go on about the exchange rate in China, the renminbi exchange rate. The political reaction to that is very large. And my point is that you could approach China through the mutual assessment process and talk to them about the imbalances and the steps that they were going to be taking to redress this huge current account surplus issue and how they were going to absorb it by facing domestic demand where it’s in the Western provinces, or the central, and the structural measure that they are going to raise domestic demand, which will then reduce the current account surplus and then in sort of implication have the exchange rate effect as well. So I think that’s my approach to China that I would suggest to the authors.

And finally I think that just a little quibble I have basically. On fiscal space, Spain having more fiscal space than US, what is the role of market perception about sustainability of the fiscal deficit for the fiscal space? I think it’s all very well to measure in some ways. But some way or the other, you need to bring in the market’s own perception as to what they consider to be more sustainable than the others. And if they would do that, then I think you would find that certain economies in Europe although in terms of the reaction curves of the sector would be more fiscally sustainable that might not be that has a large economy like the US whose debt is more easily acceptable by the market. Thank you.

C. Fred Bergsten: Let me just start if I might. Stan raised two questions that I think are very central to this debate about exit strategies, policies going forward. First, he refers to the part of the paper that talked about the sharp fluctuations in the exchange rate between dollar and euro and he’s quite right. Only four months ago, there were lots of anxieties in this country. The euro was getting undervalued that was going to make the US problem harder. Today, it’s the opposite. Is there a case for anything more than the joint abstinence that the paper proposes? Should there be any more concerted coordination or cooperation between the two key currencies, the euro and the dollar, to try to minimize instability in the system, minimize instability in the economic environment in the world, and to add to Stan’s other point, to maybe stop exacerbating the concerns in the rest of the world about competitive undervaluations, movements of currencies that would undermine other countries’ growth strategies? And then secondly, Stan raised the broader question: The anxiety, as he put it, across emerging markets and I know from talking with him that his own Israel is in the midst of that as well. He’s an intervener to a very big tune himself. He doesn’t like to do it. He feels he has to do it because of what’s happening in the rest of the world. That is a global problem as he said quite explicitly. He made the distinction between countries who are overvalued and therefore resisting capital inflow, read Brazil, countries which are very undervalued and are aggressively trying to keep themselves there, read China. So what are the systemic implications? And, as he said, nothing has been achieved in 60 years to deal with the surplus side of the adjustment problem. Should new steps be taken? And should the US and Europe lead in that direction? So let me ask first if any of the members of the panel would like to comment on that. Then we’ll open it up for comments on that or broader questions.
**Nouriel Roubini:** Well I think the problem is we live in a world in which the US needs a weaker dollar to grow its exports. The eurozone, especially the peripheries, are going to need a weaker euro to grow its exports. Japan needs a weaker yen to grow its exports. Even the Swiss are intervening to prevent the franc from appreciating because they don’t want to lose market shares relative to China. But there cannot be a world in which all currency weaken relative to each other, right? So, you know, the FX market for the last few months has been a contest, a beauty contest, about not only who is their prettiest but the least ugly, right? Until May and June, the dollar was less ugly and the euro looked like very ugly because of risk of a collapse of the eurozone, defaults, you name it. Then they patched up things in eurozone. Q2 numbers were better. In the summer, the US numbers were worse and then the dollar became less ugly and that’s what’s happening. And agreeing on not currency intervention, my view is meaningless because as I pointed out the monetary policy is a form of intervention. If the ECB is on hold, then talking about exit in the US and UK and Bank of Japan are going to do more QE and the US is going to do massive more QE. Then the ECB will have to decide either to accept that and to let the euro go to 150 to 160 and have another double dip or they’ll be forced to intervene. And my answer is they’re going to intervene and they’re going to intervene aggressively. And everybody is going to do the same and everybody is going to have to follow US monetary policy whether you like it or not. And there’s all the side effects for how emerging markets deal with this inflow of capital and it’s not an easy answer; capital controls, more intervention, letting your currency appreciate, credit controls. Other types of controls. It is going to be a royal mess.

**Jean Pisani-Ferry:** Yeah, I’d like to focus on this QE debate and the implication. I think the discussion we’re having is really about what is really QE and the different approaches to it. If you’d take the view that it’s monetary policy by other means and this doesn’t imply any monetization leading to inflation provided you have at the same time a fiscal framework for the medium term and I think that’s underlined in the paper. And I think from Lorenzo that he's saying, provided this condition is in place. We are wrong to consider that there’s something in the mandate of the ECB or in the setup in the relationship between the ECB and government that would prevent it to contemplate such an approach if we are in a condition where it would be deemed appropriate.

So that without the fiscal framework in the medium term that’s a different story because then it obviously leads to the expectation that in fact the name of the game is just to inflate away. And I think that’s very much the core of the issue we are discussing between the US and Europe. And in a way, this responds, Fred, to your first question, you know, that we don’t need to go beyond. I think the difficulty or the inability to commit fiscally in this country is a big problem for what we’re discussing. I know the institutional constraints, but I think from our perspective we cannot but say that it is a major issue. On your second question, the way I would put it is the real exchange rate adjustment needs to take place only vis-à-vis China but vis-à-vis the block of emerging countries that are having a very good crisis as Marco would have said. Essentially no permanent effects—certainly on their potential output and a very significant rebound. No fiscal adjustment down the road. The numbers put forward by the IMF are extremely impressive: 7
percentage point of GDP fiscal adjustment years to come in the advanced countries basically zero in the emerging countries. These are the implications for real exchange rates. And question is: Who is holding the key to this adjustment and then we’re back to China? But we shouldn’t look at it from a relatively narrow perspective. We should look at the issue from a broader perspective on relative exchange rate adjustment.

**Rajiv Kumar:** I just wanted to point out that in India’s case between April and now, the rupee has appreciated about 8 to 9 percent. We are going to run in a current account deficit about 3.5 percent, which is more than what we had planned to do. And that our net exports still contribute – 8 percent to our GDP growth. And I’m pointing all of this out because I think there can be a possibility that, led by the IMF’s mutual assessment process, if it is country specific that there could be developed a set of norms for preventing market intervention, the horror of which Nouriel just talked about. I think that is possible that could be done and I think that should be attempted. But at the moment, nobody seems to be having the political will to talk and to go in that direction. I think that’s the road to take. It can be done. But I’m not so certain that there will be these massive interventions because I think countries, economies in Europe and US, would see that that’s really a road to common denomination abroad.

**C. Fred Bergsten:** As Stan said, a lot of this has been triggered by China, which of course, has been intervened massively $1 billon a day for five years to keep its currency severely depressed. And Stan flagged that for 60 years the system has not had an effective response to that kind of problem. I put in your folders today an op-ed I had in the *Financial Times* on Monday that did propose an approach to it, which would be what I call countervailing currency intervention. If the Chinese are going to buy $1 billion a day, the US should sell $1 billion a day to counter that. I’m pretty sure that would deter the whole process. If you put something like that in place under authorization by the IMF to pursue systemic goals multilaterally agreed, then I think you’d have, for the first time, an effective mechanism to counter. If the Europeans get into the business more, the euro becomes more and more key currency. They, of course, would want to do that as well if their currency was being artificially inflated by the actions of other countries. Under the IMF rules, countries are obligated to consult with other countries in whose currencies they intervene, but they don’t do it. They’ve never done it. And that’s one more shortcoming in the system. This is just one idea to maybe try to fill that gap goes beyond the scope of today’s discussion. But I try to throw that out to see if we could begin thinking about filling the systemic void, which now as Stan put it, as Nouriel has just luridly expanded on it, could in fact be a very big source of global economic and financial trouble. Okay. Questions?

**Liz Chang:** Hi, Liz Chang from Emerging Markets. I just wanted to ask the members of the panel: The debate surrounding capital controls is such in the market there seems to be expectations that is going to—they are going to come. What measures would you suggest governments can consider in terms of introducing capital controls?

**Rajiv Kumar:** Capital control is something that’s been seriously considered. It was also done—it’s also considered in early ’90s actually. And then it’s sort of brought up all the Tobin literature and Tobin tax, etc., and so on. At least I think the emerging economies don’t have a very deep
capital markets, deep financial markets. This does call a lot of uncertainty and appreciation etc., and then the damage. And it is very much on the cards, I think. It’s very much on the cards and the authorities are looking at it. The other way, of course, is the sterilization process, which is what India had adopted in the last two years. But not yet, but I don’t think it can be ruled out.

**Joe Gagnon:** I have a question about monetary exit strategies we talked about. I agree with what Lorenzo said about back in 2003 and 2004 probably the Fed was too easy for too long and that was a mistake. But another lesson is that you aren’t easy enough to get the economy back on track, you actually delay exit quite a bit. A year ago, we are all talking about monetary exit. In fact, I was saying that we need actually more monetary ease. I think it’s clear now that if the Fed and the ECB had done that and taken my advice, we would be talking about exit now, but we’re not. And in fact, the ECB is not talking about exit and the Fed is actually talking about further ease. So, I guess the question I have for the Europeans is: In the US the reason we’re doing this seems to me is that core inflation is heading down and it’s down to one and threatened to go lower and the Fed doesn’t want that. In the euro area, as I calculated if exclude value-added tax, which I think you must, otherwise you have monetary policy reinforcing fiscal policy in a bad way, the core inflation rate in the euro area is 0.5 percent in the past 12 months. That’s way below target. Now, I understand that in the past, the core inflation rate hasn’t been a good predictor of future inflation. We care about headline inflation. Core inflation sometimes went up to headline in the past. But that seems to have changed lately. And in particular in 2008, the ECB responded to headline inflation and turned out headline inflation didn’t stay high. It dropped down below core. I think in the future that maybe likely. Is this an issue that people at the ECB in Europe are worried about that maybe deflation is heading your way?

**Lorenzo Bini Smaghi:** Yes, many questions, and as far as I saw from the charts: By the way the US is recovering, it’s recovering stronger than the euro area. The point is that jobs are not coming back. So maybe in this country people think that monetary policy is very useful to increase jobs in a way that is not clear to me how can this happen, so to push even further quickly monetary policy back on track. By the way, on VAT [value-added tax] it depends. It depends if VAT if every once for all increase, but if you have every year an increase and you don’t take into account as we’ve had in the euro area, by the way, systematically during the last decade, part of inflation increase was due to indirect taxes. And then if you monetize this, this is a monetization of fiscal policies. So you cannot really take it away. Third observation is true that core inflation is low. I think core inflation is core inflation. Our objective is headline inflation. So for us it’s more important to forecast well headline inflation and headline inflation as we are forecasting it is between one and a half and a bit higher going forward. Of course, we look at many indicators. So we consider that current rates are appropriate. And I don’t want to be boring and repeat things that have been said. So I think when we talk about exit strategies, most people are talking about instruments, the way in which monetary policy is implemented. And we have exited some of the instruments that we have applied, the 12 months fixed rates full allotments and the 6 months. And the markets are adjusting quite well to that. By the way, the exit strategy is endogenous in the euro area because it depends on the demands of liquidity by the banks. So if the banks need less liquidity, well they apply for less and then this is an automatic exit. Now some people may believe that you may force the liquidity on the banks by doing many things, but it’s not obvious
to me that this is working because then the banks bring back the liquidity to the central bank. And it’s not obvious to me that this kind of forcing the banks to get more liquidity by purchasing everything is bringing about results in terms of lowering long-term interest rates as I’ve shown myself. And I think if you want to have low interest rate, it’s better to anchor inflation. By the way, I think if tomorrow you said in Europe let’s aim at four percent, I mean, I don’t think or whatever—I don’t think people would be happy. But automatically, interest rate will go up. So I don’t think that we would gain a lot except for losing credibility in a monetary policy. So I think the exit in the end depends on underlying conditions. If the economy improves to some extent endogenously, the markets will ask for less and this is what we are observing. And we don’t believe in a theory that you have to force market participants to hold much more liquidity. And the graphs I showed, showed that this liquidity is not necessarily flowing to the system.

**Marco Buti:** Now just as a complement tackling a bit indirectly the said two questions. I mean a very important divide across the Atlantic is on the interpretation of the crisis. I mean basically in this country here we tend to see the drop in output, the increase in output gap as essentially a cyclical phenomenon. And the response is of the classic Keynesian type pushing to the limit. In Europe, we tend to see the crisis having for the advanced economies, not only for Europe but for the rest of the advanced economies also, having a lasting legacy and leaving permanent scars, which would only be mended through policies which are not of the short-term macroeconomic nature, not only at least to that but mainly of the structural nature. So we see the divide, and I think it seems to me in line with the whole strand of literature between the advanced economies and the emerging economies. Advanced economies and emerging economies have had two different crises. I mean the typical banking and financial crisis affected the advanced economies, and the research shows that to recover from this crisis takes time because of the deleveraging and all the rest of the things that we saw. I think it is normal that we see the exit from the crisis with a gradual subdued recovery in the US and in Europe. Emerging economies didn’t have this type of crisis. I mean basically their financial system was underdeveloped, under the public ownership because of very strict regulatory framework basically suffered from a more deep and more classic type of crisis, which led to a V-shaped recovery. So I think this is an element that I think is important also in assessing the degree and the type of responses. I mean if we take this differing interpretation together with the fact that this country here can afford—I say something provocative—this cannot afford unemployment less than we can afford in Europe because of the social security systems and because the welfare mechanism that we have, which are much more generous in Europe compared to this country, then this leads to a strong accent on the macro response and not enough on the structural response.

**Jean Pisani-Ferry:** Two points. First, I fully agree with Marco. But to push it a little bit further, what you’re saying is that essentially someone is wrong—either the US, the policy committee, or the European policy committee is wrong. That’s not the reality that differs so much that the way to look at the reality. We can discount some differences in the way market works, but then there would still be this element. So what if the US is wrong? It’s going to be frustrated by incurring structural problem mechanism means and that means going back to the ’70s basically, this kind of situation. What if we, in Europe, are wrong? That means we are going to do the opposite. And we are going not to solve our commission problems by focusing on the structural dimension and
believing that it is structural. So I think that I very much agree with that and that that’s a strong point. We will learn who was wrong and who is right. On Rajiv’s point, I wanted to react on your suggestion of a higher inflation target and also link that to the granularity debate. I think you underestimated the fact that there’s a lot of adjustment, in fact, going on within the euro area that a number of countries have to regain competitiveness to depreciate in real terms that this process is likely to be asymmetric with respect to countries in a much better situation, say, Germany. And that probably implies continued pressure on the aggregate inflation rate. And so I would see the risk of undershooting the target of the ECB. So I wouldn’t wish the ECB to increase its target. I just would wish the ECB to be on target, and I think that’s going to be a challenge.
The Last Shall Be the First: The East European Financial Crisis, 2008-10

Anders Åslund
Senior Fellow
Peterson Institute for International Economics, Washington, DC
THESES

- Standard credit bubble
- No change in exchange rate regime
- Excellent political economy
- Good crisis resolution by governments, IMF, and EU
Causes of the Crisis

- Loose monetary policy of the US Fed and European Central Bank (ECB)
- Excessive capital inflows (carry trade)
- Excessive credit expansion
- Real estate bubble
- Rising inflation
- Current account deficit
- Small currency reserves

But decent public finances and little leverage
Current Account Deficit, 2007 & 2009 (Percent of GDP)

- Bulgaria: -25.0% (2007), -7.0% (2009)
- Estonia: -10.0% (2007), -4.0% (2009)
- Lithuania: -10.0% (2007), -6.0% (2009)
- Romania: -15.0% (2007), -7.0% (2009)
- Hungary: -20.0% (2007), -8.0% (2009)
- Slovakia: -5.0% (2007), -1.0% (2009)
- Slovenia: -2.0% (2007), -0.5% (2009)
- Poland: -3.0% (2007), -1.0% (2009)
- Czech Republic: -8.0% (2007), -3.0% (2009)
Exchange Rate Regimes

- Euro: Slovenia & Slovakia: no crisis
- Currency Board: Estonia, Latvia, Lithuania & Bulgaria: Biggest output slump
- Floating Exchange Rates: Poland, Czech Republic, Hungary, & Romania: Mixed results
Currency Boards

- Most overheating: No means to stop or sterilize capital inflows
- But best fiscal policy
- Biggest GDP slumps
- But only one IMF program needed
- Internal devaluation works

All want the euro early: Estonia 2011
Inflation Targeting

- Poland & Czech Rep: Ideal monetary and exchange rate policy
- But Hungary & Romania needed IMF programs
- Poorer fiscal policy, especially in Hungary

Less interested in early euro adoption
Conclusion

- Ultimate problem: Loose monetary policy of US Fed and ECB
- No exchange rate regime could salvage these open and attractive economies
- No country changed exchange rate regime as no evident advantage
Political Economy

- Minimal unrest: Populism not popular
- Cuts of 8-10% of GDP (Baltics) politically easier than 2% of GDP
- People have demanded realistic, radical crisis resolution
Political Economy 2

- 8 of 10 countries have changed government during the crisis
- 9 of 10 countries have center-right governments – center right stronger than ever
- Multi-party coalitions most effective in crisis
IMF: Stronger than Ever

- Seized initiative with speed
- Had and gave more money than ever
- Fewer conditions: Back to old Washington Consensus
- Accepted and financed large temporary budget deficits
European Union: The Rookie

- Let the IMF lead
- Substantial co-financing
- Checked IMF – insisted on pegged exchange rates and financing for Latvia
Other International Players

- The United States: Keeping a Low Profile
- World Bank: The Third Fiddle
- EBRD & EIB: Bank restructuring
- European Central Bank: Voldemort
How ECB Should Change

- Abridge ERM II period
- Set a floor for inflation (2% a year)
- Offer credit swaps to EU countries

(Darvas and Pisani-Ferry 2008)
Outcome and Outlook

- Trimmed public sectors: Expenditure cuts rather than higher taxes
- Minimal changes in pensions – main problem
- Unchanged liberal tax policy: 7 have flat income taxes
- Eastern Europe has gained efficiency and self-confidence: European convergence

The Last Shall Be the First
Comments on
The Last Shall Be the First: The East European Financial Crisis, 2008-10
by Anders Åslund

Zsolt Darvas
Research Fellow, Bruegel
October 8, 2010
The book is an excellent report on the crisis in Eastern Europe with some provocative conclusions.

Brief comments on:


2. The exchange rate conundrum: *Will internal adjustment work in currency board countries?*

3. Main thesis: *Shall the last be the first?*
1. Was loose monetary policy of the US Fed and the ECB the ultimate problem?

Previous emerging market crises were frequently preceded by loose US monetary policy and were triggered by US tightening.

1. This time emerging Asia and Latam were barely hit

2. Huge diversity within Eastern Europe

(see chart next slide)
GDP, 2008 Q3 = 100 (2005 Q1–2010 Q2)

CE-5: Czech Republic, Hungary, Poland, Slovakia and Slovenia

Baltic/Balkan-5: Bulgaria, Estonia, Latvia, Lithuania and Romania

Asia-6: Indonesia, Korea, Malaysia, Philippines, Taiwan and Thailand

Latam-7: Argentina, Brazil, Chile, Columbia, Ecuador, Mexico and Uruguay
2. Will internal adjustment work in currency board countries?

Unit labor costs: Latvia vs Czech Republic (1999Q1=100)
2. Will internal adjustment work in currency board countries?

Average nominal monthly wages in Latvia (2001 Q1 – 2010 Q2; seasonally adjusted)
2. Will internal adjustment work in currency board countries?

How to evaluate recent current account surpluses?

1. Disappearance of unsustainable consumption and investment booms
2. Financing constraints
3. Negative output gap
3. Shall the last be the first?

Legacies in currency board countries:
- (Capacity to adjust fiscal policy; social peace)
- Overvalued exchange rates
- Slow adjustment in private sector wages
- Distorted FDI (see next slide)
- High private debt
- High unemployment

External environment: slower growth in EU-15; deleveraging; more differentiation; financial regulation
3. Shall the last be the first?

### Composition of FDI stock in 2007: Latvia vs Czech Republic

<table>
<thead>
<tr>
<th>Sector</th>
<th>Latvia</th>
<th>Czech Republic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>9</td>
<td>37</td>
</tr>
<tr>
<td>Finance</td>
<td>28</td>
<td>16</td>
</tr>
<tr>
<td>Real estate</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>Other sectors</td>
<td>41</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
3. Shall the last be the first?

IMF Oct 2010 WEO projections

GDP, 2008=100

- CE-5: Czech Republic, Hungary, Poland, Slovakia and Slovenia
- Baltic/Balkan-5: Bulgaria, Estonia, Latvia, Lithuania and Romania
- Asia-6: Indonesia, Korea, Malaysia, Philippines, Taiwan and Thailand
- Latam-8: Argentina, Brazil, Chile, Columbia, Ecuador, Mexico, Peru and Uruguay
US Climate Change Policy: Implementing Copenhagen and Beyond

William R. Cline, Peterson Institute for International Economics Senior Fellow

INTRODUCTION

At the 15th Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), held in Copenhagen in December 2009, the United States and other major nations undertook a political commitment to meet certain targets for reducing greenhouse gas emissions by 2020. Although this Copenhagen Accord was not a legally binding treaty like the Kyoto Protocol, it arguably provides an important basis for moving forward on curbing global warming. Crucially, for the first time the accord incorporated action pledges by major emerging market economies likely to be the largest sources of future increases in emissions.

The first section of this paper reviews the Copenhagen Accord pledges of the United States and other major nations. It discusses findings of my recent analysis of costs of an international abatement strategy that meets 2020 Copenhagen targets and then follows a path through 2050 that is consistent with limiting atmospheric concentrations of carbon dioxide to 450 parts per million and limiting warming to 2 degrees Celsius. Alternative leading cost models are applied to calculate abatement costs of such a strategy. The second section then considers whether political gridlock in the United States is likely to derail fulfillment of the US Copenhagen Accord pledge, and in particular, whether a second-best strategy based on EPA enforcement and regional climate initiatives can provide a strong initial substitute for climate legislation. The third section compares the EU and US Copenhagen pledges and considers mechanisms through which transatlantic cooperation can improve the effectiveness of abatement commitments.

Copenhagen Pledges and Abatement Costs

Table 1 reports the Copenhagen Accord pledges of 19 major economies. Together, their total carbon dioxide emissions of 24.5 billion metric tons (GtCO2) in 2007 constituted approximately 83 percent of the world total. The table highlights the importance of incorporating the major emerging-market economies into international abatement efforts. Already by 2007 carbon dioxide emissions (not counting from deforestation) from 10 major emerging-market economies already were about 80 percent as large as those of 9 major Annex I economies; in the business as usual baseline paths, these emerging-market economies’ emissions would far surpass those of the Annex I countries. So the Copenhagen Accord lays at least the initial groundwork for overcoming the single largest problem of the Kyoto Protocol: its omission of developing countries from any abatement efforts. This being said, it should be noted that typically the submissions of the emerging-market economies to the Copenhagen Accord were couched in language that made reference to prior UNFCCC clauses pertaining to finance and technological transfer to facilitate abatement.

---


2 Unless otherwise specified, all estimates and calculations in this section are from Cline (2010).
Table 1 Copenhagen Accord pledges for reductions in CO₂ emissions

<table>
<thead>
<tr>
<th>Annex I</th>
<th>2007 level</th>
<th>Reduction by 2020a</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>5,812</td>
<td>17 percent from 2005; 83 percent by 2050</td>
</tr>
<tr>
<td>European Union</td>
<td>4,050</td>
<td>20 percent from 1990 (30 percent contingent); 80 percent by 2050</td>
</tr>
<tr>
<td>Russia</td>
<td>1,585</td>
<td>15–25 percent from 1990</td>
</tr>
<tr>
<td>Japan</td>
<td>1,236</td>
<td>25 percent from 1990 (contingent)</td>
</tr>
<tr>
<td>Canada</td>
<td>530</td>
<td>Same as United States</td>
</tr>
<tr>
<td>Australia</td>
<td>377</td>
<td>5 percent (15 percent or 25 percent contingent) from 2000</td>
</tr>
<tr>
<td>New Zealand, Norway, Switzerland</td>
<td>131</td>
<td>10–20 percent, 30–40 percent, 20–30 percent from 1990, respectively</td>
</tr>
<tr>
<td>Non-Annex I</td>
<td>10,816</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>6,603</td>
<td>40–45 percent cut in carbon intensity of GDP from 2005 level</td>
</tr>
<tr>
<td>India</td>
<td>1,574</td>
<td>20–25 percent cut in carbon intensity of GDP from 2005 level</td>
</tr>
<tr>
<td>Korea</td>
<td>477</td>
<td>30 percent cut from BAU</td>
</tr>
<tr>
<td>Mexico</td>
<td>445</td>
<td>30 percent cut from BAU</td>
</tr>
<tr>
<td>South Africa</td>
<td>434</td>
<td>34 percent cut from BAU</td>
</tr>
<tr>
<td>Indonesia</td>
<td>416</td>
<td>26 percent cut from BAU</td>
</tr>
<tr>
<td>Brazil</td>
<td>352</td>
<td>36–39 percent cut from BAU</td>
</tr>
<tr>
<td>South Africa</td>
<td>434</td>
<td>34 percent cut from BAU</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>195</td>
<td>15 percent from 1992</td>
</tr>
<tr>
<td>Argentina</td>
<td>172</td>
<td>No specific target; energy efficiency measures, renewables</td>
</tr>
<tr>
<td>Singapore</td>
<td>148</td>
<td>16 percent cut from BAU</td>
</tr>
<tr>
<td>Total</td>
<td>24,537</td>
<td></td>
</tr>
</tbody>
</table>

a. Excludes deforestation.
b. BAU: business as usual baseline level by 2020.

Based primarily on projections by the Energy Information Agency of the US Department of Energy (EIA 2009), I have estimated business as usual (BAU) global emissions of carbon dioxide in 2020 at 35.9 GtCO₂, or 22 percent above the 2007 level. If the Copenhagen Accord goals of the 19 countries listed in table 1 are achieved, the result would be to cut global emissions to 32.7 GtCO₂ in 2020, a reduction of 9.1 percent from the BAU level but still an increase of 11 percent above the 2007 level. Clearly this reduction would be far from sufficient to limit eventual atmospheric concentrations to 450 parts per million or warming to 2 degrees Celsius, but this outcome would “bend the curve” of increases and could provide a key turning point for subsequent global reductions.

It is important to emphasize, nonetheless, that the pledges of the emerging-market economies are more ambiguous than those of the industrial countries. It turns out that China and India in particular have made pledges that essentially amount to no departure from business as usual. In China, the energy efficiency of output (units of real GDP per unit of energy) grew at 4.8 percent per year in 1990–2006; the carbon efficiency of energy (units of energy per unit of carbon dioxide emissions) deteriorated with a growth rate of –0.9 percent per year; so the carbon efficiency of output (units of GDP per unit of carbon dioxide) grew at the combined impact of 3.9 percent per year. In its BAU baseline, the EIA projects that for 2010–20 China’s energy efficiency of output would grow at 3.6 percent and its carbon efficiency of energy at 0.5 percent, once again leaving the carbon efficiency of GDP to grow at about 4 percent, even though there is a modest shift toward less ambitious growth in energy efficiency with some shift toward favorable rather than unfavorable carbon composition of energy. At an annual rise in carbon efficiency of output of 4.1 percent, over the 15 years from 2005 to 2020 the BAU baseline would reduce the carbon emissions per unit of GDP by 45 percent. This is just what China pledged in the Copenhagen Accord, suggesting that its effort is not a departure from business as usual. A similar calculation for India yields a
similar conclusion. Perhaps the most important implication of the pledges by China and India, then, is not that they will contribute to a substantial cutback in their own emissions from business as usual, but rather that their commitments will place limits on any “carbon leakage” that might otherwise occur through increased production of carbon-intensive products as a consequence of the curbing of these products in Annex I countries (and other emerging-market economies) that have pledged more aggressive cuts.

In principle, the pledges of several other major emerging-market economies are more ambitious than those of China and India. Brazil, Korea, Indonesia, Mexico, and South Africa have all pledged cutbacks from the BAU baseline by about 30 percent or more by 2020. Even so, the ambiguity about what the BAU baseline would have been implies future uncertainty about whether the pledge has been fulfilled.

For a meaningful path of global abatement consistent with eventual avoidance of greater than 450 parts per million carbon dioxide concentration or greater than 2 degrees Celsius warming, after 2020 there would need to be aggressive steady reductions in emissions by both industrial countries and most developing countries. I have calculated that subsequent to 2020 a straight-line reduction in emissions to reach a per capita ceiling of 1.43 tCO₂ by 2050 would be necessary to meet these goals. The current levels are about 20 metric tons per capita (i.e., more than 10 times the eventual ceiling) in the United States, 8 tons in the European Union, 10 in Japan, and 5 in China (but only 1.4 in India). A uniform per capita target by 2050 following achievement of the 2020 pledges, in what can be called a “Copenhagen Convergence” strategy, would have the moral strength of appealing to equity. The industrial countries will be in a much better position to ask China in particular to cut its emissions per capita by about three-fourths from their prospective 2020 peak of 6.7 tons if they themselves commit to future emissions that are no greater per capita than those of China, India, and other emerging-market economies.

For the 13 largest emitting economies, table 2 reports the proportionate cutbacks from BAU baselines that would be required to meet the Copenhagen Convergence, or CopCon, policy path for CO₂ abatement. The table also shows global emissions in the BAU baseline, under CopCon, and the depth of corresponding cutbacks.

<table>
<thead>
<tr>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>17</td>
<td>40</td>
<td>65</td>
</tr>
<tr>
<td>European Union</td>
<td>17</td>
<td>41</td>
<td>63</td>
</tr>
<tr>
<td>Russia 7</td>
<td></td>
<td>40</td>
<td>68</td>
</tr>
<tr>
<td>Japan 30</td>
<td>50</td>
<td>69</td>
<td>87</td>
</tr>
<tr>
<td>Canada 23</td>
<td>47</td>
<td>70</td>
<td>92</td>
</tr>
<tr>
<td>Australia 26</td>
<td>48</td>
<td>69</td>
<td>91</td>
</tr>
<tr>
<td>China 0</td>
<td>39</td>
<td>68</td>
<td>88</td>
</tr>
<tr>
<td>India 0</td>
<td>10</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Korea 30</td>
<td>54</td>
<td>74</td>
<td>91</td>
</tr>
<tr>
<td>Mexico 30</td>
<td>46</td>
<td>60</td>
<td>72</td>
</tr>
<tr>
<td>South Africa</td>
<td>34</td>
<td>57</td>
<td>76</td>
</tr>
<tr>
<td>Indonesia 26</td>
<td>38</td>
<td>49</td>
<td>57</td>
</tr>
<tr>
<td>Brazil 24</td>
<td>39</td>
<td>51</td>
<td>61</td>
</tr>
</tbody>
</table>

Memorandum: World

<table>
<thead>
<tr>
<th>Emissions (GtCO₂)— BAU</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions (GtCO₂)— BAU</td>
<td>35.9</td>
<td>41.4</td>
<td>47.1</td>
<td>53.2</td>
</tr>
<tr>
<td>CopCon (GtCO₂) 32.7</td>
<td>26.8</td>
<td>20.3</td>
<td>13.3</td>
<td></td>
</tr>
<tr>
<td>Cut from BAU ( percent)</td>
<td>9.1</td>
<td>35.2</td>
<td>57.0</td>
<td>75.0</td>
</tr>
</tbody>
</table>

Globally, emissions cuts from the BAU baseline would need to reach 75 percent by 2050. The depth of cutbacks is not only large but also, for some key emerging-market economies, surprisingly
similar to that of industrial countries. Thus, by 2050 cutbacks from baseline are about 85 to 90 percent not only for the United States, the European Union, Russia, Japan, Canada, and Australia, but also for China, Korea, and South Africa. India starts from such low per capita emissions that its proportionate cutbacks by 2050 are only about one-fourth. Other emerging-market economies are intermediate, with cutbacks of about 60 to 70 percent for Indonesia, Brazil, and Mexico.

For China, the absence of any cutbacks from baseline by 2020 means a more abrupt cutback from baseline by 2030 (a jump from zero to 39 percent). This suggests that Chinese planners might consider the merits of advancing cutbacks more aggressively than currently implied by the Copenhagen Accord pledge.

Cline (2010) estimates synthesis abatement cost functions for major economies using the results of the Energy Modeling Forum’s survey of integrated assessment model results (Clarke et al. 2009). Alternative cost functions are available from the Nordhaus (2010) RICE model (Regional Integrated model of Climate and the Economy), and for 2030, from cost functions based on McKinsey (2009) estimates. When these three cost models are applied to the CopCon abatement scenario, the resulting abatement cost estimates for major economies in 2020 and 2030 are as shown in table 3. The table also shows the corresponding marginal abatement costs per ton of CO₂ for two of the three models.

### Table 3: Abatement costs for the Copenhagen Convergence policy scenario: 2020 and 2030 (percent of GDP and 2005 dollars per tCO₂)

<table>
<thead>
<tr>
<th></th>
<th>Abatement cost (percent GDP)</th>
<th>Marginal cost (dollar per tCO₂)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>0.02  0.23</td>
<td>0.29  1.18</td>
</tr>
<tr>
<td>European Union</td>
<td>0.03  0.23</td>
<td>0.27  0.80</td>
</tr>
<tr>
<td>Russia 0.00</td>
<td>0.27  0.17</td>
<td>2.44  0.07</td>
</tr>
<tr>
<td>Japan 0.17</td>
<td>0.55  0.55</td>
<td>1.14  0.17</td>
</tr>
<tr>
<td>Canada 0.08</td>
<td>0.46  0.36</td>
<td>1.04  0.28</td>
</tr>
<tr>
<td>Australia 0.11</td>
<td>0.48  0.44</td>
<td>1.06  0.26</td>
</tr>
<tr>
<td>China 0</td>
<td>0.36  0.00</td>
<td>2.42  0.12</td>
</tr>
<tr>
<td>India 0</td>
<td>0.01  0.25</td>
<td>0.00  0.00</td>
</tr>
<tr>
<td>Korea 0.16</td>
<td>0.70  1.69</td>
<td>3.9  0.09</td>
</tr>
<tr>
<td>Mexico 0.13</td>
<td>0.37  1.69</td>
<td>3.11  0.08</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.20  0.69</td>
<td>2.01  4.19</td>
</tr>
<tr>
<td>Indonesia 0.16</td>
<td>0.39  1.38</td>
<td>2.39  0.08</td>
</tr>
<tr>
<td>Brazil 0.07</td>
<td>0.22  1.14</td>
<td>2.36  0.09</td>
</tr>
</tbody>
</table>

The most important overall implication of table 3 is that abatement costs should be manageable for the key emitting economies, certainly through the 2020 Copenhagen targets but also even by 2030 as aggressive cuts are implemented in the convergence path. The lowest costs are those from the McKinsey-based model, which for example indicates that the 40 percent cut from baseline in both the United States and the European Union in 2030 would cost only about 0.1 percent of GDP. An intermediate estimate of 0.23 percent of GDP is obtained in the RICE model. The synthesis models estimated from the European Monetary Fund (EMF) survey show considerably higher costs, but these are still only about 0.5 percent of GDP in 2020 for the industrial countries and about 1.5 percent for emerging-market economies (excluding China and India). The higher costs for five emerging-market economies reflect the fact that

---

3 However, the initial negative-cost section of the McKinsey cost curves is suppressed to zero cost.
their Copenhagen pledges amount to greater proportional cutbacks from baseline emissions than those of the industrial countries (except for Japan, see table 2).  

Table 3 also reports the marginal abatement costs for the RICE and EMF-based models. Somewhat surprisingly these tend to be higher for the emerging-market economies than for the industrial countries, again reflecting the more ambitious pledges for 2020. The surge in marginal cost from 2020 to 2030 for especially China (and particularly in the EMF-based estimates) suggests scope for gains from reallocating cutbacks to earlier in the horizon, with cuts already in 2020. An implication of the pattern of marginal abatement costs is that there may be less scope than popularly believed for reducing abatement costs in industrial countries through the purchase of offsets from developing countries.  

Prospects for action in the United States

The passage of the Waxman-Markey energy and climate bill in the US House of Representatives in June, 2009, turned out to have been the likely high-water mark for US climate action for at least some time. The bill sought to reduce greenhouse gas emissions by 17 percent from 2005 levels by 2020 (equivalent to a reduction back to the 1990 level); 42 percent by 2030; and 83 percent by 2050 (equivalent to an 80 percent cut from 1990 levels). A cap-and-trade regime was initially to allocate 85 percent of emissions permits without cost to existing electricity distribution companies, energy intensive industries, and other emitting sectors, with the portion of permits auctioned rising from the initial 15 percent to 70 percent by 2030. Auction revenues were to be used to offset additional costs for low-income households, and eventually to include use in funding of international aid, forestation, and technology related to climate change action. The bill set a minimum carbon price for permits at $10 per ton of CO₂; the Environmental Protection Agency projected a range of $11 to $15 by 2012 and $22 to $28 by 2025 (in 2005 dollars). The bill provided that 20 percent of electricity would be from renewable sources by 2020; that new coal-fired plants would capture 50 percent of emissions with carbon capture and sequestration (CCS) by 2025; buildings would have standards requiring a 50 percent increase in efficiency by 2016; and included other regulatory measures. By 2022, the president was authorized to require emissions allowances on imports.

The Congressional Budget Office (CBO 2009) estimated that the bill would reduce US GDP from baseline by 0.2 to 0.6 percent of GDP by 2020; 0.3 to 1.2 percent by 2030, and 1 to 3.5 percent by 2050. It placed the price of emissions allowances at $19 per metric ton of CO₂ in 2015, $25 in 2020, $40 in 2030, and $120 by 2050 (in 2009 dollars). The CBO emphasized that a key factor curbing abatement costs was the flexibility in the bill to achieve up to a 2 GtCO₂ equivalent of annual reductions through the use of offsets, amounting to about half of the reductions planned through 2030.

Two principal attempts were made toward parallel action in the Senate. The Kerry-Boxer bill, a cap-and-trade proposal similar to Waxman-Markey, passed a key committee in November 2009 despite a Republican boycott, but was subsequently abandoned. Senator Kerry then sought to develop a bill with Senators Lindsay Graham and Joseph Lieberman that applied less comprehensive, less stringent caps, combined with a carbon tax for some sectors (oil, gasoline) (Tutwiler 2010). But in July 2010, Senate Majority Leader Harry Reid announced he would not bring a compromise bill to the floor. In effect, the concentration of legislative effort on healthcare reform and then on financial sector regulation, combined with increasing partisan gridlock in especially the Senate, doomed the prospects for legislation on climate action in at least 2010.

---

4 Note, however, that the EMF-based estimates probably overstate the abatement costs for these economies, especially by 2030. An alternative estimate also based on a synthesis of the EMF results but allowing for trading at the international carbon price places the CopCon abatement costs by 2030 at 1.22 percent of GDP for China, 1.07 percent for Korea, 0.67 percent for Mexico, 2.79 percent for South Africa, 0.85 percent for Indonesia, and 0.50 percent for Brazil, much lower than the EMF-based estimates reported in table 3.

5 That is, the purchase of emissions rights from developing countries that they would otherwise use themselves, or arrangements that seek to accomplish this effect in the absence of a formal international emissions rights regime.
All of the legislative proposals had included a strong incentive to persuade opponents that cooperation would be advisable: they would preempt regulatory controls on greenhouse gases that otherwise might be imposed by the Environmental Protection Agency (EPA). In 2007 the US Supreme Court ruled that greenhouse gases constituted “air pollutants” that were subject to regulation by the EPA. In late 2009 the EPA formally made a finding of “endangerment,” that greenhouse gases threaten public health and welfare, a condition for action (EPA 2009). Now that legislative initiatives on climate have stalled, the role of the EPA shifts at least potentially from being the club in the closet to becoming the front-line mechanism for implementing the Copenhagen pledge. Ideally the legislative track would regain momentum following the November 2010 midterm elections, and something like the Waxman-Markey bill would become law within the next year or two. However, few observers seem to be optimistic about legislative action within this time frame.

“Plan B” for US climate action does not depend solely on the EPA. In addition, there are three regional initiatives at the state level that seek to limit greenhouse gas emissions (annex A). Researchers at the World Resources Institute have compiled estimates of emissions reductions that might be attained under low, medium, and high levels of intensity of action at the federal and state levels, considering both EPA enforcement and the regional initiatives at the state level (Bianco and Litz 2010). In the area of electric power, which accounts for 28 percent of US emissions in the case of coal-fired plants and another 5 percent for natural gas–fired, the EPA has scope for action under the New Source Performance Standards and preconstruction permits, ash disposal regulations, and traditional air regulations (also subject to state action). The Department of Energy (DOE) and states can act under energy efficiency standards. For emissions from vehicles, with light-duty vehicles accounting for 16 percent of total US greenhouse gas emissions and medium- and heavy-duty vehicles another 8 percent, regulations apply under the Corporate Average Fuel Efficiency (CAFE) standards of the Department of Transportation (DOT), emissions standards under the Clean Air Act (EPA), renewable or low-carbon standards (EPA), and miles traveled policies (states and cities). For light vehicles, the authors assume CAFE standards of 40 miles per gallon by 2030 in the low case, ranging to 51 miles per gallon in the high case.

At the state level, the authors consider existing legislation, additional action under existing gubernatorial executive orders on emissions reduction targets, and additional cap-and-trade action within the regional programs as the three levels of intensity of action. Regarding the latter, there are three existing regional initiatives: the Regional Greenhouse Gas Initiative (RGGI) of 10 northeastern states; the Western Climate Initiative (WCI), encompassing California and six other states as well as four Canadian provinces; and the Midwestern Greenhouse Gas Reduction Accord (MGGRA), with six member states. Together the three initiatives include states that account for about 40 percent of US emissions (Bianco and Litz 2010, p. 18).

Overall, Bianco and Litz judge that for the low level of ambition, federal and state action would reduce greenhouse gas emissions by 6 percent below 2005 levels by 2020 (and by 5 percent by 2030); the corresponding intermediate action cuts would be 9 percent (18 percent); the high-intensity level of action would achieve cuts of 14 percent below 2005 levels by 2020 (and 27 percent by 2030). About 80 percent or more of the reductions would be attributable to action at the federal level, with the rest occurring from additional state-level action. The upper end of the cutbacks is reasonably close to the US Copenhagen target of a 17 percent cutback from 2005 levels by 2020. A key issue, however, is whether the political obstacles that have hindered federal legislation would impede aggressive action using existing regulatory authority. Some senators have already proposed legislation that would limit or postpone the EPA’s authority to regulate emissions of greenhouse gases.

---

6 “Lackluster,” “middle-of-the-road,” and “go-getter,” in their terminology.
7 In Canada, the four provinces constitute almost 80 percent of population and GDP (WCI 2010).
Implications for US-EU cooperation

The European Union has long taken the lead on international action to limit global warming. Until recent months it seemed that the United States had finally joined in this effort in earnest. Public attitudes had shifted in favor of action, perhaps in part because of Hurricane Katrina.\(^8\) In the 2008 presidential election, both candidates called for action to curb global warming. Despite the financial crisis and Great Recession, as recently as May 2009 a survey commissioned by Pew Charitable Trust found that 77 percent of voters favored action to reduce greenhouse gas emissions (Pew 2009b).\(^9\)

A major political challenge for moving ahead in the United States will be to reengage the climate issue on a bipartisan basis. The dynamics of massive legislative change in 2010, marked by healthcare reform and financial regulatory reform, became heavily partisan, turning on the ability to muster the 60 votes in the Senate needed to stop filibuster. Addressing climate change is such a central and long-term issue that it will likely need to marshal wide congressional support rather than being forced through with one party heavily in opposition. This could be especially so because several Senators from the majority party represent coal and industrial states and might not support a closure vote.

Even before the recent setbacks to climate action by the United States, many in Europe had thought that the US goals in the Waxman-Markey legislation were inadequate and not comparable to the efforts the European Union had made in the past and planned to make in the future. Such doubts were based primarily on the grounds that whereas the European Union sought a goal of reducing emissions 20 percent below the 1990 level by 2020 (and possibly 30 percent if other nations were ambitious in their goals), the US goal of 17 percent below 2005 levels only amounted to a reduction back to the 1990 level. EU carbon dioxide emissions (excluding deforestation) were 4.20 GtCO\(_2\) in 1990; US emissions were 4.87 GtCO\(_2\). By 2007, EU emissions had fallen by 3.6 percent to 4.05 GtCO\(_2\) whereas US emissions had risen by 19.3 percent to 5.81 GtCO\(_2\).\(^{10}\)

A major difference in population growth accounts for part of this difference in past performance. From 1990 to 2007, the EU population rose only 3.8 percent; the US population rose 20.4 percent. In terms of percentage change, then, the per capita comparison shows the United States in a less unfavorable light than the change for total emissions, as the decline of 0.9 percent in US per capita emissions from 1990 to 2007 was considerably closer to the EU performance of a 7 percent per capita decline (a gap of 6 percent) than the 23 percentage point gap in the change in total emissions.

A second consideration is that the abatement performance of the European Union was to some extent exaggerated by developments peculiar to Eastern European members who experienced sharp reductions in emissions associated with economic reform and the phasing out of highly inefficient energy production facilities. Thus, for the core 15 countries that were initial EU members, CO\(_2\) emissions rose by 4.7 percent from 1990 to 2006; it was for the 12 countries that subsequently joined the European Union that emissions declined, by 24.4 percent (calculated from WRI 2010).

Perceptions about mutual performance are also affected by a popular if misleading impression in the United States that the European Union’s Emissions Trading System (ETS) had been a failure—because of overissuance of permits that led to a collapse of the carbon price to zero in 2007 (CCC 2008). On the other side, a reasonable impression for EU citizens would be that the United States has been a serious laggard on climate change, not only because it failed to join the Kyoto Protocol but also because

---

\(^8\) A global poll in the fall of 2004 found 58 percent of Americans surveyed considered violent storms, flooding, and drought to be “part of a natural pattern;” the same question asked in 2006 found only 39 percent giving the same response, and 59 percent viewing them as unusual—boosting the US response to the global average (World Public Opinion 2006).

\(^9\) Even so, another Pew survey had found that out of 20 subjects viewed by Americans as “top priorities,” such as the economy, terrorism, immigration, and so forth, dealing with global warming had slipped from mention by 38 percent as a top priority in January 2007 to 30 percent in January 2009, whereas those indicating strengthening the economy as a top priority had risen from 68 percent to 85 percent (Pew 2009a).

\(^{10}\) Unless otherwise specified, data cited in this section once again are from Cline (2010).
its emissions are so much higher per capita than those in Europe. Thus, in 2007, per capita emissions in the United States amounted to 19.3 tCO₂, more than twice the level of 8.3 tCO₂ in the European Union (Cline 2010). However, it turns out that the difference between the two is partly explained by per capita income, considering that for the European Union as a whole per capita income (in purchasing power parity [PPP] terms) is considerably lower than in the United States because the European Union includes several Eastern European economies. Average per capita income is considerably lower than that of the United States (approximately $27,500 for the European Union in 2007 versus $43,100 in the United States, in 2005 PPP dollars). Thus, whereas per capita GDP in the EU-15 core of original members at about $32,000 is considerably closer to US per capita income, for the EU-12 group of new members per capita GDP is only about half as high.¹¹

For the 25 largest emitting economies, for 2007 a simple regression of the logarithm of emissions per capita on the logarithm of PPP GDP per capita yields a relationship that places the United States almost exactly on the cross-country curve but shows the European Union considerably below it (figure 1).¹² The divergence of US and EU emissions per capita can then be decomposed into two parts: the amount that can be attributed to the fact that the United States has higher per capita GDP; and the amount that can be explained by the departure of each economy from the cross-country line. US emissions per capita would be expected to be 48 percent higher than those of the European Union because of higher per capita income. In addition, it turns out that the US emissions per capita were 2.1 percent above the cross-country curve whereas EU emissions per capita were 36 percent below it. The European Union does have well above average efficiency of emissions performance, then, but the superiority to that of the United States is much more moderate than would be suspected by a raw comparison of the absolute levels of emissions per capita for the two economies.

Of the other economies shown in the figure, notable departures from the cross-country curve occur in the case of China’s high emissions per capita and Brazil’s low emissions (but excluding deforestation). Notably, India’s low emissions are explained by low per capita GDP rather than a departure from the cross-country line.

To recapitulate, despite the various qualifications concerning the extent to which the European Union has led and the United States has lagged in the international effort to curb global warming, there is little doubt that to at least some degree the European Union has been ahead in this effort. Even so, the US commitment in the Copenhagen Accord marks a major advance over what the United States has done in the past, and it is to both economies’ interest to maximize the chances that the United States, the European Union, and other economies actually deliver on the accord pledges going forward. What steps could the European Union and United States take to help ensure this outcome?

One area for possible US-EU cooperation would be in the harmonization of their cap-and-trade systems to allow for trading emissions permits between the two economies. It would be extremely helpful for international progress on abatement if there were a predominant world price on carbon dioxide. Such a price would not only help ensure least-cost abatement but would also be a spur to technological change by sending a strong signal about the likelihood of the future opportunity cost of carbon-based energy. If the United States were to adopt legislation similar to the Waxman-Markey bill, then there is no reason that the trading of emissions allowances could not be made available to potential purchasers from within the European Union’s ETS, and vice-versa. Mutual eligibility for trading in the two economies’ cap-and-trade regimes would go a long way toward establishing “the” world price on carbon dioxide emissions.

¹¹ Calculated from World Bank (2010).
¹² For 25 major economies, a regression of the natural logarithm of emissions per capita (EPC, metric tons CO₂ per year on the natural logarithm of PPP per capita income (“y” dollars of 2005) yields the following results for 2007: ln (EPC) = −6.3069 (−5.8) + 0.8664 (7.5) ln y, adjusted R² = 0.70, t-statistics in parentheses. Data are from Cline (2010).
The marginal cost estimates in table 1 suggest that, in principle, carbon prices could be broadly comparable in the European Union and the United States in 2020 and 2030. The RICE model is more nonlinear than the synthesis of the EMF model survey, and the RICE marginal costs are only about $15 per metric ton of CO₂ in 2020 versus about $80 in the EMF models. But in both models the two regions show relatively similar marginal costs. In part this outcome reflects the fact that the European Union and United States have the same estimated cutback from baseline in 2020 (17 percent), as the RICE and EMF-based models both calibrate cost as a function of the depth of emissions cut from baseline.

A similar marginal cost in the European Union and United States could be interpreted as having two alternative implications for trading. The first might be that trading would not accomplish much because neither economy would benefit much from buying or selling permits to the other. The second, which I prefer, is that trading could be allowed without much fear on either side that there would be a severe dislocation domestically as a consequence of large trading operations, yet the availability of trading would strongly enhance the market perception that there was a “world price” for carbon. Moreover, there has been sufficient experience with sharply fluctuating prices within the ETS that a much broader market that included the United States would seem desirable to smooth out prices.

At present it might be feared by some in Europe that the US efforts would be so meager, and overallowances so great, that permitting trading would simply weaken the overall abatement effort that otherwise would be accomplished under the European Union’s leadership. If those in the United States (for example, in regional trading initiatives) shared this expectation, they might similarly be concerned for the opposite reason: that openness to trading would drive up the cost of local abatement. Indeed, if one were to look at today’s spot prices for the only relevant trading information, one would conclude that a large price divergence would be likely to realize such fears. Thus, as of early September the ETS trading price for December 2010 was €15 per ton of carbon dioxide, whereas the price in the RGGI auctions was $1.86, only about one-tenth as much. However, in the relevant time period, the third trading period for the ETS beginning in 2013 (the first was 2005–07; the second covers 2008–12) and a comparable period in the United States, it seems highly likely that the EU price level will be at least modestly higher than presently and the US price would be much higher than the current RGGI level. That would be especially

---

13 See [www.pointcarbon.com](http://www.pointcarbon.com) and [www.rggi.org](http://www.rggi.org).
14 As noted above, the CBO estimates the carbon allowance price under Waxman-Markey at $19 per ton of CO₂ by 2015.
true if either the EPA were to move forcefully ahead and were to use trading mechanisms as it has done in past abatement initiatives (especially for sulfur dioxide) or, preferably, if congress were to pass a comprehensive climate bill that implemented either cap-and-trade (as in Waxman-Markey) or adopted a carbon tax of some form. In principle the regional initiatives could also make their trading regimes open to trading with the European Union’s ETS, as was envisioned in mid-2006 in a letter of intent agreement between UK Prime Minister Tony Blair and California Governor Arnold Schwarzenegger (Wintour 2006). However, the EPA would probably need to cooperate, rather than opposing such initiatives on grounds that any such arrangements should be controlled at the federal level.

Besides integrating their cap-and-trade regimes through permitting mutual carbon trading, and first and foremost meeting their own 2020 goals pledged at Copenhagen, perhaps the other most important action the United States and the European Union could take to help ensure successful international action on climate change would be to develop concrete plans for implementing the target for financing of developing-country climate action on something like the Copenhagen Accord’s $100 billion per year scale by 2020. China’s huge holdings of foreign exchange reserves (about $2.5 trillion) mean that it should be able to act without external finance. For other developing countries, Cline (2010) estimates that annual investments in developing countries needed to meet Copenhagen Convergence abatement goals would amount to about $40 billion annually in 2020 and $120 billion in 2030 (in 2005 dollars). Adaptation costs in developing countries (excluding not only China but also Korea, Malaysia, and Taiwan by virtue of their by-then high income levels) could require financing of about $40 billion in 2020 and $50 billion in 2030. Even with only moderate global financial flows associated with the purchase of offsets from developing countries, by 2020 and especially 2030 the financing needs could easily meet the $100 billion benchmark incorporated in the Copenhagen Accord language. Presumably such financing could be at market-related rates for emerging-market economies but on concessional terms for low-income countries.

ANNEX A\textsuperscript{15}

US regional climate initiatives

Currently there are three regional climate initiatives at the inter-state level encompassing a total of 23 US states and four Canadian provinces. All of the three initiatives have announced goals for the next decade for the reduction of greenhouse gas emissions and intend to implement regional cap-and-trade programs to achieve these goals. Among the three initiatives, the RGGI is the only one that has already begun operating its regional cap-and-trade program. The WCI has completed the design of its cap-and-trade program, which is scheduled to start in January 2012. The MGGRA, the newest initiative, is still in the stage of designing its cap-and-trade program.

**Regional Greenhouse Gas Initiative (RGGI)**\textsuperscript{16}

The member states of RGGI include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. In addition, Pennsylvania has observer status. In January 2009, RGGI launched its regional CO\textsubscript{2} cap-and-trade program, which became the nation’s first mandatory, market-based program to curb emissions of greenhouse gases.\textsuperscript{17} The program currently covers 209 fossil fuel–fired power plants of 25 megawatts or greater in size in the 10 participating states, accounting for 95 percent of the CO\textsubscript{2} emissions from the electric power generation sector in the area.

\textsuperscript{15} Prepared by Yimei Zou.
\textsuperscript{16} [www.rggi.org](http://www.rggi.org)
\textsuperscript{17} Overview of the program: [http://rggi.org/docs/program_summary_10_07.pdf](http://rggi.org/docs/program_summary_10_07.pdf)
Total CO₂ emissions from the RGGI member states are capped by the sum of CO₂ allowances issued by the 10 states, which is initially set at 188 million short tons per year. This ceiling applies from 2009 through 2014. From 2015 through 2018, the cap will decline at an annual rate of 2.5 percent, achieving a total four-year reduction of 10 percent.

Carbon dioxide allowances are traded through quarterly regional auctions. According to the 2009 Annual Report on the Market for RGGI CO₂ Allowances, by the end of 2009, 172 million allowances had been sold in total, which yielded auction proceeds of $494 million. The RGGI states are investing approximately 70 percent of auction proceeds in programs that improve energy efficiency and promote renewable energy.

Western Climate Initiative (WCI)

Member states of the WCI include Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington, as well as four Canadian provinces: British Columbia, Manitoba, Ontario, and Quebec. Observer states include Colorado, Idaho, Kansas, Nevada, and Wyoming.

The WCI released the design of its regional greenhouse gases cap-and-trade program in July 2010. The program is scheduled to start in January 2012, although not all members will implement the program when it begins. The goal of the program is to cut regional greenhouse gas emissions to 15 percent below 2005 levels by 2020. When fully implemented, the program is projected to cover a broad range of emitters jointly responsible for approximately 90 percent of greenhouse gas emissions in the WCI-participating regions.

Each state is to issue limited amounts of tradable “emission allowances.” Not yet determined, these allowances are to follow these guidelines. Starting from 2012, allowances will only apply to the electricity sector and large industrial sources. Each state’s allowance ceiling is to be the best estimate of actual emissions anticipated from the covered emitters for that year. In 2015, allowance ceilings are to rise to provide for expansion of coverage to transportation, residential, and commercial fuels. For 2020, allowance ceilings are to be set for each state such that, together with emissions from uncapped sources, they will amount to the state’s 2020 economywide emissions target. The allowance budgets are to follow a linear decline from 2012 to 2015, and again from 2015 to 2020.

Midwestern Greenhouse Gas Reduction Accord (MGGRA)

Member states of the MGGRA include Illinois, Iowa, Kansas, Michigan, Minnesota, and Wisconsin. States with observer status include Indiana, Ohio, and South Dakota.

The accord, established in November 2007, calls for the development of targets for greenhouse gas emissions and a regional cap-and-trade program to help achieve these targets. The cap-and-trade recommendations were completed in May 2010 and are now under review by the member states. The recommended emissions reduction targets for individual states were set at 18 to 20 percent below 2005 levels by 2020, and 80 percent below 2005 levels by 2050.

---

18 One short ton = 907.2 kg.
19 Detailed auction data and CO₂ allowance prices are available on the RGGI website: http://www.rggi.org/market/co2_auctions/results
21 http://www.westernclimateinitiative.org
22 Detailed design of the program: http://westernclimateinitiative.org/component/remository/general/program-design/Design-for-the-WCI-Regional-Program/
23 http://midwesternaccord.org
24 See http://www.midwesternaccord.org/midwesterngreenhousegasreductionaccord.pdf
References


EU Climate Change Policy: Can It Mobilize Innovations for Clean Energy Technologies?¹

Dr. Reinhilde Veugelers, Bruegel Senior Fellow, University of Leuven (BE) Full Professor, Center for Economic and Policy Research (CEPR) Research Fellow

INTRODUCTION

This paper analyzes the EU Climate Change Policy’s ability to mobilize innovations for clean energy technologies. It first discusses the impact of the crisis and the implications of its low- and high-end pledge of respectively 20 and 30 percent greenhouse gas (GHG) emission reductions. As the cost-effectiveness of these targets, particularly the high-end one, requires the development and deployment of new technologies and the competitiveness of EU firms in green technologies, this paper next takes a look at the trends and the major players in the world in green patenting. It relates private green patenting activities to government policies on carbon pricing and public funding. It concludes with a discussion on what is needed in the future to mobilize innovations for clean energy technologies.

1. The Current State of the European Union’s Climate Change Policy

In early 2008 the European Union adopted its Climate and Energy Package (CEP), to reduce its GHG emissions by 80 to 95 percent by 2050. The package includes a 20 percent renewables target and a 20 percent GHG reduction by 2020, with the option to increase that to 30 percent. A mix of policy instruments were designed to reach these targets: an Emissions Trading System (ETS) and a set of regulatory measures on CO₂ car emissions and energy efficiency (non-ETS).

Since the adoption of the CEP plan in 2008, there have been important changes, most notably the impact of the crisis. The full force of the economic crisis in 2009 had a significant impact on emissions in the short term, with estimates putting the emission reduction in 2009 at around –14 percent compared to 1990 levels (Delbeke 2010). Carbon prices fell early in 2009 from €25 to €8 and then slightly recovered. Furthermore, there were unexpectedly significant levels of banking in the ETS system, giving little incentives to further reduce emissions after 2012, and still a large amount of unused international credits and banked allowances in the system up to 2020.

Emissions are expected to rebound when GDP growth rates recover, but overall GDP levels by 2020 are projected to remain lower than expected before the crisis. An approximation of the costs of full implementation of the Climate and Energy Package puts the estimated costs in the context of the new 2009 baseline framework at €48 billion in 2020, or 0.3 percent of GDP. This is a reduction of costs per GDP between 30 percent and 50 percent (European Commission 2010). 2010 projections for 2020 estimate GHG emissions to be –19 percent below 2005 (compared to –13 percent with 2008 projections). In the 2010 projections for 2020, the ETS price estimate has been reduced to €16.5 per allowance (2008 prices), down from €30 per allowance (2005 prices) in the 2008 projections for 2020 (Delbeke 2010).

In the reference scenario with policies in line with the commitments under the Climate and Energy Package, the European Union is now estimated to reach the –20 percent GHG reduction targets of the Climate and Energy Package internally without a need for significant amount of international credits both in the ETS and non-ETS.

At the same time the crisis has spurred governments to kick-start efforts toward a greener economy through their economic recovery packages. There is no overall official estimate for the green share or volume of all recovery programs available. And in some countries, the crisis has

forced government to cut back on green subsidies (e.g., Germany and Spain). Nevertheless, a study by the United Nations Environment Program and New Energy Finance (UNEP-NEF) estimates the combined stimulus programs related to sustainable energy from five major EU countries and at the EU level at $26 billion in total (UNEP-NEF 2009).

At the EU level, €4 billion is spent, as part of the European Economic Recovery Plan, on energy infrastructure projects, offshore wind electricity generation and demonstration of carbon capture and storage.1

From the start, the European Union recognized the importance of research, technology development, innovation, and diffusion of technologies for meeting its targets. It launched in October 2009 the technology pillar of the CEP—the Strategic Energy Technology (SET) Plan—to beef up the technology pillar of its Energy and Climate Policy. The SET Plan is the European Union’s all-encompassing technology roadmap for creating a low-carbon and renewable energy–based European economy. The goal is to coordinate fragmented policies and programs and organize energy research efforts across Europe in a coherent and efficient manner behind a clear set of technology targets in partnership with the private sector. The SET Plan envisions raising the total public and private investment in low-carbon energy technologies from the current €3 billion per year to around €8 billion per year. This would represent an additional investment, public and private, of €50 billion over the next 10 years.

Box: Europe’s Strategic Energy Technology (SET) Plan

In October 2009, the European Commission launched its SET Plan. The priority for the SET Plan is to accelerate the development of low-carbon energy sources in six sectors: wind, solar (both concentrated solar and photovoltaic), smart grids, bio-energy, nuclear fission, and carbon capture and storage. In each sector a European Industrial Initiative (EII) is set up. These initiatives, to be led by industry, are large-scale programs that bring together companies, the research community, member states, and the commission in risk-sharing, public-private partnerships. In addition there is also a Smart Cities Initiative and the European Energy Research Alliance (EERA), aimed to coordinate and accelerate research and development of new generations of low-carbon technologies.

2. EU Climate Change Policy Beyond 20 Percent

As part of the Climate and Energy Package, the European Union has committed itself to move to a 30 percent target by 2020 if the conditions are right (“high-end” pledge). The commission is currently preparing an analysis of what practical policies would be required to implement such a 30 percent reduction.

The motivation for investigating the 30 percent target does not come so much from more active emission reduction plans by other international players. The main motivation is mostly internal: stepping up to a 30 percent target would now be less costly to realize than before, thanks to the crisis. Preliminary European Commission (EC) estimates suggest that the extra cost would be 0.22 percent of GDP in 2020, lower than estimated before (European Commission 2010). In addition, it is hoped that it would restore higher levels of carbon prices. This in turn is hoped to support innovations and technology deployment, and thus to invigorate its recently launched SET Plan.

Options in the non-ETS to accelerate include first and foremost technological options (e.g., product standards and energy efficiency measures), but also energy taxes and the leverage of Cohesion and Common Agricultural Policy (CAP) funds. Options in the ETS include tightening of targets by auctioning fewer allowances. This would have the benefit of leading to higher carbon prices, which is expected to stimulate more strongly innovation.

In any case, in order to keep the costs of reaching targets affordable, the 20 percent target and a fortiori the 30 percent target, scenarios rely heavily on new technologies coming to market
and being smoothly deployed, thus giving a strong prominence to the SET Plan in future EU clean energy policymaking. Preferably, this faster innovation and deployment should also create a competitive edge for European companies in key sectors of the future, securing growth and jobs in the European Union postcrisis. But will the European Union be able to activate its innovation potential for green growth? The next sections examine the performance on green innovations in more detail.

3. Assessing the Current Performance of Private Green Innovations

To assess the capacity of the private sector to generate new green technologies, we use mostly information on applications for green patents.\(^2\)\(^3\)\(^4\) We will use a recently developed and published categorization of green patents provided by UNEP, the European Patent Office (EPO), and the International Center for Trade and Sustainable Development (ICTSD, 2010). UNEP, EPO, and ICTSD examine six main categories of clean energy technologies that are either already commercially available or have strong prospects of commercialization in the near-to-medium term. These are solar (both thermal and photovoltaic, or PV), wind, carbon capture and storage, hydro, geothermal, biofuels, and integrated gasification combined cycle (IGCC). These technologies are labeled as Clean Energy Technologies (CET).

3.1. Trends in Green Patenting

Overall, Clean Energy Technologies represent a very small share of total patents, less than 1 percent over the period 1988–2007. But CET patents are growing rapidly, be it from a small base.

\(^2\) With regard to technologies, a multitude of labels exist ranging from “environmentally friendly” to “green” to “clean energy” to “eco-friendly.” We will try to stick as closely as possible to the definitions used by the sources reported; else we will use the label of “green.”

\(^3\) A few caveats before we discuss the numbers: (1) Not all inventions may be patented. Particularly those inventions still far from the market may not yet show up in patent statistics. (2) There is as yet no international standard to classify patents as “green,” with the European Patent Office, the World Intellectual Property Organization, and the OECD each using their own classifications.

\(^4\) Data on R&D expenditures would be a better measure of activities in the early stage of technology development. Unfortunately, R&D statistics are not collected by area of technology. Green R&D expenditures can therefore not be assessed easily.
Until the mid-1990s, CET patents have stagnated and even declined, certainly in relative terms as overall patenting activities continued to grow. But since the late 1990s CET patents have trended upwards. This upward trend holds particularly when compared to the traditional energy fields (fossil fuels and nuclear) that have trended down since 2000. When looking at individual CET technologies, patenting rates in solar PV, wind, and carbon capture have shown the most activity. Biofuels are a more recent growth story. IGCC and solar and geothermal are not yet kicking off, probably reflecting their still premature stage of development.

One cannot ignore the correlation between political decisions and the take-off of CET technologies, as the upward trend started around 1997, when the Kyoto Protocol was signed.

3.2. Who’s Who in Green Patenting: Toward a Multipolar Clean Technology Space?

If we look at which countries are active in green patenting, Japan is the clearest positive outlier (table 1). Japan holds about 30 percent of all CET patents, but it is not particularly specialized in Clean Energy Technologies, and it is heavily concentrated in a particular CET technology, namely solar PV (cf infra). Also Korea is an important player in CET patenting, specialized and heavily concentrated also on solar PV.

The United States, despite its 16 percent share of world “green patents,” is not specialized in Clean Energy Technologies. It is more dispersed across various CET technologies.
In Europe, Germany is by far the largest country for CET patents, being somewhat specialized in Clean Energy Technologies, and like the United States, more dispersed across various CET technologies.\footnote{Also some other EU countries are specialized in environmental technologies (RTA>1), but are nevertheless small players (<2 percent of CET patent share). In order of size: Netherlands 1.19; Denmark 13.46; Spain 1.14; Austria 1.05; Portugal 4.93; and Hungary 1.11.}

If the European Union would be counted as a homogeneous block, it would be the block with the largest share of CET patents, with a slight specialized and relatively dispersed portfolio across CET technologies.

Table 1 Who’s who in CET patenting?

<table>
<thead>
<tr>
<th></th>
<th>SIZE</th>
<th>SPECIALIZATION</th>
<th>CONCENTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top six</td>
<td>Share of country in world CET patents</td>
<td>RTA in CET patents</td>
<td>Herfindahl across CET technologies</td>
</tr>
<tr>
<td>Japan</td>
<td>29.7 percent</td>
<td>0.99</td>
<td>0.72</td>
</tr>
<tr>
<td>United States</td>
<td>15.9 percent</td>
<td>0.87</td>
<td>0.33</td>
</tr>
<tr>
<td>Germany</td>
<td>15.2 percent</td>
<td>1.05</td>
<td>0.28</td>
</tr>
<tr>
<td>Korea</td>
<td>5.6 percent</td>
<td>1.21</td>
<td>0.82</td>
</tr>
<tr>
<td>France</td>
<td>3.9 percent</td>
<td>0.70</td>
<td>0.26</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.6 percent</td>
<td>0.98</td>
<td>0.28</td>
</tr>
<tr>
<td>European Union</td>
<td>32.0 percent</td>
<td>1.01</td>
<td>0.25</td>
</tr>
<tr>
<td>BRICs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>0.9 percent</td>
<td>1.11</td>
<td>0.36</td>
</tr>
<tr>
<td>India</td>
<td>0.3 percent</td>
<td>1.44</td>
<td>0.45</td>
</tr>
<tr>
<td>Russia</td>
<td>0.2 percent</td>
<td>1.11</td>
<td>0.27</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.2 percent</td>
<td>1.51</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Note: Patents are counted on the basis of claimed priorities (patent applications filed in other countries based on the first filed patent for a particular invention).

Source: Own calculations on the basis of UNEP-EPO-ICTSD 2010, Patents and clean energy: bridging the gap between evidence and policy.

A top six country has at least 2 percent of world CET; together the top six represent 74 percent of world CET patents. RTA = share of the country in world CET patents relative to the share of the country in total world patents; RTA > 1 measures specialization in CET patents; Herfindahl is the weighted sum of the share of each CET technology in total country’s CET patents, with the weights being the share. The Herfindahl ratio varies between 0 (maximal dispersion) and 1 (perfect concentration).

Overall, Brazil, Russia, India, and China (the BRICs) still dwarf in CET patenting, compared to the big three. Of the BRICs, China is the most important active country in CET patents. It has particularly increased its position in recent years. It is also specializing in clean energy patents. It is less concentrated on solar PV, as compared to Japan and Korea. Although China has leading manufacturers in solar PV and also in wind technologies, these companies are less active in patenting. Either they may be heavily reliant on technology transfer to develop their products or they are largely manufacturing based.

The other BRICs are less important in terms of total CET patenting, although they are specializing in Clean Energy Technologies. India and Brazil are concentrated on few technologies. Patentees from India show the highest activity in solar PV. The main patenting
activity for Brazil lies in the area of hydro and marine and biofuels. However, overall patenting activity is limited in this area, compared to other countries. For example, China has more patents for biofuels and as many patents in the area of hydro and marine as Brazil. This suggests that Brazilian companies are focused more on the production process than on developing technologies.

Table 2 zooms in on who’s who by the various clean energy technologies. By far the most important CET in terms of patents is solar PV, which represented over the period 1988–2007 57 percent of all CET patents. Solar PV is a technology that is concentrated in a few countries. Especially Japan is a dominant and specialized player in solar PV patents.

Wind is the second largest CET technology in terms of patents. But in this sector concentration is much lower. Germany holds the largest position and is specialized in wind, but there are many other European countries specializing in wind technology.

The strong patenting activities in solar PV and wind suggest that these technologies are extensively used in the market and can therefore be considered as the more mature Clean Energy Technologies.

Geo and solar thermal, hydro, and biofuels all have lower dominant positions of the big players, with many countries active and specializing in these technologies.

Carbon capture and storage (CCS) is a sector with a high level of concentration. In this sector the United States is a strong and specialized player, although also several European players are specializing in CCS, including France and the United Kingdom. The share of CCS patents in total CET patents is low, reflecting the still early stage of technology development for CCS.
Table 2 A multipolar clean technology space?

<table>
<thead>
<tr>
<th>Technology</th>
<th>1988–2007</th>
<th>Share of technology in total CET patents</th>
<th>Share of largest country</th>
<th>Share of top 3 countries</th>
<th>Concentration (Herfindahl)</th>
<th>Countries with specialization technology¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar PV</td>
<td>57</td>
<td>44 (JP)</td>
<td>69</td>
<td>24</td>
<td>JP, KR, TW</td>
<td></td>
</tr>
<tr>
<td>Wind</td>
<td>14</td>
<td>29 (GE)</td>
<td>52</td>
<td>12</td>
<td>DE, UK, NL, CA, DK (!), ES, NO, SE EU</td>
<td></td>
</tr>
<tr>
<td>Hydro</td>
<td>12</td>
<td>20 (US)</td>
<td>44</td>
<td>9</td>
<td>US, UK, IT, CA, CH, ES, AT, SE, NO, AU EU</td>
<td></td>
</tr>
<tr>
<td>Solar thermal</td>
<td>10</td>
<td>27 (GE)</td>
<td>47</td>
<td>10</td>
<td>DE, IT, NL, CA, CH, ES, AT, AU, IL EU</td>
<td></td>
</tr>
<tr>
<td>Biofuels</td>
<td>5</td>
<td>18.5 (US)</td>
<td>52</td>
<td>10</td>
<td>DE, FR, UK, IT, NL, CA, CH, CN, AT, FI, BE EU</td>
<td></td>
</tr>
<tr>
<td>CCS</td>
<td>4</td>
<td>32.5 (US)</td>
<td>61</td>
<td>16</td>
<td>US, FR, UK, NL, CA, NO EU</td>
<td></td>
</tr>
<tr>
<td>Geothermal</td>
<td>2</td>
<td>18 (US)</td>
<td>44</td>
<td>8</td>
<td>DE, IT, NL, CA, CH, CN, AT, SE, NO, FI, IL, H EU U,</td>
<td></td>
</tr>
<tr>
<td>All CET</td>
<td>100</td>
<td>30 (JP)</td>
<td>61</td>
<td>14</td>
<td>DE, KR, NL, TW, DK, ES, CN EU</td>
<td></td>
</tr>
</tbody>
</table>

¹ Only countries with at least 1 percent of world patents in technology; specialization if RTA >1.
² Although relative positions vary across technologies, the top three countries are always JP, US, GE.

(3)

Source: Own calculations on basis of UNEP-EPO-ICTSD 2010.

If taken as an integrated unit, the European Union would hold a specialized position in all CETs excluding solar PV. It is particularly specialized in geo-and solar-thermal, and to a lesser extent, in biofuels, hydro and marine and wind. In CCS it is only marginally specializing.⁶ The United States is only specialized in CCS and Hydro-Marine.

Overall table 2 shows that with the exception of solar PV and CCS, most CETs have a quite geographically dispersed, multipolar pattern of countries active in patenting. Different countries tend to specialize in different CET technologies. Particularly in the newer, emerging technologies like biofuels, hydro, and geothermal, concentration is still low. In contrast, in the more mature clean technologies, especially solar PV, concentration is high with Asia holding a dominant position in this technology.

---

⁶ The values for the RTA index, reflecting the European Union’s specialization pattern, are 1.80 geothermal, 1.70 solar thermal, 1.39 biofuels, 1.35 hydro and marine, 1.23 wind, 1.05 CCS, and 0.62 solar PV.
4. Government Intervention for Green Innovations

In view of the pervasive environmental and knowledge externalities characterizing green innovations, the private green innovation machine cannot be expected to be effective on its own. It needs government intervention to start. The patterns in patenting clearly suggest the importance of government intervention. The growth in clean energy patenting only significantly initiated after the Kyoto Protocol. Also which countries are strong in which technologies are significantly related to government policies. Johnstone, Hascic, and Popp (2010) show, using econometric analysis, that policies indeed have a significant impact on the green patenting activity in a country. Policies such as feed-in tariffs, renewable energy credits, carbon taxes, and R&D subsidies are found to significantly affect innovators in a country, although the strength of the effects varies over technologies, instruments, and countries. For example, Germany has seen a dip in wind patenting despite the existence of feed-in tariffs. Policies therefore are no straightforward panacea for stimulating green innovations.

In a Bruegel policy brief, Aghion, Hemous, and Veugelers (2009) discuss how government intervention should be designed in order to effectively turn on the private green innovation machine. In particular the analysis strongly supports the case of a portfolio of instruments including simultaneously carbon prices, R&D subsidies, and regulation. In tandem with a sufficiently high and long-term time consistent carbon price, R&D support for clean technologies is needed. Public R&D support is especially crucial for clean technologies that are still in the early stages of development, neutralizing the installed base advantage of the older, dirtier technologies.

So, are governments deploying the right effective policies for stimulating private green innovations? In a Bruegel policy contribution, Aghion, Serre, and Veugelers (2009), examined in detail the record of green government policies for innovation and concluded that we still are a long way off from an ideal policy support.

On carbon prices, the evidence showed not only the low level of carbon taxes in most countries, but there is also a high dispersion in carbon taxes across countries, leaving a worldwide carbon price a far distant reality. At the EU level, the first phases of the European Union’s ETS established a carbon market, but at low and volatile levels. Beyond the discussion on whether current taxes and cap-and-trade systems in place generate a sufficiently high carbon price to induce green innovations, there is an issue of the carbon price being far from long-term predictable. It is particularly this latter feature that is important for the carbon price to serve as an incentive for green innovations.

On subsidies to green R&D, again the evidence showed the poor performance of the major policy actors. Public R&D spending targeted to environment and energy efficiency remains a very minor share of total public R&D spending.7

Correlating with its leading position in CET patents, Japan is clearly the frontrunner with respect to public funding for energy R&D, spending 0.11 percent of GDP on this in 2006. Compared with Japan, the aggregated EU figure (0.02 percent of GDP in 2007) is low and almost unchanged from 2006. Also when comparing the energy-related part of public R&D expenditures in relation to the overall public R&D expenditures, the share of energy R&D in total public R&D budgets was 2.9 percent in 2007 for the European Union, compared to a share of 15.2 percent in Japan. The United States is, with a mere 1.1 percent share for energy in total public R&D budgets in 2007, a worse actor than the European Union.

---

7 Unfortunately, there are little data available on public spending that are comparable across countries. As a source for R&D subsidies the Government Budget Appropriations or Outlays on R&D (GBAORD) data are used (Eurostat; Aghion, Serre, and Veugelers 2009).
For the technologies included in the European Union’s SET Plan the EC Joint Research Center (JRC) has tried to assess the amounts currently being invested in these technologies in the European Union, both by the public sector (EU members and the European Union) and the private sector (table 3).

Twenty-five percent of the total public R&D budgets is spent at the EU level, indicating the importance of the European Union for clean technology public funding. Most of the public budget goes to nuclear. Nuclear also has the highest ratio of public to private investment.

For non-nuclear energy, hydrogen and fuel cells and PV are the largest recipients of public R&D funds in the European Union; they also have the highest ratio of public to private investment. CCS, closely followed by biofuels, smart grids, and wind, has the lowest ratio of public to private investment. The relative position of the European Union among public financiers is the highest in CCS and hydrogen and fuel cell. These also happen to be the two CETs where the European Union is the least strongest in terms of patenting (cf supra).

As PVs are among the most mature technologies in the set of CET, there still-high share of public funding is somewhat surprising. Equally surprising is the high share of private funding in CCS, still an early-stage technology.

Table 3 R&D funding for CET technologies in the European Union

<table>
<thead>
<tr>
<th>Technology area</th>
<th>Share of area in total public R&amp;D</th>
<th>Share of EU in total public R&amp;D funding</th>
<th>Share of private in total R&amp;D funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen and fuel cells</td>
<td>13 percent</td>
<td>29 percent</td>
<td>61 percent</td>
</tr>
<tr>
<td>Photovoltaics (PVs)</td>
<td>8.5 percent</td>
<td>17 percent</td>
<td>58 percent</td>
</tr>
<tr>
<td>Wind</td>
<td>5 percent</td>
<td>12 percent</td>
<td>76 percent</td>
</tr>
<tr>
<td>Biofuels</td>
<td>4 percent</td>
<td>17 percent</td>
<td>77.5 percent</td>
</tr>
<tr>
<td>CCS</td>
<td>3 percent</td>
<td>30 percent</td>
<td>81 percent</td>
</tr>
<tr>
<td>Smart grids</td>
<td>3 percent</td>
<td>23 percent</td>
<td>77.7 percent</td>
</tr>
<tr>
<td>Solar (CSP)</td>
<td>2 percent</td>
<td>13 percent</td>
<td>58 percent</td>
</tr>
<tr>
<td>Nuclear fission</td>
<td>37 percent</td>
<td>16 percent</td>
<td>43 percent</td>
</tr>
<tr>
<td>Nuclear fusion*</td>
<td>25 percent</td>
<td>42 percent</td>
<td>0 percent</td>
</tr>
<tr>
<td>TOTAL 100</td>
<td>percent (=476 mill Euro)</td>
<td>25 percent</td>
<td>53 percent</td>
</tr>
</tbody>
</table>

* Nuclear Fusion, although a technology closely related to SET priority technologies, is not included in the SET Plan.

5. A New Momentum for Europe in Clean Energy Technologies?

Although EU countries have started to become active patentees in specific Clean Energy Technologies, the European Union, lacking integration, is overall not a forerunner. Asian countries, Japan, Korea, and increasingly also China, are active players particularly in the more mature CET technologies. Low, uncoordinated, and too volatile levels of the carbon price as well as public funding for CET investments correlate with the European Union’s innovative capacity in CET, which is below potential.

The European Union, in its Europe2020 strategy and accompanying Innovation Union communication, has stated its objective to activate more its innovative capacity for future sustainable growth and jobs. Green innovations have never been higher on the agenda of policymaking in Europe, crystallized in the SET Plan. Is there a new momentum for the private green innovation machine in Europe?

Strategic Energy Technology Information System (SETIS)-JRC estimated the total amounts of R&D investments needed to match the roadmaps designed by the various EIIs of the
SET. The total amount of yearly investments in CET technologies is estimated to be €5.8 billion. Especially CCS and solar are the technologies that will be soaking most of the money, respectively 28 percent and 22 percent. For CCS, 2007 investment levels only cover 13 percent of the needed yearly investment, for solar, this is 18 percent (European Commission JRC 2010).

Where will the money come from? To launch the first industry initiative in CCS in 2009, the commission tapped €1.05 billion in EU crisis funds. To bolster resources on the other five industrial initiatives that did not receive EU crisis funds, the EC is lobbying individual member states to take the financial lead to get projects rolling. But the major battle will be over the 2014–20 budgets.

The new European Emissions Trading System enables, from 2013 onward, the creation auctioning revenues being reinvested at a national level in the development of more efficient and lower cost clean technologies. The use of the revenues is determined by the member states, but at least 50 percent should be used for climate change–related activities, including in developing countries. Three hundred million EU allowances set aside from the New Entrants Reserve of the ETS will be used to support CCS and innovative renewables. These allowances will be made available via member states to fund demonstration projects selected on the basis of criteria defined at community level.

But beyond finding public funding, it is clear that private funding needs to be leveraged. Will the private sector and their financiers be willing to initiate and (co-) fund clean technology projects?

An important incentive to trigger private innovations, beyond the amounts of cofunding of clean-technology projects provided by the public sector, is a sufficiently high and long-term predictable carbon price. With the current carbon price not likely to give a strong boost to these incentives, the move to a 30 percent target in the ETS would be an improvement in the right direction, although it is still unclear whether a 30 percent target, if implemented, would be sufficient.

A signal that the private sector in the European Union is still not convinced of the longer-term commitment of the public sector to the development of clean energy technologies comes from the venture capital market. Graph 2 plots the trend in venture capital (VC) funding for renewables in Europe and the United States. These amounts, which were trending up in 2007–08, have been hard hit by the crisis. But while they seem to have recently recovered in the United States, they continue to trend downward in Europe.

This is all the more remarkable as the downward trend seems to have stopped for VC in general in Europe. For the United States, the strong upward trend in 2010 in renewable VC (stronger than the overall upward trend in VC funding in the United States) would suggest that the US private (venture capital) market, despite the lack of strong government impetus, has more confidence in the US clean energy innovation market.

**Graph 2A**

![Euro raised in renewable energy by venture-backed companies in Europe and the US](image)
6. Toward a Global Clean Energy Technology Market

If governments want to leverage the needed private innovations for clean energy technologies, they will have to provide a well-designed, time-consistent policy, reducing commercial and financial risk by a combination of consistent carbon pricing, regulations, and public funding. With current heavily constrained public budgets, it is all the more important that this public funding is allocated as cost effectively as possible. This implies that public funding will have to be able to leverage private funding.

Beyond efficient targeting and timing of public budgets, particularly for early stage, highly risky research projects, governments should first and foremost establish a sufficiently high and long-term predictable carbon price. A well-functioning carbon market is essential for driving low-carbon investments and achieving global mitigation objectives in a cost-efficient manner, particularly for investments in development, demonstration, and deployment of later stage technologies.

For the EU, this is perhaps the biggest threat for its SET Plan: the lack of a sufficiently high carbon price. To this end, a larger effort should be devoted to integrate carbon taxes among EU MS. At the same time, the ETS system and the emission of allowances should be designed to leverage innovation. A move to a 30 percent target, which would involve fewer allowances being auctioned, could reinforce innovation incentives.

The patent data have shown that the world of green technologies is an emerging global, multipolar one, with many geographically dispersed sources in the various clean energy technologies. Coordination of green policies internationally among the major players should therefore be high on the policy agenda.

What would benefit the development of green technologies most is an international carbon price established on a globally integrated carbon market, or at least internationally linked domestic cap-and-trade systems. Any segmentation would reduce the incentives for clean energy innovations.

Also the global coordination of public R&D programs for clean innovations would help to pool resources and know-how, avoid duplication, and speed up the diffusion of results. While on public R&D programs, a certain level of competition between countries could be healthy to allow the nurturing of a larger set of potential technology trajectories, eventually, the best technologies that emerge from this competition should be diffused as broad and fast as possible. This implies well functioning global markets for clean energy technologies where private actors have the incentive to transact their clean technologies. Well functioning green technology markets require clear IPR systems. For developing countries who lack the finance and the technological capacities to be active in green innovations, specific financial support and support for deployment of the best technologies available, needs to be in place.


Christian Burgsmüller: Thanks very much for the two papers. They’re very insightful and fascinating reminder of what we’re talking about. I was going to open my remarks with the statement that climate change exists and that it is manmade, yes it is. And it’s unfortunate that I have the feeling that I should say that, but I have the feeling I should. The EU policy is driven by that. And I think the policy of many of the—or the majority of the other countries in the world. And even though they are having difficulties coming to an agreement that’s not so much a reflection of their disagreement that something should happen, but of the disagreement on just how we should get there because so much is at stake and time is running out.

From a European perspective, the policy is that the emissions need to go down—that really is what counts. And we need to get there somehow. And then there’s a lot of machinery that we need to activate to get there. This has been mentioned. Europe is on track to meet its emission goals, not always for the right reasons, and we didn’t want the financial and the economic crisis to help us get the emissions down. That certainly is not the right pathway even though it helps us to meet certain goals we’ve set ourselves. It has also been said that internationally the basis for moving forward is the Copenhagen Accord and that is certainly true. But it’s a basis for moving forward. It’s on its own. It’s a starting block. It’s not in itself enough.

One of the things that the EU tries to achieve in the international negotiations is to bring Copenhagen into the framework of the UN negotiations because the goal is very much binding international deal that has legitimacy by being signed up by all. And that answers to one of the key divisions that we see emerging here, which is emerging another economic fora as well. But it’s put in contrast here, which is the division between the developed and the developing world and how to shift the burden. And I find Bill Cline’s considerations of the reduction pathway to 2050 extremely interesting in that respect because it conveys this message of equity that I think a lot of countries are looking for in the negotiations and that seems to be one of the road blocks.

So we see negotiations going on right now in Tianjin, which is the last time an international negotiation is happening before Cancún, the next COP [Conference of the Parties] meeting about November or December this year. And I think everybody after the experience of Copenhagen has become very careful what kind of progress they announce that they would be satisfied with and word South Africa is popping out in that context. Clearly, we want to see some progress in Cancun and we want to see that. From a European perspective we want to see that has a credible part of a step-by-step process. We are being realistic. We want a globally binding deal that involves everybody. And we want Cancún to be a step on the way there. And that includes on the one hand, very important really, the concept of a balanced approach the fact that everybody has to bring something. Developed and developing nations have to bear their fair share of the burden. We want individual decisions to move forward on a number of topics. And I think in this way we see very much eye to eye with the United States. There are topics that are ripe for decision making on monitoring, reporting, verification, on deforestation, on an international framework, on adaptation, on new carbon market mechanisms, on bunker fuels. There are issues that are ripe for moving forward, and we hope to see progress there. And this seems to be something that, despite all the difficulties, could make progress in Cancún.

So I’m sitting here in the EU delegation in Washington and basically these negotiations from afar. And I’m concerned with the transatlantic aspect of this and how can we as the European Union help the United States get along on this pathway? We are different, but we are also very similar in a global
context. We are both highly industrialized economies both with high per capita carbon emissions. Different but as it has been pointed out not all that different both market economies.

And that brings me to a concept that is very clearly an aspect of the EU climate policy vis-à-vis the United States and that is the interest to see legislation enacted in the United States that creates a carbon market. There is a carbon market in the European Union, and of course there is an enormous interest in linking up to other carbon markets for the obvious rationale that I don’t have to explain to this audience that that’s the instruments to get emission reductions at lowest cost. I have a feeling a part of the very adverse discussion that we’ve seen here in the United States is due to the fact that it’s catchphrase and not very many people actually know what is meant by it when you say cap and trade. It has been abused politically. And one of the things that I think we should be looking for is communication channels to explain to people what that actually means, what is actually at stake. And what should also be communicated much more is just how much of an economic interest there is for entities such as the European Union or the United States to become active in this field. We’ve seen the venture capital investment figures. That’s not for nothing. That is because people sense an opportunity here. And that opportunity is there, but it is also that elsewhere. It is there in China and other industrialized or industrializing countries. So there is an interest that we get out slice of the pie. Europe certainly is very interested in that. How do we do that?

Innovation-wise, innovation is one of those elusive beasts that are difficult to manage. And clearly, you have to work in a multipronged approach. One of those is to give a stable signal to investors. And it has been argued by some that an emissions trading scheme is not a stable signal because it has a market price and the market price fluctuates and that is true. And that is as markets behave because they convey information and information changes all the time. I should point out that Europe has at once stage attempted to introduce a carbon tax that was already in the 1990s and that unfortunately has suffered the fate that most tax proposals at the EU level do for procedural reasons unique to the European Union unanimity body of 27 countries.

But we certainly do see the opportunity in innovation. And we have a policy that was already outlined to push it forward. Maybe I think I should also point out that not all impacts of emission-reducing policies immediately show themselves in the form of innovation when you measure things such as patents because there’s such a large number of things that you can do to use emissions that aren’t innovative in the technological sense at all. Putting double glazing windows in every home is not innovation measured by patents, but it is a huge part of what we need to do. So maybe that’s just the tip of the iceberg of what is happening. And as the world gets round to getting serious about the climate, I would expect more of the technological cutting-edge innovation to happen, especially on the energy supply side but also in the field of energy-saving demand side measures—look only at the question of electrical vehicles, for example, electrification of transport. So there is, I think, a lot still coming. And in the paper some of the obstacles are being pointed out. It’s good that they are, and we need to address them all.

Maybe just one last word and I can’t refrain from that. I used to work in policymaking in one specific area and that was CO2 emissions from cars. And what I learned there is that when you talk about the costs of future legislation, you are dealing with something that is very, very elusive. You are discussing the difference between a baseline that is your expectation of what might happen, and you compare that with the cost of something deployed massively that currently isn’t actually deployed massively. And we’ve had that experience time and again when you compare the ex ante cost estimates of
new legislation and a few years later you’re looking to the ex post actual costs that are being found—there are staggering differences.

So when we look into economic models of the cost of climate change, we need to be aware that we can only populate those models with cost information that we have today. But it is only when policies are in place that the industry is concerned will actually for the first time look in earnest how they are going to do this. And with that message, I will stop. Thank you.

James Bradbury: It’s my pleasure to follow those excellent remarks. I think those were really on point. And I’m also pleased to be here, of course. I appreciate the opportunity to comment on these very good research papers and thank the Peterson Institute for the opportunity. So I’ll speak to the two different papers in the order they were presented.

First, I’d say I think Dr. Cline’s paper provides a very helpful point of reference, or frame of reference, for really where we are today in the US and also globally on this challenge. And I think more than anything to me, it illustrates our current predicament and it has advanced to the point where we cannot hope to prevent dangerous levels of climate change through incremental or small steps in the right direction. We really do need to sustain a global effort.

This means, as I think it was implied by Dr. Cline’s paper, that in the US we will have to use all of the tools available to us to achieve emissions reductions and uphold our commitments under the Copenhagen Accord. Those include, of course, the Clean Air Act authorities which are really critical to achieving emissions reductions in the absence of legislation. I think as of course the Senate and I guess both houses of Congress consider repealing those authorities or delaying those authorities, we risk very seriously damaging the tenuous credibility, I should say, the US has with the 17 percent target sitting out there for 2020. And to the extent that those authorities are delayed or eliminated, which several in Congress would like to do, I think we’re deeply on a precipice here.

So I would certainly strongly agree with Dr. Cline in international finance for developing countries as a very important of this puzzle. It’s obviously an important piece of the international negotiations. Cooperation between the US and Europe is a good idea. Of course, each country needs to appropriate the funds to put into the pool. And again we’ll be waiting on Congress and hoping the Congress will appropriate those funds. I also agree: Linking the different emissions trading schemes is a very good idea. It could be beneficial. Of course, right now, we’re looking at regional emissions trading schemes. And those, I think, could be linked to the European system. It’s been very frustrating, of course, to watch as legislation as—not only had legislation in the Senate failed, but we saw the market-based mechanisms embodied in the cap and trade demonized by the opposition and leaves us in a difficult spot and very uncertain about when the US Congress comes back and seriously considers addressing this issue. What policy mechanisms are left and if there will be the leadership to revisit this policy mechanism, which indeed is a very important one.

So I think another thing that Dr. Cline’s paper shows is there’s really a pressing need for better information internationally to keep track of just what other countries are doing, not just what they’re pledging to do, but what they’re actually achieving. In common terms that are consistent across jurisdictions along these lines I would differ a little from Dr. Cline’s characterization of the ambition of China’s intensity target. It’s very much the future and the ambition that is very much dependent on future GDP growth. And also, though it is a continuation of past improvements in emissions intensity, moving forward along the same ambition requires going for more difficult reductions in emissions, that is, to say a lot of the little hanging fruit has been picked. Another important point is the business as usual in China
actually accounts for and includes a substantial amount of policy in place for renewable energy deployment and efficiency investments. So the point is that business as usual can be somewhat misleading when that includes policies on the books and plans for making reductions that are already underway.

In the spirit of enabling greater transparency and hopefully building more political will and better understanding of what other countries are doing and building greater appetite for collective action, one thing that the World Researches Institute is doing we’re currently initiating what we hope will be a long-term project to track and report on each country’s contributions to emissions abatement and international financing that’s currently pretty poor information from a number of countries, probably most countries in terms of what countries are doing beyond just what they’re pledging to do. And it will be really important to have a consistent set of metrics that are credible for civil society, industry, and governments to really keep track of this complex issue. And of course here’s an area, I think, for some collaboration, transatlantic collaboration, and expertise there is across the Atlantic.

So speaking to the second paper, I think this paper I found refreshing. I thought it really highlighted some very big differences between the state of the debate in the European Union versus the conversation on global warming solutions in the US that more stringent policy could be considered beneficial in terms of driving innovation and creating opportunities for industry and business is a very refreshing perspective. It’s not that the opponents of action in the US have successfully defeated this opportunity that’s out there or defeated the clean energy jobs narrative, if you will, because there definitely remains a very compelling case that a lot can be gained by getting ahead in the clean energy race. And if anything, there has been some bipartisan consensus on that point. Of course, the question is how to get there. And clearly, the sense of urgency is lacking in the US Congress and then they’ve just missed, of course, a very key opportunity to move forward and do something serious on this problem.

And it’s not for a lack of hearing this message. We’ve had the CEO General Electric, Jeff Immelt, speaking, imploring really, the US Congress on a regular basis to set policies in place that will get investments moving into these low-carbon technologies. After the senate really dropped the ball on this, there is a powerful biting statement from Deutsche Bank in August excoriating the US for being asleep at the wheel on climate change. It explained why only, I think, $45 million worth of investment from Deutsche Bank is in the US clean energy product out of their $6 to $7 billion of investment in the space internationally. So we’re really missing the investment money opportunity in the US. And this opportunity side of the equation, I think, will continue to be an important part of the political and economic debate. And I think potentially there are likely areas for cooperation internationally in that space.

I wanted to also comment on some of the lessons learned. I think I was working on Capitol Hill when Waxman-Markey passed and worked on the House bill. And there were certainly lessons learned. Some of the lessons learned from the European experience were taken to heart and the crafting of that legislation seeing decarbonizing the economy as an economic opportunity as I’ve already said, recognizing that there’s a first mover advantage. If you take, for example, Germany where the renewable energy market actually continued to grow though the recent recession, and the idea that if you are investing now in these technologies you’re creating space and opportunity for jobs, not just now but in the future. I think another important point that comes from the European experience, and was pointed out, is that the price on carbon is not sufficient. It’s definitely an important long-term signal, but as we’re really talking about doing the energy system transformation here, there do need to be other measures including research and development, public investment, and regulations that I think in large part just need to be
removing barriers that exist wherein incumbent energy suppliers will really have an advantage and some barriers need to be removed such as access to the grid and so forth.

So I’d like to actually close my comments on something that Gunter really closed his comments on as well. I was thinking along the same similar lines, I think, not identical but similar. Just commenting on the topic area where I think there’s a lot more can and will really need to be done in terms of research and analysis in order to compel appropriate actions in the US and internationally. And so when we talk about cost and opportunities associated with transitioning to a low carbon economy, we’re talking about the cost and opportunities of making energy system investments. But we really have to be mindful and not lose track of the fact that there are major costs associated with continuing on the path we’re on, business as usual, or even insufficient action in addressing climate change speaking as a climate scientist. It’s something that—I obviously can’t forget and try to implore others to keep this in mind. So my point is that really, I think, we really do need better estimates of what the cost of inaction is. We don’t have good estimates. Part of this is just we still need to understand the climate system better. But a lot of it is just a lack of communication between economists and climate modelers in terms of research collaboration. I know in the European Union they’ve—I’m sorry. The European Commission, the joint research center, has been doing research in the space quantifying the cost of climate change at different degrees, temperature change, and what the impacts would be in the EU. Not a lot of work has been done on this in the US, there has been some, but it’s really cursory. And even having good numbers for the US and EU doesn’t give us a picture of the global implications we’re talking about, the complete loss and disappearance of island nations, the impacts of losing all the glaciers in the Andes, which are key water supplies for South American nations. These are important issues and I think good potential areas for research collaboration in the US and EU government-funded research moving forward.

Jean Pisani-Ferry: What I think we should try in this discussion is to put what we discuss in the broader perspective of the agenda for today, which is to discuss four areas of policy comparison and policy cooperation. And what we’re discussing now is probably the field in which has most difference or divergence between the US and Europe because another field we’re speaking of—the move from joint action to some degree of differentiation or we have some topics for disagreement here; we are at risk of a major divergence. I mean it’s not only at the risk. I mean we are speaking of different preferences that are being exposed.

And so the question I would have first: what degree of difference we can accommodate and still trying to find fields for cooperation. At what point is it just becoming meaningless? The price of carbon is a good illustration because the price of carbon, after all, is an indicator of the preference you have for reducing emission for pricing this externality, if you price this externality at zero then that’s simply just not possible to find meaningful ways of cooperation.

And the second: how much does this imply—what does this imply for what you emphasized in your second conclusion, the initiatives vis-à-vis the rest of the world? How much cohesion do we need between the US and EU to be able again to have meaningful joint initiatives vis-à-vis emerging countries? As we all know, this is where most of the action is, in fact, in terms of future emissions. So this is absolutely crucial.

Maybe, Reinhilde, I will add something for you especially, which is: You spoke confidently of this 30 percent target for the EU. How confident are you that EU—whatever happens in the rest of the world—is going to stick to its own agenda and even to go further to take into account the effect of the reduction in GDP?
Reinhilde Veugelers: The last question is an easy one so I can immediately answer. I’m pretty confident because it’s not motivated by what the other parties were doing. But it’s really motivated by its own interest of the European Union to do it. Thanks also to the effects as it is less costly now, but the belief is really that if we would go to 30 percent we would be able to leverage innovation stronger and have our EU companies being stronger in developing competitive positions in these markets and a stronger driver of growth here. So it’s in our own interest here and that should make us more confident here.

On your first question, which is much more difficult, is: What is the degree of difference that we can accommodate here? First of all, again, I would like to open up. It’s not just transatlantic. It’s really differences also with other areas and particularly also differences with policies in Asia, and in China particularly, and in Korea, which are much more targeted almost industrial polices to its particular technologies like solar PV [photovoltaic]. This gives me already one important point which is indeed the problem that could be indeed too much targeted policies here where, in general, what we actually need is a general carbon price or global price here. So on the incentive that comes from carbon price, there was not actually—not so much difference that we can actually accommodate here when we’d like to have a smooth and global prices possible.

But if you look at the other instrument, which is R&D financing, public funds for R&D, there we can accommodate a bit more differences here because particularly this instrument is important in the early stages of development of technology where it’s actually very important that you stimulate various technology trajectories and allow for much more competition to still arise between these different technology trajectories here. And there is much more room; each country trying out different options here. But at least then in later stage, this coordinates once it becomes more clear which technologies will be more dominant; coordinate in those stages by coordinating on common standards etc., but initially would allow for more differences here. But on the carbon price, there it’s clearer and stronger single comes from global common price.

William Cline: As you know, this country has gone backwards quite a bit from where it was just a couple years ago. I think Hurricane Katrina sensitized the public that this is a serious problem, rightly or wrongly. I would say rightly. And in the election, we had two candidates in presidential election. Both candidates were committed to strong stance on acting on climate change. Now we have climate as just another victim of the collapse into political gridlock. We heard this morning in session that there is doubts about the US fiscal because there is greater challenges of getting credibility of political action, well this is sort of true in spades in climate.

On the other hand, you’ve got a 40-year period here and the main thing is to get the ball rolling. I think there is a lot can be done. I was quite struck in the figure in Reinhilde’s paper about R&D—public R&D. And I was not struck by the fact that it’s there. I was struck by how small it is. It’s €450 million. So I start looking. Where are the corresponding numbers in the United States? Only $2.5 billion a year. So why isn’t this kind of an area where we could move immediately to have sort of a joint initiative that we will undertake substantial upscaling of public R&D? The US and the EU will do something together in this. I mean this, after all, was what the Bush administration pushed on climate change instead of—but maybe there’s a focus on R&D. So there are areas where you can start work. I also think that it’s right that the more you can do to get the carbon price functioning, the better. And I was struck that in the Western initiative the carbon price is only $2 per ton. In Europe, it’s running at €15 per ton. Well why can’t one
again in plan B start making operational, similar carbon prices in those issues? But we’re really on a second or third best here.

Now that being said, I would say one more thing. I think the Europeans’ proclivity to have absolute international treaty obligations is something that looks a little bit different from this side of the Atlantic. And particular, I think, is the question of what you’re going to get China to do. On China, you’re definitely not going to get China to agree concrete targets by concrete dates. For me, bottom line, I think there are things that can be done, but we are in a very unfortunate situation, I think, in terms of politics of this on the US side. I will just on China note that the baseline that is in my paper is the Energy Information Agency’s baseline. But I will also acknowledge that when you look abroad and who’s doing the wind turbines and who’s doing these things, China really stands out. So there’s a little bit of incongruity there I acknowledge.

James Bradbury: I will make a quick comment. I mean it’s difficult to answer the question coming from the US and how much difference can we accommodate. The question it seems like it would be better for the European side because we’re not moving forward and Europe is and even strengthening targets and taking on greater ambition. I think it’s just been instructive on the US side and at least to the policymakers who are serious about this to watch what the European Union is doing and try to learn from that and see that the ETS has been operational for several years now. The sky is not falling and this is something we can do. I think that’s beneficial to the discussion, but I think as Bill rightly said, we’re really less here in DC on Capitol Hill looking across the Atlantic than we are looking across the Pacific or to other countries that we compete with in other areas. So it’s a real challenge. It’s a difficult question to answer sitting on the side of the Atlantic.

Christian Burgsmüller: Well okay if the ball is so clearly played to me. And in a sense, I have difficulty answering the question as it is because when you asked what degree of carbon difference, price difference, and so forth can we tolerate? That’s an incomplete question and what it doesn’t say is before we do X like what, like before we do climate policy in the EU? I don’t think we see that as an option. It’s not like when we see, okay, the US isn’t playing ball, so should then we drop the pursuing climate change policies? I don’t think that’s an option at all. It’s just the bigger difference is, the harder it will be.

But the interesting dynamic in this is, of course—is that everybody around the table internationally understands that ultimately this is in their interest. China understands what it means if Himalayan glaciers are melting and if they have drought problems because they have them today. What if the sea level is rising because the richest part of China is on the coastline? They understand that. But what you have seen and what the complicating factor is, is that climate change from being for decades an issue that was driven by people and countries more interested in it than others. In Copenhagen, you saw the rise at the top level where it belongs. You have President Obama. You have Wen Jiabao. You have these people sitting in a room haggling over text. So the issue is now a top level issue and that’s new post Copenhagen. And so inevitably, of course, it gets bound up and all the other big issues that are up there like who’s going to dominate the planet in the 21st century. And that is why the axis, China and US, is such a huge elephant in the room in the climate negotiations. But it’s also interesting to see how in other context through one can see China. I’ve recently seen an article written by John Gummer, a member of the House of Lords in the UK, pointing out that China is actually preparing its own emissions trading scheme, and having the beautiful sentence in there; “given stasis on this issue in America and power shifting East, it is time for Europe to look East too.” I think that’s quite the wake-up call, isn’t it?
Let me start by thanking [Fred, the IIE, Bruegel] for inviting me to this policy debate on regulatory reform and transatlantic relations. The issues on the conference agenda are highly topical and present challenges for international policy makers.

Just as is the case for tackling the problem of global climate change – another important topic on your agenda – achieving a more stable and resilient global financial system requires coordinated action at the global level. The US and Europe have strong joint interests in this and are critical to progress. But so are the growing weight of countries beyond these continents, and they have come to play an increasingly important role in shaping global outcomes.

In my remarks I will first review what we have achieved so far in terms of financial reforms. I will then turn to important challenges still ahead of us. And I will conclude with thoughts on international policy coordination and the role of the FSB.

**Achievements so far**

We have come a long way towards strengthening the financial system since this crisis began, reflecting an unprecedented amount of international co-ordination in achieving consistent reforms. While issues remain to be resolved, in Europe, in the US and elsewhere, we are, collectively, fundamentally reshaping the framework for systemic financial oversight. Let me note some examples:
- First, top-down, system-wide oversight arrangements are being put in place at national, regional and international levels. These arrangements are designed to deliver more encompassing surveillance, with broadened macro-prudential perspectives, and better mechanisms for triggering action on identified risks. Examples are the European Systemic Risk Board and related arrangements, the US Financial Services Oversight Council, the IMF-FSB Early Warning Exercise, and the establishment of the FSB itself.

- Second, major jurisdictions have overhauled their regulatory and supervisory structures to strengthen responsiveness to risks, improve coordination and close gaps. The FSB is in many ways the international manifestation of these efforts;

- Third, the regulatory perimeter is being expanded. Major jurisdictions have finalized or will shortly finalize legislation that establish regulation and oversight over the OTC derivatives markets, hedge funds and credit rating agencies. In each of these areas, principles for what regulation should achieve have been internationally agreed and implementing regulation is being closely coordinated;

- Fourth, we have put in place cross-border oversight and contingency planning for the largest and most complex global financial institutions, each of which now have functioning core supervisory colleges and crisis management groups.

At the level of the essential regulatory policies to buttress financial stability, let me recall:

- that with Basel III, we have a fundamentally revised global bank capital framework which will establish stronger protection through improved risk coverage, more and higher quality capital, a counter-cyclical buffer and a constraint on the build-up of banking sector leverage;
- Second, as part of Basel III, we will for the first time have a global liquidity standard for banks that will promote higher liquidity buffers and constrain the maturity mismatching that created the condition for this crisis;

- Third, as I will describe later, we are making progress in developing a policy framework and tools to roll back the moral hazard risks posed by institutions that are TBTF;

- Fourth, we have eliminated the perverse incentives that pervaded securitization, including the scope for leverage to develop in opaque off-balance sheet vehicles through changes to accounting standards and regulatory and prudential rules;

- Fifth, we are establishing central clearing of standardised contracts in the OTC derivatives markets and a OTC global trade repository is now in operation;

- Fifth, we have developed a series of supervisory tools to raise standards of governance, risk management and capital conservation at financial institutions. In this context, let me note that:

  o we are making good progress with accounting standard setters towards expected loss provisioning regime for credit losses, which will dampen procyclicality and align accounting and prudential objectives in this key area; and

  o principles and standards have been issued to better align compensation systems with prudent risk-taking. The standards give supervisors powers to restrain compensation structures and the level of pay-out to conserve capital in the firm. As we move to raise capital levels, we will encourage supervisors to use these powers.

I have been selective in my enumeration. But the point I want to leave with you is that we should not underestimate what has been accomplished. Each of the above areas are difficult in their own right. That we have been able to progress global policy development and implementation on such a broad front, while
fighting a very serious financial crisis, is something that has never happened before.

So, the direction in which we are moving internationally is encouraging. But important issues remain. And it is political resolve that will determine whether we accomplish the credible and robust reforms that our citizens rightly demand, yet preserve the enormous advantages of an internationally integrated financial system.

**Addressing TBTF**

Addressing the “too-big-to-fail” (TBTF) problem is perhaps the most challenging remaining legacy of the crisis. Basel III will greatly strengthen banking system resilience, but it does not address this problem.

The FSB has assessed a broad range of policy options in this area and will present its recommendations to the G20 in November.

It is important to recognise that SIFIs vary widely in structures and activities and that the nature and degree of the risks they pose also differ. Some are large, complex highly integrated global financial institutions with activities spanning a range of sectors. Others may have a global customer base but are simpler commercial banking operations. Yet a third category is entities that are large at a domestic or regional level but nonetheless globally interconnected through wholesale funding markets.

Whatever their nature, SIFIs have two things in common: that their uncontrolled failure would cause significant systemic disruption and that we, as authorities, cannot at present resolve them in an orderly fashion without use of public funds. The framework we have agreed to address SIFIs is therefore based on four necessary pillars.

First, we must radically improve our capacity to resolve SIFIs without disruptions to the financial system and without taxpayers’ support. Effective resolution regimes must advance the goals of both financial stability and market discipline. This means they need to be able to impose losses on shareholders as well as
creditors while ensuring continuity of essential financial functions. All countries should have a Dodd Frank style regime in place. In addition, we need to acquire additional resolution tools. The bail-in of debt holders holds significant attractions both from the perspective of correcting creditor incentives and protecting tax payers. But the legal issues associated with the bail-in in group structures and in a cross-border context are non-trivial.

Moreover, to be effective backstops in dealing with global firms, national resolution regimes need to converge towards common standards. And these need to be supplemented by cross-border cooperation arrangements underpinned by national law that provides both mandate and capacity for resolution authorities to cooperate. Legislative changes will be needed in many countries to enable this. Lastly, “living wills” will be mandatory for major firms. These will include assessments of firm resolvability. Supervisors will have the power to require changes to a firm’s structure to improve its resolvability.

Second, the loss absorption capacity of systemic firms should reflect their role in the global financial system and their potential contribution to systemic risk. Even with the best possible resolution tools, the failure of a major global firm would cause significant damage. This reinforces the importance of strengthening the resilience of major global firms. Higher loss absorption capacity for SIFIs than the minimum agreed Basel III standards, especially for the largest globally operating SIFIs, therefore are at the core of our recommendations. A credible process of peer review will be established to challenge the policy choices made within each jurisdiction and to ensure that measures applied on a country-by-country and SIFI-by-SIFI basis are consistent and mutually supportive.

The third area is strengthened oversight and supervision. Senior line supervisors have drawn a frank assessment of weakness leading up to this crisis. These weaknesses were not present in equal amounts everywhere, but there is scope for improvements all around. Our recommendations in this area have been developed with the IMF. One set is focused on the mandates, independence and
resourcing of supervisors. Another is on improved methods and practices to proactively identify and address risks.

Fourth, we will be setting out higher robustness standards for core financial infrastructure. These infrastructures – including for central counterparties – are themselves sources of systemic risk were they to malfunction or fail..

This is a complex project which will unfold over a number of years. It will need to be consistently implemented in all major countries to maintain a level playing field, avoid regulatory arbitrage and effectively address the risks to the overall system. The already established FSB framework of country and thematic peer reviewing process will address improved resolution frameworks and more intensive supervision In addition for SIFIs with the potential to create damages at a global level we will establish a mutual policy review process that will review and challenge the national policies towards major global SIFIs.

Ahead of us, other issues still require attention:

- So far, most of our attention has been on strengthening the resilience of the banking system, and rightly so. Yet, the shadow banking sector remains a large part of our financial systems, less regulated, but nonetheless significant in the credit intermediation and maturity transformation, and subject to runs in damaging ways.

- We need to make frameworks for macro-prudential policies and system-wide oversight operational. We will be sharing approaches for surveillance, powers to obtain information and modalities for action on identified risks. The FSB will coordinate approaches where an international regulatory response is needed. We will be working with the BIS and the IMF to build principles for effective macro-prudential policies.

Lastly, the FSB is developing arrangements to broaden the involvement non-members in its work at early stages of policy development. We will be setting up regional arms of the FSB. Each regional group will be co-chaired by an FSB member and a regional non-member who will attend FSB Plenary meetings.
Conclusions

Let me conclude. Three things have been important in making the progress we have on reforms:

- First, the sheer seriousness of the crisis, and the recognition that, in a globally integrated system, we all sit in the same boat;
- Second, the readiness in the official community to agree objectives and timelines for substantial reform, including through the G20 process; and
- Third, the establishment of mechanisms, such as the FSB, to hasten the policy development needed to meet these objectives.

I am quite confident that, with these, we will be able to achieve globally consistent rules that will lastingly increase the resilience of the financial system and the real economy and deliver the level playing field that a global system needs.
Keynote Address

C. Fred Bergsten: Mario has graciously agreed to answer some questions, take alternative views and challenges to what he said. So the floor is open.

Jean Pisani-Ferry: You mentioned a macroprudential supervision and the creation of the institution in the US and the fact that it’s soon to be created in EU. So it’s a major achievement in institutional terms. What is not entirely clear to me—what it means in policy terms—what is exactly the role it has in the whole policy framework? What are the instruments? How advanced is the thinking in this respect?

Mario Draghi: First of all, the concepts differ across jurisdictions in terms of this sort of global, top-down oversight mechanisms. In the case of Europe, we see that the outcome was the—it was a compromise between the desire and the need to have a central mechanism of supervision with powers to intervene directly on specific institutions and the national supervisors who wanted to retain control. And I think right is on both sides because clearly the national supervisors have way more information than can be held by any central mechanism for at least for certain number of years. So I think the final proposal by the de Larosière Group, I would say, truly reflects this compromise. One could argue that’s a little shy on the actual powers that this new mechanism will have being they’re limited to recommendations that as a rule will not be public. I think that is sort of—I don’t know whether I’m capturing exactly this but I think I—but I think, you know, these things develop when people see that they work. So I have a lot of faith rather than—I have a lot of faith in the actual doing things, realizing that they work, and then you have progress, and then you see the national supervisors gradually will accept more and more intervention from this central mechanism if they realize they have something—actually can do things they cannot do like coordinating macroprudential policy as they will not be able to do it right now. So I have more faith in this sort of process rather than in clear rules, which imply an overall of powers and national mechanisms and bureaucratic changes that it’s bound to take anyway a long time.

Daniel Cash: Daniel Cash of the University of Chicago. You talked about peer reviews for SIFIs [systemically important financial institutions], which is interesting. What’s your view on peer reviews of national decisions?

Mario Draghi: National decisions. So, I know of no economist that thinks it’s reasonable for money market fund to have a fixed net asset value. Yet there are strong political forces in the United States that make me think that the Systemic Risk Council in the US will never take that on, or at least not take it on in any meaningful way. Is there any scope for the FSB [Financial Stability Board] to be the adult in the room and just say, “this is ridiculous” and put pressure on a decision like that, which I think is plausibly systemic but not exactly in the framework you’ve discussed?

Daniel Cash: The FSB will certainly express views on national arrangements. But the peer review process that I’ve described goes a little further than that and it’s intimately linked with the objective of maintaining a level playing field. In other words we have, you know—around this table in the FSB, maybe I say a word to how it works really. You have all the countries, now it’s been enlarged to 23
countries sitting around that table. And then you have the standard setters, the Basel Committee, the AIS, the SEC [Securities and Exchange Commission]. Each country has three people. One is the SEC to use your categories, then you have the central bank, and then you have the Finance Ministry or the Treasury Ministry or Treasury Department. So the idea there is to have the regulators but also governments. And the second idea there that was at the origin of this concept, which goes back to the end of the ’90s, is to make sure that the people who sit around that table are also the very same people who are going to implement what they have discussed. So they feel fully responsible. And/or when you need legislative change rather than simple changes in regulations, these people feel they are responsible for drafting draft legislation, that then will be examined by the legislative powers. So that’s how it works.

So the peer review there is slightly, as I was saying, it’s a little further than simply expressing views. When you have a change in regulation, you want to make sure that if you do something more in your own jurisdiction, everybody else is going to do the same. And so that’s the sort of peer review, it’s—I would call it more peer pressure because the review is such—the surveillance, the checking that things that have been put in place, is something that the FSB does through the dialogue, but institutionally it’s the task that belongs to the IMF. So, that’s how it works. I heard that some people think that these discussions amongst peers lead to peer protection rather than peer pressure. But as I have explained, there is no incentive at all to protect your peer in this—around that table. All the incentive is first of all in drafting regulation that makes sense, and second, maintaining a level playing field.

C. Fred Bergsten: You’ve mentioned along the way the need to compromise, pull together some conflicting views. What about going forward? This is sensitive so, obviously, I understand you’re having difficulty commenting perhaps. But are there still significant differences within the FSB on appropriate capital requirements, resolution authorities—the issues that had allegedly been the source of a lot of disagreement, particularly across the Atlantic between some European and US authorities—do you feel those have been satisfactorily resolved, or is it a battle that will be fought again another day?

Mario Draghi: As far as Basel III is concerned, I’m confident that the recommendations and the actual drafting of the Basel III, which has been endorsed at several stages already by the governors that had supervision, it’s going to be presented at the next summit of the finance ministries and the governors in Seoul, and will be ultimately be endorsed by the leaders. I think my sense is that this is done, and I have no reason to think otherwise. Then past that, you have some areas, many areas in fact, whether—either we all do the same or frankly it wouldn’t mean much. Let me give you an example. The OTC [over-the-counter] derivatives, the centralization process of all these standardizeable derivatives trades into CCPs [countercyclical payments], all regulated exchanges. And together with this, the mandatory channeling of all information about all derivatives contracts into trade repositories so that this huge amount of information would be finally eventually available to the authorities for policymaking. These objectives are either pursued by everybody, or it’s exactly the area where you have instantaneous regulatory arbitrage that would nullify all the efforts. And so far, on this area at least, I have—I’m actually quite confident the people, everybody, wants to have the same thing. They want to see through one of the problems of this crisis that we had a huge area which was a black hole. You remember this numbers in the aftermath of Lehman, these numbers about the volume of derivatives contracts in existence. They were changing everyday in gross and net. And for a long time, I think for at least for a few months, people really didn’t know exactly what they were talking about. So this is one area.
Another area is the credit rating agencies [CRAs]. You have many dimensions to this. But again, it’s a point that unless—either we agree about how to regulate and treat and legislate about CRAs or frankly again, one CRA will simply establish itself somewhere else.

On resolution regimes, that’s an area—let’s not forget that resolution regimes are really the byproducts of a much broader set of legislation, which is the bankruptcy legislation. And that is a very complex piece of legislation that differs across countries. I mean in Europe we have, I guess, 27 different bankruptcy laws within the union. So it’s very likely that the national resolution regimes will differ as far as this or that detail. And there, the task of the FSB will be to make sure that if they differ, their differences don’t hamper an effective cross-border resolution when it happens.

Let me give you an example of things that would hamper this. If you have automatic ring-fencing of assets in one country that whereby these assets would be frozen in that country, and the bank, which is established in a different country, could not use these assets as a collateral to fund itself in case of need perhaps with the Central Bank. And so you could have a failure there even though the bank might be, in principle, perfectly solvent. So we’ve seen this. We’ve seen this on and on and on with the Lehman, but also in other cases. This is what we really want to overcome.

Then you have in other area—I think I hinted at that before—you won’t have the—for the SIFIs you want to have a higher loss of solvency capacity than the one given by the minimum Basel III standards. Now, in some countries, this could be achieved in the most straightforward and simple way, namely, higher capital. And when I say higher capital, I mean higher ordinary capital, higher common equity with the good quality capital. In other countries this could be either more difficult because of the structure of shareholding or because the business models of the SIFIs are different. They are not so much trading based but more on traditional commercial lending. In which case they may want to use instruments that are different like contingent capital, namely bonds that become capital at some point, or loss absorbing as I said before. Let me say—let me add immediately that these instruments are not fully developed in their design or even in their legal structure really. There’s a lot to think about of these instruments. Contingent capital has been studied and discussed now for several years in different forums. But to say that we now have a usable concept of contingent capital would be to say too much.

So I’m saying that we are trying to—basically the bottom line of what I’m saying is that we’re trying to have an area as broad as we can of basically fully coordinated, fully—almost exactly the same thing. But there are things that are naturally different and they should be kept different.

Georges Pineau: I would like to ask you the question on the too big to fail issue in the SIFIs because I think that there are two dimensions of the issues. The technical one which you raised, and I think that you have very good avenues, but there is a political dimension. And when the crisis arrives and when you have a SIFI which is collapsing, then you cannot avoid to have some kind of political interference. That has been always the case and it will be always the case. You have a lot and lot of examples. So how do you introduce in your mechanism the fact that you will have, at one point or another, political interference, which is the problem of different jurisdictions and so on, which is in my point one of the most difficult issues you have to face?

Mario Draghi: I think you’re absolutely right. But our task really is to—in this sense is to prepare draft legislation or regulation, which by itself eliminates many of the inconsistencies. But it will be presumptuous of us to sort of prevent any political interference because after all, if there has to be a political interference, we are regulators. We cannot do much—even Central Bankers can’t do that. But the
political interference, if that takes the form of drafting new legislation, we have to see the way it will develop, but I think it’s the nature of things. Like it is today, by the way, when you have an industry that fails and it should be closed, I think we have a good example of a country in Europe about the car industry. All the legislation, the bankers’ legislation says that you shouldn’t do anything. However, there was a political—let’s call it political interference that decided otherwise. So I think we have to take that as part of the functioning of democracy, I guess.

Ted Truman: So, Mario, I’d like you to maybe—an other direction from Anil’s question about the shadow banking system. I was interested that you labeled that as a sort of unchartered water so far for the financial stability board, and it would be interesting to see how you—and that strikes me again as—since even what different jurisdictions consider shadow and banking, if you may put it that way, are quite different. So I would be interested to see how—I’m interested to hear how you plan to sort of approach that issue which is basically the perimeter issue which I think recognize as one of the major causes of the problem of many crises. I’d like to remind our Korean colleagues that they had the curve mark that was the same thing as the shadow banking system—it raises many of the same issues. So I’d be interested if you can expand on that aspect of your work program going forward.

Mario Draghi: Ted, this is obviously a very big area when we say the shadow banking system. And we’ll have a lot of work to do in this area. But I think—let me give you the three things that I’m pretty solid about.

First, we have a mandate. All jurisdictions virtually want to do something about shadow financial service industry.

Second, there’s a common denominator about what all of them want to do—that is to increase transparency. We can move safely, first of all, to achieve this objective. By the way, it’s not an obvious thing to get. It’s not an easy thing to get for a variety of reasons.

Third, what is the likelihood that we are going to extend prudential regulation to known banking sector, to a shadow banking sector? I think all in all it’s not high because the shadow banking of the shadow financial service industry doesn’t have access to the central bank lending. So in a sense, I’m not ruling out anything really, but there’s one statement which actually describes more the complexity of the issue. More and more monetary policy assert its effects through the changes in the balance sheets of financial intermediaries, especially the non-regulated financial intermediaries. It’s not true in all jurisdictions, it’s true in some, in the largest, by the way.

And one thing we have discovered, not so much as regulators but as central bankers is that how little we know about these changes and about how these balance sheets change when monetary policy changes. So there is a lot of knowledge that we have to acquire before we can actually design a regulation. But so far, even the objective of achieving greater transparency, greater visibility, is a fairly challenging one.

C. Fred Bergsten: We have, I’m afraid, reached the end of our time for this session. We are going to continue discussing these issues at the next panel, and in fact, a bit of it even in the last panel on the financial architecture reform. So Mario, we thank you enormously for sharing with us your experience. I think I speak for most people here in saying how much we congratulate you on what you and your colleagues have achieved. It has been an enormous amount in a relatively short period of time on a crucial
and very complicated set of issues. So we congratulate you. We wish you the best of success going forward, and we thank you for sharing your time with us today.
Too Big to Fail: The Transatlantic Debate

Morris Goldstein and Nicolas Véron

Abstract

Although the United States and the European Union were both seriously impacted by the financial crisis of 2007, resulting policy debates and regulatory responses have differed considerably on the two sides of the Atlantic. In this paper the authors examine the debates on the problem posed by “too big to fail” financial institutions. They identify variations in historical experiences, financial system structures, and political institutions that help one understand the differences of approaches between the United States, EU member states, and the EU institutions in addressing this problem. The authors then turn to possible remedies and how they may be differentially implemented in America and Europe. They conclude on which policy developments are likely in the near future.

JEL Codes: G01, G21, G38, F36

Keywords: banks, comparative political economy, financial regulation, microprudential policy, too-big-to-fail


Note: The authors are indebted to Victor Zhikai Gao, Anil Kashyap, and Paul Tucker for their comments at the conference jointly organized by Bruegel and the Peterson Institute with sponsorship by the European Commission on October 8, 2010, where an initial draft of this paper was presented and discussed; to Gonzalo Capriolo, Gerry Cross, Douglas Elliott, Wilson Ervin, Wim Fonteyne, Mojmír Hampl, Nicolas Jabko, Micol Levi, Sergio Lugaresi, Christian Mouillon, Philippe Peuch-Lestrade, Elliot Posner, Nikhil Rathi, Barbara Ridpath, Jörg Rocholl, and David Westbrook for subsequent feedback on the same draft; to Philip Turner of the Bank for International Settlements for sharing with the authors BIS data on concentration ratios in banking; and to Allie Bagnall for excellent research assistance.
I. INTRODUCTION

The problem of dealing with too big to fail (TBTF) financial institutions is not a new one in financial policy, but the severity of the global economic and financial crisis that started in 2007 has put a spotlight on it like never before, along with the size and scope of the measures taken by the official sector to prevent the failure of a host of large and complex financial institutions. This paper aims at reviewing the key dimensions of the policy debate on the TBTF problem, as distinct from other dimensions of discussions aimed at strengthening financial stability, in the two major jurisdictions directly affected by the financial crisis, namely the United States and the European Union.

The TBTF problem gained particular prominence in March 2008 with the controversial rescue of Bear Stearns, when the US Federal Reserve backed JPMorgan Chase’s purchase of that ailing investment bank, and then again symmetrically in September 2008 when the US authorities’ decision to let Lehman Brothers fail ushered in a sequence of major market disruptions. On October 10, 2008, a few weeks after the Lehman collapse, the finance ministers and central bank governors of G-7 countries met in Washington, DC, and “agreed to take decisive action and use all available tools to support systemically important financial institutions and prevent their failure,” thus providing official confirmation that the TBTF label was more than just an allegation. A few days later, EU leaders clarified at the October 15–16, 2008, European Council meeting their “commitment that in all circumstances the necessary measures will be taken to preserve the stability of the financial system, to support the major financial institutions, to avoid bankruptcies, and to protect savers’ deposits,” while adding that “measures to support financial institutions in difficulty should go hand in hand with measures to protect taxpayers, to secure accountability on the part of executives and shareholders, and to protect the legitimate interests of other market players.” Given such pledges, it is no wonder that significant attention is being paid by policymakers and analysts alike to how one can avoid a future situation where authorities would once again be faced with an unpalatable binary choice between massive bailouts and market chaos.

The existence of TBTF financial institutions represents a three-fold policy challenge, which we refer to throughout this paper as the “TBTF problem.”

First, such institutions exacerbate systemic risk by removing incentives to prudently manage risks and by creating a massive contingent liability for governments that, in extreme cases, can threaten their own financial sustainability, with Iceland in 2008–09 and Ireland in 2010 serving as dramatic, recent cases in point. Larger and more diversified banks have shown greater write-downs of assets than smaller and less diversified ones (Haldane 2010), lending support to the proposition put forward by Stern and Feldman (2004) that large banks “spend” any diversification cost-saving on greater risk-taking.

Second, TBTF institutions distort competition. According to Moody’s, the 50 largest banks in 2009 benefited from an average three-notch advantage in their credit ratings, which has been understood to be at least partly related to official support (BIS 2010). US banks with assets of more than $100 billion can fund themselves for more than 70 basis points cheaper than smaller banks. The largest banks have received the lion’s share of state intervention: Haldane (2010) reports that 145 global banks with assets over $100 billion each accounted for more than 90 percent of the government support since the start of the crisis.

Third, the treatment of TBTF institutions lowers public trust in the fairness of the system and undermines the framework of responsibility and accountability that is supposed to characterize capitalist economies if and indeed when it boils down to the privatization of gains and socialization of losses.

---

1 We use the TBTF shorthand in full awareness of its shortcomings, especially the fact that the systemic importance of financial firms is not dependent on size alone, as we discuss later in this paper. Other shorthand characterizations have been proposed, such as “too important to fail (TITF),” which has become standard at the International Monetary Fund. However, TBTF has acquired sufficiently wide acceptance to be considered a standard way to name our subject matter.

2 Our geographic focus means that some elements of the wider global debate on TBTF, such as the impact of dominant state ownership of large banks in countries such as China, India, or Russia, are not taken up.
Johnson and Kwak (2010), among others, regard TBTF institutions as a threat not only to financial stability but to the political fabric as well.

Leading policymakers have often emphasized the importance of TBTF in the context of the financial crisis. Mervyn King (2009), governor of the Bank of England, said in June 2009 that “if some banks are thought to be too big to fail, then … they are too big…. Privately owned and managed institutions that are too big to fail sit oddly with a market economy.” US Federal Deposit Insurance Corporation (FDIC) Chairman Sheila Bair has opined in mid-2009 that the TBTF problem “is at the top of the list of things that need to be fixed…. It fed the crisis, and it has gotten worse because of the crisis” (Cho 2009). US Federal Reserve Chairman Ben Bernanke (2010), testifying before the US Financial Crisis Inquiry Commission, concluded that “if the crisis has a single lesson, it is that the too big to fail problem must be solved.” The Irish crisis of November 2010, which led to an official rescue package of €85 billion, more than 40 percent of which is to be used for immediate bank recapitalization and contingent support for the banking system, should further increase the prominence of the TBTF problem in European policy debates.

The TBTF problem is reflected in recent trends in concentration of the banking industry. Alessandri and Haldane (2009, p. 28) indicate that the share of the five largest global banks in global banking assets has doubled over the past decade, from 8 percent in 1998 to 16 percent in 2008. Drawing on the The Banker database, International Financial Services London (IFSL 2010) reports that this increase in concentration has been particularly pronounced during the crisis: with the share of the 10 largest global banks (in the assets of the largest 1,000) rising from 14 percent in 1999, to 19 percent in 2007, to 26 percent in 2009. This trend toward higher concentration also seems to be strongest among the very top banks: the changes in asset share for the next 10 and next 30 largest banks are more modest and different in sign, respectively. The next 10 largest saw their share increase only modestly from 12 percent in 1999 to 15 percent in 2009, with essentially no change between 2007 and 2009. The next 30 saw their share decrease modestly between 1999 and 2009 and more sharply between 2007 and 2009. Using Bank for International Settlements (BIS) data on the ratio of top-three bank assets relative to home-country GDP, we find that the level of concentration was higher in 2009 than in 2006 in 10 out of 14 large, advanced economies. Whatever the causality, concentration figures suggest that the recent crisis has exacerbated the TBTF problem.

Some policy initiatives have been taken since the start of the crisis to address the TBTF problem, especially through the introduction or reform of special resolution regimes that would provide an alternative to normal insolvency procedures for financial institutions (Goldstein 2010b). However, there is no consensus that decisions made so far will be sufficient to defang the TBTF problem and this issue is likely to elicit continued policy debates for years to come. Both the difficulty of the problem and its continuing relevance are underlined by the report recently delivered to the G-20 Summit in Seoul by the Financial Stability Board (FSB 2010), following difficult international discussions. Specifically, the Basel III agreement on minimum global capital standards was announced in September 2010 without a consensus on whether to impose a capital surcharge on what the Basel-located bodies call “systemically important financial institutions” (SIFIs), i.e., those financial firms whose disorderly failure would be likely to create systemwide instability (BCBS 2010b).

This paper is organized as follows. Sections 2 and 3 look, respectively, at how history and structural differences (in the financial sector) can help to explain current differences in policy orientations between the United States and the European Union on the TBTF issue. Sections 4 and 5 break up the TBTF debate into its two components: the debate on the “bigness” (size, interconnectedness, and systemic importance) of financial institutions on the one hand, and the debate on how to make the “failure” of these institutions less costly or disorderly, and ultimately a more credible prospect, on the other. Finally, section 6 offers some brief concluding remarks.

---

3 The findings are qualitatively similar if one substitutes top-five bank assets for top-three bank assets.
4 See for example Masters 2010.
II. HISTORICAL BACKGROUND, BEFORE AND DURING THE CRISIS

The United States and European Union have different starting points for the TBTF debate, in part for reasons linked to their respective histories including the experience of the recent crisis. These legacies form a crucial backdrop for any forward-looking policy discussion.

Precrisis History

The United States has a long tradition of suspicion and concern about large banks, which goes as far back as the controversy between Alexander Hamilton and Thomas Jefferson about the establishment of the First Bank of the United States in 1791. For a long time, the growth of a “national” financial system was kept in check by initiatives to restrain banking. The 1927 McFadden Act prohibited national banks from opening new branches across state lines. During the Great Depression, the Glass-Steagall Act (1933) forced a strict separation of investment banking activities from depositary banks, leading to the breakup of major institutions, such as the 1935 spinoff of Morgan Stanley from J. P. Morgan & Co. However, much of this framework was repealed in the 1980s and 1990s. The 1982 Garn–St. Germain Act allowed out-of-state bank-holding companies to acquire failed banks and thrifts, regardless of state law. The Riegle-Neal Act of 1994, which took effect in 1997, largely did away with restrictions on interstate branching for domestic bank holding companies and foreign banks. The Gramm-Leach-Bliley Act of 1999 repealed much of Glass-Steagall and lifted restrictions on the formation of diversified financial conglomerates.

The banking crisis of the 1980s provided a rehearsal for some of the current arguments about the TBTF problem. In 1984, the Continental Illinois National Bank and Trust Company, then the seventh-largest US bank by deposits, ran into severe difficulties and had to be rescued with liquidity support from the Federal Reserve, and with guarantees from the FDIC under a provision of the 1950 Federal Deposit Insurance Act, which had been seldom used until then. In subsequent hearings, the US Comptroller of the Currency admitted that regulators would not let the largest 11 US banks fail (Conover 1984). The expression “too big to fail,” at least as applied to banks, is said to date from this episode (Dash 2009). Partly as a result, the 1991 Federal Deposit Insurance Corporation Improvement Act established a special resolution regime for commercial banks and gave the FDIC a mandate to administer it. However, until 2008 this regime was only applied to relatively small institutions and was therefore not tested on a TBTF institution.

The crisis surrounding Long-Term Capital Management (LTCM), a hedge fund that suffered heavy losses and liquidity tensions as a result of the Asian and Russian financial crises in 1997–98 and had to be bailed out by major banks under the auspices of the Federal Reserve Bank of New York in September 1998, illustrated a new dimension of the TBTF problem—sometimes referred to as “too interconnected to fail.” With assets in excess of $100 billion, LTCM was not huge, but it was felt that its bankruptcy would cause a chain reaction throughout the financial system that could have catastrophic consequences, as assets would have to be liquidated at fire-sale prices.

In the European Union, the historical and political underpinnings of the TBTF problem are very different. Because the continent is composed of independent, generally centralized nation-states with strong cross-border financial linkages, national governments have been encouraged to favor the emergence of a strong and autonomous national financial sector that could successfully compete with its neighbors. Thus, the inclination is generally to protect and foster “national banking champions.” When these run into difficulties the inclination is to prevent their disappearance or foreign takeover by forcing domestic consolidation or, if this option is not available, by nationalization.

An early example of such “financial nationalism” is the creation of Deutsche Bank in 1870 in Berlin, partly to counteract the then dominance of British banks in international transactions, in the context of the formation and rise of the German Empire. As a consequence of the Great Depression and Second World War, large swathes of the financial system were nationalized in several countries, including Italy in 1933 and France in 1946. Since then, privatizations and financial crises (such as those
in Spain in the 1980s, or the difficulties of France’s Credit Lyonnais in the 1990s) have spurred considerable intracountry consolidation. Somewhat paradoxically, the introduction of the euro as a single currency in much of the European Union first resulted in further intracountry consolidation rather than the cross-border variety, as governments wanted stronger national champions to be ready for what they saw as a forthcoming increase in cross-border competition—the main exceptions being within groupings of small like-oriented countries (such as the Benelux or Scandinavia), and the privatization of the banking sectors of central and eastern European countries.

Since the 1990s, the European Commission has intervened more assertively in the consolidation process than in previous decades. Its Directorate General for Competition (known as DG COMP) has not generally objected to mergers among financial institutions with a cross-border market impact, as the creation of pan-European financial groups was generally seen positively from the perspective of integration of the single European market. On the contrary, the European Commission has tended to intervene to unblock cross-border combinations that were opposed by national prudential authorities supervising the target firm, particularly since the landmark case of Santander’s attempted acquisition of Portugal’s Champalimaud Group in 1999. This intervention, combined with the limits reached by intracountry consolidation as some national banking systems became extremely concentrated, encouraged a wave of cross-border banking mergers and acquisitions in the 2000s, which led to the emergence of a handful of truly “pan-European” groups (such as BNP Paribas, Santander, and UniCredit). In terms of deal size, the high point of this wave was the ill-fated hostile takeover of ABN AMRO in 2007 by a consortium of Royal Bank of Scotland (RBS), Fortis and Santander, which in turn contributed to the downfall of the former two.

Overall, this history has produced a wide diversity of banking structures within the European Union, with the larger continental economies (France, Germany, Italy, the Netherlands, and Spain) still relying predominantly on domestically headquartered banks, and most smaller countries (Belgium, Finland, all former communist countries) dominated by local affiliates of foreign banks. The United Kingdom is a category of its own with, inter alia, one large foreign-owned retail bank (Santander UK), along with very large wholesale activities of nondomestic, European, and non-European financial institutions in the city of London, now the undisputed financial hub of Europe as the continent’s capital markets have gradually integrated over the past two decades (a development that has mostly happened independently from banking consolidation).

Apart from the “domestic champions” mindset, a second major difference between the United States and European Union is the attitude toward bank failures. It is often asserted that the United States is more tolerant of corporate insolvency than most European cultures, and that the US bankruptcy code, at least when applied to nonfinancial companies, is comparatively more protective of corporate executives and employees than most European counterparts. In the case of banking, this difference is compounded in the European (and especially, but not only, in the German) psyche by the memories of the last significant wave of bank defaults in Europe, which in 1931 played a prominent role in enabling the subsequent rise to power of Adolf Hitler’s National Socialists. Thus, it is common among European policymakers to see bank failures as politically ominous disasters to be avoided at all costs, even in the case of relatively small banks. In this connection, the head of Germany’s financial supervisory authority, BaFin, commented in early August 2007, in the very first stages of the financial crisis, that the bailout of IKB, a second-tier specialized bank that most observers would have thought far smaller than any reasonable TBTF threshold, was necessary to avoid “the worst financial crisis since 1931.”

By “failure” we mean here the case where a financial institution fails to meet its contractual obligations to third parties. In the corporate world, the default process for handling failures is bankruptcy. In banking, and finance more generally, the existence of systemic risk means that bankruptcy can be disruptive much beyond the individual institution that fails. There are essentially three alternatives to

---

5 DG COMP’s mandate is only about competition and not about assessing the financial stability impact of mergers and acquisitions, either at national or European level. However, EU legislation allows prudential considerations to be invoked by national authorities to defend a combination that might otherwise be rejected on competition grounds.
bankruptcy when a financial institution reaches the point of insolvency. The first is a specific “resolution regime” involving the transfer of the institution’s assets and economic rights into receivership by a public entity, such as the FDIC in the United States, which can then decide which obligations will be honored or not. The second, nontechnically known as a “bailout,” is government intervention to repay creditors, which in certain cases is accompanied by nationalization, i.e., a voluntary or forced transfer of ownership to the state without interrupting business continuity. The third, sometimes euphemistically referred to as “regulatory forbearance,” is a temporary (sometimes extended) denial by the authorities that the institution is indeed insolvent, if necessary involving the softening or outright exemption of public disclosure requirements (of course, this cannot be considered “crisis resolution” but only a dilatory measure in the hope that the crisis would disappear or become less acute with the passing of time). In our use of the word, failure is a possibility under the first of these alternatives to bankruptcy, but not under the latter two.

Using this definition, we are not aware of any single major EU-headquartered bank failing in the first three years of the crisis. Several banks, such as Northern Rock and Bradford & Bingley in the United Kingdom and Hypo Real Estate in Germany, have been nationalized (using newly introduced legislation) and subsequently dismantled, but they have honored all contractual obligations throughout the process, as have Spanish savings banks taken over by the Bank of Spain such as Caja Castilla-La Mancha and CajaSur (using legislation dating from the 1980s). There were some actual bank failures but only of fairly small institutions, such as Weserbank in Germany, which was declared insolvent in April 2008; Dunfermline Building Society in Scotland in March 2009; and DSB Bank in the Netherlands in October 2009. This stands in contrast to Lehman Brothers, Washington Mutual (a major US savings bank that was placed in receivership in late September 2008 and whose banking subsidiaries were subsequently acquired by JPMorgan Chase), CIT Group (a mid-sized commercial finance company that entered bankruptcy in November 2009), and scores of smaller US depositary institutions found insolvent and taken into receivership by the FDIC. Only the funding difficulties of some EU member states may bring significant change. In November 2010, the Irish government decided to impose losses on junior bondholders of Anglo Irish Banks, which had been nationalized in January 2009, and at the time of writing there was expectation of other cases to follow.

A third specific “European” feature is linked to its welfare and/or social-democrat heritage, namely the importance of cooperatives and savings banks in several EU countries. The United States had a rough equivalent with the savings and loans (S&L) institutions and credit unions, but their importance and specificity have decreased in the last two decades, not least as a consequence of the S&L crisis of the 1980s. Many demutualizations and transformations into commercial bank entities have taken place in Italy, Sweden (with the formation of Swedbank), and the United Kingdom, but this segment remains prominent in Austria (Erste, Raiffeisen), Denmark (savings banks), Finland (OP-Pohjola), France (Banques Populaires-Caisse d’Épargne Groupe, Crédit Agricole, Crédit Mutuel), Germany (savings banks and Volksbanken), the Netherlands (Rabobank), and Spain (savings banks). In general, cooperative and savings banks have proved fairly resilient in financial crises, except when they diversified beyond their core retail business in which case they have often run into major difficulties (Fonteyne 2007). As they are not publicly listed, they typically disclose less financial information than listed peers; this in turn can be a contributing factor to market distrust, as has recently been the case, arguably, in both Germany and Spain.

Outright government ownership of banks used to be widespread but had largely disappeared from the European Union with the large-scale privatizations of the 1980s and 1990s. The main exceptions are Germany’s seven Landesbanken, generally jointly owned by local governments (Länder) and local

---

6 Iceland, which is part of the European Economic Area but not of the European Union, is obviously not included here.
savings banks in varying proportions; a few remaining state-owned banks in formerly communist
countries, most prominently Poland’s largest bank, PKO-BP (51 percent owned by the Polish state as of
mid-2009); and specialized national financial institutions with public-service mandates, such as France’s
Caisse des Dépôts et Consignations, Italy’s Cassa Depositi Prestiti, Germany’s Kreditanstalt für
Wiederaufbau, or Spain’s Instituto de Crédito Oficial, which, on most activities, do not compete directly
with private-sector financial firms (in the United States, Fannie Mae and Freddie Mac would arguably
form a similar category). In addition, of course, there are legacies of government interventions in financial
crises, such as the Swedish state’s stake in Nordea (19.9 percent as of mid-2009), or more recently the
controlling stakes of the UK government in Northern Rock, RBS, and Lloyds Banking Group, and the
government ownership of virtually the entire banking sector in Ireland; but in these cases, the respective
governments proclaim their intent to sell their shares as soon as market conditions are favorable.

Developments since 2007

In the United States, the July 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-
Frank Act 2010) contains a host of provisions targeted at the regulation and supervision of SIFIs (Davis-
Polk 2010), including, inter alia, stipulations that:

- bank holding companies with $50 billion or more in assets are automatically subject to enhanced
  prudential standards;
- once designated, systemically important nonbank financial companies must register with the Federal
  Reserve within 180 days;
- the Federal Reserve is required to establish enhanced risk-based capital, leverage, and liquidity
  requirements, overall risk management requirements, resolution plans, credit exposure reporting,
  concentration limits and prompt corrective action to apply to systemically important bank and
  nonbank financial firms;
- the enhanced prudential standards will also apply to US operations of foreign bank holding
  companies, although it is not yet known whether such provisions will apply extraterritorially to the
  foreign parent;
- subject to some exceptions and a transition period, any “banking entity” will be prohibited from
  engaging in proprietary trading or sponsoring and investing in a hedge fund or private equity fund;
  systemically important nonbank financial companies, while not prohibited from engaging in such
  activities, will be required to carry additional capital and comply with certain other quantitative limits
  on such activities (part one of the so-called “Volcker Rule”);8
- any insured depository institution or systemically important nonbank financial company will be
  prohibited from merging or acquiring substantially all the assets or control of another company if the
  resulting company’s total consolidated liabilities would exceed 10 percent of the aggregate
  consolidated liabilities of all financial companies at the end of the prior calendar year (part two of the
  Volcker Rule); and
- systemically important nonbank financial companies and large, interconnected bank companies will
  be required to prepare and maintain extensive rapid and orderly resolution plans, which must be
  approved by the Federal Reserve and the FDIC.

Many of these provisions require regulations to be issued by federal agencies, which are still in
the works at the time of writing this paper. In a speech in August 2010, the US Treasury secretary
continued to underscore the priority attached to making progress on TBTF when he emphasized that “the

---

7 For example, BayernLB is 94 percent owned by the state of Bavaria, while Helaba is 85 percent owned by savings
banks in the state of Hesse, and Landesbank Berlin is 99 percent owned by the German national association of
savings banks (DSGV).

8 While this Volcker Rule applies to all banks and is therefore not exclusively targeted at SIFIs, it was partly
motivated by considerations of systemic risk.
final area of reform...is perhaps the most important, establishing new rules to constrain risk-taking by—and leverage in—the largest global financial institutions (Geithner 2010).”

By contrast, in the European Union there have so far been no legislative or regulatory initiatives to establish size caps, mandatory capital, or liquidity standards applicable specifically to SIFIs, nor anything resembling the Volcker Rule. The only item in the Dodd-Frank “menu” that has already been met with some action in the European Union is the last one in the list, as various EU member states are asking leading banks to produce proposals to facilitate their possible recovery and/or resolution in a crisis, whether formally as specifically defined “living wills” or as part of the ongoing supervisory dialogue. In Belgium, recent legislation has created a national systemic risk board that will publish and regularly update an official list of SIFIs requiring special attention: a first version of this list was published in October 2010 and includes 15 legal entities belonging to 9 different financial groups.9 In the United Kingdom, the new coalition government elected in May 2010 has established an Independent Commission on Banking that is expected to propose a policy strategy to address the TBTF issue. Its conclusions are expected in June 2011, even though an active public debate will certainly take place before then.

At the European Union level, the legislative response to the crisis has been generally slower than in the United States for four main reasons. First, legislative proceedings are structurally slow in the European Union because of the complex interaction between the EU level and 27 sovereign states. The lawmaking framework combines the exclusive right of initiative for the European Commission and the need to reach agreement both with the Council of Ministers, which represents the 27 member states voting (in most financial-services matters) under a qualified-majority rule, and with the European Parliament. Second, at the time of the Lehman Brothers collapse, the European Commission was already in lame-duck mode awaiting its planned renewal in 2009, and this renewal was then further delayed for procedural reasons involving the adoption of the Lisbon Treaty. The new team, including the new commissioner for the internal market and services (who oversees most financial-services issues), Michel Barnier, only took the reins in early 2010. Third, priority was initially given to the necessary overhaul of the European Union’s supervisory architecture. This is an innovative policy endeavor that will result in 2011 in the establishment of three supranational European supervisory authorities, with respective mandates over banks (European Banking Authority—EBA), securities and markets (European Securities and Markets Authority—ESMA) and insurance (European Insurance and Occupational Pensions Authority—EIOPA), as well as a European Systemic Risk Board to oversee macroprudential issues. The corresponding legislation, based on a report published in February 2009 (Larosière 2009), was finalized in September 2010. This rather long delay is unsurprising given the political significance of the changes: the US equivalent is not the limited reorganization of federal agencies included in the Dodd-Frank Act, but rather the establishment of federal financial authorities such as the Securities and Exchange Commission and the Federal Deposit Insurance Corporation in the 1930s, even though the European agencies will start with a more limited mandate that does not supersede all existing competencies of national supervisors at the level of EU member states. Fourth, and not least, the European Union remains in the midst of an unresolved major banking crisis, while in the United States the “stress tests” of spring 2009 and subsequent recapitalization managed to restore a sense of normalcy at the core of the national banking system, even though many smaller banks have failed since.

Now that a new commission is in charge and a suitable supervisory infrastructure is being put in place, new policy initiatives are to be expected. The indications so far, however, are that the EU institutions are reluctant to envisage specific policies to address the TBTF problem. Two European Commission communications (nonbinding statements of policy principle) were published in 2010, the first on “Bank Resolution Funds” in May and the second on crisis management and resolution in October (European Commission 2010a and 2010b). Both contain essentially no reference to a possible differential

---

9 Of which five are headquartered in Belgium (Ageas, Dexia, Ethias, Euroclear, KBC) and four are foreign headquartered (AXA, Bank of New York Mellon, BNP Paribas Fortis, ING). Source: Belgian Committee of Risks and Systemic Financial Institutions (CREFS-CSRSFI), Circulaire CREFS 2010-01.
treatment of SIFIs compared to smaller financial institutions, and suggest that the commission at this point remains markedly more cautious on the TBTF problem than the United States has been with the adoption of the Dodd-Frank Act. The same applies to a more recent consultation on “technical details of a possible EU framework” for bank recovery and resolution (European Commission 2011).

Such caution reflects a more structural challenge for the European Commission as a direct result of the financial crisis. In the preceding decade, the European Union relied on an implicit agreement within both the commission and the European Parliament to foster financial-market integration through the dismantling of national regulatory barriers that hindered it, and thus de facto aligned itself with an international deregulatory agenda (Posner and Véron 2010). Now that reregulation is the order of the day, this alignment is no longer relevant, and the European Commission finds itself with the need to define a new strategic orientation that must still be compatible with the beguiling diversity of national positions and regulatory cultures within the European Union. One option may be to replicate US choices under the guise of transatlantic convergence, as Commissioner Barnier seems to have chosen in the important issue of moving over-the-counter derivatives toward centralized clearing. However, it is doubtful that the same can be achieved in the highly politically charged area of bank regulation. Thus, it is to be expected that some time will pass before a clear orientation emerges at the EU level in this area.

III. STRUCTURAL DIFFERENCES BETWEEN THE UNITED STATES AND EUROPEAN UNION

In this section, we examine the differences in financial and political structures that result from the contrasting historical paths of the United States and European Union. We would argue that such structural differences are influential in shaping the policy arguments on issues such as TBTF.

Financial Industry Structures

In the European Union banks play a much bigger role in financial intermediation than in the United States. This contributes to different attitudes toward regulatory reform. The Institute of International Finance (IIF 2010b) calculates that, as of end-2009, US banks accounted for only 24 percent of credit intermediation in the country, versus 53 percent in Japan and as much as 74 percent in the euro area. Many financial services that in the United States are provided by nonbank financial firms, such as asset management, broker-dealing, and specialized credit functions, are mostly delivered by banking conglomerates in the European Union. To give an illustration: In the Financial Times Global 500 ranking of the world’s 500 largest—by market value as of end-June 2010 (latest available)—listed companies, all 18 noninsurance financial firms with headquarters in Europe that were listed were referred to as banks, while there were only 7 out of 18 such firms based in the United States (representing 65 percent of the corresponding aggregated market capitalization10).

One consequence is that for all the consolidation that has taken place in the United States in recent years, EU-headquartered banks are comparatively larger than their US counterparts, especially when measured by assets. IFSL (2010) research reports that of the worldwide assets of the 1,000 largest banks in 2008–09, EU banks had the largest share at 56 percent versus 13 percent for US banks and 14 percent for Asian banks. Table 1 shows that of the top 25 banks worldwide, ranked by assets at end-2009, 10 of the top 15, including all the 6 largest, hailed from the European Union.

Another consequence is that measured in terms of assets to home country GDP, the largest EU banks are much larger, and thus even more likely to be considered TBTF, than their largest US counterparts. As shown in table 2, ratios of top-three or top-five bank assets to GDP show a considerable

---

10 The Financial Times list does not refer to Goldman Sachs, Morgan Stanley, and American Express as “banks,” even though they have converted to bank holding company status at the height of the crisis in late 2008. If these were considered banks, the share of nonbanks in the sample’s aggregate market value would decrease from 35 percent to 19.5 percent.
increase in the size of the largest banks since 1990 (earliest available) in all nine of the large advanced economies included in the sample. As noted earlier, for more than two-thirds of the cases this increase in the size of the largest banks relative to the size of the economy also continued during the recent crisis (where 2006 represents the precrisis observation and 2009 the latest one).

Just as important for our purposes, table 2 highlights the considerably higher systemic importance of large banks in all major EU economies than in the United States—at least if systemic importance is proxied by the size of the balance sheet, which probably underestimates the importance of banks in the United States given the broader development there of the “shadow banking system (Pozsar et al. 2010). Our interpretation is that the TBTF problem is actually much more pressing in the European Union than the United States, but also much more difficult to address. Some might argue that since the European Union has a policy to create a single financial market, bank assets should be compared to the EU GDP rather than the national GDP of the country of headquarters, in which case the EU and US figures would be of a comparable order of magnitude. However, such a comparison of aggregates is less relevant from a policy perspective: As the recent crisis brought home forcefully, de facto public guarantees for most banks come from the home country and only from there, a reality aptly summarized by the quip often attributed to Mervyn King that “international banks are global in life, but national in death.” In truth, the European reality is somewhat blurred by some banks’ multiple national allegiances. Thus, Dexia was jointly rescued by France and Belgium (and their respective taxpayers) in late September 2008, and it is likely that some burden-sharing would be sought in the case of a public intervention to help, say, Nordea (in this case involving Denmark, Finland, Norway, and Sweden where the group is formally headquartered). Standard Chartered, while headquartered in the United Kingdom, has much of its activity and also many of its central decision-making functions located in Asia, and it is therefore unclear that the UK government would support it even in the event of very serious difficulties. However, even after much cross-border integration, these are exceptional cases and most European banking groups have an unambiguous “home country” that the current policy framework designates by default as the one whose national government is likely to intervene in a crisis. The same applies to all significant US banks.

It should be noted that European banks are less globally dominant when ranked by other measures of size or strength. By absolute value of Tier 1 capital (also in 2008–09), US banks dominate the top 10 list: Four of this group are US banks (including the top three), four are EU banks (two from the UK and one each from Spain and France), one is Japanese, and one is Chinese (IFSL 2010). Rankings by market capitalization have been dominated since late 2007 by leading Chinese banks, with ICBC consistently at the top and China Construction Bank more often than not number two.11 By end-September 2010, HSBC (ranked third) was the only “European” bank in the top five, notwithstanding the fact that much of its activity is in Asia and its chief executive is based in Hong Kong. Santander was the only other European bank in the global top 10, and the smallest of that group, which otherwise includes two other Chinese institutions (Agricultural Bank of China and Bank of China) and four American ones (JPMorgan Chase, Bank of America, Wells Fargo, and Citigroup).

Another major structural difference between the United States and the European Union is the higher degree of internationalization of European banks, most of which takes place within the European Union. Table 3 illustrates the degree to which European banks have internationalized from their home base to the rest of Europe, less so in the rest of the world. The typical large European bank has less than half its activity in its home country; the corresponding proportion for US banks sampled is above three-fourths.

This difference in the degree of internationalization implies that cross-border linkages, especially intra–European Union ones, are typically much more important in policy discussions within the European Union than they are in the United States. In a way, one might even say that the discussion on cross-border dimensions of financial stability policy has largely crowded out the one on the TBTF issue in (continental) Europe, at least for the time being.

---

Political Systems

A more intangible but no less important factor of transatlantic policy differences is the difference in political systems, which leads to strikingly different decision-making processes and to different allocations of priorities. In most EU countries, the parliamentary nature of the regime means that the executive and legislative branches are closely aligned, while in the United States, divergence between Congress and the Executive branch is typically more frequent. EU countries also vary widely in the respective strengths of the executive and legislative branches, with a rule of thumb that parliaments are generally stronger in Northern than Southern Europe. The United States mainly relies on federal regulation of finance (with some exceptions such as insurance), whereas in Europe competencies in financial and banking regulation are shared between the national and EU levels. Some important matters, such as bankruptcy and tax legislation, are entirely or almost entirely national; others, such as accounting standards for listed companies’ consolidated financial statements and oversight of rating agencies, are entirely set at the EU level; and many others are a combination of EU directives (EU-level legislation that requires “transposition” into national law) and additional national requirements, sometimes referred to in EU jargon as “gold-plating.”

Less well-documented is the way the respective political and financial systems interact and depend on each other, a factor that an abundant political science and journalistic literature suggests can be an important driver of policy. In the United States, the attempts of private-sector actors to influence public policy decisions are typically measured in terms of election campaign contributions and lobbying expenses, for which there is a comparatively high degree of public transparency in spite of continuous (and often successful) attempts by private donors to circumvent existing disclosure requirements. For example, Johnson and Kwak (2010) calculate that campaign contributions from the US financial sector have grown from $61 million in 1990 to $260 million in 2006, a more than fourfold increase. In Europe, no equivalent benchmarks are available. In most EU countries, election campaigns are largely (though not entirely) funded by the public purse, and the granularity of available data on private campaign contributions is inferior to the US equivalent. Lobbying activities tend to be of a more informal nature than in America, and typically go entirely unreported.

That said, numerous examples and anecdotes support the proposition that the financial industry is at least as influential in shaping policy in many parts of Europe as it is in the United States. In Spain and Germany, local politicians sit on savings banks’ boards, and regions have direct equity ownership in the Landesbanks. In France, most senior executives in the banking industry have a civil service background, and conversely many prominent civil servants expect to move to banks in their later working years, which may influence their behavior and priorities. In Italy and Belgium, local communities play a significant role in the governance of key financial institutions. In the United Kingdom, city financiers actively engage political leaders in various informal venues. At the EU level, international financial institutions have built considerable influence in recent years, helped by an alignment between their own aims of winning international business and the EU institutions’ commitment to cross-border financial integration (Posner and Véron 2010). It remains to be seen how this relationship is to be affected by the change of emphasis of the European Commission since 2008 toward more intrusive regulation, as a consequence of the financial crisis. The assertive competition policy developed by the European Union since the 1990s illustrates that when no such alignment of aims exists, the European Commission can display a level of imperviousness to corporate influence that is rarely matched by national governments.

Yet another significant dimension is the fact that not all political leaders involved in financial regulation face the same kind of constituencies. In the United States, it is familiar to see Congressional representatives from states with major financial centers taking more favorable views of the financial industry than those without, but no such differences exist within the executive branch as it has a nationwide mandate. In the European Union, however, much of the decision-making results from the interaction of member states. Some countries, such as the United Kingdom, host global financial centers; in others, such as Cyprus, Ireland, or Luxembourg, the financial industry is a major contributor to the local economy, while in others still it is not seen as a significant contributor to national competitiveness.
Some countries, such as France or Spain, have very limited penetration of foreign banks on their domestic banking markets, but have strong “national champions” that have dynamically expanded abroad in recent years. Not surprisingly they have repeatedly displayed a strong inclination for home-country regulation, especially in comparison with other countries (such as Finland and most Central and Eastern European member states) where most banks are in foreign hands, and which tend to put more emphasis on host-country control. Differences are especially prominent in matters relative to wholesale financial intermediation, especially those segments that are concentrated in the United Kingdom as a result of several decades of (largely successful) EU financial integration. In such matters, an overwhelming majority of the EU Council of Ministers has no direct political stake in the outcome, as those market participants potentially affected are not among their constituents. The discussion of the Alternative Investment Fund Managers (AIFM) directive has been a prominent example of such dynamics. Conversely, the United Kingdom, partly because it hosts the continent’s major financial center and its banks have comparatively little activity on the continent, tends to downplay the need for consistent and binding policy frameworks at the EU level. All these specificities tend to make financial policy decision making at the EU level generally more complex, and often less fact based, than it can be in a single, coherent political entity.

IV. THE “BIGNESS” DEBATE: SIZE, INTERCONNECTEDNESS, AND SYSTEMIC IMPORTANCE

In a report to G-20 finance ministers and governors, the IMF, BIS, and FSB (2009, p. 2) define systemic risk as “a disruption to financial services that (1) is caused by an impairment to all parts of the financial system, and (2) has the potential to have serious negative consequences for the real economy.” SIFIs—which can then be seen as institutions whose impending failure, inability to operate, and disorderly wind-down could produce such systemic effects—12 can be seen as institutions whose impending failure, inability to operate, and disorderly wind-down could produce such systemic effects. The key criteria most often listed for identifying such SIFIs include size, concentration (sometimes employed as a proxy for substitutability), interconnectedness, performance of systemically important functions, and complexity (which some argue is proxied by the number of majority-owned subsidiaries or affiliates, or by the number of regulatory agencies or courts that would be involved in a resolution of the group). Many analysts also throw in leverage and liquidity as helping to define SIFIs, although these can also be regarded as characteristics of vulnerability that apply to all financial institutions. Most analysts also recognize that TBTF also has a time-dependent or context-dependent dimension, that is, thresholds for TBTF can be much lower if impending failure occurs at a time and/or context in which the economy is fragile and/or other financial institution failures have recently taken place.

To address the challenge posed by TBTF institutions, the first set of proposals concentrates roughly on the notion of “too big.” This section accordingly explores the options and prospects for regulation of bank size, and their respective implications in the United States and European Union.

Defining Bigness

As suggested above, there is no single measure or single firm characteristic that could provide a simple and straightforward gauge of systemic importance. A flavor of what has been done to gauge what financial institutions are and are not “systemically important” can be gleaned from the following examples.

12 Thomson (2009, p. 1) argues that a firm is systemically important “if its failure would have economically significant spillover effects [that], if left unchecked, could destabilize the financial system and have a negative impact on the real economy.” The ECB (2006, p. 132) argues similarly that large and complex banking groups are those “…whose size and nature of business are such that their failure and inability to operate would most likely spread and have adverse implications for the smooth functioning of financial markets or other financial institutions operating within the system.”
The European Central Bank (ECB 2006, 2007) has published a framework for identifying what it calls large and complex banking groups (LCBGs). It argues that the size of the balance sheet alone may fail to capture important interconnections, especially given the growing importance of off-balance sheet activities. It therefore proposed a multi-indicator approach that incorporates the following 13 variables: assets under custody, contingent liabilities, interbank assets, interbank liabilities, net interest revenue, proceeds from equity issuance, deposits, customer loans, net noninterest revenue, proceeds from syndicated loan issuance, other assets, proceeds from bond issuance, and mortgages (ECB 2006). In ECB (2007). Six more indicators were added to cover cross-border assets, overnight lending contributions, market capitalization, number of recorded subsidiaries, subordinated debt issuance, and trading income. The indicators were applied to a 2006 sample of 415 euro area and non-euro area banks, and cluster analysis was employed to demarcate the LCBGs from the others. In the end, the ECB (2007) wound up with 36 banking groups that were “large and complex.” Twenty-one of those were headquartered in the euro area and 15 outside. A composite size measure, based on the 19 indicators, was also constructed for each of these 36 institutions and tests were conducted to see how that measure correlated with total assets (the traditional size measure). Despite the ECB’s (2006) a priori argument that asset size alone was not likely to be a sufficient indicator for identifying LCBGs, it turned out that the $R^2$ between total assets and the composite size measure was about 0.93, indicating that asset size alone conveys a good deal of useful information.

A second example comes from Thomson (2009), who aimed to establish a set of criteria for designating US financial firms as “systemically important”. He did not base these criteria on empirical studies but instead used his judgment to suggest measures of size, contagion, correlation, concentration, and conditions and/or context. A sampling from Thomson’s criteria conveys the basic idea. His size threshold would be any of the following: 10 percent or more of nationwide banking assets; 5 percent of nationwide banking assets paired with 15 percent or more of nationwide loans; 10 percent of the total number or total value of life insurance products nationwide; and (for nonbank financial firms that were not traditional insurance companies) either total asset holdings large enough to rank it as one of the 10 largest banks in the country or accounting for more than 20 percent of securities underwritten over the past five years. On contagion, a firm would merit designation as systemically important if its failure could result in substantial capital impairment of other institutions accounting for a combined 30 percent of the assets of the financial system or the locking-up or material impairment of essential payments systems. Turning to concentration, Thomson (2009) would regard any financial firm as systemically important if it cleared and settled more than 25 percent of trades in a key financial market, processed more than 25 percent of the daily volume of an essential payments system, or was responsible for more than 30 percent of an important credit activity. However, it is not clear from the article how these thresholds were decided.

Example number three derives from chapter 2 of the April 2009 IMF Global Financial Stability Review (IMF 2009). The IMF explores four approaches for measuring interconnectedness: (1) network simulations that draw on BIS data on cross-border interbank exposures and that tracks the reverberation of a credit event or liquidity squeeze via direct linkages in the interbank market; (2) a default intensity model that uses data from Moody’s Default Risk Service and that measures the probability of failures of a large fraction of financial institutions due to both direct and indirect linkages; (3) a co-risk model that utilizes five-year credit default swap (CDS) spreads of financial institutions and that assesses systemic linkages among financial institutions under extreme duress; and (4) a stress-dependence matrix that incorporates individual CDS and probability of default data, along with stock prices, to examine pairs of institutions’ probabilities of distress. Among other findings, the IMF (2009) reports that: (1) simulations with the network model confirm that the US and UK banking systems are the most systemic systems in terms of triggering the largest number of contagion rounds and highest capital losses; (2) the Belgian, Dutch, Swedish, and Swiss banking systems are relatively highly vulnerable to banking distress in other economies; (3) if Citigroup’s CDS spread were at a very high level (the 95th percentile), this would lead (in a March 2008 simulation) to an increase of 390 percent in AIG’s CDS spread but only a 13 percent increase in the CDS spread of Wells Fargo; similarly, if Goldman Sachs’ CDS spread were at the 95th
percentile level during that period, the induced increase in the CDS spread would have been much higher for Bear Stearns than for HSBC or JPMorgan Chase; (4) in March 2008, extreme stress in CDS markets would have had greater spillover effects for 10 other large financial institutions if the stress occurred at HSBC or Commerzbank than if it took place at Wachovia or Bear Stearns; (5) the probability of default of any other bank conditional on Lehman falling into distress went up from 22 percent on July 1, 2007, to 37 percent on September 12, 2008; and (6) drawing on simulations from the default intensity model, the likelihood of the failure of a relatively large number of financial institutions increased sharply during 2008 to exceed the levels seen during the Internet bubble.

Our fourth example deals specifically with complexity. Herring and Carmassi (2010) use the number of majority-owned subsidiaries as a rough proxy for the complexity of a large and complex financial institution (LCFI). They note that the 16 LCFIs identified by the Bank of England (2007) and IMF have 2.5 times as many majority-owned subsidiaries as the 16 largest multinational manufacturing firms. As shown in table 4, taken from Herring and Carmassi (2010, table 8.1, p. 199), such financial conglomerates typically have hundreds of majority-owned subsidiaries; 8 of the 16 LCFIs in table 4 have more than 1,000 subsidiaries each and one (Citigroup) has nearly 2,500 of them—half of which are chartered abroad. Lehman Brothers had 433 subsidiaries in 20 countries at the time of its failure. Herring and Carmassi (2010) note that as well as having roughly $700 billion in assets, Lehman was the sixth largest counterparty in the over-the-counter (OTC) derivatives market, was a major player in the Repo market, and had among its unsecured creditors the US federal government’s Pension Benefit Guarantee Corporation, the German government’s deposit insurance arm, and market-money mutual funds, including the Reserve Primary fund, which eventually “broke the buck.” On top of this, the Fed and Treasury claimed they lacked the tools and/or authority to take over Lehman. Carmassi, Luchetti, and Micossi (2010, p. 59) note that subsidiaries constitute the principal legal form of European cross-border banks, holding assets of almost €4.6 trillion; subsidiaries of third countries’ credit institutions in Europe hold assets of almost €1.3 trillion. With such complexity for almost all financial conglomerates, it is very difficult to map lines of business into legal entities. Unwinding such complex financial institutions can be a nightmare because SIFIs have operations in many countries, because resolution regimes differ (and often conflict) across countries in many respects, because there is no agreement on a cross-border resolution plan, and because the recent crisis demonstrated that national “ring fencing” of assets is likely to be the default plan when an international bank fails without an agreed burden-sharing formula—an outcome that led some host-country supervisors to press for either an insistence on adequately capitalized subsidiaries or greater say in supervision over foreign banks operating in their backyard (FSA 2009b).

Our fifth and last example refers to attempts to gather a list of SIFIs—presumably based on the kind of criteria outlined above. One such attempt was reported in the Financial Times (Jenkins and Davies 2009), which referred to a list of 24 global banks and 6 global insurance companies that were earmarked for cross-border supervision by regulators. The list included six US banks (Goldman Sachs, JPMorgan Chase, Morgan Stanley, Bank of America, Merrill Lynch, and Citigroup), four UK banks (HSBC, Barclays, RBS, and Standard Chartered), one Canadian bank (Royal Bank of Canada), two Swiss banks (Credit Suisse and UBS), two French banks (Société Générale and BNP Paribas), two Spanish banks (Santander and BBVA), four Japanese banks (Mizuho, Sumitomo Mitsui, Nomura, and Mitsubishi UFJ), two Italian banks (Unicredit and Intesa), one German bank (Deutsche Bank), one Dutch bank (ING), and six European insurance groups (Axa, Aegon, Allianz, Aviva, Zurich, and Swiss Re).

Irrespective of the specific yardstick used to identify SIFIs, one nontrivial policy question is the following: if financial institutions deemed systemically significant are subject to a specific regulatory regime, should this list be made public? Some have argued that going public would undesirably confer official TBTF status on such institutions, thus reinforcing moral hazard. However, it appears unlikely that the identity of firms subject to a specific regulatory treatment can in fact be kept private, especially since such firms would likely be able to challenge their designation as SIFIs, including before the fact. Indeed, such a challenge is part of the Dodd-Frank Act of 2010 in the new US financial reform legislation and similar concerns are likely to arise in other countries. Also, as argued above, most large and complex financial institutions already receive in the market a funding discount and credit rating upgrade (relative
to smaller financial institutions) that can be at least partly linked to the formers’ perceived higher probability of obtaining government support should they get into trouble. Thus, it is not as if the absence of a public SIFI list will eliminate perceptions of unequal bailout treatment. Most importantly, designation as a SIFI is not identical to deeming that institution TBTF; a SIFI can fail if other elements of the regulatory and/or supervisory regime (discussed in the next section) make resolution credible and orderly and do not make liquidation too expensive for the taxpayer. Conversely, the cases of LTCM in 1998 and of IKB and Northern Rock in 2007 suggest that even institutions that would have been unlikely to be included in an official list of SIFIs can be considered too important to be allowed to fail. Indeed, as previously mentioned, Belgium has already proceeded with public disclosure of those firms deemed systemically significant there, including some local affiliates of nondomestic groups, and has done so even before the formal establishment of the public body that will determine which specific regulatory regime such firms should be subject to.

**Discouraging Bigness Through Curbs and Incentives**

A first set of policy options is to discourage TBTF and to internalize the externalities associated with bigness and complexity through curbs and incentives (as opposed to absolute size limits, which are discussed in the next subsection). We identify three main such options: capital and liquidity surcharges; size-related taxes or levies; and competition policy.

The Basel Committee on Banking Supervision (BCBS), which prepares capital and liquidity standards, has discussed for some time the idea of imposing higher capital (and perhaps also liquidity) requirements on financial institutions deemed systemically important relative to those not so designated. In its September 12, 2010, communication announcing what is commonly known as the Basel III agreement, the Basel Committee referred to this possibility as work in progress, to be decided in coherence with other FSB initiatives, but stated expressly that “systemically important banks should have loss-absorbing capacity beyond the standards announced today” (BCBS 2010b).

Here again, one objection to a TBTF capital surcharge is that the financial firms paying such a surcharge will have their TBTF status further enhanced (from de facto to de jure) and that this official designation will provide them with a further unwarranted funding subsidy, thereby exacerbating the misallocation of resources. However, one can doubt how the list of surcharge payers could be very different than the market’s existing perceptions of who is and who is not systemically important. Moreover, there is no reason why the surcharge needs to be zero-one; it can be graduated depending on the official sector’s evaluation of the size, interconnectivity, and complexity of the individual institution, in which case there is no threshold between non-SIFIs and SIFIs, and no need for a list of SIFIs, public or otherwise. The IMF (2010a) has explored various alternative approaches to estimating the capital surcharge for large and complex financial institutions, which present conceptual similarities to risk-based deposit insurance.

A second approach would be to create disincentives to bigness through tax or tax-like instruments. This would be especially relevant in countries that envisage setting up a new contribution, tax, or levy on financial institutions as a form of compensation for the public support they receive in the event of crises. However, considerations of tax fairness could play a role, at least in some legal environments, and limit the margin for governments to modulate the burden according to size or systemic importance. Those EU countries that have introduced a contribution from the banking industry so far, such as Sweden in 2009, have not decided to include a surcharge for systemic significance. In the United States a financial contribution from the financial industry was proposed by the Obama administration in January 2010 and debated by Congress, but was not included in the final version of the Dodd-Frank Act and remains an open option at this time.

Yet a third approach in this category is to use competition policy to curb the size of the largest financial firms. In the European Union, the European Commission has extensively used its powers since the beginning of the crisis to keep a check on state rescues and on the size of rescued firms. Specifically, it has required firms that received significant support from member states under the cover of safeguarding
financial stability, such as RBS, WestLB in Germany, KBC in Belgium, or ING in the Netherlands, to trim the size of their balance sheets and divest important parts of their business portfolios. However, the commission has only acted in cases when the government guarantee has been made explicit, i.e., in a corrective not preventive mode. Nor is it entirely clear at this stage to which extent TBTF concerns could also be applied to EU merger control, leading to block acquisitions or mergers that would exacerbate the TBTF problem, even as applicable EU regulations recognize the legitimacy of prudential and financial-stability considerations in this area. In the United States, it is also unclear how much the domestic competition policy framework would allow similar approaches, especially as, unlike in the European Union, it does not explicitly include control of state aid. As a substitute, the Dodd-Frank Act empowers financial regulators to force a systemically important financial institution to sell activities deemed to contribute to excessive systemic risk. The extent to which this provision will be used in practice remains to be seen.

**Prohibiting Bigness Through Size Caps and Breakups**

A more radical approach than curbing the size of financial institutions is to prohibit, or cap, them from growing beyond a maximum size. The Dodd-Frank Act of 2010 specifies that any insured depository or systemically important nonbank could be prohibited from merging or acquiring substantially all the assets or control of another company if the resulting company’s total consolidated liabilities would exceed 10 percent of the aggregate consolidated liabilities of all financial companies. This liability size-cap would not require any existing US financial institutions to shrink, though, and does not prohibit their organic growth in the future. It parallels and complements a preexisting cap of 10 percent of total domestic deposits that cannot be exceeded by some forms of external growth, introduced by the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994.

Some observers have suggested going further, by imposing size limits on systemically important financial institutions relative to GDP. Johnson and Kwak (2010) propose that the size cap for US commercial banks be set at 4 percent of GDP and that for investment banks the cap be set at half that (2 percent of GDP). Applied to the present US financial industry structure, this would require the six largest institutions, namely JPMorgan Chase, Bank of America, Citigroup, Wells Fargo, Goldman Sachs, and Morgan Stanley to shrink or split into separate entities. Goldstein (2010a) has favored size caps for US banks along Johnson-Kwak (2010) lines, although he argues that he could live with somewhat higher caps.

While the size-cap proposal is certainly controversial in the US context, it becomes even more so when viewed in an international environment. As emphasized in the previous section, many European countries have higher levels of banking sector concentration than the United States, and their banks carry comparatively more assets on their balance sheets. As a consequence, a consistent cap set at a few percentage points of GDP would require them to split their prominent banks into myriads of tiny entities. It would also explicitly prohibit small countries from hosting the headquarters of large banks, a proposition that might well generate political and diplomatic tensions.

Conversely, an international uniform size cap that would not depend on national GDP, say a maximum total of assets that banks should not exceed, would be questionable in terms of TBTF avoidance. A cap of $100 billion of assets, say, would force many banks in large countries to restructure and splinter drastically. Based on IIF (2010a) calculations, it would require 410 banks to replace the top 20 and 750 banks to replace the top 100. But it would still be too high to affect TBTF dynamics in most small and mid-sized countries.

At a more fundamental level, substantial disagreement presently exists on the economic cost and benefits that such a size limit would entail.

On the one hand, a longstanding strand of economic literature argues that significant economies of scale exist in banking (Diamond 1984; Allen 1990). More recently, studies such as Wheelock and Wilson (2009) find empirical evidence of economies of scale in the US banking sector. Large banks may also play a specifically important role in an internationally integrated financial system. Calomiris (2009)
argues that large and complex financial institutions are needed to service large and global nonfinancial businesses. In this view, we would not have the degree of global integration of stock, bond, and foreign exchange markets that we enjoy today without large, global financial firms nor would the flow of finance to emerging economies be what it is with the assorted economic benefits (as discussed, for example, in Cline 2010). Accordingly, so the argument goes, to deny the links between large, global corporations and large, global banks is to ignore both important supply-chain links that have transformed the way global firms do business and the globalizatin of professional services more broadly, including, for example, law firms and accounting firms. Banks with less than, say, $100 billion of assets tend to be mostly domestic in their focus and would not be able to substitute for the cross-border activities of the very large banks. Some relatively highly concentrated banking systems in the advanced world (e.g., Canada and Australia) escaped relatively unscathed from this crisis, while some less concentrated ones (like the United States) incurred relatively high costs. More generally, there is no empirical evidence that banking concentration is positively related to the incidence of banking crises; if anything, the evidence goes the other way (Beck, Demirguc-Kunt, and Levine 2003). Also, foreign bank participation in national banking systems, which often involves comparatively larger financial institutions (Focarelli and Pozzolo 2001), can be associated with higher financial stability. Persaud (2010) argues that contagion in a systemic financial crisis is an effect more of investor psychology (if firm A has a problem and firm B apparently carries the same type of risk, investors go short on firm B) than actual financial interconnections. Adair Turner, the chairman of the UK Financial Services Authority, has similarly argued recently that “there is a danger that an exclusive focus on institutions that are too big to fail could divert us from more fundamental issues” of precarious credit supply and corresponding macroeconomic volatility (Turner 2010).

On the other hand, some analysts—such as Johnson and Kwak (2010), Stern and Feldman (2004), Group of Thirty (2009), and Goldstein (2010b)—stress that other empirical studies on the economies of scale in banking finds such economies only for small banks and certainly not beyond $100 billion in asset size—to say nothing of the trillion-dollar-plus balance sheets of the world’s largest banks (Berger and Mester 1997; Amel et al. 2004; Herring 2010). As banks become very large, diseconomies of scale can set in, particularly regarding ability to manage prudently and to implement effective risk-management systems. While the main motive for consolidation is usually described as maximization of shareholder value, there is also evidence of other motives behind the trend toward larger, more complex financial institutions—such as the desire to avoid taxes and financial regulations, the drive for market power, and the link between firm size and executive compensation—which typically subtract from, rather than add to, social value. In this strand of thought, the defense of universal banks on grounds of diversification and “economies of scope” across bank products and activities is a false hope. More recent research finds that markets impose a “discount” on banks when they become more complex—not a diversification premium (Laeven and Levine 2005). As noted earlier in this paper, measures of bank size and bank diversification have been positively (not negatively) correlated with income volatility during the 2006–08 period. Haldane (2010) finds that larger and more diversified banks have also shown greater write-downs of assets than smaller and less diversified ones. Some authors holding this view also argue that contrary to industry claims, large, complex financial institutions are not needed to service large, global nonfinancial businesses, and that the needs of those businesses can just as well be met by consortia of medium-sized banks without the excess baggage that TBTF institutions bring with them (Goldstein 2010b; Johnson and Kwak 2010).

An alternative perspective is to focus not on financial institutions’ overall size but on the way critical market functions can become overwhelmingly reliant on a limited number of actors. For example, Tett (2010) notes that the triparty repurchase (or “repo”) market is predominantly cleared by only two large firms, JPMorgan Chase and Bank of New York Mellon. The systemic importance of that market is such that, as Tett notes, it is impossible to avoid massive moral hazard without a radical change of market structure. More broadly, Giovannini (2010) advocates a separation of all “infrastructure” functions into separate entities as a way to reduce systemic risk. Such focus on functions that may be deemed incompatible within the same financial group underpins the Volcker Rule, as it did with the Glass-
Steagall Act in a different era. However, as this category of approaches does not in principle differentiate institutions according to size, it may not address the TBTF question in a comprehensive way.

Altogether, it is unlikely at this point—for better or worse—that international agreement can be reached on hard size caps for banks. In the United States, aside from the hard size cap on the share of systemwide liabilities that is already in the Dodd-Frank Act and the older cap on deposits, regulators will rely on other types of incentives to limit the “bigness” of financial institutions. Meanwhile, it looks like EU countries will be reluctant to envisage the somewhat disruptive prospect of a mandatory break-up of large banks, given the already mentioned heterogeneity of country preferences linked to diverse structures of national banking markets, and to the perception that prevails there that no sufficiently strong analytical basis is currently available for the assessment of both the costs and benefits of such an option. Softer curbs on the size of financial conglomerates, through a targeted adjustment of prudential, tax, and competition policy, will be insufficient to put an end to the TBTF problem but can at least help to somewhat correct the competitive distortions it creates. In Europe, more cross-border banking integration and centralization of the supervision of the largest institutions at EU level would allay the current competitive tensions, and would make the TBTF issue less intractable than it currently is in individual EU member states.

V. THE “FAILABILITY”\textsuperscript{13} DEBATE: ALLOWING BANKS TO GO UNDER?

The second class of proposals to address TBTF relates not to the size of institutions, but to the possibility of their failure. If even huge financial conglomerates can fail without creating major market instability, then their bigness becomes less of an inherent problem. The financial crisis, and especially the successive decisions taken by the US authorities on Bear Stearns, Lehman Brothers, and AIG, has illustrated both the difficulties of applying a consistent policy framework to all crisis situations without creating massive moral hazard, and the disadvantages of taking different stances in different cases.

Failure and Competition

It is difficult to separate the debate about the possibility of financial institution failure from a more general conversation about competition in the financial industry, which is made more complex by its multifaceted links with financial stability. Competition simultaneously imposes discipline on financial firms, and can foster excessive risk taking. A bank failure can increase concentration, or on the contrary, provide opportunities for new entrants, depending on how open and competitive the banking system is in which it takes place. In a system where all or most of the financial industry is in government hands, an actual bank failure is virtually impossible and a government bailout is almost guaranteed.\textsuperscript{14}

In many EU countries, the financial sector has long been sheltered from competition policy (Carletti and Vives 2008), and the more assertive stance of the European Commission’s Directorate General for Competition (the EU competition authority) since the late 1990s is too recent to have had structural impact in all the European Union’s financial systems. Many specific features, even when considered compliant with EU competition policy, restrict the competitive field. For example, German savings banks are generally considered autonomous from one another (see for example in the ECB’s statistics of banking concentration in the euro area in ECB 2010), but the so-called “regional principle” prevents each of them from proposing or supplying services on another savings bank’s territory (they also rely on mutual guarantee schemes at regional and national levels). In other countries such as France, Belgium, or Austria, successive waves of consolidation have led to the almost complete disappearance of independent local banks. There are almost no new entrants in many (Western) European banking markets,

---

\textsuperscript{13} For lack of a better word.

\textsuperscript{14} It is not absolutely guaranteed though, especially at times of major shifts in government policy. Thus, Guangdong International Trust and Investment Company, a large state-owned Chinese bank, declared bankruptcy in January 1999. See Landler 1999.
in stark contrast to the almost continuous flow of “de novo” banks being created at the local level in the United States.

A large sector enquiry carried out by the European Commission between 2005 and 2007 found major competition barriers in many countries in several areas including: payment cards and payment systems, credit registers, product tying, and obstacles to customer mobility (European Commission 2007). Competition issues are also present in US retail financial services, but the large size and relative openness of the national market, near-continuous emergence of new entrants, and provision of many financial services by nonbanks contributes to a generally more competitive playing field than in most EU countries. In wholesale financial services, the difference is less apparent as indeed many of the most prominent actors are the same on both sides of the Atlantic.

Special Resolution Regimes

As mentioned above, special resolution regimes administered by an out-of-court resolution authority appear better adapted to the conditions of financial firms than ordinary corporate bankruptcy processes. As analyzed in Cohen and Goldstein (2009), this is primarily because bankruptcy processes pay little attention to third-party effects that are the essence of systemic risk; because creditor stays, and their potential adverse systemic effects, are part and parcel of the bankruptcy process; because bankruptcy proceedings move too slowly to protect the franchise value of the firm; and because bankruptcy does not permit pre-insolvency intervention. However, resolution authority should not be seen as a panacea, if only because it may sometimes be difficult to implement in a way that simultaneously supports market discipline and avoids the contagion effects that financial stability policy is intended to minimize. Supporting market discipline usually is interpreted to mean wiping out shareholders, changing management, and paying off creditors (promptly) at estimated recovery cost (not at par). It may also entail not selling the failing firm to one of the larger players in the field. And it is also increasingly seen as meaning that the resolution authority should be funded in part with ex ante and/or ex post fees on other financial institutions so that the financial sector, rather than the general government budget, pays the lion’s share of the costs. However, in some crisis scenarios, policymakers may stray from following through on some of these measures (for example, imposing haircuts to senior bondholders) out of concern that they may precipitate “runs” on similar instruments in other firms. This appears to have been the case when the EU authorities insisted that the Irish rescue package of November 2010 should not include the imposition of losses on the holders of senior debt issues by Ireland’s failed banks. Ultimately, the proof of the pudding will be in the eating.

The US Dodd-Frank Act introduces a new procedure that in effect allows US authorities to apply a special resolution procedure to systemically important nonbank financial institutions, on the initiative of the Secretary of the Treasury and subject to approval of the systemically significant status by a special panel of bankruptcy judges (and of the newly formed Financial System Oversight Council). Once agreed, the resolution procedure would be administered by the FDIC.

In the European Union, the situation varies widely from one country to another but new resolution regimes, for either banks or systemically important financial institutions or both, have been introduced recently or are being introduced through new legislation in Sweden, the United Kingdom, Belgium, and Germany. It is likely that other countries will follow suit in the near future. The idea of an integrated EU bank resolution framework has recently been forcefully endorsed by the IMF (Fonteyne et al. 2010 and Strauss-Kahn 2010) and by the European Parliament’s Committee on Economic and Monetary Affairs, including the specific proposal of a common “European Bank Company Law, to be

\[15\] In fact, in the US case, one of the most oft-cited concerns about tougher new financial regulations—be they size related or otherwise—is that it will prompt a large (and undesirable) migration of financial activities to the “shadow” banking system. Indeed, for that very reason, some analysts (e.g., Hanson, Kashyap, and Stein, 2010a) have proposed that such regulations be defined on a “product” basis so that they bite equally across the banking and nonbanking sectors.
designed by the end of 2011” (European Parliament 2010). However, the European Commission has not attempted to harmonize national resolution initiatives so far, let alone create an integrated framework. Even its limited, nonbinding suggestions about the funding of national resolution schemes (European Commission 2010a) have not been taken on board by several member states. Its latest proposals on crisis management essentially amount to delaying any harmonization of bank resolution frameworks to after 2012, and any discussion of an EU-level resolution framework to 2014 at the earliest (European Commission 2010b).

That said, the European Union is playing a role in bank resolution through another channel, namely control of national state aid as part of its competition policy framework. Dewatripont et al. (2010) note that under this mandate, the European Commission has effectively contributed to the objectives of mitigation of moral hazard and correction of competitive distortions resulting from national bank bailouts. They advocate a reinforcement of this function, as a complement or substitute for a still-to-be-decided European resolution framework.

**Orderly Dismantling of Complex Groups**

The availability of a resolution regime and resolution authority is a necessary condition to envision the orderly resolution of large financial institutions, but it is not sufficient. The resolution authority does not only need the legal powers to intervene, it must also have the operational capability to do so, which can prove to be a significant challenge in itself. The failure of a large financial conglomerate can be a hugely complex affair, especially as corporate structures in the financial sector have become ever more complex, partly as a result of continuous regulatory and tax arbitrage (Herring and Carmassi 2010).

Since the idea was floated in the UK Turner Review (FSA 2009b), regulators have pinned hopes on the notion that the financial institutions themselves could meaningfully contribute to alleviating this herculean task. One option is to require each systemically important institution to prepare and maintain a “living will” or “wind-down plan” (or, if it also includes provisions aimed at preventing failure in a crisis, a “recovery and resolution plan”) that would provide regulators with a “roadmap” to guide them through the maze of subsidiaries, commitments, and contingent liabilities.

In the United States, the Dodd-Frank Act of 2010 stipulates that all systemically important nonbank financial companies and large, interconnected bank companies will be required to prepare and maintain extensive rapid and orderly resolution plans, which must be approved by the Federal Reserve and the FDIC. In cases where the institution is too large and complex to be wound down in a nonsystemic way, the supervisor would have the authority to require the institution to shrink and to become less complex. In several EU countries, the authorities have initiated a dialogue with key financial institutions on resolution options, even if this effort may not always be materialized by a formalized, self-standing plan.

According to Herring (2010), the orderly resolution plans must:

- map lines of business into the corporate entities that would be taken through the resolution process;
- describe the resolution procedures for each entity, along with an estimate of how long each will take;
- identify key interconnections across affiliates (such as cross-guarantees, stand-by lines of credit, etc.), along with operational interdependencies (such as information-technology systems);
- contain provisions for developing and maintaining a virtual data room that contains information that the resolution authority would need to expeditiously resolve the entity;
- identify key information systems, where they are located, and the essential personnel to operate them;
- identify any activities or units deemed as systemically relevant and demonstrate how they operate during a wind-down;
- consider how its actions may affect exchanges, clearing houses, custodians, and other important elements of the infrastructure; and
- be updated annually, or more often if a substantial merger or acquisition or restructuring adds extra complexity.

As this list illustrates, the credible maintenance of living wills could represent a significant administrative burden for financial institutions, and there will be trade-offs as to how the requirements will be implemented. The fundamental difficulty is that the resolution strategy is, in many aspects, dependent on the actual features of the crisis in which it would take place. For example, selling certain assets early in the resolution process may depend on whether the markets for these assets remain liquid, which itself is dependent on the specific crisis scenario. As 19th century Prussian General Helmuth von Moltke famously quipped, “no campaign plan survives first contact with the enemy.” If orderly resolution plans are very detailed, they might not withstand the first contact with a real crisis. If they stay general and do not provide detail, they might not be able to serve their purpose.

The magnitude of the challenges is compounded by international complexity, which is a common feature of many SIFIs. The Lehman Brothers bankruptcy has illustrated the potential for considerable difficulties to arise from the international interdependencies that must be unwound in the resolution process. While there may be exceptions, this difficulty is in general vastly more pronounced in investment banking than in retail services. As retail operations are local in nature, it can be relatively easy to ring-fence them in a resolution process even if some functions, such as information technology and some aspects of risk management, are provided on a cross-border basis. Global banks with significant retail operations, such as Citi, HSBC, or Santander, often claim that they would be fairly easy to wind up on a country-by-country basis in the event of major financial difficulties—even though this claim is ultimately unverifiable, at least for outside observers, as long as no such process has been tested in real conditions. For investment banks, however, the ability to manage complex and fast-moving cross-border linkages is a core part of the business model and of the value proposition to customers, and for that reason their orderly resolution on a transnational basis is almost by definition a highly problematic endeavor. In effect, there is no relevant precedent. Cross-border banking resolutions have been extremely rare, and generally horribly messy as in the case of Herstatt Bank in 1974, Bank of Commerce and Credit International in 1991, or indeed Lehman Brothers. Conversely, resolutions that have happened in a relatively orderly way, such as, say, Washington Mutual or CajaSur, have generally been largely managed within a single country.

One probably inevitable consequence of the emphasis on resolvability is growing host-country insistence on autonomous capitalization and funding of local operations for international banks, certainly in retail activities but also, perhaps increasingly, for wholesale business as well. In some cases this can take the form of conversion of branches into subsidiaries—especially since the Icelandic crisis brought home the importance of host-country control and protection of local depositors. This will rightly worry advocates of cross-border financial integration, as it may hamper the international intermediation role of financial firms, but the importance of protecting local stakeholders will, in most cases, weigh heavier than concerns about financial fragmentation.

It remains to be seen whether this same concern will be applicable to intra–European Union (or perhaps intra–European Economic Area) activity. On the positive side, there is both a higher degree of commitment to cross-border financial integration and the creation of a single financial market, and there is more of a legal, regulatory and (to some extent) political infrastructure to credibly oversee the financial sector at the supranational level. From this perspective, the creation of the European Banking Authority is probably a step toward a more integrated future supervisory and crisis management framework. In such a framework, we would see a clearer division between financial institutions with a national or local reach, for which supervision shall remain at national level, and “pan-European” ones, which would be at least partly supervised at the EU level—even as fiscal resources are likely to stay managed by member states for the foreseeable future (Véron 2007). However, as emphasized above, there is not yet a consensus in EU policy circles on such a proposal, and therefore the European Union is bound to retain for an undetermined period of time its current unstable mix of centralized rulemaking, commitment to a single market, and absence of an integrated crisis management and resolution framework.
Making Creditors Pay: Contingent Capital and Bail-ins

Another proposal that has caught momentum in the past few months is to envisage mandatory requirements for SIFIs to convert a portion of their debts into common equity under prespecified stress conditions (Squam Lake Working Group on Financial Regulation 2009, Goldman Sachs 2009, Herring 2010). At the time of writing, two concepts are widely debated: “contingent capital” or “CoCos” for contingent convertible instruments, which have been endorsed in a proposal of the Swiss authorities for additional requirements to Basel III for Swiss-headquartered SIFIs; and “bail-ins” (Calello and Ervin 2010), which have been actively discussed within the Basel Committee and FSB (BCBS 2010a). These ideas have received support from significant financial industry bodies such as the Institute of International Finance (IIF 2010b) or the Association for Financial Markets in Europe (AFME 2010). Some have also argued (Goldstein 2010b) that the minimum global capital standards recently agreed under Basel III (BCBS 2010b) are too low and that this will increase the need for some type of contingent capital.

In “bail-ins,” the conversion of specific tranches of debt (in the AFME proposal, preferred stock or unsecured debt) to equity would be decided by regulators, which would require new enabling legislation, as an alternative to resolution. By contrast, in the case of contingent capital, the debt instruments would be automatically converted into equity in application of preexisting contractual arrangements whenever a predefined trigger is reached (somewhat comparable instruments have existed for some time in the insurance industry). Both notions, contingent capital and bail-ins, are seductive as they hold the promise of bringing loss-absorbing equity to financial firms exactly when they need it most, in the midst of a crisis. However, both are also essentially untested. Contingent convertible bonds were issued by Lloyds Banking Group and somewhat similar instruments were issued by the Netherlands’ Rabobank, but these precedents are widely seen by market participants as not sufficient to establish the commercial viability of the concept, let alone its effectiveness in crisis conditions. Thus, caution is warranted as to whether these concepts are potentially a way of “ending too big to fail” (Goldman Sachs 2009) or merely another hybrid structured finance product that may fail its purported objective when tested under stress.

At this stage, it seems prudent to see contingent capital and bail-ins as possible complements to other TBTF antidotes such as capital surcharges for SIFIs, special resolution regimes, and orderly wind-down planning, rather than substitutes, and provided they stand the test of the marketplace, which is too soon to assess at the time of writing.16

VI. CONCLUDING REMARKS

In its report for the Seoul Summit in November 2010 (FSB 2010), the FSB acknowledged the difficulty of addressing the TBTF problem on a transnational basis and recommended a focus of international discussions on what it termed “global SIFIs” or “G-SIFIs,” which exclude institutions that are systemically important in a domestic context but have limited international activity (say, Japan Post or the large Chinese banks). This limited agenda underlines the prospect for divergence of practice and implementation in the years ahead, including between the United States and European Union, and to some extent also among EU member states. This need not necessarily be a fatal problem. A global, level playing field in finance is a worthy ideal, but it remains a vision rather than a reality and will remain so for some time. The IMF (2010a) notes that tax rates on the financial sector in advanced economies differ markedly from one another, without resulting in massive moves of financial institutions changing their location in response to these differences. Within the European Union, there is a need for a higher degree of harmonization, and leaders have committed to the notion of a “single rulebook,” even if this is unlikely to include tax and bankruptcy arrangements for some time. Elsewhere, regulatory constrains will continue to vary widely, including between both sides of the Atlantic. In a politically heterogeneous world, such variations have to be accepted as a necessary evil.

16 See for example Jones 2010.
The adoption of binding “bigness” caps that would cut SIFIs down to a more limited size do not seem likely on either side of the Atlantic, at least in the next few years. In the United States, where hard size caps are viewed perhaps the most favorably, it appears improbable that officials will go beyond the market-share funding caps that are in the Dodd-Frank Act—at least until the more comprehensive approach to deterring TBTF in that legislation has had enough time to be tested. In the European Union, size caps are highly unlikely if measured in terms of assets (or another yardstick) to national GDP. It may be more promising over the longer term to envisage caps defined by size to EU GDP, even though they would not correspond to the current patterns of bank rescues. If this happens, it is likely that such caps would at least initially be set at a relatively high level, comparable to the existing limits applicable to American financial institutions in terms of share of total US deposits and liabilities (10 percent in each case).

There are somewhat higher prospects for change regarding other forms of constraints on the structure of financial conglomerates, namely incompatibilities between certain lines of business corresponding to different types of risk exposures within the same group, akin to the Volcker Rule now adopted in the United States. Giovannini (2010) makes a strong argument for this category of curbs, and we believe an active debate will develop on this issue, not only in the United Kingdom (which has put it on the agenda of its Independent Commission on Banking) but possibly to some extent in the rest of Europe as well, in spite of the dominance of the universal banking model. That said, such functional separation is not about TBTF in a strict sense and is therefore beyond the scope we gave ourselves in this paper.

We also regard the arguments for a comprehensive approach toward discouraging TBTF as compelling enough to expect several initiatives to be adopted in the United States and in several, perhaps all, EU member states. These may include capital surcharges as floated by the Basel Committee, even though they are now fiercely resisted in several parts of the European Union; more-than-proportional levies on large banks, in those countries that would introduce such mandatory contributions; and an assertive conduct of competition policy, at least at the EU level, to put a check on excessive intracountry bank concentration (while still favoring cross-border integration). A transparent designation of SIFIs in Europe would have the additional advantage of raising public awareness of the disturbing number of European banks that are indeed systemically important, including most household brand names. This may, in an optimistic view, create incentives for more competition in the European banking sector, a more favorable environment for new entrants, and for more effective cross-border regulatory integration, which would be a way to raise SIFI threshold (if systemic importance is assessed vis-à-vis the EU financial system as a whole, as opposed to national ones).

We underlined why making orderly failure of SIFIs a credible prospect is even more difficult in the European Union than it is in the United States; in this connection, it is desirable that all EU countries adopt special resolution regimes and correspondingly empower their financial authorities, which will have the desirable effect of broadening the range of options available to policymakers in future crises. In the mid-term, we expect a resolution authority to be introduced at the EU level, broadly along the lines suggested by the IMF (Fonteyne et al. 2010). In the meantime, resolution authorities should be established or reinforced at national level, and should assertively obtain knowledge on how to unwind the complex structures of SIFIs they oversee, in spite of predictable resistance from the financial industry. The most recent working document from the commission at the time of writing (European Commission 2011) suggests cautious hope that some progress may be made along these lines in 2011–12.

We would, of course, be happier if we could say with a straight face that the TBTF problem was well on its way to being solved on a comprehensive G-20 basis. We cannot say that. But we can say that current policy approaches toward SIFIs have taken into account some of the lessons from this global economic and financial crisis, that serious efforts to address the TBTF issue have made their way into legislation in some major economies (more so far in the United States than in the European Union), that there does seem to be a healthy willingness to experiment with different approaches, and that much will depend on whether regulatory authorities will be willing to exercise their newly acquired authority to curb
the excesses that turned out to be so costly in the past. Even if these measures do not bring a final solution to the TBTF problem, they are well worth the continued attention of policymakers in the years to come.
References


Haldane, Andrew. 2010. The $100 Billion Question. Speech to Institute of Regulation and Risk, Hong Kong, March.


Turner, Adair. 2010. Too much “too big to fail”? *Project Syndicate* (September 2).


<table>
<thead>
<tr>
<th>Rank</th>
<th>1990 Institution</th>
<th>1990 Assets (USD millions)</th>
<th>2009 Institution</th>
<th>2009 Assets (USD millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dai-ichi Kangyo Bank Ltd., Tokyo</td>
<td>$428,167</td>
<td>The Royal Bank of Scotland, Edinburgh</td>
<td>$3,500,950</td>
</tr>
<tr>
<td>2</td>
<td>Sumitomo Bank Ltd., Osaka</td>
<td>$409,161</td>
<td>Deutsche Bank AG, Frankfurt am Main</td>
<td>$3,065,307</td>
</tr>
<tr>
<td>3</td>
<td>Mitsui Taiyo Kobe Bank, Ltd., Tokyo</td>
<td>$408,754</td>
<td>Barclays Bank PLC, London</td>
<td>$2,992,682</td>
</tr>
<tr>
<td>4</td>
<td>Sanwa Bank Ltd., Osaka</td>
<td>$402,699</td>
<td>BNP Paribas SA, Paris</td>
<td>$2,888,728</td>
</tr>
<tr>
<td>5</td>
<td>Fuji Bank, Ltd. Tokyo</td>
<td>$399,545</td>
<td>HSBC Holdings, London</td>
<td>$2,418,033</td>
</tr>
<tr>
<td>6</td>
<td>Mitsubishi Bank, Ltd., Tokyo</td>
<td>$391,528</td>
<td>Crédit Agricole SA, Paris</td>
<td>$2,239,370</td>
</tr>
<tr>
<td>7</td>
<td>Crédit Agricole Mutuel, Paris</td>
<td>$305,206</td>
<td>JPMorgan Chase, New York</td>
<td>$2,175,052</td>
</tr>
<tr>
<td>8</td>
<td>Banque Nationale de Paris</td>
<td>$291,873</td>
<td>The Bank of Tokyo-Mitsubishi UFJ Ltd., Tokyo</td>
<td>$2,025,830</td>
</tr>
<tr>
<td>9</td>
<td>Industrial Bank of Japan, Ltd., Tokyo</td>
<td>$209,067</td>
<td>Citigroup, New York</td>
<td>$1,938,470</td>
</tr>
<tr>
<td>10</td>
<td>Crédit Lyonnais, Paris</td>
<td>$287,331</td>
<td>UBS Ag, Zürich</td>
<td>$1,894,423</td>
</tr>
<tr>
<td>11</td>
<td>Deutsche Bank, AG, Frankfurt</td>
<td>$266,286</td>
<td>ING Bank NV, Amsterdam</td>
<td>$1,853,393</td>
</tr>
<tr>
<td>12</td>
<td>Barclays Bank Plc, London</td>
<td>$258,983</td>
<td>Bank of America, Charlotte</td>
<td>$1,817,943</td>
</tr>
<tr>
<td>13</td>
<td>Tokai Bank Ltd., Nagoya</td>
<td>$249,751</td>
<td>Société Générale, Paris La Défense</td>
<td>$1,572,721</td>
</tr>
<tr>
<td>14</td>
<td>Norinchukin Bank, Tokyo</td>
<td>$249,667</td>
<td>Banco Santander SA, Boadilla del Monte</td>
<td>$1,460,866</td>
</tr>
<tr>
<td>15</td>
<td>Mitsubishi Trust &amp; Banking Corp., Tokyo</td>
<td>$237,696</td>
<td>UniCredit SpA, Milan</td>
<td>$1,455,270</td>
</tr>
<tr>
<td>17</td>
<td>Bank of Tokyo, Ltd.</td>
<td>$223,185</td>
<td>Sumitomo Mitsui Banking Corporation, Tokyo</td>
<td>$1,219,544</td>
</tr>
<tr>
<td>18</td>
<td>Société Générale, Paris</td>
<td>$219,983</td>
<td>China Construction Bank Corporation, Beijing</td>
<td>$1,105,471</td>
</tr>
<tr>
<td>19</td>
<td>Sumitomo Trust and Banking Co., Ltd., Osaka</td>
<td>$218,916</td>
<td>Credit Suisse Group, Zürich</td>
<td>$1,100,263</td>
</tr>
<tr>
<td>20</td>
<td>Mitsui Trust and Banking Co, Ltd., Osaka</td>
<td>$210,935</td>
<td>Agricultural Bank of China Limited, Beijing</td>
<td>$1,026,300</td>
</tr>
<tr>
<td>21</td>
<td>Long-Term Credit Bank of Japan Ltd., Tokyo</td>
<td>$200,679</td>
<td>Bank of China Limited, Beijing</td>
<td>$1,017,718</td>
</tr>
<tr>
<td>22</td>
<td>Dresdner Bank, Frankfurt</td>
<td>$186,936</td>
<td>Mizuho Financial Group, Tokyo</td>
<td>$1,494,960</td>
</tr>
<tr>
<td>23</td>
<td>Union Bank of Switzerland, Zurich</td>
<td>$183,443</td>
<td>Wells Fargo, San Francisco</td>
<td>$1,309,639</td>
</tr>
<tr>
<td>24</td>
<td>Yasuda Trust &amp; Banking Co. Ltd., Tokyo</td>
<td>$175,552</td>
<td>Bank of Scotland plc, Edinburgh</td>
<td>$1,005,710</td>
</tr>
<tr>
<td>25</td>
<td>Daiwa Bank, Ltd., Osaka</td>
<td>$171,239</td>
<td>Dexia, Brussels</td>
<td>$906,063</td>
</tr>
<tr>
<td></td>
<td><strong>Sum of top 25</strong></td>
<td><strong>$6,819,094</strong></td>
<td><strong>Sum of top 25</strong></td>
<td><strong>$44,912,391</strong></td>
</tr>
</tbody>
</table>

Source: Jason Goldberg, American Banker, The Banker Top 1000 World Banks, and Barclays Capital.
<table>
<thead>
<tr>
<th>Country</th>
<th>Top three banks</th>
<th></th>
<th>Top five banks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>38</td>
<td>117</td>
<td>118</td>
<td>55</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>68</td>
<td>226</td>
<td>336</td>
<td>87</td>
</tr>
<tr>
<td>France</td>
<td>70</td>
<td>212</td>
<td>250</td>
<td>95</td>
</tr>
<tr>
<td>Italy</td>
<td>29</td>
<td>110</td>
<td>121</td>
<td>44</td>
</tr>
<tr>
<td>Spain</td>
<td>45</td>
<td>155</td>
<td>189</td>
<td>66</td>
</tr>
<tr>
<td>Netherlands</td>
<td>154</td>
<td>538</td>
<td>406</td>
<td>159</td>
</tr>
<tr>
<td>Sweden</td>
<td>89</td>
<td>254</td>
<td>334</td>
<td>120</td>
</tr>
<tr>
<td>Japan</td>
<td>36</td>
<td>76</td>
<td>92</td>
<td>59</td>
</tr>
<tr>
<td>United States</td>
<td>8</td>
<td>35</td>
<td>43</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Taken from Barclays Capital “Large-Cap/Mid-Cap Banks 2010 Outlook.”

Source: Bank for International Settlements.
### Table 3  Large and complex financial institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>Total assets (USD billion, year end 2006)²</th>
<th>Total subsidiaries³</th>
<th>Percent of foreign subsidiaries</th>
<th>Percent of net foreign income before taxes (2006)³</th>
<th>HHI-business lines revenues (2006)⁴</th>
<th>Number of countries⁵</th>
<th>Subsidiaries in OFCs, number²</th>
<th>Subsidiaries in OFCs, percent²</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBS AG</td>
<td>1,964</td>
<td>417</td>
<td>96</td>
<td>62</td>
<td>2,903</td>
<td>41</td>
<td>38</td>
<td>9</td>
</tr>
<tr>
<td>Barclays Plc</td>
<td>1,957</td>
<td>1,003</td>
<td>43</td>
<td>44</td>
<td>2,179</td>
<td>73</td>
<td>145</td>
<td>14</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>1,897</td>
<td>1,170</td>
<td>61</td>
<td>51</td>
<td>1,843</td>
<td>58</td>
<td>62</td>
<td>5</td>
</tr>
<tr>
<td>Citi</td>
<td>1,884</td>
<td>2,435</td>
<td>50</td>
<td>44</td>
<td>4,122</td>
<td>84</td>
<td>309</td>
<td>13</td>
</tr>
<tr>
<td>HSBC Holdings Plc</td>
<td>1,861</td>
<td>1,234</td>
<td>61</td>
<td>78</td>
<td>3,945</td>
<td>47</td>
<td>161</td>
<td>13</td>
</tr>
<tr>
<td>The Royal Bank of Scotland Group Plc</td>
<td>1,711</td>
<td>1,161</td>
<td>11</td>
<td>34</td>
<td>1,966</td>
<td>16</td>
<td>73</td>
<td>6</td>
</tr>
<tr>
<td>Deutsche Bank AG</td>
<td>1,483</td>
<td>1,954</td>
<td>77</td>
<td>80</td>
<td>3,931</td>
<td>56</td>
<td>391</td>
<td>20</td>
</tr>
<tr>
<td>Bank of America Corporation</td>
<td>1,460</td>
<td>1,407</td>
<td>28</td>
<td>12</td>
<td>4,256</td>
<td>29</td>
<td>118</td>
<td>8</td>
</tr>
<tr>
<td>JPMorgan Chase &amp; Co.</td>
<td>1,352</td>
<td>804</td>
<td>51</td>
<td>26</td>
<td>2,086</td>
<td>36</td>
<td>54</td>
<td>7</td>
</tr>
<tr>
<td>ABN AMRO Holding NV¹</td>
<td>1,300</td>
<td>670</td>
<td>63</td>
<td>77</td>
<td>1,381</td>
<td>43</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>Société Générale</td>
<td>1,260</td>
<td>844</td>
<td>56</td>
<td>46</td>
<td>4,128</td>
<td>60</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>1,121</td>
<td>1,052</td>
<td>47</td>
<td>42</td>
<td>4,476</td>
<td>46</td>
<td>203</td>
<td>19</td>
</tr>
<tr>
<td>Credit Suisse Group</td>
<td>1,029</td>
<td>290</td>
<td>93</td>
<td>71</td>
<td>3,868</td>
<td>31</td>
<td>53</td>
<td>18</td>
</tr>
<tr>
<td>Merrill Lynch &amp; Co., Inc.</td>
<td>841</td>
<td>267</td>
<td>64</td>
<td>35</td>
<td>4,089</td>
<td>25</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Goldman Sachs Group, Inc.</td>
<td>838</td>
<td>371</td>
<td>51</td>
<td>48</td>
<td>5,391</td>
<td>21</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Lehman Brothers Holdings Inc.</td>
<td>504</td>
<td>433</td>
<td>45</td>
<td>37</td>
<td>7,807</td>
<td>20</td>
<td>41</td>
<td>9</td>
</tr>
</tbody>
</table>

1. After the most recent list of large and complex financial institutions, or LCFIs (Bank of England, 2007b) was published, a consortium of three banks (RBS, Fortis, and Santander) acquired ABN AMRO.
2. Bankscope. Data on subsidiaries refer to majority-owned subsidiaries for which the LFCI is the ultimate owner with a minimum control path of 50.01 percent.
3. Annual reports for each LCFI. Net income before taxes with five exceptions: net income after taxes for Citi, and net revenues for Barclays Plc, BNP Paribas, Lehman Brothers Holdings Inc., Merrill Lynch & Co., Inc.
4. Oliver Wyman. The Herfindahik Hirschman Index ranges from 0 to 10,000, and it is calculated on the percentage of revenues per business line. Higher values indicate a higher degree of specialization. Lower values imply a higher degree of diversification.
5. Number of countries in which the LCFI has at least one majority-owned subsidiary.
6. Offshore Financial Centers identified by the Financial Stability Forum (2000). We exclude Swiss subsidiaries for Credit Suisse and UBS and Hong Kong subsidiaries for HSBC. Four subsidiaries were allocated to OFCs on the basis of locations designated in their names even though Bankscope did not specify a home country.

Table 4  International versus national sources of bank revenue, large global banks, 2009

<table>
<thead>
<tr>
<th>EU banks</th>
<th>2009 Assets (USD billion)</th>
<th>Home country</th>
<th>Rest of Europe</th>
<th>Americas</th>
<th>Rest of world</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNP Paribas</td>
<td>2.952</td>
<td>34</td>
<td>42</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>2.728</td>
<td>48</td>
<td>27</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>HSBC</td>
<td>2.356</td>
<td>25</td>
<td>11</td>
<td>34</td>
<td>31</td>
</tr>
<tr>
<td>Credit Agricole</td>
<td>2.227</td>
<td>49</td>
<td>38</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Barclays</td>
<td>2.223</td>
<td>44</td>
<td>15</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>2.151</td>
<td>26</td>
<td>41</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>ING</td>
<td>1.668</td>
<td>26</td>
<td>24</td>
<td>32</td>
<td>18</td>
</tr>
<tr>
<td>Lloyds</td>
<td>1.651</td>
<td>94</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Societe Generale</td>
<td>1.469</td>
<td>43</td>
<td>39</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Unicredit</td>
<td>1.439</td>
<td>49</td>
<td>41</td>
<td>n.a.</td>
<td>10</td>
</tr>
<tr>
<td>Santander</td>
<td>1.439</td>
<td>23</td>
<td>27</td>
<td>50</td>
<td>n.a.</td>
</tr>
<tr>
<td>Commerzbank</td>
<td>1.203</td>
<td>84</td>
<td>14</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Intesa Sanpaolo</td>
<td>878</td>
<td>79</td>
<td>19</td>
<td>n.a.</td>
<td>2</td>
</tr>
<tr>
<td>Dextra</td>
<td>829</td>
<td>47</td>
<td>43</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>BBVA</td>
<td>760</td>
<td>41</td>
<td>n.a.</td>
<td>59</td>
<td>n.a.</td>
</tr>
<tr>
<td>Nordea</td>
<td>729</td>
<td>19</td>
<td>81</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Danske Bank</td>
<td>597</td>
<td>54</td>
<td>40</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Standard Chartered</td>
<td>436</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>88</td>
</tr>
<tr>
<td><strong>EU sample average</strong></td>
<td><strong>1.541</strong></td>
<td><strong>44</strong></td>
<td><strong>28</strong></td>
<td><strong>15</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US banks</th>
<th>2009 Assets</th>
<th>US (home)</th>
<th>Rest of Americas</th>
<th>Europe</th>
<th>Rest of world</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America</td>
<td>2.223</td>
<td>82</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>JP Morgan Chase</td>
<td>2.032</td>
<td>75</td>
<td>2</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Citigroup</td>
<td>1.857</td>
<td>32</td>
<td>20</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>1.244</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>849</td>
<td>56</td>
<td>n.a.</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>771</td>
<td>81</td>
<td>n.a.</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>US Bancorp</td>
<td>281</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PNC Financial</td>
<td>270</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bank of New York</td>
<td>212</td>
<td>47</td>
<td>n.a.</td>
<td>37</td>
<td>16</td>
</tr>
<tr>
<td>BB&amp;T</td>
<td>166</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>US sample average</strong></td>
<td><strong>991</strong></td>
<td><strong>77</strong></td>
<td><strong>2</strong></td>
<td><strong>12</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Source: Forbes rankings, corporate reports, authors’ calculations. Mauricio Nakahodo’s research assistance is gratefully acknowledged.
Too Big To Fail: The Transatlantic Debate?
Transatlantic Relationships in an Era of Growing Economic Multipolarity
October 8, 2010

Anil K Kashyap
University of Chicago Booth School of Business

Lots to agree with in the paper and I will be skipping plenty of issues to focus on two points

1) Consequences of highly imperfect resolution tools
2) Bail-in
What happens to a dying (TBTF?) firm?

1. Short-term debt holders and derivatives counterparties will RUN if they not protected

2. The firm will dump assets to try to obtain liquidity ➔ firesale spreads the losses to other institutions….

• Need tools that manage the fallout from this scenario, otherwise bailout is the only choice
  – Designing the resolution process to deal with 1) is not easy
Bail in

1. Short-term debt does not run if it’s protected

2. Counter-parties may prefer the certainty of the pre-contracted loss sharing if the rules are clear

3. May need “shock and awe” in terms of the scale of the capital infusion

(Contingent convertibles on a big scale can work too; let’s use “held back” pay to purchase some of these securities.)
Panel 3

Anil Kashyap: It’s a pleasure to read this paper. It’s actually quite good and I encourage you to read it. I’m going to teach it to my students next year, so that’s the highest endorsement. You didn’t announce my affiliation but I will announce that I’m at the University of Chicago Booth School of Business. I point that out because during the crisis, the only institution in the world that raised enough capital was us. And all it cost us was changing our name. So I think you could compel people to raise capital and it works. And that’s going to be a theme. Let me say in the course of the discussion here, I took seriously the instructions that we’re only supposed to have three slides and we’re only supposed to talk for 10 minutes. So I’m going to hit both those targets and that means that I’m going to pass on a number of things that were in the paper. So I’m not going to talk at all about this discussion of who is too big to fail and whether you should disclose their identities, whether the size caps might work, where the origins of the differences between the US and Europe came from. But I think the discussions there are good and I certainly broadly agree with the big thrust of the paper which is that too big to fail is a serious problem but it’s probably worst in the European context. I never really thought about that, but I think they make a pretty compelling case that Europe is going to have a more difficult time with this than the US. So I think that’s the first big take away from this paper. And there’s a lot of good numbers in the paper too that are just interesting comparisons over time and across the Atlantic that I think you’ll enjoy reading.

I have one major kind of knit to pick with the paper, and that has to do with—that has to do with really the dynamics of what goes on with too big to fail and why we should be worried about it. Most of the discussion in the paper reads as if the problem is the company is going to fail, and when it does it’s going to take down a bunch of counterparties through a sequence of cascading defaults. I don’t really think that’s what we’re worried about because what you see as one of these firms gets into trouble is that their debt maturity starts to adjust and you find that the debt maturity is shortening and it’s not accidental. These creditors don’t really understand necessarily what the officials are going to do if the firm really gets into trouble so they start lending on a shorter and shorter basis. And what you find is when you get into the actual end-stage of a crisis, what kills you is the run—both through the short-term creditors and through the derivatives book. And then what we learned in this crisis, that I don’t think we’d appreciate as much and Mario cited it when he was talking, was the fire sale that comes once the run has begun and people start dumping assets. And really, that’s the dynamic that we need to deal with if you take as given that we don’t really have all the tools for a good resolution regime. So I think you can’t really separate too big to fail from the kind of uncontrolled destruction that happens once a run begins and once the asset dumping proceeds. And so I really think you have to think of the challenge here is figuring out a way to try and manage that and in that sense I’ll say Dodd-Frank is pretty bad because Dodd-Frank was a combination of “let’s try to straighten out what happened” but “let’s punish the bastards.” And so there’s conflicting tension all through the legislation and you see it quite clearly with respect to this runs question. So because they want to do and be able to impose losses, there’s this idea that you should have a one-day stay where you would have one day to wind down the derivatives books and maybe not pay everybody off in full. But of course the fact that the people see that one-day stay as “doom is approaching” means they’re going to run. So I think in equilibrium you’ve accelerated the run. Another example of the “let’s get even with these guys.” The clawback provisions in Dodd-Frank say that there’s the possibility of a settlement is made that after the fact, if it turns out that you got paid more than you would’ve in liquidation, the Treasury can come after you. And then there’ll probably be lawsuits by other counterparties that didn’t get as good a deal as they should’ve that will force the
Treasury to come after you. That’s going to again accelerate the incentive to run. So, you’re going to have these incentives and I think Dodd-Frank, despite all its good intentions really didn’t confront this as what we have to manage. So I think when we come to thinking about this, we need to focus more on controlling the runs and I would say even if you round up, you know, the leading thinkers in the world and said, okay, design a resolution authority that you need to deal with this, it’s not obvious what you would do. It’s just a really hard problem. So I’m part of the Squam Lake Group and we opined on all kinds of stuff. We couldn’t figure out what to say about this because it wasn’t obvious how to manage the various tradeoffs, but I think it’s a problem we have to deal with.

Alright. So, with that in mind, Mario teed up exactly where I want to end, which is: Given that we don’t really have a great way to resolve one of these firms, and we’ve got all these cross-border things that he talked about, we need to be thinking about contractual ways to the extent we can to manage this. And here I think one of the principles he’s mentioned about internalizing losses is a great way to do it. So, the paper talks about taxing size through higher capital charges and higher liquidity requirements—Mario emphasized that too. I think those are great preventive measures and we should be looking in that direction to the extent we can. But I think in the end it’s probably not going to work, and you’re probably going to face one of these institutions that’s failing again. And so, to that extent, I think you need to figure out ways to get capital in. Mario mentioned bail-in—there’s a page in the paper on this. I think that’s probably something that deserves more attention. The bail-in idea is that you would contractually write into the contract structure, rules that say as you get very close to failure, everybody’s going to convert in the following cascade of ways. So the equity holders are going to get wiped out. Subordinated debt is going to turn into warrants or something like that.

Slightly more senior debt is going to convert into equities and it’s going to go all the way through. The people of Credit Suisse have been pushing this very, very aggressively. It turns out that Swiss law seems to permit you to actually implement this type of thing almost as is, so short of getting harmonization of all the bankruptcy code, if we could just get an arrangement so that you would respect the agreements across jurisdictions on this kind of a bail-in thing, I think this is a very appealing area to pursue.

And one of the things that market participants will tell you about this is there’s a lot of discretion that happens if you actually go into bankruptcy or if you’re lurching towards nationalization. Having it written out and having the law sharing rules precontracted makes it much easier for people to assess the risk. It looks like the kind of thing that people in financial markets price all the time. They’re used to pricing losses and credit events, and that’s what this would turn it into. And it has the advantage that if you do it on a huge scale, you would make the institution on the backside incredibly well capitalized, which then creates incentives so that people don’t have to run. If you’re going to be the best capitalized bank in the world the day after the triggers are hit, you’re going to continue doing business with them.

So you can do that, you can do a version that’s contingence convertibles. If you do it in a big scale, it would look very similar. I think either of those things are good. And then the last idea I would pitch—I think my favorite Squam-like idea that hasn’t been picked up at all is to force the bankers to hold back some of their bonus pool. Imagine that they held back 20 percent a year for five years. So you’d have one year’s worth of bonus pool sitting there.

That would change the attention of the people deciding whether or not they want to raise capital if they knew that everybody in the firm was going to use essentially a years’ worth of bonus, it would be a huge amount of money that could be sitting there that could be invested in contingent convertibles if you want to jumpstart the market so that you force some natural buyers, you get some price discovery, and
you align incentives. So I think options like this are probably the thing that I would change most about the papers to beef up this discussion. Thank you.

**Paul Tucker:** Like Anil, I thought this was a really nice paper about the right subject, and there are an awful lot of papers that aren’t quite about the right subject and are slightly, if not orthogonal, perhaps at an angle to what’s actually going on in the policy world. This isn’t one of those papers.

I’ve got four comments on resolution but let me start with a comment on the comparison between the EU and the US. And first of all, I think one of the great things about today and about this paper is making that comparison. I think you overdo it a bit.

So let me give you two examples. The statistic that credit intermediation in the US is only 24 percent in the banking industry. It’s surely more when you build in that part of the so-called shadow banking industry, which was utterly dependent on committed credit lines from banks. If you add that in, I think you’ll get a bigger number and it’s why what’s been going on since it has been in part reintermediation, including, sadly, onto central bank balance sheets.

The second thing I’d say about that is that you—for understandable reasons and that its core, which is right, you draw distinction between the kind of capital market-oriented investment banking in the US and the other more traditional commercial banking tradition in Europe. Yet, let’s face it: The losses on both sides of the Atlantic came from carry trades. These weren’t great big trading positions. These were—on this side of the Atlantic as well, investment banks and universal banks borrowing short to lend long for a credit spread and holding it for a while, sometimes describing them as warehouses. But you know all of that was part of the smokescreen. So I think you need to moderate some of the comparisons you make. That doesn’t matter at all to the core of the argument. The core of the argument you make is the too big to fail is at the core of this. As Mario said, we the official community most certainly think that. And I speak not only as somebody from the Bank of England but as the chair of the FSB’s working group on resolution. And I’d make four points about that.

The first is: It’s striking—it’s shocking really the extent to which so many countries in the world including my own didn’t have a bog-standard resolution regime for bog-standard commercial banks. And I think this goes partly to the comparison you make between Europe and the States. What tools you have not only reflect your thinking and your culture—they actually influence your thinking and your culture over time as well. If you don’t have any tools for resolving commercial banks, and if you’re completely unfamiliar with them, then you’re conditioned over many years and decades to thinking that the only thing you can do is to bail out the bank as it gets into difficulty.

Now, what’s happening in Europe now, and I mean within the EU, is it seems very likely that the European Commission will bring forward proposals that a standard resolution regime is introduced in every country of the union. We’ve already done this in the UK. That’s the legacy of our Northern Rock experience. But this will—I think this is quite likely to happen in Europe and I think that it will affect the conversation, the policy debate about this a lot.

There are officials all around the world who when they start—when you try to talk to them about resolution, after about 10 minutes, they start talking about supervision and early intervention and capital ratios because they’re unfamiliar with what resolution is. And of course, when we equip ourselves all with the basic resolution regime, I think the policy debate will be enhanced. So I’ll come back to that.

The basic resolution tools that were developed in this country and in Canada as well don’t work for the giant and complex international firms. And one respect that’s because they only apply to commercial banks. It didn’t apply to bank holding companies. It didn’t apply to affiliates. It didn’t apply
to dealers or insurance companies. And at its root, that is what the Dodd-Frank resolution regime does. It extends the basic tool kit to other types of financial institution. That’s an unambiguously good thing.

The other thing that it does, and Anil touched on one aspect of this, is that it closes down the practical possibility and concept of open bank resolution. And it does this because it identified open bank resolution with state bailout which I think is a mistake. I don’t think the two are the same thing. And this is quite important for what I’m going to go on to say which is about bail-in.

Anil talked about the contractual version of bail-in, in which we in the FSB see great merit and lobby for the work on this going into next year. But there’s also a resolution version of bail-in. And these two things aren’t mutually exclusive at all. If anything, they’re reinforcing. And think about resolution as when you’re in the Last Chance Saloon and enhanced supervision has failed, higher capital ratios have failed. All the CoCos [Contingent Convertibles] and contractual bail-in bonds have been triggered and it still wasn’t enough and you’ve got an insolvent or insipiently insolvent bank or dealer on your hands and you’re sitting in this room and I’ve sat in rooms like this, and you have—without some tools you’ve got two choices. You’ve got: Go to the political leaders and say, “Can I have a load of money to spend on a bank to rescue it?” Or alternatively: Close it and get mayhem. And no one should’ve been surprised that the closure of Lehman was mayhem. That much was obviously foreseeable.

So the resolution debate is about what tools you can have in those circumstances and Dodd-Frank tool says I will take this giant and I’ll put it in a bridge company and I think that can work where there are buyers for bits of the underlying business. So Barclay’s and Nomura in the case of Lehman.

It’s a more hazardous enterprise if there aren’t immediately buyers because there you are, a government agency, and you are left owning and running Lehman the following morning for weeks. And I suspect people stopped going to work, and I suspect that even if it’s risk free, some kind of parties will move away because what’s the point of dealing or placing money with an institution which has no future? But there are definitely circumstances in which this could work and I hope very much that we put it on the statute book in other countries.

The bail-in resolution tool could also only work probably in one set of circumstances. So take a group which has 20 lines of business and they’re all equally the same size and it’s 20 times levered as well. And one of these lines of business is completely toxic; it’s worthless. This business is bankrupt. But its franchise and 95 percent of its business is fine. It’s just got a completely screwed up capital structure. We’re familiar with this in this country from Chapter 11. And what Chapter 11 does is it reconstructs the capital structure, writes off the equity, writes off any subordinated debt, and it eats into senior or unsecured or in banking’s case, uninsured debt and then converts part of the residual into equity to recapitalize the bank. And this is the resolution form of bail-in and that too, like the contractual form, is likely to be studied around the world over the next year or so. And it’s probably not essential that everybody has exactly the same set of tools.

My third point is about cross-border resolution because everything I’ve said up to now would apply if there’s any one country in the world—alternatively say JPMorgan Chase did all of its business within this country. It’s still pretty difficult to resolve it. Once you got the cross-border element, it’s much more complicated for the reasons that Mario said. And what this comes down to isn’t just a technocratic problem, which people on my group and the steering committee of the FSB can solve. There’s something about sovereignty here. It’s probably unrealistic to expect a multilateral binding treaty that determines that there’s one lead resolver for these firms around the globe nor, on the other hand, can we expect countries to unilaterally disarm where they say well, I’ll let the home country lead, come what may, even if they take no interest in my circumstances at all. But that doesn’t mean we can’t do useful things. We
can—as Mario said, we can remove automatic triggers where if I do something in the UK it automatically triggers bankruptcy elsewhere in the world, or ring-fencing elsewhere in the world. And we could remove legal impediments to cooperation because they exist in some jurisdictions. And we could even introduce exultations to cooperate, take account of the host country’s circumstances. And remember that there are some big banks around the world headquartered in one country, don’t have much business there, have a lot of business in other countries. This is going to require political will and actually a political steer before we can make more technocratic process.

And the final thing I would say is about living wills which, by the way, I think the expression living wills was probably popularized by my boss, Mervyn King, after the discussion he had had with Anil. And I can remember Anil saying to me, “Shall I discuss the living will thing with Mervyn?” And I said, “Yeah, yeah, do, do.” And Mervyn gave a speech about it and it’s helped give the whole idea currency. The point I want to make though is that what a recovery and resolution plan looks like varies according to the resolution regimes that you have. If you don’t have a decent resolution regime, there is no resolution plan to be written. People can fill files with papers, and by god they are, but actually it doesn’t amount to a plan that will help you resolve the bank. It means you might have a recovery plan, but not a resolution plan.

So what this living will thing is going to amount to will depend entirely on two things. First of all, putting in place the statutory frameworks along the broad lines I’ve described, and secondly, and separately, a preparedness for much more candor and openness and exchanges between home and host authorities. On which note, I’ll change—this is a nice paper and, as I say, very much about the right subject. Thank you.

**Victor Gao:** Ladies and gentlemen, it is a great honor for me to be invited here to attend this very important meeting and to be amongst with all these big brains. And I’m sure I will go to pick many of these big brains in the coming years.

I have to confess that whenever I’m at an international conference like this where the focus is about transatlantic, the Chinese normally are very quiet because we hesitate to make a contribution. Fortunately now, two of the three largest economies in the world are in East Asia, and if you really believe in the projections about India, maybe in a couple of decades three of the four largest economies will be in Asia. So that gives me a little bit of—lack of hesitance to make some contributions. And I’m sure that by now, few people no longer do not know the reference about too big to fail, but I have to acknowledge that when I was reading this excellent paper and then when I came across too big to fail being abbreviated as 2B2F, I actually had to pause because it reminded me of Hamlet when he asked that fatal question: To be or not to be? That’s the major question because 2B2F sounds like “To be or to fail?” or “To be 2B2F or to fail as a 2B2F?” That’s the question.

When I continue to read the article, I came across references to systematically important financial institutions being abbreviated as SIFI. It really looked like these institutions being alien institutions descending on mortal people like us in a UFO and they really kind of took on immortal dimensions like in a Sci-fi movie. And it actually is alarming because some of these big financial institutions do claim to be immortal. We remember in the midst of the financial crisis, Goldman actually came out to say what they are doing is God’s work. And also it reminds us that just a few weeks ago, again, Goldman Sachs came out by threatening to pull their operations out of Europe if the regulations there are to be perceived, not by the general public, not by the regulatory community, not by the world as a whole, but by the bank as to be too restrictive.
So this is the issue we are faced with, and it also reminds me of a real story, and I want to share with you very quickly. That is—you know—during the Long March in 1934 and 1935, there was a crucial battle. And if the Red Army lost the battle, there will be no new China, there will be no Mao Zedong’s Cultural Revolution, there will be no Deng Zhao-Peng’s opening to the outside world, and there will be no big headache about renminbi of course. But there was a dozen of brave soldiers who overcame all odds and won that battle and paved the way for the founding of the People’s Republic, of course. But do you know what they were awarded as a result of their bravery? They were not awarded by gold. There was no gold at that time in the Red Army. Not a castle or a big plot of land or treasury bonds or green backs. They were issued—legend has it—a certificate of immunity from death. Actually, it was not uncommon because in the imperial days, if you really helped an empire—emperor to found his empire or you helped an emperor to defend his empire or you helped one prince to get the throne for him against all the other princes, you sometimes were given a certificate of immunity from death. And do you know what are the consequences in the Chinese historical precedents? Once a mortal gets a certificate of immunity from death, all kinds of evils would happen. And I would say that for an institution to be classified either by itself, which will be even worse, or by the regulatory community as 2B2F is really a recipe for great disasters. And I think we really need to think very, very carefully the profound consequences attaching to that.

Now, it also reminds me of a very recent story that is around the time in 1998 in the midst of the Asian financial crisis, there was a big, big financial institution in China. It’s not a bank. It’s a trust and investment company called the Guangdong International Trust and Investment Company [GITIC], which was so huge—on the par with the bank actually did all kinds of things. And then when the financial crisis came, when the water started to recede, all the liabilities were exposed. And the Chinese government were faced with this critical choice as to whether to shut it down or let it live. And eventually, it was shut down. Do you know what’s the consequences of cost not only GITIC, which had a weird name—GITIC. GITIC was shut down, but almost 2,000 trust and investment companies eventually had to be restructured. And now, there are only about 60 trust and investment companies left. But I think China is a winner out of that huge painful traumatic experience because it taught you that no company, no financial institution should be immune from death. And if there is any Chinese company, state owned or privately owned, who comes to your attention then claims that he has a certificate of immunity from death, don’t trust him because there is no one—because the Chinese government has learned that while it is their responsibility to protect the interests of the depositors, the interest of the society as a whole, you cannot create this moral hazard of giving anyone—any institution—the certificate of immunity from death, because otherwise we will not know what you will take a bite for because the bite you want to take as a country or even as EU as a whole or even as big countries like the United States or China, you do not know what will be there.

Many of us believe in the invisible hand of the market and thought that the distinction between the state and the government is a sacred one. Things should be left to the market because it’s efficient, because eventually it will sort out all the problems, and eventually shareholders’ values will be maximized. But don’t forget that the invisible hand of the market may be hijacked by greed. And it is not ordinary greed. It’s greed in the most sophisticated form. It’s greed as if they have double calculated—both themselves as well as the counterparties. And it is the greed which can really bring havoc not only to themselves but to the country they’re operating—but also in the financial world, to the whole international financial community.
Therefore, I think, when we talk about this 2B2F, we need to know: Where are the regulators? What should they do? Do they just need to do and classify which institute is 2B2F or there is much more for their regulatory job? And also, while the international and global financial market is increasingly becoming an integrated one, the regulatory regimes, the countries, the regions, etc. They are not on the same boat. Even in China, for example. The securities regulators, the insurance regulator and the banking regulator, sometimes they are very much engaged in turf war against each other rather than try to get their acts together to get the regulatory issue done. Therefore, I think, it is uphill struggle. We should not just be complacent that once we designate, institute 2B2F, that’s the end of the story. I would say it is very much up to the regulators to really think hard as to what they should do. And also, may I end on a Marxist note? The regulators of the world unite because if they do not unite—if they are very much at each other’s throat or if they want to outwit the other regulatory bodies, the other countries, or other regions, then the regulatory regime as a whole will fail. Thank you very much.

Jean Pisani-Ferry: Thank you. We’ll all evidently read carefully the next speeches by Mervyn King to know whether there’s a reference popping up to the certificate of immunity from death. Nicolas, I would like to give you an opportunity to respond before opening the floor to question.

Nicolas Véron: Very quickly and in a telegraphic mode, on Anil’s two main remarks on failure dynamics, I think we absolutely agree. I cannot speak on behalf of Morris but I certainly agree with your criticism of Dodd-Frank and the contrast between the sort of moral imperative to punish the bastards and the stability imperative and I think the legislation is clearly imperfect here even so we know some political conditions which lead to this outcome. The more difficult question, which you acknowledge, is how to address the problem you mentioned. And clearly here, nobody has a clear response to this challenge at this point, which certainly doesn’t mean there is none, but certainly there’s more work that’s needed. On bail-ins, you’re absolutely right. I think in the final version of the paper, we need to elaborate more on this and partly it’s because I’m to blame for this delays in the preparation of the paper, but we’ll work on it.

As for what Paul told us, you’re probably right that we overdo the differences in the structure of credit intermediation between the Europe and the US. The reason why we do it is there is so little data available that can be put on a comparable basis, and basically I’ll come back to you to get more data. I wouldn’t say we overdo the difference in terms of assets to GDP, which is perhaps our main argument. And it is I think an undisputable fact that the largest financial institutions in Europe are vastly bigger in terms of hazards to GDP as the largest financial institution in the US and I think this—the national GDP, and I think this is really our main argument. Of course again, I repeat, that we’d like to look at European GDP as opposed to national GDP but that would—suppose that you have a European policy framework with which to address bank failures and even after that the creation of European banking authority. We’re not yet there. I hope we’re going forward to sort of framework. It’s controversial, not the least with the UK, but we’re clearly not there.

I think the point you made on—what I would say resolution culture as opposed to supervisory culture, is an extremely important one. And indeed, we’re sort of illuminating for me that clearly there is a resolution culture here in this country under FDIC [Federal Deposit Insurance Corporation], probably more than any other institution at the US federal level, and there is very little that is comparable in Europe. So we have to develop that at the same time. And you mentioned that we are not clear as to what this means for very large complex institutions because the FDIC resolution culture very much applies to
local retail or commercial banks, and same framework applied to hugely complex international groups is very much untested.

I also recognize that I didn’t insist enough in my presentation, even though it is in the paper, about the intractable political nature of across the border resolution issue, and I could hear of things that because it’s so intractable for the reasons you mentioned, we are very pessimistic about the progress that can be made on cross border resolution at this stage, even in spite of the best efforts of Mario Draghi, of the FSB, and of many well-intentioned people in this discussion. I would, however, say that in spite of what I just said, I think the situation to you is slightly more promising on a global level, so I think we really have two discussions here. One is European cross-border resolution—why I would be mildly optimistic, and the other one is global cross-border resolution where I’m definitely pessimistic. I think at global level, we’ll get more subsidiarization, more ring-fencing, more locally capitalized and funded banking operations, at least in retail banking and probably also to a certain extent, in investment banking. I hope we can avoid that into EU because I think the corresponding financial fragmentation can be harmful. And that is actually also what IMF has said with their—I’ve seen a very good paper on EU cross-border resolution in the spring.

I’m not going to comment on Victor Gao’s presentation because anything I could say would break the charm and I cannot be at this level. I’ll just mention that the Guangdong International Trust and Investment Corporation is indeed a fascinating case. We make a very brief mention of it in the paper. And I fully support what you said about the fact that in this, as in other regulatory issues, we westerners have to recognize that Chinese or other emerging countries led the way and did better as for loan to value ratios or other things that can seem quite simple but that the West generally fail to achieve—that we have to learn generally from the experience even with countries which by many measures have a less sophisticated or less developed financial systems, at least for the moment, than in the case in the North Atlantic. Thank you very much.

Jean Pisani-Ferry: Thank you Nicolas. The reason why I made this point about national GDP versus European GDP is because when you’re referred to too big for failure referred to the shock and the implication—the vanishing implication or shock for the vanishing market to the extent that banks are increasingly integrated that the EU GDP that matters. And so basically what you’re saying is that in fact it’s maybe not the banks that are too big. It’s the states that are too small, which is a slightly different point.

Rajiv Kumar: Actually on too big to fail, first point here is, I think, the absolute size of banks matters, not in percentage, not in relation to the GDP, because these banks are also operational in a lot of small countries, where they are really like a gorilla in the room, not so small. So therefore, you need to think of US banks being in some sense smaller and therefore having less systemic impact. I’m not sure where we are going on that. So that’s the first.

Second I sort of speak now really as a member of the Warwick Commission, which had made several recommendations. Unfortunately, I don’t find many echoes of that. First one, and the only thing that I found, is an honest sort of recommendation on holding back bonuses, and that back bonus pool—you know, because we made the recommendation that it’s critical to change incentives for the players who are actually operating these banks. It’s not products, it’s not size, it’s not banks, nothing. It is the agents, and how do you change behavior and incentives structure for that? I found so far very little in that regard. And I think they are very—sort of a regime of countercyclical capital requirements. Not just large
capital requirements but countercyclical ones, whether I think a good idea but I don’t know what’s happened to that.

Second, we had recommended that there be firewalls within the different sort of financial institutions so that no financial super mall is permitted to come about, and this gets allocated to those who can manage and those who do better. There is credit risk; there is market risk, project risk. Why not let it be handled as it was earlier?

And the third thing is the peer review mechanism. What are the incentives to enforce those decisions? We have suggested a name and shame thing because there will be national jurisdictions as they were in the past, which will find it convenient to have reach the bottom and liberalized, and then what? And so it is all very well to have these peer reviews, but then where do we end up if somebody decides that it doesn’t matter? They will not accept the peer reviews decision.

And my last point is to—wonderful intervention by Mr. Gao, there does seem to be some immortal and some mortals, like the four banks which you recapitalized successively starting off there, and did seem to have a life of their own. Now is it true or is it that they willed themselves not to be—they will not be 2B2F?

Bill Cline: I’d be interested in the panel’s diagnosis of whether the 2B2F problem is primarily distorted incentives or simply externality of a big entity. I mean, I think the fact that the key players who make the decisions in any corporation typically tend to hold stock, which suggests when a crisis arises, you basically get the stockholders being—even take Citi Group. Their stock basically went to zero. I would’ve thought that the incentive argument is overdone because the real problem is the social externality. So that the challenge becomes more like you regulate light-bodied aircraft airlines more than you do small passenger planes. It’s just this bigger fallout from the collapse. Now, to the extent that’s not true, it seems to me one could do things to the incentives to make sure that the decision makers really are interested in the stock price such as making all bonuses be paid in stock and only available after five years or something like that. But I’m not sure that this perception—I guess probably this perception isn’t very widely shared, so I’d be interested in—and I don’t want to invite a long panel discussion, so let me ask Anil to see if he would perhaps—or maybe take a position on this. If the problem is the light-bodied aircraft problem, then it’s a very different kind of thing that you do, I think. You get more into Simon Johnson’s kind of thing and Morris Goldstein’s—oh well, no bank can be more than 5 percent or 10 percent of GDP because you’ve done a cost-benefit analysis and the return to size tails off there, so I don’t know. I’d be interested in whether this sparks any particular insight to the problem.

Anil Kashyap: Okay, so the way I think of this is that there’s two separate problems. There is—the fact that stock-based compensation aligns the management with the shareholders is probably a good point, but the problem is that the managers and the shareholders have different interests than the taxpayers. And so paying of 100 percent stock and then they go off and gamble and it’s heads I win, tails the taxpayer loses is still a problem that’s not going to be solved by paying more with stock-based compensation. I understand that.

But if we have to bail out a bunch of other people and if they delever and have a fire sale and it crashes the economy, the mere fact that they got wiped out isn’t enough in my book. So they can impose risks and costs on society beyond just the direct losses associated with the equity. So I think you have to think about two things. I think you’re right that the externality of the failure is what you’re trying to control and I think you want to figure out ways to mitigate that. But I think of the holding back of
bonuses as a way to get them to feel like they should issue equity and risk a little bit of dilution or bail-in—any of these other things are incentives to get them to realize that just shrinking assets and trying to race for the door is not collectively what the country wants. I mean I think it’s a big problem that all our regulation is in terms of a ratio instead of dollar values. I think one of the things that the stress test did well was not leave on the table the option of beating the stress test by shrinking your assets by basically telling them you had to raise a certain dollar amount of capital so you can shrink if you want—but that doesn’t force you to actually go get the capital was a very clever thing that’s been underappreciated. And that’s because the capital buffer is what protects the taxpayer.

Paul Tucker: I would add to that. It’s striking this debate about incentives or remuneration is always caused in terms of how much equity they should get, which of course does give them the downside as you rightly described. But it gives them a lot of upside as well. It might be different if they are paid in debt or subordinated debt in part. And this then relates to the resolution debate because that is only credible if it becomes possible to impose losses on debt holders or in the subordinated debt holders. But if they are holding 5-year or 10-year subordinated debt or just senior unsecured debt, they would have an interest in preserving the solvency of the firm. I didn’t mean for all of the remuneration package but for part of it. But more generally, I agree with you that it’s more about the externality of the failure than about incentives.

Victor Gao: Allow me to answer your question very briefly about the immortals versus mortals, especially among the four major state-owned commercial banks in China. While I’m not here to defend or justify the regulatory system in China, one thing I want to say is very different from the model in the United States or Europe. Let me give you one example. You know Mr. Hwang-chi Chang who is right now Deputy Prime Minister in charge of financial and foreign investment in China. He’s the head of the Chinese delegation in the strategic and economic dialogue with the United States. When he was the governor of China Construction Bank, one of the four largest commercial banks in a very small setting, and I was present at that time, be basically said whenever I meet with a provincial branch governors, I always presume that they are the wolves while waiting to prey upon you, and you cannot let down your guard. And whenever you shake hand with them, when you take back your hand, you need to check how many fingers you have. So this is the kind of presumption against rogue bankers or some of which are your principal subordinates. And I think in terms of the regulatory philosophy, the rigorousness, the hands-on attitude and the discipline, and also the presumption of the evil, for example, among the operatives, for example. And also the anticipation of the problem. The lack of this laissez-faire attitude towards the banker or the insurance or the securities market. And also the sense of urgency and the eagerness to always second guess the market practitioners. For example, you know, before the collapse or before the outbreak of the financial crisis, Bear Sterns almost got to merge or tie up with CITIC Securities. CITIC Securities were very, very eager to proceed with that deal. What caught it up was the slowness in the regulatory approval. And after the dust settled, everyone congratulated themselves and the CITIC really felt so lucky that they actually were not burned as Ping-An Securities in the Fortis deal.

Now, I made this point in the hope that while the different countries, etc., may have different regulatory philosophies, and it is fully understandable and I am not advocating any country to simulate or to copy the Chinese regulatory system, which can be very oppressive, but it is very, very important to compare notes and to learn from each other, and really to draw upon the good examples, because I think there is the tendency that the Wall Street forces are really getting too much of a force and they sometimes
can hijack the regulatory system. And also they can hijack the whole country for example. And eventually the taxpayers need to pay. And eventually as we witness in some of the European countries, it’s even beyond any single country’s capability to repair the damages which maybe inflicted upon by these rogue companies or traders.

**Anil Kashyap:** There’s one point on Rajiv raised about the countercyclical stuff. I thought almost everything Mario said was great, but one thing that scared me is he kind of said, well, if these guys aren’t at the discount window, we’re not going to chase the shadow banks. So there’s a limit to how far we can go. One point that rarely gets made is if you implement countercyclical policies—so you’re trying to slow down the lending during the boom, of course that raises the incentives during the boom to move stuff to the shadow system, and that’s exactly the time when the shadow system’s financing constraint is easiest and it’s easiest to move there. And so while I think countercyclical regulations of some sort is a good idea, if you’re not going to chase the stuff into the shadow banking system, you’re going to perhaps make things actually worse or more procyclical.

**Paul Tucker:** Can I just add to that and actually, particularly a point about the UK? In the UK we’re all moving towards a regime where we would do countercyclical stuff. But we’re also—the regime that our new government is planning—will give the Bank of England the obligation of recommending to the finance ministry when the perimeter of regulation should be changed. And that doesn’t solve everything, but it seems to me to be a necessary condition for solving the shadow banking problem, to recognize it and give someone the responsibility of not just monitoring the whole but of changing where the perimeter is. The other thing I wanted to pick up, if I may, was what you said about peer review because essentially you challenged whether this is going to amount to anything, and I understand why you do that. I’m reasonably optimistic on this because our incentives as countries are to be completely candid with each other about this global SIFIs. The small banks don’t matter very much frankly. They are cross border. They don’t screw up our economies. Whereas the really massive institutions from my own country, from America, from Germany, France, if the regimes for these countries are poor, we have no incentive not only to not address that with the other countries, but actually in our case to get to parliament and say, “We are bothered about this and we can’t solve it directly but we want you, the people of our country, the representatives of the people of our country, to know this.” And I, you know, the reforms go through in the UK I think that our mindset will be to be as transparent about our concerns in this area as we’ve become used to being in the monetary policy area.

**Nicolas Véron:** A few short annotations. On the shadow banking system, I think there are two very different things when we speak about the shadow banking system. And they don’t mean the same and just debate on too big to fail. One is about weakly regulated or unregulated autonomous financial institutions like hedge funds or others, and here’s the experience with the crisis is that they were not the ones that created the problem in this crisis. They may create the problem in another crisis—LTCM was serious enough, but in this crisis, they weren’t the place where the risk came from unlike the consensus in the regulatory community just before the crisis. I remember the conferences in early 2007, you know, about risk exercises, etc., it was all about hedge funds, regulatory community was entirely wrong on this risk identification and I think we should remember that.

Now, there is another part of the shadow banking system is also off-balance sheet vehicle, the SIV [structured investment vehicle], the ABCP [asset-backed commercial paper] conduits of German
Landesbanken etc., and this is what has proven particularly harmful in this crisis and it’s absolutely relevant to the too big to fail discussion exactly the way Anil mentioned it. We don’t want regulations to incentivize large financial institutions to shift the number of risk off the balance sheet; and it’s not just an accounting problem. I can tell you in a way that makes them in practice retain a risk while not showing it. So I think this latter shadow banking system is really what you want to address in this discussion rather than hedge funds or other autonomous unregulated or weakly regulated financial institutions, even so you may want to regulate them more as well.

As to the last words of Victor Gao’s last intervention on capture. I think one of the things we tried to explain in our paper is that, yes, the capture of the US political system by Wall Street has been very well documented and criticized and Simon Johnson here at the Institute and Morris also have been instrumental in this. But the fact that you don’t see it work in the same way in Europe from European banks doesn’t mean that you don’t have parallel phenomena of capture. And I think this may be at least intuitively evident to all the Europeans in this room—it may not be evident to all Americans because there is a way of measuring capture in this country which is linked to certain degree of transparency of the public system where you measure lobbying expenses, campaign contributions, that sort of things, and you don’t see the same things in Europe partly because they don’t work the same way, partly because they are not disclosed the same way. But it doesn’t mean the capture is less real and I would actually argue that in line with the sort of numbers I showed about assets to GDP in a number of continental European countries, you have a systemic importance of banks, which is not only financial but also political that is certainly not at lower levels than what you see in the US. So I think this comparative perspective is perhaps something that has to be brought more into the debate even though it’s intrinsically controversial.

On Bill’s point, I agree. I think it’s about the externality of large institutions primarily and that’s why we didn’t discuss remunerations that much in the paper. The other reason, and that also is to Rajiv, is that we really tried to focus on issues that were specific to too big to fail. We didn’t try to focus on issues of financial stability that apply to all financial institutions. We really wanted to see what is specific to the big ones because we wanted to have focus in our paper. We didn’t want to have just another paper that goes across a whole range of issues in the crisis and that means that the purpose for this are a number of very important dimension of the regulatory debate that we don’t address at all in the paper because we really wanted to have a paper on too big to fail. For example, we don’t address countercyclical capital buffers. It’s a very interesting debate but we don’t think it’s something that’s specific to too big to fail.

Last thing about peer reviews. I’m with you on peer reviews—I’m amongst the skeptics. And actually we have another piece of research with a Belgian coauthor Stéphane Rottier—National Bank of Belgium, which was published two months ago both by Bruegel and by the Institute here, that tends to suggest that it’s difficult these days to get things done at global level. Actually more difficult than before the crisis—in spite of all the political impetus at G-20 level, and we explained why or we try to explore why in the paper, one thing we found is that if you want to get things done in the current environment at global level, you better have strong global institutions. You better have institutions at global level that have some autonomy of resources and of initiative. And we have actually numbers on this. We analyzed outcomes of the first G-20 summit decisions, so 39 measures on financial regulation, and we looked at what happened about them, and the correlation is extremely clear; even clearer than what we expected to find that, you know. The stronger the institutional framework at global level in terms of autonomy of resources and initiatives, the more things get done. So this is a bit controversial because then, you know, institutions compare themselves and they say, well, this is unfair to us, et cetera, but actually the evidence is there.
Jean Pisani-Ferry: Please ask your question and can you be quick? And then we go back to the panel and close.

Male Speaker: I’ll be quick. I know this focus is on too big to fail but there’s a related issue that intersects and that’s the too complex to manage, too complex to regulate, too complex to bail out, or too complex to insure. I know that wasn’t the subject of this panel, but I wonder if the panelists might comment on that and extend to which those complexity issues intersect with the size issues.

Jean Pisani-Ferry: It’s fair to add this dimension. Who would like to respond to that?

Paul Tucker: It’s absolutely part of this agenda. You’re completely right. I would say two or three things about it. First of all, to the extent that we can make it credible, and I promise you the official community is completely determined to make it credible that we will put losses on unsecured, uninsured debt holders that will bring market discipline back into this part of capitalism. And it’s shameful that finance at the heart of capitalism doesn’t proceed according to the precepts of capitalism. And market discipline, I think, overtime would reduce the degree of complexity.

Second thing I’d say is we need to look at large exposures regime. This is the kind of so-called network problem. Not only do we tolerate quite large exposures between medium-sized banks, 10 percent, 25 percent of capital, but also it goes for the largest and most complex institutions in the world. And arguably, we should limit their exposures to each other to the levels much below that which is starting to be debated in the many committees that gather in the Basel tower.

And the third thing is that the things like central counterparties will bring some simplification of the network. I doubt it will be enough, but if when we see the results of that in a few years’ time, we’ll be able to see what residual complexity we have. And I don’t think that the energy to deal with this is going to dissipate very quickly when unemployment remains around the Western world at uncomfortably, intolerably high levels, so that we can proceed in stages. And the determination in the official community is quite remarkable.

Nicolas Véron: Just to say briefly that complexity is at the core of the topic. It’s a mix of size, complexity, systemic relevance, etc. We discussed this in the paper. I’ll just mention that the related debate that we don’t really address in the paper but which is sort of at the boundary of this issue and other issues is the debate about functional separations in financial conglomerates, which you eluded to, Rajiv, on the supermarket and things like that. And you can see that too big to fail in the financial supermarket is too complex and creates this sort of systemic risk, or you can see through a different angle typically what you alluded to in terms of allocated different—allocating different categories to different financial institutions and because we thought it was at the boundary, we didn’t discuss it very thoroughly in the paper. But in my view basically, what you could call simplistically as the Glass-Steagall debate but in the 21st century and that global level with international implication, this debate is not going to disappear. In Europe, policymakers are doing—most policymakers perhaps not in the UK are doing everything they can to avoid having this discussion, but I don’t think they will avoid it.
Reform of the Global Financial Architecture

Garry J. Schinasi and Edwin M. Truman

Abstract
This paper examines the implications of the global financial crisis of 2007–10 for reform of the global financial architecture, in particular the International Monetary Fund and the Financial Stability Board and their interaction. These two institutions are not fully comparable, but they must work more closely in the future to help prevent global financial crises. To this end, the paper identifies institutional and substantive reforms separately and in their joint work that would be desirable and appropriate.

JEL Codes: F30, F33, F36, F53, G28

Keywords: International Monetary Fund, Financial Stability Board, Bank for International Settlements. Group of Twenty, banking supervision and regulation, financial crises, financial stability, financial reform


Note: This paper was prepared for a conference sponsored by Bruegel and the Peterson Institute for International Economics to be held on October 8, 2010 as part of a project on transatlantic relationships in an era of growing economic multi-polarity sponsored by the European Commission. The authors thank Morris Goldstein and Larry Promisel for their comments on an earlier draft. The views expressed in this paper are their own.
INTRODUCTION

It is now more than three years since the onset of the global financial and economic crisis and two years since the global market dysfunctioning that occurred in the aftermath of the public bankruptcy of Lehman Brothers and the US government takeover of AIG. Although some progress has been made in reforming financial-sector policies and the International Monetary Fund (IMF) and Financial Stability Board (FSB), the bulk of reforms required to improve the ability to safeguard global financial stability and resolve global crises have yet to be agreed much less fully legislated and implemented.¹

Against this background, this paper examines the implications of the global crisis for reform of the global financial architecture (GFA), focusing in particular on areas where further reforms of the IMF and FSB could help to improve the functioning and governance of the global financial system. The paper is organized as follows: The next section examines the precrisis framework for safeguarding global financial stability and identifies six key areas where financial-system reforms are necessary. The following section focuses on the IMF and the FSB (the successor to the Financial Stability Forum [FSF]) and their recent and prospective reforms. The penultimate section discusses the interaction of the issues identified in the second section with the institutions discussed in the second-to-last section. The last section provides our key conclusions and recommendations.

In summary, we conclude that the IMF and FSB are distinct and not fully comparable institutions, but they must cooperate more closely than in the past on the reform and performance of the global financial system. No other global financial architecture is up to the task and is politically feasible at this time. To that end, we outline the key tasks that the IMF and FSB should address.

We make recommendations for substantive and institutional governance reforms of both the IMF and FSB; reorientation of central banks vis-à-vis the IMF and vice versa and vis-à-vis macroprudential policies; and using the FSB-IMF collaborative structure to help address the troubling issue of global capital flows.

Before proceeding to our analysis, the remainder of this introduction provides some definitions and sets the stage.

The main focus of our analysis is the global financial system (GFS) and its supporting GFA. The GFS consists of the global (international) monetary system with its official understandings, agreements, conventions, and institutions as well as the private and official processes, institutions, and conventions associated with private financial activities.² For completeness, we refer to Gold’s definition of the international (global) monetary system, which consists of the rules governing the relations of countries through their balance of payments and the monetary authorities that manage them (treasuries, central banks, stabilization funds, and other country-specific institutions (Gold 1981).

The global financial system has three components: private sector institutions, the nations that have supervisory jurisdiction over the private institutions, and the international institutions through which the national authorities coordinate and cooperate. The GFA is the collective governance arrangements at the global level for safeguarding the effective functioning (or the stability) of the global financial system.³ The GFA is governed first and foremost by the countries that have agreed to be part of it, for example, through their IMF membership, their participation in other institutions and agreements, and their adherence to various codes, standards, and understandings. Accordingly, accountability for the successes and failures of the GFA rests squarely with its member countries, in particular those that strongly...

¹ For some of the many reform recommendations see: UK Treasury (2009); US Treasury (2009); European Commission (2009); de Larosière (2009); G-30 (2009); UK Financial Services Authority (2009); Committee on Capital Markets Regulation (2009); FSB (2008); G-20 (2009); Issing Committee (2009); and IMF (2009).
² This definition is a slight modification of the definition in Truman (2003).
³ Here we have adapted Elson’s (2010) definition to suit our purposes.
influence it. These same countries are accountable to their own constituencies for the performance of the GFA and any implications its performance may have on national, regional, continental, and global economic and financial outcomes.

The global financial and economic crisis of 2007–10 revealed that the precrisis GFA was flawed both in its implementation and in its structure. With the benefit of hindsight, there were warning signs and policy mistakes and misjudgments. But as structured and implemented, the GFA was not effective in encouraging or persuading remedial actions at the national, regional, continental, or global level until a full-scale global systemic crisis was a reality to be dealt with. As Stanley Fischer (2009) wisely observes, warnings are one thing, but they are worth little unless they lead to meaningful actions.

The GFA was revealed to be structurally flawed. Its coordination mechanisms failed to resolve cross-border problems without the resort to national ring-fencing, unprecedented volumes of liquidity provided by central banks to markets, and volumes of credit guarantees and recapitalizations provided by national treasuries to individual financial institutions not previously witnessed on a global scale. In light of the need for unprecedented massive interventions, one important and perhaps overriding lesson for global governance emerging from the crisis is that the international community lacks a body of international law, or at least official agreements and conventions, and importantly ex ante, burden-sharing mechanisms (or balance sheets) for resolving the weaknesses or insolvencies of large, complex, interconnected financial conglomerates.

Table 1 summarizes the IMF’s and FSB’s policy mandates, tools, and governance structures. As discussed in more detail in the body of this paper, the FSB is the successor body to the FSF. It has a broader membership and remit, but its basic structure remains the same as that of the FSF.

As the table demonstrates, the IMF has concrete policy instruments and substantial resources: It lends, engages in bilateral and multilateral surveillance (evaluations), and it provides technical assistance for improving macroeconomic and financial-sector policymaking in member countries. By contrast, the FSF was, and the FSB is, primarily a coordinating body. The FSF’s advanced-country membership, before the crisis, used the FSF to try to form consensus about best practices in microprudential regulation and supervision for all countries as well as to identify vulnerabilities in the GFS and supervisory gaps. Neither the IMF nor the FSF had the policy instruments to prevent or resolve financial crises involving private financial institutions and markets. They can hardly be held fully accountable for not preventing or resolving the global crisis of 2007–10. But, as institutions, the IMF and FSF (including their managements and staffs) can and should be held accountable for failing to deliver what was expected—such as candid assessments of the impending financial system imbalances and more effectively pressuring their membership and constituencies to adopt remedial measures to safeguard stability.

Although the IMF and the FSB, and the FSF before it, have been tasked to cooperate on assessing systemic risks and vulnerabilities and share a common purpose in providing financial stability–enhancing global public goods, they are very different types of organizations.

As is clear from its Articles of Agreement, the IMF was established by a formal international agreement that was ratified by governments. It was organized to promote international monetary cooperation and stability as well as to provide other public goods. As such, it should be viewed as an organization that has an identity separate from and in some respects transcending its country membership. In addition, the IMF is constituted with a management and staff structure separate from its governing or executive boards but with the mandate to pursue the objectives of the IMF. In addition to speaking on behalf of the organization, staff are also free, subject to quality controls, to publicize their professional research, analyses, and policy judgments on matters of concern to the Fund and its membership, of course with the appropriate disclaimers. Both management and staff do so frequently and at times forcefully. For example, the two leading publications of the IMF—the World Economic Outlook and the Global Financial Stability Report—express the views of the IMF staff and not those of the IMF as an organization.

Like the IMF, the FSF and FSB charters also make clear that their respective mandates entail the provision of global public goods that transcend its membership: the development and promotion of effective global regulatory, supervisory, and financial sector policies and assessing financial system
vulnerabilities that threaten the global financial system. However, the roles of the FSB chair and secretariat are to represent the FSB and its views, not to express views independent of its members.

**Global Financial Systemic Issues Revealed by the Crisis**

The global crisis revealed fundamental weaknesses in the precrisis global financial architecture for preventing, managing, and resolving crises in the GFS. This section concludes, not surprisingly, that all lines of defense against a systemic crisis were breached during the crisis. This section highlights the principal areas where reforms are necessary.

**Precrisis Framework for Safeguarding Global Financial Stability**

The precrisis framework for safeguarding financial stability and encouraging economic and financial efficiency can be seen as lines of defense against systemic problems that could threaten stability. It was put in place over time by both private and public stakeholders in the major financial centers. This architecture evolved over time as events occurred. It is the result of neither a grand design nor an underlying “genetic” code that predisposed the evolution of the system to emerge in the way it has. It is more akin to an evolving patchwork quilt of consensus decisions by stakeholders in the major financial centers to deal with problems as they emerged and as an organic collection of private and public international agreements and conventions.

A simplified framework of potential threats to stability and of the lines of defense against them is summarized in table 2. The columns of the table represent four important sources of global systemic financial risk: (1) global financial institutions—primarily large, international banks/groups but also including global investment banks and insurance/reinsurance companies; (2) global financial markets—foreign exchange, bond, and over-the-counter derivatives markets; (3) unregulated financial-market activities of institutional investors such as the capital markets activities of insurance and reinsurance companies and of mutual, pension, and hedge funds; and (4) economic and financial-stability policy mistakes.

Financial infrastructures could be added as another source of systemic risk but they are excluded for simplicity. By and large, clearance, settlement, and payments systems performed reasonably and comparatively well during the crisis. There are some notable exceptions, such as the repo market, but problems there were related to the weaknesses that surfaced in the financial institutions that are the major counterparties in the repo markets. More generally, the large global banks typically are the major participants in national and international clearance, settlement, and payments infrastructures—both public and private—as well as the major trading exchanges. Many of these financial institutions co-own parts of the national and international infrastructures and have a natural interest in their performance, stability, and viability. Incentives are to some extent aligned to achieve both private and collective net benefits.

Increasingly, however, internationally active banks have been more heavily involved in over-the-counter (OTC) transactions, which do not pass through these infrastructures. This poses systemic risk challenges, many of which surfaced dramatically during the global financial crisis and earlier during the Long-Term Capital Management (LTCM) crisis. In addition, broader aspects of finance can also be considered as part of the infrastructure and pose systemic risks—such as the frameworks for risk management (grounded heavily in value-at-risk or VAR models), the very notion and practical meaning of risk diversification, important market segments that provide essential “utility” and “liquidity” services to the broader market place, such as the repo market and swaps markets, accounting rules and practices, corporate governance and compensation practices, and supervisory and regulatory standards and practices (Garber 2009).

The rows of table 2 represent what can be characterized as lines of defense against systemic problems: (1) market discipline—including private risk management and governance, along with adequate disclosure via financial reporting and market transparency; (2) financial regulations—which define the rules of the game for transactions and relationships; (3) microprudential supervision of

---

4 This subsection is adapted from the framework in Schinasi (2009a).
financial institutions and products; (4) macroprudential supervision of markets and the financial system as a whole; and (5) crisis management and resolution.

As indicated in the first column of table 2 labeled “Global Financial Institutions,” large cross-border banking groups are within the perimeter of all five lines of defense. As such, these financial institutions are the most closely regulated and supervised commercial organizations on the planet, and for good reasons. These institutions pose financial risks for depositors, investors, markets, and even unrelated financial stakeholders because of their size, scope, complexity, and of course their risk management systems, which may permit excessive, often highly leveraged, risk taking. Some of them are intermediaries, investors, brokers, dealers, insurers, reinsurers, infrastructure owners and participants, and in some cases many of these roles exist within a single complex institution. They are systemically important: all of them nationally, many of them regionally, and about 20 or so of them globally. Protection, safety net, and systemic risks issues are key public policy challenges. Oversight of these institutions occurred at the national level, through both market discipline and official involvement, with a degree of indirect surveillance carried out at the international level through the IMF, the Organization for Economic Cooperation and Development (OECD), and the Bank for International Settlements (BIS), and committees and groups, including the Basel Committee and Financial Stability Forum prior to the crisis.

At the other extreme of regulation and supervision are unregulated financial activities (and entities), as can be seen in the third column of table 2. These financial activities and entities are neither regulated nor supervised. Many of the financial instruments—OTC derivatives for example, used strategically and tactically by these unregulated entities—are not subject to formal securities regulation. Moreover, the markets in which they transact are by and large the least regulated and supervised. This lack of regulation, supervision, and surveillance is often the basis for their investment strategies and it defines the scope of their profit making. Unregulated entities (such as hedge funds and certain kinds of special investment vehicles [SIVs]) are forbidden in some national jurisdictions. In jurisdictions where they are partially regulated, this is tantamount to being forbidden—given the global nature and fungibility of their business models. Some market activities of unregulated entities are subject to market surveillance just like other institutions, but this feature does not make transparent who is doing what, how they are doing it, and with whom they are doing it. Investor protection is not an issue for many individual unregulated entities to the extent that they restrict their investor base to institutions (pension funds, insurance companies, hedge funds) and wealthy individuals willing to invest with relatively high minimum amounts.

Starting with the collapse of the European exchange rate mechanism (ERM) in 1992–93, intensified during the Asian crises and the financial market disruptions associated with the Russian sovereign default and the collapse of LTCM, and in light of their tremendous growth over the past several years, hedge funds came to be seen by many, correctly or incorrectly, as potentially giving rise to systemic risk concerns. Others believed that the attention paid to hedge funds as posing systemic risks was misplaced and instead should have been focused on the over-the-counter derivatives markets instead (Schinasi et al. 2000). As the recent global crisis demonstrated, hedge funds did not play a (major) role in the virulent market dynamics and dysfunctioning whereas the over-the-counter markets did play a major role.

Global financial markets—a third source of systemic risk identified in the second column of table 2—fall between being and not being regulated and supervised. What is meant by global markets? Examples are the foreign exchange markets and their associated derivatives markets (both exchange traded and over the counter) and the G-3 (dollar, euro, and yen) fixed-income markets as well as others associated with international financial centers (pound, Swiss franc, etc.) and their associated derivatives markets. Dollar, euro, and yen government bonds are traded more or less in a continuous global market and the associated derivatives activities are also global. The primary line of defense is market discipline.

Global markets are only indirectly regulated. They are subject to surveillance of one form or another through private international networks and business-cooperation agreements; information sharing

---

5 These activities are subject to laws against fraud and the general provisions of commercial codes.
by central banks and supervisory and regulatory authorities; official channels, committees, and working
groups; and less directly through IMF multilateral surveillance of global markets. Parts of these markets
are linked to national clearance, settlement, and payments infrastructures, so they are also subject to
surveillance through these channels. The risks they potentially pose are less of a concern to the extent that
the major players in them—the large internationally active banks—are supervised and market disciplined
by financial stakeholders. Nevertheless, if there is poor oversight of the major institutions, then these
global markets are subject to considerable risks, including a greater likelihood of systemic risk. One
obvious example is the global over-the-counter derivatives markets, which are unregulated and which
were prior to the crisis (and still now are) subject to little formal oversight except through the regulation
and supervision of the institutions that engage in the bulk of these markets’ activities.

The fourth and final source of systemic risks identified in table 2 is the policy framework itself,
which includes both macroeconomic policies as well as the financial-stability architecture. As will be
discussed later, we believe there were mistakes made in many policy areas which either encouraged the
behavior that led to systemic risks or directly posed systemic risks as with some aspects of the financial-
stability architecture itself.

As noted in row five of table 2, an additional aspect of the policy framework is crisis management
and resolution of financial problems once they become systemic. This part of the policy framework
entails the following key components: deposit insurance protection to prevent bank runs; appropriate
liquidity provision by central banks to keep markets smoothly functioning; lender of last resort operations
to prevent market dysfunctioning and illiquid but viable financial institutions from failing; and
recapitalization, restructuring, and resolution mechanisms (private preferred to public) to maintain orderly
transitions for institutions that are not viable. As the global crisis revealed, an important missing element
of this policy architecture was an effective framework for resolving potential systemic problems
experienced by systemically important financial institutions.

What We Know from the Crisis

Although the global financial crisis has been characterized by some as caused by the US subprime
mortgage crisis, the continuing crises in the euro area, and in Europe more generally, suggest that the
earlier and ongoing US problems should be seen as symptomatic of an economic and financial
environment that encouraged imprudent risk taking, excessive leverage, a worldwide credit boom, and the
accumulation of an unsustainable amount of private and public debt. As has been widely discussed,
including in the press, many economic and financial factors contributed to the crisis, and we do not need
to repeat the long list here.6

The relevant observation for the purposes of this paper (and for reforming the global financial
architecture) is that the precrisis policy framework and architecture described above failed to prevent and
resolve in a cost-effective manner the kind of financial imbalances that ultimately created systemic risks
and events that threatened to create a worldwide depression. This framework—created over time
primarily by US and European policy architects—relied heavily on achieving and maintaining a balance
between market discipline and official oversight, with the objective of providing checks and balances to
prevent systemic threats to financial and economic instability.

The balance was wrong. Neither market discipline nor official oversight by national authorities
and international institutions such as the IMF and FSF performed its function as intended. Regarding the
balance, it was tilted too heavily toward ex ante market discipline, which proved to be elusive until it was
too late—at which point the ex post exercise of market disciplining behavior created panic and market
dysfunctioning. It also relied too little on official oversight, which failed to foresee the buildup of
systemically significant imbalances and weaknesses; it also failed to deal as effectively as it might (in a
least cost manner) with the crisis once it was upon us. For example, in the United States, if Lehman

6 There is a wide range of papers expressing a diversity of views. See, for example, Carmassi, Gros, and Micossi
(2009); Caprio, Demirgüç-Kunt, and Kane (2009); de Larosière (2009); Gorton (2008 and 2009); Lane and Milesi-
Feretti (2010); Levine (2009); Obsfeld and Rogoff (2009); Truman (2009); and Visco (2009).
Brothers would have been subject to regulation that included a Federal Deposit Insurance Corporation (FDIC)–type prompt-corrective action procedure, it is arguable that Lehman’s bankruptcy could have been avoided. In addition, even if prevention failed, Lehman’s ultimate bankruptcy and resolution would have occurred in a less disruptive manner and at lower taxpayer cost. The same arguments apply to the resolution of Fortis in Europe. As these examples suggest, national frameworks for crisis management and resolution also proved to be inadequate for managing and resolving cross-border problems and even some national stability problems.

In summary, the precrisis lines of defense against threats to systemic stability proved to be inadequate and were breached most visibly in the European Union and the United States:

- Private risk management and market discipline failed and markets dysfunctioned, the result of a combination of imperfect information, opaque instruments and exposures, poor incentive structures, insufficient capital and liquidity buffers and excessive leverage, inadequate governance/control by top management, insufficient ex ante market discipline, and loss of trust.
- Official supervision failed to promote safety and soundness of systemically important financial institutions (SIFIs).
- Macroeconomic policies contributed to conditions conducive to financial crisis.
- National and global market surveillance failed to identify the buildup of institutional, market, and system-wide financial imbalances with sufficient clarity and rigor to persuade policymakers to take remedial action.
- Precrisis central bank and finance ministry tools for addressing liquidity/solvency issues and for restoring market trust and confidence proved to be inadequate and were out of date and out of tune with the fast-paced nature and global reach of 21st century finance.

In line with this assessment—which broadly is conventional wisdom despite important differences of emphasis—reforms are necessary and being considered in a broad range of areas where the global crisis revealed important weaknesses. Many of these areas have been discussed extensively since the onset of the crisis three years ago and officials in the major financial centers and other G-20 countries are actively debating and crafting solutions aimed at dealing with these weaknesses.

**Principal Areas where Reforms Are Necessary**

Six broad and closely related and overlapping areas can be indentified that are particularly relevant for considering reforms of the global financial architecture as it impacts the stability of the global financial system.

*Regulatory Requirements for Capital, Liquidity, and Leverage and the Potential Benefits/Costs of “Systemic-Risk” Taxes*

The global crisis revealed that regulatory requirements for ensuring the safety and soundness of individual financial institutions (or microprudential bank regulations) were inadequate. There are many facets of these requirements that contributed to the buildup of imbalances and risks: (1) Basel II methodologies were flawed in determining capital requirements for both on– and off–balance sheet credit exposures; (2) liquidity risks were misunderstood as was private risk management and regulations; (3) leverage limits were either inadequate or unbinding, or in Europe completely absent; and (4) other aspects of national supervisory frameworks and day-to-day practices were ineffectively applied.

The Basel Committee on Banking Supervision and the Financial Stability Board are considering reforms to deal with the four above-mentioned revealed flaws in the approaches taken to ensure the safety and soundness of institutions. Significant increases in capital, liquidity, and leverage requirements were originally envisioned in a Basel Committee proposal sent out for comment in December 2009.

On July 26, 2010, the Group of Governors and Heads of Supervision—the oversight body of the Basel Committee on Banking Supervision—met to review the Basel Committee's capital and liquidity reform package. Their announcement expressed a deep commitment to increase the quality, quantity, and
international consistency of capital, strengthen liquidity standards, discourage excessive leverage and risk taking, and reduce procyclicality. They also announced they had reached broad agreement on the overall design of the capital and liquidity reform package, including the definition of capital, the treatment of counterparty credit risk, the leverage ratio, and the global liquidity standard. The Committee will finalize the calibration and phase-in arrangements at their meeting in September.

Unfortunately, compared to the revisions to Basel II put forward in the December 2009 proposals, the agreement reached in July 2010 provided many concessions favorable to the banking industry, including a less demanding definition of Tier 1 capital, less stringent liquidity requirements, and a lower leverage limit (only 3 percent) phased in over a longer period ending in 2017. Moreover, as of the time of writing (August 2010), the Committee had not yet agreed a numerical minimum capital requirement or whether common equity would be used as a supplemental Tier 1 capital standard. These decisions are key to an overall judgment on Basel III.

Authorities in the major financial centers have also been grappling with ways of addressing the systemic nature of nonbank financial institutions after learning that even a relatively small but highly interconnected financial firm like Lehman Brothers could pose a systemic risk to the global financial system and economy. Various taxes, surcharges, and levies on individual SIFIs are being considered to meet a variety of objectives: to pay for past costs of recapitalization; to set aside “insurance” funds to pay for future problems; and to alter incentives so that excessive risk taking is reduced. A part of the challenge is to develop microprudential measures that can be imposed on those institutions that are deemed to pose systemic risks regardless of their legal and regulatory organizational structure. Earlier the G-20 considered the possibility of a systemic-risk capital surcharge with the aim of imposing a micro level tax on SIFIs to add protection to capture systemic externalities posed by individual institutions. It is not clear whether this idea is still under active consideration.

The US regulatory reform legislation, the Dodd-Frank Act, did not impose an ex ante tax even though at various points in the process the draft legislation anticipated doing so. US financial institutions may be required ex post to repay the FDIC and US Treasury for the fiscal costs of orderly liquidation of a US financial company. The United Kingdom is considering an internationally coordinated systemic risk tax on financial institutions that could help to reduce the risks and impact of future financial crises, and other countries within Europe are also considering levies to deal with future problems. Because finance is fungible and global—as are the relevant institutions—systemic-risk capital charges or taxes are likely to have limited impact in reducing systemic risk if they are imposed unilaterally. Global coordination would enhance the effectiveness of a systemic-risk charge, but the playing field for SIFIs is not level today and is unlikely to be level in the future. It is an unfortunate political reality that international agreements tend at best to produce common minimum standards even when obvious collective solutions can be envisioned and implemented.7

Perimeters or Boundaries of Financial Regulation, Supervision, and Infrastructures
The “perimeter” or “boundary” of financial regulations, supervision, and infrastructures proved to be too narrow or ill-defined to prevent systemic problems from arising and worsening. For example, US authorities in charge of managing crises and resolving bank failures had no legal authority or standing in resolving the problems of Bear Stearns and Lehman Brothers. The Federal Reserve was able to help to facilitate an acquisition of Bear Stearns but was unable or unwilling to do so with Lehman Brothers. That

7 The G-20 in Toronto (2010, annex II, paragraphs 21–23) endorsed five principles to promote financial sector responsibility via a financial levy. It remains to be seen whether the application of these principles satisfies the fifth, which is to “help provide a level playing field.” Testifying on July 20, 2010 before the Subcommittee on Security and International Trade and Finance of the US Senate Committee on Banking, Housing, and Urban Affairs, US Treasury Under Secretary Lael Brainard and Federal Reserve Board Governor Daniel Tarullo both acknowledged that global convergence may require different approaches across nations and identified aspects of the Dodd-Frank Act that are not likely to be embraced outside the United States, including restrictions on proprietary trading, participation in derivatives transactions, and any limits on the size of financial institutions.
was all about firefighting ex post not ex ante. Ex ante, the perimeter problem and challenges are particularly acute for nonbank financial institutions with significant cross-border exposures and businesses.

The boundary or perimeter challenge is multidimensional. The most obvious sources of perimeter or boundary problems are: (1) off–balance sheet activities conducted through over-the-counter derivatives markets and embodied in unregulated special purpose vehicles; (2) the national orientation of prudential oversight despite the existence of systemic cross-border institutions operating in multiple jurisdictions; (3) the banking orientation of supervisory oversight to the exclusion of other systemically important nonbank financial institutions (AIG, Lehman, GE Capital, hedge funds); and (4) many sources of regulatory arbitrage within national financial systems (for example, Basel related off–balance sheet arbitrage of capital requirements) and across geographical as well as legal boundaries.

Key unresolved questions include the following. Can the existing national frameworks be reformed so that they can better anticipate and prevent problems in cross-border institutions? In the transatlantic or global spheres, for example, can international groupings and committee structures be reformed to provide sufficient early warnings? In this regard, are supervisory colleges for cross-border supervision a promising avenue? If not, what steps are necessary to improve global coordination so that more effective prevention and resolution mechanisms are established to deal with problems emanating from any systemic financial institutions regardless of its core franchise? Can differences in the legal treatment of country bankruptcy be managed short of adopting a uniform approach? How should differences in accounting practices be treated if not harmonized? It is far from clear that the evolving US and EU approaches to these areas are consistent.

Regulation and Surveillance of Global Money and Financial Markets

Although authorities in all of the major financial centers agree that global money and financial markets, in particular the over-the-counter derivatives markets, need to be effectively regulated and subject to surveillance, creating an effective regulatory framework is likely to pose significant operational and politically contentious challenges. Over-the-counter derivatives markets constitute a global network of counterparty relationships among and between primarily SIFIs—a network in which these institutions act as dealers and market makers, manage financial risks, and trade on their own account (capital). In effect, this network is an extension of the global interbank money market. It is at the core of the global financial system, and it provides “utility” financial services that affect indirectly many aspects of company and household finance. As the global crisis demonstrated, a single credit event or weak link in this network can quickly lead to a systemic problem as SIFIs rebalance and reprice their portfolios to minimize exposures and preserve their own liquidity. When this happens, the network shrinks, becomes fragile, and as we saw in autumn 2008 it ultimately can dysfunction.

The autumn of 2008 was not the first time this network threatened to meltdown. Ten years before, in September 1998, the market turbulence surrounding the collapse of LTCM occurred in this same network; it was a wake-up call that this market was subject to considerable systemic risk. In the event, as the crisis revealed, many of the counterparty- and liquidity-risk problems that surfaced during the LTCM crisis surfaced again in more dramatic fashion in 2007–10 and without hedge funds playing a major role. It is at least a reasonable hypothesis that sufficient reforms to counterparty- and liquidity-risk management procedures and practices were not effectively implemented even though the private and

---

8 Giovannini (2010) examines the “boundary problem” between the financial functions (services) society desires and the set of financial institutions that actually try to deliver them. He observes that the global crisis revealed a “boundary” or “perimeter” mismatch between functions and institutions. He concludes that reforms are necessary to realign financial functions (or services) with the institutions that deliver them so they can be more effectively privately risk managed as well as officially regulated and supervised to prevent systemic problems.

9 For an extensive discussion of the potential for systemic risk in over-the-counter derivative markets see Schinasi et al. (2000).
official community gathered many times and wrote many reports about what needed to be reformed and how to accomplish it.

Effective and enduring reform efforts in this area will require changes in many dimensions: legal, process, architecture, and cross-border cooperation. Reform proposals across the Atlantic differ, and fierce competition between the major financial centers is active, but there is also much common ground. The OTC money and derivatives markets are truly global and systemic. Uncoordinated solutions risk exacerbating problems, for example a massive shift of these activities to the least regulated and/or weakest oversight jurisdiction with the potential consequence of even greater excessive risk taking, risk concentrations, and excessive leverage. More generally, anything short of a global solution could lead to the persistence of regulatory arbitrage, complexity, opacity, and systemically threatening counterparty relationships. For these reasons, leadership at the head-of-state level may be required to force a consensus that a global regulatory framework and platform is necessary to regulate the activities in these markets and conduct continuous effective surveillance over them.

Systemically Important Financial Institutions or the “Too Big to Fail (TBTF)” Problem

As touched upon above in the discussion of systemic-risk charges and taxes, the global crisis revealed a fundamental flaw in the precrisis architecture for preventing global financial systemic problems in systemically important financial institutions. Over the years, several reports were written that identified and examined sources of systemic risk, including involving financial institutions, specific markets, and financial infrastructures. Because of the strong adverse economic impact of the global financial crisis, greater attention is now being paid to these sources of systemic risk—including by the G-20 leaders and the general public at large (taxpayers). Thus, it is now more widely understood that some financial institutions pose risks to the stability of the entire global financial system because of their size, complexity, and interconnectedness.

One way of interpreting this heightened recognition is that, prior to the crisis, there was a widespread misunderstanding—an intellectual deficit and even a lack of imagination—about how systemic financial risks and, ultimately, economic instability can be caused by the activities of a single financial institution (a complex financial conglomerate). As observed in Fischer (2009), there is a clear distinction to be made between the recognition of a source of risk, a warning that the risk is growing and becoming systemic, and actually taking action to prevent the risk from being realized. Over the years prior to the crisis, there was much recognition of risks, fewer serious and credible warnings, and very few instances in which strong actions were taken to reduce or avoid the kind of imbalances that led to systemic events.

In this regard, the precrisis architecture for safeguarding global financial stability can be judged to have failed to assess, monitor, and manage the wider implications of financial imbalances and weaknesses that can emerge within individual financial institutions. Simply put, the authorities in charge of safeguarding financial stability fell behind the curve in understanding how to manage the changed nature of systemic risk in a financial system comprising global institutions and market-oriented securitized finance. For lack of a better label, the relevant financial institutions have become known as too big to fail (TBTF). A more neutral and appropriate phrase—systemically important financial institutions (SIFI)—focuses on systemic importance and downplays the role of any one of the often-mentioned characteristics, such as large, complex, interconnected, unique, etc.

According to a recent Report to G-20 Ministers of Finance and Central Bank Governors (FSB, IMF, and BIS 2009):

---

10 The companion paper by Goldstein and Véron (2010) focuses primarily on the TBTF issue.
11 See, for example, G-10 (Promisel Report, 1992), Schinasi, et al. (2000), and G-10 (2001).
12 In normal circumstances, a financial institution like Northern Rock would not be considered a systemically important financial institution. It became systemic because of the specific circumstances and situation that evolved in the United Kingdom. Thus, as is discussed later, systemic importance is not just a matter of size, complexity, or interconnectedness; it is also situational, state dependent, and time varying.
“[I]n practice, G-20 members consider an institution, market or instrument as systemic if its failure or malfunction causes widespread distress, either as a direct impact or as a trigger for broader contagion. The interpretation, however, is nuanced in that some authorities focus on the impact on the financial system, while others consider the ultimate impact on the real economy as key.”

This specific language reflects both the difficulty of defining systemic importance and of reaching a consensus among G-20 finance ministers and central bank governors.13

Nevertheless, other authors have been less shy and reserved in trying to define SIFI.14 Drawing on these other suggestions, the following factors either alone or in combination could render individual financial institutions as systemically important:

- size relative to the economy, key markets, or other like institutions;
- scope of activities;
- complexity of business model, organization, and risk-taking activities;
- opacity of the nature and magnitude of risk exposures;
- interconnectedness of activities with other financial institutions, markets, and infrastructures;
- similarity (or correlation with) of activities and risk exposures to other institutions; and/or
- nonsubstitutable, systemically important activity.

Other factors could be relevant as well, including the macroeconomic and macrofinancial environment. Thus, whether an institution is an SIFI depends in part on its structure as well as economic and financial conditions beyond its control. In other words, the definition itself is “state contingent” and “time varying” to some degree.

Regardless of the nomenclature, several global financial conglomerates were both the cause and consequence of the systemic risks and events they collectively helped to create. In the event, the activities of Bear Stearns, Lehman, and AIG (to name a few) helped to create the complex network of counterparty relationships that ultimately became unsustainable, unraveled, and caused repeated episodes of market panic and the dysfunctioning of the global financial system. Many other large, global financial institutions that were not merged or did not fail also contributed to the buildup of excessive risk taking and leverage prior to the crisis, but they too required unprecedented remedial actions individually and collectively. The remaining global institutions now compose a more highly concentrated network of counterparty relationships within the core of the global financial system than before the crisis. In other words, the restructurings and bankruptcies of several global financial institutions have created a more highly concentrated global financial system. It is not unreasonable to think that the systemic risks associated with the activities of the remaining global institutions have gone up because of this restructuring and the manner of its financing.

It is reasonable to conclude from the crisis that precrisis banking regulations, supervisory frameworks/practices, and market surveillance did not just fail but were in fact incapable of assessing, monitoring, and supervising the risk profiles of global institutions and the implications for global financial systemic stability both prior to and during the early stages of the crisis. The inadequacy of the global financial architecture for dealing with these institutions and their roles in global markets shaped importantly the policy responses. Responses entailed unprecedented public credit guarantees, unprecedented recapitalizations, forced restructurings with public guarantees and ownership, and perhaps unprecedented and still extant moral hazard.

An additional problem revealed by the crisis is that government efforts to recapitalize cross-border institutions (for example, Lehman Brothers) reverted immediately to national ring-fencing and solutions—which exacerbated market panic and systemic problems. Even in the case of Fortis in Europe,

---

13 The FSF identified 30 or so large complex financial institutions that were considered to merit, and now have, core supervisory colleges and standing cross-border crisis management groups. For the presumptive list of these entities—which has not been made available to the public at large—see Jenkins and Davies (2009).

for which it can be argued that excellent preconditions for coordinating a rescue existed between Belgium, Luxembourg, and the Netherlands, the financial resolution ultimately devolved to each country ring-fencing and recapitalizing the domestic pieces of the pan-European institution.

Our takeaway is that reforms are necessary in many related areas pertaining to SIFIs if systemic risk management is to be improved significantly in the future. These areas include regulation, supervision, market surveillance, crisis management, rescue, and resolution. Some reformers have advocated breaking up these institutions into more transparent, focused, and specialized institutions that are easier to regulate, supervise, rescue, or resolve. But, whatever its merits, the political will does not exist to consider this approach seriously. Short of this more surgical approach, reforms will have at least to recalibrate the balance between the private benefits and potential social costs of SIFIs in providing financial services in our modern financial system and the best way to risk-manage their delivery.\footnote{See FSB, IMF, and BIS (2009) and FSB (2010).}

\textit{Crisis Management, Rescue, and Resolution}

Much of the reform agenda has focused appropriately on improving the architecture’s ability to prevent the next crisis. For example, the creation of a US Financial Stability Oversight Council and a European Systemic Risk Board are necessary and worthwhile efforts aimed at improving the ability to assess the potential for systemic risk in the absence of market pressures and adequate supervision and regulation. Early detection of financial imbalances is necessary to avoid systemic problems through the implementation of risk-mitigating measures that could reduce the potential for financial imbalances becoming systemic and threatening financial stability. Authorities on both sides of the Atlantic are proposing to devote considerable resources and political capital to improve early warning systems to the point where they become more reliable.

However, authorities should have realistic expectations about whether these early warning systems will be effective. The reality is that crises will occur again. The crucial question is whether warnings will lead to action.

The costly and ad hoc rescue and resolution efforts of authorities during the global crisis provide clear evidence that countries generally lack effective mechanisms for managing, rescuing, and resolving weak or insolvent financial institutions with significant cross border exposures, including SIFIs, in a cost effective manner. These widespread challenges were apparent in dealing with national, continental, and global financial institutions and markets.

The challenge for all of the major financial centers is to establish legally robust, operationally practical, and compatible frameworks designed for the orderly resolution of systemically important financial institutions in a timely manner and with the capacity to minimize both the systemic consequences and taxpayer costs of resolution. Solutions are being pursued on both sides of the Atlantic, but the outcomes are likely to be less coordinated and compatible than is desirable for resolving cross-border institutions operating in several legal jurisdictions.

In addition to rescue and resolution, the crisis also revealed weaknesses in the ability to manage and to resolve liquidity problems associated with financial distress and instability. Notably the European Central Bank, the Bank of England, and the US Federal Reserve all lacked established instruments to resolve liquidity problems and needed to innovate and introduce new ways of operating in the markets with financial institutions to maintain monetary stability in the presence of financial instability. In effect, prior to the crisis, the major central banks all fell behind the curve in understanding the liquidity-hungry nature of securitized markets and the changed nature and greater market orientation of systemic risk, including their global scope (Schinasi 2009c). Many policy issues need to be addressed to improve the ability of central banks to manage future crises. In the area of prudential oversight, two particular issues stand out.

- Central bank mandates for prudential supervision in all of the transatlantic financial centers fell short of what was required to prevent financial problems from becoming systemic and for dealing with the crisis once it was systemic. In the United States, the Federal Reserve did not...
have oversight responsibilities for all of the SIFIs operating in US markets as some of them were investment banks and insurance companies. In the United Kingdom, the Bank of England had responsibility for financial-market stability but did not have responsibility for banking supervision and had to rely on cooperation with the UK Financial Services Authority (FSA), an arrangement that proved to be ineffective. In the euro area, while some national central banks within the European System of Central Banks (ESCB) have supervisory powers, the European Central Bank (ECB) itself had no formal responsibility for supervision.

- The relevant authorities had neither the comprehensive power to obtain relevant timely information from all SIFIs and other unregulated financial institutions nor the authority to intervene (place in administration, liquidate, resolve) SIFIs when it was necessary.

Effective Management of Volatile Capital Flows

The epicenter of the global crisis of 2007–10 was the US financial system and economy and the principal locus of secondary eruptions was Western Europe. But the crisis became global, encompassing Central and Eastern Europe, Latin America, Asia, and Africa before running its course. A major transmission mechanism was the global financial system and associated capital flows, which dried up, first, for Iceland and Eastern Europe and ultimately for many of the major emerging-market economies, for example Korea. A second transmission mechanism was the recession in the advanced countries that led to a collapse in global trade that was unprecedented in the post-World War II era.16

As is documented in Blanchard and Milesi-Ferretti (2009), the major portion of the precrisis gross capital flows involved the advanced countries, primarily of the North Atlantic. The emerging market economies were the source of net capital flows. In the case of the Eastern European countries, net and gross capital flows financed large current account deficits. However, the emerging market economies of Asia and Latin America, in particular, were also recipients of substantial gross capital flows. Korea is exhibit number 1.

Korea had the fifth largest foreign exchange reserves as of February 2008 and ran substantial cumulative current account surpluses during the years in advance of the crisis (Truman 2009). Nevertheless, it was hit hard by a reversal of the gross inflows of capital to Korea that were a feature of the immediately preceding years. One consequence was the Bank of Korea took advantage of the Federal Reserve’s offer to open a $30 billion swap line that the bank could use to support financial institutions needing to repay US dollar borrowings. The Federal Reserve opened similar lines with the central banks of Brazil, Mexico, and Singapore.17 Mexico along with Colombia and Poland also took advantage of the flexible credit line (FCL) put in place by the IMF in March of 2009.

In the aftermath of the global crisis, as many emerging-market countries have recovered more rapidly than the advanced countries causing some of their central banks to raise their official interest rates, global capital flows have reemerged as a problem for some countries. A few have instituted controls to impede the inflow of capital.

Unwanted capital flows are generally a problem both in the management of macroeconomic policies and in safeguarding the stability of domestic financial systems, which are the normal, but not necessarily the only, conduit for such flows.18 Moreover, with the globalization of the financial system, capital flows are likely to continue to be a source of concern even without crises on the scale of that of 2007–10. Thus, the effective management of such flows is a key challenge in ensuring financial stability and for macroeconomic policies. Reasonable responses to such flows require cooperation both by source and recipient countries involving both prudential and macroprudential policies (Truman 2010a).

---

16 See IMF (2010b), Herman and Mihaljek (2010), and McGuire and von Peter (2009).
17 In addition to the Bank of Korea, the Bank of Mexico drew on its line, but the Central Bank of Brazil and the Monetary Authority of Singapore did not.
18 Roberto Zahler (2010) emphasizes that short-term capital inflows can go directly to equity markets or to nonfinancial borrowers bypassing domestic financial institutions.
This is an area where representatives of both the European Union and the United States have reservations. The United States appears to be more receptive to expanding the IMF’s lending facilities, and the Europeans appear to be less so even though a number of countries in the European Union, and now the euro area have taken advantage of the increased flexibility of the IMF’s lending operations. As of this writing, Europeans are resisting a substantial increase in the IMF’s quota resources, which would be necessary if the IMF were to play an expanded role as a lender of last resort. The US position is one of skepticism, yet to be convinced. The views of both on the use of controls on capital inflows appear to have mellowed since the late 1990s. A reasonable guess, however, is that neither is prepared openly to embrace the view that its own macroeconomic, in particular monetary, policies should or might need be altered in light of trends in capital movements.

The IMF and Financial Stability Board Today
Against the background of the previous section outlining the principal areas where reforms are necessary, this section examines the IMF and the FSB, the principal international institutions responsible for the GFS in the postcrisis environment. We examine five aspects of those institutions: membership and representation; tools and instruments; compliance and leverage; macroprudential orientation; and accountability and transparency.

The International Monetary Fund
The IMF commenced operations in 1945—65 years ago. Its objectives were then, and remain today, to promote growth and financial stability via its lending and surveillance activities and a variety of mechanisms in support of international cooperation. At the start, the IMF’s role was focused on exchange rate stability and the removal of restrictions on payments that limited the expansion of international trade.

The IMF’s primary focus was on the international monetary system and the Bretton Woods regime of fixed, but occasionally adjustable, exchange rates. Indeed, the purposes of the IMF stated in Article I of the Articles of Agreement as they stand today focus on the promotion of “international monetary cooperation . . . [and] the machinery for consultation and collaboration on international monetary problems.” In the period immediately after World War II and continuing into the 1960s when the Bretton Woods exchange rate regime came under pressure, the private sector’s role in the global financial system was largely ignored. The international monetary system was the entire GFS as we defined that term earlier. Even today, Article VII limits the use of the IMF’s resources to make capital transfers. The only limitation on the use of capital controls is that they should not be used to impede trade and current account transactions.

The expansion of private capital flows in the 1960s was one of the many contributing factors to the demise of the Bretton Woods system. Some thought that with the passing of fixed exchange rates among the currencies of the major countries, which were then the currencies of the G-10 countries, the IMF would and should go out of business. These hopes or fears did not materialize. The members of the IMF supported the evolution of the institution in the context of the oil shocks and inflationary chaos of the 1970s, the global debt crisis of the 1980s, the challenges of transition economies in the 1990s, the debt crises of the mid and late 1990s, and more recently the global economic and financial crisis of 2007–10 (Truman 2006b, 2008, and 2010b).

As time passed the attention of the IMF and its members turned increasingly away from the structure and functioning of the international monetary system and arrangements among governments toward the global financial system. This was most vividly illustrated by the IMF’s involvement in capital account financial crises of the 1990s. Since 2001, the IMF has published its Global Financial Stability Report (GFSR), first as a quarterly publication and subsequently as a semiannual publication updated quarterly. The GFSR was preceded in the 1980s and 1990s by the annual International Capital Markets reports, which focused on sources of vulnerabilities in international capital markets, and evolved in

---

19 The 11 G-10 countries are Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.
response to the global debt crises in the earlier decade and in response to subsequent periods of turbulence and crisis throughout the 1990s. Thus IMF staff, management, and membership have engaged in one or another systematic form of assessments or surveillance of global financial system vulnerability for more than three decades.

Nevertheless the IMF (management and staff) did not warn about the impending global economic and financial crisis although some of its various papers and reports identified some red flags. In that sense, its value added to the Global Assessment of Functioning (GAF) was limited.

In the remainder of this subsection, we discuss various aspects of the IMF’s evolving role in the global financial system.

**Membership and Representation**

The IMF with its 187 member countries is essentially a universal international organization. In principle, it is fully representative because each member country is directly or indirectly represented on its Board of Governors (see table 1).

However, the Fund departs from the principle of one nation, one vote because the preponderance of its formal decisions are taken by weighted majorities, based largely on IMF quotas, in which each country’s voting power is based broadly on its economic importance. Currently, those weights are considered by many observers to be unrepresentative (Bryant 2010).

In addition, and partly as a consequence, representation on the 24-person IMF executive board, its day-to-day decision-making body, is heavily influenced by the 8 to 10 chairs held by European countries as well as by the United States. With a very few exceptions, the executive directors and their alternates, their advisors, and their staffs are drawn from finance ministries, rather than central banks, and only by coincidence would they include anyone with supervisory or regulatory experience.

Thus, the IMF, in principle, is representative, but the structure of its current representation both in terms of voting shares and talking chairs has undercut its legitimacy in the sense, following John Locke, that all countries are members and have representatives in Washington. However, in the view of some, IMF representation is deficient and consent of the governed is incomplete or blunted. It remains to be seen whether this situation will be substantially changed as the result of agreements reached at the Seoul G-20 summit in November 2010.

**Tools and Instruments**

The IMF has a range of tools and instruments that it can employ to help it achieve its objectives: lending, surveillance, analytical studies, and technical assistance.

Although IMF lending operations normally absorb less than one-quarter of IMF administrative expenses, they attract a disproportionate share of attention. The IMF directly impacts the policies of its members primarily via its lending programs, imposing conditions designed to get out of current crises and to reduce the probability of future crises.

IMF lending, built up to more than $100 billion in credit and commitments outstanding in the early 2000s, was back down to about $10 billion in September 2008, at the end of the first year of the financial crisis, and subsequently expanded to more than $200 billion. This was accompanied by a

---

20 The countries with the five largest IMF quotas are each entitled to appoint an executive director. The remaining 19 executive directors are elected by constituencies; currently three are one-country constituencies (China, Russia, and Saudi Arabia). The countries In the European Union are spread across 10 appointed executive directors and elected directors of constituencies, which include nonmembers of the European Union, in principle each of those chairs could be occupied by an EU representative. Switzerland is one of those constituencies and heads its own constituency. In addition, the European Central Bank may be separately represented at some meetings of the executive board (Truman 2006a). This European dominance is likely to be reduced somewhat with the election of a new executive board that is scheduled to take over on November 1, 2010.

21 We use the word “legitimacy” as it is used in the literature on political theory. For example, according to John Locke (see Ashcraft 1991, page 524), “The argument of the [Second] Treatise is that the government is not legitimate unless it is carried on with the consent of the governed.”
substantial addition to the IMF’s resources, principally via ad hoc borrowing from individual members and, potentially, from an expansion of the New Arrangements to Borrow to $550 billion to supplement its usable quota resources of about $250 billion.\footnote{22}{The allocation of about $280 billion in special drawing rights (SDRs) by the IMF directly augmented the resources of member countries to deal with the consequences of the crisis.}

IMF surveillance over members’ policies and the global economic and financial environment has increased in importance in recent decades. These activities include bilateral surveillance focused on the economic and increasingly the financial policies of individual countries in the form of mandatory Article IV reviews at 12- to 18-month intervals and since 1999 its voluntary reviews under the Financial Sector Assessment Program (FSAP).\footnote{23}{The World Bank participates in FSAPs for developing countries. In the case of both institutions, the staff conducting the reviews are largely seconded from national authorities because the Fund and the Bank lack the staff and other resources to do the work in house.} IMF surveillance also has its global component—multilateral surveillance—in the form of executive board discussions and conclusions based on reports on the economic outlook and financial system prepared by the staff. The World Economic Outlook (WEO) was first published semiannually in 1980, and quarterly updates are now issued (Hacche 2009).

The IMF executive board experimented with a multilateral consultation with China, the euro area, Japan, Saudi Arabia, and the United States on global imbalances in 2006–07. It did not have a great impact because the countries participating did not want to commit to any new policy measures and the topic of global imbalances was soon overwhelmed by the economic and financial crisis.\footnote{24}{An active minority of observers think that global imbalances played a major role in precipitating the 2007–10 crisis, but that is not our view.} At the time, it was mooted that the next such consultation exercise would involve the global financial system issues, but that intention was displaced by the crisis.

The IMF’s analytical multilateral surveillance publications such as the WEO and GFSR and their predecessors and an array of working papers, staff position notes, and other documents are an important tool by which the IMF staff of close to 3,000, with the support, and in some cases instigation, of IMF management (the managing director and the three deputy managing directors) attempt to influence the policies of its members and shape debates about current policy issues and challenges.

The IMF’s technical assistance programs offer another mechanism through which the IMF can promote and support better policies, including policies of member countries in the financial area. Those policies contribute to financial stability in the financial systems of the individual countries and in the aggregate stability of the system as a whole, but they are not at the core of issues confronting the architecture of the global financial system today as we outlined earlier.

Compliance and Leverage
The IMF is not constituted to be a rigorous international regulator. The formal obligations of members under the IMF Articles of Agreement are few, and many of those obligations are honored in the breach. Based on this reality, Truman (2010b, page 38) argues that the IMF’s regulatory role “is considerably broader in practice than that of a regulator in the national context, but that role is dependent on the mutual consent of governments initially to agree to subject themselves individually to the IMF’s oversight and subsequently to adjust their policies in response to that oversight. The oversight or regulatory role to a substantial degree is enforced via the self-application by its members of peer review processes.”

The IMF does have considerable leverage over countries that require financial assistance in support of recovery and reform programs, and the Fund has used that leverage effectively. We would submit that the record of increased financial stability in recent years among Latin American, Asian, and African countries owes substantially to reforms encouraged by the IMF in connection with reform programs of those countries that were supported by IMF financial assistance as well as by the World
Bank and other development banks.\textsuperscript{25} When not linked to IMF lending operations, the IMF can only assist those countries that want to be assisted.

Finally the IMF, by virtue of the size, range of skills, and relative independence of its professional staff and management, can influence and exert leverage over the policies of member countries via use of the bully pulpit backed by robust analysis.\textsuperscript{26} Many observers note the important role of the IMF staff and management as “trusted advisors.” This role sometimes comes in conflict with “name and shame” efforts to exert influence over the policies of members to bring them into better compliance with global norms and standards. However, the resistant or recalcitrant country is free to ignore the advice and entreaties of the IMF staff, and even to deny information to the IMF, unless the country requires financial support from the IMF or its blessing to receive financial support from the private sector. Moreover, messages from the management and staff of the IMF are often diluted by the softer messages from the more political executive board.

The IMF’s representation issues that affect its legitimacy, in turn, weaken its leverage including via peer review processes. In addition, the extent of leverage the IMF management and staff have over the largest member countries—once the G-7 countries and now a longer list—can be questioned. It depends in part on the governance processes in those countries and the role of the media and interest groups as well.

**Macroprudential Orientation**

The IMF is the premier international organization when it comes to the analysis and assessment of macroeconomic policies. The IMF does not have a monopoly on these issues among international organizations, but its mandate and near-universal membership guarantee the IMF the widest scope and respect.\textsuperscript{27} As noted above, the IMF has engaged in capital markets and global financial system surveillance since the 1980s and has published numerous, regular reports since then. It has a large staff focusing on the multilateral issues, and its bilateral country surveillance has been refocused toward a more macrofinancial orientation as an additional pillar to supplement bilateral surveillance work on macroeconomics and monetary, fiscal, and exchange rate policies.

On the other hand, since the collapse of the Bretton Woods exchange rate regime, the IMF’s governance has become increasingly dominated by finance ministries and increasingly distrusted, partly as a consequence, by central banks. Moreover, the finance ministry representation on the executive board and among the deputies of the International Monetary and Financial Committee (IMFC)—that is, below

---

\textsuperscript{25} This is the principal conclusion in IMF (2010b, page 4) emerging-market “countries that had improved policy fundamentals and reduced vulnerabilities in the precrisis period reaped the benefits of these reforms during the crisis.”

\textsuperscript{26} We use the phrase *professional staff* to mean a staff whose primary objective is to use its skills, training, experience, and expertise to help the organization achieve its mandate largely free from the political influence or policy preferences of member countries and organizations. By *independence* we mean a staff that is largely free to exercise, express, and publish its professional judgments and opinions without the political and policy influence of member countries and organizations. Article VII, section 4(c) states, “The Managing Director and the staff of the Fund, in the discharge of their functions, shall owe their duty entirely to the Fund and to no other authority. Each member of the Fund shall respect the international character of this duty and shall refrain from all attempts to influence any of the staff in the discharge of these functions.” In practice, IMF staff are encouraged to express their professional judgment and personal views in several publications, including IMF working papers, occasional papers, and staff position notes. The World Economic Outlook and Global Financial Stability Report are documents of the staff in which a disclaimer notes that the views expressed are those of the authors and not those of IMF management or its executive board. A majority of IMF economists are hired directly from graduate schools; some are hired and sometimes seconded for a limited term from national authorities. The IMF website provides disclosures on professional requirements, salaries, benefits and other staff related information.

\textsuperscript{27} Among the competing international organizations are the World Bank (equally universal but with a different mandate), the Organization for Economic Cooperation and Development (more limited membership), and the Bank for International Settlements (more limited membership and a more limited mandate).
the level of the ministers and governors—is by individuals with experience and skills in international affairs but not necessarily macroeconomic affairs. Thus, the expertise of the IMF staff is disconnected from formal interaction with the relevant macroeconomic and also supervisory authorities by virtue of the IMF’s governance structure.

The national authorities, in turn, are to varying degrees engaged in system-wide financial surveillance activity as well, in the form of financial stability reports. However, these reports are largely focused on national (or regional) markets and priorities except to the extent that the global environment impinges on them. Many of the financial stability reports set the stage for risk assessments by surveying the global financial landscape as it relates to conditions and risks in national markets, financial institutions, and infrastructure. However, they are drafted primarily by central banks with some input from national supervisory authorities, and the IMF itself has limited interactions with these groups.28

**Accountability and Transparency**

The IMF is viewed by many private sector observers as opaque and mysterious, and some see it as conspiratorial if not malevolent. The IMF has a formal anchor in its establishment by an international agreement that was ratified by its member governments, clearly establishing its governance if not its broader governmental processes. Because the IMF is an inter-governmental organization, it can operate above the political processes that affect its member governments. If a substantial majority of them are satisfied with the IMF’s work, the institution is largely protected from outside pressures and criticisms.

However, as noted above, some member governments question the IMF’s legitimacy. Moreover, the legitimacy of some of the member governments is questioned by the nongovernmental organization (NGO) community. They also criticize the Fund for a lack of accountability and transparency. Thus, the IMF faces its own issues in this area along with the associated questions of access to its decision-making processes and transparency about those processes. As a formal matter, IMF transparency about its official business, for example minutes of executive board discussions, is controlled by its members through the executive board. The management and staff, responding to the increased pressures for accountability and transparency from 21st public opinion have carved out some scope to act informally and independently of the board via papers and web postings.

**The Financial Stability Board**

The Financial Stability Forum—the forerunner to the Financial Stability Board—was established by the G-7 countries in February 1999 in the aftermath of the Asian financial crises, the Russian default, and the financial turmoil that accompanied the demise of the hedge fund Long-Term Capital Management (see box 1—Brief History of the FSF). It was created and structured to coordinate, not to act.

The FSF’s secretariat was small. Aside from those activities directed at identifying vulnerabilities and gaps in policy with associated recommendations to fill the gaps, the bulk of the substantive work was produced by committees composed of and chaired by FSF members. The reports issued were high quality consensus documents focusing on a few key issues. After the first burst of reports in the 2000–2002 period, the FSF largely settled into a role of trying to identify incipient national and international financial vulnerabilities and the review of reports from other bodies.29

During its tenure, the FSF coordinated work in developing and disseminating standards and codes and best practices in regulation and supervision of finance in concert with the international standard setters and the IMF and World Bank. It served as a useful forum for member countries, international financial institutions, and standard-setting bodies to share information and analyses and learn from each other, which was one of its principal purposes. It created opportunities to address many of the

---

28 In the future, the United States will be an exception to this generalization. The US Treasury will have responsibility for financial stability reporting on behalf of the Financial Stability Oversight Council.

29 In an initial burst of activity in its first two years, the FSF sponsored working groups on highly leveraged institutions (hedge funds), capital flows, and off-shore financial centers. However, responding to the wishes of the United States and other G-7 countries, it subsequently took fewer such initiatives (Helleiner 2010).
externalities that exist in finance (information asymmetries, for example, within the context of the vulnerabilities discussions) and that posed risks to the global financial system. Public-good benefits were captured as a result of the work of the FSF and the resulting learning by its members with implications for the work under their own remits.

The FSF, as a collective of countries and organizations, identified some risks that were later proved to be central to the global economic and financial crisis. In particular, the FSF starting in 2003 encouraged the Joint Forum in its work on the issue of credit risk transfer activities. However, insufficient action was taken by member countries in light of the Joint Forum’s work. More broadly, the FSF membership included all of the suspect jurisdictions with respect to the global crisis and they did not act sufficiently forcefully, either independently or collectively in advance of the crisis.

It is therefore reasonable to question the value added of the FSF’s work during the period prior to the global crisis in which systemic risks and vulnerabilities were accumulating. Notably, the FSF (as a collective organization) can reasonably be viewed as having been unsuccessful both in terms of developing and implementing supervisory and regulatory standards to prevent a global systemic risks and in terms of developing a collective process accurately to identify and assess sources of global systemic risks and vulnerabilities. In addition, it is notable that the political authorities of non-members were critical of the FSF’s limited size and coverage of issues prior to the crisis.

By contrast, once the crisis broke, the FSF produced what many observers regard as an excellent report in early April 2008 (FSB 2008) on enhancing market and institutional resilience. This report laid much of the groundwork for subsequent reforms endorsed and instigated by the G-20 leaders who did not assemble until November that year.

Partly as a consequence, in the heat of the global crisis, the leaders of the G-20 countries in November 2008 called for a larger membership of the FSF. A broad consensus emerged in the following months toward placing the FSF on stronger institutional ground with an expanded membership—to strengthen its effectiveness as a mechanism for national authorities, standard setting bodies (SSBs) and international financial institutions to address vulnerabilities and to develop and implement strong regulatory, supervisory and other policies in the interest of financial stability. As announced at the G-20 Leaders London Summit on April 2, 2009, the expanded FSF was reestablished as the Financial Stability Board (FSB) with a broadened mandate to promote financial stability. The FSB’s broadened mandate made mandatory its members’ compliance with IMF/World Bank FSAPs and Reports on the Observance of Standards and Codes (ROSCs) and made more explicit and comprehensive its focus on macroprudential work in cooperation with the IMF (see box 2—Mandate of the FSB and table 3).

US Treasury Secretary Timothy Geithner (2009) has argued that the enlarged FSB with expanded powers is now the fourth pillar of global economic governance along with the IMF, World Bank, and World Trade Organization. The discussion of the FSB that immediately follows, and implicitly this paper as a whole, examines that proposition. We conclude that this characterization of the FSB is not useful.

Article I of the FSB’s charter (FSB 2009) spells out the objectives envisioned by the Heads of State of the G-20 countries: “The Financial Stability Board (FSB) is established to coordinate at the international level the work of national financial authorities and international standard setting bodies (SSBs) in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. In collaboration with the international financial institutions, the FSB will address vulnerabilities affecting financial systems in the interest of global financial stability.”

As envisioned in the FSB’s charter, the FSB plenary is the FSB’s governing and decision-making body; a steering committee is its co-coordinating body; and there are three operational standing committees addressing vulnerabilities assessment, supervisory and regulatory policies and coordination, and standards implementation. The FSB has an explicit mandate to assess and act on vulnerabilities. The FSB is in a position to draw on the best analysis available globally, and it has a highly professional staff running the secretariat.

---

30 The Joint Forum includes the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, and the International Association of Insurance Supervisors.
The FSB chairman and secretariat acting together are coordinators. Box 3 summarizes the role of the FSB chairman. The FSB has neither an explicit policy mandate nor the critical mass of professional staff that would be necessary to engage in analytical studies and independent assessments of global financial vulnerabilities. But it can draw on the work and resources of the international financial institutions to do so. The FSB secretariat very capably convenes meetings, organizes agendas, and manages the processes that produce multinational reports on issues pertaining to its financial-stability mandate (see box 4—Role of the FSB secretariat). The key exceptions to these generalizations are its work on risks and vulnerabilities in the global financial system, which it does jointly with the IMF, and the commitments of its members to participate in peer-review processes within the FSB “framework for strengthening adherence to international standards.”

Membership and Representation
The FSF’s initial membership was confined to the G-7 countries, international financial institutions, and the international standard-setting bodies. Later in 1999, the FSF membership was expanded to include representatives of four important financial centers: Australia, Hong Kong, the Netherlands, and Singapore; Switzerland was invited to join in 2007 (see table 3—Evolution of Membership and Representation of the FSF and FSB). This limited membership on the FSF and the Basel Committee on Banking Supervision (BCBS), the principal standard-setting body (SSB) associated with the FSF, contributed to the perception that there are “rule makers” (the G-7 and the FSF structure) and “rule takers” (the rest of the world).

This perception was ameliorated only in part by the FSF’s regional meetings. There were five in 2001–02, but they tapered off to only six over the following four and a half years to mid-2007 before the start of the crisis. The fact that the crisis was a G-7-centered affair that also affected many other countries only strengthened the view of outsiders that the FSF and SSBs had paid too much attention to nonmember jurisdictions and not enough to monitoring internal problems and issues in member jurisdictions. Thus, as with the IMF and considerably more so, the FSF had, and the FSF still has, a legitimacy problem in the sense of John Locke (see footnote 21).

As noted above, partly in response to these criticisms, the FSB’s country membership has been expanded to include all of the G-20 countries and also includes the European Commission. This expansion of membership should improve the coverage of issues by giving a potential voice to emerging-market country issues, needs, and concerns. It could also help to improve compliance with international standards, codes, and best practices in financial regulations and supervision. To the extent that continental/regional membership and representation within the FSB has been expanded and improved, this could help to improve the perceived legitimacy of the FSB with respect to standards and best practices for global finance.

Having said this, the membership is still skewed toward the G-7 countries and geographically towards Europe. The G-7 countries still have 21 of the 52 seats in the 67-seat FSB occupied by country representatives, and European countries occupy 20 of the 54 country seats, including the seats of the European Commission and the European Central Bank for this purpose. Although membership has been expanded to include most, if not all, of the systemically important emerging-market countries, it gives the

31 Article 15 of the FSB’s Charter spells out the role of the secretariat, but neither the charter nor the FSB website provides information about the professional status or independence of the staff of the secretariat. Our understanding is that except for the secretary general and some secretarial and administrative staff, the “professional” staff of the FSB are seconded from and paid by member organizations.

32 The first such thematic peer review completed in March 2010 focused on the application of standards for sound compensation practices and their implementation. The second will examine implementation of recommendations on risk disclosures in light of the 2008 FSB report on enhancing market and institutional resilience. The FSB is also scheduled in 2010 to conduct country peer reviews of Italy, Mexico, and Spain based on their recent IMF-World Bank FSAPs.

33 In some sense, the role of the IMF and the World Bank representatives in the FSF was to “represent” nonmembers, but that view has been put forward with respect to the IMF and the G-7 and has not been very convincing.
greatest representation, and therefore potential voice, to the larger countries that are aspiring quickly to enter the realm of advanced countries.

One can argue that adding the voice and perspectives of China and the other systemically important emerging-market countries under the umbrella of the FSB is the key innovation. However, looking at the specifics, while the G-7 countries, Brazil, China, India, and Russia each have three representatives within the FSB, Australia, Mexico, the Netherlands, Spain, South Korea, and Switzerland each have two representatives and Argentina, Hong Kong, Indonesia, Singapore, Saudi Arabia, South Africa, and Turkey each have only one representative. The FSB operates by consensus and in this type of body, the number of voices matters.

Thus, the limited and skewed country and geographic membership of the FSB and the country representation within it will most likely continue to have implications for perceptions about the political legitimacy of the FSB. Perceptions often shape outcomes.

Tools and Instruments
The FSB does not have policy tools or instruments beyond its mandate to promote collaboration and coordination among its constituent members and to identify gaps and financial system vulnerabilities.

The FSB has a small professional secretariat largely drawn from its member institutions. The secretariat is not designed or intended to conduct independent studies of key issues (see box 4). The FSB relies on FSB member countries, member organizations, and member international financial institutions with their substantial resources to carry out the mission of the FSB. This institutional arrangement places much of the initiative and analytical firepower with those who have national or organizational priorities and political imperatives with their own constituencies. This poses a risk that the national authorities from the larger countries—who also influence the work programs of non-country members of the FSB—will continue to shape the FSB’s agenda and consensus to their advantage, which could be detrimental to collective action in the interest of global economic and financial stability.

Compliance and Leverage
FSF member country compliance with international standards and best practices was voluntary, which was perceived by some at the start as a weakness. This structure was a compromise. In 1999, there was no appetite as there is none now for a global regulator or supervisor. The FSF structure comprised three related elements targeted on improving global financial stability: voluntary IMF/World Bank financial-sector surveillance in the form of FSAPs and ROSCs; market pressure/discipline to encourage adherence to international standards and best practices; and a formal process of “name and shame,” and possibly sanctions, for offshore financial centers (OFCs).

The FSB’s charter is more prescriptive. It mandates that each member country: (1) be subjected to IMF/WB FSAPs every five years with published assessments used as a basis for ROSCs; (2) implement international standards; and (3) undergo peer reviews within the FSB as well assessments performed by the IMF. Moreover, the process of “name and shame” may be extended beyond the OFCs to other non–member countries (Helleiner 2010).

This mandatory approach would constitute a substantial improvement were it to significantly increase the number of systemically important countries that comply with international standards and IMF/World Bank financial-sector surveillance. However, as of September 2008, all but four of the regular members of the G-20 had already participated in the financial-sector surveillance process. The exceptions were Argentina, China, Indonesia, and the United States (Truman 2010c). Notably, the United States has just completed its FSAP/ROSC process with the IMF/WB and those for China and Indonesia are also underway.

The more difficult and pressing postcrisis challenge faced by the FSB is to improve further the existing standards and practices that shape financial regulation and accounting, supervisory frameworks, and day-to-day supervisory practices. As we discussed in earlier sections, this challenge is especially

34 See the US FSAP documents on the IMF website (www.imf.org).
pressing in the major financial centers where the crisis revealed key weaknesses in the supervisory and regulatory architectures. The mandating of FSAPs every five years and the peer-review process within the FSB for members may help in this regard while at the same time creating possible conflicts with the work of the IMF and World Bank. But the onus is on the major financial centers, working through and with the FSB, to develop and implement more effective supervisory and regulatory frameworks, standards, codes, and best practices.

The FSF’s charter on its face was at best ambiguous about the relationship between the FSF and the international SSBs. The Tietmeyer (1999, page 6) report assigned to the FSF the task of “creating procedures for coordinating the work of national and international regulatory groupings, and for the exchange and pooling of information among them.” This formulation raised the question whether the FSF was a “rule maker” or “rule taker.” As part of monitoring and coordinating, there may have been a two-way process. But the lack of a clear FSF oversight was seen by some as a shortcoming because one of the reasons for creating the FSF was to improve standards and compliance with them.

In this regard, the FSB takes three qualified steps forward for influencing SSBs’ work and decisions. In particular, FSB members have agreed.35

- SSBs will report to the FSB on their work—with the objective of strengthening support for strong standard setting by providing a broader accountability framework—but without prejudice to the SSBs’ independence and existing reporting arrangements.
- The FSB will undertake joint strategic reviews of the policy development work of the SSBs to ensure their work is timely and coordinated, focuses on priorities, and addresses gaps.
- The FSB will promote and help coordinate the alignment of the activities of SSBs to address any overlaps or gaps and clarify demarcations in light of changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure, as well as accounting and auditing.

While these principles defining the FSB’s relationship with the SSBs may be an improvement over the FSF, it is unclear whether the FSB has the clout to influence the agenda and content of the work of the SSBs. One can see the tension in the language used in the FSB’s charter. Moreover, arguably the most important of the SSBs is the BCBS. The BCBS now formally reports to the Group of Governors and Heads of Supervision as its oversight body. That group, now chaired by ECB President Jean-Claude Trichet, consists of the G-20 central bank governors and the supervisors from the G-20 countries. Until 2009, the Group of Governors and Heads of Supervision was an informal body. It was created to resolve the ambiguous situation that came to exist between the G-10 central bank governors, which established the BCBS in 1974 and to which the BCBS previously “reported,” and the evolving membership of the committee that increasingly included banking supervisors that were not part of their national central banks because central bank involvement in banking supervision was scaled back or eliminated.

Since 2009, the IMF has had observer status on the BCBS and it participates with other international institutions on the Basel Consultative Group involving larger emerging market countries, such as Chile, Malaysia, and Thailand, which are not represented on the BCBS, which does now include all the G-20 countries.

Our inference is that, while there is scope for a two-way interaction during the process of standard development, by the time BCBS proposals reach the FSB, which also includes representation of 17 finance ministries and international institutions, the decision to support them is essentially a formality. In countries where policy development is well coordinated between finance ministries, central banks, and supervisors, this three-tier structure many not matter with respect to the substance of national positions, but the voices of the other international organizations in the final approval process are absent.

---

35 See the FSB’s charter (Financial Stability Board 2009).
Macroprudential Orientation

As we argued in the previous section, an important failure of the precrisis framework for safeguarding global financial stability was that it was focused too heavily on microprudential regulation and supervision and not enough on assessing, monitoring, and resolving problems at the system-wide level. In our view, the macroprudential orientation of supervision and regulation should have two major focal points: (1) the impact of the aggregation of financial risks on the system as a whole, including externalities and cross-correlations of risks (that is, a focus on systemic risk); and (2) the impacts on the financial system as a whole of macroeconomic policies—monetary, fiscal, and financial.

The first focal point has a regulatory dimension, as well as an ongoing supervisory dimension. The regulatory dimension involves restructuring the regulatory system to improve the ex ante alignment of incentives and to minimize ex post any unwanted consequences such as moral hazard.\footnote{See the exposition in Hanson, Kashyap, and Stein (2010) in which the authors define the macroprudential approach to capital regulation as an “effort to control the social costs associated with excessive balance-sheet shrinkage on the part of multiple financial institutions hit with a common shock.”} The supervisory dimension involves the aggregation and calibration of the importance of risks across financial institutions or the financial sector as a whole. The second focal point requires assessing whether macroeconomic policies are encouraging or contributing to financial imbalances and systemic risks.

We would submit that when the FSF was established in 1999, and in the wake of the crisis of 2007–10, sufficient attention was not paid and is still not being paid, to this second focal point. The boldest evidence of this bias is, first, the lack of consensus on how monetary policy should deal with asset-price bubbles, and more broadly on the role of monetary (and more generally macroeconomic) policies in contributing to the conditions that caused and facilitated the recent crisis. Second is the widespread, but not universal, rejection of the view that aggregate quantities are relevant for assessments of systemic risk and financial stability, for example, the growth of aggregate credit (private and public) and off–balance sheet leverage.

Whatever one’s view about the role and definition of macroprudential concerns, going into the recent crisis the GFA, to a considerable degree, was intellectually and operationally oriented toward ensuring the safety and soundness of individual institutions and toward thinking that this would be sufficient to safeguard systemic financial stability.

This ineffective orientation need not have been so. One reason why the FSF was originally established was to provide a forum for national central bankers, supervisory and regulatory authorities, officials from SSBs, and finance ministry officials to discuss these matters at arm’s length—including with the international institutions.\footnote{Central bankers outnumber finance ministry officials on the FSB 27 to 17.} As originally envisaged by Hans Tietmeyer (1999, page 6) in his report to the G-7 finance ministers and central bank governors for the establishment of the FSF, one of the four early action areas for the FSF was “improving arrangements for surveillance of global vulnerabilities including the pooling of information available to the IFIs [important financial institutions] and the international regulatory groupings, the development and assessment of macro-early-warning indicators, and the creation of procedures to ensure that information reaches the relevant parties.”\footnote{The other three action areas were: (1) the coordination of the work of national and international regulatory groups; (2) assessing the need for the regulation of nonregulated entities (hedge funds and those operating out of offshore financial centers); and (3) encouraging the development and implementation of international best practices and standards.} The FSF did convene a vulnerabilities group—composed of key representatives from a small number of members with expertise in market surveillance and systemic risk assessment—in order to identify sources of risks and vulnerabilities so that the FSF could recommend remedial actions when and where necessary.

One possible reason why the FSF itself may have limited its attention to the macroeconomic policy aspects of macroprudential supervision is that central banks with some reasonable justifications tend to be reluctant to discuss or analyze their (monetary and macroprudential) policies in a forum that includes outsiders, including other central banks as well as supervisory authorities, finance ministries, and
other organizations. Out of the 36 seats at the FSF table initially, almost a third (11) were occupied by representatives of central banks or central bank institutions, such as the BIS, or central bank committees. The original intent of the FSF was and of the FSB is to expand these open discussions precisely to fill in gaps of information and analyses between central banks, supervisory authorities, and finance ministries. Thus, a continuation of this practice will most likely be self-defeating once again.

The FSF did address in its vulnerability discussions some of the aggregated aspects of macrofinancial imbalances and their implications for macroprudential policies, but with insufficient value added to head off the crisis. Much of the FSF’s attention was concentrated on financial institutions for which there was little available data and information (such as highly leveraged institutions and other types of nonbank financial institutions), international standards and codes, and of course the crisis of the day, such as Argentina or Turkey.

The charter of the FSB tries to redress this balance by more explicitly acknowledging a role for the FSB in macroprudential assessments in concert with the IMF. Three of the FSB’s assigned tasks can be interpreted as macroprudential in nature: assessment of vulnerabilities affecting the global financial system, monitoring and advising on market developments, and collaborating with the IMF to conduct early warning exercises (FSB 2009). It is unclear at this point whether this new FSB focus on macroprudential issues is oriented toward the aggregation aspects and away from the macroeconomic policy aspects as described above. We suspect that it is. We note that the FSB as initially reconstituted includes among its 69 initial members 27 (more than one-third) from central banks or their institutions.

Accountability and Transparency

As a coordination mechanism, the FSB in principle should be able, at least, to consider how to internalize many of the externalities that exist in global finance. One would hope that they would also be successful in formulating coordinated policy solutions that would actually internalize many of these externalities, for example to manage systemic risks in the global over-the-counter derivatives markets. Internalization of finance-related externalities can occur through information sharing, through the development of international standards, codes, and best practices, and through policy formulation and implementation. This is an essential process for promoting collective action with the objective of improving the ability to safeguard global financial stability.

Because the transparency of the FSB’s work is largely confined to the publication of its consensus reports and findings, much of what is learned in reaching a consensus cannot find its way into the public domain. The consultation documents of the SSBs do provide a bit more transparency. However, for the severe critics in the NGO and academic community, the SSBs are the regulators to which the regulated have privileged access with the result that accountability and transparency of their processes are inherently suspect and the FSB layer only adds the central bankers and representatives of finance ministries, which are no better in this regard.

There are three potential problems with this lack of transparency. The first two involve nonmember countries. First, while nonmember countries have direct access to all FSB website published reports and even some indirect access through the bodies that are FSB members, nonmembers, as discussed above, by-and-large do not see this as sufficient involvement in the formulation of the standards, codes, and best practices to which they are expected to adhere. This is one reason why the FSB was expanded to include the G-20 countries, but this may not be sufficient.

A second potential problem involving nonmembers is that nonmembers only get to see the work of the FSB that the SSBs decide to publicize. This is likely to continue to be confined to consensus documents. However, the process of reaching a consensus is itself an important part of the information flow; it is a learning process that takes place within committees and between national authorities with varying degrees of experience and through information and analyses sharing. Nonmember countries do

39 The other five identified tasks are: promotion of information exchange, promotion of regulatory best practices, reviews of the work of the international standard-setting bodies, guidelines for supervisory colleges, and contingency planning with respect to systemically important firms. (See box 2.)
not have the opportunity to share fully in this learning process of the dialogue, debate, and consensus-building process of FSB deliberations, meetings, and report researching and writing.

The third potential problem is with respect to the public at large. The issue is whether the FSB—because it is further removed from the political processes of the member governments—accentuates perceived structural problems at the national level. The insiders are the gatekeepers to influencing the regulatory process and the capacity of the guardians of the public interest in such matters is severely attenuated. The charter of the FSB does call upon it to “consult widely” not only among its members but also with other stakeholders identified as the private sector and nonmember authorities. Some observers are concerned about too much consultation with the former and too little with the latter. The ultimate governance over the FSB and its deliberations is exercised somewhat removed from governance at the national level by electorates, public-interest groupings—including affected industries—and more generally through public perceptions and opinion. It should be acknowledged that some regard this independence as a plus, but in individual societies striking the right balance between independence and accountability is not easy, and across societies it is even more challenging. The most limited standard tends to prevail.

**Implications for the Global Financial Architecture**

This section examines the implications of our preceding analysis of the institutions of the global financial architecture for the principal issues facing the global financial system. The IMF and FSB are different organizations with separate, but overlapping, mandates. Nevertheless, in the aftermath of the crisis, they have been asked to enhance their cooperation in key GFA reform areas. Thus, we first compare and contrast these two GFA-central institutions, and second we consider the extent to which they are positioned to address the six major issues coming out of the crisis of 2007–10 that we earlier identified.

**The Central Global Institutions**

The IMF and the FSB are the principal institutions of governance of the global financial architecture. The immediately preceding section reviewed the strengths and weaknesses of each institution individually, but it is useful to summarize that review via comparison.

By virtue of universal membership and representation the IMF is seen as having greater legitimacy (as we have defined that term) than the FSB. But the IMF still falls short of the ideal in the view of many observers. Although universal, the IMF currently faces its own challenges to adjust its representation with respect to voting shares and voices from chairs. European countries have a disproportionate share of the votes and voices at the IMF. They also have a disproportionate share of the voices at the FSB.40 One difference between the two organizations is that the IMF is dominated by the views of governments as articulated by more politically responsible finance ministries. In the FSB the views of independent central bankers and supervisors have substantially greater influence.

Turning to tools and instruments, the IMF has a limited set of policy tools in its lending, surveillance, research, and technical assistance activities. The FSB is principally a coordinating body with few tools aside from its own nascent peer-review processes, which potentially are in conflict with those of the IMF itself.

On compliance and leverage, the FSB is a voluntary organization and compliance with its decisions and recommendations depends on the independent actions of its member countries and nonmember countries. As noted, the FSB is experimenting with a peer-review process applied to its own members, and has been mandated by the G-20 to conduct a review of the supervisory policies of nonmembers. This could lead to some degree of naming and shaming and subsequent response by both members and nonmembers. Its predecessor, the FSF, did some of this; however, the subsequent reliance on IMF assessments of offshore financial centers because of that institution’s greater resources and legitimacy failed to generate meaningfully differentiated assessments. The IMF, for its part, has some—but is not overly well endowed with—leverage, in particular over its largest members. The principal

---

40 Voices may be more important in the FSB given that it reaches decisions entirely via consensus.
instruments are its lending programs, its surveillance activities, which may be more credible than those of the FSB, and its large professional staff. The IMF, as well as the World Bank, has an internal governance structure that provides scope for the expression of independent staff views.

The IMF, along with the World Bank for developing countries, disseminates and evaluates compliance with international standards, codes, and best practices in each of its member countries. In principle, it is positioned in the future to assume a greater (still informal) financial regulatory role in both its country and multilateral surveillance work and in joint IMF/World Bank/FSB efforts in financial-sector surveillance not only for the FSB member countries but for the universal membership of the IMF. At present, the IMF has a critical shortage of the relevant staff expertise to conduct this work effectively on its own and must draw on independent experts and at times member countries’ government experts.

The macroprudential orientation of the IMF is greater than that of the FSB by dint of its broader remit and more extensive experience on macroeconomic issues. The IMF and the FSB have been called upon by the G-20 to enhance their cooperation in conducting early warning exercises. This is a ramping up of the vulnerabilities exercises that the FSF was asked to coordinate when it was first established. The crisis revealed that neither the IMF nor the FSF individually or collectively were able to provide much value-added via their vulnerabilities, early warning, and surveillance activities. We think this judgment of low value-added is justified by the lack of success in providing the kind of consistent and credible risk and vulnerability assessments that would move policymakers to action to prevent or at least lessen the impact of potential systemic events and ultimately the global financial crisis.

Going forward, a key challenge is whether the new early-warning systems will be more effective. The G-20 countries—as members of the IMF—already are subject to the IMF’s annual bilateral surveillance and its global financial system surveillance conducted twice annually and published in its Global Financial Stability Report. In addition, the World Economic Outlook of the Fund also often delves into the risks to the global economy emanating from global financial imbalances and market pressures. The G-20 countries influence the work program of the IMF through their role in the governance of the institution.

What more can the FSB add to the work of the IMF management, staff, and executive board? One answer might be that the FSB has more of a comparative advantage in the aggregation dimension of macroprudential supervision, and the IMF might have a comparative advantage on the macroeconomic policy dimension. However, that division of labor is complicated by the fact that central banks essentially are not and do not want to be engaged with the Fund, and are more engaged with the FSB even though they may be reluctant in any institutional context to consider the global impact of their monetary policies on financial stability. In the end, it is not appropriate to view the exercise of the traditional tools of monetary policy (interest rates) as separate from the use of other so-called macroprudential tools because monetary policy affects the financial system and financial system supervision—regulation in particular—and adjustments to that supervision and regulation to achieve financial stability, affect the performance of the macroeconomy.\footnote{On the effects of central bank monetary policy on the stability of the financial system see Giavazzi and Giovannini (2010).}

Finally, with respect to accountability and transparency, neither the IMF nor the FSB is exempt from criticism. Nevertheless, the edge goes to the IMF in part because of the breadth of its membership and the more avenues it has to open up to the general public. The FSB is a more closed club of supervisors, central bankers, and selected finance ministry officials.\footnote{An examination of the websites of each organization provides the basis for our evaluation of their relative transparency.}

\textbf{The IMF, the FSB, and the Principal GFS Issues}

In the wake of the 2007–10 crisis, the substance and modalities of IMF collaboration with the FSB and vice versa are not fully established. For the general public the operative framework is contained in a joint letter from IMF Managing Director Dominique Strauss-Kahn and FSB Chairman Mario Draghi dated
November 13, 2008 and addressed to the G-20 finance ministers and central bank governors (Strauss-Kahn and Draghi 2008). Note that the letter predates the transformation of the FSF into the FSB and specifies the respective roles of the IMF and the FSF:

1. Surveillance of the global financial system is the responsibility of the IMF.
2. Elaboration of international financial sector supervisory and regulatory policies and standards, and coordination across the various standard-setting bodies, is the principal task of the FSF. The IMF participates in this work and provides relevant inputs as a member of the FSF.
3. Implementation of policies in the financial sector is the responsibility of national authorities, who are accountable to national legislatures and governments. The IMF assesses authorities’ implementation of such policies through FSAPs, ROSCs and Article IVs.
4. The IMF and the FSF will cooperate in conducting early warning exercises. The IMF assesses macrofinancial risks and systemic vulnerabilities. The FSF assesses financial system vulnerabilities, drawing on the analyses of its member bodies, including the IMF. Where appropriate, the IMF and FSF may provide joint risk assessments and mitigation reports.

The letter concludes “Our shared goal is to strengthen the international financial system. To that end, the IMF and the FSF stand ready to support the work of the G-20.”

A few points are notable about this document. First, the letter is oriented toward the work of the G-20 finance ministers and central bank governors in the precrisis context rather than toward the G-20 leaders to which the FSB is formally responsible, in the postcrisis environment of a substantially transformed landscape of regulation. Second, the letter acknowledges that, as previously, the IMF has a role to play with respect to the setting of standards, for example drawing on the analyses and experience of IMF staff and drawing up certain standards such as with respect to data reporting. Third, although the IMF was assigned responsibility with the World Bank in the late 1990s for assessment of the implementation by national authorities of regulatory policies and standards, subsequently the FSB has assumed a portion of that role vis-à-vis the G-20 countries themselves as well as nonmembers. A relevant question is: Although the FSB secretariat has a capable, professional staff, does it have the kind of human capital—both in expertise and scale—to add value to the Fund’s and, in the case of FSAPS and ROSCs, also the World Bank’s resources and efforts in these areas? Notably, neither the IMF nor the Bank has sufficient in-house expertise and resources, and there remains the challenge of ensuring the arms-length independence of the resources that they hire temporarily from member countries. Some of this risk that the examined are also the examiners can be mitigated through the careful selection and allocation of “borrowed” resources, but the risk remains. This is less true of the Fund and Bank reviews of policies. In his criticism of the FSB-IMF relationship on this point, Fischer (2009) observes that the collegial nature of the FSB may limit a frank exchange of views and peer reviews may take the form of nonaggression pacts. In the IMF institutional context, a more independent staff and management increases the probability that sensitive issues at least will be raised.

How might this IMF-FSB framework apply to the six areas we earlier identified as particularly relevant for considering reforms of the global financial architecture?

Regulatory Requirements for Capital, Liquidity, and Leverage and the Potential Benefits/Costs of “Systemic-Risk” Taxes

The FSB and the SSBs would be expected to take the lead in the area of capital liquidity and leverage requirements, and they have largely done so. But the reality is somewhat more complex given the existing architecture for consensus building.

The current structure has the FSB reporting through the G-20 finance ministers and central bank governors to the G-20 leaders on capital, liquidity, and leverage for banks at their upcoming summit in Seoul, South Korea. Our understanding is that there is a continuous flow between the BCBS and the FSB
on banking regulations and standards.\textsuperscript{43} Finance ministries that have a role in financial regulation and policies also exert direct influence over decisions. As one might expect, ministries tend to reflect the political pressures on reform efforts against the backdrop of still-recovering financial institutions and systems. These pressures tend to call for a delay in implementation, if not the watering down, of capital, liquidity, and leverage requirements. G-20 leaders have also been involved, but as the Toronto summit revealed there are contrasting views on both capital and liquidity requirements and so a lack of consensus exists at the head-of-state level. Some argue that greater independence from political influences produces better regulations; others would argue that the regulations will be watered down via the influence of banks on finance ministries and regulators.\textsuperscript{44} Moreover, this reality may not sit well with the non-G-20 countries that presumably will be expected to apply these new banking standards to their internationally active institutions. Once endorsed by the G-20 leaders, the voluntary nature of such standards is more difficult to maintain. They will be incorporated directly and indirectly into IMF/World Bank reviews of all countries without the consent of most of them. The FSB in effect uses the IMF for leverage.

The G-20 leaders requested the advice of the IMF on the related issue of the costs and benefits of “systemic-risk” taxes. As noted earlier, the G-20 leaders appear to have rejected the uniform application of the IMF’s advice from the management and staff (IMF 2010a), which proposed two taxes: (1) a financial stability contribution to cover the fiscal costs of any future crises; and (2) a financial activities tax on the profits and remuneration of financial institutions, which would flow to the general revenues to cover the wider costs of such crises and limit distortions that favor excessive size and risk taking by financial institutions. This example illustrates that the FSB is not solely responsible for proposals affecting the financial system and that the IMF has relevant expertise as well.\textsuperscript{45}

Another question is the role that the FSB play in this process as a coordinating body. Member countries are undertaking reform efforts and expending political capital at home while implementing national policies aimed at national objectives. They may not align national efforts with agreements and understandings reached in the FSB. Europeans have criticized the US Dodd-Frank legislation in this regard and the United States has been critical of some European thinking and initiatives. This tends to undermine the FSB’s effectiveness.

\textit{Perimeters or Boundaries of Financial Regulation, Supervision, and Infrastructures}

It would be natural to think that the countries that are members of the FSB should take the lead in this area, and therefore the FSB itself. However, even more so than with the area previously discussed, this topic involves primarily only a few key jurisdictions. Even the FSB may be too large a group to reach agreement, for example, on the appropriate degree of regulation and surveillance of hedge funds. On the other hand, when it comes to infrastructures, the interests of a very broad group of countries are potentially involved, and the FSB may be too small a group to command full acceptance and compliance. This suggests a potentially important role for the IMF.

\textit{Regulation and Surveillance of Global Money and Financial Markets}

When it comes to the regulation and surveillance of global money and financial markets, in particular OTC derivatives markets, the arguments advanced with respect to the regulatory and supervisory perimeter hold with even greater force. While it is natural to think that representatives from the major markets serving on the FSB should take the lead in this area, they also have their own axes to grind and turf to defend. It is not clear that their interests coincide with those of all participants in the global financial system. Thus, there is a role for the IMF in representing those less parochial and global interests

\textsuperscript{43} The IMF is also involved because it has had “observer” status in the BCBS since mid-2009.
\textsuperscript{44} See Murphy and Jenkins’ (2010) take on what has already been agreed by the BCBS and endorsed by its oversight body, “the principles outlined . . . contained far-reaching concessions.”
\textsuperscript{45} In April 2009, the G-20 leaders requested a joint IMF-FSB-BCBS report to the G-20 ministers and governors on the identification of SIFIs (FSB 2010).
as well as to provide a perspective from outside a closed circle to help to align incentives and help to internalize externalities.

Systemically Important Financial Institutions or the TBTF Problem
This area is one that involves the interests of the global financial system to a greater degree even than the two previous areas. Although it is natural that agreements would first be reached in the context of the FSB and the SSBs about how to treat SIFIs in life, near death, or in death, the consequences of countries’ mistreatment or their clumsy treatment, as witnessed in the case of the Lehman and Fortis bankruptcies can affect many jurisdictions and creditors. In particular, if the global financial system is not to degenerate into one in which most financial institutions are heavily ring-fenced, as favored by many, or in which the authorities try, and more likely fail, to ring-fence them, global standards are needed.46

Crisis Management, Rescue, and Resolution
The IMF is the preeminent international organization for country crisis management and country economic and financial rescues. That status has been enhanced in the crisis of 2007–10 by the fact that European countries that many thought were not or should not be in need of such rescue operations ended up needing the Fund’s not-so-tender ministrations.

On the other hand, crisis management blends into crisis prevention both in anticipating crises and in learning lessons from them. It follows that the IMF alone cannot be held responsible. In particular, where frameworks need to be put in place to facilitate the rescue of institutions or their resolution, the IMF can prod the individual national authorities, but those authorities must collaborate in advance to set up the appropriate procedures. A forum such as the FSB is broadly appropriate to help to establish such understandings.

Effective Management of Volatile Capital Flows
As with crisis management, the IMF is the natural locus of decision making with respect to establishing a framework for the more effective management of volatile capital flows. If as a consequence of lessons learned from the crisis of 2007–10 the IMF is to become more of an international lender of last resort than it has been in the past, as some have proposed in the form of global financial safety net, should the Fund have a more enhanced role in regulation? One of the arguments for such a role is that it would help to deal with the moral hazard issues associated with lender-of-last-resort activities by linking the availability of financing more directly to prior supervision or surveillance.47

Alternatively, is it sufficient for the Fund to play a role in other international bodies, such as the FSB, that have the mandate to reach agreements on the principles and standards to be applied in supervision and regulation? Similarly, is it sufficient for the IMF to share responsibility with respect to early warning systems? Whether responsibility for early warning systems is shared or not, the relevant concern is not with who issues the warnings but whether the authorities take action in response to those warnings (Fischer 2009 and Schinasi 2009b).

From another perspective, how can the FSB best add value to work in this area without duplicating the efforts of the IMF and, perhaps, even affect perceptions of the IMF’s legitimacy? For example, with the new enhanced role of the FSB (as a creature of the more political G-20) in rule making and the associated closer scrutiny of the IMF’s work in this area, non-G-20 members of the IMF may come to question the IMF’s role and importantly its capacity to serve the interests of its non-G-20 as well as G-20 members.

---

46 The question is whether the FSB acting alone can deliver those standards or whether a more representative group should be involved. It should be noted that the IMF staff has opined on this topic (IMF 2010c and Kodres and Narian 2010). Rottier and Véron (2010) emphasize the growing risk of fragmentation in the global financial system.

47 For more on this line of argumentation see Truman (2010b).
Conclusions and Recommendations

Our broad conclusion is that the structural financial weaknesses revealed by the global crisis require further reforms of the global financial architecture if future crises are to be managed and resolved more cost effectively, both in terms of preserving the efficiency gains of global modern finance and in terms of taxpayer monies. First and foremost, reforms are required at national levels. However, to maximize the probability that these reforms contribute to greater stability of the global financial system and are implemented consistently, the financial-stability roles of the relevant international institutions, the IMF and FSB in particular, should be enhanced individually and collectively. More specifically, the IMF and the FSB must cooperate and collaborate as closely as possible on the reform and operation of the global financial system in order to achieve their mandated objectives that overlap in many areas.

Our assessment is that the global financial architecture will not soon include a global financial regulator that is empowered to replace or even substantially influence sovereign supervision and regulatory decisions. In particular, as currently constituted and situated, the FSB is not positioned to become the fourth pillar of global economic governance as was suggested by US Treasury Secretary Geithner. It has been called upon to cooperate with the IMF and vice versa, and the collaboration should be mutually reinforcing, drawing on the respective strengths of the two institutions. By cooperating with the IMF, the FSB may enhance its accountability and transparency to stakeholders in the global financial system. By cooperating with the FSB, the IMF may gain greater trust from central bankers and supervisory and regulatory authorities and in the process enhance its leverage with these policymaking organizations.

Is there a case to be made for greater separation between the IMF and the FSB because they have different, if overlapping, mandates? Is there a concern that forcing more collaboration between the two institutions will reduce accountability? The answer is yes to both questions. However, our view is that the crisis has increased the pressure on both institutions to add more value in the financial-stability sphere both individually and collectively, as mandated by the G-20. Moreover, the business-as-usual model with its associated jealousies and turf battles will not meet the needs of the global financial system going forward.

The IMF and the FSB are different institutions, but their financial sector–stability operations and activities should be more closely aligned. The overall objective should be to tie the IMF and the FSB closer together rather than to allow them to compete, to remain distant, and to engage in turf wars.

Given the GFS reform challenges, the IMF must focus on macroeconomic and macrofinancial stability, the linkages between them, and the implications of macroeconomic policies for the stability of the global financial system. For its part, the FSB must focus its efforts on sponsoring the adoption of new international supervisory and regulatory standards that improve the ability to assess, monitor, and hopefully maintain systemic financial stability in addition to the safety and soundness of financial institutions. As noted earlier, this challenge is especially pressing in the major financial centers where the crisis revealed key weaknesses in the supervisory and regulatory architectures. Accordingly, the major onus is on the major financial centers, working through and with the FSB, to develop and implement more effective supervisory and regulatory frameworks, standards, codes, and best practices. In addition, it is an important responsibility of the FSB—even if it is not explicitly mandated—to facilitate the coordination of reforms among the country membership to the benefit of global stability in areas where unilateral actions are unlikely to be effective in safeguarding global stability.

In this regard, international standards and best practices that are likely to have the highest payoff are in the following areas:

- capital, liquidity, and leverage standards of financial institutions;
- resolution of complex cross-border financial institutions;
- rescues of such financial institutions short of their resolution; and
- determination of whether a financial institution, market, or instrument is systemically important.
However, these focal points clearly interact and overlap. In both institutions, the need is to try to affect national policies and priorities. In general, reform efforts should be aimed at improving the ability to foresee and prevent future crises and to resolve the next one when it occurs.

To mitigate the dominance of national priorities in the FSB’s work, we recommend that the international organizations that are members of the FSB—the IMF in particular—should be empowered and emboldened to facilitate the dialogue between member countries so that national reform efforts and policies focus on global externalities and priorities. This was the original intent of the IMF’s multilateral consultation exercise on global imbalances in 2007–10 involving China and the United States along with the euro area, Japan, and Saudi Arabia. Perhaps the IMF can play this role in the financial-stability sphere within the context of the FSB’s discussions.48

The challenge of managing volatile capital flows provides the scope and opportunity for a bargain between historically dominant countries and the emerging-market countries for the greater involvement of the emerging countries, including the macroeconomic, regulatory, and financing aspects of this challenge. As is now better understood, both micro- and macroprudential policies can help to manage the risks associated with volatile capital flows and in so doing allow countries to rely less on costly self-insurance in the form of high levels of international reserves. This topic should be on the agenda of the FSB—initially it was on the agenda of the FSF—as well as that of the IMF.

In this regard, both the IMF and FSB need to address institutional representation issues per se. For example, prior to the crisis and the recent reform efforts, Europe (including Switzerland) and the United States played dominant roles relative to all other country groups. With the emergence of volatile capital flows and new major players (among them several emerging-market countries and smaller financial centers—such as Hong Kong, Special Administrative Region [SAR] and Singapore), there is a need to rebalance the influence structure toward more inclusiveness and representation on relevant issues and policy challenges without compromising standards.

The need for such institutional governance reform is overwhelming in the case of the IMF, which, as an older institution, has ossified for a longer period. In the case of the FSB, its governance structure should in due course be streamlined, for example, by dramatically consolidating European representation, building on a consolidation of European representation on the IMF executive board and in other governance bodies such as the IMFC. That desirable step within the FSB also will require greater consolidation of the European financial regulatory and supervisory structure than is likely to result immediately from the recent crisis—notwithstanding the European progress that has already been achieved.

It may ultimately be desirable to move within the FSB to a constituency system, but that would have to wait for the adoption of such a system within the G-20 leaders and finance ministers and central bank governors groups. We do not think that this is the most urgent issue facing the G-20 groups today.

Short of expanding its membership, a key issue for the FSB is to engage effectively the large number of nonmember countries and persuade them to adopt the standards the SSBs develop and the FSB proselytizes. To open its doors more, deliberations of the FSB should be routinely publicized, including on the issues where it cannot reach a consensus and why. As we understand is intended, the FSB should resume regional meetings with regulators from nonmember countries and routinely provide them with information on the agenda for FSB meetings, papers, and outcomes. This would improve the ability of nonmember countries to learn and benefit from the work of the FSB that does not get published because it is in areas where consensus cannot be attained.

The IMF, similarly, is less open about deliberations of its executive board than it can and should be. The internal debates at the executive board level are obscured, for example, by incomplete

---

48 This kind of arrangement need not apply in all cases; for example, the key players on some issues may include only a small set of countries, and it is not clear that the presence or active engagement of a mediator or facilitator would advance the process. Recall that the Basel I capital standard was built on a bilateral agreement between the US and UK authorities after the Basel Committee on Banking Supervision demonstrated its inability to come to grips with the issue.
concluding-remarks references to country positions of “a few,” “some,” or “many” directors and many documents are not released until decisions have been made, for example, on quota realignments.

The balance of roles for the authorities of their respective memberships within the IMF and FSB should be addressed. Within the IMF, the global crisis has had implications for the roles of central banks vis-à-vis finance ministries. The IMF, in particular, must engage more with central banks and vice versa because of the now more widely acknowledged close interlinkages and policy challenges in simultaneously achieving and safeguarding both macroeconomic and financial stability. As the global crisis demonstrated, a slavish defense of central bank independence in the narrow pursuit of (for example) price stability, or of macroeconomic stability, can become inconsistent analytically and institutionally with the need to rely on macroeconomic tools to restore or to pursue financial stability. Naturally, the extent of inconsistencies will depend on the specific mandate(s) of a particular central bank, but are most likely to become critical soon enough for central banks with mandates focused exclusively, or overriding, on price stability. Contrary to its past practice, the IMF management and staff should exploit the FSB to engage with central bankers collectively on these issues because it has no other regular forum in which to do so.

To tie the FSB and IMF closer together in recognition of their overlapping missions and mandates, we recommend a formalization of the current de facto practice of the FSB reporting to the IMF’s International Monetary and Financial Committee (IMFC) in addition to the G-20 ministers and governors and G-20 leaders. This would help defuse concerns about FSB legitimacy. We also recommend that strong consideration should also be given to provide the IMF with the “authority” to call on the FSB, perhaps through the IMFC, to consider certain issues and to report back—just as the G-20, and implicitly the FSB, now call on the IMF to consider and deliver on certain issues.

To enable the IMF to provide more effective surveillance over national financial systems and the global system, the Fund needs more in-house expertise and resources in relevant areas. We also favor increasing the resources available to the FSB secretariat to fortify its own permanent professional staff. Short of this, resources should be added to the secretariat on the current seconded basis so that it has the capability to contribute to the FSB’s efforts with its own analytical work in core areas. We think the risk of duplicating the IMF’s staff work is worth taking. Consideration should also be given by both the IMF and the FSB to the active, continuous use of panels of independent experts to review the work of the institutions as it evolves in the period ahead. This would help to address the perceived problem of capture of regulatory and supervisory authorities and institutions.

A longer-term option is to consider placing the FSB secretariat under the auspices of the IMF. This would require a clear set of understandings, for example about how the G-20, IMF executive board, and G-20 FSB representatives interact and are governed. In addition, there would also need to be guidance and understandings on the extent to which the FSB could draw upon the Fund’s human capital for FSB work beyond the Fund’s own contributions to FSB work as an FSB member.

The FSB should adopt the practice of dual chairs for its standing committees and working groups, including one chair from one of the advanced countries and one chair from other members. Care should be taken not to perpetuate such a system indefinitely because it cuts against broader globalization trends in which all countries are treated the same, but for the next 5 to 10 years it would be desirable.

Within the institutions and country groups that make up the GFA, substantive policy challenges often condition international policymaking, coordination, and governance. For example, the European Union and United States both desire reforms in areas that require international or global consensus and agreement to be effective and to achieve a level playing field such as the cross-border supervision and resolution of systemically important financial institutions and the OTC derivatives markets. At the same time, because of financial globalization, without greater global coordination facilitated by the IMF and

---

49 We join de Larosière (2009, page 61) in this recommendation with respect to the FSB’s predecessor the FSF.

50 The IMF’s new income model, relying less on charges on loans because of the availability of income from investments on the profits from gold sales, should lessen these concerns somewhat. The Fund will be better positioned to produce a wider array of public goods.
FSB working together, it is unlikely the European Union and the United States will be able to achieve desired reforms in many areas.

The only way to achieve the potential benefits of collective action is to establish the conditions for closely coordinated policy development and implementation. This may require significantly more give and take among countries than is now extant as well as strengthened roles for both the IMF and the FSB within the global financial architecture. Such a reorientation would endeavor collectively and equitably to create, manage, and capture the benefits of global public goods for the global financial system. International and global collective action to safeguard financial stability has to flow from a shared interest in the objective of financial stability.

Table 1 IMF and FSB policy focus, tools, and governance.

<table>
<thead>
<tr>
<th>Policy focus</th>
<th>International Monetary Fund</th>
<th>Financial Stability Board</th>
</tr>
</thead>
</table>
|                                                  | • Exchange-rate-system and balance-of-payments equilibrium  
• Member-country macroeconomic and financial stability  
• Global economic and financial stability                                                                                                                   | • International standards and best practices for financial regulation and supervision  
• Global financial stability                                                                                                                                     |
| Tools                                            | • Financing facilities for balance-of-payments needs  
• Bilateral and multilateral surveillance  
• Technical assistance                                                                                                                                             | • Identification/assessment of sources of global financial vulnerabilities  
• Facilitate development of remedial policies to safeguard/restore stability  
• Facilitate coordination of member-country financial-system policies                                                                                           |
| Internal governance structures                   | • **Board of Governors** consisting of one governor and alternate for each of the 187 member countries (usually the finance minister or central bank governor)  
• **Executive Board** in continuous session  
• **IMF Management and Staff**  
• **International Monetary and Financial Committee**  
• **Development Committee**                                                                                                                                 | • **Plenary**, comprised of G-20 central bank governors or deputies, heads or deputies of main supervisory/regulatory agency, and deputy finance ministers; and high-level representatives of SSBs, central bank committees, IMF, WB, BIS, and OECD  
• **Steering Committee** selected by plenary  
• **Chairperson**  
• **Secretariat** drawn from members                                                                                                                        |
| Accountability                                   | • Member-country governments                                                                                                                                                                                                  | • G-20 heads of state                                                                                                                                              |

Source: IMF and FSB Websites.
<table>
<thead>
<tr>
<th>Lines of defense</th>
<th>Global financial institutions</th>
<th>Global markets</th>
<th>Unregulated financial activities</th>
<th>Economic and financial-stability policy mistakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market discipline and transparency</td>
<td>Partial</td>
<td>Primarily</td>
<td>Exclusively</td>
<td>Committee structures; peer pressure; lack of clarity and transparency</td>
</tr>
<tr>
<td>Financial regulation</td>
<td>National orientation with international cooperation on capital requirements</td>
<td>No formal regulation</td>
<td>No regulation</td>
<td>No explicit framework and ineffective coordination and cooperation</td>
</tr>
<tr>
<td>Microprudential supervision</td>
<td>National orientation with cooperation on best practices via Basel process</td>
<td>Not applicable</td>
<td>No supervision</td>
<td>International cooperation proved inadequate to supervise systemically important financial institutions</td>
</tr>
<tr>
<td>Crises management and resolution</td>
<td>National legislation and orientation</td>
<td>National orientation with some central bank cooperation and coordination</td>
<td>No framework</td>
<td>No framework and ineffective cooperation and coordination</td>
</tr>
</tbody>
</table>

*Source:* Adapted from Schinasi (2007 and 2009a).
<table>
<thead>
<tr>
<th>Representation</th>
<th>FSF</th>
<th>FSB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial membership</strong></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Canada</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Italy</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Japan</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IMF</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>WB</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>BIS</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>OECD</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BCBS</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>IOSCO</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>IAIS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GCFS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CPSS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ECB</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Added to FSF in 1999</strong></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Added to FSF in 2002</strong></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>IASB</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Added to FSF in 2007</strong></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Added to FSB in 2009</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>South Korea</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>European Commission</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*Source:* FSF and FSB websites.
The FSB was established in April 2009 as the successor to the Financial Stability Forum (FSF).

The FSF was founded in 1999 by the G-7 Finance Ministers and Central Bank Governors following recommendations by Hans Tietmeyer, President of the Deutsche Bundesbank. G-7 Ministers and Governors had commissioned Dr. Tietmeyer to recommend new structures for enhancing cooperation among the various national and international supervisory bodies and international financial institutions so as to promote stability in the international financial system. He called for the creation of a Financial Stability Forum.

G-7 Ministers and Governors endorsed the creation of the FSF at a meeting in Bonn in February 1999. The FSF would bring together:

- national authorities responsible for financial stability in significant international financial centers, namely treasuries, central banks, and supervisory agencies;
- sector-specific international groupings of regulators and supervisors engaged in developing standards and codes of good practice; international financial institutions charged with surveillance of domestic and international financial systems and monitoring and fostering implementation of standards; and
- committees of central bank experts concerned with market infrastructure and functioning.

The FSF was first convened in April 1999 in Washington.

In November 2008, the leaders of the G-20 countries called for a larger membership of the FSF. A broad consensus emerged in the following months toward placing the FSF on stronger institutional ground with an expanded membership—to strengthen its effectiveness as a mechanism for national authorities, standard-setting bodies, and international financial institutions to address vulnerabilities and to develop and implement strong regulatory, supervisory, and other policies in the interest of financial stability.

As announced in the G-20 Leaders’ Summit of April 2009, the expanded FSF was reestablished as the Financial Stability Board (FSB) with a broadened mandate to promote financial stability.

Source: http://www.financialstabilityboard.org/about/history.htm.
Box 2 Mandate of the Financial Stability Board

The mandate of the FSB is to:

- assess vulnerabilities affecting the financial system and identify and oversee action needed to address them;
- promote coordination and information exchange among authorities responsible for financial stability;
- monitor and advise on market developments and their implications for regulatory policy;
- advise on and monitor best practice in meeting regulatory standards;
- undertake joint strategic reviews of the policy development work of the international standard-setting bodies to ensure their work is timely, coordinated, focused on priorities, and addressing gaps;
- set guidelines for and support the establishment of supervisory colleges;
- support contingency planning for cross-border crisis management, particularly with respect to systemically important firms; and
- collaborate with the IMF to conduct early warning exercises.

As obligations of membership, members of the FSB commit to pursue the maintenance of financial stability, maintain the openness and transparency of the financial sector, implement international financial standards (including the 12 key International Standards and Codes), and agree to undergo periodic peer reviews, using among other evidence IMF/World Bank public Financial Sector Assessment Program reports.

The FSB, working through its members, seeks to give momentum to a broad-based multilateral agenda for strengthening financial systems and the stability of international financial markets. The necessary changes are enacted by the relevant national financial authorities.

Source: http://www.financialstabilityboard.org/about/mandate.htm.
According to the FSB’s charter, the FSB chair:

- is appointed by the plenary from members for a term of three years;
- shall have recognized expertise and standing in the international financial policy arena;
- convenes and chairs the meetings of the plenary and of the Steering Committee;
- oversees the secretariat;
- is the principal spokesperson for the FSB and represents the FSB externally;
- shall be informed of all significant matters that concern the FSB;
- more generally, shall make all decisions and act as necessary to achieve the objectives of the FSB in accordance with the directions given by the plenary; and
- in the discharge of the functions as the chair, shall owe the duty entirely to the FSB and to no other authorities or institutions.

Box 4 Role of the FSB secretariat

As stated in Article 15 of the FSB’s charter:

(1) The secretariat shall be directed by the secretary general.

(2) The secretary general shall be appointed by the plenary at the proposal of the chair.

(3) The secretary general shall be under the responsibility, and shall act in accordance with the instructions, of the chair. The chair is responsible for providing general direction to the secretary general, in accordance with any directions given by the plenary.

(4) In appointing the secretariat staff, the secretary general shall, subject to the importance of securing the highest standards of efficiency and technical competence, pay due regard to the importance of a balanced composition in terms of geographic regions and institutional functions.

(5) The secretary general and the secretariat staff, in the discharge of their functions, shall owe their duty entirely to the FSB and to no other authorities or institutions.

(6) The main responsibilities of the secretariat shall be the following:

   (a) to support the activities of the FSB, including its standing committees and working groups;

   (b) to facilitate cooperation between members and between the FSB and other institutions;

   (c) to ensure efficient communication to members and others;

   (d) to manage the financial, material, and human resources allocated to the FSB (including the appointment of staff who may be seconded by members);

   (e) to maintain the records, administer the website, and deal with the correspondence of the FSB; and

   (f) to carry out all other functions that are assigned by the chair or the plenary.

(7) The secretariat shall be located in Basel at the BIS.

References


Jörg Asmussen: Fred, and ladies and gentlemen, thank you very much for inviting me at the Peterson Institute to discuss the paper that Ted and Garry have presented. I’m pleased to comment on this even if I may say that I would not subscribe to anything that is written there, let’s say not on all aspects on the FSB work and not especially what is written there on part three.

I think the paper has two relatively distinct parts which were then put together at the conclusion. First, the pillar of strength in financial market regulation, and second you have the question how you boost the effectiveness and the efficiency of the international financial institutions. And yes, I think it’s clear that these two elements will at the end reinforce each other and we’re on our way to do this. I think it’s clear on this paper, it’s pretty outspoken, that no doubt the recent financial crisis has revealed major deficiencies in the global financial architecture. First, yes, market incentives were not always conducive to safeguarding financial stability. To the contrary, we had moral hazard, we had conflict of interests, asymmetric information; all this contributed to the buildup of unsustainable positions at the individual level and at the systemwide imbalances.

Second, yes, supervision and regulation of financial markets proved to be insufficient and some major segments were completely left out or pieces of information were not effectively put together. This relates very much to the off balance sheets. Just a few years, I think in 2006 or ’07 the off–balance sheet activities of the Citibank or Citigroup were larger than their own balance sheet activities. There’s the whole question of the nonbanks.

But thirdly, international institutions didn’t succeed either in correctly identifying financial markets, their own abilities or, if so, they didn’t make themselves heard and initiated countermeasures by relevant authorities.

On financial regulation, to take the first part of the paper, I think you mentioned six areas which are, yes, at the core of this effort in expanding the scope of supervision and regulation. In Pittsburgh, we agreed to include all financial institutions markets and instruments. In the line of incentives, in increasing transparencies, and in strengthening buffers, and one should be clear we have made considerable progress already. But of course, yes, much more needs to be done.

Many countries have implemented more long–oriented compensation practices. We are on the way to build expanding in Europe in increasing the transparency of derivative markets by standardization and central clearing. And I think the recent agreement in the Basel Committee on banking supervision on new capital standards was a major step forward. And I would disagree, it was said that the quality of capital was weakened. I think the opposite effectively took place. But we have, without any question, to first advance our reform agenda. And I think the next G-20 summit in Seoul at the end of November—we have, let’s say a major issue to deal with the SIFIs, maybe concentrate on the issue of what we call globally, systemically financial important institutions. That means at first banks, but it also could mean at a later step because more intellectual work has to do here, insurance companies; that means nonbanks. And so we have again the question of OTC derivatives. There will be an FSB report on how to reduce the reliance on the years of external ratings in supervisory affairs. So I think we still have a lot to do on the reform agenda and still will be a right step forward here.

And then it’s very much about implementation, which is done at the national level of countries and in Europe mainly at the community level of the European Union. And here it’s a key question if and when, for example, the US will implement the rules and regulations of Basel III.
When it comes to the institutions, the paper focuses on two: the IMF and the FSB. Yes, they have to play a major role in helping to safeguard the financial system, and they have mandates that are designed to complement each other. It’s well described in the paper, what is the responsibility of the fund and what is the responsibility of the FSB. I can agree but I think a very good example of the working together that has improved every six months is the early warning exercise that both institutions do together. We will have this evening again.

On the governance—yes, legitimacy is the focal point for any international institution and countries have to be adequately represented in the organization in the decision-making process. But it has to go hand in hand with a clear commitment and the commitment, let’s say, for the Fund means all to participate in financing these institution and its activities.

I think starting with the FSB, a major step forward was one and a half years ago as a clear result of the crisis to expand the membership of FSB to all G-20 countries. I think that was very, very important to make the FSB more inclusive and have a broader picture in the debate and the decision making on financial market issues. And I think it is positive and the papers—I have the impression it is slightly negative that at the FSB, most members are represented by their central bank, their supervisory agency and their treasury. I think that is the most valuable tool of the FSB composition that we have these three institutions or these three points of views combined in one meeting. I think that is—compared to many other groups, it’s a meeting that has the most valuable effect of the FSB. You have a cross country, cross sector and cross institutional approach, and this is the major strength of the FSB.

I know Mario has elaborated in his speech about the outreach activities of the FSB with the nonmember countries. This is key to extend this in the future. We are dealing already with the issue of capital flows, but that will need high attention in the future. What I’m not agreed upon is, let’s say especially in page 48 of the paper that the FSB—or let’s say that the fund can call on the FSB, that it can task the FSB. There is a kind of superiority in the organization which I think is not helpful when it comes to the task. And what Ted said “in square brackets” that at the end, the FSB should be integrated into the IMF. I think the FSB has to play its own role in, as I said, specific composition. It is more flexible than the fund. It can quicker adapt because it’s not such a formal institution as the IMF is. Yes, there is always a kind of tension between efficiency on one side and legitimacy on the other side. But I think the FSB is now with full G-20 membership and its outreach activities has very good balance found here.

I will come to the end on the IMF governance reforms, which are ongoing for very good reasons. We have agreed at the Pittsburgh summit to deliver results until the end of this year. I think we are making progress here on this issue at the annual meeting, but we probably would need more time to finalize the results. Changes should reflect the changing role of member countries in the world economy. The voice and the representation of dynamic emerging and developing countries should be increased, but that also would mean that they have to take over greater responsibilities in financing the IMF’s works. And we, of course, fully subscribe to what we agreed in Pittsburgh to a shift of quota, let’s say by 5 percent to 6 percent, and we are aware that new realities in the world economy have also to be considered when discussing the composition and the size of the fund’s board. We would say that 24 seats strikes the right balance between effectiveness and inclusiveness, and I don’t see a compelling reason for refusing this number. But I agree that we have to talk about the composition. And here, European Union member countries have made an offer to give up up to two seats in the board, but this is relied on that we have an overall comprehensive package that includes the size of the quota increase, the quota shift, size and composition of the board, the election of top management position, the role of the IMFC [International Monetary and Financial Committee] in the future and the kind of voting procedure in the fund.
So I think we will strike for comprehensive reform package. We are in a good way here. We are making progress but we will need probably some more time. Again, thank you very much for your patience.

Ken Rogoff: Thanks to Garry and Ted for producing this thought-provoking and very useful paper, and also thanks to the Peterson Institute for the privilege of being on this very distinguished panel. But before I talk about the paper, I have to congratulate you, Fred, for the announcement that you passed out to everyone that Carmen Reinhart is joining the Institute for International Economics. I think many of you know that she’s one of the most influential and cited scholars in the world, and I’ve had the privilege of working with her for much of the past decade. I will just concretely point out that in the widely used ranking: the academic RePEc [Research Papers in Economics] rankings where she ranks in the top 50 economists in the world in all fields and those lags several years on citations, so essentially includes none of our joint work in those rankings. So that’s quite a great day, I think, for the Institute.

Anyway, this is a very thoughtful and constructive paper. We were asked to take off from where the paper left rather than to go into details, so I’m going to go in that spirit to pick up on few things. First I have to say, I mean I’ve spent most of my life in academics, but I did have an experience working at the Federal Reserve and also at the International Monetary Fund, and I must say in international institutions, particularly the concept of work together, is a very difficult mandate. I recognize many of you from the Federal Reserve, the International Monetary Fund, other international institutions, and I—at least many of the department directors I know would agree with the following that when you are told you had to jointly write a paper with another department, that mandate would be twice as much work and half as good a product. And I think it is very challenging because institutions are not necessarily set up that way. And then I thought it was very interesting because Ted ended his comment noting—or was it just an afterthought? The endgame is going to have to be that the two are merged. And I actually think that’s probably true.

Now, Jörg Asmussen gave a very good explanation of the benefits and the flexibility of the FSB. I actually would say the IMF has been a very adaptive institution over the years. It doesn’t always happen overnight, but that’s really, I think, how it’s been so successful. And to some extent the fact that it’s mandate, it’s not acts, and the world has changed; that’s a problem that the IMF has faced again and again and again. And so maybe there’s some scope as you had in that final slide to try to achieve this.

Now, it’s interesting to be writing this sort of hopeful paper about global governance in a period where it’s very challenged; where the power of the nation states is very large and becoming more diffused as the emerging markets become more powerful. And I think this is going to throw constant challenges really that trace back to the governance, the objectives of these institutions. And yet, just as Garry stated very well in his presentation, you need coordination and financial regulation because otherwise, money flows to the lowest common denominator and, of course, the problem is spread to everyone.

The German chancellor had the temerity when she was chair of the G-8 to suggest that maybe there should be a bit more of financial regulation just as an advance of the crisis. My interpretation of her remarks was that she sort of explained that the US and Britain are getting all the benefits but we’re all bearing the cost. And she had her head handed to her by the British and the Americans at the time, but I mean I think those remarks look rather prescient now. And it does reflect this tension. You know, the benefits don’t just go to the banks who are arbitraging. They also go to the local jurisdictions. It’s a big part of the success of the city of London, the city of New York, the United States, Britain, the financial sector. I mean there’s no doubt there’d been—I think clearly there’d been big contributions. But it isn’t
such a simple matter to try to regulate it at global level because there’s this tension between the problems are shared internationally but the benefits often accrue not just to the banks but to the individual countries. And I don’t think this is at all just about political contributions—political influence as some have argued. I think it’s much broader than that, that it can be a very good business and you want to cultivate it.

I do think there is a deeper question that needs to be asked in this whole thing about what exactly are the benefits to international finance. Where are the big gains? There clearly are, but where are the big social gains? Where are the private gains coming? And I don’t think, unfortunately, we academics have a very good answer to that question. There’s certainly a sense that some of what goes on in international finance is somehow leveraging side payments from the taxpayer moral hazard, these other issues. And I think it’s a very tough question. Obviously, before the crisis, I won’t name names, but we all heard speeches at meetings like this about how—well, it’s all very complicated but it’s actually spreading out risk and it’s good for causing the great moderation, it’s reducing volatility, it’s improving growth. And I think you could take an exaggerated view in the other direction now, but I think it’s fair to say we don’t have a clear idea we don’t have a clear idea and we have papers on—a lot of papers on financial intermediation and growth that really look at developing countries. How did they go from being poor, emerging markets to middle income?

We don’t have as much as concrete a notion about the benefits of going from having sort of a very complex financial system to a very, very complex financial system. To paraphrase the head of Goldman Sachs, I mean, there were certainly a lot of economists who would’ve said all these derivatives and complex financial dealings, we’re doing God’s work of completing financial markets because that’s what our error degree model showed would be ideal and it’s clearly something that’s complicated. And I lay that as a question. I don’t think we want to go back to the past completely. But that is really a big part of the question about some of the more complex arbitrage opportunities, the complex regulation are on markets where it’s not quite clear they should exist that the benefits are really there.

And let me just conclude by saying—referring to something in my joint work with Carmen, which, by the way, it’s all academic and academics are listed in alphabetical order of Reinhart and Rogoff. But I think that one of the things that sort of intrigued us and for us was exciting as the results unfolded was—particularly if you look at the aftermath of the financial crises, how similar they are on housing prices, on unemployment, but why would you expect that different political systems, historical circumstances, legal systems—you could make a very long list. And yet quantitatively, not just qualitatively, but quantitatively, they seemed or they seem at least with the numbers we have, to be surprisingly similar. And I think, you know, it sort of says something—there’s something deeper going on in how our financial systems are enforced, crafted where at some level the question of the financial architecture is all of that governance and how we interpret it.

Anyway, I should just finally say that I’ve found this kind of paper Ted has written in the past have been very useful. I’ve used them in my—his books sometimes in my courses because it’s not only a matter of the issues, but laying out very clearly what the heck these institutions do. There are not that many places you can actually find that explained and categorized. So the paper serves useful functions on a number of dimensions. Thank you.

Guillermo Ortiz: Like Ken, I found the paper very interesting, informative, comprehensive. And let me take off—I’m sorry—let me start where Ken finished and talk a little bit about the financial sector and then the institutional setting. I think that what the crisis demonstrated was that there was a massive institutional failure involving private financial institutions, involving regulators, involving of course
rating agencies, and also international financial organizations like the IMF and the Financial Stability Board that as it was called at that time.

Now the question is why. Well the Financial Stability Board prior to its current reincarnation did not really have a lot of disability and its mandate was much narrower than it’s today. So we’re going to have to ask the question why did the IMF not only—I mean I’m not saying that the IMF should have predicted the crisis because that’s impossible. But why did it not warn of the vulnerabilities that were developing in the financial sector?

As Ken was saying in his book and it’s a great book, by the way, the striking thing is the similarity of all financial crises, and they are all one common denominator among others. Of course, all start with big credit extensions, and the off-shot is that ultimately people cannot pay them and that manifests itself in different ways. And there were so many people that were, at that time, warning about the vulnerabilities and the connection between global imbalances and financial risk zone, but yet the fund failed to put this in its mainstream view. I guess the reason why that happened was that the fund adhered to the then-existing politicking that financial institutions and financial markets not only allocated resources well, but they also managed risks. Okay, it was referring to the complexity of financial products. I think the Fund bought into this very much, the virtue of self-securitization and dispersion of risk and so on, and obviously that did not occur.

Now going into the institutional setting, if one starts from the premise that the Fund failed both in its bilateral surveillance with the US—I mean it’s multilateral surveillance role, apart from this intellectual capture—is there anything within the institution, is there anything in the, let’s say, governance of the institution that could have yielded a better result? It’s a difficult question to answer. But we have been talking about IMF reform for many, many years. Two years ago, the managing director commissioned a group of people; I was included in that group and under the share of Trevor Manuel from South Africa would produce a report with a set of recommendations for IMF governance reform. Then last year the G-30 produced another report on IMF reform. So I’m not going to go through all this. I also participated in that group.

But our main recommendations, of course, were some that Mr. Asmussen was mentioning, and the main one, of course, is quota reform, voice, and representation because that’s the only way the IMF can have the legitimacy for its surveillance functions. We are today embarked on a huge discussion about currency—I would say—wars. Well the IMF was just a little bit silent about “let’s see what happens over the weekend,” but I’m not hopeful that a lot of it will happen. It’s arithmetically very difficult to think that all countries can stop their currencies from appreciating. But anyway, one of the basic functions of the fund should be precisely to gather the main players in the context of G-20 or IMFC and resolve this question. I mean there’s clearly something wrong with the international monetary system that produces a result such as one we’re seeing today, so basic recommendations, of course, quota realignments. Even with the 2008 quota reform, Belgium will have a quota that’s higher than Mexico or Brazil. Germany, UK, and France will have a quota which is greater than China and China is the second largest economy in the world and much larger if you take PPP [purchasing power parity] calculations.

So I mean it’s pretty obvious that this has happened, but Mr. Asmussen said that we are not going to be finished by this year. It may take some more time, but we’re making progress this weekend. Okay, I’m sorry. I hope that we finish by the G-20 meeting in November.

So I mean the other parts of the recommendations on IMF reform were the activation of the Council—that it’s in the Articles of Agreement and that would imply a lot more political commitment on the part of the membership. And finally, we recommended also that the managing director would be
elected on a merit base and not by nationality and that should apply also to the whole management structure of the fund.

Now turning to the Financial Stability Board, I think they have done actually a pretty good job in producing it, let’s say, coordinating all this standard setters that are independent. They have different governance structures and the mandate of the FSB is one of coordination. I think they have achieved that. They have done, I think, quite a good job. And obviously one can be disappointed or not, like Ted was saying with the outcome. But I think that and I agree with Mr. Asmussen that this was a very important step forward.

Now on the relation between the IMF and the Financial Stability Board, well, this is an open question because obviously there is responsibilities overlap. And, I don’t know, maybe in the long run they may be merged as the authors of the paper were suggesting. I sincerely doubt that. And I think that we have to keep a flexible mind in terms of sort of the geometry of international cooperation and international organizations. I think that it’s inevitable that this overlapping, this function overlapping, would lead to perhaps inefficiencies and maybe turf fights. And this can be costly because, I mean, obviously we cannot afford that. So what we suggested in the G-30 report was perhaps a practical way of looking at decisions is to write a memorandum of understanding between the IMF and the Financial Stability Board that would clarify each other’s responsibilities and would set the basis for cooperation, for example, talking about implementation of standards and think of joined surveillance missions between the IMF—I’m sorry—in the IMF and the FSB. I’m out of time. So I’ll end up here, and again, thank you very much for the invitation.

C. Fred Bergsten: The floor is open, lots of food for thought on the table, open for questions, comments, alternative views, suggestions.

Nicolas Véron: Maybe just to start off the discussion, one of recommendations before was eventual merger between the two organizations. Is the monitoring of standards, implementation, and control of standards implementation would be an activity for also FSB? Now, yes, FSB has started peer reviews, but the main exercise in reviewing standards implementation is financial stability assessment program or financial sector assessment program (FSAP) of the IMF. So are you advocating that FSB should take over the FSAP leadership? And if that’s the case, what does that mean in terms of the resources and internal organization of FSB because it’s clear that the FSB currently has very good team, very highly qualified, but it’s also very tiny and certainly not at the scale that would allow it to do that sort of thing. So, basically, can you be a bit more specific on what you think in terms of reviewing standards implementation, which I think is an absolutely crucial function if global standards are to be credible.

Ted Truman: Well I think actually our point was the reverse, Nicolas. I mean it’s just that we’re unclear. So the presumption is, as you say, that the FSAP will be the major issue. But it also has been mandated by the G-20 leaders that there be a certain degree of peer review and even beyond peer review of implementation or the quality of standards, quality of supervision by the FSB itself. And that actually has created a degree of tension in this area in particular by the non-G-20 countries as you might guess. But at one level you can argue we can’t have—since they’re both types of peer review processes. Some duplication of peer review processes probably is not all bad. They might actually compete with each other a little bit. But it’s easy to see also how it could get messed up. So we were actually pointing to that as a problem where there is actually some potential for tension on those grounds.
Richard Erb: My name is Richard Erb. I was formerly with the IMF. I now live in Montana. I’m listening to Guillermo Ortiz. At the end he referred to a memo of understanding between the IMF and the FSB. I think in the time that I was at the IMF we had at least three negotiations between the World Bank and the IMF trying to come up with an agreement on how to work together and how to do things jointly, and I think they’ve continued to have those negotiations. So I would guess I’m a bit of a skeptic or I guess I see what the difficulties are in trying to coordinate two bodies with very different responsibilities and mandates. Even merging it poses—that same channel within the organization—a management challenge. I guess I would add because among the recommendations is the need to—let’s see here—add financial expertise to IMF resources, which I agree and I think they’ve been doing that. But I think it’s also a matter of looking at the decision-making bodies too—the executive board of the IMF and the IMF Committee—because I think you also need to have in those two bodies the expertise and, as importantly, the links between the executive board members and their national capitals and the bodies and the organizations in their national capitals who have responsibility for regulation. The same thing would be true with the IMFC that I think the US representation on that—some of the most important regulatory bodies don’t even come with the US delegation to those meetings, of course, that the Fed does, which is, of course, Ted, the most important regulatory body. I know that. But you have other regulatory bodies and one of the issues here is coordination, for this country anyway, among some of the regulatory bodies. So I guess I would maybe ask Ted to comment or Garry because he’s had the inside experience, too.

C. Fred Bergsten: Could I just add to the question to Guillermo? Because he raised the idea about a memorandum of understanding. I think either Garry or Ted or it’s in—their paper did mention there was an agreement between the two. Just coincidentally Mario Draghi was explaining to me over lunch how that happened to come about. But they do have an agreement. And so I guess that’s to Guillermo what would be new and different about your memorandum of understanding.

Guillermo Ortiz: Well, of course, Dick is right. I mean since I was an ED [executive director] the Fund in the ’80s I have the good fortune of working also with Dick—but I mean it’s been an impossible task to coordinate the IMF and the World Bank in an efficient manner. And it’s been tried many, many times. So why would this work? I think that in the case of the FSB and the IMF the focus is much more narrow. These are issues on financial system. Already the standard setters have come up with a set of recommendations. So the question now is implementation and surveillance. So I think that, given the narrower focus of the overlapping responsibility, should be an easier task than to coordinate the World Bank and the IMF.

Garry Schinasi: I couldn’t agree more with Dick’s point on having more financial expertise sitting around the governing bodies. It’s not that it isn’t there. It’s that it’s not really thought about when appointments are made, I think. And they are very knowledgeable and competent people sitting around that board table making important decisions. But they often don’t have the expertise that’s required to fully understand and deliberate on specific issues. So I think raising the level of financial expertise on the staff as well as the governing bodies would help. While I have the microphone if I could respond to some other comments that were made here.

First I’d like to clarify what I said about the quality of capital. I think Basel III is a big step forward in terms of defining core capital. But the definition of core capital that was agreed was a
weakened definition from the one that was agreed at an earlier G-20 summit by the leaders. So a consensus could not be reached on that stronger definition, so yes, the definition of core capital is much stronger now given the agreement from precrisis. But there was a hope that it would be even stronger and that was watered down a bit. There is no question capital requirements have been raised significantly. So I just wanted to clarify that.

I’m a little reluctant to get into this, but I’m going to go for it anyway. I’m just going to go back to Ken’s agreement with our bracketed statement that a merger is inevitable. I was at the IMF working—comanaging the capital markets report exercise, which some of you know about—at that time that the FSF [Financial Stability Forum] was introduced. And over the years I have asked many people the reasons why it was created because the same work could have been done within the IMF. You could have had a secretariat established in the IMF. And the IMF had the resources. It had the modeling capability. It had the access to central banks and finance ministries. On the capital market’s exercise, we used to speak frequently with regulators, supervisors, and especially the major institutions throughout the world and we used to do it several times a year. So the reason given that I hear the most was that the international community—in the aftermath of the Asian crisis and the Russian default and many other mistakes that may have been made in managing crises, inevitably you’re going to make mistakes. That a clear message needed to be sent to the IMF by the leaders or at least by finance ministers and central bank governors. And so that was the reason for setting up this FSF. Now is it true or not? I don’t know. But as an insider at that time, there seems to be a grain of truth in that it was to send a strong signal to the IMF because it made these mistakes.

C. Fred Bergsten: Competition is a good thing.

Garry Schinasi: Well I agree. It is. I’m not going to defend the IMF. From what you’ve said that the IMF missed this. The IMF probably missed other periods of imbalances. But that doesn’t mean that there aren’t those in the IMF who see them and even write papers about them and even bring those papers to the board. There are two problems. One is that even the work that was done within the IMF by some departments through the WEO [World Economic Outlook], through the GFSR [Global Financial Stability Report] or what used to be the capital market’s report, a lot of that work just didn’t get disseminated into the country work. And sometimes it takes many iterations to get that work flowing into the country work and the country assessments. So that was one weakness in the Fund. I think that’s being worked out now. Again, I’m not defending the Fund. I retired from the Fund, by the way, so I’m not even on sabbatical anymore. I’m separated.

So that’s one issue. There is work going on. It doesn’t get incorporated into the area department work. That’s changing. I think I’ll stop there.

C. Fred Bergsten: Okay. Let me maybe in the 10 or so minutes we’ve got left bring another major issue back to the discussion. Jörg Asmussen, in his very interesting comments, mentioned this ongoing debate about the size of the executive board, some of the disagreements over representation, who has the chairs, what should be the resolution of that—if not this weekend, over the next few weeks, months leading up to the G-20 summit in Seoul. I can’t resist noting that my colleague, Dr. Truman, has held forth on that issue once or twice. And if I might ask him to share with us his latest thinking on what ought to be done and how to get it done.
Ted Truman: I didn’t really ask for this, so I have to apologize. I mean I have—maybe I should put it this way, maybe, on several of these points. The role, I think constructive role, of think tanks—and Fred sets a high standard—is to be provocative and to force or try to force—to try to lead policymakers to strive for more in what they are trying to achieve, whether it’s on capital standards or IMF governance reform.

I mean I think broadly the Secretary Asmussen embraced the agenda. And I think there is a case, but it’s more of a technical case for a smaller executive board because it would actually save money and the executive boards are very expensive for the fund, that’s why I have central banking hat or fiscal hat if you want to put it that way. But I can see politically why it might not work that way. So I would think you actually could put in place a 20-person board and it would be slightly more efficient and it would save money. That doesn’t necessarily mean it’s going to happen and it’s probably that dimension, the actual size of the board is probably not, I think, the most important issue. I think the important issue, and I wish Jörg and his colleagues well, is to—all the issues are now on the table. I think it’s right to talk about them in terms of a package. There will have to some discussion and there will obviously be some discussion about what’s in their package. I personally agree with most of the ones that you mentioned, or all of the ones that you mentioned—not necessarily the position, but they should be as part of the package. And I wish them well. I think that’s their basic point. So I’m declining to be—for the first time in my life working with you, Fred—provocative, I guess.

C. Fred Bergsten: Well you had your chance. Okay. Other questions? Fabrizio Saccomanni.

Fabrizio Saccomanni: Thank you. I apologize because I arrived late so I didn’t listen to the presentation. But looking at the conclusion of the paper and I see that you quote this crucial memorandum of understanding between the managing director and Mario Draghi, I read it through. I don’t see that there is much that is wrong in terms of the division of labor that is implied here that would require at some point the merging of these two institutions. I think Fred just said that competition is good. And also I think that an efficient division of labor is good. Frankly here the crucial points are that the surveillance of the global financial system is the responsibility of the IMF. And the responsibility of the FSB is the elaboration of the international financial sector supervisory and regulatory policies. This is not a sort of a turf war. I think it is because the people that sit in the Financial Stability Board indeed have an expertise in these kinds of things. Then the IMF comes in again through the FSAP and the ROSC [Report on the Observance of Standards and Codes] to assess whether, from the point of view of systemic equilibrium of systemic stability, the policies that have been decided at the national level are indeed implemented. But that doesn’t mean that the IMF should use the ROSC or the FASP to sort of propose or elaborate regulatory or supervisory standards, in my view, and that is a division of labor that exists everywhere. I don’t think that it is done. You have a single institution that does both. So I think it’s a little bit like, “If it ain’t broke don’t fix it,” you know, my reaction. What is it that doesn’t work? I participated from the side of the Bank of Italy in some of these FSAP discussions. And I remember once we discussed a lot about whether to change the legislation in Italy about rural banks. And frankly I didn’t think that that was a major systemic issue and although the law indeed requires amendment. But I thought that this was something that you, Ted, have called in an earlier paper a little bit of a mission creep of the IMF into micromanaging the regulatory and supervisory aspects. So I don’t know whether there is indeed a risk in the kind of suggestions that you’re making. Thank you.
C. Fred Bergsten: Okay back to Jörg Asmussen for another observation.

Jörg Asmussen: I want to—since Ted said that we were at least able to name the items which should be part of the package, maybe I can clarify a little bit how we can narrow down the set of solutions which we can follow, but of course emphasizing that nothing is agreed before everything is agreed.

I think one comes to the size of the quota increase. And we all know or at least the technocrats from us know: The larger the size of the quota increase, the easier is it to get the shift of quotas. So if we used the assumption for the following days or weeks that we will have a quota increase of the size of up to 100 percent and have some rebalancing on the NAB (IMF’s New Arrangement to Borrow), maybe we can narrow down the options that are on the table. We then probably could even come closer to a solution if we can agree that all overrepresented countries will contribute to the agreed quota shift—that means especially all advanced, overrepresented countries. If we then could agree as a working assumption that after the quota shift and after the quota increase, no country should fall behind its calculated quota. That should be a backstop for some countries that might facilitate to get a solution even if I’m always—am a cost cutter as a treasury person. But if we can agree to amend the Articles of Agreement to have permanently fix the board to 24 members that might ease the solution on the composition of the board. And then it also might help—Guillermo Ortiz talked about the merit-based selection process. If it’s clear we will have this in the future, not just for the Fund but also for the banks, if we have tried to use this element, we can probably narrow down the options that remain to us.

C. Fred Bergsten: Ted, do you want to respond?

Ted Truman: Yeah let me just add since we’re having a live discussion. I think I agree with you 100 percent on the size of the quota increase and I’ve written extensively on that point that it makes it easier and there are other bases for doing it bigger too, I think. I think it’s appropriate given what’s happened that whatever ends up that the question of the size should be permanently fixed, whichever way it ends up that makes some considerable sense if you don’t want to go through this process in this way again. I mean I’m not saying it was a bad strategy in the part of the United States. In fact, I have written about it for years. So I can hardly say that. But you want to fix the size. You didn’t mention it, but I suspect you would. The question of whether the elected and nonelected executive directors—we agree on that. I agree certainly on the question of the selection process. The one point where there is disagreement, and again I’m only saying something that I obviously speak for myself just to be clear because I’ve written on this before: I think one of the problems with the overrepresentation and underrepresentation issue is, in my opinion as well as the opinion of Dr. Bryant from Brookings sitting out here is that the standard that is now being used for that—meaning the 2008 quota formula—is inadequate. So I would agree if I was confident or if the world was generally confident that that quota formula is the right quota formula, than the notion that one should not fall below on that. If we push below that standard is to be sensible. But that, I think, is a major issue. I also appreciate the fact that it is maybe both difficult as well as in some views undesirable to reopen that issue. But I think it is one of the sticking points that the failure, in my view, of what was done in 2008 is a problem in reaching the agreement that I’m confident that you will even if we have people in think tanks will say we’re disappointed because that’s our job.

C. Fred Bergsten: Jörg, any final word?
Jörg Asmussen: It’s just briefly not to bore everyone. I mean I think if we open the quota formula, we would take years. I mean you have seen how we have struggled to come to the decision about the quota formula we use right now. So let’s say as a basis the existing quota formula if it then helps to get a compromise we are open to introduce and talk elements as we have done in the past. So that might overcome the, let’s say, perceived deficiencies of the existing quota formula.

C. Fred Bergsten: Okay. We’ve come to the end of time for this session. Let me thank the panelists enormously.
Closing Panel

C. Fred Bergsten: We’re going to start with the last panel. The effort here is to pool together the thoughts of the day and offer some answers to all the problems that have been raised. And we have a superb panel to do that.

We’ll start with our cohost for the event, Jean Pisani-Ferry, who has kindly agreed to give a summary of what went on during the day to recapitulate the main conclusions and results and that will help set the tone for the rest of the panel. Mohamed El-Erian from PIMCO will be our next speaker. Unfortunately Mike Froman, who was scheduled for our panel, got called to a meeting with the president at exactly this time and so had to back out and we regret that. I’ll sort of share with Mohamed, speaking from a US standpoint, and it won’t be the same, but we will at least give that geographical perspective.

Sharon Bowles is our final speaker and our European policymaker in this final panel. Sharon chairs the Economic and Monetary Affairs Committee of the European Parliament, has done so for five years.

So Jean, start us off and we’ll go then to Mohamed and Sharon and I’ll bring up the rear.

Jean Pisani-Ferry: Thank you, Fred. I think the common idea, was that there was a need to redefine the transatlantic economic relationship precisely as the title indicates in an era of growing economic multipolarity.

The traditional view about the transatlantic relationship is that it is the most important economic relationship in the world. And, of course, we know it’s wrong. It’s not true anymore. And that we can congratulate bilaterally on the size of trade flows, on the fact that maybe trade is not anymore the most important. But FDI [foreign direct investment] is so important and capital market integration is so important we basically missed the point. And the point is that the world is changing extremely fast, that this relationship in relative terms is diminishing in important—and that it needs to be redefined in this new context. And I think that was basically what this conference was about. So I wouldn’t choose the term reset because it has been taken already. But I think that redefinition is what it is about.

Now we’ve gone through a number of essentially four types of issues starting with macro then with global climate change, financial regulation, and global financial architecture, which touched upon many things but in the end was about governance. And on each of them, I think we came to slightly different conclusions. On the macro, I think the conclusion was that we are collectively too weak to fail, that the US and Europe are the weakest part of the global economy in terms of observed recovery, in terms of the nature of the challenges they are facing in this recovery phase. And the question we asked—we started from is: Why are we diverging? We were very convergent in the recession phase in terms of the policy solutions, very much the atmosphere of today that is divergent. There is divergence on the monetary response. There is divergence of physical response. And is it a matter of different situations? Is it a matter of different doctrines? Is it a matter of different institutions what we discussed?

There can also be different perceptions of the same situation or similar situation with a much more Keynesian view prevalent here and a much, much more structural view prevalent in Europe that leads to have different views on what is desirable. Then we went on to discuss to what extent in this context we can coordinate whether coordination is still the name of the game today. In the paper I wrote with Adam Posen, we advocated a quantum, a relatively modest quantum that minimal quantum of coordination in this context. Stan Fischer in his comment said, “Well, it’s not about coordinating because
you think it’s desired, but it’s about having systems that provide incentive to behave in a consistent way” and the system is not really in place so that was really the question we ended with.

On the environment, I would say here we are too small to fail really because we know the EU and the US are going forward a small part, a relatively small part of the global emissions. Even so, it still represents a significant part. At the horizon, I think we have to reason the importance is diminishing fast. And here the question is whether the degree of disagreement—there is different perspective—was the EU now thinking about whether they should go for a 30 percent reduction in emission by 2020 instead of 20 percent and the US, where the debate is not moving forward, where the legislation is stalled. This contrast was extremely striking. And the question the panel ended with is in this context: What can we still do together? Is there a scope for some sort of cooperation? Is it on technology? Is it on innovation that we should focus on? Or is it some scope for having a common or a communication between the trading schemes? Even so it will be extremely difficult if the price of carbon is not the same, so the situation where the degree of divergence in preferences really handicaps the cooperation very much.

Now on global financial architecture, I would say the US and Europe are too important to fail. Really this is a field where we feel the most that we are still the regulators of the world, even though the G-20 was enlarged, and rightly so, the driving force of the recent reforms and the reforms that we’ve been discussing and the agenda going forward because it’s certainly not completed. The driving force has been the Europeans and the Americans. And I was struck by the lack of any clear division in terms of what is desired, but there were more in the presentations by Nicolas and Morris Goldstein. It was more the fact that the situation is not the same because the US is a unified market with a single fiscal authority whether in Europe we are confronted with the fact that markets are integrating fast, but policy has been lagging behind market integration. And all the momentum is about catching up of policy integration and legislative integration or regulatory integration with market integration. And therefore the notion of what is too big to fail was not the same just because of that. So it was really determined by this clear difference of situation much more than by any difference in vision about the agenda going forward.

And finally on governance—and here I can be very short because most of you, or almost all of you, were here when we talked about it—it’s here where we are perhaps too powerful to fail. We’re still extremely powerful in the institutions. And the name of the game is: How and to what extent and how fast are we going to share power? And the panel ended up with this discussion on the chairs at the IMF. I found the tone cautious for a meeting here at the Institute. I was surprised maybe. That’s fishy. Ted was extremely, unusually restrained. So I do think that the procrastination that has been—is worrying that I fear personally that the name of the game now is that the US is requesting a change from the Europeans, rightly so. The Europeans come up with half the change and tell the US we are able to do more, but we expect some move from your side especially on the bank and the fund the criteria for nationality especially on the bank and that the US is not responding so that we’re going to continue with this type of relatively unpredicted discussion, at least that is my fear. So let me end here with perhaps slightly biased, but I hope relatively comprehensive overview of the debate.

**C. Fred Bergsten:** Thank you. That’s extremely helpful. We’ll tee up some questions for later.

**Mohamed El-Erian:** Thank you for inviting me. It’s a huge honor to be here. I’m going to be reacting in real time to the summary that was just provided by Jean. And I’m going to redefine the questions slightly. You said the general agreement is that the relationship needs to be redefined. I will put it differently. I said that the reality is that the relationship is being redefined and the question is the how and the what to.
So it is currently being redefined and the question is: Where is it going to end up? If you want to regain control of the situation, if you want to be able to ask the question “How should it be refined?” as opposed to “It’s going to be redefined and we’re going to be at the receiving end,” I totally agree with the point you said. We need a quantum of coordination. We need a set of incentives. And we need the ability to course correct.

So what is the reality? What is actually going on on the ground? So let me give you a very partial view of what’s going on on the ground. And I would argue that the initial conditions are such that rather than be enabling of an orderly redefinition, they are disruptive to an orderly redefinition. So you have to change the initial conditions that are on the ground. The way I think of that is exactly how it’s put in the title, which is a redefinition between EU and US in a redefining global environment, in a multipolar global environment. So those of you who like to think of—it is about variances and covariances, you have to have a view of how the US and the EU are behaving and the variances there. And then you have to think of the covariance matrix that somehow has to solve with a lot of other things that are happening that are outside of the control of the EU and the US. So it is really a very complex process to solve and to gain control of.

What are the major issues? And here, Fred, I’m going to reduce it to one issue for each block in the hope that simplification of the complexity sheds a lot of light. It may actually be oversimplified, but let me speak to it. And what I’m going to argue is: Unless we understand how unpredictable both the variances and the covariances are, we’re not going to be able to explain the behavior that’s going on right now where entity after entity in both the US and the EU are self-insuring. They do not believe that the infrastructure will deliver good outcomes. So they are taking actions to self-insure and that’s true for the world as a whole. Think of large company holding massive amounts of cash on their balance sheet. Think of households who are able to—are de-risking. Think of accumulations of reserves. There is an essence of self-insuring going on because people don’t trust the system.

Here I can’t help but react to something you said, Jean. You said when it comes to governance, when it comes to the IMF, we are too big already to fail. I would say no. You are failing because increasingly countries are going outside these organizations in order to deal with their issues. So the organization itself is failing for being a place where people go to on that.

So what about the variances first? The US issue in our mind comes down to a very simple question. Is there the political and economic ability and willingness to recognize three things? One is that this country is going through a massive structural change after a great age of leverage. And Carmen Reinhart and Ken Rogoff’s book sheds light on what happens after a great age of credit, of debt, and of leverage. So is this country able to deal with these structural changes? Second question: What will be done about the remaining overhangs? We still have overhangs in the system that have to be dealt with. And until they are dealt with, they will undermine a quick recovery. And finally: What will we do with the financial services sector that is in the muddled middle right now? It neither serves the real economy in a manner that is expected nor has it regained strength. It’s in the muddled middle. It’s not quite sure where the financial service fits into all this right now. Absent progress on these three things, national agendas will totally dominate the EU-US relationship and will also dominate the multipolar issues.

How about Europe? What is the major issue in Europe? Again simplifying it is the question of how long is Core Europe, Core Europe defined as essentially Germany and the ECB? How long are they willing to contaminate their balance sheet and underwrite problems of debt, problems of competitiveness, and problems of credibility elsewhere in the eurozone? That is for me the fundamental question. How long are they willing to underwrite this? Like the US, the hope is what I would call the immaculate
recovery that somehow things recover and the tide comes in and raises all boats and we don’t have to worry about these things. The reality is that immaculate recoveries are very difficult to engineer. And therefore, there has to be some view on this because until that issue is resolved, it will take up a lot of attention on the European side.

These two issues speak to the variance. How about the covariance? And here Fred and I can have a really interesting discussion. I think the major challenge facing the world is how to accommodate a breakout phase in systemically important emerging economies. This is for real. This breakout phase is for real. And it is coming at a time when the global economy is facing other pressures, which some has to accommodate it and that means accommodate it on the trade side, on the currency side, on the capital flow side. And this accommodation can end up in different ways. In fact, when we try to model the world, we are stunned by what the distribution of potential outcomes look like. If you think of a distribution that we live with easily, it tends to be bell shaped. There is a dominant outcome, 85 or 90 percent probability, and there are tails, but they are thin tails. The sort of redefinition that we’re talking about globally results in a very different curve in terms of expectations. It results in a much flatter curve. There are many more potential outcomes. There is no big dominant outcome. And the tails are much fatter. So you can tilt. I can call it path dependency. I can call it multipolar equilibrium, call it whatever you want, but the reality is it’s very hard for anybody to define a regularly shaped bell curve of expectations. And that is why I go back to the issue that is why people out there are self-insuring increasingly—because it’s not fooling anybody and that is why we hear about currency tensions and we hear everything else.

Let me end with the reality that it is the national and global realignments that are going to redefine the relationship and not the other way around. So one has to have a view on the national and global realignments and they will be the drivers of the redefinition of the US-EU relationship. This will change if one of the following happens: First if the EU and if the US can have a common analysis of the issues and a common objective. That does not exist today. Secondly, it can change if you have well-functioning institutions that are credible again, and the previous panel pointed to the difficulties that are being faced right now. And the rest of the world is not waiting for these difficulties to be resolved in a measured way. And thirdly, it has to be done in a way that also accommodates the breakout phases in the other side. Unless you get that, then the question is going to be a relationship in EU-US relationship that is the outcome of something as opposed to something that is targeted and delivered. So let me stop there.

C. Fred Bergsten: Okay, Mohamed thank you. Very thoughtful. Very provocative.

Sharon Bowles: Well I’m a complete fraud being here really because I wasn’t here for all of the previous panels. So I’ll have to try and improvise and give some responses to some of the things that have been brought up.

Quickly referring back to what Jean said, I mean he said why are we diverging in the EU and the US. And to some extent that is due to different responses and I think, as Mohamed has been perhaps getting at to some extent as well, you cannot get away from the fact that we have a single currency area with the eurozone and the influence of the sovereign debt crisis that we have had within the eurozone and the fact that the euro is not a reserve currency. It means we have different drivers and some different problems that we have to cope with and that’s obviously having an impact on some of our decisions.

And I suppose if I’m going down then that track and the provocative question about how long will the Germany and the ECB put up with underwriting everybody’s debt. I mean that’s a very serious problem for us that, of course, we are aiming to address to is a set of economic governance measures that
will mend some of the lack of coordination in European policies. But, of course, it’s going to be quite a battle to get those through a sufficiently strong form to probably have powers that bite. And some people who might have followed what I’ve said on things—I’m not myself convinced that it’s enough because we have got links through and problems into the sort of microprudential and into the regulatory sphere that exacerbate our problems again coming back to a single currency area where we have a zero risk rating on sovereign debt. This ends up providing some odd and perverse incentives at certain times in the cycle. But now is not the time really to try and amend that, but we have to bear that in mind for the future that there are some things in Basel that actually don’t fit when you have a currency union that cannot print its own currency.

I think looking at the other point that Mohamed said about the self-insurance—whether that be firms or individuals, I’m not sure it’s only a lack of trust. I think this is, to some extent, an uncertainty that there has been so much talk about everything having to be changed and redefined and the instincts both domestically and for businesses are therefore to pull in their horns and not spend things and to save money, which of course is exactly what we don’t want at the moment for those that could actually be spending and could actually be stimulating the economy. But human nature is what it is. And I don’t suppose we’re going to be able to change that overnight. But I think that some of the language that we used and some of it was in the last session as well pointing out that there’s a disappointment in the slowness of implementation of the change in regulation.

But why is there a disappointment? It’s two years of the financial crisis. We had a slight problem in both Europe and the US and that we were changing the Commission in the EU. So we had to wait for the new commission to get in. You had the slight matter of having to elect Obama. So you had to wait until you had your new administration. And these things did mean that there was a certain amount of not getting our acts together as quick as we might have done otherwise. But early in the crisis in the European parliament, we had our panel of wise men, Baron Lamfalussy and others who said, “Well what we don’t want is a knee-jerk reaction.” And within about three months of that pronouncement that everybody thought was a good idea, what are we doing? We’re trying to come out with an enormous tsunami of legislation that worried the industry without us having the details. Then subsequently G-20 put on the table the comprehensive road map as we now call it. But why are we being disappointed that it’s taking a little while to operate? I mean if you take OTCs out, I was just making a little list here. So G-20 said, “Well, it’d be a good idea to get derivatives onto exchanges or at least to electronic platforms.” But they didn’t tell us whether that was going to be central bank liquidity or commercial liquidity. They didn’t tell us what was going to be the role of competition or the governance or the ownership or the interoperability; what the capital requirements would be; how the margining was going to be done; who or what was going to be the participants or the users; what are you going to do with the different needs of the different asset classes and the commodities; and physicals are very different from financials; and actually how do you measure robustness; and how do you build the tools for interpreting or interrogating all the data that you’re going to put into these data repositories so that you just haven’t expensively collected things; and are you going to look at things in real time or aren’t you; and what about the rules relating to access where Europe’s got a lot of concerns about data protection? And we’re not very good either between the EU and the US sometimes with the US giving the right access to the EU. We got lots of problems in things like audits still. So it’s all very well to say, well, G-20 mapped it out. But we have the legislators. We have to deal with the whole range of these things and that’s just a shortlist.

And on derivatives, we’re actually doing quite well. In the global context probably because we do realize this is one area that could move very quickly. But one way or another, it is coming together. If you
look at something like credit rating agencies, the US started off first with its legislation and then the industry came and tried to bully Europe to do the same. But we did something slightly different and the US has taken some of ours. And their sort of nudge-nudge process is ongoing and improving the legislation. I mean the industry does tend to try and push us to the first to move—right, that’s got to be it, now will you please do the same. But I think we’ve actually shown that we’re not playing that game of it’s a competition of first to put something down and that’s the marker and that’s it. One way or another, we are intelligently joining up. And so I look at this as a glass half-full story rather than a glass half-empty story, at least as far as the legislation goes. I mean there’s some bits that aren’t great, I admit. But we seem to be getting better at it as we go along.

I think what does strike me, though, is then if I stick with derivatives because there’s been so much activity on it. Coming across my desk, I have countless charts of comparisons of what the EU is doing and what the US is doing. And I agree that covers most of the markets. But it would be nice sometimes to have one that was a comparison of what was going on in Japan and elsewhere. And because they have been doing things, it does actually join up again and sort of reasonably well. I think for us to just focus because we are the majority of the market and to say we are not looking at what’s being done elsewhere, where we go over to banking, we’re saying we’re not taking notice of what is going on in Asia. We’re losing a big opportunity to build trust because there is a distinct lack of trust. Yet when it comes down to it, we are now trying to be cleverer and to use some of the macroprudential tools and that they’ve actually used quite well in Asia. So we are ignoring them but then actually going to perhaps bring in some of the things that they have been doing. So we should have been joining up paths. I think now is a great opportunity. The moment is still not gone when we should be aiming to build trust rather than to be looking at everything fearfully. I mean something that I have said in the context in Europe when we were doing the new supervisory architecture and we talked about colleges of supervisors as the global organization. And of course we want colleges to be a real supervisory force. But what was actually said, in the secrecy and the privacy of trialogues especially, the only points that were ever raised were about confidentiality. It wasn’t how do you make the college of supervisors into a decent force. It’s how do you stop the wrong people getting the wrong information, which I thought was really rather a sad way to proceed.

I’ve got a few other little things here that I’ve been thinking about. We are talking a lot about having more bodies of the Basel type, the FSB type. I mean you can put in the International Accounting Standards Board and they can come up with technical decisions. But you’ve still got a problem with the democratic link. And so we then enact the legislation that comes from it. Sometimes we can do it automatically. But we have to admit that it isn’t always done. We don’t know whether or not the United States will do Basel. We hear the promises. But we heard those for Basel II. And it’s impossible to imagine that they can do Basel III. They don’t sign up to IFRS [International Financial Reporting Standards]. I mean if we don’t solve the International Accounting Standards problem and IFRS, we can forget about there being an EU-US agreement that everybody is doing Basel III. So we better sort that one out somehow. And I know that there are problems on both sides here that there are disagreements over how things should be done. But nobody’s actually pointing the finger at that, don’t think strongly enough.

I think we’ve got an interesting time ahead if we look at where we’re going with some of our rule making and the interaction between corporate governance and supervision and that’s going to be an interesting area looking forward where they may well be divergence between the views of what we want to impose between the EU and the US and other countries. I’m concerned that at the same time as we concentrate all our effort on things like leverage and liquidity that we’re fast moving down a track of
unintended consequences. Are we actually removing moral hazard or are we creating more? What is the sort of concentration of thinking about liquidity measures doing? Is any equity ever going to get a look in anywhere if we start transferring the kind of prudential regulations that we’re talking about in Basel over to insurance? But we happily used to have 20 percent of equity—now only 5 percent and it will get worse. So how are we actually going to get any investment into the real economy if the only thing that you’re going to be able to hold is sovereign debts and derivatives? Where is the long-term investment going to come from and what does this do to the lack of diversity? When we come to crisis management, I think that’s a very interesting area where ultimately we could recognize good crisis management in capital requirements if you get the cleavage planes and the escape modules and all these things to work together. But what happens if you make a mistake and you take a bank in to restructure it when it wasn’t really in trouble? I’m not quite sure who pays for that, and I think if we’re going to start looking at insurance as a sort of systemic financial institution and everybody always waggles a finger about AIG there, but I mean it was a banking mistake. It wasn’t the insurance mistake. And I’m quite worried about this that we’re going to try and treat insurance the same as banking. But we’re not looking at systemic groupings. We’ve already got an example of this in Europe with the Cajas in Spain. They’re all separate little banks, but they were all exposed to the same kinds of problems. So you have quite small banks that can be systemically relevant if they’ve all got the same business model and something happens in the economy that will all go the same way and you could find yourself at least within a country in as much of a mess as if you had a big bank going down. So I mean I think that we haven’t put enough thought into that.

And many of the things that we are doing now we should be honest about that certainly as regards capital they were all in there in Basel II in Pillar II, but nobody did them. There were things in there that said if a supervisor doesn’t understand complex financial products and how about having a bit more capital. So I mean the net result going forward has to be, I think, things must be simpler. I mean I know that this is straying a little bit from the relationship that you’re talking about, but there may become a divergence of opinion over simplicity. But if you go back to the global outlook in the multipolar, the one thing that has been different in Asia is that they kept with simplicity. One thing that is still a point of contention in Basel is that in the US actually you do want some simplistic backstop measures on leverage whereas in Europe they seem to not be quite so keen on those. So I think we still got quite a big debate to have in and around simplicity and that in itself can be part of the shape of the future of the EU and the US relationship.

C. Fred Bergsten: Thank you much. Jean started this last panel by suggesting that the US-Europe relationship was no longer the most important in the world and that may be right, but it’s still pretty important. And so I’ll just take a very few minutes here at the end to suggest where I think we stand on the three or four issues that I mentioned way back at the start this morning—I thought were the key ones that the transatlantic relationship now face.

First, and Sharon has just been discussing that, is financial regulatory reform. Sharon suggests that there still are a number of important differences between the US and Europe. Mario Draghi, to the contrary, asserted that at least for the moment things seemed to be pretty well agreed, the Basel Accords to be ratified by the G-20 summit in Seoul, and that probably is the realistic outlook. I must say some of the outside government observers, Ted and Garry and their paper here, Morris Goldstein and Simon Johnson and their work here at the Institute, all concur that the outcome was disappointing. But it does seem that the officials are burying their disagreements for the moment, go ahead with this first step,
which everybody agrees is a good first step, and so I suspect that issue is under control for the moment and will not produce any big conflicts.

The second area was the exit strategies and effort to walk that narrow line between continuing the growth recovery and avoiding debt buildups by starting a consolidation process. There are really two issues under that heading, I think, in the transatlantic context. One is what some view as a premature German fiscal tightening. And the second is what some view as inadequate expansionary measures by the European Central Bank. Germany has not been pushed by bond vigilantes to the contrary, but Marco Buti contended this morning that its fiscal tightening is small, not frontloaded, so not very serious to worry about. To which the response would be: That’s probably right, but the sign is wrong. And at least for the next year or two, policies of that type by the chief growth engine in Europe is going to condemn Europe itself to slow growth, could even push it to a double dip that’s certainly the leading risk of such a turndown in the world and that in turn spills over into weakening in the world economy. So I suspect some disagreement is going to continue on that.

The monetary issues, of course, are not really discussed in the G-20 and intergovernmental forums because central banks are, of course, sacrely independent. So governments don’t dare talk about that like in summits in Seoul. But as somebody commented this morning, it’s almost axiomatic that the ECB is going to have to ease interest rates, pursue QE à la the Fed, particularly if it goes more the Bank of Japan if only because the exchange rate is going to pinch increasingly. Nouriel Roubini focused on that. And so in the meanwhile, there will be some cost in terms of lost growth, possible risk of a double dip, the exchange rates fluctuating even more so and perhaps getting out of alignment in the direction of euro overvaluation. So I think that too will continue to be to some extent an issue of disagreement.

Third area: IMF reform does strike me as more confrontational. We have a very polite, as Jean said, abnormally polite discussion here between Jörg Asmussen and my colleague, Ted, even though I’ve tried to incite him. He resisted for once. But that doesn’t resolve the fact that there is real confrontation on this issue and it’s a three-way confrontation. Secretary Geithner, of course, has now for the first time explicitly linked US agreement to an increase role in the Fund for China—to China’s cooperation on the currency issue. He said that very clearly Wednesday in his speech and it’s, I think, part now of the US position. That comes on top, of course, of the US-EU difference over who’s to be overrepresented, who’s underrepresented, how to change not so much the shares but the chairs on the executive board and all the technical details about the size of the board going forward. But that issue, I think, has been brought really to the brink of confrontation if not already to it by the US veto of the continued 24-seat board. And so within the next few weeks or month that one, I think, is probably headed toward a real dust up. There’s a package deal to be made. The US is going to have to make some concessions. It has not yet indicated a willingness to concede, though my guess is it will do so. And so it can certainly be resolved, but not yet and that one may have some bumps at least in the short run.

Finally, and I think probably the most serious, is whether the US and Europe can get together vis-à-vis the rest of the world and particularly China on the issues that have come up repeatedly today. The US, including the Congress, clearly wants a multilateral approach to the problem—wants to effectively use the IMF maybe the WTO, certainly the G-20, to bring a resolution within the agreed rebalancing context. But to do that, there clearly has to be a coalition of the willing to be willing to put some heat on the Chinese—I leave open the tactics privately/publicly, but to really bring to bear the weight of the substantial majority of world opinion certainly starting with and led by the US and Europe together.

Yet when the IMF discussed the China problem in the fairly innocuous forum of the IMF executive board just a couple of weeks ago, only a couple of Europeans agreed with the US to take even a
modestly tough rhetorical line with China on the nature of the problem, let alone push for a solution.
When the Chinese lean on everybody around the world not to even let the adjustment issue be discussed
at the Seoul summit, I’m not sure how Europe is going to come out not to mention the emerging markets
who tend to side with them even if other officials are denouncing the impact on exchange rates and real
economic effects. This is all very important because if the multilateral effort fails, the congress is going to
act and the US will take what the world will view as unilateral action on the grounds that if the preferred
anointed institutions can’t do it, somebody’s got to do it. You can’t just let it go on forever. And so I think
this is a real testing ground for US-EU cooperation and then hopefully radiating out to a broader
multilateral grouping. And if we can’t even get together on that one, which is so clear in terms of its
substance and where the impact is now spilling over to the entire world economy if there are currency
cum trade wars, it clearly runs off that massive imbalance. Yes, the US obviously has responsibilities for
it, but nobody wants the US to tighten the budget this month or this year, surplus countries least of all.
And so we’ve got to have some give, particularly from the country, the biggest economy, the biggest
surplus, the biggest reserves, the fastest growth rate. If we can’t get together to bring that imbalance into
some semblance of progress, our relationship I think is pretty frayed and pretty tattered.

So there’s the usual wide agenda. The degree of difference on them, I think, differs. The degree
of importance of the issue is different. And even if Jean is right that it’s not anymore the most important
relationship in the world, that all these issues indicate that it’s quite important and we better be able to get
our acts together, at least better than we are now.

Okay, back to my hat as chairman. We’ve reached the witching hour. Unfortunately, no time for
discussion, so I’m going to bring the day to a conclusion. I want to do so by particularly thanking Jean
and Bruegel for being our partners in the exercise; thanking the European Commission for sponsoring and
supporting and enabling the whole thing to happen, particularly; and, he hasn’t gotten mentioned much
today, thanking Jacob Kirkegaard along with Nicolas Véron who organized the whole operation, but
Jacob was doing it here day to day. And I want to thank him particularly for making all this possible.

I also want to invite all of you to stay on, go back out in the patio, have another refreshment
before you leave, continue the discussion informally, but thank you all for coming.

Thanks particularly to this final panel, Jean, Mohamed, Sharon. Thank you all very much.

Meeting adjourned.