

**“World Trade and Exchange Rates: From the Pax Americana to a  
Multilateral New Order”**

**The Stavros Niarchos Lecture 2017**

**Peterson Institute of International Economics, Washington DC**

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**Mervyn King**

Secretary Summers, President, Mr. Dracopoulos, Director, Ladies and  
Gentlemen,

It is a great honour to be introduced by my friend Larry Summers – the most brilliant policy economist of our generation. As Treasury Secretary, Larry often reminded the other participants in international meetings that nothing of any significance happened in international economic policy without American leadership. I must admit that it is difficult to think of exceptions to the “Summers rule”. So it is a particular pleasure to speak on such matters here in Washington DC where past international initiatives, such as the Marshall Plan and later the creation of the G20, originated.

And it is a privilege to be invited to deliver the Stavros Niarchos Lecture in the Peterson Institute. All of us here tonight have cause to be grateful to the Niarchos Foundation for its generosity in supporting not just this lecture series but a wider programme of research at the Peterson Institute. When Fred Bergsten launched the Institute in 1981, few could have imagined the immense

contribution that it would make to economic policy over the following three decades. Fred, you should be immensely proud of your intellectual offspring.

Your successor, Adam Posen, is of course well known to me through his service as a member of the Bank of England's Monetary Policy Committee (MPC) from 2009 to 2012. Last week was the twentieth anniversary of independence of the Bank of England and the creation of the MPC. So tonight's lecture gives me an opportunity to thank Adam publicly for his contribution to monetary policy in Britain, and to remind you all that for his service he was made an Honorary Commander of the Most Excellent Order of the British Empire (CBE).

My talk this evening starts with another anniversary. One hundred years ago, on 6 April 1917, Congress declared war on Germany, and the United States entered the First World War. It was the start of a century during which America became the dominant global power, not just militarily but economically and financially as well. After half a century of conflict, the world emerged into the sunlight to enjoy a period of rapid economic growth underpinned by free trade under the American security umbrella, the *Pax Americana*. America first did not mean the rest of the world last. Free markets and open borders generated prosperity. But that very success contained the seeds of its own destruction. The rise of emerging market economies, and the continuing damage to the reputation and performance of the US economy from the financial crisis almost a decade ago, have diminished the importance of the industrialised world and created a backlash against the current system of international economic relations.

The inevitable transition from a regime of *Pax Americana* to a multipolar world brings us back, in some ways, to the situation before the First World War. Significant trade and financial links between the competing empires did not prevent their going to war. In 1909, the British author Norman Angell had published a book entitled *Europe's Optical Illusion* in which he argued that the

great economic interdependence of the European empires meant that conflict would be irrational. Sadly, the illusion was his. Germany felt that others had sewn up the opportunities for colonial expansion, leaving her with little room to find her own colonies and access to natural resources. Angell's idea that a world court would be able to resolve such international conflicts might have been attractive to a hypothetical set of countries behind philosopher John Rawls' "veil of ignorance". But countries never are in that position; they know their current interests and act accordingly.

The problem of creating any sort of world governance in the economic arena is precisely the same. Countries are not waiting to discover how big or important they will be; they know already and pursue their national interests. The failure to appreciate this has bedevilled proposals for reform of the international economy and the international monetary system for decades.

A multipolar world is inherently more unstable than the world of *Pax Americana*. How best to manage this challenging, if not brave, new world? Do we need new rules of the game for trade and capital flows in a world in which American dominance will no longer be its prime feature? Two years from now, we will celebrate the 75<sup>th</sup> anniversary of the Bretton Woods conference to settle arrangements for international trade and finance after the Second World War. As Paul Volcker remarked a few weeks ago, "Bretton Woods" is not a particular institution – it is an ideal, a symbol, of the never-ending need for sovereign nations to work together to support open markets in goods, in services, and in finance".<sup>1</sup> The Bretton Woods arrangements themselves proved only a short-term palliative to the problems of post-war reconstruction. Fixed exchange rates were possible only in a world of severe capital controls which crumbled as economic growth depended on private investment. After 1971, a new regime of floating exchange rates and domestic monetary policies based on a credible commitment to price stability became the late 20<sup>th</sup>-century equivalent

of the late nineteenth century flexible gold standard. But in turn that regime faded as emerging market economies pursued export-led growth by pegging their exchange rates to the dollar, and the infamous current account imbalances reached record levels.

I will organise my remarks around **three** topics that are as relevant today as they were at Bretton Woods: **first**, current account imbalances and their relationship with trade and exchange rate policies; **second**, the financing of current-account deficits and the resulting build-up of indebtedness; **third**, the reforms that are needed to the rules of the game that govern international trade and finance.

## 1. Current Account Imbalances

During and immediately after the financial crisis, current account imbalances shrunk as demand fell. Economists and policy-makers were focussed on preventing another Great Depression. With a modest recovery, there are signs that the imbalances are growing again. Current account imbalances are back in fashion – both in practice and in theory.

From 1945 until around 1980, restrictions on capital flows in the industrialised world meant that current account balances were small and financed largely by movements in official reserves. When a country's reserves were almost exhausted, it resorted to borrowing from the IMF, as the UK did in 1976. But since then the freeing up of capital movements has meant that in the industrialised world current account surpluses and deficits are the counterpart to swings in capital flows. And those flows are sensitive to expectations about future exchange rate policies. A crisis of confidence in the sustainability of the exchange rate regime can produce a sudden reversal of capital flows and either the abandonment of the regime or a sharp change in the current account, often necessitating a large fall in domestic demand. In many of these crises, whether

in Latin America, Asia, or, more recently, Europe, the IMF has stepped in to provide temporary financing to support adjustment to a sustainable path. But the largest imbalances have resulted from a sustained attempt to fix exchange rates at levels that are inconsistent with an underlying intertemporal equilibrium. The two examples that matter for the rest of the world are China and the European Monetary Union.

In January 1994, China pegged its currency against the dollar, after a devaluation of no less than 50%. In 2005, China moved to a crawling peg against the dollar, and in 2015 its currency was pegged against a basket of currencies which itself was enlarged in December last year. Although in recent months China has been intervening to support its currency in the wake of potential capital outflows, and in so doing has reinstated some of the capital controls eased earlier, the peg against a basket of currencies has meant it has depreciated further against the US dollar. China has had a large current account surplus for much of the past twenty years. In 2007, that surplus was 9.9% of Chinese GDP. It has since fallen and last year the current account surplus was a mere 1.8% of GDP. The sheer magnitudes of China's export surplus, and its high savings, were enough to start the unprecedented fall in real interest rates which has continued for a quarter of a century. Central banks in those parts of the industrialised world with current account deficits made no attempt to resist this fall, and indeed exacerbated it to boost domestic demand so as to offset the drag on total demand from their trade deficit. No country is blameless, and there is little point in trying to apportion blame for the outcome of a general equilibrium.

In the league table of current-account surpluses, China has now been replaced in first position by Germany. Since the early days of monetary union, the German current account surplus has risen steadily and reached 8 ½% of GDP last year. During my time at the Bank of England, the European authorities would dismiss

concerns about the German surplus because the euro area as a whole was broadly in balance. No longer. For the past five years, the current account surplus of the euro area was a cumulative \$1.52 trillion, far exceeding that of China of \$1.1 trillion. Over the same period the cumulative US current account deficit was just over \$2 trillion.

Table 1 (computed from the IMF WEO Database for April 2017) shows the imbalances among the G20 countries in 2016.<sup>2</sup> The euro area is assumed to be one country for this purpose. I have divided the countries into two groups – the high- and low-saving countries. They correspond to those with gross national saving ratios above or below 22 ½ %. The highest saving ratio in 2016 was 46% in China and the lowest, I regret to say, was 12 ½ % in the United Kingdom, even lower than in Argentina. This dividing line corresponds closely to the division between surplus and deficit countries; the exceptions being India and Indonesia which have high saving ratios but small current account deficits, Saudi Arabia, which has been affected by low oil prices and Turkey, which has unique problems. Together the G20 had a combined current account surplus of \$58.2 billion with the rest of the world in 2016.

The surpluses are concentrated in four countries - the euro area, China, Japan and Korea. Taken together, their combined current account surplus in 2016 was \$886 billion, just over 3% of their GDP. The deficits were also concentrated in four countries – the United States, United Kingdom, Canada and Australia. Their combined deficits were \$680 billion, just under 3% of their GDP. It is a striking example of the difference between the two “groups of four”: the Anglo-Saxon world, with its instinct of openness to trade and competitive financial markets, and Continental Europe and the Far East, with a more mercantilist outlook.

Do these current account imbalances matter? For some, the imbalances threaten jobs and prosperity. The new US Administration has set out its stall to reduce

the US trade deficit, even to the extent of embracing protectionism.<sup>3</sup> For others, capital flows, and their arithmetic counterpart current account surpluses and deficits, are the reflection of individual decisions to save and invest in different parts of the world. Provided the public sector does not run excessive budget deficits, private sector decisions will lead to an efficient allocation of investment and capital flows. In this view, imbalances are benign, a view sometimes known as the Friedman-Lawson doctrine.<sup>4</sup>

Can we reconcile these two positions? In his 2012 Ely Lecture, Maurice Obstfeld, now the Economic Counsellor at the IMF, gave three reasons for being concerned about current account imbalances.<sup>5</sup> First, the current account may be a symptom of underlying macroeconomic problems. Second, sudden reversals of capital flows induced by a concern about unsustainable deficits are costly in terms of a sharp reduction in domestic demand. Third, cumulative surpluses and deficits track the overall path of national indebtedness. In a sense these three all blend into one question: what is the distortion or market failure of which large current account imbalances are the symptom? After all, the Friedman-Lawson doctrine is the restatement of the efficiency property of a market economy. I want to suggest two reasons for the potential existence of a distortion of current and capital flows in the world economy.

The first is the distortion of real exchange rates when a country or bloc of countries fixes its exchange rate and is large relative to other countries. The Friedman-Lawson doctrine was given new life only a week or so ago when two of this country's elder economic statesmen, George Shultz and Martin Feldstein, wrote an op-ed in the *Washington Post* entitled "Everything you need to know about trade economics, in 70 words".<sup>6</sup> It is worth reciting:

"If a country consumes more than it produces, it must import more than it exports. That's not a rip-off; that's arithmetic. If we manage to negotiate a reduction in the Chinese trade surplus with the United States, we will have an increased trade deficit with some other country. Federal deficit spending, a

massive and continuing act of dissaving, is the culprit. Control that spending and you will control trade deficits”.

But we need to add ten more words “provided the dollar falls, stimulating domestic rather than overseas production”. And I fear this is the nub of the problem. It takes two to make an exchange rate. And as the Trump administration would argue – if the others won’t play ball, the dollar won’t fall, and jobs will be lost in the US. Fixing nominal exchange rates has led, in a world of downward wage rigidities, to distorted real exchange rates.

In their new book, Fred Bergsten and Joe Gagnon use the phrase “currency manipulators”, and define this behaviour in terms of foreign currency intervention. By this token, Norway is included in the list of currency manipulators and Germany is excluded. I prefer the term “currency distorters” because even if a country does not accumulate reserves through foreign exchange intervention it can, by creating an unsustainable set of fixed exchange or conversion rates, distort real exchange rates away from any conceivable notion of equilibrium. Monetary union in Europe has done precisely that, whereas Norway has sensibly created a sovereign wealth fund to invest overseas its oil and gas revenues to spread that newfound source of wealth over time.<sup>7</sup> So in my terms, Norway is not distorting exchange rates whereas the monetary union is. It follows that IMF rules should be modified to allow for currency distortion rather than currency manipulation.

The second source of distortion may be less familiar. It stems from the weak discipline imposed by intertemporal budget constraints in a world of intrinsic or radical uncertainty. It is impossible to know with any degree of confidence what our future real incomes will be, and so intertemporal budget constraints are inevitably “fuzzy”, in the phrase I used in my recent book.<sup>8</sup> No probability distribution captures the uncertainty facing households and businesses. Fuzzy constraints matter because when households can borrow and lend, the discipline

implied by a lifetime budget constraint is extremely weak in the short term, and inadequate to constrain mistaken judgements about sustainable levels of spending. It is possible, therefore, for spending to deviate from its sustainable level for a long period. And the longer this state of affairs persists, the greater the ultimate correction will be, as we saw when the Great Moderation came to an end. And the correction produced a first-order loss of output and employment.

In the deficit countries, central banks went along with the fall in real interest rates which had started with the growth of high-saving countries. No central bank could easily have stood out against this, except at the price of a domestic downturn, with little impact on the global economy. This collective action problem produced a fall in real interest rates to a level incompatible with any plausible relationship with long-term growth rates or household intertemporal preferences. As a result, the allocation of resources – both investment and consumption – has been distorted. Investment in some sectors will have to be written off, and consumption will have to grow along a different path than its pre-crisis trajectory. Although Keynesian policy stimulus was certainly necessary to prevent an even bigger downturn in 2008-09, it was and could not be a sufficient condition for a sustainable recovery. General demand stimulus will not resolve a distortion of spending patterns. Rather it leads to what Larry Summers has called “secular stagnation”, not from the supply side but from the demand side. With the major deficit countries close to full employment, there is no Okun gap. But nor is the distortion of spending patterns merely a Harberger triangle; its effect in lowering the path of growth constitutes what we might call a “Summers gap” with first-order implications for output and welfare.

The interdependencies between countries can be illustrated by a simple 3 by 3 table which I call “Sudoku for economists”. For the two blocs of countries I distinguished earlier, the high- and low-saving countries, Table 2 shows

domestic demand, the current balance and GDP in 2016. Total demand or GDP is the sum of domestic demand and net trade (for simplicity, I disregard the difference between the trade and current account surplus – as Bergsten and Gagnon point out in their new book the difference is small). I shall also ignore the rest of the world and divide the combined surplus of the G20 of \$58.2 billion equally between the two groups so that they are in balance overall.

Just as in a Sudoku puzzle, the nine numbers in the table cannot be chosen independently. Sudoku for economists is simpler than ordinary sudoku because the economic adding-up constraints mean that of the nine numbers in the table, only three can be chosen independently. So, for example, if both groups of countries want to achieve full employment levels of GDP, and the high-saving group targets a larger trade surplus, the low-saving group cannot target a reduction in its trade deficit. Either trade deficits must remain high, which is not likely to prove sustainable, or something else must give. That might involve a recession in the deficit countries, or an acceptance by the surplus countries that, one way or another, trade imbalances must be reduced. Sudoku for economists shows that countries cannot pursue for long incompatible economic policy frameworks.

Now for a little algebra. Imagine a world comprising two trading blocs of equal size, the high and the low savers. This is not such a bad approximation to the data shown in table 1. Table 3 shows the accounting identities relating GDP denoted by  $Y$  to domestic demand  $D$  and the excess of exports  $X$  over imports  $M$ . Imports are assumed to be a fixed proportion of total final demand and the two blocs have different import propensities,  $m_H$  and  $m_L$ , respectively.

Recognising that the imports of one block are the exports of another, the equilibrium levels of domestic demand in terms of the levels of GDP in the two blocs are shown in Table 3.

I want to consider two cases. The first is where both countries are at full employment and have the same level of GDP,  $\bar{Y}$ . Table 4 shows the equilibrium full-employment levels of domestic demand. The difference between domestic demand and output corresponds to the current account surplus or deficit. Suppose the import propensities of the high-saving countries was 0.15 and that of the low-saving bloc was 0.175. Then the current account balance would be 3.6% of GDP. Again, this is not far off the numbers shown in Table 1.

But suppose that for some reason, the deficit countries could no longer borrow to finance an external deficit, and that therefore the current account balance must be zero in both blocs. And suppose that the exchange rate was fixed so that import propensities remained unchanged. What would happen to the levels of output and demand? Table 4 shows the relative levels of output in the two blocs. The low-saving bloc is forced to accept a reduction in both demand and output relative to the high-saving bloc. This illustrates the famous asymmetric obligations on surplus and deficit countries. If the high-saving bloc maintains full employment, then with the numerical values for the import propensities of 15% and 17.5% used earlier. Output in the low-saving bloc falls by almost 17%.

The answer to this conundrum is of course to allow exchange rates to move, changing the import propensities of countries in such a way as to allow full employment to be restored. The failure to allow exchange rates to adjust has exacted a large toll in terms of lost output and employment. And that is exactly what we have seen within the European Monetary Union over the past decade. Output has had to fall by enough to eliminate external deficits in the southern periphery countries. In Italy, GDP is barely higher than in 2000, and Greece has suffered an even larger fall in output than in my simple numerical example.

Some commentators have argued that as a surplus country Germany should expand domestic demand by deploying expansionary fiscal policy. After all, it currently has a budget surplus. In the WEO of April this year, the IMF, for example, advised that, “In countries with fiscal space, such as Germany, fiscal policy should be geared toward bolstering productive capacity as well as demand. In turn, this would help reduce their current account surpluses, support intra-euro-area rebalancing, and generate positive demand spill-overs for others”. But such a recommendation makes little sense. Germany is already at full employment. It does not need greater demand overall; it needs a higher real exchange rate to rebalance demand away from exports towards domestic spending. The problem in Germany is not that fiscal policy is too tight, but that it has a markedly undervalued real exchange rate.

The two sources of market failure suggest a flaw in the international monetary system. I shall proceed with caution down the path on which many have trod. At the Bretton Woods Conference, John Maynard Keynes identified the asymmetry of the obligations placed on surplus and deficit countries as the main source of the problem. Surplus countries could accumulate assets indefinitely but deficit countries could not go on borrowing without limit.

Keynes made little progress in persuading the American delegation, led by Harry Dexter White, of the need for a system of symmetric obligations. In his own Niarchos Lecture four years ago, Fred Bergsten stressed that “The single greatest flaw in the entire international financial architecture is its failure effectively to sanction surplus countries”.<sup>9</sup>

But there are two problems in trying to create a system of sanctions, or more fairly stated, an insurance scheme for countries trading under internationally agreed rules. The first is the difficulty of quantifying distortions in real exchange rates. The second is that insurance depends on the veil of ignorance – you cannot take out insurance once the accident has happened. The reasons for

Keynes's lack of success at Bretton Woods and the resistance of surplus countries today to any suggestion of sanctions are the same. The US then and surplus countries today are not operating behind the veil of ignorance. Harry Dexter White knew that he was in no need of insurance. And Keynes knew that he could not afford to buy it. It is the circumstances that are asymmetric, not the obligations. Harry Dexter White and Fred Bergsten were born fifty years apart.

## 2. The Financing of Imbalances and Indebtedness

Cumulative deficits imply an increase in indebtedness. And we should be concerned about the level of debt in the world today. It is higher than before the financial crisis, and at the end of last year had reached, according to the Institute for International Finance, \$217 trillion or some 325% of world GDP. As Larry Summers remarked in his 2004 Niarchos Lecture, "There is surely something odd about the world's greatest power being the world's greatest debtor".

The retort from the advocates of the Friedman-Lawson doctrine is that "there's nothing wrong with being a debtor nation ... If the debt has been accumulated to get assets".<sup>10</sup> But President Trump is not the only one to look in vain for signs of significant accumulation of productive assets, whether public infrastructure or business plant and machinery. Extremely low real interest rates – yesterday the 10-year real rate on TIPS was 0.5% - have boosted asset prices and the debt required to finance higher asset values. When interest rates rise, asset prices will fall back relative to income levels. But debt burdens will remain unaltered. The next financial crisis may well start with a few uncoordinated defaults that lead to a wave of debt restructurings.

Time does not permit a proper examination of the **composition** of capital flows and national balance sheets. They reflect the gross flows of capital among

countries. Gross flows matter because the assets of some economic agents may not be available to service the debt of others – we do not live in an economic commune. As Hyun Song Shin, Economic Adviser of the BIS, recently pointed out, in the crisis “the current account revealed little about the underlying vulnerabilities”. I remember commissioning an internal paper from staff at the Bank of England where I gave them only the title: “Why the United Kingdom is a hedge fund”. In essence, the UK had borrowed short and lent long, earning a profit on the turn, in the same way as the United States with its so-called “exorbitant privilege”. Earning a higher return on risky overseas investments than the interest paid on overseas liabilities may reconcile continuing current account deficits with a stable net international investment balance. But the cost is a growing maturity mismatch between assets and liabilities on the national balance sheet. That came home to roost in the financial crisis. Much of the rise in external indebtedness and in maturity mismatch in the industrialised world was closely associated with the expansion of their domestic banking systems. Whereas the stock of assets and liabilities to GDP reached only 1.5 times GDP in the United States, it reached six times or more in the UK, the Netherlands, Switzerland, and, of course, Ireland and Iceland, and almost all those differences reflect the size of the banking system.

Before the widespread abolition of capital controls, concerns about capital flows were focused on the size of foreign exchange reserves and the adequacy of access to official liquidity to enable countries to trade. Nowadays private capital flows dominate official flows. It is worth pointing out, however, that at the end of last year official foreign exchange reserves identified by the IMF were held predominantly in the currencies of the Anglo-Saxon “group of four” – a total of 5.7 trillion dollars compared with only 2 trillion dollars in the currencies of the Continental Europe and Far East “group of four”.<sup>11</sup>

In a world of free capital movements, what matters is the maturity mismatch of the national balance sheet, and of the banking system in particular. Forty-five years ago, John Williamson wrote the definitive survey of international liquidity.<sup>12</sup> Anticipating a world in which official reserves were no longer the only source of financing, John argued that a country's international liquidity might best be measured as "a weighted sum of its foreign assets, liabilities, commitments and credit lines. The weights would represent the authorities' estimates of the fractions of the various instruments or credits that they could expect to activate or have drawn". This concept has a remarkable similarity to my own proposals for measuring the effective liquid assets of a bank and relating them to its liquid liabilities – the idea that a central bank should act as a pawnbroker for all seasons.<sup>13</sup> Since the maturity mismatch on national balance sheets is predominantly concentrated in the banking sector, it suggests that if banks had to maintain effective liquid assets sufficient to cover their runnable liabilities – as in my proposal – then national maturity mismatch could be handled in practice, by domestic banking regulation, avoiding the need for an international agreement on the size and composition of capital flows.

### **3. Reforms to the Rules of the Game**

Finally, how should we reform the international monetary system? We need rules, an impartial referee, and a governing body. Bretton Woods created a set of rules dealing with changes in exchange rates and the short-term financing of current account deficits, a referee in the shape of the International Monetary Fund, and a governing body in the form of the IMF Executive Board. All three need to be adapted to a world in which the *Pax Americana* is giving way to a multipolar arrangement. A full-time Executive Board resident in Washington is an anachronism in an age of jet travel, even allowing for the infrastructure of US airports. Replacing the Executive Board by a new governing body

comprising the finance ministers of the G20 would streamline and improve the governance of the Fund. And as the referee, the Managing Director should no longer be drawn exclusively from its European members.

In terms of rules, we still need a sovereign default mechanism. But the big issue is the rules of the game for exchange rates and current account imbalances. Since the Bretton Woods regime broke down, two very different approaches have been canvassed. The first is a phased return to fixed exchange rates. In the early 1980s, Fred Bergsten and John Williamson suggested the concept of “target zones” for exchange rates, and the idea influenced official policy for a while after the Louvre Agreement in 1987.<sup>14</sup> In his 1996 book *The Rules of the Game*, Ron McKinnon went much further and advocated a common monetary standard in which target zones for the three biggest currencies (today, the dollar, yen and the euro) would be supported by concerted intervention.<sup>15</sup> The margin of fluctuations would, he anticipated, be reduced to no more than 1% once inflation and long-term interest rates had converged. That is very small in comparison with the actual movements in exchange rates. The effective exchange rate of the dollar, for example, has risen by over 30% over the past five years. Of course, a target zone regime would in the first instance reduce the volatility of exchange rates. But would it be credible? Experience of target zones has not been encouraging. Provided markets have confidence in the regime itself, then speculation may be stabilising. But once the credibility of the regime is called into question, speculation will be impossible to resist. We saw that in the early 1990s with the Exchange Rate Mechanism in Europe. And shocks to equilibrium real exchange rates, such as German unification, a war, or the discovery of new resources, cannot easily be achieved solely through internal devaluations, as we see today in Europe. Moreover, as we move into a multipolar world, more than three currencies would be required to participate in

the arrangements. Before long, the zones would be widened and we would be back to roughly where we are today.

The other approach, represented by the new book by Fred Bergsten and Joe Gagnon, is to embrace floating exchange rates and to adopt countervailing foreign currency intervention as the main instrument to prevent currency manipulation.<sup>16</sup> But finding agreement on a common set of criteria for intervention would be difficult for the same reason that Keynes failed at Bretton Woods. You cannot take out insurance once the accident has happened. Countries cannot retreat behind the veil of ignorance which is why mechanisms to enforce action on surplus countries are unlikely to be agreed or enforced.

Enlightened self-interest, supported by the IMF behind the scenes, is the only plausible way forward. Surplus and deficit countries have a common interest in allowing a deficit country to restore its competitiveness and service its external debts. Failure to do so will lead either to a downturn in demand affecting both sets of countries, as we have seen since the financial crisis, or a probable default on liabilities to the surplus countries, as we see today in Europe and as happened in Germany in the interwar period.

How could US leadership make a difference. We don't hear much these days about four-power conferences. But the US and UK, as the largest deficit countries, could work with China and the euro area, as the two biggest surplus blocs, to find a mutually advantageous path to restore growth. The US may need to make threats behind the scenes and the euro area will need to recognise the importance of ending the current muddling through and slow growth. But the US has an opportunity now to try to persuade two or three other countries that together they could put together a deal. And deals are flavour of the month.

#### 4. Conclusions

Two sources of market failure relate to the scale of current account imbalances. One is the weak discipline which an intertemporal budget constraint imposes on current spending, and hence the sustainability of external deficits, in an environment of radical uncertainty. For over twenty years a collective action problem has made it impossible for any one country to prevent the resulting unsustainable fall in real interest rates. The other is the deliberate distortion of real exchange rates which I distinguished from currency manipulation.

What is to be done? Neither source of market failure lends itself to simple formulae to calibrate either currency distortion, on the one hand, or excessive imbalances, on the other. An even more fundamental problem is that an insurance arrangement cannot be introduced after the accident has happened. To introduce compulsory obligations on surplus countries would be an unacceptable attack on national sovereignty, as we see only too clearly in Europe today. Even with reforms to the IMF, there is no prospect that it will be able to act as an international referee with the power to award penalties and flourish red cards. A better role for the IMF is to work behind the scenes to create a sense of mutual trust so that countries will feel emboldened to rebalance their economies and overcome the collective action problem through enlightened self-interest.

Following the financial crisis, the US and the G7 gave other countries the chance to play a bigger role in the management of the international monetary system by leaving the stage to the G20. It has not lived up to the role. The *Pax Americana* may be coming to an end; but the *Pax Globus Viginti* is unlikely to replace it. American leadership will be vital. Rather than acting as the cheerleader of the euro area, the biggest currency distorter in the world, Washington should try its best to make the leaders in Europe confront hard decisions about the future of the euro. A little more “ruthless truth-telling”, in

Keynes's phrase, would not go amiss. President Macron and German leaders have said that the euro won't survive another decade without fundamental reform – the problem is that they have diametrically opposite views about the direction of that reform.

The Smoot–Hawley Tariff Act of 1930 spread the destruction of the Great Depression to the rest of the world. In 1878, a namesake, Richard Hawley, wrote a pamphlet extolling the benefits that free trade would bring to the United States, citing the example of England.<sup>17</sup> Free trade would reduce the problem of smuggling on the Mexican border. Alongside free trade in goods, Hawley recommended controlling immigration and replacing unjust tariffs by directly taxing the rich. He was obviously a man ahead of his time. Only 64 pages long, Hawley's book would make the perfect birthday present for President Trump in four weeks' time. But President Trump is right when he identifies a problem with current international trading and monetary relationships. Change is needed, and Summers' Rule means that only American leadership can bring it about.

**Table 1****G 20 Data for Sudoku Table, 2016**

Country	GDP \$billion	Current Account \$billion	National Saving Rate Gross, % of GDP
<b>High-Saving Countries</b>			
Euro area	11,878.5	399.8	23.9
China	11,218.3	196.4	45.8
Japan	4,938.6	191.0	27.2
Korea	1,411.2	98.7	36.2
Russia	1,280.7	22.2	27.4
Indonesia	932.4	-16.3	32.5
India	2,256.4	-20.9	30.5
Saudi Arabia	639.6	-24.9	26.4
Turkey	857.4	-32.6	24.9
Total	35,413.1	813.4	
<b>Low-Saving countries</b>			
United States	18,569.1	-481.2	19.1
United Kingdom	2,629.2	-114.5	12.6
Canada	1,529.2	-51.1	19.5
Australia	1,286.0	-33.2	21.8
Mexico	1,046.0	-27.9	20.6
Brazil	1,798.6	-23.5	16.1
Argentina	545.1	-14.2	12.8
South Africa	294.1	-9.6	16.2
Total	27,697.3	-755.2	

**Table 2: Sudoku for Economists, 2016**

	<b>Domestic Demand</b>	<b>Current Balance</b>	<b>GDP</b>
<b>High-Saving Countries</b>	<b>34,629</b>	<b>784</b>	<b>35,413</b>
<b>Low-Saving Countries</b>	<b>28,482</b>	<b>-784</b>	<b>27,697</b>
<b>Total</b>	<b>63,110</b>	<b>0</b>	<b>63,110</b>

Source: IMF WEO Database April 2017.

**Table 3: Two Trading Blocs**

$$Y_i = D_i + X_i - M_i \quad i = H, L$$

$$M_i = m_i (D_i + X_i) \quad i = H, L$$

$$D_H = \frac{Y_H}{(1 - m_H)} - \frac{m_L Y_L}{(1 - m_L)}$$

$$D_L = \frac{Y_L}{(1 - m_L)} - \frac{m_H Y_H}{(1 - m_H)}$$

### Table 4: Asymmetric Obligations

#### Case 1: Full Employment Equilibrium

$$D_H = \bar{Y} \left\{ 1 + \frac{m_H - m_L}{(1 - m_H)(1 - m_L)} \right\}$$

$$D_L = \bar{Y} \left\{ 1 + \frac{m_L - m_H}{(1 - m_H)(1 - m_L)} \right\}$$

$$CA = \frac{m_L - m_H}{(1 - m_H)(1 - m_L)} \bar{Y}$$

If  $m_H = 0.15$  and  $m_L = 0.175$ , then  $CA / \bar{Y} = 0.036$

#### Case 2: No trade deficit possible

$$\frac{Y_L}{Y_H} = \frac{m_H}{m_L} \frac{(1 - m_L)}{(1 - m_H)} < 1$$

With  $m_H = 0.15$  and  $m_L = 0.175$  and  $Y_H = \bar{Y}$ :

$$Y_L = 0.832 \bar{Y}$$

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## Endnotes

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<sup>1</sup> Remarks by Paul A. Volcker at the 2017 Annual Meeting of the Bretton Woods Committee, April 19, 2017.

<sup>2</sup> The members of the G20 are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union.

<sup>3</sup> In his inaugural address, President Trump said that, “Protection will lead to great prosperity and strength” (January 20, 2017, Washington, DC).

<sup>4</sup> After Nigel Lawson, the British Chancellor of the Exchequer in the 1980s.

<sup>5</sup> Obstfeld (2012).

<sup>6</sup> “Everything you need to know about trade economics, in 70 words”, George P. Shultz and Martin Feldstein, *The Washington Post* May 5, 2017.

<sup>7</sup> Hence avoiding so-called “Dutch disease” in which the discovery of natural resources unaccompanied by the investment of the proceeds overseas pushes up the exchange rate and destroys domestic manufacturing.

<sup>8</sup> King (2016).

<sup>9</sup> I have changed the split infinitive in the original text on the PIIE website.

<sup>10</sup> Friedman (1987).

<sup>11</sup> IMF press release on the currency composition of foreign exchange reserves including holdings in renminbi, 31 March 2017.

<sup>12</sup> Williamson (1973).

<sup>13</sup> King (2016).

<sup>14</sup> Bergsten and Williamson (1983).

<sup>15</sup> McKinnon (1996).

<sup>16</sup> Bergsten and Gagnon (2017).

<sup>17</sup> Hawley (1878).