October 25 1996

ECONOMIC AND MONETARY UNION -- A VIEW FROM OUTSIDE

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1. I am delighted to have this opportunity to visit Ireland for the first time, and to have been invited to talk about EMU with such a distinguished audience. EMU is a great political enterprise, the vehicle chosen to take the process of European integration forward. The consequences of a failure of that enterprise would be so profound that we can be sure that every effort will be made by responsible politicans to ensure it will succeed.

2. We meet at a time when EMU seems to be becoming inevitable. Confidence is growing that exchange rates among a majority of the fifteen members of the EU will be irrevocably locked on Friday January 1 1999, 113 weeks from today. The questions about EMU used to be whether and, if so, when; now they are becoming how many will make it on the first round, what will happen to the others, how will it work, and how it can be made to work better.

3. The European mood in the 1990s has been quite volatile, and there is no guarantee that the recent burst of Euro-optimism will not be replaced by another spell of Euro-pessimism sometime in 1997. Today's optimism is based in part on the expectation of a return to moderate rates of growth in most European countries, particularly Germany, in 1997, as can be seen in the most recent WEO forecasts (Table 1). If growth were for some reason to be much slower than forecast, if the expected recovery does not materialize, especially in France or Germany, the mood could swing back towards pessimism. But that is not the likely outcome, and it is not one on which I will dwell.

[1] International Monetary Fund. This is the outline of a lecture to be delivered at the Economic and Social Research Institute, Dublin, on October 25 1996. Views expressed are those of the author, and not necessarily the IMF.

4. There are many technical questions about EMU and the introduction of the Euro, about how exchange rates will be fixed, whether to shift to the use of the Euro in a big bang or gradually, and about the mechanics of the new monetary system. There is also a set of questions of great interest to the IMF, about the potential role of the Euro in the international monetary system of the twenty first century. Those are among the many fascinating issues I will not take up. Rather I will start by discussing how many countries are likely to make it on the first round and what will happen to the others, then discuss how well this currency union should be expected to work, and what can be done to make it work better. At the end of my talk, I will touch briefly on possible future relations between the ECB and the IMF.

I. The Entering Class and the Pre-ins

5. The entry criteria are set out in Table 2, and Tables 3-5 show how the fifteen countries have done in meeting the criteria. The convergence of inflation rates within the EU has been extraordinary, and all countries but Greece are expected to meet the inflation criterion in 1997 (Table 3). Similarly, all countries but Greece should pass the long-term interest rate test (Table 4). But the fiscal data in Table 5 display a much more shady outlook. Almost no country satisfies the 60 percent debt criterion, and the budget deficit picture is also shaded, particularly when one recognizes that there is considerable scepticism among some about whether budget outcomes will match intentions.[2] Since the widening of the ERM bands, there has been some uncertainty about how to interpret the exchange rate criterion, particularly for countries not in the ERM. (See Charts 1 and 2 for recent exchange rate behavior.)

6. Chart 3 is very useful in discussing who might be eligible for entry. Only Luxembourg will be eligible under a strict interpretation of the articles. Some, notably the Bundesbank, are insisting on a strict interpretation of the deficit criterion, but they appear willing to allow some flexibility on the debt criterion provided the country is making progress towards reducing the debt to GDP ratio -- as allowed by the Treaty.

7. It seems clear from a reading of the treaty that the decision on EMU eligibility does not require a strict interpretation of the criteria. There is though a very serious question about German participation, and whether the German Constitutional Court can or will insist on a strict interpretation. Equally critical is the question of what the German electorate will allow. That remains to be seen; at this stage it makes no sense for those anxious to ensure that initial conditions for EMU are as good as possible to announce that flexibility will be shown. I shall for purposes of this lecture assume that there will in practice be some flexibility about the entry criteria, but not much.

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[2] Stephanie Flanders (FT, October 21 1996), "A deficit of credibility", reports for Italy, Spain, and Portugal, targets of 3.0,

8. The critical issue will be the government budget deficit. It will be hard for most countries to make 3.0 percent in 1997, honestly. Nonetheless, it is widely assumed that EMU will begin on January 1 1999. At one point it was believed that the initial group would consist of Germany, France, Belgium, Luxembourg, the Netherlands, Austria, and -- if I can be excused for guessing what will happen in your country -- Ireland. Now it is likely that Finland will also be in from the beginning.

(i) Talk about problems in that group -- including creative accounting. Particularly the French problem.

(ii) Then talk about the Club Med group, Spain, Portugal, and Italy.

• These countries want in at the beginning.

• Note that Italy will have a huge payoff from lower interest rates. • The de Grauwe point about the bargaining between north and south.

But the south gets lots of transfers.

(iii) That leaves the UK, Denmark, and Sweden, each of which might be able to make it on the first round, and Greece, which will not.

(iv) UK

• Big enough to go it alone. Says it wants to be in a position to choose.

• Should it go in? The economics is not decisive, although the role of the City could perhaps be affected. Entry would likely significantly reduce long-term interest rates in the UK, bringing an economic benefit along the lines that has been analyzed in the Irish case.

• The question is largely political, whether the UK wants to be in Europe, and help shape it. But it seems politically impossible for it to go in now, despite the changes of opionion one detects for instance in the two powerful op-ed pieces by Martin Wolf in the FT earlier this month.

• This is an issue of historical dimensions, and perhaps, as at the time of the Corn Laws, it could eventually lead to a political realignment.

(v) Sweden: has used the exchange rate successfully in the past. May look a bit like Ireland, but Ireland is not so dependent on one export. The UK issue for Ireland, depends on how stable the sterling exchange rate will be.

(vi) Reflections on the process so far:

• Has brought fiscal and monetary discipline to EU member countries -- has provided the framework for their monetary and fiscal policies. Of course, other countries have achieved the same results, US, Canada, NZ

• Fiscal framework especially NB -- generally missing, cf CBI, but see also NZ and Australia.

• Has this process caused slow growth? Hard to say. I do believe that the fiscal pressures have reduced growth somewhat, and will do so in 1997, but Ireland is one of the countries which have shown that fiscal contraction may be expansionary. It's also not clear whether it's the declining inflation or the fiscal contraction that's done the work.

• Could EMU be blown off course? Yes -- that's why there's an argument for further monetary easing in Europe at the present time, when the dangers of inflation are minimal.

9. EMS2 Much discussion of exchange rates of the Outs after Jan 1 1999, or the Pre-ins. (Depending on how I'm doing with time, will either not go into it, or briefly discuss the conditionality approach with intervention in support of bands by the ECB, vs the inflation targeting approach.)

II. Stage 3

10. The designers of EMU (and don't forget the E) were initially concerned about letting only the good behavers in. At that point they focused on the design of the ECB. Now they are beginning to worry about how the ins will conduct policies when they are in.

11. The ECB Much fear about its independence, and about how it will work. Contrasting views -- the Germans seeing it as the Bundesbank writ large, the French tending to see it as the Bundesbank tamed. Those visions are not consistent, but the gap between them will in practice be small, and it is hard to believe that the ECB will be inflationist -- rather there will be marginal disagreements, for instance whether to cut rates now, with no serious consequences for inflation. Money versus inflation targets -- my views.

12. The stability pact See Table 6 of the handout. The German view is that it is essential to minimize the strains that policies put on the overall system, especially the ECB, and on interest rates. Surprised they don't rely more on the capital markets to discipline fiscal policy. (Report on US state and Canadian provincial interest rate differentials -- Table 7 (note I think Table 7 should be 1986-1995, Chart 4). Surprised also they don't put more faith in the independence of the central bank -- they're adopting a belt and braces approach

13. Surveillance Continual surveillance of member policies. Of course, the Fund is also willing to do its part.

III. Will it work?

14. Since World War II, Europeans have brilliantly created economic institutions for political as well as economic ends. EMU is a further audacious step in that process -- audacious not because it is sudden, nor because it has not been thought out, but because it is big, and the costs of failure would be high. That indeed is part of the brilliance of the design.

15. The economic issues have been extensively debated. The gains from complementing the single market, smaller transaction costs, larger capital market, ~~the~~ stability framework for macro policies, for most countries probably lower interest rates. But European countries are giving up the exchange rate as an instrument of adjustment to external or internal shocks. In a well-managed country, exchange rate adjustments can smooth the adjustment to shocks. That could happen in a floating rate regime, or in an adjustable peg system. We also know though that exchange rate adjustments have not taken place solely to promote optimal adjustment -- sometimes they accommodate bad macroeconomic policies, sometimes the suspicion is that the markets cause exchange rates to overshoot. So the disappearance of the exchange rate from the policymakers' toolkit is not an unmitigated loss. (Adam and Eve story).

16. What are the other adjustment mechanisms?

- Fiscal (cf US and Canada)
- Labor flows (the difference with the US)
- Capital flows
- Wage and price flexibility.

17. Will it work? Some of these adjustment mechanisms can be affected by policies, especially the structural labor market policies that the Europeans are sick of hearing about. It may well be that the fiscal mechanisms will develop over time. In the end, so will wage and price flexibility develop, but there could be a quite lengthy period of adjustment. And do watch the rate of inflation, it should be very low, but it can be

too low.

18. Does the system have a deflationary bias? It could have, if monetary policy tries to push too rapidly to actual price stability, rather an inflation rate in the 1-3 percent range.

IV. The bottom line

19. It may take a long time to adjust to EMU, structural policies will make a huge difference, recognition of the need to compete in world markets will help too, but it will most likely work. Future generations will be grateful for the decisions being made now in Europe -- and not only nor even mainly for economic reasons.

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Tables for

EUROPEAN UNION – A VIEW FROM OUTSIDE [1]

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[1] Lecture to be delivered at the Economic and Social Research Institute, Dublin.

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1:40pm

Table 1. European Union: Real GDP

(Annual percentage change)

	1990	1991	1992	1993	1994	1995	1996	1997
Austria	4.3	2.8	2.0	0.4	3.0	1.8	0.7	1.0
Belgium	3.4	2.2	1.8	-1.6	2.2	1.9	1.4	2.4
Denmark	1.4	1.3	0.2	1.5	4.4	2.8	1.9	2.5
Finland	0.0	-7.1	-3.6	-1.2	4.4	4.2	2.7	4.1
France	2.5	0.8	1.2	-1.3	2.8	2.2	1.3	2.4
Germany	5.7	5.0	2.2	-1.1	2.9	1.9	1.3	2.4
Greece	0.0	3.1	0.4	-1.0	1.5	2.0	2.5	2.7
Ireland	8.0	2.1	4.0	3.1	6.5	10.3	7.0	5.5
Italy	2.1	1.2	0.7	-1.2	2.2	3.0	1.1	2.2
Luxembourg	3.4	5.4	5.8	8.5	4.1	3.5	3.0	3.5
Netherlands	4.1	2.3	2.0	0.2	2.7	2.1	2.2	2.5
Portugal	4.0	2.2	1.7	-1.2	0.7	2.3	2.3	2.8
Spain	3.7	2.3	0.7	-1.2	2.1	3.0	2.2	2.9
Sweden	1.4	-1.1	-1.4	-2.2	2.6	3.0	1.6	2.3
United Kingdom	0.4	-2.0	-0.5	2.1	3.9	2.5	2.2	3.0
EU-15	3.0	1.6	1.0	-0.5	2.8	2.5	1.6	2.5
Memorandum								
United States	1.3	-1.0	2.7	2.3	3.5	2.0	2.4	2.3
Japan	5.1	4.0	1.1	0.1	0.5	0.9	3.5	2.7

Sources: Staff estimates and projections in the IMF, World Economic Outlook, October 1996, and subsequent revisions.

Table 2. Convergence Requirements of the Maastricht Treaty

According to the Maastricht Treaty, the readiness of EU member countries to participate in Stage 3 will be assessed on the basis of convergence criteria in the areas of public finance, inflation, long term interest rates and the exchange rate. The relevant criteria are:

- The financial position of the member's government must be sustainable, as evidenced by the country not being subject to an excessive deficit finding. In particular, the general government deficit should not exceed the treaty's reference value of 3 percent of GDP, or it should have declined substantially and continuously and have reached a level close to the reference value or the excess over the reference value should be temporary and exceptional. The gross debt of the general government should not exceed the reference value of 60 percent of GDP or, if it does, it should be sufficiently diminishing and approaching the reference value at a satisfactory pace.

- Consumer price inflation should not exceed that of the three best performing countries by more than 1½ percentage points and this performance should be sustainable.

- The interest rate on long-term government bonds should not exceed by more than 2 percentage points that of the three member states with lowest inflation.

- A country should have respected the "normal" fluctuation margins of the ERM for two years without severe tensions and without devaluing on its own initiative.

The treaty also mentions a number of other factors that should be addressed, including the results of the integration of markets, the balance of payments on current account, unit labor costs and other price indices. However, there is no provision for a broad consideration of developments in labor markets, although labor market policies have subsequently been attracting increasing focus in the context of EU surveillance.

Table 3. European Union: Consumer Prices 1/

(Annual percentage changes)

	1991	1992	1993	1994	1995	1996 2/	1997 2/
Austria	3.3	4.1	3.6	3.0	2.2	2.1	1.9
Belgium	3.2	2.4	2.8	2.4	1.5	2.0	2.0
Denmark	2.4	2.1	1.2	2.0	2.1	2.0	2.4
Finland	4.1	2.6	2.2	1.1	1.0	1.0	2.0
France	3.2	2.4	2.1	1.7	1.8	2.1	1.6
Germany	3.5	5.1	4.5	2.7	1.8	1.6	1.7
Greece	19.5	15.8	14.5	10.9	9.3	8.4	6.6
Ireland	3.2	3.1	1.4	2.3	2.5	2.3	2.5
Italy	6.3	5.2	4.5	4.0	5.2	3.9	3.0
Luxembourg	3.1	3.2	3.6	2.2	1.9	1.8	2.0
Netherlands	3.1	3.2	2.6	2.7	2.0	2.5	2.9
Portugal	11.4	8.9	6.5	5.2	4.1	3.3	3.0
Spain	5.9	5.9	4.6	4.7	4.7	3.4	3.1
Sweden	9.3	2.3	4.6	2.2	2.5	1.6	2.3
United Kingdom	6.8	4.7	3.0	2.4	2.8	2.7	2.4
EU-15	5.1	4.5	3.7	2.9	2.9	2.6	2.3
Memo items:							
Maastricht reference value 3/	4.4	3.8	3.1	3.1	2.9	2.9	3.2

Source: Staff estimates and projections in the IMF World Economic Outlook, October, 1996, and subsequent revisions.

1/ Data are shaded where they are in excess of the Maastricht reference value, assuming that the reference value is calculated as set out in footnote 3.

2/ Projections.

3/ Data definition may not correspond exactly with those that will be used in assessing compliance with the treaty. The calculation of the reference value assumes that the 1½ percentage point margin provided in the treaty will be added to the average of the three best rates. The EMI's 1995 convergence report illustrated alternative calculations of the reference value.

Table 4. European Union: Long-term Government Bond Yields 1/

(In percent)

	1991	1992	1993	1994	1995	Oct. 23 1996
Austria	8.6	8.3	6.6	7.0	7.1	6.1
Belgium	9.4	8.8	7.2	7.6	7.4	6.1
Denmark	9.3	8.9	7.2	7.9	8.3	6.8
Finland	11.9	12.1	8.2	8.4	8.0	6.4
France	9.0	8.6	6.9	7.4	7.6	6.0
Germany	8.5	7.8	6.4	7.1	6.9	6.0
Greece 2/	23.3	21.5	21.2	19.2	15.6	13.1
Ireland	9.2	9.3	7.6	8.1	8.2	6.5
Italy	13.1	13.7	11.3	10.7	12.0	8.3
Luxembourg	8.1	7.9	6.9	7.7	7.6	...
Netherlands	8.7	8.1	6.5	7.2	7.2	5.9
Portugal	17.8	15.4	12.4	10.8	10.3	7.6
Spain	11.4	11.7	10.2	9.9	11.2	7.8
Sweden	10.7	10.0	8.5	9.4	10.3	7.2
United Kingdom	10.1	9.1	7.5	8.2	8.2	7.6
EU-15	10.3	9.9	8.1	8.4	8.6	6.8
Memo Item: Maastricht reference value 3/	10.7	11.2	9.2	9.9	9.7	8.5 4/

Source: World Economic Outlook, October, 1996, and Reuters for latest data.

1/ Data are shaded where they are in excess of the Maastricht reference value, assuming that the reference value is calculated as set out in footnote 3.

2/ Twelve-month treasury bill rate.

3/ Data definition may not correspond exactly with those that will be used in assessing compliance with the treaty. The calculation of the reference value assumes that the 2 percentage point margin provided in the treaty will be added to the average of yields in the three countries with the best inflation performance. The EMI's 1995 convergence report presented alternative calculations of the reference value.

4/ The reference countries are the three countries with the lowest inflation rates based on year-average data for 1996.

Table 5. European Union: General Government Budgetary Positions 1/

(As percentage of GDP)

	1991	1992	1993	1994	1995	1996 2/	1997 2/
General Government Balance							
Austria	-2.6	-1.9	-4.1	-4.5	-6.2	-4.5	-3.0
Belgium	-6.7	-7.1	-7.0	-5.0	-4.1	-3.3	-2.9
Denmark	-2.1	-2.9	-3.9	-3.5	-1.6	-1.3	-1.0
Finland	-1.5	-5.9	-8.0	-6.3	-5.2	-2.9	-1.8
France	-2.0	-4.0	-5.8	-5.8	-5.0	-4.0	-3.0
Germany	-3.3	-2.8	-3.5	-2.5	-3.5	-4.0	-3.0
Greece	-11.5	-12.3	-14.2	-12.1	-9.2	-7.6	-6.0
Ireland	-2.1	-2.3	-2.3	-2.3	-2.1	-2.4	-2.3
Italy	-10.2	-9.5	-9.6	-9.0	-7.1	-7.0	-4.0 3/
Luxembourg	-0.4	-0.8	0.5	0.9	0.4	–	–
Netherlands	-2.9	-3.9	-3.2	-3.6	-3.8	-2.8	-2.5
Portugal	-6.4	-3.3	-7.0	-5.7	-5.2	-4.0	-3.0
Spain	-5.0	-4.4	-7.5	-6.7	-6.9	-4.6	-3.4
Sweden	-1.1	-7.8	-12.3	-10.8	-8.1	-3.9	-2.6
United Kingdom	-2.5	-6.3	-7.8	-6.8	-5.5	-4.4	-3.3
EU-15	-4.4	-5.2	-6.5	-5.8	-5.2	-4.6	-3.3
General Government Gross Debt							
Austria	58.7	58.3	62.8	65.0	69.4	72.3	73.8
Belgium	130.2	131.5	137.0	135.1	133.7	130.4	127.0
Denmark 4/	69.1	73.2	86.0	81.4	77.1	75.8	74.2
Finland	23.0	41.5	57.3	59.8	59.4	62.1	62.3
France	35.8	39.7	45.7	48.6	52.9	56.2	57.3
Germany	41.1	44.1	48.2	50.2	58.1	60.8	61.9
Greece	83.3	89.4	111.8	110.4	111.7	108.2	106.2
Ireland	95.0	91.9	94.4	87.8	81.6	75.8	73.2
Italy	101.4	108.5	119.4	125.5	124.9	123.6	122.3 3/
Luxembourg	1.5	1.7	2.1	2.1	1.6	1.5	1.5
Netherlands	78.8	79.6	81.1	78.0	79.7	[illegible]	76.9
Portugal	69.8	61.9	67.1	70.4	71.7	70.7	68.0
Spain	45.8	48.3	59.8	63.0	65.7	67.1	67.1
Sweden	47.6	59.8	76.0	79.3	78.7	[illegible]	78.0
United Kingdom	33.6	34.9	40.4	46.0	47.2	49.5	50.8
EU-15	55.8	59.3	66.3	69.2	72.2	73.6	73.7

Source: Staff estimates and projections in the IMF World Economic Outlook, October 1996, and subsequent revisions.

./ Data are shaded when they are in excess of the 3 percent of GDP Maastricht reference value for the fiscal deficit and 60 percent
f GDP Maastricht reference value for the gross debt.
/ Projections.
/ The specifics of almost half of the 1997 budget measures are as yet undefined; the above figures are thus peliminary estimates.
ivate sector forecasts for the general government balance range between 3.8 percent and 4.6 percent of GDP.
/ General government gross debt figures are not adjusted for the assets held by the Danish Social Pension Fund against sectors
tside general government, and for government deposits at the central bank for the management of foreign exchange reserves. In
cordance with the Council's and Commission' statements covering Article 1 (4) of Council Regulation No. 3605/93 of 22
vember 1993, for Denmark these items shall be stated separately. In addition, the data are not adjusted for the amounts
tstanding in the government debt for the financing of public undertakings, which according to the [illegible]

Table 6. A Stability Pact

There is broad agreement among EU countries on the desirability of strengthening the surveillance procedures set out in the Maastricht Treaty for Stage 3 of EMU. In particular, while the treaty gives the Council (of Ministers) the option of imposing monetary sanctions, it creates no presumption in terms of the automaticity of sanctions and neither does it provide guidance as to their size. A stability pact is under discussion to address these and related issues. It is planned that the details of the stability pact will be agreed on at the December 1996 meeting of the European Council in Dublin. It is generally understood that, as the treaty will not be amended, the stability pact will not have the same legal status as the surveillance procedures set out in the treaty.

Under the original proposal of the German authorities, made in late 1995, countries would agree to keep deficits under 3 percent of GDP, implying an upper limit of 1 percent in "normal" times. Deficits in excess of this ceiling could be allowed in exceptional cases with the approval of a qualified majority in the Council. If a budget or an outturn exceeded the limit, sanctions would be imposed automatically. The transgressing country would make an interest free deposit of ¼ percent of GDP per percentage point in excess of the limit, or part thereof, with no maximum specified. The deposit would be returned if the country was back within the limit in two years, but otherwise would be relinquished as a fine.

Significant progress was made at the informal meeting of ministers of finance and central bank governors in Dublin in September 1996. The current status of the discussions appears to be as follows.

If a country does not take adequate corrective actions within a specified period of an excessive deficit finding (perhaps 12 months after the end of the year to which the finding applies), non-interest bearing deposits would be applied which would depend on the size of the excessive deficit. The current proposal is that these start at 0.2 percent of GDP and rise to a maximum of 0.5 percent of GDP. Deposits would be converted into fines if the Council's recommendations were not implemented after two years. If initially the corrective actions were found satisfactory, sanctions could still be imposed if subsequently the corrective measures did not have the promised effect.

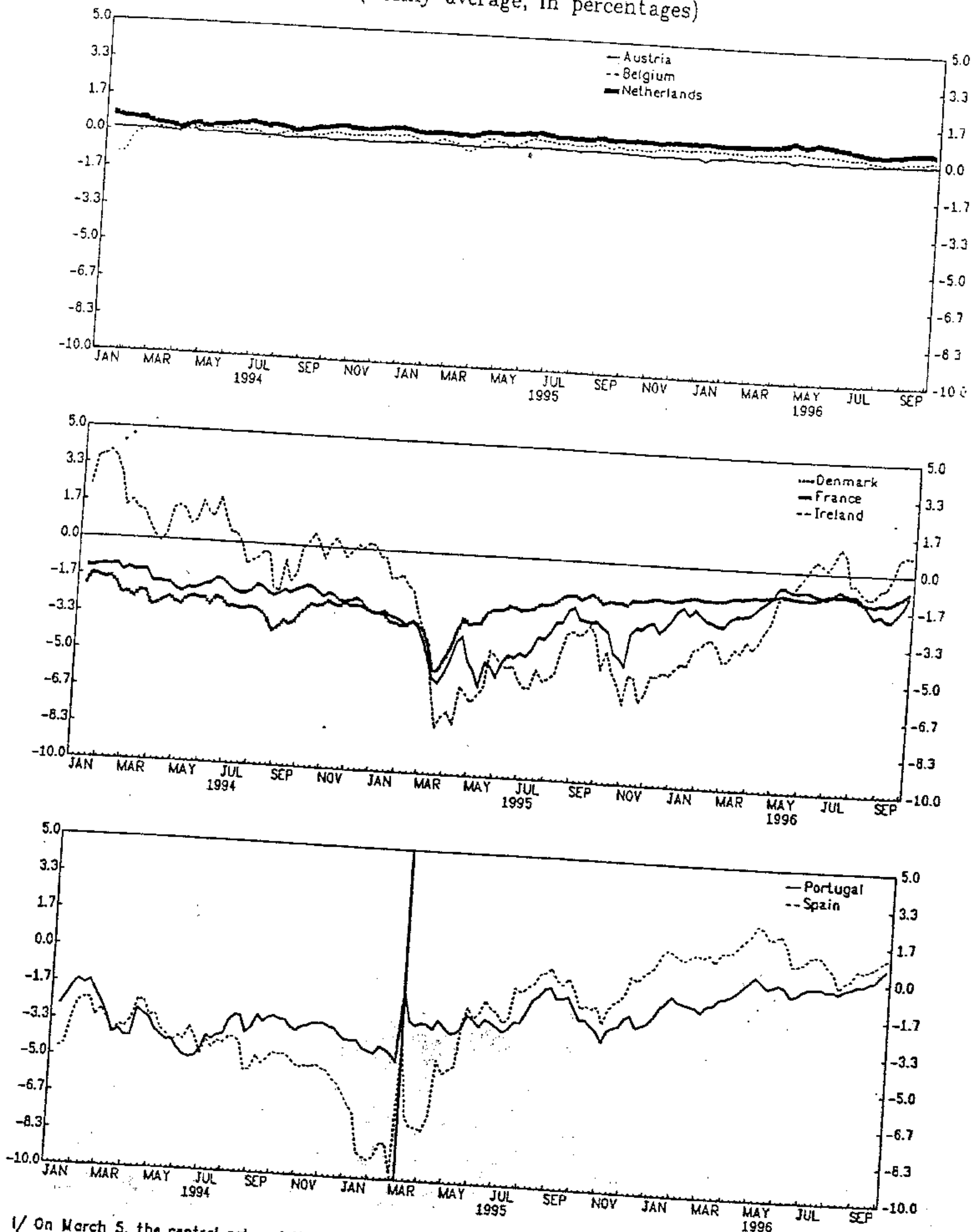
There remain a number of difficult outstanding issues. Those who wish the sanctions to have a high degree of automaticity want a qualified majority in the Council to be needed to reject a finding of an excessive deficit, in contrast to the treaty's requirement which entails a qualified majority being needed to impose sanctions. There is also a desire to define clearly what is meant by the treaty's reference to *exceptional and temporary* circumstances under which the 3 percent of GDP reference value could be exceeded without incurring an excessive deficit finding.

It is also proposed to have closer monitoring of medium-term budgetary plans, based on "stability programs". Departure from the medium-term goal of budgetary positions that are close to balance or in surplus would prompt a warning from the Commission, which could lead to a Council recommendation.

Table 7. United States: Chubb Relative Value Study, 1981–91.
(Basis point spread for 20 year state GO, relative to a New Jersey 20 year GO)

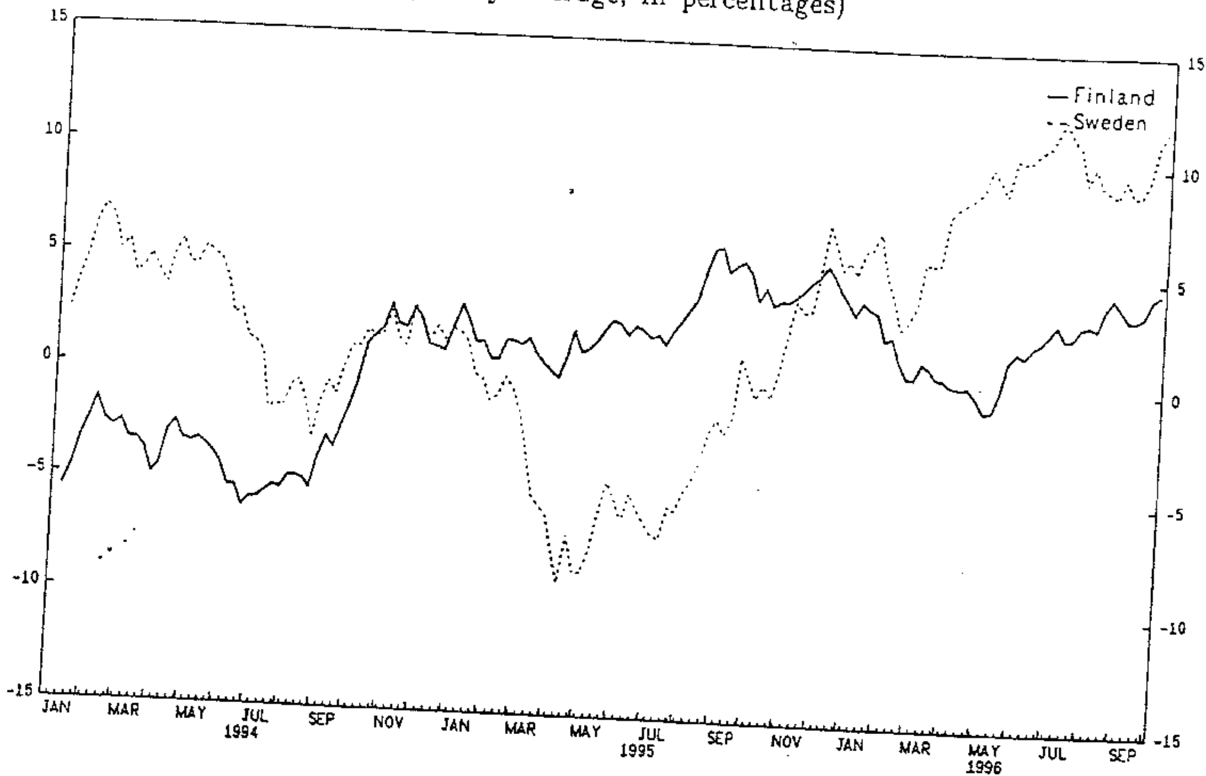
	Moody's Rating	1981–91 Average	1981–91 Standard Deviation
North Carolina	Aaa	−13.71	4.32
South Carolina	Aaa	−10.49	4.31
Virginia	Aaa	−9.72	11.65
Missouri	Aaa	−9.45	5.87
Georgia	Aaa	−6.76	3.84
Tennessee	Aaa	−6.26	4.65
Utah	Aaa	−4.64	10.19
Maryland	Aaa	−2.22	2.59
Oklahoma	Aa	2.82	19.67
California	Aaa	2.96	12.34
Kentucky	Aa	7.13	6.01
Connecticut	Aa1	8.35	18.38
Montana	Aa	8.39	8.78
Texas	Aa	9.39	19.82
Minnesota	Aa	12.67	7.81
North Dakota	Aa	13.67	13.53
Mississippi	Aa	14.53	5.13
Maine	Aa1	14.59	4.40
New Mexico	Aa	14.70	5.70
Alabama	Aa	15.68	4.71
Wisconsin	Aa	16.29	7.53
Ohio	Aa	18.41	15.90
New Hampshire	Aa1	20.16	13.19
Vermont	Aa	20.40	6.65
Illinois	Aaa	20.47	5.12
Delaware	Aa	22.31	15.11
Rhode Island	Aa	22.48	7.75
Florida	Aa	23.20	6.23
Nevada	Aa	25.68	5.62
New York	A1	29.00	19.36
West Virginia	A1	30.26	4.58
Pennsylvania	A1	35.61	25.24
Oregon	A1	37.41	20.75
Louisiana	Baa1	47.96	34.03
Massachusetts	Baa1	51.71	30.52
Washington	A1	52.04	28.73
Michigan	A1	55.86	42.83

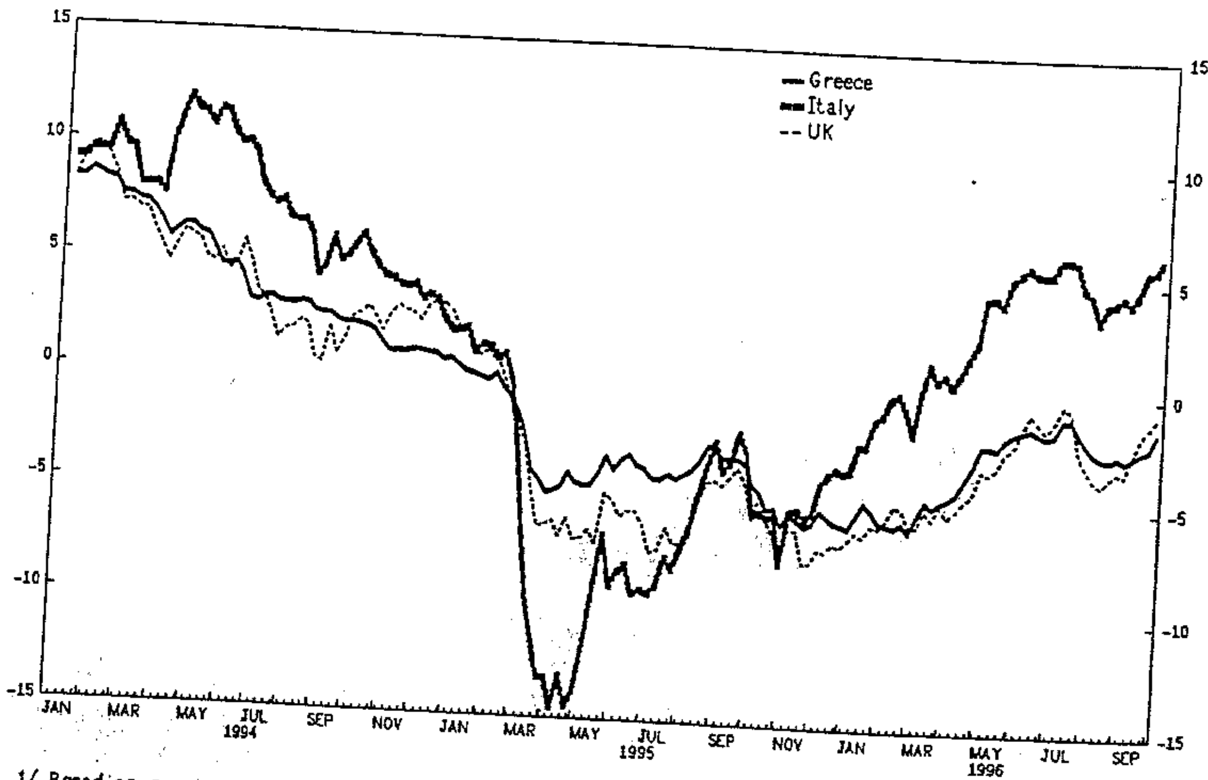
Chart 1
ERM Currencies: Deviations from Central Rates Against the Deutsche Mark 1/2/
(Weekly average, in percentages)



1/ On March 5, the central rates of the Peseta and Escudo were devalued respectively by 7 percent and 3 1/2 percent.
2/ Positive number denotes appreciation.

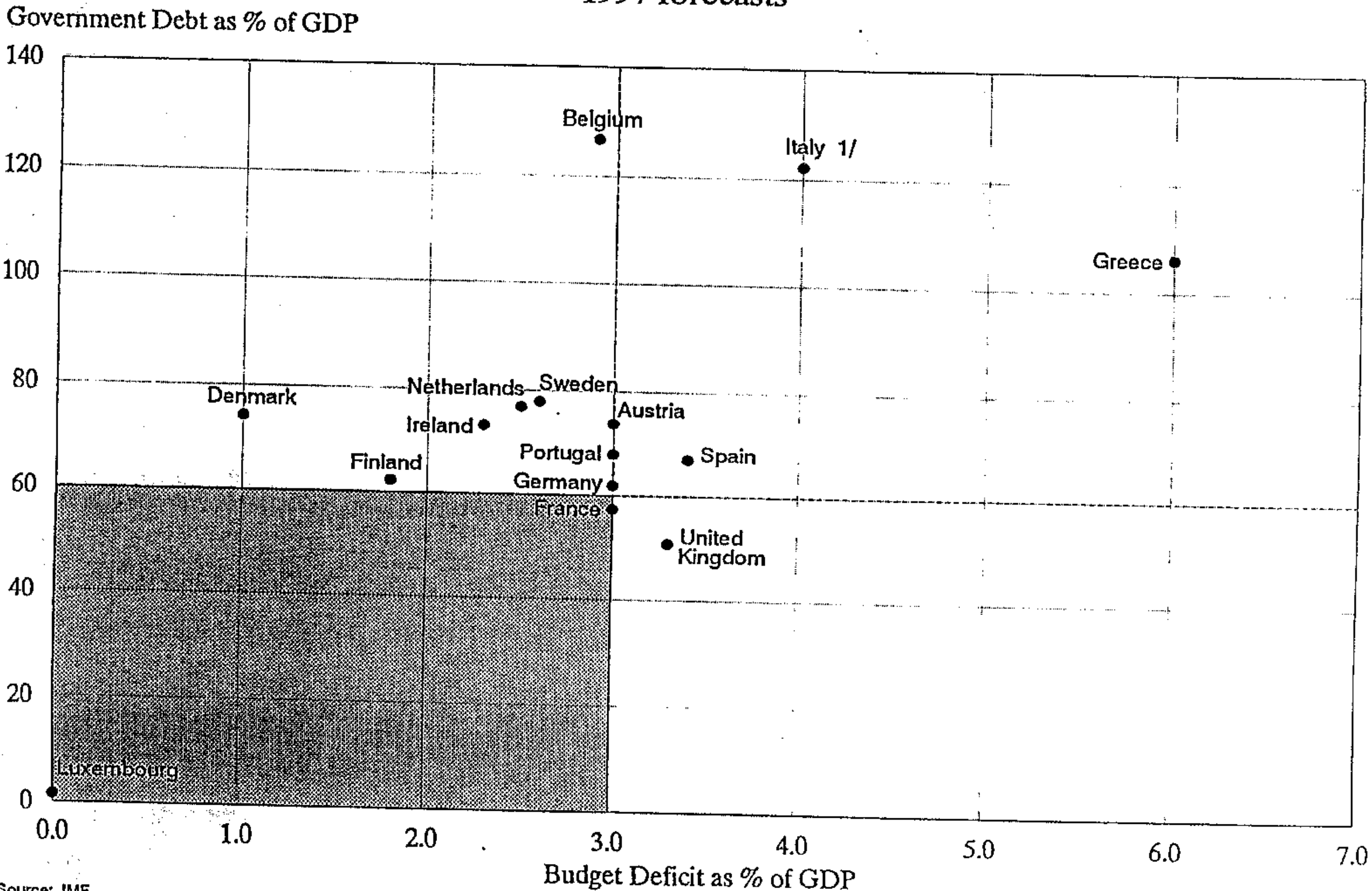
Chart 2
Non-ERM Currencies: Deviations from Average Rates Against the Deutsche Mark 1/
(Weekly average, in percentages)





1/ Based on average exchange rate against the deutsche mark of January 1994 - September 1996. Positive number denotes appreciation.

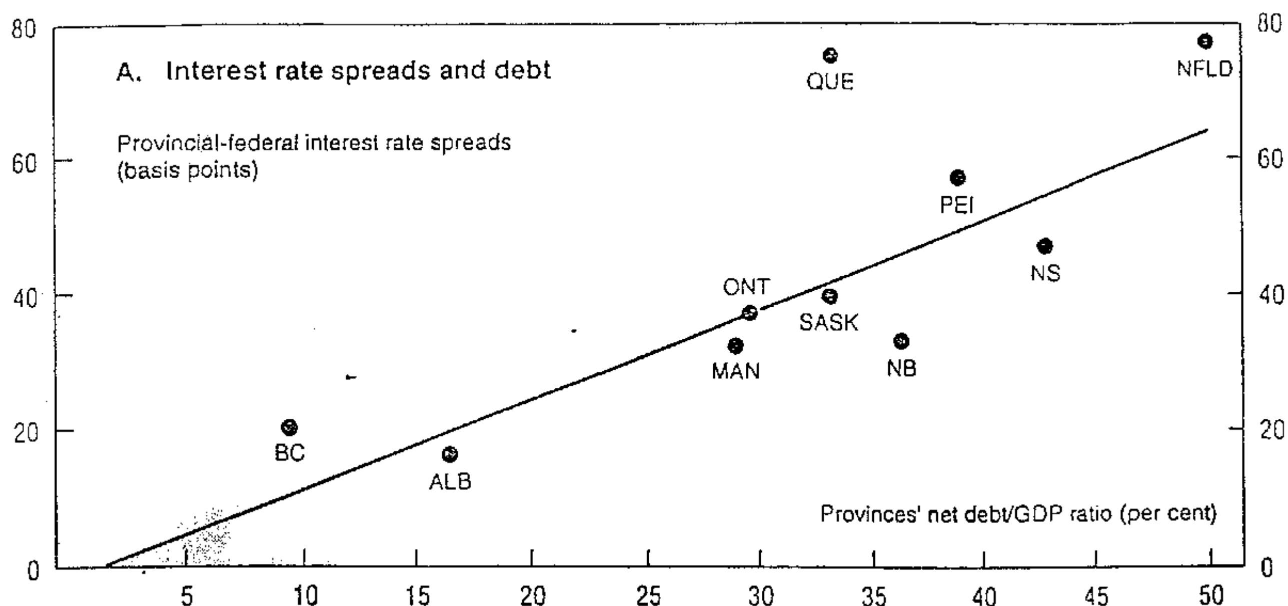
Chart 3. Getting Closer
1997 forecasts

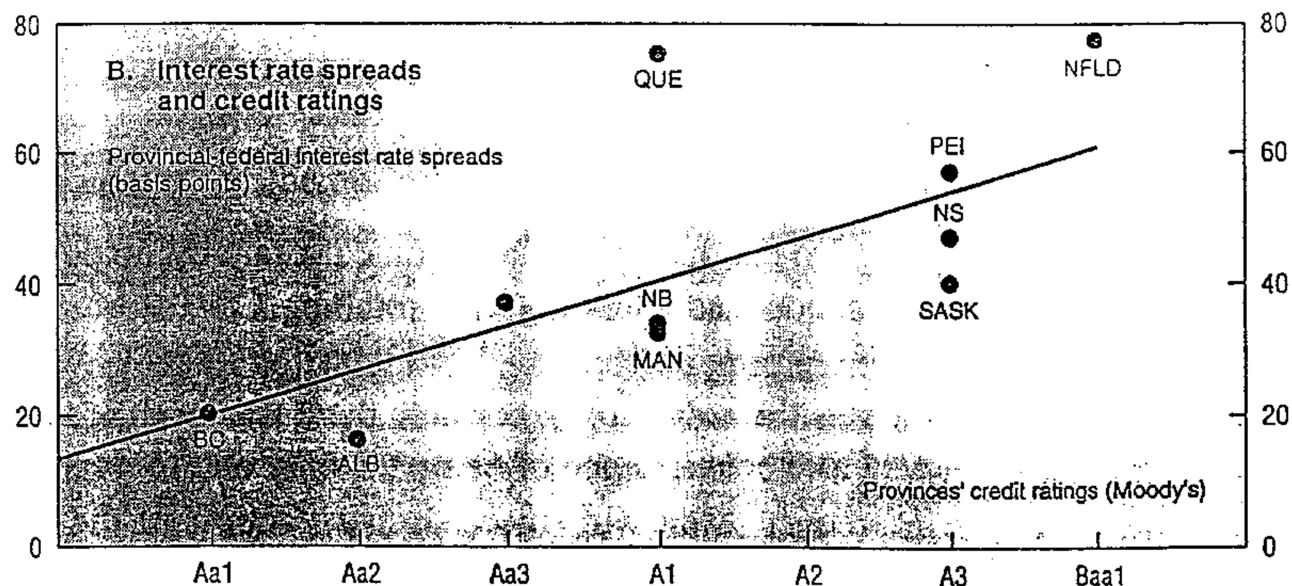


Source: IMF

1/ Preliminary estimate; please see Footnote 3 in Table 5.

Chart 4. PROVINCIAL INTEREST RATE SPREADS, DEBT AND CREDIT RATINGS





Notes: ALB = Alberta; BC = British Columbia; MAN = Manitoba; NB = New Brunswick; ONT = Ontario; SASK = Saskatchewan; NS = Nova Scotia; PEI = Prince Edward Island; QUE = Quebec; NFLD = Newfoundland. The interest rate spread (variable "SPREAD") measures the difference, in basis points, between interest rates on provincial bonds and federal bonds in April 1995. The net debt-to-GDP ratio (variable "DEBT") are values for the financial year 1994/95. For the purpose of quantifying any relationship the variable "CREDIT" has been created and given the value of 1 for the highest provincial credit rating (Aa1), with successively lower credit ratings incremented by one. Estimated lines of best fit (with t-ratios in brackets) for all the provinces, excluding Quebec, are given by:

(1) SPREAD = 2.2 + 1.32 DEBT, $R^2 = 0.792$;
(-0.2) (5.2)

(2) SPREAD = 5.4 + 7.95 CREDIT, $R^2 = 0.766$.
(0.6) (4.8)

Source: Department of Finance and OECD Secretariat calculations.