

**Life Without the Stability Pact**

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# Life without the Stability Pact

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## Abstract

There is now a real chance that the Euro member states will not abide by the strict rules of the Stability Pact. Economic and political pressures are currently moving in that direction. What then imposes budgetary discipline on governments? This paper explores how government bond markets and financial regulators could take over the disciplinary role of the Stability Pact. For example, the application of the large exposure rule to public debt should "encourage" banks to diversify their government bond holdings, shielding countries' banking system from bank failures in other countries. Information disclosure and capital adequacy requirements for government bonds should increase the sensitivity of governments' borrowing costs with respect to debt, deterring governments from running high budget deficits. Markets need to believe that EMU governments and the ECB will adhere to the Maastricht Treaty and to the no-bail-out clause in particular. The Stability Pact is not essential for the disciplining of governments, the Maastricht Treaty is. Finally, whether rules and markets matter or not, may be a function of the broader economic conjuncture.

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## 1 Introduction

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The recent election victory of the Social Democratic Party (SPD) in Germany has clearly shifted the political landscape in Europe. The Germans - who were already wary of giving up the Deutsche Mark for the Euro - have now chosen a government that is far less committed to the rules of the Stability Pact than the previous government. What is more, with Theo Waigel, the father of the Stability Pact, handing over to Oskar Lafontaine, Germany's new finance minister, and with Germany's public finances already in a somewhat shaky state (and no real prospect of improvement), the Germans themselves could be the first not to abide by the strict rules of the Stability Pact. In 13 of the 15 member states of the European Union (EU) centre-left governments are now in power. The Stability Pact and the Maastricht Treaty were agreements struck by mostly Conservative governments in order to maintain fiscal discipline in the single currency zone. Instead, Germany's Oskar Lafontaine and his French colleague Dominique Strauss-Kahn clearly have a more activist policy in mind, especially to create more jobs. However, job creation can be costly.

I shall first review some of the possible consequences of this political regime shift for policy coordination between the European Central Bank (ECB) and the national fiscal authorities. Next, I criticise the main rationales for the Stability Pact - fiercely defended by Europe's finance ministers, the European Commission and the European Central Bank (ECB). Then, I discuss the implications for Economic and Monetary Union (EMU) if the Stability Pact were to be disregarded, and how government bond markets and financial regulators might take over the disciplinary role of the Stability Pact. Finally, I conclude with some remarks about the feasibility of budgetary discipline enforced by bond markets, as opposed to budgetary discipline enforced by the Stability Pact.

### *The ECB versus left-wing governments*

Europe's central bankers - who had been in dreamland for a while, shaken by neither the Asian nor the Russian crises - have been rudely awakened. What happened?<sup>1</sup>

On *Wednesday October 21*, Mario Monti - the EU internal market commissioner - first questioned

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<sup>1</sup> See the Financial Times of October 24/October 25, 1998, p. 2.

the basic principles of the Stability Pact, calling for a flexible interpretation of the strict fiscal policy rules of the Stability Pact. In particular, Mr. Monti is considering a change of the rules to allow governments to have temporarily higher budget deficits than the maximum of 3 per cent of GDP prescribed in the Stability Pact, for example to carry out "necessary" public sector investments. Politicians should take the golden rule into account when deciding whether to impose fines. Mr. Monti's proposals would be in line with budgetary prudence rules in several member states, including Germany and the United Kingdom.

On *Thursday October 22*, Mr. Monti's proposal was well received by Oskar Lafontaine and Dominique Strauss-Kahn at their meeting at Saarbrücken. But the proposal elicited a predictable response from Europe's central bankers who fear that a more flexible interpretation of the Stability Pact could open the floodgates for fiscal profligacy. Meanwhile Oskar Lafontaine attacked the ECB for not being willing to establish a target zone for the Euro with respect to the two other leading international currencies, the US dollar and the Japanese Yen. Oskar Lafontaine is particularly afraid of a strong Euro, which would hamper export growth and the creation of new jobs. Wim Duisenberg - the president of the ECB speaking in Berlin at about the same time - promptly relegated Lafontaine's target-zone proposal to the world of fantasy. The establishment of such a target zone would considerably reduce the freedom of the ECB in controlling EMU-wide inflation.

On *Friday October 23*, Mr. Duisenberg warned Europe's centre-left governments not to break agreed budget deficit rules for EMU. The Financial Times quoting Mr. Duisenberg: "The strict compliance with the objectives of the Stability Pact is an incontrovertible precondition to give economic policy sufficient flexibility."

The above chronology clearly signals growing concern by the ECB about excessive budget deficits in some of the 11 countries that will launch the Euro on January 1, 1999. What are the risks of above mentioned political regime shift? If historical evidence is anything to go by, left-wing governments are more closely associated with high public deficits and high debt levels (Roubini and Sachs, 1989). The perceived political risk is that left-wing governments will be tempted to disregard the constraints on budget deficits imposed by the Stability Pact, and be more inclined

to pursue Keynesian demand policies. With the German government openly calling for Keynesian demand policies financed by debt, the political will to discipline errant fiscal policy within EMU may simply collapse. The problems may start if and when several governments were to run higher budget deficits than 3 per cent of GDP. Governments could each decide not to punish each other. Like-minded left-wing governments are probably less likely to fine each other anyway. The overall result could be excessively tight monetary policy and lax fiscal policy, with detrimental effects, especially on the exchange rate for the Euro.

This paper argues that regulation of the financial sector and government bond markets can enforce fiscal discipline and the credibility of the Maastricht Treaty (the ‘no bail-out’ clause in particular), regardless of the survival of the Stability Pact. Specifically, encouraging banks to diversify their government bond holdings would shield each countries’ banking system from failures elsewhere and the increase of governments’ sensitivity to borrowing costs with respect to debt should deter governments from running high budget deficits.

## **2 The rationales for the Stability Pact**

Below, I list the main rationales for the Stability Pact and argue why the Stability Pact is seriously flawed.<sup>2</sup>

### *The first rationale for the Stability Pact: Increasing budgetary discipline*

First, the Stability Pact is intended to enforce budgetary discipline. The Stability Pact calls for balanced budgets over the economic cycle. The Stability Pact also includes fines for countries with budget deficits in excess of 3 per cent of gross domestic product. If budgets were, on average, balanced over the cycle, there should in theory be sufficient room for the automatic stabilizers to work during cyclical downturns.

But the structural level of budgets in the Euro-11 is, in almost all cases, still well above balance. If a downturn was to come now in this fiscal condition, there would be a stern and unhappy choice

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<sup>2</sup> See Thygesen (1998) for an extensive review of the rationales for the Stability Pact.

between giving up on any fiscal stabilisation or of giving up on the obligations of the Pact itself. It is questionable if the fines in the Stability Pact will ever be applied if outdated by economic reality.<sup>2</sup> The rules may simply be too strict in times of recession.<sup>3</sup> Indeed, the recent credit crunch in world financial markets may have already outdated the system of fines, if not the entire Pact, before EMU even starts. There is now a real chance that the Stability Pact is going to be a dead letter right from the start of EMU. Another problem is that public warnings related to breach of deficit rules, e.g. by the ECB or the European Commission might only excite the markets and provoke the very crisis one was trying to prevent.

*The second rationale for the Stability Pact: Reducing the danger of a public sector bail-out*

The second rationale for the Stability Pact is related to the first rationale. The Stability Pact should prevent governments from going bust. The argument goes as follows. In an environment of falling government bond prices, governments may find it hard to sell the debt needed to finance the deficit because of supply-demand imbalances (a liquidity crisis in bond markets). Or a government might simply be unable to meet its short-term requirements, missing for example a scheduled coupon payment. Goodhart (1997) has argued that "once national authorities give up their command over money creation, they lose the unchallenged absolute ability to pay off their domestic currency debt, interest and principal, in legal tender, whatever may happen to demand in the bond market." Governments may struggle to sell sufficient debt to finance their deficit, should falling government bond prices spark a liquidity crisis. Governments joining EMU lose their monetary sovereignty (that is, the right to print money) to pay off domestic currency debt whatever may happen to demand in the bond market. A liquidity problem could eventually evolve into a solvency problem, for example, if the government has insufficient liquid assets that it can sell at short notice at a fair market price. The idea now is that with a credible no-bailout clause (Maastricht Treaty, Article 104b) and credible penalties for breach of deficit rules (Stability Pact), financial markets should correctly price the risk of government default so that profligate governments would be confronted with higher borrowing costs at an early stage. This should provide the necessary incentives for

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<sup>3</sup> It should be recalled that if an economic downturn is a *general* phenomenon in EMU, the joint monetary policy will be used to assist in mitigating the contraction as long as inflationary risks remain low (Thygesen, 1998, p. 16).

<sup>4</sup> Moreover, the Stability Pact seems to suggest that debt is a bad thing, and ideally should be zero in the long run. However, government debt has a useful role to play as collateral of loans for example in the EMU repurchase market, as financial security to conduct open market operations by central banks, or as liquid reserve asset held by commercial banks.

budgetary reforms at an early stage, preventing the need for a public sector bail-out.

However, according to the Economist (1998, p. 138) it is hard to imagine a highly developed EMU government ever being insolvent (bankrupt). EMU governments certainly have sufficient taxable capacity and flexibility to lower their spending; the question is whether they have the political will to do so. The risk of government default is, however, minimal and goes well beyond debt levels of 60 per cent. Furthermore, budget rules in the Stability Pact say nothing about the composition of deficits and the average maturity of debt. By restricting for example public investment, the Stability Pact interferes with the intergenerational distribution of income. Governments with a high share of short-term debt are more vulnerable to a liquidity crisis.

*The third rationale for the Stability Pact: Reducing the danger of a private sector bail-out*

The Stability Pact should help in reducing the dangers of a private sector bail-out, particularly with respect to the domestic banking sector. By reducing the governments' need to issue new debt, the Stability Pact prevents the building up of large exposures to their own domestic banking sector (Arnold, 1998), and thus reduces the likelihood of a bank failure in cases of a sudden drop in the value of government bonds (a liquidity crisis in bond markets). The Stability Pact lowers the *systemic risk* of bank failures that could ultimately endanger the stability of the financial system.

In some countries banks hold significant proportions of their own government's debt within their asset portfolios. If banks were diversified in their government bond holdings across markets, and if the default risks associated with government debt were not perfectly correlated, the systemic risk of a bank failure caused by a bond market crisis is limited. One could force banks to diversify by having exposure limits on government bond holdings. Portfolio diversification and exposure limits could help to shield countries and their banks from bank failures in other countries. Regulation should also prohibit governments from being an important shareholder in banks. Often such "government-owned" banks have access to cheaper funding than comparable privately-owned banks because of the implicit or explicit government backing. Sometimes, government support encourages these banks to undertake more risky projects. Government-owned banks also tend to lend out a larger share of their assets to local, provincial and central governments than commercial banks (Arnold, 1998). Unfortunately, the Stability Pact has nothing to say about either the

diversification of banks' asset portfolio and government ownership of banks.

### 3 Life without the Stability Pact

Let us now assume that the Euro member states will not abide by the strict rules of the Stability Pact. What then imposes budgetary discipline on governments? As has been suggested by Bishop et al. (1989), this role presumably then is taken over by government bond markets in close "co-operation" with financial regulators. Bishop et al. (1989) propose an adjustment of the prudential regulation of banks, that is, the *large exposure rules (I)* and the *solvency ratio directive (II)*. These regulations should be changed to take into account the increased riskiness of public debt. There are also other regulations that effect the disciplinary role of government bond markets: *currency matching (III)*, *syndication and tender procedures (IV)*, *information disclosure (V)*, *payment and security settlement systems (VI)*, and *tax breaks (VII)*.

#### *Regulation I: Large exposure rules*

In theory, the vulnerability of banks depends on two conditions: (1) the degree of government debt diversification by banks and (2) the degree of correlation between government default risks. Thus, if banks are not diversified in their government bond holding and all government default risk is systemic, banks are more likely to fail. At present, the large exposure directive that states that a bank cannot lend more than 25 per cent of its capital to a single borrower does not apply to government debt. Table 1 illustrates the current exposure of the banking sector to central government debt in relation to their *total assets*.

**Table 1: Claims on central government as a percentage of total bank assets**

Countries	1975	1980	1985	1990	1995
Belgium	17.5	15.3	19.2	18.6	28.9
France	3.9	9.7	11.5	7.2	11.2
Germany	9.9	12.8	14.0	12.4	15.1
Italy	10.1	18.3	21.9	15.3	n.a.
Spain	n.a.	n.a.	22.9	20.4	19.0

Countries	1975	1980	1985	1990	1995
United Kingdom <sup>2</sup>	5.5	3.1	1.3	0.9	1.3
United States	10.0	7.6	8.6	5.8	7.5

<sup>1</sup> Excluding reserves. <sup>2</sup> Net claims. n.a. not available.

Source: McCauley and White (1997, p. 46), Bank for International Settlements.

Unfortunately, it is not clear from Table 1 how much exposure the banking systems have with respect to their *capital*. In general, cross-country data on maturity, sectoral and nationality distribution of bank lending to governments are lacking. These data should be openly available (an example of information disclosure, Regulation V). At present the Bank for International Settlements (triggered by the recent Asian and Russian crises) and Fitch/IBCA (the European credit rating agency) are trying to collect these data.

Despite the severe lack of data, Gros and Thygesen (1998, p. 332) argue that the application of the large exposure rule to public debt is not feasible in EMU. This would require substantial portfolio adjustments of banks. If all EU banks held *Italian* debt up to the 25 per cent limit, total Italian debt holding would still only amount to 2 per cent of the EU GDP where Italian debt is about 15 per cent of EU GDP. Although, the application of the large exposure rule to public debt would impose a severe restriction on EU banks, it would at once eradicate the systemic risk stemming from government debt exposure by the domestic banking system. The Italian government would be obliged to seek other ways of placing its government debt (relying less on bank lending), for example with institutional investors, firms, households or abroad. This would be *the* strongest signal ever to drastically cut down budget deficits. One could envisage a scenario where the large exposure rule for government debt is introduced in steps to give banks time to change their asset portfolios.

However, there is still another condition for bank vulnerability which has to be fulfilled. If all government default risk were to be *systemic*, it cannot be eliminated through asset diversification by banks at the first place. Systemic default risk is for example government default risk caused by the health of the international economy. Similarly, the fortunes of individual banks are often linked

together via the health of banking industry and the financial sector in general (an example is the rescue of the hedge fund LTCM by several large banks). In theory, only systemic risk should be priced by the market. There is however one slight complication here: the default risk for debt is entirely one-sided and negative. Diversifying away all unsystematic government default risk might be difficult. The possible gains from diversification depend of course on the covariance structure of default risks. Lucas (1995, p. 76) defines *default correlation* as the phenomenon that the likelihood of one country defaulting on its credit obligations is affected by contemporaneous defaults of other countries. Using a measure for government default risk based on the difference between *10-year benchmark government bond yields and the corresponding swap yield denominated in the same currency* - as proposed by Lemmen and Goodhart (1998) - Table 2 calculates the cross-country correlation coefficients of government default risk between 10 EU countries that are about to join EMU over the period 1 May 1998- 30 November 1998 (Luxembourg excluded, daily data frequency).

Since, the data used in Table 2 refer to government bonds and interest rate swap contracts that mature beyond the date of 1 January 1999, I can already say something now about default risk in EMU. In addition, during the period May 1998-November 1998 the market participants knew with almost 100% certainty that the 10 EU member states in Table 2 (plus Luxembourg) were to join EMU at the first stage.

Fortunately, Table 2 shows that not all default risk is systemic. Clearly, the potential gains from diversification to banks from investing in a European-wide portfolio of governments bonds is considerable for the three smaller EMU member states; Finland, Ireland and Portugal *and* a larger member state; Italy. Regulators may want to apply exposure limits if banks are not expected voluntarily to increase their diversification of government bond holding.

**Table 2: The cross-correlation coefficients of government default risk over the period 1 May 1998-30 November 1998**

	Aus	Bel	Fin	Fra	Ger	Ire	Ita	Net	Por
Bel	0.823								
Fin	0.461	0.149							
Fra	0.819	0.921	0.222						

	Aus	Bel	Fin	Fra	Ger	Ire	Ita	Net	Por
Ger	0.858	0.934	0.151	0.936					
Ire	0.394	0.377	0.510	0.451	0.361				
Ita	0.731	0.609	0.591	0.642	0.629	0.540			
Net	0.762	0.941	0.045	0.920	0.962	0.388	0.563		
Por	0.544	0.584	0.337	0.583	0.527	0.402	0.510	0.522	
Spa	0.731	0.474	0.562	0.518	0.526	0.234	0.693	0.388	0.581

Finally, regulation should also prohibit governments from being a shareholder of banks. This transfers the risk of default inherent to a bank's loan book to the government (taxpayer). I refer here to Arnold (1998) who finds evidence that government-owned banks tend to lend more to governments than commercial banks.

#### *Regulation II: The solvency ratio directive*

The Basle capital adequacy or solvency guidelines establish a five-category credit risk weighting for bank assets. The more risky an asset is perceived to be, the greater the weight attached to the asset. A bank needs to hold a minimum of 8 per cent capital as a percentage of total risk-weighted assets. Currently, central government T-bills and long-term government debt of OECD countries is placed in the zero per cent risk category. However, in EMU government bonds will carry credit risk. EMU member states government debt should be treated as regional debt which currently is placed in the 20 per cent risk category (Gros and Thygesen, 1998, p. 331). Imposing capital adequacy requirements for government bonds would induce banks to hold more capital against loans to governments. Banks will want to recover (some of) the costs of these capital requirements by raising the interest on loans to governments, thus increasing the sensitivity of government borrowing costs to debt. This again may in principle provide the right incentives for governments to cut back on budget deficits.

#### *Regulation III: Currency matching*

Regulatory requirements such as the currency matching principle of assets and liabilities requiring institutional investors, such as insurance companies and pension funds (but not mutual funds), to hold specific government and domestic currency denominated assets will no longer be justifiable on the grounds of foreign exchange risk in the Euro zone. The introduction of the Euro will make

these requirements immediately obsolete. Pension funds and insurance companies were compelled to hold large amounts of their assets in their own government's securities. The arrival of the Euro will enable portfolio managers to selectively choose the risk and return in their portfolio, taking into account the risk and return on foreign government bonds. By holding a diversified portfolio, a portfolio manager can obtain a better risk return trade-off.

#### *Regulation IV: Syndication and tender procedures*

Currently, banks that provide investment services must be subject to authorisation by their home country. Similarly, national provisions regulate the public offering, marketing and distribution of government debt issues. European debt markets are dominated by local (investment) banks with a local currency advantage (because of the currency matching principle). Last year the national market share of local (investment) banks was estimated at 70% in Germany, 47% in France, 43% in the Netherlands, and 33% in Spain. Government bond markets also differ in the way in which government bonds are issued and traded. For example, in Austria government bond issues are underwritten by a syndicate consisting of 10 Austrian and 4 foreign banks (Battley, 1997). The introduction of the Euro will highlight the existence of these regulatory barriers. The introduction of the Euro may be a signal to remove the requirement that the majority of primary dealers have to be located in the country of the issuer. Financial regulators could, for example, prescribe that half of the (investment) banks underwriting the government bond issue is located in another country. Inviting foreign underwriters increases the cross-border placing of government bonds and thus promotes the diversification of government bond portfolios. With widely held bond portfolios the systemic risks of a bank failure is less severe, and the pressure on the ECB or other governments less strong. Commercial banks could for example offer government bonds for sale over the counter.

#### *Regulation V: Information disclosure*

Effective market discipline depends on an adequate flow of information to market participants. Large parts of government bond issues are often *privately placed* with "friendly" institutional investors who are required by law to buy their own government's bonds. This implies that less documentation and effort is required for governments to sell their bonds. In many countries the

general public is virtually excluded from the initial public offering. Therefore, only a minimal level of regulation impacts on government debt when it is newly issued or when it is traded in the secondary market. There is simply no need for consumer protection or public safety. *Sovereigns* are often exempted from the obligation to deliver a prospectus or offering circular, anyway. In order for market forces to effectively discipline governments, regulators could for example impose that *all* bonds offered for sale by governments have to be accompanied by a prospectus that provides detailed information on the nature of the security under offer, the financial condition of the government issuing the security, the credit rating, and other information about the risks facing the government that might affect the buyer of the government bond. Market participants need access to adequate, transparent and timely information. For this reason governments should be required to disclose all information deemed relevant for the pricing of government bonds at regular intervals such that the market is able to monitor the particular government's performance. Governments should improve their accounting principles and rules to permit the submission of relevant information. These accounting principles and rules should be comparable internationally. Similarly, banks should also be required to disclose to the public information regarding their government debt exposure.

#### *Regulation VI: Payment and security settlement systems*

Systemic risk can be defined as the risk that financial difficulties at one (or more) bank(s) spill over to other banks or the financial system as a whole. The concept of systemic risk must integrate events in banking and government bond markets. Regulators should examine how bond market crises impact on banks and how these *linkages* or *propagation channels* can be controlled. These linkages run often via the interbank market (repo-market), payment and security settlement systems.

#### *Regulation VII: Tax breaks*

Governments may also want to establish tax incentives to the non-financial sector (households and corporations) both located at home and abroad to lower the exposure to the domestic financial sector, but this would presumably run foul of desires for EU tax harmonisation. Indeed, a burning problem is whether, and how long, existing tax breaks for nationals investing in own-country

government bonds can continue, and what would be the fall-out if such discriminating tax advantages were required to be (progressively) removed.

#### **4 Credit and liquidity risk**

According to Goldman Sachs (1998) *credit risk* and *liquidity risk* prevent the perfect correlation and equality of government bond (excess) returns. *Credit* or *default risk* is regarded largely a function of the level of indebtedness of a government. In principle, financial markets could provide the discipline necessary to prevent an unsustainable build-up in government debt by demanding progressively higher interest rates on new debt. The no-bail-out clause of the Maastricht Treaty prohibits EU governments from helping each other. Also the ECB is prohibited from extending overdraft facilities to governments or from buying government debt in the primary market. Investors must *believe* that the government will not be bailed-out. Widespread expectation that the ECB (monetary bailout) or other governments (fiscal bailout) will rescue a defaulting government will reduce the sensitivity of interest rates to increases in government debt. This will provide the incentive for governments to accumulate more debt. In the extreme case, where there is an explicit guarantee that a government will be bailed-out, default risk will not rise with debt levels at all. The conclusion from this is that the Maastricht Treaty and the markets' belief in the full adherence to the Maastricht Treaty is essential for disciplining governments, not the Stability

crises, government bond yields of EU countries had converged dramatically, signifying a high appetite for credit risk in world financial markets (Lemmen, 1998). The Asian and the Russian crises have again led to a widening of yield differentials (low appetite for credit risk in world financial markets).

The second main factor is *liquidity risk*. In addition to credit considerations, liquidity effects are going to play a central role in the determination of yields in government bond markets. The respective size of liquidity and credit risk premiums *and* the correlation between liquidity and credit risk premiums is of prime importance for our conclusion about the sensitivity of interest rates to increases in government debt levels. Credit risk and liquidity risk premiums might even move *in opposite directions*. Bond issues of two otherwise identical credit risks may be priced differently if issuing techniques, clearing and settlement procedures, and legal procedures are different. A good measure for *country-specific appetite for liquidity risk* might be the yield differential between *on-the-run* and *off-the-run* government bond issues. Research efforts should be directed into how to measure nation's liquidity risk.

## **5 Is bond market discipline really feasible?**

Gros and Thygesen (1998, p. 322) argue that even if the solvency ratio directive and the large exposure rule were to be applied to government debt, it remains likely that for some time to come the public debt will mainly be held by domestic savers and the domestic banking system. This implies that a funding crisis of the national government could endanger the stability of the domestic financial system. I would slightly disagree here, since the larger part of government debt in EU countries is held by institutional investors, which entail less systemic risk than banks. The systemic risk is particularly large with respect to the Belgian and Italian banking system (see Table 1). The question is if and with what effects the banks in these countries can unwind their positions if the large exposure rule were to be applied and if politicians are *prepared* to apply the large exposure rule (and also the solvency directive) to public debt.

It is also instructive to consider the impact of subcentral government's fiscal position on borrowing

costs in existing federal states such as Canada. (Lemmen, 1998). The Canadian federation is arguably the closest to the EMU. It is a much "looser" federation than either the German or Australian federation. In Canada borrowing is concentrated at the provincial level. Canada unites market discipline with a successful and wide-ranging system of monetary transfers to the provinces - without being seen as an implicit guarantee of provinces' budgetary deficits (Bishop et al., 1998). The 10-year yield differentials between the provincial government and the federal government of Canada has ranged from an average of 55 basis points (Alberta) to 120 basis points (Newfoundland) in 1992 and from an average of 11 basis points (Alberta) to 52 basis points (Newfoundland) in 1996. Many of Canada's provinces have recently enacted balanced budget and/or debt-reduction legislation. It is unclear if the market's perception of debt riskiness has improved for the provinces which legislated budget constraints compared to those who have not (note that most of the legislation was passed in 1995 and 1996). In 1996, the average yield differential over 10-year government of Canada benchmark bonds for the provinces with legislated budget constraints (Alberta (0.11), Manitoba (0.18), New Brunswick (0.52), Nova Scotia (0.32), Quebec (0.47) and Saskatchewan (0.24) (which is an average of 0.31) was only moderately lower than the average yield differential for the provinces without legislated budget constraints (Newfoundland (0.52), Ontario (0.23) and Prince Edward Island (0.39) (which is an average of 0.38). In this case balanced budget rules or debt-reduction legislation did not seem to matter very much, but, whether such rules matter, or not, may be a function of the broader economic conjuncture.

## **5 Conclusion**

There is now a real chance that the Euro member states will not abide by the strict rules of the Stability Pact. Economic and political pressures are currently moving in that direction. What then imposes budgetary discipline on governments? This paper has explored how government bond markets and financial regulators could take over the disciplinary role of the Stability Pact. The disappearance of the currency matching principle (I), the harmonisation of syndication and tender procedures (II) and the imposition of exposure limits (IV) could induce banks to diversify their government bond holdings, shielding countries' banking system from bank failures in other

countries. Furthermore, it increases the credibility of the no-bail-out clause established in the Maastricht Treaty. Information disclosure (III) and capital adequacy requirements (V) increase the sensitivity of government's borrowing costs with respect to debt, deterring governments from running high budget deficits. The regulation of the financial sector and government bond markets should ensure that markets believe that governments and the ECB will adhere to the Maastricht Treaty. Financial sector regulators can help in reinforcing the credibility of the no-bail-out clause. Governments may want to establish tax incentives to the nonfinancial sector (households and corporations) both located at home and abroad to lower the exposure to the domestic financial sector. Regulators should apply the large exposure rule to government debt and promote the underwriting of government issues by bank syndicates with a large foreign participation. Regulators should apply capital adequacy requirements to government debt to take into account the increased riskiness of public debt. With such regulations in place, yields on government bonds will reflect investors' perception of differences in creditworthiness regardless of the survival of the Stability Pact. The Stability Pact is not essential for the disciplining of governments, the Maastricht Treaty is.

## References

- Arnold, I.J.M. (1998), "The Third Leg of the Stool, Financial Stability as a Prerequisite for EMU", Nijenrode University, *Mimeo*, June, Breukelen.
- Battley, N. (ed.) (1997), *The European Bond Markets: An Overview and Analysis for Issuers and Investors*, Sixth Edition, The EFFAS-European Bond Commission, McGraw-Hill Publishing Company, London.
- Bishop, G., D. Damrau and M. Miller (1989), "Market Discipline can Work in the EC Monetary Union", Salomon Brothers, November.
- Duisenberg, W.F. (1998), "Die Internationale Rolle des Euro, Vortrag bei der Konrad-Adenauer Stiftung" Berlin, 22 Oktober.
- Duisenberg, W.F. (1998), "Die Bedeutung des Euro für die Wirtschafts- und Finanzpolitik in Europa", Vortrag beim Prognos-Zukunftsforum, 1998, Basel, 23 Oktober.
- Economist, The (1998), "When Countries Go Bust", October 3rd-9th, p. 138.
- Financial Times (1998), *Duisenberg warns against breaking EMU rules*, Weekend October 24/October 25, p. 2.
- Financial Times (1998), *Return to Keynes*, October 26, p. 22.
- Goldman Sachs (1998), *Government Bond Markets in EMU - The Supply and Demand for Corporate Credit*, 9th March.
- Goodhart, C.A.E. (1997), "Two Concepts of Money, and the Future of Europe", Financial Markets Group, London School of Economics, *Special Paper*, No. 96, London.
- Gros, D. and N. Thygesen (1998), *European Monetary Integration: From the European Monetary System to European Monetary Union*, Addison Wesley Longman, London and New York.
- Lemmen, J.J.G. (1998), "Managing Government Default Risk in Federal States", Financial Markets Group, London School of Economics, *Mimeo*, October, London.
- Lemmen, J.J.G. and C.A.E. Goodhart (1998), "Credit Risks and European Government Bond Markets: A Panel Data Econometric Analysis", Financial Markets Group, London School of Economics, *Mimeo*, October, London.
- Lucas, D.J. (1995), "Default Correlations and Credit Analysis", *Journal of Fixed Income*, March, pp. 76-78.
- Maastricht Treaty (1992), *Treaty on European Union*, Council of the European Communities, Commission of the European Communities, Office for Official Publications of the European Communities, February 7, Luxembourg.

McCauley, R.N. and W.R. White (1997), "The Euro and European Financial Markets", *BIS Working Paper*, No. 41, Basle.

Roubini, N. and J. Sachs (1989), "Government Spending and Budget Deficits in the Industrial Countries", *Economic Policy*, Vol. 8, pp. 99-132.

Stability Pact (1996), Commission of the European Communities, *Proposal for a Council Regulation on the Strengthening of the Surveillance and Co-ordination of Budgetary Positions; Proposal for a Council Regulation on Speeding up and Clarifying the Implementation of the Excessive Deficit Procedure*, Brussels, 16.10.1996, COM(96) 496 Final, Brussels.

Thygesen, N. (1998), "Fiscal Institutions in EMU and the Stability Pact", *EPRU Working Paper*, No. 17, University of Copenhagen, Copenhagen.