

NON-ENHANCED DEBT FINANCING BY EURO AREA BANKS UNDER SEVERE FINANCIAL STRESS

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This article analyzes how the basic unsecured debt financing of the less systemic part of the euro area banking sector (non-enhanced financing) developed under the two major financial crises in 2009 and 2010 when banks' longer-term funding markets were disrupted severely by the global financial crisis and the sovereign debt crisis in Europe. Then a comparison with the financing developments of the more systemic group of euro area banks is offered. We find evidence that the issuance of unsecured debt instruments by the more systemic banks as percentage of their total issuance was consistently higher than that by the less systemic banks which had to resort structurally in relative terms to more "enhanced" debt instruments in their funding. We also conclude that "non-enhanced" debt financing declined significantly from 2007 onwards and that this process was not restricted to only European peripheral countries, but that instead it was a euro area-wide phenomenon. Finally, our results indicate that episodes of severe financial stress were accompanied by significant reductions in the relative share of international issuance of "non-enhanced" debt which may be evidence of a certain degree of re-nationalisation of euro area banks' wholesale funding markets.

1 Introduction

In addition to deposits, banks fund themselves through various other sources of financing, such as equity and debt. The latter may be obtained at short-term maturity, such as interbank loans and short-term paper, or at longer maturities by issuing bonds and medium-term notes. During the past few years, banks' debt funding markets experienced rather unprecedented dislocations resulting from several major financial shocks. The first was the financial turmoil that started in the summer of 2007 and which turned into the most severe global financial crisis since the Great Depression of the 1920s after the collapse of Lehman Brothers in September 2008. The second shock was the European sovereign debt crisis that disrupted in particular, but not only, European bank funding markets in 2010, especially during April-May and November-December.

This article investigates the development of longer-term debt instruments issued by euro area banks in the wake of these severe financial shocks, concentrating on the years 2009 and 2010.¹ The emphasis of the analysis will be on what we shall call "non-enhanced" debt financing, which entails here two dimensions.

First, we shall concentrate on those euro area banks that may be considered of less or non-systemic importance. Hence, these banks benefit substantially less from implicit government guarantees than the more systemic banks which may be perceived "too big to fail" (TBTF). Consequently, as the less systemic banks do not receive a TBTF subsidy, their longer-term debt financing can be characterised as being less "enhanced" when compared with similar financing by systemic banks. The selection of our sample of banks relates to the ongoing discussion of how to define and subsequently select the specific banks that are perceived systemic. We shall not enter into this discussion, but propose in Section 4 our own selection of euro area banks that seem of less systemic significance, based on practical arguments.

Second, the other dimension of "non-enhanced" debt financing that we adopt in our analysis entails the specific debt instruments that euro area banks use in their longer-term funding. In essence, we generally exclude those debt securities that are backed explicitly by either collateral or

1. Throughout the article, when we refer to issuance we mean gross issuance. For reasons of notational simplicity, we shall not always mention this explicitly.

In this article, non-enhanced debt financing by euro area banks consists of two components (1 + 2):

- 1 Issuance by non-systemic euro area banks (excluding public banks) of
- 2 unsecured bonds, excluding securitizations. Hence, non-enhanced debt financing involves the issuance of bonds and Medium-Term Notes (MTNs) excluding covered bonds, government guaranteed bonds and securitizations. Issuance of preferred shares is not taken into account as well.

government, concentrating on the more unsecured longer-term debt financing of euro area banks. Thus, our “non-enhanced” debt issuance excludes government guaranteed bonds, covered bonds and securitisations, both retained and public placements. Overall, we do not take into account preferred shares, which assumed some importance as longer-term funding instruments in the wake of the 2007-2009 financial crisis, since they are classified as equity and not debt.

Overall, the two restrictions that we impose in terms of “enhancement” on both the number of banks and type of debt instrument allow for a more explicit measurement of the inherent capability of the sample group of banks to issue debt securities on their own strength in the wake of the severe financial stress of recent years. Or by the same token, these restrictions make it possible to assess the development of market confidence in the euro area banking sector: Our “non-enhanced” debt financing shows the willingness of domestic and international investors to purchase longer-term debt issued by euro area banks without any form of explicit backing, issued by those banks that benefit less from implicit TBTF protection.

Hence, the objective of this article is to analyze how the basic unsecured debt financing of the less systemic part of the euro area banking sector developed under two major financial crises and to assess how it progressed in comparison with that of the more systemic group of euro area banks. This analysis may shed light on potential fundamental differences in funding opportunities between less and more systemic banks and could provide input for ongoing discussions on the importance and relevance of TBTF subsidies across the world in general and in Europe in particular. Moreover, we are able to provide some evidence on how the more basic unsecured wholesale funding markets for euro area banks performed in view of two major financial crises.

A summary overview of our interpretation of “non-enhanced” debt financing by euro area banks is provided in Box 1.

In addition, we investigate the concept of “non-enhanced” debt financing in an international context, i.e. we analyse how international versus domestic “non-enhanced” debt financing by euro area banks developed. We find evidence of a certain degree of re-nationalisation of this important part of euro area banks’ wholesale funding.

The structure of this article is as follows. First, we provide an overview of the financial shocks that affected severely bank funding markets, i.e. the 2007-2009 global financial crisis and the 2010 European sovereign debt crisis. After this, Section 3 discusses the various funding characteristics of euro area banks and investigate first how they were disrupted by the financial crises and second how they benefited from subsequent policy responses. Subsequently, we present the main characteristics of the sample group of euro area banks, which will clarify our interpretation of systemic and non-systemic banks. Then, in Section 5, the specific debt instruments that are excluded to obtain our so-called “non-enhanced” issuance will be dis-

cussed in more detail. Section 6 contains an in-depth analysis of the specific development of “non-enhanced” issuance by the non-systemic banks, in comparison with that by the systemic banks. This is followed by an assessment of international versus domestic “non-enhanced” debt issuance by euro area banks, which allows us to investigate the actual geographical offerings of these debt instruments. Finally, the last section concludes.

2 *The financial shocks*

During the past few years, two rather unprecedented financial shocks disrupted severely bank funding markets across the globe, as they eroded confidence in banks as borrowers and triggered a sharp rise of risk aversion vis-à-vis the banking sector. These shocks were the 2007-2009 financial crisis and the 2010 European sovereign debt crisis, which both impaired the ability of banks to raise funds both in short-term and long-term financial markets. While the first crisis affected banks on a global level, impairing more strongly funding operations of banks from developed countries than those from emerging market economies, the second crisis hit the euro area banking sector particularly hard, although at times strong contagion effects to banks outside the euro area and even outside Europe were registered.

The 2007-2009 financial crisis started as a major financial turmoil in the summer of 2007, when international financial market conditions deteriorated sharply due to banks’ exposures to US subprime mortgage markets and related financial instruments (Brunnermeier, 2009; Van Rixtel and Romo González, 2010a). Under severe repricing of risk, financial strains spread to other segments of the global financial system, resulting in a flight from risky assets throughout the world, particularly those linked to structured finance, in favour of safe-haven assets such as government debt. The turmoil also spread to short-term funding markets, with major dislocations in ABCP markets and unprecedented rises in interbank money market interest rates. These events prompted central banks worldwide to inject substantial amounts of liquidity and to switch to considerable monetary easing. Consequently, the crisis seemed to stabilise and even to moderate during the first half of 2008, although the underlying risks remained.

With the collapse of Lehman Brothers on 15 September 2008, this picture changed completely, as it triggered the most serious shock to the global financial system since the Great Depression. Confidence in global debt markets, especially in structured finance instruments, dropped to all-time lows. As the problems started rapidly to affect banks’ balance sheets, they suffered heavy losses and some had to be bailed out by government. The intensification of the crisis led authorities to adopt emergency measures which committed large sums of public money to mitigate the crisis and to rescue problem financial institutions. From March 2009 onwards, international financial market conditions started to improve and confidence in the global banking sector recovered from historic lows. At the same time, banks’ access to longer-term funding markets remained constrained, and both in 2009 and 2010, well into its aftermath, the financial crisis continued to affect the funding operations of banks.

Turning now to the other shock, the European sovereign debt crisis that developed in 2010 was driven by growing concerns in financial markets about the sustainability of public finances in view of rising government deficits and debts in various peripheral European countries in particular (ECB, 2010d). The development of this crisis showed that not only it could effectively block access of the weaker banks to funding markets, but that it could disrupt the ability to access funding of even the strongest banks in Europe as well (Moody’s, 2011). The crisis was concentrated in two episodes of severe financial stress, i.e. April-May and November-December. In the first episode, from mid-April onwards, sovereign credit risk – especially, but not only, of Greece – and possible spill-over effects to the European banking sector became a source of major concern and contributed to a sharp rise in risk aversion and volatility in finan-

cial markets. Subsequently, early in May, sovereign tensions in Europe intensified and developed into a full-blown financial crisis centred on the euro area, but with strong global contagion effects (ECB, 2010a). Securities' issuance markets in Europe virtually came to a standstill and contagion effects strained market conditions outside Europe as well, disrupting banks' longer-term funding markets, while tensions in global interbank funding markets grew markedly, especially in international US dollar funding markets.

Various policy initiatives adopted in the course of May managed to calm-down concerns of a widening and deepening crisis. Regarding spill-over effects to the banking sector, especially the publication in July of favourable results from the macro stress implemented by the Committee of European Banking Supervisors (CEBS) restored some confidence in financial markets. This was further supported by positive earnings announcements from European banks. However, renewed sovereign debt tensions concentrated in the European periphery started to build up in the course of October following discussion of the possible introduction of haircuts on government debt, which culminated in a second crisis episode in November and December. Contagion effects to the banking sector became particularly pronounced in European bank funding markets after Ireland's request on 21 November for financial assistance from the EU and IMF did not quell the spreading of the crisis to other euro area countries. In addition, discussions on the possible involvement of private holders of government bonds in sovereign restructurings fuelled market uncertainty further. As a result, numerous banks in European peripheral countries experienced severe difficulties in raising both short and long-term funding and for many their borrowing costs, even of secured instruments such as covered bonds, increased sharply. Contagion effects to funding operations of banks outside Europe were less strong but nevertheless observable. In the course of December, the situation started to stabilise and banks' longer-term funding markets started to reopen, a development that became more pronounced early in 2011.

The European sovereign debt crisis and its huge impact on euro area banks in general and on their funding markets in particular demonstrated the strong degree of interconnectedness between the government and banking sectors (DGECFIN, 2010; ECB, 2010c; IMF, 2010a; Blundell-Wignall and Slovik, 2011). First, many banks hold significant amounts of domestic sovereign bonds on their balance sheets and these large exposures may easily lead to valuation losses and solvency concerns when sovereign yields rise sharply. Second, sovereign debt serves as collateral for various financial transactions, such as liquidity operations with central banks, private repo operations and financial derivatives transactions. Doubts regarding sovereign credit risk may result in lower collateral values, due to larger haircuts or margin requirements, which effectively reduce the ability of banks to raise liquidity. Overall, the strong correlation between sovereign and bank credit risk was one of the most prominent characteristics of the European sovereign debt crisis and established the main channel for the propagation of sovereign debt concerns to disruptions in bank funding markets, both through higher cost of financing for banks in general and restricted access for some banks in particular.

The 2007-2009 financial crisis and the 2010 European sovereign debt crisis affected banks' funding operations across the board, but had a particularly strong impact on what we have typified as "non-enhanced" debt financing. The banks and debt instruments that are covered by this concept will be explained in Sections 4 and 5. But first, in the next section, we shall discuss in more general terms debt financing by euro area banks under the two financial crises and the subsequent policy responses. This discussion provides the background information which is necessary to fully grasp the more detailed analysis on "non-enhanced" debt financing that will be provided in Sections 6 and 7.

3 Euro area banks' debt financing under financial crisis and policy response

The concept of “non-enhanced” debt financing that we develop in this article is fundamentally embedded in the overall debt financing by euro area banks. In this respect, the recourse of euro area banks to longer-term debt securities issuance has been characterised by various notable features.

First, national characteristics seem to play an important role in the specific pattern of this financing across banks from different euro area countries, which may be related to differences in national legal frameworks, historical customs and structures of domestic banking sectors. Hence, certain types of bonds are relatively more important as funding instrument for banks from some euro area countries than others and vice versa. For example, traditionally covered bonds have been issued predominantly by German, French and Spanish banks, while issuance of retained securitisations in 2010 was largely concentrated at Dutch banks (Bürmeister et al., 2010; Banco de España, 2010; ECB, 2011).²

Regarding cross-country differences in the degree of debt financing by European banks, this can be assessed by calculating their amount of debt instruments (including bonds) outstanding as percentage of their total liabilities, using harmonised data published by the ECB for the domestic banking sector in individual euro area countries (ECB, 2010c). Although this indicator is broader than longer-term debt financing such as defined in this article, it gives a flavour for cross-country differences in debt financing by banks from various euro area countries. It shows that German, French and Spanish banks financed in 2009 around 19 % of their liabilities through debt instruments, followed by Portuguese and Irish banks at respectively 27 % and 22 %, whereas Italian banks' debt financing was around 30 % of total liabilities (see Table 1).³ Hence, cross-country differences in funding structures are significant in the euro area. At the same time, their impact on the results of our investigation should be modest, as the groups of both systemic and non-systemic banks that we use (and discuss in Section 4) include banks from a wide range of euro area countries.

Second, bank-specific characteristics may play a role in the use of longer-term debt instruments, such as bank size or financial strength. In this context, different funding patterns have been established for large versus small banks. This is clearly visible in Table 1 for domestic EU banks, with debt financing by small banks being considerably lower than that by medium-sized and large banks. Furthermore, regarding the use of specific debt instruments, academic research suggests that securitisations, which involve substantial and mostly fixed costs, should be particularly costly for smaller banks and thus they should be less likely to resort to this funding source (Affinito and Tagliaferri, 2008; Panetta and Pozzolo, 2010).⁴

2. Academic research on the use of specific debt instruments has found significant cross-country differences in a sample including the largest euro area countries regarding the likelihood that banks issue covered bonds and mortgage-backed securities (Rodríguez Fernández et al., 2011). 3. Furthermore, data published for various euro area countries by the IMF on the importance of wholesale funding, which includes longer-term bonds, shows considerable dispersion across countries: Wholesale funds as a percentage of total liabilities of domestic banking sectors at end-June 2010 varied from a low of 19 % for Finland to a maximum of 49 % for Austria (IMF, 2010a). Wholesale funding is defined here as the total of bonds and short-term securities issued, interbank financing and central bank financing. 4. At the same time, these costs seem not to be that high that they are not surmountable for smaller banks (Bannier and Hänsel, 2008). Moreover, securitisation provides in relative terms more liquidity advantages for small than for large banks, so the relatively high benefits should be worth the relatively high cost for small banks (Loutskina, 2011). Overall, when they occur, securitisations are more important for small and medium-sized European banks than for large ones (Uhde and Michalak, 2010). It has also been established that banks which are less locally concentrated (and which tend to be the larger banks) are more likely to issue covered bonds, with similar but somewhat weaker results for securitisations (Martín-Oliver and Saurina, 2007; see also Rodríguez Fernández et al., 2011). Finally, in addition to size, it has been found that different types of banks from identical jurisdictions may be prone to use different forms of securitisation: For example, Spanish savings banks tend to use more liability securitisation programmes through CDOs, while Spanish commercial banks are more inclined to use asset-backed securities programmes (Cardone-Riportella et al., 2010).

EU BANKS	2008	2009
All domestic banks	18.0	16.0
Small domestic banks	5.1	3.2
Small and medium sized domestic banks	19.0	20.1
Large domestic banks	18.2	15.3
German domestic banks	17.1	18.5
French domestic banks	17.1	18.9
Italian domestic banks	25.6	30.3
Spanish domestic banks	20.4	19.4
Dutch domestic banks	4.4	27.3
Greek domestic banks	8.6	9.3
Portuguese domestic banks	22.8	26.9
Irish domestic banks	23.6	22.1

SOURCE: ECB (2010c).

The findings that banks of different sizes may use specific debt instruments to different extents may constitute an element of sample bias in our study, since the systemic banks are generally large to very large banks, while the group that we have typified as non-systemic consists predominantly of medium-sized banks. At the same time, as is shown in Table 1, the difference in the degree of debt financing among EU domestic banks is the most pronounced between large and medium-sized banks on the one hand and small banks on the other, and is actually quite modest between large and medium-sized banks, so that the likelihood of sample bias may be rather small.

Third, the development of long-term debt financing by euro area banks should also be seen in the context of the considerable build up of leverage in the years prior to the 2007-2009 financial crisis and the subsequent and severe process of deleveraging (Banco de España, various issues; ECB, 2009; Barnes et al., 2010). While the former was accompanied by a considerable recourse to longer-term debt issuance, the latter mitigated to some extent the need to issue long-term debt. Regarding leveraging and deleveraging, a distinction should be made between banks in some countries that experienced strong growth in credit (such as long-term mortgages) and banks in other countries where due to weak credit demand banks expanded through purchases of securities. The former need to roll-over financing or refinance, either in funding markets or through the ECB, whereas the latter simply may let securities mature and hence do not face challenges in funding.

Fourth, both the 2007-2009 global financial crisis and the 2010 European sovereign debt crisis saw rather unprecedented dislocations in euro area banks' funding markets in general and in cross-border funding markets in particular (CGFS, 2010a and 2010b; ECB, 2010c; Fender and McGuire, 2010). Both crises seriously disrupted the use of longer-term debt instruments by euro area banks and had important consequences for banks' funding structures. In the development of the 2007-2009 financial crisis, banks' focus shifted to short-term funding, with central bank liquidity becoming an important source of financing (ECB, 2009). Moreover, during the periods of severe financial stress in 2010, banks resorted to short-term debt financing through secured money market transactions or repo financing, especially those cleared by central counterparties, in addition to ample liquidity provided by the ECB (ECB, 2010e;

Moody's, 2010b; IMF, 2010a). Furthermore, both financial crises resulted in enhanced competition for funding through deposits (ECB, 2010b; IMF, 2010b). At the same time, they also led to much greater use of relatively non-traditional instruments such as retained securitisations: In the wake of severe funding and liquidity shortages, banks started to securitize loans for the sole purpose to use them as collateral for ECB liquidity operations (ECB, 2009 and 2011).

The severe dislocations in bank funding markets prompted rather unprecedented policy reactions by public authorities to restore banks' access to funding. Governments across Europe and in most euro area countries introduced in the wake of the 2007-2009 crisis a range of support measures for banks, including capital injections, guaranteed issuance programmes for bank bonds, asset protection schemes and higher deposit insurance ceilings (ECB, 2009; Stolz and Wedow, 2010; Moody's, 2010b). These initiatives provided much needed support for longer-term debt financing, and government guaranteed debt issuance became a crucial feature of longer-term bank funding (Panetta et al., 2009). At the same time, the ECB eased its policy stance and started to offer ample liquidity and adopted a number of non-standard measures in October 2008, which were subsequently referred to as enhanced credit support. This package included the provision of rather unlimited amounts of liquidity against adequate collateral, the broadening of the list of assets eligible as collateral and the implementation of longer-term refinancing operations (LTROs) (ECB, 2010d and 2010e). Furthermore, in May 2009 the ECB announced the start of the covered bond purchase programme (CBPP) of euro 60 billion, which aimed to revive the market for covered bonds, which had virtually dried up (Beirne et al., 2011).

Also the 2010 European sovereign crisis resulted in a strong policy response, both from government and the ECB. The first episode of severe financial stress in April and May prompted the establishment of two programmes to address market fears of sovereign default, i.e. the European Financial Stabilisation Mechanism (EFSM) and the European Financial Stability Facility (EFSF). The combined effect of these programmes in easing concerns in financial markets emanating from fiscal difficulties in various peripheral countries also improved confidence in the euro area banking sector in general and in peripheral banking sectors in particular. Moreover, in early May the ECB started with the Securities Markets Programme (SMP) to mitigate upward pressures on peripheral sovereign bond yields. In addition, the ECB reintroduced some of the non-standard liquidity operations that had been withdrawn earlier and reactivated US dollar swap lines with the Federal Reserve (ECB, 2010d). Important support by the ECB was derived from the fact that banks from various peripheral countries in particular became large borrowers of its funds. All in all, a notable improvement in conditions in bank funding markets could be observed, both in short and long-term markets, to which also the publication in July of the results from the CEBS macro stress contributed significantly (see Section 2).

During the second episode of the European sovereign debt crisis in November-December, government financial support was provided to Ireland through various sources including the EFSM and EFSF. The ECB announced to continue some of its non-standard liquidity operations, while its operations under the SMP became more active early in December, although in continuing modest amounts (Citigroup, 2011). Furthermore, US dollar swap lines with the Federal Reserve were once more extended. At the same time, strong reliance of banks from some peripheral countries on ECB liquidity increased.

To summarise, direct and indirect support provided by government and ECB became a crucial element of the funding of the euro area banking sector in the past few years. How this affected the actual development of what we have called the "non-enhanced" debt financing by euro area banks in 2009 and 2010 will be the subject of the subsequent sections.

4 “Non-enhanced” debt financing: Selection of sample of banks

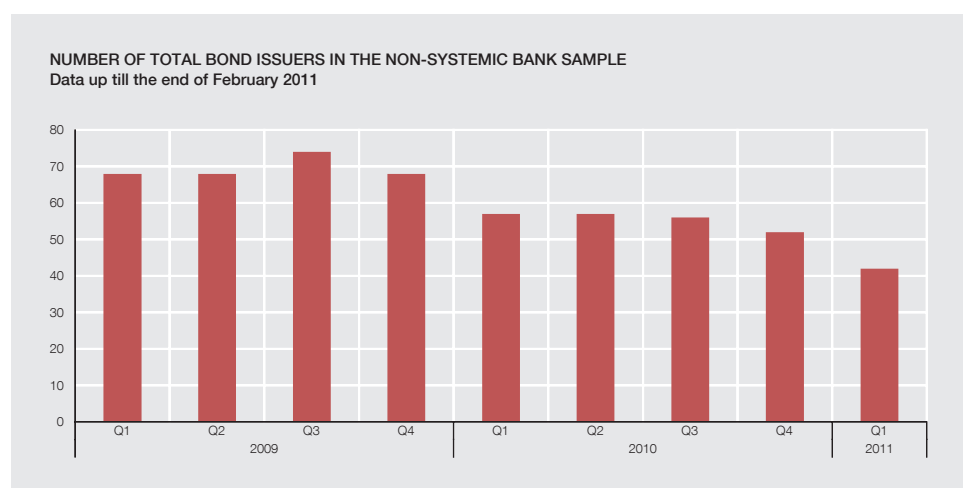
The analysis in this article is concentrated on the group of euro area banks that may be perceived, in the view of financial markets, as being of moderate to little systemic importance and consequently are considered most likely not “too big to fail” (TBTF).⁵ Hence, the banks in our sample seem less obvious candidates to be bailed out and to be under the implicit protection of government. This may be reflected in higher funding costs for these banks when compared with the large TBTF banks and potentially could have implications for their funding structure (Baker and McArthur, 2009).⁶ To construct our sample of non-systemic banks, we take all the euro area banks that issued longer-term debt securities during 2009 and 2010 and deduct from this group the banks that may be perceived systemic. In addition, public banks are excluded as well, since, as being part of the public sector, they can be perceived to be guaranteed explicitly by government.⁷

Thus, the first step is to select the systemic banks in the euro area. We are aware that the process of defining systemic banks has been at the centre of a rapidly growing body of literature, which tries to develop objective criteria to identify banks of systemic importance (ECB, 2006; IMF, 2009a; Brunnermeier et al., 2009; Thomson, 2009; IIF, 2010; Tarashev et al., 2010; De Cadenas-Santiago et al., 2010).⁸ This also relates to the introduction of new legislation and regulations, such as for example linked to the Dodd-Frank Act in the US (Price and Walter, 2011). At the same time, the selection of systemic banks continues to be surrounded by considerable difficulty and ambiguity, with the inevitable involvement of high degrees of judgement and flexibility (IMF, 2009b).

Hence, we propose our own definition of what are systemic banks in the euro area, which predominantly is based on practical considerations. Namely, these banks are here the 18 euro area banks from eight different countries that participated in the first and confidential macro stress test conducted by CEBS in 2010. Macro stress tests focus on systemic risk and hence banks’ participating in these tests may be considered of systemic importance (ECB, 2010f). Essentially, the 18 banks in the initial CEBS stress are generally the biggest banks in specific euro area countries and overall include the largest banks in the euro area.⁹ Thus, these banks are the most likely candidates to be bailed out, if needed, and may be perceived as being implicitly guaranteed by government. The group of banks participating in the initial CEBS macro stress test has not been made public.¹⁰

5. In the wake of the 2007-2009 financial crisis, other classifications have emerged in addition to “too big to fail”, such as “too interconnected to fail” or “too important to fail” (see for example: Gross, 2010; De Cadenas-Santiago et al., 2010). We shall not pay attention to this debate. 6. Regarding TBTF considerations in Europe, several observers have argued that they may be significant, due to historical, cultural and reasons, such as the inclination to protect and foster national champions (Goldstein and Véron, 2011). At the same time, the history of banking crises has shown that TBTF policies have been prevalent across the globe, for example in the US during the 2007-2009 crisis. The experience with this crisis and the impact of new regulation may affect TBTF policies: See for example WSJ (2011) on SEC comments that rating agencies should no longer count on TBTF subsidies in their rating of large systemic US banks. 7. The criterion of public bank that we follow is the classification of public banks that is provided by data-provider Dealogic. 8. In these investigations, systemic banks are also referred to as systemically important financial institutions (SIFIs) or large and complex banking groups (LCBGs). 9. Bank size is generally the main criterion or one of the main criteria found in the literature to identify systemically important banks (De Cadenas-Santiago et al., 2010; Tarashev et al., 2010; IMF, 2009b). Size can be measured as absolute size or systemic size (Demirgüç-Kunt and Huizinga, 2011). Empirical research has shown that for debt instruments issued by big US banks the TBTF discount on yield spreads became very sizeable after the bail-out of LTCM in 1998, thus finding evidence of a TBTF subsidy for big banks (Balasubramnian and Cyree, 2011). The size of the possible TBTF subsidy for the largest US banks in comparison with smaller banks has been estimated at between USD 6.3 billion and USD 34.1 billion per year (Baker and McArthur, 2009). More recent assessments show continuing and considerable advantages in cost of funding for large US banks that may be related to TBTF subsidies according to some observers (WSJ, 2011). 10. Hence this information needs to be treated as confidential at this juncture. Essentially, there is very little public information available on which banks are deemed systemic, essentially because of moral hazard considerations: The Financial Times published a list of global systemic banks including various euro area banks in 2009 (FT, 2009). At the same time, the much wider list of banks that participated in the CEBS stress test published in July 2010 is available at: <http://stress-test.c-ebis.org/documents/Summaryreport.pdf>.

("Non-18 sample")



SOURCE: Dealogic.

We do not use the 77 euro area banks that participated in the subsequent CEBS stress test of 91 EU banks and whose results were published on 22 July (CEBS, 2010). The main reason for this choice is that national supervisors from some countries, such as Spain, added a relatively large number of banks to the sample in order to realise a more comprehensive coverage of domestic banking systems.

Our sample of non-systemic banks can now be calculated by excluding the 18 systemic banks, in addition to public banks, from all euro area banks that issued longer-term debt securities during 2009-2010. This "non-systemic" sample group is shown in Chart 1. We find a maximum of 74 different euro area banks in the third quarter of 2009 and a minimum of 52 different banks in the fourth quarter of 2010. Overall, we have 111 different banks in the sample from 13 different countries, which predominantly are medium-sized banks. These banks issued a total gross amount of euro 780 billion in bonds, medium-term notes and securitisations during 2009 and 2010¹¹. Spanish and Italian banks dominate the sample, at around 23% respectively 22% of the total number of banks in the sample group, followed by German banks at around 18%.

We know that our selection of the group of non-systemic banks is a rough approximation and that specific banks included in this group may be deemed more or less systemic. Thus, some banks potentially may benefit to some extent from TBTF protection. At the same time, taking into account that they did not participate in the initial CEBS macro stress test, clearly they were considered of less systemic importance than the 18 participating banks.

To conclude our interpretation of "non-enhanced" debt financing, the next section will be devoted to the definition of the unsecured or "non-enhanced" debt instruments which are covered by this concept.

5 Definition of "non-enhanced" debt instruments

To summarise, the "non-enhanced" debt issuance that we take into account is the issuance of uncovered non-guaranteed bonds and medium-term notes, e.g. traditional unsecured longer-term debt securities issued by banks in order to fund their long-term financial needs without recourse to collateral or government guarantees (ECB, 2009), excluding securitisations. Thus, the debt securities issuance that we show is the very straightforward and unsecured issuance

¹¹. This number also includes the first two months of 2011.

without any form of explicit private or public backing, or, as we call it, “enhancement”. By analyzing the development of this issuance during 2009-2010, we are able to assess movements in the inherent and basic longer-term funding capacity of euro area banks in unsecured wholesale funding markets in the wake of severe financial stress.

We would like now to explain this definition of “non-enhanced” debt instruments in more detail. In addition to the exclusion of systemic banks, our analysis is characterised by its focus on the gross issuance of what we shall call “non-enhanced” debt instruments, which predominantly consist of unsecured bonds and medium-term notes. This concept basically involves the issuance of bonds which do not carry “enhancement” mechanisms in the form of underlying collateral or explicit government guarantees that would lower the credit risk for investors willing to purchase these instruments. By excluding collateralised and government guaranteed debt issuance that offer considerable additional security to investors, we are better able to investigate the development of investor confidence in the euro area banking sector under the impact of the two major financial crises in 2009 and 2010.

The specific “enhanced” debt instruments that we exclude are the following.

First, we do not take into account covered bonds, which are predominantly issued by banks and characterised by the dual nature of protection that they offer to investors (Packer et al., 2007; Beirne et al., 2011). This dual-recourse mechanism consists of the investors’ claim on the issuing bank and a priority claim on a cover pool of high-quality collateral. Hence, it may be expected that investors show considerable interest in these instruments at times of severe financial stress hitting the banking sector.

Second, we exclude bonds that were issued under explicit government guarantee issuance programmes. These became a prominent feature of longer-term bank funding markets across the globe in the fourth quarter of 2008 and thereafter, as traditional primary markets for banks’ debt issuance virtually came to a standstill and governments started to provide much needed support (see also Section 3). In the euro area, 12 countries initiated these programmes, which generally have been assessed positively (ECB, 2009; Stolz and Wedow, 2010; Panetta et al., 2009).

Third, our interpretation of “non-enhanced” debt issuance does not include securitisations. These instruments are collateralised by pools of financial assets and involve the subsequent sale to investors of claims on the cash flows backed by these pools (Van Rixtel and Criado, 2010). Hence, securitisations are characterised by a certain element of “enhancement” in the form of collateralisation. We exclude both public placements, which are securitisations sold to investors in financial markets, and retained securitisations, which do not come to the market but are retained by the originating banks. The latter became an important funding tool for euro area banks with the propagation of the 2007-2009 financial crisis and during certain episodes of the European sovereign debt crisis in 2010, as they were eligible as collateral for ECB liquidity operations (Van Rixtel and Romo González, 2010a).

In our analysis, we do not take into account preferred shares in the sample all together. Although these instruments are treated in financial markets as fixed income instruments, they are part of equity financing and categorised as equity on the balance sheet, and hence fall outside debt financing. Moreover, we do not include bonds issued by public sector banks. In addition, we also exclude the very limited amounts of bonds issued by private sector banks with some specific government backing other than offered under the government guaranteed

issuance programmes that were enacted after the collapse of Lehman Brothers.¹² Finally, we concentrate on longer-term debt securities, i.e. bonds and medium-term notes (MTNs), and leave out short-term debt. MTNs are offered continuously under an issuance programme to investors, with a range of different yields and maturities of up to thirty years or longer available to cater to the specific needs of individual investors (Fabozzi, 2008a and b).

In order to assist in the interpretation of the data that we shall present later on, the next section is devoted to an overview of the development of euro area banks' funding under the impact of the crises and policy response.

6 “Non-enhanced” debt financing by euro area banks

In this section, we present the results of our analysis of “non-enhanced” debt financing in the euro area, which comprises the gross issuance of “non-enhanced” debt instruments by non-systemic euro banks. More specific, we analyse gross issuance of longer-term debt excluding covered bonds, government guaranteed bonds and securitisations for a sample of euro area banks without the 18 banks that were considered of systemic importance in the initial CEBS macro stress test.

To summarise the results upfront, this “non-enhanced” debt financing was structurally lower, in relative terms, than issuance of unsecured bonds by the more systemic banks in the euro area. This provides some indirect evidence of the possible existence of different debt issuance conditions for the non-systemic part of the euro area banking sector when compared with those of their more systemic counterparts.

Our findings indicate that “non-enhanced” debt financing by euro area banks declined sharply in parallel with the 2007-2009 global financial crisis and the 2010 European sovereign debt crisis, due to severe constraints in access to longer-term funding markets (see Table 2). Total gross “non-enhanced” bond issuance in the euro area for the year 2007 was euro 169 bln, which dropped to euro 83 bln, 78 bln and 95 in respectively 2008, 2009 and 2010. This sharp decline of essentially unsecured debt was most likely due to an increase in risk aversion vis-à-vis banks in general, because it was a euro area-wide phenomenon and not limited to a few countries in the European periphery only. In fact, as shown in Table 2, the country that both in absolute and relative terms experienced the sharpest decline in yearly “non-enhanced” bond issuance was Germany.

Turning to monthly “non-enhanced” debt issuance in 2009 and 2010, the results show that it was at particularly subdued levels during April-May and November-December 2010, when the European sovereign debt crisis intensified and concerns about spill-over effects to the European banking sector increased sharply (see Table 3). Hence, the strong increase in concerns about banks' direct and indirect exposures to European sovereigns constrained the issuance of unsecured forms of debt financing. This affected basically all euro area countries, with the only exception of Germany. At the same time, “non-enhanced” debt issuance recovered strongly in September and October 2010, which was related to a certain degree of normalisation in funding markets, partly driven by the publication of the extended CEBS macro stress test late July. By country, Italian banks issued the largest amount of “non-enhanced” debt in 2009 at euro 24.5 billion, while German banks were the largest issuing sector in 2010 at euro 22.1 billion.

Chart 2 shows the relative development of “non-enhanced” debt financing for a selected number of countries, which is measured as the issuance of “non-enhanced” debt instruments by

¹² The total gross amount of bonds issued by private sector banks with other government backing than provided by the government guaranteed issuance programmes during 2009 and 2010 was only euro 3 billion, or about 3 % of the total.

NON-ENHANCED DEBT FINANCING BY EURO AREA BANKS

TABLE 2

(Annual data)

MILL EUR	FRANCE	GERMANY	IRELAND	ITALY	NETHERLANDS	PORTUGAL	SPAIN	REST OF THE EURO AREA	TOTAL
2000	11,160	32,394	2,233	8,785	6,097	4,611	6,131	4,731	76,142
2001	12,384	58,275	2,287	8,287	6,719	4,980	8,753	5,764	107,450
2002	12,570	49,745	2,057	3,175	6,494	3,466	8,237	7,995	93,737
2003	16,931	58,329	6,441	9,191	12,705	3,541	19,141	9,757	136,034
2004	22,430	70,632	8,596	13,142	11,484	7,835	18,859	12,986	165,964
2005	20,683	59,148	16,846	20,519	6,357	6,966	34,528	19,280	184,327
2006	35,141	23,186	19,554	32,268	7,020	9,361	52,201	24,001	202,732
2007	29,701	17,213	14,584	38,517	8,720	9,180	29,181	21,729	168,825
2008	20,618	3,077	4,008	27,680	5,559	3,140	7,768	11,477	83,325
2009	15,999	9,117	4,064	24,458	754	10,051	6,141	7,043	77,626
2010	21,349	22,059	3,113	16,600	10,535	5,717	10,533	5,143	95,048
2011	5,565	2,623	0	3,188	2,698	0	708	696	15,479

SOURCE: Dealogic.

a. Data updated till March 2, 2011.

b. Non-enhanced debt financing by euro area banks includes unsecured bond issuance (excluding securitizations) by the non-systemic bank group.

the group of non-systemic banks as percentage of their total issuance of debt instruments. “Non-enhanced” debt issuance by Spanish banks improved gradually in the course of 2009 and the first half of 2010, reaching a high of 22 % of total debt issuance in the second quarter. Subsequently, it declined in the third quarter of 2010 in the wake of the first European sovereign debt shock. This may also have been related to the publication of the results of the CEBS stress test in which Spanish savings banks participated, of which some are also included in our sample of non-systemic banks: The results concluded that four savings banks needed additional capital. Regarding German banks, their “non-enhanced” debt financing consistently improved from the second quarter of 2009 onwards, reaching a high of 61 % of total issuance in the fourth quarter of 2010 (left hand-side panel, Chart 2).

The publication of the CEBS stress test was associated with a sharp increase in “non-enhanced” issuance by German banks to 59 % of their total issuance in the third quarter, up from 40 % in the second quarter. Interestingly, the second European sovereign debt shock in November-December 2010 seem to have had no visible impact on “non-enhanced” debt financing by neither Spanish nor German banks, as it actually increased in the fourth quarter of 2010 from the third quarter for both groups. Turning to French banks, their “non-enhanced” debt issuance as percentage of total issuance strongly declined in the second quarter of 2010, actually below that of Spanish banks (right hand-side panel, Chart 2). Hence, it seems that the European sovereign debt turmoil in April and May has a particular significant impact on French banks. “Non-enhanced” issuance by these banks then recovered strongly in the third quarter and reached a high of 52 % in the fourth quarter.

In order to be able to better interpret “non-enhanced” debt issuance, we compare this with the issuance of “non-enhanced” debt instruments by the group of 18 systemic banks and include for both non-systemic and systemic banks their issuance of “enhanced” or secured instru-

NON-ENHANCED DEBT FINANCING BY EURO AREA BANKS

TABLE 3

(Monthly data)

MILL EUR	FRANCE	GERMANY	IRELAND	ITALY	NETHERLANDS	PORTUGAL	SPAIN	REST OF THE EURO AREA	TOTAL
January-09	0	690	0	2,448	0	195	91	455	3,879
February-09	1,399	1,116	0	2,904	80	215	0	85	5,800
March-09	608	660	0	1,753	0	616	566	350	4,553
April-09	3,386	477	0	2,442	0	1,397	220	25	7,947
May-09	662	359	0	2,239	0	2,688	898	1,343	8,189
June-09	233	237	1,304	2,806	0	1,215	1,198	795	7,789
July-09	2,463	810	0	2,327	0	402	443	65	6,509
August-09	0	1,719	10	423	0	605	0	1,087	3,844
September-09	1,739	509	1,994	1,635	0	226	370	2,539	9,012
October-09	1,022	877	0	2,174	0	554	0	77	4,704
November-09	3,986	1,340	755	3,106	674	1,855	1,793	35	13,543
December-09	502	323	0	202	0	82	561	186	1,857
Total 2009	15,999	9,117	4,064	24,458	754	10,051	6,141	7,043	77,626
January-10	3,526	905	0	636	4,495	2,161	979	117	12,819
February-10	141	1,394	1,203	2,391	0	207	0	1,500	6,836
March-10	4,246	2,143	1,767	2,702	796	1,175	1,607	1,252	15,688
April-10	240	2,046	0	496	275	612	684	14	4,367
May-10	69	1,577	0	271	0	110	300	504	2,830
June-10	1,477	1,888	0	427	0	299	1,878	357	6,326
July-10	2,027	1,747	20	65	0	178	30	5	4,074
August-10	760	2,376	0	977	0	204	187	100	4,604
September-10	3,343	2,376	124	2,983	1,759	483	2,604	1,012	14,683
October-10	3,642	1,964	0	3,589	2,927	112	1,614	27	13,875
November-10	1,767	1,656	0	1,209	105	177	650	255	5,819
December-10	111	1,984	0	853	179	0	0	0	3,128
Total 2010	21,349	22,059	3,113	16,600	10,535	5,717	10,533	5,143	95,048
January-11	4,648	1,651	0	1,023	2,626	0	240	666	10,854
February-11	917	972	0	2,165	73	0	468	30	3,728
Total 2011	5,565	2,623	0	3,188	2,698	0	708	696	15,479

SOURCE: DEALOGIC.

- a. Data updated till March 2, 2011. February also includes debt issuance of the first two days of March.
 b. Non-enhanced debt financing by euro area banks includes unsecured bond issuance (excluding securitizations) by the non-systemic bank group.
 c. Components may not sum to totals because of rounding.

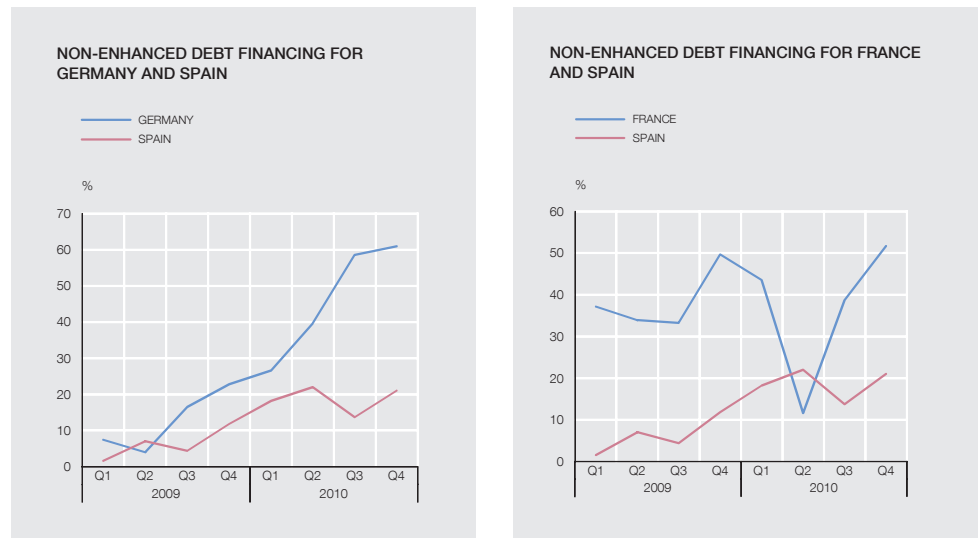
ments as well (i.e. covered and guaranteed bonds and securitisations) (see Chart 3). A number of notable features may be observed.

First, the absolute amount of “non-enhanced” instruments issued each month by systemic banks (“18 banks”) was almost consistently higher than that by non-systemic banks (“non-18 banks”). This pattern was observable for 11 months in both 2009 and 2010. In other words, banks that may be perceived to receive implicit TBTF subsidies issued larger amounts

NON-ENHANCED DEBT FINANCING FOR SELECTED COUNTRIES

CHART 2

(As percentage of total issuance)



SOURCE: Dealogic.

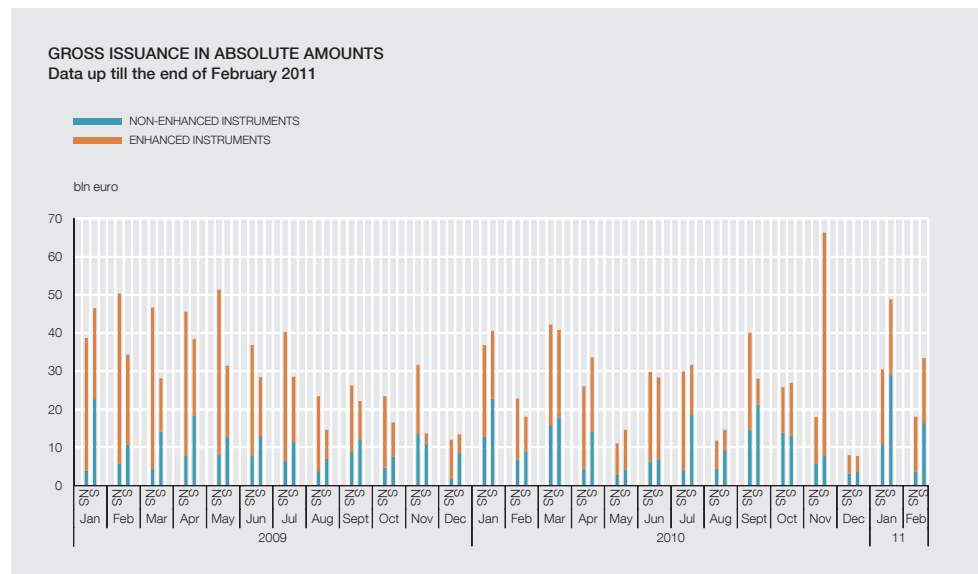
of less secure bonds than banks that most likely do not receive this assistance or to a much lesser extent.

Second, by contrast, monthly issuance of “enhanced” instruments was almost consistently higher for non-systemic banks when compared with systemic ones. This was the case for all months in 2009 and for nine months in 2010. Thus, banks that do not seem the most likely candidates for TBTF protection in the view of financial markets issued larger amounts of more secure debt instruments.

Third, the issuance of “non-enhanced” debt instruments was virtually the same for systemic and non-systemic banks during the months when the European sovereign debt crisis was the most severe, i.e. May and December 2010. This applies both to the absolute and relative figures (see Chart 3 respectively Chart 4). Thus, financial markets did not differentiate between more or less systemic banks, but showed significant risk aversion against all banks. Overall, the intensification of the European sovereign debt crisis and fears of subsequent contamination of banks sharply increased risk aversion towards the banking sector as a whole across the euro area.

Fourth, the publication of the extended CEBS macro stress test results in July, which improved transparency on sovereign debt exposures, seemed to have opened access to unsecured funding markets for the 18 systemic banks (BIS, 2010). Their July issuance of “non-enhanced” debt instruments was euro 18.8 billion, which compared with euro 6.9 billion in June and euro 4.2 billion in May and euro 11.5 billion in July 2009. This was in sharp contrast to “non-enhanced” issuance by the non-systemic banks, some of which participated in the CEBS stress test as well. At the same time, however, the CEBS’s test results may have contributed to the pick-up in issuance activity of “enhanced” or secured debt instruments by non-systemic banks in July. In parallel, banks from various countries, in particular from Spain, were able to reduce their borrowing from the ECB (Moody’s, 2010a and 2010b).

Finally, the issuance of enhanced bonds by systemic banks in November was clearly an outlier. Detailed investigation of the data showed that this was caused by issuance of retained secu-



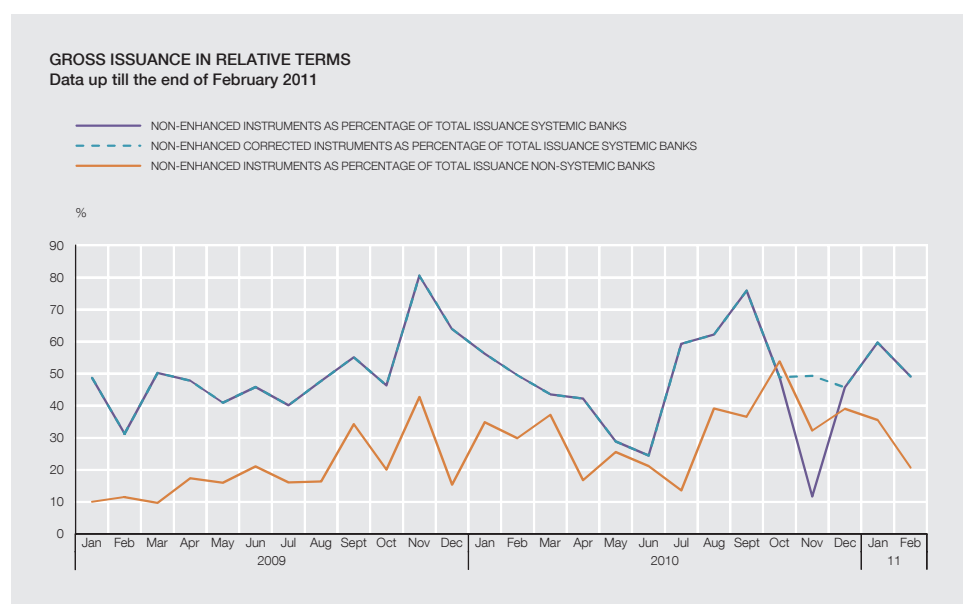
SOURCE: Dealogic.

a. NS = "Non-systemic banks"; S = "Systemic banks".

ritisations by one large Dutch bank, which most likely was related to restructuring activity of exiting securitisations (resecuritisation, see ECB, 2011). Thus, this issuance essentially did not involve real new financing.

In Chart 4, we show the development of gross issuance of "non-enhanced debt" in relative terms for both the systemic ("18 banks") and non-systemic ("non-18") banks. Clearly, the systemic banks almost consistently conducted a larger percentage of their total debt issuance in the form of "non-enhanced" instruments than the non-systemic banks. Hence, the perception that these banks receive an implicit TBTF subsidy may have made it easier for them to issue a greater part of their total debt securities issuance in the form of unsecured debt. The only exception to this pattern was November 2010, but, as was aforementioned, issuance by systemic banks in that month was affected strongly by retained (re)securitisations by a Dutch bank. Since this issuance is included in their total issuance, "non-enhanced" debt instruments issued over total issuance by systemic banks was particularly low in November. When we correct for the effect of the Dutch bank's issuance on total issuance by systemic banks (see dotted line in Chart 4), also in November the relative issuance of "non-enhanced" instruments by systemic banks was higher than that by non-systemic banks. The chart also shows that during both European sovereign debt shocks, issuance of "non-enhanced" or unsecured debt instruments in relative terms was almost identical for both groups of banks (see May and December).

Finally, to complete the picture, Charts 5 and 6 show gross issuance of specific debt instruments and preferred shares by both non-systemic and systemic banks. Turning first to the non-systemic group, these banks relied in the period January-May 2009 strongly on the issuance of both government guaranteed bonds and retained securitisations (see Chart 5). In the second half of 2009 and in the course of 2010, however, non-systemic banks resorted considerably less to these instruments. In the case of government guaranteed bonds, this may have been related to the phasing-out or closure of government guaranteed issuance programmes in several countries. Moreover, in parallel with the development of the European



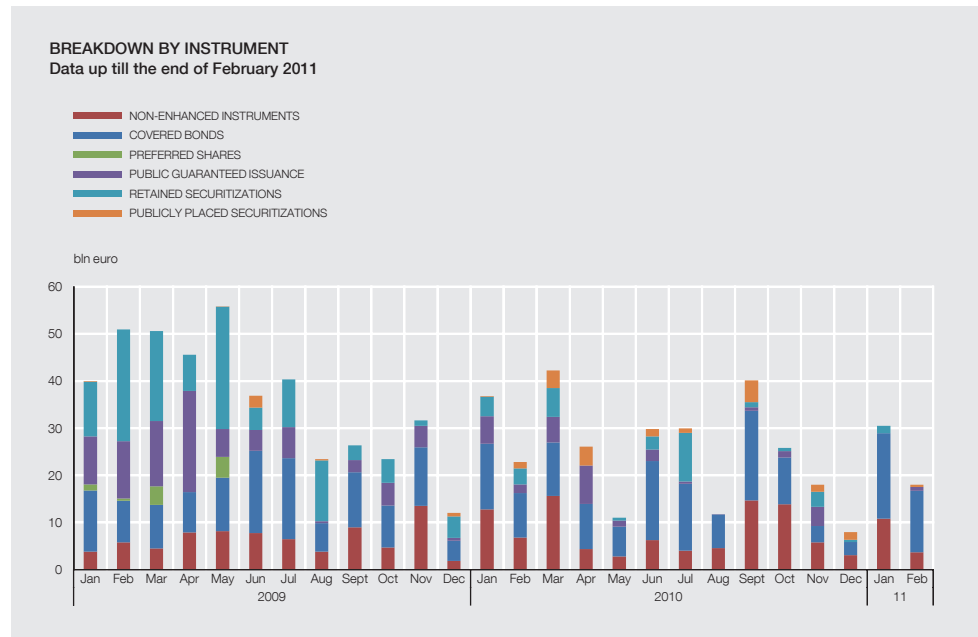
SOURCE: Dealogic.

sovereign debt crisis, the cost to issue government guaranteed debt increased markedly, as concerns about sovereign credit risk effectively reduced the value of the guarantee offered. In fact, spreads on government guaranteed bonds increased considerably in early summer 2010 and since then it has become more expensive to issue government guaranteed bonds than covered bonds (DGEFIN, 2010). Consequently, since May 2010, only a few banks in the euro area have issued government guaranteed bonds.

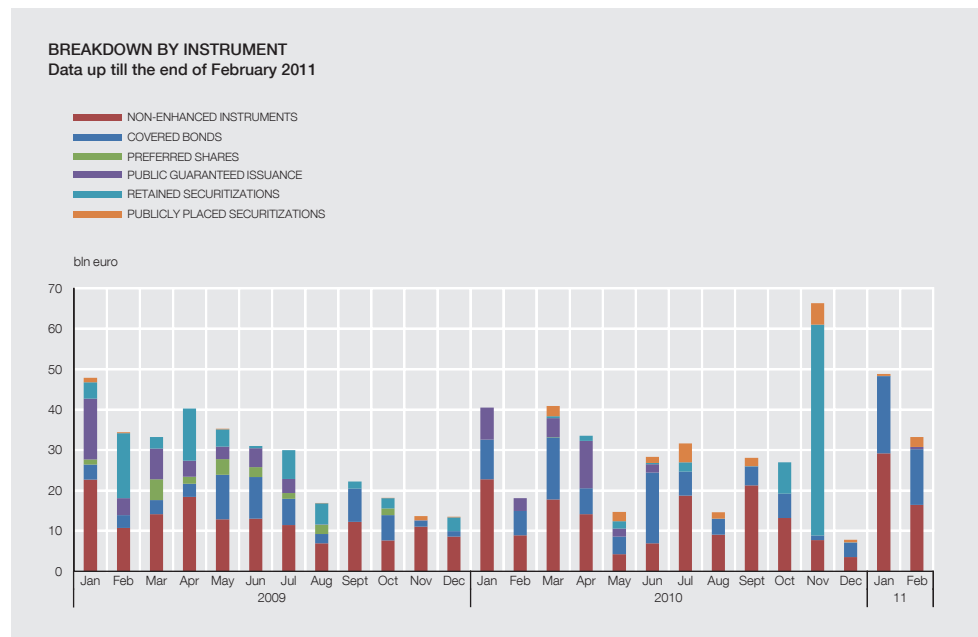
Regarding securitisations, their issuance was almost completely concentrated on retained issues, which were generally eligible as collateral in ECB liquidity operations (ECB, 2010e; see Sections 3 and 5). However, with the tightening of eligibility criteria for its collateral framework, the ECB made issuance of retained securitisations for this purpose less attractive.

By contrast, non-systemic banks started to use more covered bonds in their longer-term funding. The revitalization of the covered bond market was linked directly to the announcement in May 2009 of the launch of the ECB's Covered Bond Purchase Programme (CBPP), whose impact on market conditions has been deemed important (see Section 3; Panetta et al., 2009; Will and Kwon, 2010a; ECB, 2011). The recovery of covered bond issuance was also driven by their eligibility as collateral in ECB liquidity operations (Will and Kwon, 2010b; IMF 2010b). Research by the ECB established that the revival of covered bond issuance was driven by a substitution of banks' uncovered bond issuance for that of covered bonds and did not result in a revival of the bank bond market as a whole (Beirne et al., 2011). Hence, certain episodes of relatively subdued issuance of "non-enhanced" debt instruments may have been accompanied by relatively strong issuance of covered bonds, a substitution which may have been relatively more important for the non-systemic banks.

Finally, the overview presented in Chart 5 shows that preferred shares were of some importance as a funding tool for non-systemic banks predominantly only in the first five months of 2009, in parallel with public capital support provided in some countries (see Section 3).



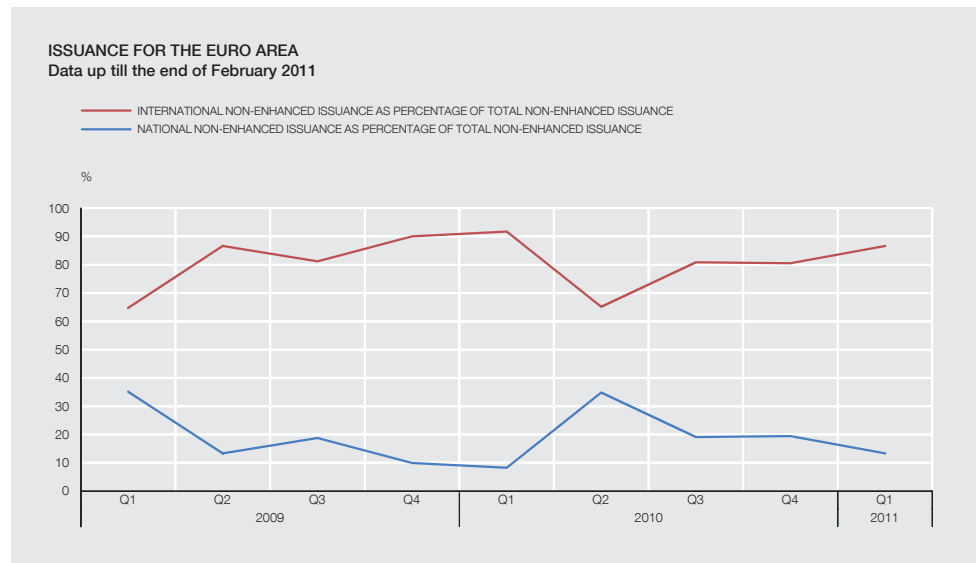
SOURCE: Dealogic.



SOURCE: Dealogic.

With respect to gross issuance activity of systemic banks, this was relatively concentrated in “non-enhanced” or unsecured instruments, with issuance of covered bonds picking up after the announcement early May 2009 of the CBPP by the ECB (see Chart 6). Securitisations and government guaranteed bonds played a relatively minor role as longer-term funding instruments, with the exception of some episodes such as November 2010 when retained securitizations by a Dutch bank affected strongly total issuance. Total issuance of debt instruments and preferred shares by systemic banks was strongly hit in December 2010 by the worsening

(By non-systemic banks only)



SOURCE: Dealogic.

European sovereign debt crisis, but recovered rather rapidly thereafter. In relative terms, during 2009 and 2010 funding through issuance of preferred shares was more important for the systemic than for the non-systemic banks, which may be related to the fact that in general public capital support was concentrated on the more systemic banks instead of the non-systemic ones.

7 The international issuance of “non-enhanced” debt

Finally, we investigate how the international issuance of “non-enhanced” debt instruments by the group of non-systemic banks developed during 2009 and 2010. International issuance is defined by data-provider Dealogic as issuance of bonds which have been offered for sale predominantly in countries outside the home country, while some may be offered for sale in the home country as well. Thus, the important characteristic of international issuance is that the bonds involved are offered for sale to international investors, which allows them to purchase these instruments if they want. By contrast, domestic bonds are bonds which are offered for sale in the home country of the issuer only and consequently are issued in the home country only.

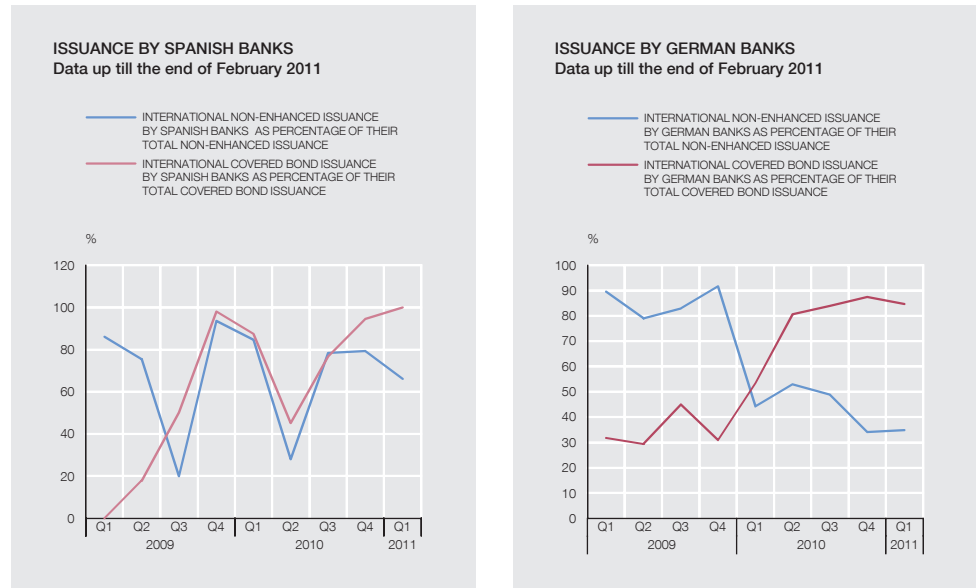
Our findings indicate that the degree of international issuance was influenced by the various financial crises in general and the European sovereign debt crisis in specific, and that this effect was more pronounced for some countries than for others. In essence, we observe a certain degree of re-nationalisation of unsecured debt issuance by euro banks especially in the course of 2010.

The actual development of both international and domestic “non-enhanced” debt issuance by the group of non-systemic banks in the euro area is depicted in Chart 7. It is shown that the percentage of these unsecured debt instruments offered to international investors gradually increased in the course of 2009 to a high of 92% in the first quarter of 2010. This may reflect to some extent growing international confidence in the euro area banking sector, because the less systemic banks in the euro area would not expand their international offerings of “non-enhanced” debt without indications of considerable international interest in this debt. At the same time, “non-enhanced” instruments that were offered for sale only in the home country declined overall during the same period. This pattern changed in the second quarter of 2010, when the first European sovereign debt shock lowered significantly the share of total “non-en-

**ENHANCED VERSUS NON-ENHANCED INTERNATIONAL ISSUANCE
FOR SELECTED COUNTRIES**

CHART 8

(By non-systemic banks only)



SOURCE: Dealogic.

hanced” debt issuance that was offered to international investors to 65 %. Clearly, non-systemic banks in the euro area had to offer significantly more of their unsecured debt in domestic markets. Subsequently, international issuance registered a rather strong recovery that was not interrupted by the second European sovereign debt shock in November-December 2010.

It may be interesting to investigate for several selected countries if substitution occurred between the international issuance of various types of debt, such as between the international issuance of “non-enhanced” debt versus that of covered bonds. Namely, due to changes in international confidence in the euro area banking sector, non-systemic banks in the euro area may had to offer more “enhanced” or secured types of debt to international investors, because the latter became less interested in “non-enhanced” debt. In fact, to some extent this pattern could be observed for both Spanish and German banks that belong to our group of non-systemic banks (see Chart 8).

Regarding Spanish banks, during the first three quarters of 2009, their international “non-enhanced” issuance as percentage of their total “non-enhanced” issuance declined strongly from 86 % to 20 %, while their international covered bond issuance as percentage of their total covered bond issuance increased from 0 % to 50 %. This may have reflected growing interest of international investors in Spanish covered bonds relative to that in Spanish “non-enhanced” debt. Subsequently, both internationally offered “non-enhanced” debt and covered bonds declined in parallel with the first European sovereign debt shock in the second quarter of 2010, indicative of increasing difficulties in offering these instruments in markets outside Spain. However, from the third quarter of 2010 onwards, with renewed sovereign tensions in Europe, some substitution between “non-enhanced” debt and covered bond international issuance could be observed again.

Also for German banks a pattern of substitution could be observed: Their international “non-enhanced” issuance as percentage of their total “non-enhanced” issuance declined from 92 % in the fourth quarter of 2009 to 32 % in the last quarter of 2010, while their international covered bond issuance as percentage of their total covered bond issuance increased from 31 %

to 88%. Hence, the severe financial turmoil that affected strongly banks' funding markets in 2009 and 2010 may have contributed to a shift in the relative composition of international issuance towards more "enhanced" or secured debt instruments across euro area countries.

8 Conclusions

In this article, we have investigated "non-enhanced" debt financing by euro area banks, concentrating on 2009 and 2010 when banks' longer-term funding markets were disrupted severely by the global financial crisis and the sovereign debt crisis in Europe. This concept involved two main features, i.e. gross debt issuance by a group of euro area banks of less or no systemic importance and in the form of "non-enhanced" or unsecured debt instruments. Our findings can be summarised as follows.

First, "non-enhanced" debt financing declined significantly from 2007 onwards, as the two major crises constrained access of non-systemic euro area banks to longer-term primary debt markets. We have found evidence that this process was not restricted to only European peripheral countries, but that instead it was a euro area-wide phenomenon. Thus, our findings indicate that the more basic, essentially unsecured, wholesale funding markets for euro area banks may not have functioned optimally during the recent financial crises.

Second, following a rather structural pattern, the issuance of "non-enhanced" debt instruments by the 18 more systemic banks as percentage of their total issuance was consistently higher than that by the less systemic banks. That may be indicative of financial market perceptions that the systemic banks benefit from implicit TBTF protection and hence their "non-enhanced" or unsecured debt issuance is considered to be less risky. By contrast, the less or non-systemic banks had to resort structurally to more "enhanced" or secured debt instruments in their funding, in relative terms, as apparently investors were less willing to purchase less secured instruments from these banks.

Third, notwithstanding the possible TBTF subsidy for the systemic banks, essentially financial markets did not differentiate between these banks and their less systemic counterparts during episodes of severe financial stress, such as during the two shocks of the European sovereign debt crisis in 2010. Thus, sharply worsening sovereign debt concerns in Europe and fears of subsequent contamination of the euro area banking sector markedly increased risk aversion towards the euro area banking sector as a whole, as investors indiscriminately refrained from investing in longer-term bank debt.

Fourth, our findings suggest that the publication of the results from the extended CEBS macro stress test in July 2010 contributed in opening longer-term unsecured funding markets especially for the systemic banks, while its effect on "non-enhanced" debt financing (i.e. involving the non-systemic banks) was subdued. At the same time, it may have contributed to facilitate issuance of secured debt instruments by the non-systemic banks. Thus, although investors were not (yet) willing to purchase "non-enhanced" debt instruments issued by non-systemic banks, the publication of the stress test results and its contribution in enhancing transparency, possibly in combination with other factors, may have made them more willing to purchase "enhanced" instruments from these banks.

Fifth, our results indicate that episodes of severe financial stress were accompanied by significant reductions in the relative share of international issuance of "non-enhanced" debt. This may be evidence of a certain degree of re-nationalisation of euro area banks' wholesale funding markets. Moreover, we have observed patterns that suggest substitution of international issuance of "non-enhanced" debt into international issuance of more secured debt such as covered bonds under the impact of financial turmoil, for example for Spanish and German banks. In other words, the

financial crises that characterised so markedly 2009 and 2010 may have contributed to a shift in the relative composition of international debt issuance by non-systemic euro area banks towards secured debt such as covered bonds, and away from the more unsecured debt instruments.

Finally, we find that the composition of “enhanced” instruments issued by non-systemic banks changed during the period considered. Namely, covered bonds clearly replaced both government guaranteed bonds and retained securitizations in 2010 when compared to 2009.

We think that the implications of our analysis both for policy and research may be interesting. Regarding the former, the results that we presented in this article seem to suggest that different long-term funding conditions exist for banks that may be perceived of different systemic importance by financial markets. Hence, perceived differences in implicit TBTF subsidies for different groups of banks may affect the cost and diversification of financing by euro area banks and obstruct the existence of a level-playing field across the European banking sector.

Moreover, in the context of the two major financial crises that hit euro area banks during the past few years, there seems to be a growing preference to use more secured debt instruments by banks in their longer-term funding operations. This may also explain the relatively buoyant covered bond issuance in the euro area during the first few months of 2011 and the increasing acceptance of this instrument outside euro area jurisdictions. Policy initiatives may want to focus more explicitly on the further development of this market as an important source of long-term financing for the global banking sector.

With respect to research, we only present very indirect evidence of the importance of TBTF protection on bond issuance conditions for various groups of banks. Further more detailed investigations at the micro bank level are needed to obtain more direct support for this premise. These may also shed light on the specific reasons for individual banks to issue particular types of debt instruments, such as unsecured bonds, government guaranteed bonds, securitisations and covered bonds.

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