

# MEASURES TAKEN BY EURO AREA GOVERNMENTS IN SUPPORT OF THE FINANCIAL SECTOR

## ARTICLES

Measures taken by euro area governments in support of the financial sector

*The extensive measures taken by euro area governments in support of the financial sector have played a key role in the management of the financial crisis that erupted in mid-2007 and intensified after the bankruptcy of Lehman Brothers. This article describes the measures taken by euro area governments to contain the impact of the crisis on the financial sector and discusses potential exit strategies. Although the focus is on the measures implemented by euro area governments, the article also compares these measures with the ones taken in the United Kingdom and the United States. The crisis responses in these three economic regions share a number of common features, both in terms of tools and scope. However, there have also been some important differences, not only between the European Union and the United States, but also within the European Union.*

## I INTRODUCTION

The financial crisis that started in the summer of 2007 originated in the US mortgage market. Sharply rising delinquencies and foreclosures revealed the extent of exuberance in the housing market and brought the sub-prime lending business to a sudden halt. Securitisation markets froze, banks had to restore assets held by special purpose vehicles to their balance sheets and confidence in funding markets was eroded. The crisis spread rapidly through the financial sector and spilled over to other industrialised and emerging market economies.

Central banks responded to the emerging crisis by injecting liquidity into the financial system.<sup>1</sup> At the onset of the crisis, the measures they adopted consisted of traditional market operations either conducted outside the regular schedule or else involving larger amounts of liquidity, to keep short-term money-market rates close to policy rates. When these measures proved insufficient to reduce funding pressures, central banks implemented changes to their operational framework.<sup>2</sup> In addition, major central banks carried out some of their actions in a coordinated manner.<sup>3</sup> This cooperation was reflected in a joint announcement to provide term funding and to enter into temporary swap agreements to obtain foreign currency liquidity, which they passed on to the financial sector.<sup>4</sup>

When the liquidity crisis appeared to be turning into a solvency crisis, threatening the stability of the financial system as a whole, governments resorted to traditional rescue measures directed

at individual institutions. These early support measures for individual banks took the form of credit lines to failing institutions and rescue mergers.

On 15 September 2008 the collapse of Lehman Brothers sent a shock wave through the global financial system. While risk aversion and mistrust between financial players led to the drying up of funding markets, concerns over the solvency of financial institutions also severely affected the confidence of depositors.

Governments were forced to act swiftly to avert the failure of their financial systems. In Europe, after an emergency meeting of the euro area countries in Paris in October 2008, the EU governments implemented coordinated support measures to alleviate the strains on their banking systems. Given the predominant position of the banking system in providing funds to firms and households in the euro area, these measures primarily targeted the financial sector, while economies with market-based

- 1 The measures taken can be broadly divided into traditional and non-standard categories. However, this distinction varies across central banks owing to different traditions, frameworks and financial system structures.
- 2 These changes included, inter alia, more frequent auctions, an expansion of the volume of lending facilities, longer-term financing, changes in the auctioning process, a broadening of the range of eligible collateral, outright asset purchases and the setting up of liquidity facilities for intermediaries other than banks.
- 3 Since the coordinated actions taken in December 2007, the G10 central banks have continued to work together closely and to consult regularly on liquidity pressures in funding markets.
- 4 More details on the implementation of monetary policy by the Eurosystem in response to the financial market tensions can be found in the article entitled “The implementation of monetary policy since August 2007” in the July 2009 issue of the Monthly Bulletin.

financial systems, like the United States, also engaged in direct credit support.<sup>5</sup> European governments complemented the extensive liquidity support that had been provided by the ECB since the summer of 2007 by guaranteeing new issues of bank bonds and raising the coverage limits of deposit insurance schemes. In addition, governments recapitalised financial institutions and adopted “asset relief measures” to shield institutions from losses on their assets. These measures were intended to mitigate the adverse feedback loop by reducing the pressure on banks to cut lending in order to deleverage.

The extraordinary remedial action taken by central banks and governments since late 2008 has been successful in restoring confidence in financial systems around the world and in improving their resilience. These measures, together with sizeable monetary and fiscal policy stimuli have set in motion a process of mutual reinforcement of financial system conditions and real economic performance. This has fostered confidence and led to a fading of systemic risk. However, the measures adopted to support the financial system have increased the risk of distorting competition and creating moral hazard and may even have increased the likelihood of excessive risk-taking, while the dramatic rise in fiscal imbalances is threatening the sustainability of public finances.

This article provides a systematic overview of the measures that have been adopted by governments in the euro area in support of their financial systems and compares them to those adopted in the United Kingdom and the United States.<sup>6</sup> The structure of the remainder of the article is as follows. Section 2 is devoted to an important institutional aspect of government measures, namely whether they are implemented through ad hoc measures tailored to the needs of specific institutions or through national schemes. Section 3 gives a detailed description of the support measures employed by governments (including the amounts extended and committed), namely deposit insurance enhancements, bank debt guarantee schemes, recapitalisation measures and asset protection

schemes. Section 4 describes potential exit strategies from the different measures taken, while Section 5 concludes by comparing the measures adopted in the European Union and in the United States and briefly outlining regulatory lessons.

## 2 AD HOC MEASURES VS NATIONAL SCHEMES

At the outset, although the financial turmoil revealed weaknesses across a wide range of large and complex financial institutions, systemic risks were largely contained. Reflecting the idiosyncratic character of financial system stresses, governments initially responded with largely ad hoc measures tailored to the individual needs of institutions that had suffered large losses. However, as the crisis intensified – with the bankruptcy of Lehman Brothers in September 2008 – and became more systemic in nature, it became clear that interventions had to be extended to a broader range of banks. This called for a more comprehensive approach in the design of support schemes. One of the first comprehensive schemes to be introduced was the US Troubled Assets Relief Program, better known by the acronym TARP.<sup>7</sup> As the crisis deepened, other countries followed suit and began to establish financial sector support schemes. For example the Financial Market Stabilisation Fund (SoFFin) was established in Germany on 17 October 2008. The distinguishing feature of these schemes was that they established more transparent and predictable procedures through which banks could obtain financial support. More specifically, transparency was enhanced

5 To put the importance of the banking sector in the euro area into perspective, as at the end of 2007 bank loans to the private sector made up 145% of euro area GDP, compared with 63% in the United States. For further details, see the article “The external financing of households and non-financial corporations: A comparison between the euro area and the United States” in the April 2009 issue of the Monthly Bulletin.

6 Further details are provided in S. Stolz and M. Wedow, “Extraordinary measures in extraordinary times – bank rescue operations in Europe and the United States”, ECB Occasional Paper, forthcoming.

7 The Emergency Economic Stabilization Act, signed into law in October 2008, created the Troubled Asset Relief Program (TARP), which authorises the US Treasury to purchase or insure up to USD 700 billion of troubled assets.

by government announcements regarding the overall financial commitments they were prepared to make in support of their financial systems. Typically, the schemes also had specific criteria for eligibility, pricing and the duration of the support measures available.

While ad hoc measures can be, and were, implemented rapidly and flexibly, the advantage of national schemes is threefold. First, in comparison with ad hoc measures, national schemes are often more transparent regarding the institutions eligible for support as well as the amount of the support, its pricing and duration.

Second, national schemes are less likely to distort competition within and across countries than ad hoc measures, and therefore reduce the risk of support measures distorting the level playing field for supported and unsupported financial institutions, both within a single country and across countries. In addition, the crisis has had a substantial impact on all major economies and has clearly demonstrated the limits of national responses in dealing with the activities of cross-border, systemically important financial institutions, markets and instruments. This has led the international

community to acknowledge the importance of strong global coordination to effectively address the issues at stake. As the crisis reached its full global extent in autumn 2008, the Leaders of the Group of Twenty not only committed themselves to enhancing cooperation but also took the lead in defining the reform agenda, adopting a common stance on the policy response needed. Owing to the high degree of financial integration in the European Union, international cooperation was further strengthened at the EU level. Hence, to tackle the rapidly worsening crisis, in October 2008, the EU countries agreed a concerted action plan (see Box 1 for details). They committed themselves to adhere to certain principles in their crisis response measures so that “the European Union as a whole can act in a united manner and avoid that national measures adversely affect the functioning of the single market and the other member States.”<sup>8</sup>

8 Declaration of the emergency summit of the euro area countries in Paris on 12 October 2008. The declaration is available at [http://www.eu2008.fr/PFUE/lang/en/accueil/PFUE-10\\_2008/PFUE-12.10.2008/sommet\\_pays\\_zone\\_euro\\_declaration\\_plan\\_action\\_concertee.html](http://www.eu2008.fr/PFUE/lang/en/accueil/PFUE-10_2008/PFUE-12.10.2008/sommet_pays_zone_euro_declaration_plan_action_concertee.html).

## Box 1

### THE CONCERTED EU APPROACH

At an emergency summit in Paris on 12 October 2008, the euro area countries agreed on a concerted European action plan. They decided to “complement the actions taken by the ECB in the interbank money market” and support fundamentally sound banks.<sup>1</sup> The summit paved the way for a concerted and coordinated EU approach to: (i) harmonising the provision of retail deposit insurance; (ii) issuing government guarantees for bank debt securities; (iii) making funds available for bank recapitalisations; and (iv) providing asset relief measures.

In accordance with the Paris summit declaration, the ECB drew up recommendations on the appropriate framework for granting government guarantees on bank debt issuance.<sup>2</sup> Among

1 The declaration of the summit is available at [http://www.eu2008.fr/PFUE/lang/en/accueil/PFUE-10\\_2008/PFUE-12.10.2008/sommet\\_pays\\_zone\\_euro\\_declaration\\_plan\\_action\\_concertee.html](http://www.eu2008.fr/PFUE/lang/en/accueil/PFUE-10_2008/PFUE-12.10.2008/sommet_pays_zone_euro_declaration_plan_action_concertee.html). The declaration also mentions two further aims: ensuring sufficient flexibility in the implementation of accounting rules, given current exceptional market circumstances, and enhancing cooperation procedures among European countries. These are beyond the scope of this article.

2 The recommendations are available at [http://www.ecb.int/pub/pdf/other/recommendations\\_on\\_guaranteesen.pdf](http://www.ecb.int/pub/pdf/other/recommendations_on_guaranteesen.pdf).

other things, the ECB recommended that guarantees on interbank deposits should not be provided. Furthermore, it recommended that the pricing of guarantees be based, where available, on banks' CDS spreads, that an add-on fee of 50 basis points be charged to ensure that governments received fair compensation and that market distortions were minimised.

The ECB also published recommendations on the pricing of recapitalisation schemes.<sup>3</sup> The valuation of the instruments chosen for capital injections should be based on market pricing in line with the instrument and its corresponding risk as well as with the specific risk of the institution. In addition, the injections should have an explicit exit strategy to retain the temporary nature of the state's involvement.

The ECB also drew up guiding principles for bank asset support measures.<sup>4</sup> According to these principles, bank participation should be voluntary. Furthermore, the definition of assets eligible for support should be broad, the degree of risk sharing should be adequate, and the duration of the support scheme should possibly match the maturity structure of the assets. With respect to the pricing of the scheme, the ECB acknowledged that this was a crucial and complex issue. The ECB did not recommend a specific method, but called for transparency and for a range of approaches to be followed, including the use of expert opinion. It expressed a preference for the adoption of common criteria across countries.

3 The recommendations are available at [http://www.ecb.int/pub/pdf/other/recommendations\\_on\\_pricing\\_for\\_recapitalisationsen.pdf](http://www.ecb.int/pub/pdf/other/recommendations_on_pricing_for_recapitalisationsen.pdf). The respective European Commission recommendations are available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:010:0002:0010:EN:PDF>.

4 The recommendations are available at <http://www.ecb.int/pub/pdf/other/guidingprinciplesbankassetsupportschemesen.pdf>. The respective European Commission recommendations are available at [http://ec.europa.eu/competition/state\\_aid/legislation/impaired\\_assets.pdf](http://ec.europa.eu/competition/state_aid/legislation/impaired_assets.pdf).

Third, in the European context, obtaining approval of a particular measure by the European Commission may be simpler if it is part of a national scheme. In the European Union, national intervention requires approval by the Commission, which aims to ensure that the measures do not distort competition. Each ad hoc national measure requires individual approval by the Commission, while measures that are part of a scheme are typically subject to approval of the scheme as a whole. This represents a further advantage of explicit schemes over ad hoc measures. Generally, the Commission assesses the criteria for the eligibility of institutions, the volume of support and the pricing to ensure a level playing field.<sup>9</sup> Approval by the Commission has typically been

rapid. In a number of cases, however, considerable delays have occurred when restructuring requirements have entailed lengthy negotiations with the national authorities.

9 The Commission initially extended approvals for capital injections for a period of six months, after which the decisions were to be reappraised, on the basis of a progress report. In its 2009 Communication "The return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules", the Commission clarified the framework for its examination of the viability and restructuring plans of banks, which are to be submitted following the provision of State aid. In particular, the Commission takes into account: (i) the past practice of the Commission; (ii) the global scale of the present crisis; (iii) the systemic role of the banking sector for the whole economy; and (iv) the possible systemic effects arising from the need for a number of banks to restructure within the same period.

This has been an issue, in particular, in those few cross-border cases in which several governments have provided support to the same institution.<sup>10</sup>

### 3 MEASURES ADOPTED

In general, the support measures have been available to financial institutions operating in a particular country and to foreign subsidiaries with substantial domestic operations in that country. Support has typically been provided upon request from a financial institution, although in a number of cases banks have also been instructed to accept government support (for example in the United States and France). Also, support measures have usually been accompanied by restrictions on dividend payments, requirements for regular reporting on business developments, restructuring requirements, government participation in the management of banks and restrictions on executive compensation. In addition, in some cases government support has been provided with explicit targets for lending growth, in order to maintain the supply of credit to the economy (for example in France, Ireland, and the United Kingdom).

Table 1 gives an overview of the support measures that had been adopted by November 2009. The table includes data on

all support measures taken by governments in response to the worsening of the crisis after the collapse of Lehman Brothers. Support measures are classified into three main categories: (i) guarantees on bank bonds; (ii) capital injections; and (iii) measures to provide relief from legacy assets.<sup>11</sup> Table 1 distinguishes between the amounts that governments have committed themselves to providing (shown in brackets) and the amounts that have already been actually extended to financial institutions. Table 1 also shows the amounts committed and extended under national schemes and outside such schemes (i.e. ad hoc measures).

10 The experience of these cases shows that problems during cross-border bank resolutions may stem, inter alia, from the different powers and roles of the national authorities involved in a rescue process, the extraordinary time pressure under which the details of the rescue operation must be finalised and possible disagreement over burden sharing. To avoid such problems in the future, the European Commission is currently working on an EU framework for cross-border crisis management in the banking sector, which would involve changes in three main areas: i) early intervention in the form of action by supervisors aimed at restoring the stability and financial soundness of an institution when problems are developing, together with intra-group asset transfers between solvent entities for the purposes of financial support; ii) bank resolution, i.e. the measures taken by national resolution authorities to manage a crisis in a banking institution, in order to contain its impact on financial stability and, where appropriate, to facilitate an orderly winding up of the whole or parts of the institution; and iii) insolvency proceedings, for reorganisation or winding-up, under the applicable insolvency regime.

11 Apart from these three categories, governments have sometimes also provided bridge loans to individual institutions. As these measures have not been used systematically across the euro area, they are not reported in this article.

**Table 1 Government support measures taken since October 2008**

(as a percentage of GDP, as at end-February 2010)

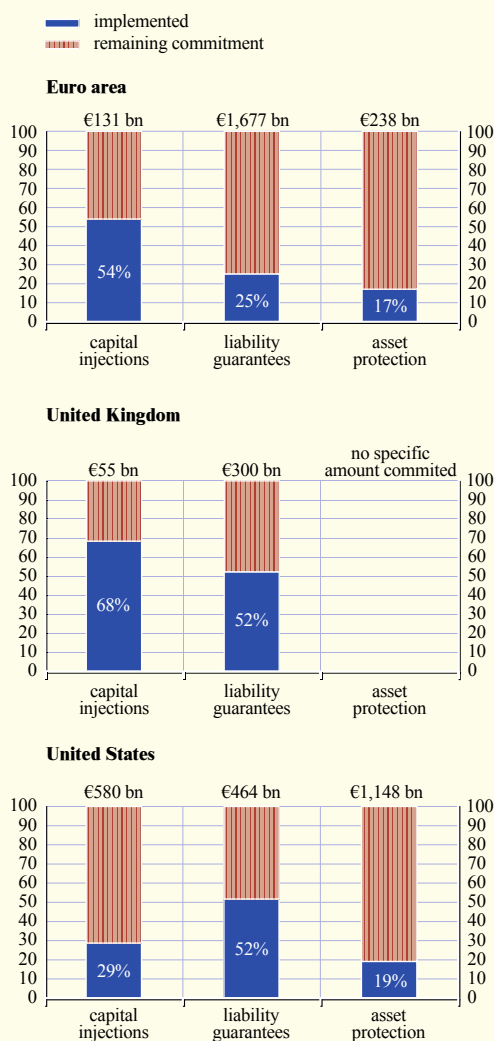
	Capital injections		Liability guarantees and loans		Asset support		Total commitment over all measures
	Within Schemes	Outside Schemes	Guarantees	Loans	Within schemes	Outside schemes	
Euro area	1 (1)	1	5 (18)	2 (-)	0 (3)	1	27
United Kingdom	2 (3)	3	10 (19)	4 (-)	- (-)	13.8	43
United States	2 (5)	0	2 (4)	0 (5)	2 (11)	1	26

Sources: National authorities, Bloomberg and ECB calculations.

Notes: Numbers are cumulative, from the beginning of the financial crisis, and expressed as a rounded percentage of GDP. Numbers in brackets show the total commitment for each measure and the numbers in front of the brackets the actual amounts extended. Some of the measures may not have been used despite having been announced. Actual amounts extended of "Guarantees" refer to issued bonds only. "Outside schemes" are support measures that are taken without the explicit setting up of a scheme, i.e. direct government support. This can, for example, be provided by local governments, as in the case of the support BayernLB has received from the state of Bavaria. For further details of the figures in this table, readers may consult the official publications of the relevant national authorities, such as the June and December 2009 issues of the Bank of England's Financial Stability Review, although it should be borne in mind that figures may differ owing to the use of different definitions or approaches.

**Chart 1 Take-up rates within national support schemes**

(percentages; as at February 2010)



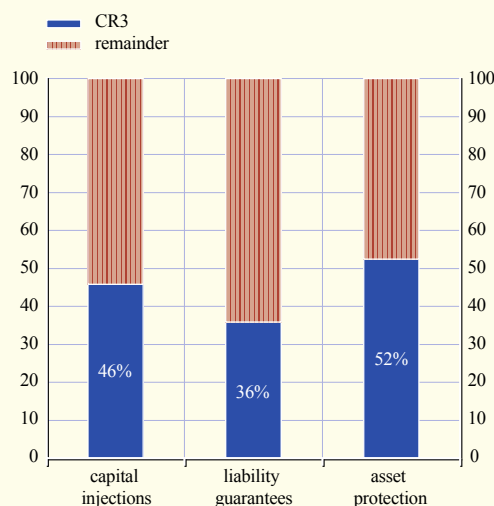
Sources: National authorities, Bloomberg and ECB calculations.

The total commitment is the sum of the commitments under national schemes, across the three categories (or the actual amount spent in the absence of explicit commitments), plus the actual amounts spent outside national schemes.

Regarding the implementation of the measures, some conclusions can be drawn. Although there are differences across the different measures and regions, the amounts involved are significant in the euro area, the United Kingdom and the

**Chart 2 Concentration ratio of implemented measures in the euro area (October 2008 – February 2010)**

(percentages)



Sources: National authorities, Bloomberg and ECB calculations. Note: The concentration ratio CR3 indicates the share of the implemented support measures that has been absorbed by the largest three recipient institutions.

United States. It should also be noted that there are also significant differences across euro area countries (not shown in the table). Chart 1 shows the percentages of the overall amounts committed under national schemes that have actually been extended. The take-up rate is generally low across all measures, but there are substantial variations: the use of recapitalisation measures has been relatively widespread, while the issuance of bank bonds with government guarantees has been considerably lower. It should be noted that the committed volume and use of liability guarantees, in absolute terms, are far higher than the committed volume and use of capital injections.

Furthermore, the bulk of the financial support has been targeted at a relatively small number of institutions (see Chart 2). Indeed, in the euro area about half of the extended support has been absorbed by the three largest recipient institutions.<sup>12</sup> In the case of each individual

<sup>12</sup> The three institutions that absorb the largest share of support are not the same for capital injections, liability guarantees and asset protection.

support measure, the three largest recipients account for 6-9% of total euro area banking assets.

The subsequent sections provide a more detailed description of the measures in the chronological order in which they have generally been adopted.<sup>13</sup> It should be noted that these measures to support banks have typically been used in combination. However, the actual use of measures has generally followed the same sequence, with support provided to banks on the liabilities side of their balance sheets before the assets side has been relieved.

## DEPOSIT INSURANCE

Deposit insurance schemes were among the first measures used to mitigate the impact of the financial turmoil that intensified after the collapse of Lehman Brothers. In Europe, before the crisis, EU legislation stipulated a minimum level of deposit insurance of EUR 20,000, with an optional coinsurance element of 10%, under which depositors bear 10% of losses incurred. However, as this deposit coverage proved insufficient to calm depositor concerns, the limit was raised in October 2008 to a minimum of EUR 50,000, which could be increased further, to EUR 100,000, before the end of 2010.<sup>14</sup> In addition, EU countries agreed to speed up the process of repayment of guaranteed deposits in the event of default, in an effort to enhance the effectiveness of deposit insurance.

One of the main events that led to the raising of the minimum level of deposit insurance was the decision taken by the Irish authorities in September 2008 to provide a blanket guarantee<sup>15</sup> for virtually all bank liabilities (including retail, corporate and interbank deposits), which amounted to a sizeable percentage of GDP.<sup>16</sup> The Irish blanket guarantee, combined with the experience of depositor runs on Northern Rock, a UK bank that failed, led other countries to reform their own deposit insurance schemes and abandon coinsurance. Deposit insurance has since been raised above EUR 50,000 in the majority of EU countries and, in a number of

cases, blanket guarantees have been issued for retail deposits (e.g. Germany). In the United States, deposit insurance has temporarily been raised to USD 250,000, being due to return to USD 100,000 in January 2014. In addition, the Federal Deposit Insurance Corporation (FDIC) is offering full coverage of non-interest bearing deposit transaction accounts, regardless of their dollar amount, under the Transaction Account Guarantee, which is part of the Temporary Liquidity Guarantee Program (TLGP).<sup>17</sup>

## GUARANTEES ON BANK BONDS

As well as higher levels of deposit insurance, the provision of government guarantees for bank bonds was also among the first measures implemented in support of banks. These programmes enabled banks to issue bonds that were insured by the government against the bank's default. Several countries committed large amounts to guaranteeing bank bond issues. However, the take-up of government guarantees was slow to materialise. While a number of debt guarantee schemes were available from early October 2008, issuance had only gained momentum by mid-November 2008. Notably, the euro area and the United Kingdom led the way in this issuance and still account for the majority of all outstanding

13 As this article follows the order in which the different measures were generally adopted it does not provide information on the dates at which specific schemes or individual measures were taken. Instead, the interested reader should refer to other sources that give details of the timing of support measures (e.g. Petrovic and Tutsch, "National Rescue Measures in Response to the Current Financial Crisis", ECB Legal Working Paper No 8, July 2009). Also, the Federal Reserve Bank of New York provides a timeline on its website ([http://www.newyorkfed.org/research/global\\_economy/IRCTimelinePublic.pdf](http://www.newyorkfed.org/research/global_economy/IRCTimelinePublic.pdf)).

14 Agreement of 7 October 2008 at the ECOFIN Council meeting of EU ministers of finance ([http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ecofin/103250.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/103250.pdf)).

15 A blanket guarantee is a declaration by the government that all deposits, and perhaps other financial instruments, will be protected.

16 Liabilities covered include all retail and corporate deposits (to the extent not covered by existing deposit protection schemes in Ireland or any other jurisdiction), interbank deposits, senior unsecured debt, covered bonds and dated subordinated debt (lower Tier 2).

17 The participation fee for the Transaction Account Guarantee consists of a 10 basis point annual rate surcharge on non-interest-bearing transaction deposit amounts over USD 250,000.

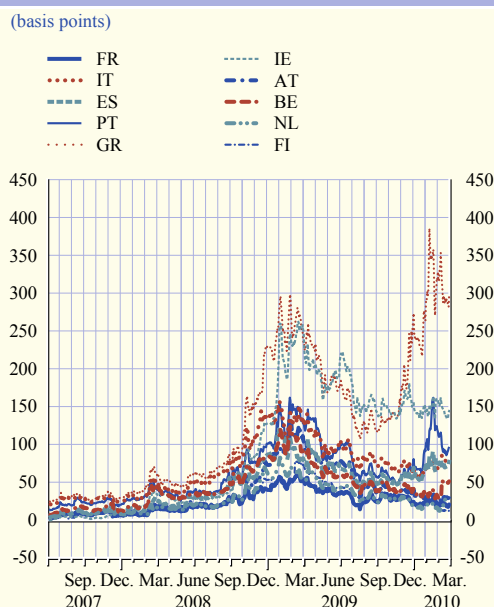
government-guaranteed debt. In some countries (e.g. Italy) schemes have been implemented, but no bank has made use of them. In other countries, few banks have applied and the amounts issued are low. In the United States, guarantees on bonds are offered under the Debt Guarantee Program, which is also part of the TLGP managed by the FDIC. Banks can choose to opt out of one or both of the programmes offered under the TLGP.

The sluggish take-up may be explained by several factors, including: (i) pricing (see below); (ii) the perceived high degree of competition between financial and non-financial issuers in the corporate bond markets; (iii) the potential for stigma effects; (iv) the conditions of the guarantees (for example, restrictions on remuneration); and (v) the ongoing deleveraging by banks and general slowdown in demand for credit.

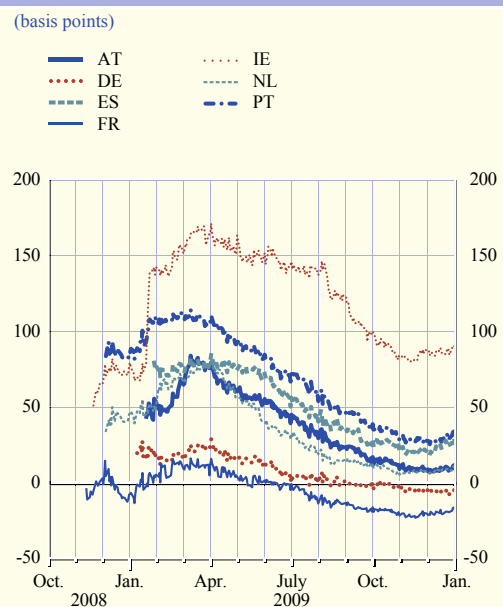
One major factor limiting the issuance of guaranteed bonds has been the cost entailed. First, the cost of issuing long-term debt – whether guaranteed or not – has become

increasingly expensive vis-à-vis short-term funding sources as the yield curve has steepened. Second, with regard to the pricing of guarantees, banks typically pay a market-based fee linked to the bank's credit risk, plus a margin. In line with the ECB recommendations, EU countries have relied on banks' CDS spreads as the basis for their pricing. Given that CDS spreads have been at historically high levels since the onset of the crisis, government-guaranteed bonds can be an expensive funding source. By contrast, in the United States the duration of the guaranteed bank debt is the sole determinant of the fee. Third, the market also requires a relatively high liquidity premium on guaranteed bank debt over government debt. Finally, the pricing of bonds has been based on the respective government spreads. These have risen, which is a further reason for the reluctance to use government-guaranteed bank debt (see Chart 3). The rise in these spreads has been largely mirrored by government-guaranteed bank bond asset swap spreads (see Chart 4) and may represent an important cost element for banks located in countries with higher spreads.

**Chart 3 Ten-year euro area sovereign bond spreads vis-à-vis Germany**



**Chart 4 Government-guaranteed bank bond asset swap spreads**

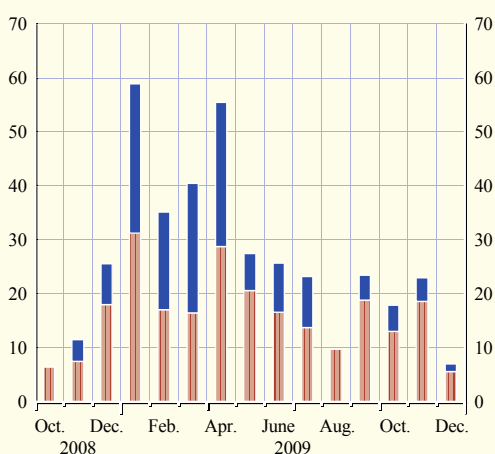




**Chart 5 Gross issuance of senior bank bonds in the euro area**

(EUR billions)

■ covered by guarantee  
■ not covered by guarantee

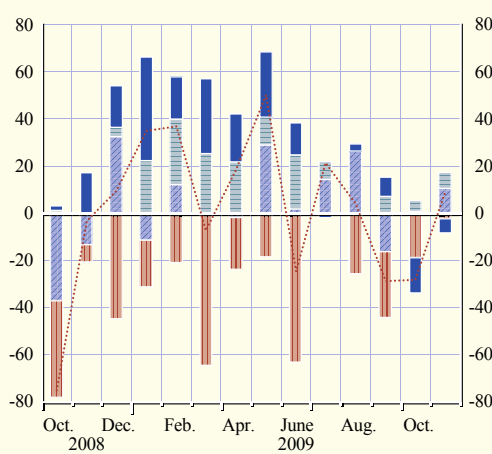


Sources: Dealogic and ECB calculations.

**Chart 6 Net issuance of securities by monetary financial institutions in the euro area**

(EUR billions)

■ short-term, with guarantee  
■ short-term, not covered by guarantee  
■ long-term, with guarantee  
■ long-term, not covered by guarantee  
..... total issuance



Sources: MFI statistics and ECB estimates.

Although the take-up of government guarantees by banks has been sluggish, this source of funding represents a significant part of euro area financial institutions' total funding in the securities market (see Chart 5). The reliance has however lessened since mid-2009. While gross issuance highlights overall activity in the market for securitised bank debt, net issuance sheds light on the ability of banks to roll over maturing liabilities and thus on financial intermediaries' potential funding gap. Chart 6 shows that some of the issuance is actually more than offset by redemptions and that there is a tendency to replace short-term debt with long-term debt.

The declining dependence on government guarantees that is observed in the funding of euro area banks may partly reflect the fact that, since the summer of 2009, banks have been able to substitute guaranteed short-term debt with Eurosystem liquidity. It may furthermore be explained by factors such as the gradual but significant improvement in financial market

conditions observed in 2009 and the impact of the Eurosystem's covered bond purchases, which helped boost activity in this market segment. In addition, banks' access to non-guaranteed bond market funding probably reflects an improved and more stable credit risk outlook for many banks, driven by strengthened capital bases and increased retained earnings.

Table 2 presents the characteristics of bank bonds guaranteed by governments that have been issued since October 2008. The median residual maturity shows that about half of all guaranteed bonds will mature within two years, i.e. by the end of 2011. The duration and size of bond issues vary widely both within and across countries. The mean maturity at issuance has been around three years in most countries, but the span of actual maturities at issuance ranges from 16 months in the case of Greece to 45 months for the Netherlands. In the European Union, the maximum maturity of the guaranteed debt was initially limited to three years but this

**Table 2 Volume and maturity of government-guaranteed bonds issued between October 2008 and December 2009**

Country	Total issuance (EUR billions)	Number of issuers	Number of bonds	Average issue size (EUR billions)	Average maturity (months)	Median residual maturity (months)
Belgium	4.0	2	5	0.8	35.4	19
Germany	89.0	11	27	3.3	27.2	22
Ireland	41.4	7	113	0.4	17.8	10
Greece	2.0	2	3	0.7	16.3	29
Spain	43.1	37	106	0.4	34.0	29
France	101.0	2	70	1.4	27.2	19
Luxembourg	1.0	1	4	0.3	19.5	13
Netherlands	54.2	6	43	1.3	45.4	30
Austria	24.6	6	35	0.7	39.7	28
Portugal	4.9	6	6	0.8	37.0	27
United Kingdom	151.6	11	171	0.9	29.7	24
United States	245.1	41	197	1.2	34.0	25
Total/average	934.1	184	1,356	0.7	33.0	25

Sources: Bloomberg and ECB calculations.

Notes: Residual maturity as at 1 December 2009. Euro amounts are based on the exchange rate prevailing on 1 October 2008. The figures are totals in columns 1 to 3 and averages in columns 4 and 5.

has subsequently been raised in a number of countries as debt has matured.<sup>18</sup> However, guarantees on debt with a maturity of three to five years have been granted only in exceptional circumstances. The increase in the maximum maturity has partly been justified by the slow take-up of guarantees, as banks have cited the short maturity offered in their jurisdictions as the main reason for not taking advantage of this form of support.

### CAPITAL INJECTIONS

As the financial turmoil persisted, write-downs owing to credit-rating downgrades had a severe impact on banks' capital. In addition, as the economic environment deteriorated, banks also faced losses on their credit portfolios and the risk weights on performing assets increased, putting further pressure on banks' capital positions. As it became clear that banks were not only facing liquidity strains, but also potential risks to their solvency, several governments began to supplement liability guarantee schemes with direct injections of capital into banks. Capital injections have mostly been made through the acquisition of preference shares or other hybrid instruments that fulfil the conditions for Tier 1 capital.<sup>19</sup>

The focus on preference shares as the main tool to inject capital was primarily a result of the objectives of bolstering the capital position of banks, while at the same time leaving bank ownership in the private sector and ensuring the priority of public sector claims. These objectives have been met. Although preference shares do not carry voting rights, they do give their holders priority over ordinary shareholders in the payment of dividends and during liquidation. With regard to their inclusion in regulatory capital, only non-cumulative preferred stock can be included as an element of Tier 1 capital (see Basel Committee on Banking Supervision, 2005). Even if it can be counted as regulatory capital, concerns remain about whether raising capital through preference shares truly amounts to deleveraging, insofar as this form of capital does not have the same loss-absorbing features as common equity. Also markets have increasingly focused on higher quality capital definitions, such as tangible common equity,

<sup>18</sup> In addition to maturity restrictions, some countries have also put restrictions in place that limit the overall amount of government-guaranteed debt relative to the total outstanding amount of senior unsecured debt (for example, the United States).

<sup>19</sup> Some countries have included an option to convert preferred shares into ordinary shares, for example the Netherlands in the case of ING.

which exclude preference shares. This may have been one reason for the interest in converting preference shares into ordinary shares.<sup>20</sup> Another reason is the high cost of preference shares (see below).

Capital injections have been less common in the euro area than in the United States. The total volume of US capital injections amounted to 2.6% of GDP at its peak in June 2009, while recapitalisations reached 1.3% of GDP in the euro area. Within the European Union, the UK government injected the largest volume of capital, which peaked at about 5.1% of GDP. A further important aspect is the varying level of government involvement in the banks that have received capital injections. In a number of cases, banks have become de facto nationalised, when governments have obtained majority stakes in them, or have been nationalised outright. As a case in point, the German government even organised a shareholder squeeze-out to take full control of Hypo Real Estate, after having granted more than EUR 100 billion in guarantees to the bank.

With respect to the pricing of the capital injections, banks typically pay a significant coupon on their preference shares.<sup>21</sup> The expensive pricing should encourage an early exit by the banks,<sup>22</sup> an incentive that is often reinforced by step-up and redemption clauses.<sup>23</sup> Overall, the exit arrangements currently in place in the European Union aim to strike a balance between providing incentives for an early exit and paying due regard to banks' individual circumstances.

#### ASSET SUPPORT

The uncertainty about the value of some classes of assets held by banks may have resulted in a reluctance to lend in the interbank market. The related write-downs subsequently ate into banks' capital and prevented them from extending credit to the private sector. Therefore, cleaning up balance sheets became a core part of the rescue efforts. However, the

problem of pricing these toxic assets correctly also made the task of removing them from balance sheets complex and difficult. Hence, while the lessons learnt from previous banking crises, namely that cleaning up balance sheets was essential to speed up the recovery process (for example, the Asian crisis, referred to in Lindgren et al., 1999), systematic asset support measures only slowly became part of the policy tool kit in the aftermath of the Lehman Brothers bankruptcy. In contrast, ad hoc asset support measures formed part of some of the earliest rescue operations (see below).

In general, asset support schemes may either take the form of asset removal schemes (which transfer the assets to a separate institution, such as a so-called "bad bank") or asset insurance schemes (which keep the assets on the banks' balance sheet). The Eurosystem considered the specific circumstances, based on past experience, that determine which of these schemes is the preferred option. Circumstances that favour the asset removal model include (i) a high degree of uncertainty regarding the future quality of

20 To strengthen its capital position, Citigroup converted USD 25 billion of preferred shares into common equity at the end of July 2009, thereby increasing the US government's stake in the bank to 34%. Before that transaction took place, almost all of the non-government holders of preferred shares had agreed to convert their holdings into common equity.

21 The coupon generally consists of three elements: (i) the government bond yield, as a benchmark for the relevant minimum risk yield and the government's funding cost; (ii) a premium to reflect the credit risk of the financial institution concerned, based for example on the CDS spread; and (iii) a fee for the operational costs. In line with the recommendations of the ECB, calculations establish a pricing corridor for preferred shares and other hybrid instruments, with a lower bound represented by the average required rate of return on subordinated debt of 6%, and an upper bound represented by the average required rate of return on ordinary shares of 9.3% (see [http://www.ecb.europa.eu/pub/pdf/other/recommendations\\_on\\_pricing\\_for\\_recapitalisationsen.pdf](http://www.ecb.europa.eu/pub/pdf/other/recommendations_on_pricing_for_recapitalisationsen.pdf)).

22 A decline in risk-based spreads below the level of the component used for the pricing will make private funding cheaper when markets calm. The pricing mechanism thus already contains an in-built exit arrangement. However, the expensive pricing also negatively affects banks' profitability and their ability to retain earnings and build up capital. This in turn may impair banks' ability to attract other forms of private capital and thus delay the government's exit.

23 Step-ups have been implemented through an increase over time in the coupon payments on preference shares. Redemption clauses take the form of a call option on the debt, which permits the issuer to redeem the capital at any time.

banks' assets; (ii) the concentration of impaired assets in a few institutions within the financial system; and (iii) those in which a "clean break" for the participating institutions could be deemed most appropriate, despite the higher upfront costs. In contrast, circumstances that favour the asset insurance model are (i) a high incidence of hard-to-value assets, such as asset-backed securities, among the impaired assets; and (ii) those in which consideration of the state of public finances would favour schemes with a cost profile that puts less pressure on the government fiscal position in the short term.

However, the choice between an asset removal scheme and an asset insurance scheme is extremely challenging in a situation where the quality of banks' assets is likely to deteriorate further. This uncertainty is probably one reason why many schemes combine elements of both types and can thus be categorised as hybrid schemes. Such schemes often involve asset transfers, financed by public sector guaranteed loans, and sophisticated arrangements for risk-sharing between the government and participating banks.

Some countries had implemented asset support measures even before the crisis intensified in October 2008. The earliest instances of this type of support were ad hoc measures forming part of rescue restructurings, such as asset removal and guarantee measures to support several German Landesbanken, the back-up facility for ING and the Maiden Lane transaction in the United States.<sup>24</sup>

Recognising the need to offer asset relief in a systematic way, several countries have introduced asset protection programmes. Examples are the Public-Private Investment Program (PPIP) in the United States, the National Asset Management Agency (NAMA) in Ireland and the German consolidation scheme targeted at Landesbanken. In the United Kingdom, the authorities offered asset insurance to the three largest banks, with the participation depending on the outcome of stress tests conducted by the Financial Services Authority.<sup>25</sup> The features of asset schemes vary considerably

across countries. For instance, the eligible asset classes vary widely from one scheme to another, as does the nature of participation, which is voluntary in Germany and the United States, but mandatory in Ireland. Furthermore, the pricing mechanisms differ: prices are established by auction in the United States, while they are determined by auditors in Germany and Ireland.

The potential risks are high for the public sector, as the amounts committed to asset relief measures are large (see Table 1). For instance, the United Kingdom has entered into a risk-sharing agreement with Royal Bank of Scotland, which could cost almost 14% of GDP. However, these losses would only materialise in the unlikely case that the underlying asset pools become worthless. If the assets retain part of their value, the ensuing loss for the public sector will be smaller. Also, if the bank that benefits from the asset relief measures also receives support in the form of capital and/or liability guarantees, the taxpayer would have to pay either for losses on the right-hand side or the left-hand side of the balance sheet, but not on both sides.

#### 4 EXIT FROM GOVERNMENT MEASURES

Along with central bank action, the government support measures have been successful in restoring confidence in financial systems around the world and in improving their resilience. These measures, together with sizeable macroeconomic policy stimuli, have set in motion a process of mutual reinforcement of financial system conditions and real economic

24 In the second quarter of 2008 the Federal Reserve System facilitated the merger of JP Morgan Chase and Bear Stearns by providing a senior loan to Maiden Lane (a bad bank in the form of a limited liability company) to fund the purchase of a portfolio of mortgage-related securities, residential and commercial mortgage loans, and associated hedges from Bear Stearns.

25 The ring-fencing arrangements specified a first loss tranche, which the banks themselves were to bear, with the government agreeing to cover 90% of any further losses. After the stress tests, Barclays was allowed to opt out, and the government entered into loss sharing arrangements with RBS and Lloyds. However, Lloyds terminated the agreement with the government before it could be implemented (see Section 4).

performance, fostering improved business cycle prospects, as well as the fading of systemic risk.

However, the various measures to support the financial sector amounted to considerable actual and contingent liabilities for governments.<sup>26</sup> While the governments' budget deficits are not materially affected in the short run, the eventual impact on government debt depends on the borrowing that will be needed to finance any additional recapitalisation measures and those contingent liabilities that actually materialise. It should be noted that this comes on top of the rapid rise in government deficits and debt attributable to the economic slowdown and discretionary stimulus measures. At the same time, government budgets are currently benefiting from the remuneration of guarantees and capital injections. The contingent liabilities associated with the support to the financial sector represent major risks for government deficits and/or debt in the medium term. In addition, fiscal risks in the form of rapid changes in market sentiment that could lead to less favourable refinancing costs are sizeable for those euro area countries with very large fiscal imbalances.

In addition, some of the support measures risk distorting competition (between recipient and non-recipient banks and between banks in different jurisdictions). Furthermore, the support, be it implicit or explicit, could give rise to the moral hazard risks associated with downside protection – including the possibility of excessive risk-taking.

Against this background, a debate has started on exit strategies for public support measures. This debate is currently being conducted simultaneously at the global and at the EU level. Given the highly integrated financial system in the European Union, there is agreement to coordinate exit strategies among national authorities. A coordinated approach would help to avoid adverse cross-border spillover effects and to preserve a level-playing field. However, this does not necessarily entail synchronised

implementation of exits. The EU coordinated strategy is based on: (i) adequate incentives to return to a competitive market; (ii) ex-ante exchange of information between governments on the intentions to phase out; (iii) transparency towards the public and the financial sector; and (iv) an assessment of the stability of the financial system.

For some banks, especially those that have received state support, fundamental re-structuring will be needed in order to ensure their long-term viability when such support is no longer available. This may entail the shrinking of their balance sheets, through the shedding of unviable businesses, with a view to enhancing their profit-generating capacities. Indeed, such re-structuring is already under way for some large banks in the euro area.

The following sub-sections focus on specific aspects of individual measures.

#### EXIT FROM ENHANCED DEPOSIT INSURANCE

In the European Union, the discussion on exit from enhanced deposit guarantees revolves around a coordinated reform of deposit insurance schemes, which would in essence consist of an increase in the insurance limits (compared to the limits before the crisis), but also faster payouts in the event of insolvency. Insurance ceilings have been raised and, in a number of countries, unlimited deposit insurance has been granted. A specific deadline for ending unlimited deposit insurance has not been discussed so far. In the United States, the current deposit insurance limit of USD 250,000 per depositor will expire at the end of 2013, when it will be reduced to USD 100,000.

<sup>26</sup> More details on this issue of budgetary effects in the euro area can be found in the article "The impact of government support to the banking sector on euro area public finances" published in the July 2009 issue of the Monthly Bulletin.

## EXIT FROM GUARANTEES ON BANK BONDS

The potential for a market-based exit is built into schemes that have a fixed price for the government guarantee, insofar as improving market conditions raise the cost of issuing government-guaranteed bonds relative to non-guaranteed bonds. Charts 5 and 6 show that euro area banks have already started to exit by substituting the issuance of non-guaranteed bonds for guaranteed ones. However, it may be too early to draw the general conclusion that banks have started to regain access to funding markets, as some banks may still face serious challenges.

In the United States, the Debt Guarantee Program was extended by six months until the end of October 2009. At the same time, the fees were raised for debt issued after 1 April 2009 and for debt with a maturity beyond 30 June 2012.<sup>27</sup> This effectively initiated the exit from the Debt Guarantee Program. The programme has been succeeded by a six-month emergency guarantee facility, which will expire at the end of April 2010. The fee for debt issued under the emergency facility amounts to at least 300 basis points, but can be raised depending on the risks associated with the issuing entity.

## EXIT FROM CAPITAL INJECTIONS

In broad terms, there are two approaches for the exit from government recapitalisations. First, the government can sell its stake in the private market. Currently, the only case of this has been the sale by the Swiss government of its stake in UBS to institutional investors. Second, the bank can repay the government. There are several alternative and generally complementary options available to raise capital in order to return capital to the government. The main strategy, observed during the repayment initiatives by large banks in France and the United Kingdom, is to raise capital in private markets. This strategy has been complemented by retaining earnings, selling business units, deleveraging and converting the Tier 2-type capital of private investors into ordinary shares.

While the exit from guarantee schemes is still being discussed, the exit from recapitalisation has already started. US banks have clearly led the way by returning capital as early as late March 2009. So far they have repaid 16% of the capital they received. Initially it was mostly smaller US banks that started repaying government capital. Only after the outcome of the stress tests undertaken by the US authorities did larger banks receive permission to reimburse the US Treasury, which explains the repayment wave observed in June 2009.

In the European Union, Lloyds TSB was the first bank to issue new shares in order to be able to return capital (EUR 4.4 billion) to the government, in June 2009. This was followed by the sale of EUR 4 billion of UBS shares held by the Swiss government in August 2009. In autumn 2009 several large French banks announced their intention to repay the capital injections received from the government. These repayments amount to more than half of the total amount of public capital injected into banks in France. These events indicate that exit from government schemes is now also under way in the European Union.

Overall, recent events seem to suggest that the incentives set by governments to induce early repayment have been effective for well-performing banks. An early exit is generally possible for those banks that have been less affected by the financial crisis or that have managed to achieve a quick turnaround. Their favourable earnings facilitate the raising of new capital in the market and the retaining of earnings to repay government support. However, other banks that have received government support will find it substantially harder to reimburse the government. In fact, the incentive to repay early may prove largely ineffective for banks that cannot raise capital in private markets or retain earnings. For these banks, the options to achieve repayment are more limited and they may need to deleverage

27 See <http://www.fdic.gov/regulations/resources/TLGP/faq.html>.

and/or sell business units. Ultimately, repayment by these banks will need considerably more time. It should also be noted that banks that finance repayment by deleveraging may reduce their lending activities thereby contributing to possible credit constraints for the real economy. In addition, the Swiss example shows that governments can also pursue exit proactively through the sale of their stakes. However, this requires a sufficient increase in stock prices to protect the taxpayers' interest and markets that are capable of absorbing the large government stakes.

#### EXIT FROM ASSET SUPPORT

Most of the asset support has been granted through ad hoc measures tailored to individual institutions. Schemes are rare and have only been set up over recent months (in Ireland, Germany and the United States). The implementation of measures in support of individual institutions under these schemes is still ongoing. Normally an enrolment window is announced during which eligible financial institutions can sign up to the scheme. After the enrolment window has passed, the scheme is closed and cannot be accessed any more.

As asset support is granted for the life of the underlying assets, asset support measures are generally self-liquidating. It should be noted, however, that owing to the long maturity of the underlying assets, asset support measures will be in place for a considerable period of time.

In principle, asset support measures can be terminated prior to the maturity of the underlying assets. In the case of asset removal measures, the asset manager – be it a private investor (e.g. under the PPIP in the United States) or a public agency (e.g. the NAMA in Ireland) – can sell the assets when market prices improve. In the case of asset insurance measures, where the assets are ring-fenced and stay on the financial institution's balance sheet, the financial institution can terminate the guarantee arrangement. An early exit of this kind has not been observed so far, but the measures have

only been recently introduced. What has been observed, however, is the withdrawal by some banks from measures that have been announced, but not yet implemented. In the United States, following the release of the results of the Supervisory Capital Assessment Program, Bank of America announced that it did not plan to go ahead with the asset insurance measure agreed earlier with the US Treasury, the Federal Reserve System, and the FDIC. Hence, the ring-fencing arrangement was abandoned without having been implemented, and Bank of America paid an exit fee of USD 425 billion to the authorities in September 2009, in return for the implicit protection that had already been provided since the announcement of the asset insurance agreement. In the United Kingdom, in November 2009 Lloyds exited from its March 2009 agreement with the government to share losses on a GBP 260 billion pool of assets since, owing to improved market conditions, it was able to raise enough capital to cover the potential losses on this pool of assets itself. Lloyds paid the government an exit fee of GBP 2.5 billion.

In sum, exit from asset support may be less complex than entry. However, it has not yet entered the current policy debate, as the asset support measures have only recently been introduced or are currently still being put in place.

#### 5 CONCLUSION AND OUTLOOK

A key element of the management of the crisis has been the extensive public support measures for the financial sector. As regards the measures used, the crisis responses in the European Union have been broadly similar to those in the United States. First, EU and US governments have employed similar tools (government guarantees, capital and liquidity injections and asset protection). Second, apart from the similarity of their scope, the measures have also been similar in size. Like the European Union, the United States has relied on a mix of ad hoc measures for individual institutions and schemes

addressing the wider needs of the financial system. However, there are also important differences. A key difference has been the sizeable repayments of capital made so far by US banks. This may be partly attributed to the fact that capital injections were mandatory for large US banks, while in Europe capital support has typically been voluntary. In France, where capital injections were also mandatory, banks have also started to repay significant amounts of the capital they have received.

Within the European Union, sizeable differences in crisis responses have emerged. These differences partly reflect the magnitude of the problems faced by each banking system, the degree to which the banking systems are exposed to bad assets and, potentially, public sector budgetary restrictions, which impose constraints on commitments. More specifically, a number of European countries have set up schemes to address the problems in their financial systems, while many others have relied on ad hoc measures for individual institutions. Given the wide range of approaches in Europe, the United States naturally lies somewhere in between. A case in point is the widening of deposit insurance to USD 250,000 in the United States, which appears high by average European standards, but is dwarfed by the unlimited insurance granted by some EU countries.

For the future, a number of lessons should be drawn from the experience of the provision of public support to the financial sector. These include, first, the fact that, while the EU coordination process has worked effectively overall, there is still room for enhancing public coordination to deal with the solvency problems of cross-border financial institutions. Second, there is a need for more consistency in the tools and approaches used for crisis management and resolution. Third, there is a need to limit any moral hazard behaviour by market participants as a result of the public sector support. On all these issues, work is under way at the international and European level.