E THE IMPORTANCE OF INSURANCE COMPANIES FOR FINANCIAL STABILITY

Insurance companies can be important for the stability of financial systems mainly because they are large investors in financial markets, because there are growing links between insurers and banks and because insurers are safeguarding the financial stability of households and firms by insuring their risks.

This special feature discusses the main reasons why insurance companies can be important for the stability of the financial system. It also highlights the special role of reinsurers in the insurance sector and discusses some of the key differences between insurers and banks from a financial stability point of view.

INTRODUCTION

The insurance sector has traditionally been regarded as a relatively stable segment of the financial system. This is mainly because most insurers' balance sheets, unlike those of banks', are composed of relatively illiquid liabilities that protect insurers against the risk of rapid liquidity shortages that can and do confront banks. In addition, insurers are not generally seen to be a significant potential source of systemic risk. One of the main reasons for this view is that insurers are not interlinked to the same extent as banks are, for instance, in interbank markets and payment systems.

The insurance sector can, however, be a source of vulnerability for the financial system, and the failure of an insurer – an event that has occurred from time to time – can create financial instability. In addition, the traditional view that insurers pose limited systemic risk can be challenged, however, because it does not take account of the fact that interaction between insurers, financial markets, banks and other financial intermediaries has been growing. It is important, however, to recognise that insurance companies, given their role as mitigators of risk and their often long-term investment horizons, often also support financial stability.

The importance of insurers for financial stability is also increasing as the size of the euro area insurance sector has grown rapidly over the last decade. For example, euro area insurers' financial assets increased by some 90% from early 1999 to 2008, or from 35% to 50% of euro area GDP. This growth was mainly driven by economic development, which raised the demand for non-life insurance, and ongoing public reforms in pension systems, which encouraged an ageing population to allocate more savings to life insurers (and pension funds). As these developments are likely to continue in the future, it is to be expected that the growing role of the insurance sector will continue in the years ahead.

Because of the importance of insurers for financial stability, the ECB regularly monitors and analyses the conditions in, and risks confronting, the euro area insurance sector. This analysis has been published in the Financial Stability Review (FSR) since the first issue of December 2004.

INSURANCE COMPANIES AND FINANCIAL STABILITY

There are three main reasons why insurers are important for the stability of the financial system.[1] First, insurers are large investors in financial markets.[2] Second, insurers often have close links to banks and other financial

1 For discussions of the importance of insurance companies for financial stability, see also, J.-C. Trichet, "Financial Stability and the Insurance Sector", The Geneva Paper, No 30, 2005; J.-C. Trichet, "Developing the work and tools of CEIOPS: the views of the ECB", keynote speech at the CEIOPS conference on "Developing a new EU regulatory and supervisory framework for insurance and pension funds: the role of CEIOPS", November 2005; J-C. Trichet, "Insurance companies, pension funds and the new EU supervisory architecture", keynote speech at the CEIOPS annual conference 2009, November 2009; ECB, *Potential impact of Solvency II on financial stability*, July 2007; P. Trainar, "Insurance and financial stability", *Banque de France Financial Stability Review,* November 2004; International Association of Insurance Supervisors, "Systemic risk and the insurance sector", October 2009; U.S. Das, N. Davies and R. Podpiera, "Insurance and issues in financial soundness", *IMF Working Paper,* No 03/138, IMF, July 2003; and G. Häusler, "The insurance industry, fair value accounting and systemic financial stability", speech at the 30th General Assembly of the Geneva Association, June 2003.

2 See also, IMF, "The Financial Market Activities of Insurance and Reinsurance Companies", *Global Financial Stability Report,* June 2002.

institutions, and problems confronting an insurer can therefore spread to the banking sector. Third, insurers contribute to the safeguarding of the stability of household and firm balance sheets by insuring their risks.

INSURANCE COMPANIES AS LARGE FINANCIAL MARKET INVESTORS

Insurance companies, especially composite and life insurers, are large investors in financial markets since they invest insurance premiums received from policyholders. The total value of the investment assets of euro area insurers amounted to €4.4 trillion in 2008 (see Table E.1). Most of the time, given their often long-term investment horizons, insurers are a source of stability for financial markets. However, because of the sheer size of their investment portfolios, reallocations of funds or the unwinding of positions by these institutions has the potential to move markets and, in the extreme, affect financial stability by destabilising asset prices.

The largest asset class in which euro area insurers invest is debt and other fixed income securities. Direct investment by euro area insurers in such securities amounted to over €2 trillion in 2008 (see Table E.1). On average, large euro area insurers have about half of their bond holdings in corporate bonds and half in government bonds. Because of these large government and corporate bond investments, the investment behaviour of insurers has the potential to affect long-term interest rates and pricing in the secondary markets. Furthermore, it makes insurers important for the provision of financing to both governments and firms. For example, around 20% of the debt securities issued by euro area governments are held by euro area insurers and pension funds.

Out of the total of €4.4 trillion they hold in investment assets, euro area insurance companies' equity holdings amount to around €550 billion (see Table E.1). Equity investment shares of insurers, however, were higher before the bursting of the dot-com bubble and the slump in equity prices in 2001 and 2002 induced many insurers to liquidate part of their portfolios. In addition, most insurers reduced their equity

Table E.1 Investments of euro area insurance companies

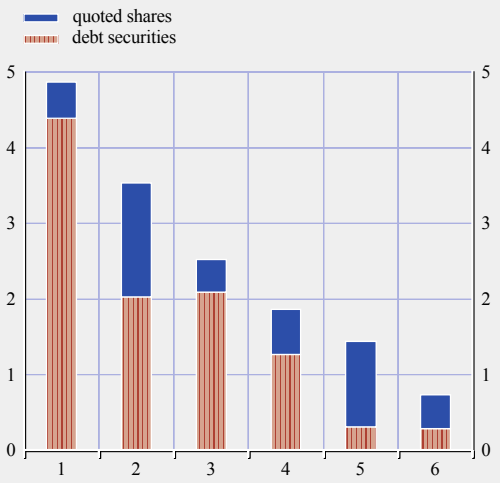
(2008)

	Life insurers		Non-life insurers		Composite insurers		Reinsurers		Total	
	EUR billions	(%)	EUR billions	(%)	EUR billions	(%)	EUR billions	(%)	EUR billions	(%)
Total investments where the insurers bear the investment risk	**1,627**	***78.6***	**648**	***100.0***	**1,099**	***86.5***	**366**	***99.8***	**3,741**	***85.9***
Lands and buildings	32	*2.0*	27	*4.2*	34	*3.1*	4	*1.1*	98	*2.6*
Investments in affiliated enterprises and participating interests	86	*5.3*	103	*15.8*	57	*5.2*	169	*46.1*	415	*11.1*
Shares and other variable-yield securities and units in unit trusts	272	*16.7*	121	*18.7*	130	*11.9*	29	*8.0*	552	*14.8*
Debt securities and other fixed income securities	912	*56.1*	276	*42.6*	824	*75.0*	79	*21.5*	2,091	*55.9*
Participation in investment pools	6	*0.4*	2	*0.3*	6	*0.6*	0	*0.0*	14	*0.4*
Loans guaranted by mortgages	81	*5.0*	6	*0.9*	5	*0.4*	0	*0.0*	92	*2.5*
Other loans	177	*10.9*	82	*12.7*	11	*1.0*	3	*0.7*	272	*7.3*
Deposits with credit institutions and other financial investments	47	*2.9*	24	*3.7*	24	*2.2*	11	*2.9*	106	*2.8*
Deposits with ceding enterprises	14	*0.9*	7	*1.0*	8	*0.7*	72	*19.7*	101	*2.7*
Investments (unit-linked) where policyholders bear the investment risk	**444**	***21.4***	**0**	***0.0***	**167**	***13.2***	**1**	***0.2***	**612**	***14.0***
Total investment assets	**2,071**	***100.0***	**648**	***100.0***	**1,270**	***100.0***	**367**	***100.0***	**4,357**	***100.0***

Sources: Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) and ECB calculations.

Chart E.1 Quoted shares and debt securities held by euro area institutional sectors

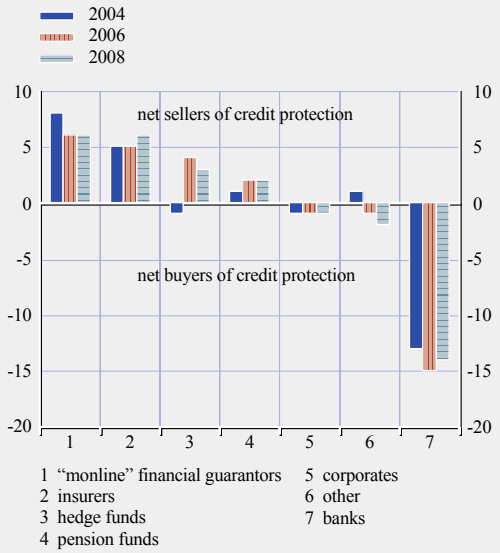
(2008; EUR trillions)



Sources: ECB, Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) and ECB calculations.
Note: MFIs denotes monetary financial institutions and OFIs denotes other financial intermediaries.

Chart E.2 Global net positions in credit derivatives, by type of investor

(percentage)



Source: British Bankers Association.
Note: The data include single-name CDSs, full index trades, synthetic collateralised debt obligations (CDOs) and tranched index trades.

investments significantly further during the current financial crisis, in an attempt to derisk their balance sheets and reduce volatility in their earnings (see also Section 5 in this FSR).

In addition to insurers' own investment, they hold about €600 billion of investment on behalf of unit-linked life insurance policyholders (where the policyholder bears the investment risk).

Insurance companies are the third largest type of investor in quoted shares and debt securities after monetary financial institutions (MFIs) and other financial intermediaries (OFIs). Because of the large share of their investment in debt securities, the relative importance of the insurance sector in these markets is higher than in the quoted shares markets (see Chart E.1).

In addition to investments in equities and debt securities, the insurance sector as a whole was a net seller of credit protection during the first decade of this century (see Chart E.2).[3] It should be noted, however, that insurers withdrew almost completely from this activity during the current financial crisis. Nevertheless, many insurers still have large amounts of credit default swap (CDS) contracts outstanding. The involvement of insurers in the credit derivatives markets, however, varied significantly across institutions and was concentrated on a limited number of institutions. For example, the US insurer American International Group (AIG) was the by far largest seller of credit protection among insurers. It had a net notional CDS exposure of USD 205 billion in September 2009, down from USD 447 billion in June 2008.[4]

Insurers also have investments in structured credit products such as residential and commercial mortgage-backed securities

3 See also International Association of Insurance Supervisors, "IAIS paper on credit risk transfer between insurance, banking and other financial sectors" March 2003; IMF, "Risk transfer and the insurance industry", *Global Financial Stability Report*, April 2004; and ECB, *Credit risk transfer by EU banks: activities, risks and risk management*, May 2004.

4 See AIG's 10-Q form to the Securities and Exchange Commission, June 2008 and September 2009.

(RMBSs and CMBSs).[5] The level of exposures across insurers, however, varies significantly. Furthermore, insurers have generally invested in less risky parts of structured credit products, and exposures to products that reference US sub-prime mortgages were and are generally low. This saved most euro area insurers from the large losses on such investment that many banks incurred after the outbreak of the current financial market turmoil in 2007.

Although the extensive investment activities of insurers have the potential to affect financial asset prices negatively, insurers generally have a long-term investment horizon since they receive premiums up front for policies that often run over many years. Insurers can therefore help to stabilise prices in financial markets as they are less likely than many other investors to liquidate investments when financial asset prices are falling. However, insurance companies are in some cases restricted by supervisors in their investments and may only hold high-rated assets. Rating downgrades of securities held by insurance companies can therefore force them to sell assets in falling markets, thereby contributing to the negative developments.

The potential for insurers to stabilise financial asset prices is sometimes overvalued as there is the misperception at times that insurers do not have to fair value their investments and that they are thus not affected by temporary value changes. In general, large listed insurers have to fair value their investments, but it often takes longer than in the case of banks before fair value losses are recorded in the profit and loss accounts. This is because, in general, insurers reporting under the International Financial Reporting Standards (IFRSs) mainly classify their investments as "available for sale". The investments are then recorded at fair value on insurers' balance sheets, with any losses that are recorded leading to movements in shareholders' equity. However, no loss is recorded in the profit and loss account unless the investment is considered to be impaired.[6] Many IFRS-reporting insurers have, however, imposed a policy on themselves that triggers impairments when the value of their equity investment falls, for example, 20% below the acquisition costs, or remains below the acquisition cost for longer than a certain predefined period (of, typically, six to 12 months). For credit investment, a charge against earnings is taken when there is a delay in the payment of interest or principal. Such valuation policies can limit the possibilities for insurers to act as long-term investors.

Looking ahead, the proposed changes by the International Accounting Standards Board (IASB) to financial instrument reporting are likely to have an impact on insurers' investment behaviour.[7] The IASB has proposed abolishing the "available for sale" category for financial instruments. This would have a major impact on insurers, since they currently classify most of their financial assets in this category. The change is likely to lead to increases in insurers' reported book values of debt securities (as well as corresponding increases in shareholders' equity), since most of them would be moved to the amortised cost category. This would reverse previously reported unrealised losses in shareholders' equity.

A further impact of the proposed change by the IASB is likely to be that equity holdings would, in principle, be marked to market through the profit and loss account. This could create more volatility in insurers' earnings. To avoid this, some market participants believe that the moves by many insurers in recent quarters away from equities in their investments were partly driven by the proposed change and that insurers might be less inclined to invest in equities in the future.

5 For further details, see ECB, *Financial Stability Review,* December 2008.

6 This differs from the practices of banks that generally record most securities "at fair value through profit and loss", which means that the assets are marked to market through the profit and loss account.

7 See International Accounting Standards Board, "Financial Instruments: Classification and Measurement", July 2009, and JPMorgan Chase & Co., "European insurance: IAS 39 accounting changes could have profound impact on reported numbers", July 2009.

INSURANCE COMPANIES' LINKS WITH BANKS

From a financial stability perspective, the identification of linkages between the banking and the insurance sectors is of importance because such linkages determine the channels through which potential problems in one sector could be transmitted to another. Such contagion channels can be either indirect – e.g. via insurers' financial market activities (as described above) – or direct through ownership links and credit exposures (discussed hereafter).

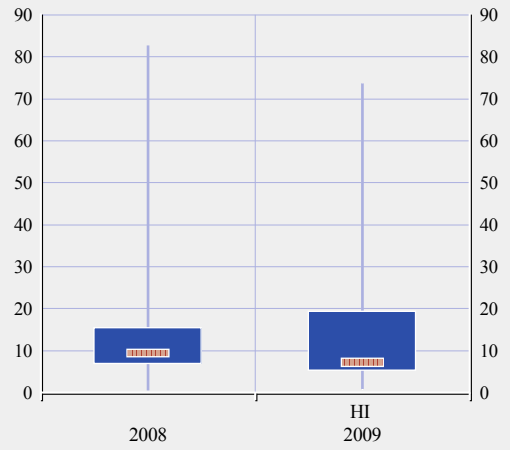
In recent decades, the direct ownership links between banking groups and insurance undertakings have increased and many "financial conglomerates" that offer both banking and insurance products have emerged. The reasons for conglomeration were mainly to diversify income streams, to reduce costs and to take advantage of established product distribution channels. In addition, some banks and insurers saw benefits in joining the different balance sheet structures of banks – the assets of which have a longer maturity than their liabilities – and insurers – which generally have liabilities with a longer maturity than their assets – to reduce balance sheet mismatches.

It is more common that banks in the euro area engage in insurance underwriting than that insurers engage in banking activities. For example, of the 19 large and complex banking groups (LCBGs) in the euro area that are analysed in this FSR (see Section 4), 14 are considered to be financial conglomerates with significant insurance activities.[8] Eight of the LCBGs regularly report insurance activities separately in their financial accounts.[9] The average contribution of insurance activities to total operating income of these LCBGs was about 7% in 2008 and the first half of 2009 (see Chart E.3). However, these shares vary widely across institutions and some LCBGs derive a more substantial amount of their income from insurance business.

The strong links between insurers and banks have meant that insurance companies, or insurance business lines of banks, have become more important for banking groups, and vice versa, and thus for financial stability. But the links between insurers and banks do not necessarily have to be strong as the perception of such

Chart E.3 Contribution of insurance activities to the operating income of large and complex banking groups in the euro area

(2008 – H1 2009; percentage of total operating income; maximum, minimum, interquartile distribution and median)



Sources: Individual institutions' financial reports and ECB calculations.
Note: Data for eight of the 19 large and complex banking groups in the euro area that reported insurance activities separately in their financial accounts for 2008 and the first half of 2009.

8 According to the Directive 2002/87/EC of the European Parliament and of the Council of 16 December 2002 on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate and amending Council Directives 73/239/EEC, 79/267/EEC, 92/49/EEC, 92/96/EEC, 93/6/EEC and 93/22/EEC, and Directives 98/78/EC and 2000/12/EC of the European Parliament and of the Council – the Financial Conglomerates Directive (FCD) – a group qualifies as a financial conglomerate if more than 40% of its activities are financial and the group has significant cross-sector activities. For this latter criterion, two quantitative criteria, a relative and an absolute, are used. The relative criterion specifies that the proportions of both the banking and the insurance parts are within a 10%-90% range of total activities. These activities are measured by total assets and solvency requirements. The absolute criterion is that when the smaller activity has a balance sheet total larger than €6 billion, the group also qualifies as a financial conglomerate.

9 Banks shall report their insurance activities separately if one of the three following quantitative criteria are met; 1) the insurance revenue is 10% or more of all operating segments; 2) the absolute amount of their reported profit or loss is 10% or more, in absolute amount, of (i) the combined reported profit of all operating segments that did not report a loss and (ii) the combined reported loss of all operating segments that reported a loss; and 3) the segment's assets are 10% or more of the combined assets of all operating segments.

links might be sufficient to trigger contagion, especially in times of financial instability.

Insurers are also important for banks as sources of equity capital and funding. As discussed above, insurance companies invest large amounts of funds in debt and equity markets. A significant amount of this is invested in the debt and equity issued by euro area banks. Some provisional estimates, based on internal ECB data for the second quarter of 2009, show that euro area insurance companies and pension funds held about €435 billion of debt securities issued by euro area MFIs. This represents about 10% of the total amounts outstanding of debt securities issued by euro area MFIs. At the same time, euro area insurers and pension funds held about €37 billion of quoted shares issued by euro area MFIs, which represents 8% of the total amount of shares issued by euro area MFIs.

As mentioned in the section above, insurance companies have also become increasingly more involved in financial transactions with banks – for example, in credit risk transfer markets – which has increased the linkages between the sectors.[10]

This type of exposure between insurers and banks came to the fore during the current financial turmoil where the problems faced by the US insurer AIG and some US-based "monoline" financial guarantors caused losses for banks across the globe. Losses on CDSs written by these insurers on structured credit products triggered rating downgrades on securities they had insured. These rating downgrades caused marking-to-market losses for institutions, often banks, that had bought credit protection. It should be noted, however, that AIG's large exposures to structured credit products are not representative of the exposures of the global insurance sector as a whole, as most insurers do not have financial product units like AIG's. Nonetheless, the problems for AIG indicate the types of risk that can build up in any large and complex financial group and suggest that financial stability monitoring needs to take account of at least the large entities in the insurance sector.

In addition, although the business conducted by financial guarantors was specialised and limited to a small number of companies, the impact their problems had on banks shows that smaller specialised insurers can also have close and important links with banks.

Because of the often strong direct and indirect links between insurance companies and banks, financial stability assessments of the banking sector should also consider links to insurance companies or banks' insurance activities and the risks that such links and activities can pose.

INSURANCE COMPANIES AS PROMOTERS OF FINANCIAL STABILITY AMONG HOUSEHOLDS AND FIRMS

By insuring risks that households and firms are confronted with, insurance companies contribute to the stability of the balance sheets of these sectors. However, the links between insurers and non-financial sectors can occasionally give rise to potential financial stability concerns.

For instance, the default of an insurer – an event that has occurred from time to time – can cause financial distress in these sectors. This occurred, for example, in Australia in 2001 when the failure of HIH – the second largest non-life insurer in the country – led to the bankruptcy of some companies that had purchased insurance cover from HIH.[11] The default of an insurer or withdrawal of insurance coverage can also make it impossible or very difficult for firms to conduct certain business where insurance coverage is needed.

Insurance companies can also be of similar importance for households. For example, insurance policies on houses, cars and other physical assets protect households from large losses. In addition, life insurers are increasingly important for euro area households.

10 See, F. Allen and D. Gale, "Systemic Risk and Regulation", in M. Carey and M. Stulz (eds.), *The Risks of Financial Institutions*, The University of Chicago Press, 2006.

11 See, G. Plantin and J.-C. Rochet, *When insurers go bust,* Princeton University Press, 2007.

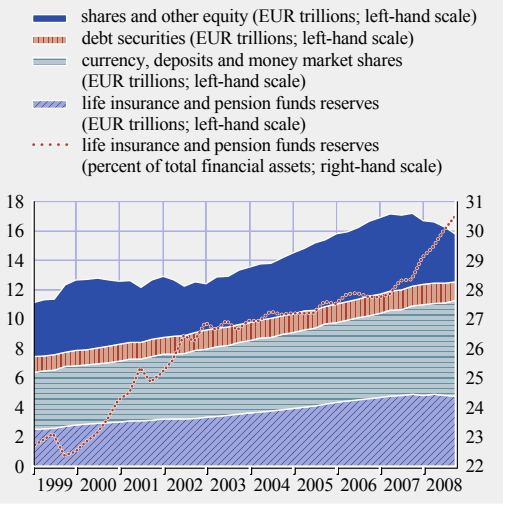
The expected increase in the proportion of retirees in the population, and pension reforms underway in many euro area countries designed to encourage people to shift from public to private life insurance schemes, has increased the role played by life insurers in the economy. The amount of euro area households' assets invested in life insurance and pension funds has increased from €2.5 trillion at the beginning of 1999 to almost €5 trillion at the end of 2008 (see Chart E.4).[12] As a share of households' total financial assets, life insurance and pension fund investments has increased from 23% to 31% during the same period.

The important role insurers play for households and firms is the main reason why insurers are supervised. The prudential supervision of insurance companies and pension funds aims at promoting a sound and prudent management of these institutions also with a view to protecting policy holders and investors.

In addition to providing insurance coverage for firms and households, insurance companies sometimes also finance their investments. As already mentioned, insurance companies are large buyers of corporate bonds, but in some cases they also extend loans to both firms and households.

Chart E.4 Euro area households' financial assets

(Q1 1999 – Q4 2008)



Sources: ECB and Eurostat.

THE SPECIAL ROLE OF REINSURERS

Although the reinsurance sector is much smaller than the primary insurance sector, it can still be seen as important for financial stability for two main reasons. First, reinsurers provide safety nets for primary insurers, and a reinsurer's financial difficulties can significantly affect the primary insurance sector. For example, if a reinsurer experiences financial stress, the problems could spread to many primary insurers if their reinsurance hedges were to fail to perform as expected. In this sense, reinsurance is a credit risk for primary insurers. It could also lead to a reduction in the availability of reinsurance coverage, which might force primary insurers to cut back on their underwriting, withdraw from capital markets and bolster solvency positions by other means. Second, because the business of reinsurers is to protect against extreme events, they are usually more exposed than primary insurers to rare and unexpected catastrophic events, such as natural disasters and terrorist attacks, the likelihood of which is difficult to quantify accurately.

The potential for a reinsurer to cause a systemic event within the primary insurance sector has increased in recent years, due to consolidation in the reinsurance sector. The global reinsurance sector is dominated by a handful of very large companies. For example, the four euro area reinsurers that are regularly monitored in this FSR have total combined assets of about €290 billion and they account for about 30% of total global reinsurance premiums written (see Section 5). What is more, the reinsurers themselves are interlinked as they distribute reinsurance exposures among one another (called retrocession). In retrocession markets, large and unique risks can be spread around the global reinsurance market to allow primary

12 A breakdown into life insurers and pension funds is not available, but life insurers account for about half of the total.

insurers to also reinsure risks that are too large for a single reinsurer.

THE DIFFERENCE BETWEEN BANKS AND INSURANCE COMPANIES

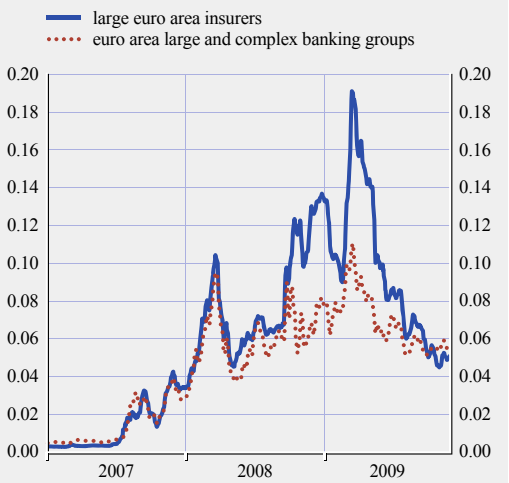
Banks have a special role in the financial system on account of their central role in the transmission of monetary policy and their participation in payments systems. The interconnections between banks in interbank markets and payment systems can also cause problems faced by one bank to spread to others. Banks are therefore of particular importance for financial system stability. This importance is exacerbated by the fact that banks' assets (such as customer loans) are mostly long-term in character, whereas their liabilities (such as deposits) are of shorter-term duration. This leaves the banks vulnerable to depositor runs that can result in liquidity shortages. Insurers on the other hand, unlike banks, generally have liabilities with a longer maturity than their assets, which makes them less vulnerable to customer runs. In addition, insurers' liabilities are usually less liquid than bank deposits, as the possibility of withdrawing savings is restricted in most insurance contracts and is also more costly for customers.

As discussed above, the insurance sector can be of considerable importance to financial system stability, but insurers do not pose the same systemic risk for the financial system as banks. This is because insurers are not as closely interconnected as banks are, since they do not directly participate in payments systems. This does not necessarily, however, mean that simultaneous defaults are less likely to occur in the insurance sector than in the banking sector, at least not during periods of financial turmoil. This can be exemplified by looking at the implied probability of two or more euro area insurers and euro area LCBGs defaulting at the same time – calculated by using CDS spreads and equity returns. This "systemic risk indicator" was somewhat lower for insurers than for the LCBGs before the outbreak of the financial market turmoil in the summer of 2007, which implies that the systemic risk in the insurance sector was indeed perceived to be lower. However, the indicator displayed rather similar levels and developments for banks and insurers during the first year after the outbreak of the financial market turmoil (see Chart E.5). The similarity of developments among banks and insurers during this period could possibly be explained by the fact that many of the risks that insurers and banks faced during this period – such as financial markets risks – were the same. In October 2008, when problems in the banking sector intensified, the indicator for euro area insurers rose above that of banks, and it remained higher until September 2009. This development could probably be explained by the fact that banks received more support from governments than insurers did during this period, which reduced the likelihood of banks defaulting.

The traditional view that insurers pose less systemic risk than banks did not take into account the growing interaction between insurers, financial markets, banks and other financial intermediaries. As insurers are

Chart E.5 Implied probability of two or more institutions defaulting simultaneously within the next two years

(Jan. 2007 – Nov. 2009; probability; five-day moving average)



Sources: Bloomberg and ECB calculations.
Note: For details about how this indicator is constructed, see Box 16 in ECB, *Financial Stability Review*, December 2007.

increasingly more involved in financial transactions with other financial intermediaries, such as banks, the potential for problems confronting an insurer to spread in the financial system has increased. In addition, the insurance-linked securities market (with instruments such as catastrophe bonds) has created direct links between insurers as they sometimes buy such securities to diversify their own risk exposure, while benefiting from investment in instruments linked to their area of expertise.[13]

CONCLUDING REMARKS

Although insurers can contribute to financial stability on account of both their capacity to reallocate risks in the economy and their often long-term investment horizons, they also have the potential to destabilise the financial system. In particular, a problem confronting an insurer could affect not only households and firms that have bought insurance, but also financial markets – via insurers' investment activities – and banks and other financial institutions – via direct and indirect links.

All this warrants a regular analysis and monitoring of insurers' financial performance and assessments of their risk by central banks, international organisations and other bodies that cover countries/regions where the insurance sector plays a significant role. In addition, given that the banking and insurance sectors have become increasingly interlinked, financial stability assessments should avoid an approach that is too sector-oriented and should take into account the linkages between these different parts of the financial system.

13 The development of insurance-linked securities markets has also created new links between insurers and investors in these markets which predominantly consist of dedicated securities funds, money managers, hedge funds and banks. See, ECB, *Financial Stability Review,* June 2008.