EN EN

COMMISSION OF THE EUROPEAN COMMUNITIES



Brussels, 9.1.2009 SEC(2009) 19 final

COMMISSION STAFF WORKING DOCUMENT

EUROPEAN FINANCIAL INTEGRATION REPORT 2008

EN EN

TABLE OF CONTENT

1	INTRODUCTION	5
1.1	The aim of the European Financial Integration Report	5
1.2	2008 – a challenging year	5
1.3	The structure of the report	5
2.	FINANCIAL INTEGRATION	7
2.1	Financial markets: money, bond and equity markets	7
2.2	Financial institutions; banking and insurance	10
2.3	Financial infrastructure	12
2.4	Retail markets	14
2.5	Financial integration in EU-12	16
2.6	Conclusions	17
3	MARKET STRUCTURES AND COMPETITION	19
3.1	Introduction	19
3.2	Banking	19
3.3	Insurance	23
3.4	Infrastructures	25
3.5	Distribution channels	28
3.6	Conclusion	29
4	EFFICIENCY AND ACCESS	30
4.1	Recent efficiency trends	30
4.2	Access to financial services	34
4.3	Conclusions	39
5	FINANCIAL STABILITY	40
5.1	Recent developments	40
5.2	The new pattern of financial contagion	42
5.3	Risk propagation through securitisation	44
5.4	Asset valuation - a possible risk amplifier?	48

5.5	Conclusions	51
6	THE EXTERNAL DIMENSION	52
6.1	The size and relative performance of the EU financial sector	52
6.2	EU global competitiveness	53
6.3	The global regulatory environment – International regulatory dialogues	56
6.4	Looking ahead – Global industry consolidation	56
6.5	Conclusions	57
7.	CONCLUSIONS	58
ANNE	X 1: Policy achievements in 2008	61
ANNE	X 2: Statistical Indicators	67
ABBR	EVIATIONS	79
REFER	RENCES	80

ANNEX II: TABLE OF CONTENT

1.	Cross-country standard deviation of euro-area interbank rates
2.	Geographical counterparty breakdown in euro-area money markets (2006-2008) 67
3.	Convergence of 3-month money market rates in EU countries outside the euro-area (coefficient of variation in %)
4.	Proportion of variance in local euro area equity returns explained by euro area and US shocks
5.	Convergence in long term government bond yield (coefficient of variation) 69
6.	Cross-sectional yield spread variance of euro area corporate bonds explained by various factors
7.	Foreign investment in the equity and bond markets by origin, 2006
8.	Sector split of all European M&A activity in 2007
9.	Gross premiums written by foreign branches as a % of total activity in the country 71
10.	Revenues of the 20 largest banks by geographical location
11.	Euro area MFI cross-border loans (in percentage of total loans)
12.	Evolution of retail banking prices 2007-2008
13.	Financial markets depth (% of GDP, 2007)73
14.	Proportion of variance of equity returns explained in EU-12 by US and European shocks
15.	Proportion of variance of various interest rates in EU-12 explained by common factor (German benchmarks)
16.	Market share of foreign-owned banks (% of total assets, 2006)
17.	Development of insurance markets in the EU (2007)
18.	Market capitalisation in selected EU and US exchanges
19.	Annual turnover in selected EU and US exchanges
20.	Levels of financial exclusion in the EU
21.	Distribution of venture capital (seed and start-up) investment in the EU by country of investee company (2007)
22.	Venture capital (seed and start-up) investment as % of GDP

1 INTRODUCTION

1.1 The aim of the European Financial Integration Report

- 1. The European Financial Integration Report (EFIR) is produced annually and examines the state of financial integration within the European Union and the impact of integration on other financial sector trends. This report also provides an overview of EU financial services policy achievements in 2008. It aims at providing an updated report of the progress and state-of-play of the financial integration process, in all its various dimensions. The ambition is that it will thus provide a tool for evidence-based policy making and contribute to the Better Regulation agenda.
- 2. The EFIR provides an assessment of key aspects of the EU financial integration process. It examines whether the financial integration process is on track, and whether this process is generating the desired outcomes. The EFIR also highlights those areas where the integration process is lagging behind, and provides an overview of the current and ongoing EU initiatives aimed at addressing the remaining obstacles.
- 3. While EU financial services policy is a major driver of EU financial sector developments, global trends as well as financial contagion also have a significant role. The financial crisis has been a stark reminder of the interdependencies between financial markets, both globally and within the EU. It has also underlined the crucial role of the financial system in supporting the proper and efficient functioning of modern economies.

1.2 2008 – a challenging year

4. At the time of writing, it is too early to draw definite conclusions on the economic effects of the crisis. The Commission's November 2008 forecast projects EU economic growth to drop sharply in 2008 to 1.4%, from 2.9% in 2007. In 2009 the EU economy is expected to grind to a standstill at 0.2% before recovering to 1.1% in 2010. In the Report, we have tried to shed some light on the effects of the turmoil on EU financial markets. A more in-depth assessment will be available in the 2009 edition.

1.3 The structure of the report

- 5. The structure of the Report is as follows: **Chapter 2** examines the state of play of EU financial integration. Despite some changes in indicators due to the turmoil, the following trends can be confirmed a relatively high degree of integration in the wholesale segment (especially the money and bond market) while integration within the retail segment lags behind. In the banking and insurance markets, cross-border mergers and acquisitions continue, while direct cross-border provision of services remains marginal. Additional progress, particularly in equities and retail markets, will rely on boosting competition and the consolidation of payment and settlement infrastructures.
- 6. Given the important role of competition in financial integration, **Chapter 3** analyses the market structure and competition between intermediaries, markets and infrastructures. It shows that for a number of EU-12 Member States high margins, costs and profitability could increase competition and efficiency in the banking sector.

Special attention is paid to the impact of the Code of Conduct on securities post-trading. While the first signals are positive, further progress is needed before the Code can be considered truly successful. As for equity trading, the implementation of the Markets in Financial Instruments Directive (MiFID) already seems to have had a substantial impact on competition.

- 7. Competition encourages market players to improve their efficiency. This issue is discussed in **Chapter 4**. The recent turbulence has had a negative impact on efficiency indicators within the EU banking sector and on the performance of EU equity markets, both in terms of capitalisation and trading activity. However stock markets remained relatively liquid despite falling indices. Chapter 4 also takes a look at issues on access to finance by European households and enterprises. There are still big differences between EU-15 and EU-12 Member States. Venture capital, as a specific form of financing for start up companies, remains concentrated in a few developed countries but unexploited in the remaining Member States.
- 8. It is also important to examine the link between financial integration and financial stability. On the one hand, integrated financial markets offer better opportunities for financing and risk diversification. On the other hand, they create intensified cross-border financial links through which shocks can be transmitted across the EU financial system. **Chapter 5** therefore examines the causes of the crisis. Starting as a US sub-prime mortgage crisis, the mortgage credit bubble was fuelled by historically-low interest rate levels, ample access to credit and over reliance on credit ratings. There were also a number of factors that turned the US sub-prime crisis into a global financial crisis: in particular the lack of transparency in the structured credit market and the securitisation of the sub-prime lending. Chapter 5 also examines how the original risks were amplified where a critical factor was the valuation of illiquid financial assets. As a result, credit institutions worldwide faced massive write-downs and credit losses, but US and European institutions suffered most.
- 9. In order to get a better understanding of financial developments in the EU, **Chapter 6** analyses the position of the EU financial services sector in a global context. The EU, along with the US and Japan, remain the key players. However, emerging regions, such as China, India and the Middle East, are increasingly making their presence felt. Finally, the Annex presents the main achievements of the EU in the field of financial services in 2008 as well as additional information on financial integration indicators.

2. FINANCIAL INTEGRATION

1. The objective of this chapter is to present a set of indicators which will enable us to assess the current level of integration of EU financial markets and to judge whether integration has been progressing or not. Financial integration for our purposes is defined according to the law of one price. Under this definition, if markets are integrated, financial assets which have identical characteristics should exhibit the same price - irrespective of their geographical origin. In other words, an asset's price should be driven by factors other than the place where it is traded or the geographic location of the two contractors. In measuring the level of integration two main categories of indicators are used – those that are price-based and those that are quantity-based. Pricebased indicators, like cross-country dispersions, measure discrepancies in prices (or in an asset's returns) that are related to the geographical origin of the services (or assets). To the extent financial products are comparable an increase in integration should lead to a higher convergence of prices and yields across countries. The second category, quantity based indicators, follow the principle that integration should lead users of financial services to diversify geographically and shop beyond national boundaries. Therefore measures of the share of cross-border business and indicators of geographical segmentation of investors' portfolios are investigated.

2.1 Financial markets: money, bond and equity markets

- 2. The level and rate of integration of EU wholesale financial markets over recent years has been remarkable. Over the past decade we have observed high levels of market integration in both the money and bond markets, especially in the euro area. We have also observed integration in EU equity markets, although the level of progress has been hindered by a lack of integration within the clearing and settlement infrastructure. Naturally the recent financial turmoil has had a significant effect on these markets with the positive trends we have observed reversing in the money and equity markets. We believe that this reversal in trend can be linked to transitional factors, including increased credit risk variance amongst intermediaries and a temporarily higher home bias for financial transactions. As such, this change in direction should not be seen as a clear signal of a permanent worsening in the level of market integration. It is clear that further information and time is needed to shed sufficient light on these developments so that we can be in a position to accurately judge the situation.
- 3. As far as the euro area money market is concerned, the unsecured segment is showing a higher level of integration than the secured (repo) one (see chart 1 in the annex)¹. Over the second half of 2007 and the first quarter of 2008, a sharp widening of the

_

Please note that the conclusions in the text stem from the comparison of EURIBOR with EUREPO. As far as the integration of the secured segment this is still hindered by the differences in national legal and tax frameworks and by the persistent fragmentation in national clearing and settlement infrastructures that make difficult the cross-border movement of collateral. However, the implementation of the Financial Collateral Directive (FCD) has reduced the national legal differences and has contributed to the greater usage of cross-border collateral.

dispersion in EONIA² lending rates was seen in response to the financial turbulence. This could have been the result of two joint factors - an increase in the variability of counterparty risk and a temporarily higher home bias for unsecured transactions³. This conclusion is supported by the positive trend in the geographical counterparty breakdown for 2006-08. Indeed, while the share of "other euro area" counterparties for the unsecured segment decreased from 55% to 47% over this period, it rose to 65% up from 61% in the repo market (see chart 2 in the annex). It appears that over 2007 and the first quarter of 2008 the secured segment has been less influenced by the financial turbulence. Nevertheless some impact has been seen both in terms of reduced cross-border business and increased variability of rates between countries⁴. Outside the euro area, (unsecured) money market interest rates were also converging up until the emergence of the market turmoil in the latter part of 2007(see chart 3 in the annex).

4. Despite the market turbulence, equity return indicators confirm the good level of integration reached in this market. Looking at the cross-country dispersion of equity returns in the euro area between 2002 and 2006 the average difference in equity returns has more than halved see chart 2.1 below). Since the beginning of the market turmoil this positive trend has reversed and the difference between the cross-country and the cross-sector dispersion rates has narrowed, and even disappeared at the beginning of 2008. Due to the short timeframe it is difficult to say if this trend is showing a reduction in the level of integration or, which we believe is more likely, that this trend is temporary phenomenon which is linked to the financial turbulence. This view is supported by the relevance of euro area events in explaining equity volatility; indeed its relevance is now more than double that of global shocks (see chart 4 in the annex)⁵.

-

The euro overnight index average (EONIA) is a measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

The two factors are interrelated since uncertainty about counterparty risk in the unsecured interbank market is wider in a cross-border context where asymmetric information and adverse selection effects are amplified. The increase of CDS spreads – used as a proxy for counterparty risk - in the second half of 2007 confirms that the turbulence has resulted inter alia in a perceived increase of the counterparty risk and risk aversion among investors. It has been observed that the concerns that prevailed towards the end of 2007 about counterparty risk were far more pronounced than were the concerns in 1999 (the so called "Y2K" problem). See ECB (2008a) and IMF (2008a).

During the period from June 2007 to June 2008 the share of the cross-border business declined to 55,1% from 57,7%. See ICMA (2008).

Global factors are proxied by shocks in US equity markets.

6
5
4
3
2
1
O Filtered country dispersion of euro area equity returns

— Filtered sector dispersion of euro area equity returns

Chart 2.1: Filtered cross-country dispersion of euro area equity returns

Source: ECB (2008a). Note: The more integrated the market, the greater the benefits of diversification through sector based equity investment strategies rather than through country-based ones. The data suggests that the advantages of a sector diversification have been higher than those of a geographical diversification for most of the time observed.

- 5. The integration of government bond markets in the euro area is almost complete since the introduction of the common currency. However, in other EU Member States especially in the EU-12 bond yields are still quite diversified (see chart 5 in the annex). During the first quarter of 2008 a widening in both euro area and EU-27 government bonds yields was observed. As we have tentatively inferred for the interbank rates, these developments could be linked with higher perceived country-specific risks and increasing credit risk premiums⁶. Corporate bond markets show quite an advanced level of integration since the variance in total yield spreads that are explained by country effects remains close to zero⁷ (see chart 6 in the annex).
- 6. Integration in EU capital markets can also be observed by analysing the origin of total foreign equity investments in the EU area. While the most recent data (2004-2006) on EU foreign equity and bond investments shows a steady situation, the percentage of investments that originated from another EU country has increased for both types of assets when compared to 2001 (see chart 2.2 below). This data confirms the existence of an increasing "regional" bias in the EU over the longer term. Country level data for 2006 provides clear evidence that this regional bias is higher for bond investments than for equity investments and it is particularly relevant for EU-12 countries where, on average, EU bond investors account for around 90% of total bond investments (see chart 7 in the annex). In 2006 the US was the largest non-EU foreign investor in EU equities, with a share of 29% (28% in 2005). US investors have also increased their share of the EU bond portfolio (from 7% in 2005 to 9% in 2006). Observing the other side of the market, i.e. that of the issuers, there is less evidence of cross-border integration with very few cross-border listings.

According to the ECB the drying-up of liquidity in the government bond market could have also contributed to the divergence between intra-euro area yield spreads. See ECB (2008b).

In a context of increasingly EU integrated markets bond yields should react more to common than to local factors.

Equity Bonds Rest of the world □ EEA+CH ■ US Other FU

Chart 2.2: Bond and equity investment in EU by origin of investors

Source: IMF (2006-2008). Data refer to holdings of securities at end-December of the reference year. Data for 2006 is provisional.

2.2 Financial institutions; banking and insurance

7. In 2007 the financial services was a mayor player in terms of European merger and acquisition (M&A) activity, accounting for more than 19% of total deal value (see chart 8 in the annex). Following a slowdown in the previous year, cross-border deals dominated in 2007, with several high-profile deals in both the banking and insurance markets (see chart 2.3 below). Unlike banks, which also use branches to enter foreign markets⁸, expansion by EU insurance companies has predominantly been achieved by firms establishing separate legal entities, i.e. subsidiaries⁹ in these markets. As a result, the level of activity observed through the free provision of services (i.e. through distance selling channels) or through foreign branches remains limited (see chart 9 in the annex). While many EU banks have become multinational, in particular by increasing their "European" dimension (see chart 10 in the annex), only a few large insurance groups could be characterised as effective multimarket leaders across Europe¹⁰.

see BCG (2008).

The number of branches of credit institutions from EU Countries in 2007 was 693 which resulted in an increase of around 7% in comparison to 2006. See ECB (2008f).

The number of branches of EU/EEA Countries in 2006 was 386, i.e. – 2,5% in comparison to the data registered in 2005. Source CEIOPS data, Commission Services calculations. Data include life, non life, composite and reinsurance enterprises.

50% 45% 40% 35% 30% Domestic 25% 20% Crossborder (intra-EU) 15% 10% 5% 0% 2005 2006 2007

Chart 2.3: European Financial Services M&A. Domestic vs cross border.

Source: PWC (2006-2008), Commission services calculations. Data refers to the top 20 european FS deals announced for each year.

8. Cross-border consolidation has been a significant feature for banking M&A activity over 2007 and has been driven by the significant size of the acquisition of ABN-AMRO by RBS, Fortis and Banco Santander¹¹. While domestic consolidation has been higher than the cross-border one, over the past years (with the exception of 2005)¹², the overall market share of other EU banks has steadily increased to 19% in 2006 for the EU-25 (it was around 15,5% in 1997) while the market share of third countries has remained flat (see chart 2.4 below). Moreover, the amount of total assets of branches and subsidiaries of EU credit institutions has increased by 16,5% in 2007¹³. The cross-border flow of intra-EU MFI loans increased between 2002 and 2008, although the flow of transactions between euro-area countries and the rest of the EU has shown signs of stagnation since mid-2007. The proportion of cross-border loans to non-MFI clients, despite a slight improvement over the recent years, remains small and is further evidence of continued market fragmentation in the retail sector (see chart 11 in the annex).

-

In the context of the initiatives undertaken to smoothen the impact of the market turbulence, during the month of October 2008 the Government of the Netherlands acquired Fortis Bank Nederland (Holding) N.V. including the participation in RFS Holdings B.V. that represented the acquired activities of ABN AMRO by Fortis.

See ECB (2008f). Yet, major European banks have recorded in the years 2002-07 an increasing foreign presence in their shareholder structure. See DB Research (2008a).

See ECB (2008f). With specific reference to the branches, the increase has been even higher, i.e. around 18%.

30% 20% 0% ■ Europe ■ Other Countries Source DB Research (2008b) 9. In 2007 the EU insurance industry continued to expand, with firms seeking to benefit from economies of scale. Besides a general increase of more than 70% in total value of M&A activity over the previous year, some major cross-border deals were concluded in 2007 (i.e. Allianz SE/Assurances Générales de France¹⁴). The high profitability and equity performances of insurance firms over recent years may have facilitated the increase in the number of large deals. Foreign presence seems to be particularly important in EU-12 markets where many major insurance groups have expanded in search of higher profitability¹⁵. Quantity-based indicators show an increasing amount of gross written premiums sold through the free provision of services (i.e. distance marketing) and through branches of other EU/EEA countries, i.e. an increase of 16% from 2005 to 2006 and 15% between 2004 and 2005¹⁶. Despite these positive results, direct cross-border provision and branching do not seem to be attractive ways to enter foreign markets for insurers due to the lack of product harmonisation and efficient distribution channels¹⁷ 2.3 Financial infrastructure 10. Harmonization in the wholesale payments sector is progressing smoothly with migration to TARGET2 having been completed in May 2008. The introduction of a 14 Total value 9,8 million € 15 According to BCG (2008), the Eastern European markets achieved an average annual total-premium growth rate of 18,9% between 2000 and 2005, compared with 4,8% for the same period in Western Europe. Source: CEIOPS data, Commission Services calculations. Data include life, non life and composite enterprises. 17 According to a recent research local market leaders (either independent local firms or subsidiaries of international groups) perform better than the rest of players, showing a cost ratio up to -15% relative to market average with reference to BE, NL, AT, ES, DE, IT, FR, and UK. The competitive advantage of these enterprises is explained through "superiority in marketing and pricing, a broad product range that supports sales force effectiveness as well as customer bonding, and economies of scale across products, distribution channels, and clients. Local market leaders also achieve higher brand awareness. They are attractive partners for banks and other distribution channels and preferred employers for top talent in

Chart 2.4: Market share of foreign-owned banks (% of total assets)

60% 50% 40%

management and staff". See BCG (2008).

single shared RTGS (real time gross settlement system) platform will further contribute to the integration of wholesale payments, allowing its participants to operate with a uniform price structure for both domestic and cross-border transactions and allowing firms to optimize their payment and liquidity management. In 2007, the large-value payment systems operating in euro (TARGET) accounted for 89% of the value and 60% of the volume of all payments¹⁸.

- 11. The efficiency and integration of the retail payments systems across the EU are lagging behind the progress we have seen in the wholesale market. While the bulk of wholesale payments are conducted through two systems (TARGET2 and EURO1), retail payment systems are still fragmented and largely operate within national boundaries with only one system operating on a cross-border basis (STEP2). However, the Single Euro Payments Area (SEPA) is expected to bring about a much higher level of integration of these systems thereby enhancing the efficiency and competition of the retail payment systems. This project will allow customers to make euro payments to any SEPA-area based beneficiary using a single bank account and a single set of payment instruments such that any distinctions between domestic and cross-border retail payments will disappear.
- 12. After the wave of M&As activity in 2000-2005 (Euronext, OMX), integration of the EU securities markets is now being boosted by the implementation of the Market in Financial Instrument Directive (MiFID). Indeed MiFID allows free competition between regulated markets (i.e. existing stock exchanges) and other alternative trading venues due to higher standards in market transparency and integrity. As a result, since the end of 2007 a new class of trading venues, Multilateral Trading Facilities or MTFs, offering lower fees and faster services has emerged²⁰. MTFs are expected, inter alia, to enhance integration and efficiency of the European trading infrastructure. We have already seen several of the new platforms offering their services on a pan-European basis and putting competitive pressure²¹ on stock exchanges which were traditionally confined to national markets.
- 13. MIFID has also assisted in progressing integration and consolidation of post-trading infrastructures. The first visible impact of this change has been the entry of new paneuropean providers in clearing services (EMCF and EuroCCP)²² that serve MTFs, which have also contributed to the reduction of clearing fees. The Code of Conduct on clearing and settlement has also had a positive impact through its provisions on transparency of services and prices, unbundling, account separation, and access and interoperability²³. The Code and MIFID have also created market momentum in the settlement arena, where Euroclear has continued its consolidation by acquiring the

_

¹⁸ See ECB (2008c).

SEPA covers not just the euro area but also retail payments in other EU Member States as well as in Iceland, Liechtenstein, Norway and Switzerland.

Examples of these "pan-European" MTFs are Chi-X, Turquoise, and Nasdaq OMX Europe.

For instance in August 2008 Chi-X had reached a market share of 5,2% of the total volume of all European equities since its launch (March 2007). See Thomson Reuters (2008).

For further details see chapter 3.

The access and interoperability part of the Code has received a boost from the decision of London Stock Exchange Group in September 2008 to pursue a dual CCP competitive clearing model for the London market with X-Clear joining LCH.Clearnet as a provider of CCP services to the Group's London equity market offering. See also Annex 1.

Nordic Central Security Depository (NCSD) which comprises both the Finnish and Swedish CSDs. Moreover, a group of 7 CSDs led by Clearstream have decided to link to a central hub (Link-Up Markets) in order to enhance the efficiency of cross-border settlement. The process towards higher harmonization will also benefit from the proposed adoption of the ESCB-CESR recommendations. With specific reference to the euro-area, the development of the T2S (Target2-Securities)²⁴ common settlement platform should bring higher levels of integration as well as increased efficiency and competition. The integration of several segments of EU financial markets (namely the equity and bond markets and the secured money market) will rely heavily on the successful integration of the clearing and settlement infrastructure.

2.4 Retail markets

- 14. Even though there are signs of increased integration across national borders, establishing a single EU retail financial market is far from being achieved. Crossborder transactions for individuals and small and medium sized enterprises remain limited and a high level of heterogeneity still exists on various key aspects including prices, available products and distribution channels. Integration has mainly occurred on the supply side of the market through firms establishing subsidiaries and branches outside domestic markets. This process has been particularly intensive in the EU-12 countries (see following section). While several legal²⁵ and cultural factors will continue to play an important role in hindering full integration, recent initiatives to reduce fragmentation in payment infrastructures could promote further integration and lead to a reduction in consumer prices.
- 15. Despite the persistent differences in retail banking interest rates amongst EU countries, integration in this area is progressing. The highest degree of convergence in the euro area can be observed for large loans to non financial corporations. Conversely, interests on consumer loans show a high degree of variance across national borders (see chart 2.5 below). These differences can mostly be explained by the relative strength in negotiating power held by large companies compared to consumers and a company's ability and openness to "shop" beyond national borders. Although housing loans show some of the lowest country dispersion in the euro area, significant differences between countries remain in product ranges and fiscal and regulatory frameworks. This makes direct price comparability (and cross-border business) difficult. More generally, when assessing the differences in retail interests rates it is important to take account of the remarkable product heterogeneity across EU that might partly explain the crosscountry dispersion. Indeed, the latter can be influenced by existing asymmetries between MS on a wide range of factors including credit risk, degree of capital market development, and the institutional framework of financial markets, including differences in fiscal regulations.

-

On 17 July 2008 the Governing Council of the ECB decided to launch the T2S project and to provide the resources required until its completion. It also decided to assign the development and operation of T2S to the Deutsche Bundesbank, the Banco de España, the Banque de France and the Banca d'Italia. Apart from Euro area CSDs, the Danish CSD has agreed to participate in T2S for Danish krone settlement and euro settlement, and the Swedish CSD has indicated that they intend to participate for euro settlement.

As an example opening an account abroad can be hampered by extensive "know-your-customer" rules requiring a face-to-face contact with the bank and consequentely high travel costs for the customer. See DB research (2008f).

2,500

2,000

1,000

1,000

0,500

0,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,000

1,

Chart 2.5: Standard deviation of euro area retail interest rates (in %)

Source: ECB data, L. Vajanne (2007).

Note: data refers to a) loans to non-financial corporations up to an amount of $\in 1$ million; variable rate and up to 1 year initial rate fixation; b) loans to non-financial corporations over an amount of $\in 1$ million; variable rate and up to 1 year initial rate fixation; c) loans to households for house purchases; variable rate and up to 1 year initial rate fixation; d) loans to households for house purchases; over 5 and up to 10 years initial rate fixation.

16. The fee structure and product composition of retail banking products²⁶ across the EU is far from homogeneous. If we examine the differences in prices, euro-area MS show the smallest price discrepancy in comparison to other areas (see chart 2.6 below) even though the trend towards lower discrepancy has slowed down over the course of 2008. Price evolution provides additional evidence of increasing integration in EU retail markets. In the period 2007-2008, retail banking prices remained relatively stable (+0.8%), both in the euro area and in the rest of the EU, (see chart 12 in the annex). The impact of SEPA on the degree of competition in payment services is expected to drive retail prices²⁷ lower given that in 2007 payments accounted for 55% of total fees for core banking services²⁸, both in the euro area and in the rest of the EU.

See also chart 4.6 in chapter 4.

According to a study carried out by Cappemini full SEPA implementation could lead to a reduction of 42,6% in fee per transaction (compared to levels in 2006). See Cappemini (2007).

See Cappemini (2008). It's worth mentioning that payment services account for around 70% and 45% of prices increase in euro-area and rest of EU respectively. This provides additional evidence on the expected benefits of SEPA.

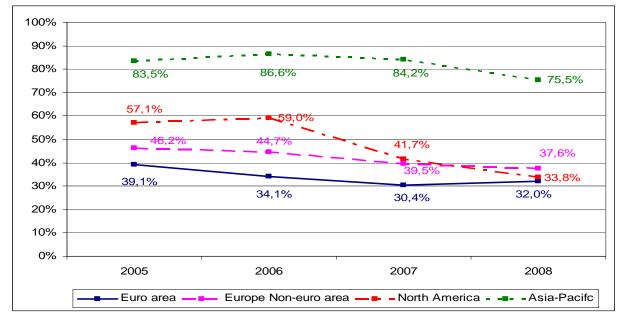


Chart 2.6: Regional price discrepancy for local active users of banking services

Source: Capgemini (2008).

Note: the data refer to the price discrepancy around the regions' average price for day-to-day banking services (account management, cash utilisation, exceptions handling, payments) in the period 2005-2008. Price discrepancy is calculated as the standard deviation of a region's bank prices divided by the region's average price. A minor discrepancy means that a region's prices are close to the average and relatively homogeneous, while a larger discrepancy indicates that price levels vary greatly among banks in a region.

2.5 Financial integration in EU-12

- 17. In recent years, EU-12 Member States have experienced a rapid development in both the real economy and financial markets. The catching-up process with other EU Member States is continuing even though major differences still exist on both the real economy side and at the level of financial development (see chart 13 in the annex). This is also reflected in the relatively low degree of integration amongst EU-12 financial markets when you compare them against those in the rest of EU. Nevertheless there is evidence of increasing financial integration both among EU-12 countries and between EU-12 and EU-15 Member States, even though this process has been taking place at different speeds according to individual market characteristics.
- 18. Integration of EU-12 money market interest rates has progressed substantially since 2000; at the same time the difference between EU-12 and EONIA rates has also decreased; yet it remains higher than the difference with EU-12 average (see chart 2.7 below). Part of this discrepancy between non-euro and euro-area interest rates may be permanent and can be explained by the existence of exchange rate risks. For equity markets, some evidence of increasing integration is shown by the increasing relevance of EU shocks in explaining the cross-border variance of equity returns. Nevertheless, US shocks (i.e. a proxy for global shocks) still explain most of this variance (see chart 14 in the annex).
- 19. An accurate analysis of government bonds markets is difficult due to the structural differences between Member States, e.g. the different degrees of liquidity. In the Czech Republic, Hungary and Poland, where the most developed bond markets are in place, bond yields show a certain convergence towards the euro area (German) benchmark.

Since the remainder of the EU-12 bond markets react rather weakly to movements in the benchmark, it is possible to conclude that there is a serious lack of integration in those market segments, both intra EU-12 and in relation to euro area Member States. With reference to the latter, as for the integration of money markets of the two areas, it's necessary to take into account the impact of exchange rate risks.

2500
2000
1500
1000
1995 1996 1997 1997 1998 1998 1999 1999 2000 2000 2001 2002 2003 2003 2004 2004 2005 2006
— Dispersion to average - - - Dispersion to Eonia

Chart 2.7: Dispersion of overnight lending rates (basis points)

Source: Baltzer, M., Cappiello, L., De Santis R.A., and Manganelli (2008). Note: Countries included are CZ, HU, LT, LV, PL, SI, SK.

20. The intensity of integration in EU-12 banking markets can be analysed by assessing the degree of variance in interest rates that are explained by common factors (i.e. by changes in the relevant benchmark)²⁹. This analysis (see chart 15 in the annex) shows that the level of integration in loans to enterprises is increasing and is substantially higher than the level of integration in consumer loans and mortgages. Integration with the rest of the EU has mainly occurred through a high degree of cross-border direct investments from financial institutions that are based in EU-15, especially through the establishment of subsidiaries in EU-12 countries³⁰ (see chart 16 in the annex).

2.6 Conclusions

21. EU financial integration is an ongoing process, particularly with respect to certain segments such as the equity and retail markets. Money markets and bond markets have shown a high level of integration since the introduction of the euro even though some integration indicators (particularly for the unsecured interbank segment and government bonds) have worsened as a consequence of the financial crisis. Such deterioration could be the result of temporarily higher variability in counterparty risk or

_

To the extent retail rates are comparable across countries higher degrees of integration imply a greater impact of common factors on changes of interest rates over time.

According to the ECB (2008f), foreign subsidiaries having an EU parent held in 2007 around 58% of the total assets of the banking sector in EU-12 Countries.

be the result of investors' preference for domestic markets in times of turbulence. These conclusions can also apply to equity markets where in 2008 cross-country dispersion equalled cross-sector dispersion for the first time since 2001. Substantial progress in this segment and - to a lesser extent - in the (corporate) bond market is heavily dependant upon further harmonization in the post trading securities infrastructure.

- 22. Cross-border consolidation in both the banking and insurance markets over 2007 has been quite remarkable with some significant deals concluded. The market share of non domestic enterprises has steadily increased over recent years, particularly in the EU-12. Nevertheless branching and distance selling remain quite unusual and cross-border selling to retail customers is still quite limited. Although retail markets remain primarily confined within national borders, financial integration is increasing for services provided to non financial corporations. In the years to come, the Commission's recent initiatives on retail payment systems are expected to exert downward pressure on prices and act as a catalyst for further progress in this area.
- 23. Integration in securities trading structures is being prompted by the implementation of MiFID and the emergence of new trading venues which are focussed on operating across national borders. This in turn, along with other initiatives such as the Code of conduct and the T2S, will further enhance the harmonization of securities post-trading systems. This is vital if we are to progress the integration of various market segments such as the equities, bond, and repo markets. As for payments infrastructure, while integration of the wholesale segment has seen substantial progress with the complete migration to TARGET 2, the retail payments side is still largely based on national systems. The introduction of the "euro area retail payments market" through the implementation of the SEPA could bring about significant benefits.
- 24. Integration of financial markets of recently acceded Member States is lagging behind. Money markets in these Member States show the highest degree of integration. Equity markets are increasingly influenced by common EU shocks while bond markets remain far from being integrated. As for the banking markets, integration has occurred mainly through foreign firms establishing subsidiaries in these countries while, at the customer level, only prices of services to enterprises show some degree of convergence. Arguably, improvements in financial integration will go hand in hand with other developments in these Member States as they adopt the single currency³¹ and catch up with the rest of the EU, particularly in relation to developments in their capital markets.

_

On 8 July 2008 the Council of the European Union approved Slovakia's application to join the euro area on 1 January 2009.

3 MARKET STRUCTURES AND COMPETITION

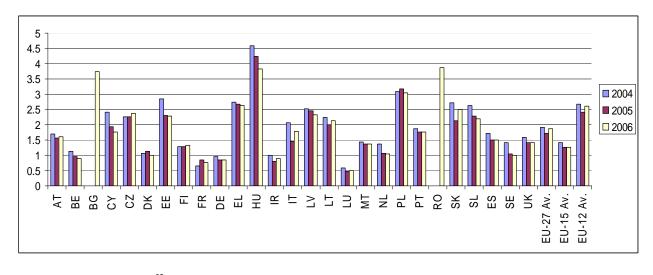
3.1 Introduction

1. This chapter discusses the impact of financial integration on EU market structures and competition. According to economic theory, financial integration should positively influence competition, which in turn promotes firms to: (i) become (more) efficient, (ii) offer a greater choice of products and services, and (iii) offer these products and services at lower prices. Competition therefore should give rise to increased consumer welfare and allocative efficiency. Moreover, the level of competition is an important aspect of financial sector development and, in turn, economic growth and social welfare.

3.2 Banking

- 2. Given that the relationship between competitive conditions and markets structure (as measured by concentration ratios and the Herfindahl index) remains unclear, it is important to combine different indicators in order to get a better idea of competition in the EU banking sector. This chapter compares a number of income, cost and profitability indicators so we can gain a good understanding of the competitive conditions across the EU 27 Member States.
- 3. Chart 3.1 provides an overview of the net interest margin (NIM), that is, the difference between interest income and interest expense as a percentage of total assets. A banks' interest margin is one of the most important indicators of the cost of financial intermediation. The NIM can be used as an indicator for the actual degree of competitive condition in a market, but can also reflect other factors, such as market power and risk appetite.

Chart 3.1: Net interest margin (% of total assets)



Source: ECB (2005-2007)³²

EU Banking Sector Stability.

- Chart 3.1 shows that the NIM in Bulgaria, the Czech Republic, Estonia, Greece, 4. Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia is substantially higher than the EU average (with values ranging from 2.12% to 3.82% in 2006 – against an EU average of 1.87%). The position of many EU-12 countries in relation to NIM is much higher than the EU average. Previous studies have shown that margin spreads in the EU-12 are particularly high in banks with households on both the lending and deposit side³³. The same may also hold for loans to Small and Mediumsized Enterprises (SMEs). Chart 3.1 in the Annex shows that there are especially large differences between the interest rates for loans under EUR 1 million - ranging from a low of 5.3% in the Netherlands and Sweden to a high of 9.4% in Hungary. Over the longer term, the NIM has been declining in the EU-12. This reduction is - amongst other things – a result of a higher degree of efficiency, a higher weight of non-interest income, lower risk aversion and increased competition³⁴. Further reductions are expected, as in other countries, margins generally decrease as economies (and capital markets) develop.
- 5. Current accounts play a gateway role as banks may use this service as the basis for cross-selling other (fee based) products to their customers. This particular strategy may however result in higher switching costs and a corresponding reduction in customer mobility (i.e. cross-selling increases the consumers' reliance on a financial institution and may make it more difficult for a consumer to exit a contractual relationship or to have more than one supplier of financial services). According to recent Commission analysis cross-selling differs across Member States but tends to be lower in the EU-12 countries.
- 6. In addition to cross-selling, banks may also be making use of product tying strategies, i.e. the practice of making the sale of one product/service conditional on the purchase of another product/service, which may in fact weaken competition. In general, product tying can weaken competition in several ways: (i) as for cross-selling, product tying increases the cost of switching and can therefore reduce customer mobility, (ii) it is likely to discourage the entry of new rivals, and (iii) by selling a bundle of different services, it reduces price transparency and comparability. Table 3.1 shows that the practise of current account tying is widespread in the EU retail banking sector, whether purchased alongside a mortgage, consumer or SME loans.

See OeNB (2007) Financial Stability Report No. 14

See for example OeNB (2004) Financial Stability Report, No. 8

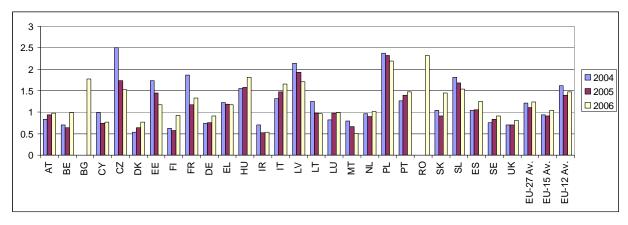
Table 3.1 Tying of retail banking products (weigthed % of banks)

	Mortgage	Consumer loans	SME loan	Mortgage
	+ current account	+ current account	+ current account	+ Life insurance
AT	0	0	29	0
BE	44	0	73	0
CY	35	30	100	6
cz	32	41	100	0
DK	93	62	53	0
FI	75	85	13	0
FR	86	71	91	0
DE	5	0	11	0
GR	69	89	81	39
HU	100	80	100	0
IE	0	0	0	0
IT	48	58	73	2
LT	100	100	100	0
MT	48	39	67	0
NL	0	55	58	38
PL	29	26	85	25
PT	100	100	100	54
sk	100	100	100	2
SL	24	38	100	11
ES	67	65	91	0
SE	1	17	13	0
UK	1	1	0	0
EU-25	39	35	63	6

Source: European Commission (2007). Note: The percentages shown are weighted for each Member State based on their intra-sample percentage share of all customers holding the lead product (e.g. mortgages or personal loans, rather than current accounts).

7. Looking at other sources of income, chart 3.2 shows that (on average) the net non-interest margins (NNM) in the EU-12 are higher than those in the EU-15 Member States, i.e., over the period 2004-2006 the average NNM was up to 72% higher in the EU-12 compared to the average NNM in the EU-15. The fact that both interest and non-interest margins are substantially higher in the EU-12 compared to the EU-15 could raise questions over efficiency and competition, especially in those countries where tying practices are common (e.g. HU, LT, SK and MT).

Chart 3.2: Net non-interest margin (% of total assets)

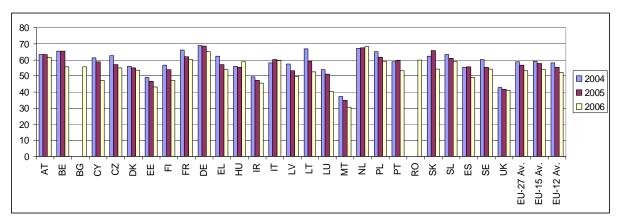


Source: ECB (2005-2007)

8. As for the efficiency of national banking markets (measured by the cost-to-income ratio, that is, a ratio expressing a company's cost effectiveness which sets operating expenses in relation to operating income), differences between EU-15 and EU-12

countries are marginal (on average). Overall, cost to income ratios have declined, both due to higher income levels (although these have recently declined due to the financial turmoil) and further cost reductions (see Chart 3.3).

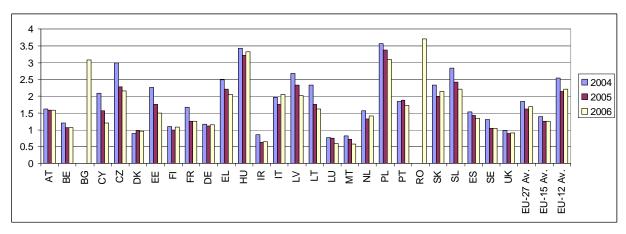
Chart 3.3: Cost-to-income ratio³⁵



Source: ECB (2005-2007)

9. Despite marginal differences in cost-to-income ratios, chart 3.4 shows that there are substantial differences between the levels of expenses as a percentage of total assets across various Member States. A clear distinction can be made between EU-15 and EU-12 banking markets, with the latter having a substantially higher expense ratio. It is therefore interesting to examine how this figure relates to overall profitability.

Chart 3.4: Total expenses (% of total assets)



Source: ECB (2005-2007)

10. Chart 3.5 provides an overview of profitability in EU Member States measured by the Return on Equity (RoE)³⁶. Chart 3.5 shows that there are substantial differences between individual Member States as well as between the EU-15 and the EU-12. The average RoE is 17.5% in the EU-15 and 20.9% in the EU.12. As you can see, Austria,

Sum of noninterest expenses as a percentage of the aggregate sum of net interest revenues and noninterest revenues

Since the RoA is a part of the RoE (i.e. RoA reflects the efficiency of with which a firm utilizes is assets, independently of its capital structure), we focus on the RoE.

Belgium, Bulgaria, the Czech Republic, Estonia, France, Hungary, Latvia, Lithuania, Poland, Slovakia, Spain and Sweden all have profitability levels above the EU-average. The favourable economic conditions up to the summer of 2007 have been an important driver for increasing overall profitability figures. However, in some Member States (notably some of the EU-12 countries) the combination several factors including high margins, high costs and high profitability, may point towards the potential for enhancing competition and efficiency in these countries. This conclusion should however be treated with some care as the analysis has not taken into account country specific factors such as differences in business-cycles and the effects of inflation, which would need to be taken into account before any conclusion can be drawn.

Chart 3.5: Profits after tax – Return on Equity (in %)

Source: ECB (2005-2007)

3.3 Insurance

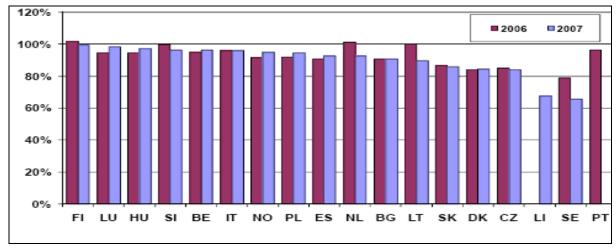
11. According to CEIOPS (2008), overall premium growth in the non-life sector in 2007 remained stable (i.e. at 5%). Despite continued growth, several countries showed the dampening effect that increased competition has had on premium income. In the life sector, overall premium income development was also flat over 2007. Among other things this has been the result of increased competition between life insurance products and other savings products. It has been argued that the life sector has been faced with the lowest growth rate since the significant drop that was seen in 2001. In a number of Member States, especially in the EU-12, the sector did see high growth in 2007 (see chart 3.6) predominantly as a result of overall economic growth, strong savings growth and the development of occupational schemes.

Chart 3.6: Growth in gross premiums written 07/06 (inflation adjusted)

Source: CEA (2008). Note: Data for LT and LV is not available. Inflation adjusted growth of life premiums in EE is 100.3%.

12. In order to assess competition within the non-life sector, we have examined the 'net combined ratio' (NCR), that is, a ratio reflecting the percentage of premiums an insurer has to pay out in claims and operating expenses (See Chart 3.7). In highly competitive markets, the NCR tends towards 100%, as insurers are under competitive pressure to price their premiums no higher than the estimated coverage price (i.e. coverage of expected claims and expenses). The aggregate net combined ratio for the countries reporting to CEIOPS (2008) was 91.2% in 2007, compared to 95.3% in 2006. In this publication last year we saw that over the period 2003-2005 the NCR fluctuated between 92.6% and 95.3%. Given the fact that premium growth remained stable, the drop in the 2007 NCR may be due to a (relative) decline of expenses and/or losses.

Chart 3.7: Net combined ratio



Source: CEIOPS (2008)

13. Chart 3.8 shows the components of the combined ratio, that is, the expense ratio and loss ratio and shows that the share of expenses is higher in many of the EU-12 countries (e.g. HU, PL, BG, LT, SK and CZ), possibly indicating again that there may be room for efficiency gains in these markets.

120%
100%
80%
60%
40%
FI LU HU SI BE IT NO PL ES NL BG LT SK DK CZ LI SE

Chart 3.8: Components of the combined ratio

Source: CEIOPS (2008)

3.4 Infrastructures

- 14. Previous analyses of post-trading infrastructures have concluded that integration and competition in post-trading was lagging behind since these infrastructures remained largely fragmented along national lines. As mentioned in the previous chapter, in November 2006 the post-trading industry presented a Code of Conduct ("the Code") to the Commission which aimed at increasing competition amongst European post-trading infrastructure providers. The Code has injected momentum in the market producing a significant increase in price transparency and a decrease in certain post-trading fees (see Box 3.1 hereunder). What is perhaps even more important is that a large number of access and interoperability link requests have been made since the summer of 2007, which introduces the possibility of increased market contestability.
- 15. This momentum has been further strengthened by implementation of the Markets in Financial Instruments Directive (MiFID). Since November 2007, a high number of Multilateral Trading Facilities (MTFs) have started to compete with established trading venues. Their ability to compete has been strengthened by dedicated and novel posttrade solutions. For example, Chi-x, NASDAQ OMX's Pan-European Market and BATS Trading Europe are using the European Multilateral Clearing Facility (EMCF), a Dutch incorporated subsidiary of Fortis Merchant Banking (now government controlled following the implosion of Fortis in September 2008). Turquoise, another MTF, is using EuroCCP, a subsidiary of the DTCC, the US clearing and settlement infrastructure. These two central counterparty clearing houses (CCPs) connect to national central securities depositories (CSDs) via agent banks (e.g. Credit Suisse, Citi). The effectiveness of this solution is illustrated by the significant market share captured by new entrants (e.g. Chi-x having around 15% of secondary trading in LSE listed shares, Turquoise around 5%). This new entry has also further reduced both trading costs and clearing fees.

Box 3.1 Downward pressure on post-trading fees

Price transparency and the threat of entry appear to have contributed to a downward effect on the incumbent operators' fees. The entry of new MTFs and clearing houses has further accentuated these reductions. Given the Code's provisions on price transparency, it is now possible to quantify the decrease. A few examples below illustrate the point:

- CCP services for equity trades carried out on the LSE the market that is the subject of the highest number of link requests and has seen the establishment of most MTFs the incumbent CCP LCH.Clearnet Ltd decreased its fees throughout 2007 and 2008. Recent estimates by the LSE suggest that since competitive clearing was announced in May 2006, CCP clearing fees per trade have declined by about 60% on average and up to 75% for the largest customers.³⁷
- LCH.Clearnet SA, the French part of the LCH.Clearnet Group providing CCP services for NYSE Euronext, is subject to three link requests and has also reduced its fees. For example, in October 2007 LCH.Clearnet S.A. reduced its clearing and membership fees by 35%. This built on a previous fee reduction in January 2007, when clearing fees on Euronext cash markets were reduced on average by 15%. 39
- Fee cuts can also be observed for CCP services for Frankfurt Wertpapierbörse, where Eurex Clearing, itself subject to two link requests, cut the fixed clearing fees for stock trades on its main order book and trading floor by 25% as of 1 April.⁴⁰
- Moreover, SIS x-clear, also subject to link requests, cut its prices for clearing services on virt-x, SWX Swiss Exchange and the London Stock Exchange (at the time of the press release, x-clear planned to have its LSE service up and running by then) by an average of 47% in February 2008.⁴¹
- One of the new entrants, EMCF, has also decreased its fees. The first fee reduction came in March 2008, when it reduced clearing fees by 32% for its French, German and Dutch shares (12% for UK shares, no change for Swiss). In April 2008 it decreased its fees by a further 20-26% across the board. Fees were further cut later in 2008.
- 16. Market experience suggests that the threat of market entry alone can decrease fees, but the threat needs to be confirmed by actual entry or dynamics in the market for these effects to be sustained. While the arrival of MTFs, new CCPs and the decision of the LSE to go ahead with competitive clearing certainly brought about new market entry, it

LSE (2008), "Netting – Consultation Document", 29 January 2008. See also 2007 press releases of LCH.Clearnet Ltd. According to the LSE, also settlement fees have been affected, as fees levied by Euroclear UK & Ireland in the form of charges to the CCP and directly to customers per trade have fallen by around 25% and another tariff reduction of 22% has been announced for April 2008.

Press release, 4 June 2007, http://www.lchclearnet.com/press_and_publications/press_releases/2007-06-04.asp

Press release, 19 October 2006, http://www.lchclearnet.com/press_and_publications/press_releases/2006-10-19.asp

Press release, 31 January 2008, http://deutsche-boerse.com

See http://www.group.sisclear.com/sis/pressrelease-080114-massive-price-cuts.pdf

is nevertheless important that the expectations for Code-style competition materialises on a broader scale. In this respect, further progress is needed for the Code of Conduct before it can be considered as truly successful. Other initiatives, such as the removal of the "Giovannini barriers" - barriers to integration of European clearing and settlement systems - and the ECB's work on TARGET2-Securities (T2S), complement the work that is aimed at increasing competition between service providers ⁴².

17. As already highlighted, MiFID has brought about considerable structural changes, especially in relation to the number of trading venues and the division of market share. Exchanges have now lost their monopoly over where a share can be traded. Chart 3.9 suggests that existing exchanges traded almost all the turnover in European equities in November 2007 just after MiFID entered into force. However, looking beyond this initial period, the difference between overall reported trading activity in Europe and trading activity reported from European exchanges has increased (although turnover is slowing down after May 2008).

3,000 2,500 2,000 1,500 1,000 500 O Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun 07 07 07 07 07 08 08 08 08 07 07 07 07 08 08 Stock Exchange turnover Turnover in Europe

Chart 3.9: European equity turnover and FESE equity turnover

Source: FESE, Thomson Reuters

Note: Because of the use of different data sets Chart 3.9 is not fully accurate, e.g. in November 2007 overall turnover is lower than total stock exchange turnover. The latter is merely due to differences in the underlying definitions.

18. Chart 3.10 shows that the market share in turnover (blue line) of incumbent exchanges has decreased from around 100% to around 77 %, leaving roughly one fourth of the turnover now being provided by 'other' trading venues. It is clear that the shift in market share is not due to an increase in overall trading activity (as this is roughly unchanged) but rather from a shift from traditional exchanges to alternatives, including MTFs, SI and OTC. In response to this trend in trading volumes, Europe's exchanges have recent cut their fees with a view to maintaining market share.

A clearer idea on the extent to which the Code, and the various other initiatives in the post-trading area mentioned above have impacted on the price of post-trading services will be available once the study on prices, costs an volumes of post-trading activities - that Oxera is currently finalising for the Commission - will be completed.

110 100 90 80 Ratio-70 60 50 40 Jan 08 Jul 08 **Nov 07** Dec 07 Feb 08 Mar 08 Apr 08 May 08 Jun 08 Market share of turnover Market share of trade reporting

Chart 3.10: Estimated market share of exchanges in equity trading and reporting

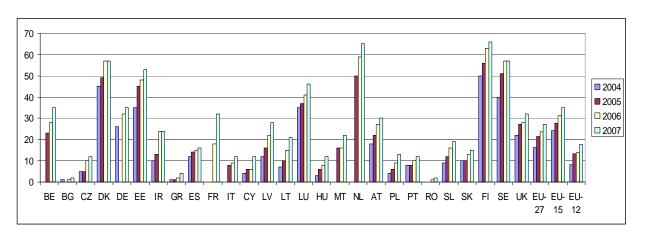
Source: FESE, Thomson Reuters

Note: Because of the use of different data sets Chart 3.10 is not fully accurate, e.g. in November 2007 the market share of incumbent exchanges is over 100%. The latter is merely due to differences in the underlying definitions.

3.5 Distribution channels

19. As indicated in the 2007 edition of this report, distance selling of financial services can result in increased competition. Without having the need for a physical presence through branches and subsidiaries, (foreign) competitors may in fact have a cost advantage over existing national financial service providers. In order for online activities to be successful throughout the EU, consumers need to be more confident and empowered when choosing amongst competing products. Initiatives in the field of financial education could be helpful in this respect. The number of individuals using online banking services is nevertheless (already) growing, i.e. the share of online banking in the EU-27 increased from 16% in 2004 to 24% in 2007 (see chart 3.11). If the current trend continues, the average adoption rate will increase to 50-60% in the EU-15 by 2020 – a level which is already common in the Nordic and Benelux countries (Deutsche Bank, 2008). Figure 3.5 shows that the proportion of the population that uses online banking services is highly dependant on geographic location (i.e. high adoption rates in northern European countries) and income.

Chart 3.11: Percentage of individuals who have used online banking during the last 3 months



Source: Eurostat (2008)

3.6 Conclusion

20. We have found that, most notably in a number of EU-12 Member States, a combination of factors including high margins, high costs and high profitability may point towards the potential for enhancing competition and efficiency in these countries. In the insurance sector, premium growth in the non-life sector remained stable, while in the life sector development was flat. Competition between life insurance products and other savings products rose substantially in 2007. As for post-trading of securities, the Code of Conduct has injected momentum in the market - price transparency has significantly increased and certain post-trading fees have decreased. MiFID has also provided a chance for new firms to set up alternative trading venues offering cheaper fees and faster trading. We have also seen that if the current adoption rate of internet banking continues, the internet could become one of the main distribution channels for financial services, providing new opportunities to enhance competition in national markets.

4 EFFICIENCY AND ACCESS

- 1. Based on academic studies and market theory, it is believed that the integration of financial markets across Europe should, through market entry, lead to an increase in the level of competition amongst new, and existing, financial services providers. The combination of increased competition and the potential economy of scale benefits for companies that operate in an integrated market should result in greater efficiency of the European financial services sector as a whole. By monitoring various efficiency indicators we can assess the extent that efficiency gains have been materialised across the EU financial sector.
- 2. In this report we use some basic indicators to examine the profitability and cost efficiency of financial institutions as well as liquidity indicators to allow us to examine the financial markets as a whole. These indicators, although widely recognised, have their limitations. For example, there is an ambiguous relationship between the efficiency of a firm and its profitability. Higher profitability can just as easily be a result of improvements in efficiency, or can simply reflect an increase in the market power of financial institutions that are operating in more concentrated and/or less competitive market. These aspects were analysed in greater detail in the previous chapter.
- 3. To complete the analysis on access and efficiency, this chapter looks at access to financial services and capital. Recently published studies have clearly shown that broad access to finance, including households and small enterprises, is an important dimension of financial development⁴⁴, which in this context, complements financial integration by fostering financial market efficiency⁴⁵. The analysis of access to financial services is based on a relatively limited set of available data.

4.1 Recent efficiency trends

4. Up until the beginning of the financial crisis in mid to late 2007, the EU banking sector's profitability and efficiency levels continued to improve, just as it had been for the pervious several years. In June 2007 the average return on equity of the euro area's large banks was 20.2%, up from 18% at the end of 2006. Their average cost-to-income ratio fell from 60% to 58.4% ⁴⁶.

-

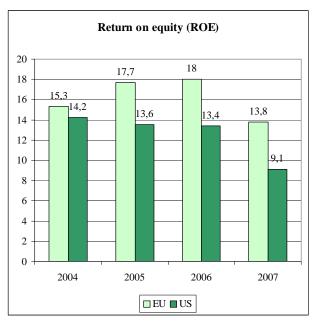
Although there can also be a trade off between competition and economies of scale. For example, there were arguments that increased competitive pressure brought about by the MiFID led to fragmentation of securities trading in the EU with negative effect for liquidity.

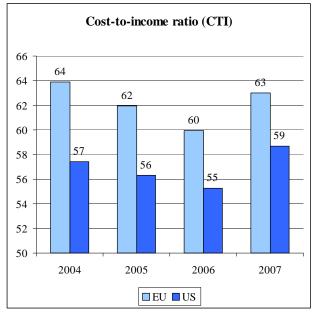
⁴⁴ World Bank (2007).

⁴⁵ ECB (2008d)

ECB (2007a)

Chart 4.1: ROE and CTI of large banks in the euro area⁴⁷ and the US (in %)⁴⁸





Source: ECB (2008e); FDIC (2005-2008).

- 5. As expected, the financial turmoil had a significant negative impact on the profitability of EU banks. This was due to a number of causes including significant asset writedowns, credit losses, a general decrease in income (lower economic activity and falling credit demand), and an increase in funding costs (shrinking securitisation markets and higher costs of credit protection). This combination of lower income and higher funding costs naturally led to a reversal in the positive trends seen in both profitability and efficiency indicators over recent years. Banks' return on equity fell to 13.8% at the end of 2007, well below the average level of the previous three years. At the same time, the cost to income ratio rose to 63% reversing the recent positive trend (see chart 4.1).
- The 2007 reversal of the long term trend was caused by the recent financial market turbulence and the US-led downturn in the global economic cycle. It is likely that the lower efficiency indicators are a reflection of the decrease in banks' income, while the levels of banks' operating costs have remained relatively stable. The presumption stated at the beginning of this section that financial integration contributes positively to the overall efficiency of EU banks has not changed. At the same time, as demonstrated in the previous chapter, there are still remarkable differences between Member States in terms of efficiency and profitability of their banking sectors (compare with charts 3.4 3.6).
- 7. Chart 4.1. shows that compared to the performance of the EU large banks (only from the Euro area), the US's largest banks⁴⁹ tended to be more efficient but less profitable

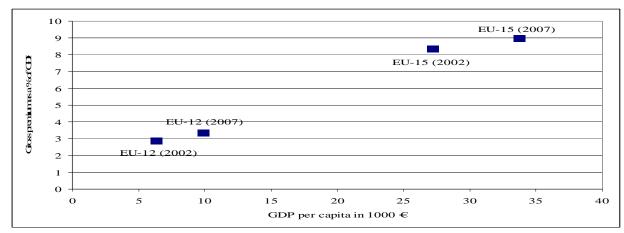
⁴⁷ 20 IFRS-reporting large and complex banking groups in the euro area as selected by the ECB

FDIC-insured commercial banks with assets greater than \$10 billion. The group included 86 banks in 2007.

over last few years. It is expected that these higher levels of efficiency could be linked with the ability of US banks to better exploit economies of scale given the size, scope and level of integration of their domestic market. Again, lower profitability levels in the US could also have been the result of greater competitive pressures in the US market than is currently the case across the EU. As you would expect, the US subprime mortgage crisis had a major, and sudden, impact on the latest indicators for the US banking sector. The cost-to-income⁵⁰ ratio worsened from 55% in 2006 to 59% in 2007. At the same time, the return on equity fell from 13% to 9%, making it lower than for the large banks in the Euro area.

- 8. The EU insurance sector as a whole, based on currently available data, was in a state of flux with no clear trend for the sector in 2007 in some MS premium income grew, yet it declined in others (compare with chart 3.6). The analysis of the Net Combined Ratio in the previous chapter showed that the expense ratio decreased in a number of countries, which may be regarded as positive sign in the context of efficiency of the EU insurance sector (compare with charts 3.7 and 3.8).
- 9. As the integration process generates higher economic growth in the 'catching up' economies, the demand for insurance products generally follows and can foster development of insurance sector. There is still a great difference between the average level of development of the insurance sector in the EU-12, measured as the premium / GDP ratio, and in the EU15 just as it is the case with the respective levels of income per capita. However, from 2002 to 2007, the average income per capita grew twice as fast in the new Member States compared to the EU-15 (accumulated change of 56% and 24% respectively). In the same period, the premium / GDP ratio also increased twice as fast in EU-12 (16%) compared to the EU-15 (8%)⁵¹ (see chart 4.2 below and 17 in the annex). The average level of development of the insurance sector in the EU-12 advanced from 23% to 29% of the EU-15 level. This demonstrates gradual diminishing of the existing development gap.

Chart 4.2: Development of insurance sector in EU-12 and EU-15



Source: CEA (2008), Eurostat (2008), Commission services calculations.

FDIC-insured commercial banks with assets greater than \$10 billion. The group included 86 banks in 2007

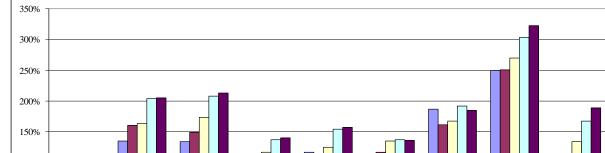
In the US usually referred to as "efficiency ratio"

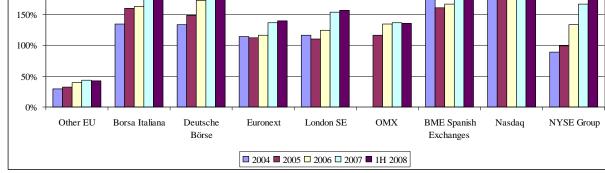
Largely due to the effect of low basis in the new MS

- 12. The level of market liquidity, which can be analysed by examining the turnover velocity in equity markets, increased significantly over 2007. However, the high increase in velocity resulted to a large extent from growing trading volumes combined with stagnating market capitalisation.⁵² Market capitalisation in 2007 grew by only 3% in the EU and by 2% in the US⁵³ (see chart 18 in the annex) whereas the value of traded shares continued its upward trend, increasing by 33% in the EU and 35% in the US (see chart 19 in the annex). In the first half of 2008, turnover velocity continued to increase in most markets, although at a slower pace.
- 13. The recent developments in equity markets are clearly linked with the turmoil and falling stock indexes. In spite of unfavourable economic conditions, until mid-2008 the EU stock markets remained relatively liquid. But under similar conditions, liquidity in the US equity markets was improving (see chart 4.3). One possible explanation for this may be the average higher weight of the financial sector in total market capitalisation in Europe than in the US. But this may also reflect the impact of the MiFID in the EU, which facilitated emergence of new trading venues as alternative to traditional exchanges. The Multilateral Trading Facilities are reported to have gained a significant share in the EU equity market.

350% 300% 250%

Chart 4.3: Turnover velocity of domestic shares in selected EU and US exchanges





Source: WFE (2008a).

Measured in euro; annual exchange rate by WFE.

⁵² According to the World Federation of Exchanges definition, the turnover velocity is the ratio between the turnover of domestic shares and their market capitalization. The value is annualized by multiplying the monthly moving average by 12, according to the following formula: Monthly Domestic Share Turnover*12 / Month-end Domestic Market Capitalization. Turnover velocity is calculated in 2 steps. Step 1: we first calculate for each month the annualized ratio between the domestic share turnover and the domestic market capitalization, multiplied by 12. Step 2: we add together, using a moving average methodology, the percentage ratios obtained in step 1, divided by 12. 53

14. Again, due to recent market events and declining equity prices, overall market capitalisation fell in most major exchanges in the US and in Europe. Between mid-2007 and mid-2008, the decline in stock value across the five major markets ranged between 10% and 30%. The European markets – with some exceptions – seem to have experienced stronger falls than their American counterparts, but again it is too early to analyse the current market trends in any great detail. Share trading value also decreased in Europe while it grew in the US (see table 4.1).

Table 4.1: Market capitalisation and annual turnover in selected EU and US exchanges (change June 2007 - June 2008, in local currency)

Exchange	Market Capitalisation*	Share Trading Value**
Euronext	-29.2%	-18.2%
Deutsche Börse	-20.6%	-10.2%
London Stock Exchange	-17.4%	-28.7%
NYSE Group	-13.2%	30.3%
The Nasdaq Stock Market	-13.8%	7.2%

^{*} Values at the month end

4.2 Access to financial services

- 15. A well functioning financial market should guarantee everybody's access to basic financial services and allow the maximum number⁵⁴ of consumers and companies to benefit from access to financial services and capital. According to the World Bank⁵⁵, "access to financial services financial inclusion implies an absence of obstacles to the use of these services, whether the obstacles are price or non-price barriers to finance. (...) Without inclusive financial systems (...) individuals and enterprises with promising opportunities are limited to their own savings and earnings." This has negative consequences for social welfare and economic growth.
- 16. A recent study for the European Commission⁵⁶ defined financial exclusion as "a process whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong". According to this study, 7% of the population can be regarded as financially excluded in the EU15, while this rises to as much as 34% of all citizens in the new Member States. Even higher

^{**} Total trading value in the first half of 2008 compared to the total trading value in the first half of 2007 Source: WFE (2008b).

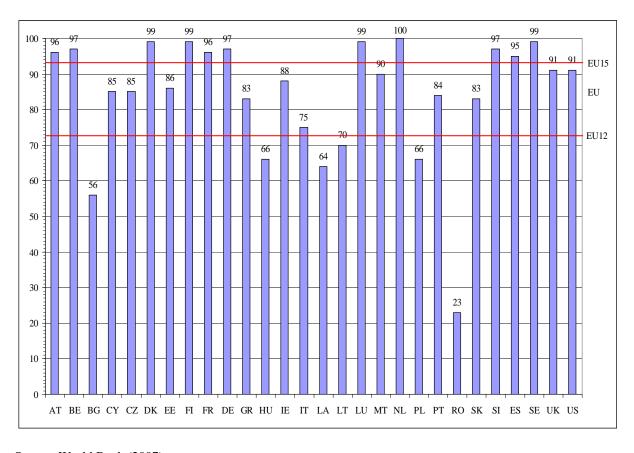
Nevertheless certain criteria for granting such access have to be maintained, especially taking account of the experience with sub-prime mortgage loans in the US.

⁵⁵ World Bank (2007).

⁵⁶ European Commission (2008).

- percentages can be found when you look at those consumers across the EU who do not use any form of banking services (see chart 20 in the annex)⁵⁷.
- 17. The World Bank⁵⁸, through its composite indicator of financial access also found there to be considerable discrepancy between the new and old Member States in relation to access to finance (see chart 4.4). They found that the average level of access to finance for people in the EU15 amounts to 93%, yet falls to only 73% in the EU12. This compares to 91% in the US.

Chart 4.4: The World Bank composite measure⁵⁹ of access to financial services



Source: World Bank (2007).

18. It is interesting to note here that access to financial services does not only depend on the level of that country's physical infrastructure but also on information, conditions and costs associated to these services. For example, as far as access to banking services is concerned, Portugal and Bulgaria stand out. Portugal has the highest penetration of ATMs per 10 000 inhabitants, in the World Bank study however it only ranks as 'average' in the EU in terms of access to finance. Bulgaria is ranked third in the EU in

The respective World Bank and European Commission indicators of access to finance / financial exclusion are based on data from surveys carried out independently by these two institutions in recent years.

⁵⁸ World Bank (2007)

The World Bank composite measure is the percentage of the adult population with access to an account with a financial intermediary. It is based on various household surveys carried out over last years in the Member States.

terms of banking branch density, but when this is included in the overall composite measure of access to finance Bulgaria falls towards the bottom of the group (compare charts 4.4 and 4.5).

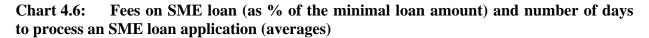
16
14
12
10
8
6
4
2
0
AT BE BG CY CZ DE DK EE ES FI FR GR HU IE IT LT LU LV MT NL PL PT RO SE SI SK UK

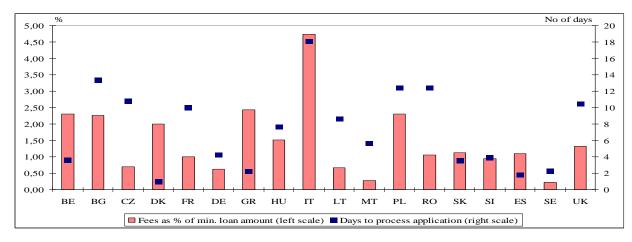
Branches
ATMS

Chart 4.5: Branch and ATM penetration per country (per 10 000 inhabitants)

Source: ECB (2008f).

19. There are significant differences in bank financing conditions for Small and Medium Enterprises (SMEs) gaining access to capital across various Member States. The banking fees that firms are charged when they apply for a loan vary from less than 0.5% (Malta) to nearly 5% (Italy) of the minimal loan amount. Similar discrepancies apply to the number of days necessary to process an application. While the average waiting time for a bank decision does not exceed two days in some Member States (e.g. Denmark, Spain and Sweden), it can be over ten days in many other countries (see chart 4.6).

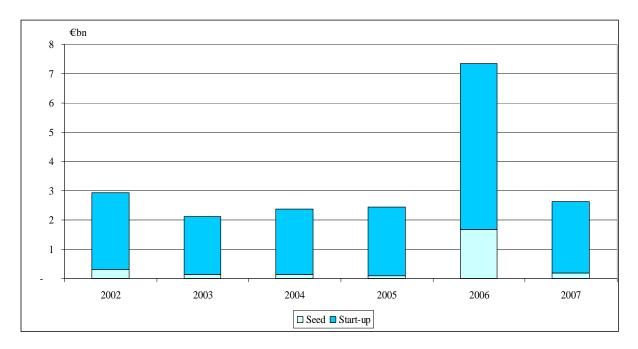




Source: World Bank (2007)

20. For some emerging SMEs seeking venture capital is an alternative source of funding that is considered. In this analysis we define venture capital⁶⁰ (VC) as investment in the equity of companies which are in their early stages of development referred to as the seed (establishing new business) and start-up stages.⁶¹ In 2007, venture capital investment in Europe fell to 2.6 billion EUR, down from 7.3 billion EUR in 2006 and close to the levels that had been observed over recent years⁶² (see chart 4.7).

Chart 4.7: Venture capital investment in Europe



Source: EVCA (2008)

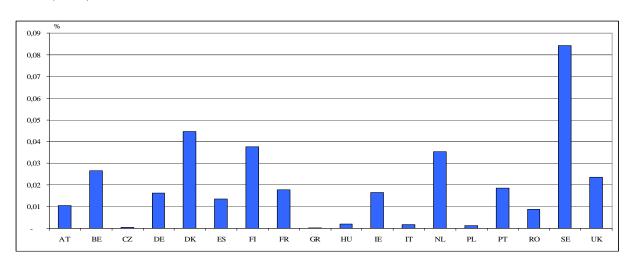
21. In the EU, venture capital investment is concentrated in a few of the most developed countries. In terms of total investment, more than three quarters of venture capital was located in the UK, Germany, France, Sweden and the Netherlands (see chart 21 in the annex). In terms of the VC investment to GDP ratio, the biggest beneficiaries were Sweden, Denmark, Finland, the Netherlands and Belgium (see chart 4.8 below). In both comparisons, the new Member States were at the lower end of the spectrum. But even excluding the EU-12, the average VC investment / GDP ratio for EU-15 has remained lower than the level observed in the US (see chart 22 in the annex).

Venture capital investors expect high returns from their investments as a reward for higher investment risk. Venture Capital plays an important role in stimulating the growth of the most profitable (or in some cases potentially profitable) – and usually the most innovative – businesses, thus contributing to the overall productivity of the economy. Apart from providing capital, VC funds also offer assistance to the investee company management to increase success chances of the new ventures.

According to EVCA definitions.

Interestingly, a surge in venture capital investment was also observed in 2000. Both 2000 and 2006 were peak years of the respective equity market cycles (compare chart 22 in the annex).

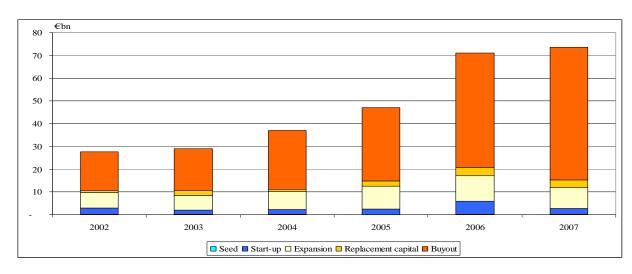
Chart 4.8: Venture Capital investment (by country of investee company) as a share of GDP (2007)



Source: EVCA (2008), Eurostat (2008), Commission services calculations.

22. Chart 4.9 shows that venture capital is a relatively small part of total private equity investment in Europe. Since 2002 its share has not exceeded 10% and in 2007 it fell to below 4%. On one hand, European VC managers may tend to be relatively risk averse not willing to invest in some ventures perceived as having a high probability of default or bringing low returns in the start-up phase. On the other hand, European entrepreneurs may prefer to maintain control of their company and be reluctant to accept advice from professional managers. Such cultural factors may also be limiting the VC investment opportunities across Europe.

Chart 4.9: Stage distribution of private equity investment in Europe



Source: EVCA (2008)

Private equity provides equity capital to enterprises not quoted on a stock market. Private equity refers mainly to management buyouts and buyins, replacement capital and venture purchase of quoted shares (definition according to EVCA).

4.3 Conclusions

- 23. An efficient and inclusive financial system is crucial for stimulating economic growth and facilitating social inclusion in Europe. It should lead to both reductions in the cost of capital and to increases the scope of opportunities for households and enterprises, which in turn bring about a rise in general economic and social welfare.
- 24. The financial crisis has led to a reversal in the positive efficiency and profitability trends that have been seen across the EU banking industry over recent years. However, the falling indicators were reflecting mainly the falling income, not increasing operational costs. It is difficult to assess efficiency of European banks based on the available data, but the presumption that financial integration contributes positively to overall efficiency of the banking sector does not change.
- 25. Although the European equity markets maintained their liquidity throughout the turbulence, both capitalisation and turnover declined. The extent of falls observed on the EU stock exchanges exceeded the similar trend in the US. This may result from a somewhat higher share of quoted financial companies in the EU stock market capitalisation, but it may also reflect the simultaneous impact of the Market in Financial Instruments Directive and the emergence of the alternative trading venues in Europe.
- 26. EU Member States differ significantly in terms of access to finance for households and enterprises with a significant discrepancy clearly observable between the old and the new Member States. Venture capital as a form of financing for start-up companies is not strongly developed within the EU. The demand side can play a major role in this context, e.g. characteristics of the entrepreneurial cultures. More than three quarters of venture capital investment is concentrated in only five member states. The Nordic countries stand out with the highest level of development of venture capital sector measured as the VC investment / GDP ratio.

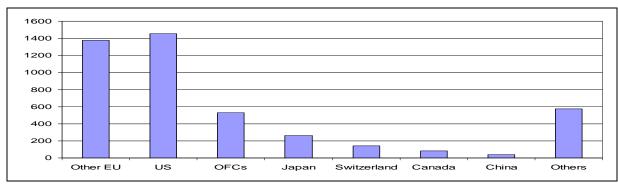
5 FINANCIAL STABILITY

- 1. One of the overarching objectives of creating a Single Market in financial services is to strengthen the global competitiveness of the EU economy and thereby create growth and jobs. However, there are very few external shocks that could have such a major negative impact on both growth and jobs as a financial crisis. It is for this reason that policy makers need to pay continuous attention to the stability aspects of financial integration. In particular, policy makers must ensure that the incentives for risk management are properly targeted.
- 2. What is the relationship between financial integration and financial stability? One aspect is that financial risks are more easily distributed across markets, which is expected to promote financial stability. However, closely integrated markets can also facilitate financial contagion, which can be amplified by diverse mechanisms. The US sub-prime mortgage crisis and its transformation into a broader international financial crisis have demonstrated this. This crisis also has an impact on the global structure of the financial sector. Even if it is too early days to make a full assessment of its impact, it is already apparent that the crisis has spared a trend towards greater market consolidation.
- 3. This chapter examines the inter-relationships within the EU financial sector that exposed the EU market to financial contagion from the US sub-prime mortgage market. We also analyse some of the mechanisms that transformed the initial US shock into a global financial crisis.

5.1 Recent developments

4. The backdrop to the financial turmoil is the internationalisation of financial markets. One indicator of this process is shown in Chart 5.1 below.

Chart 5.1: The euro area external financial position, portfolio investments, Euro billion.



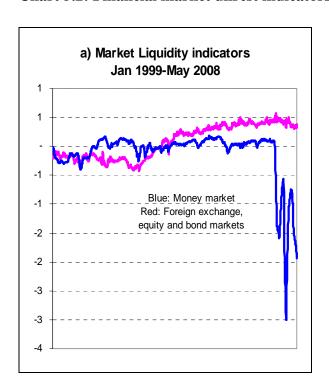
Source: ECB Monthly Bulletin 2008 (data is from end 2006).

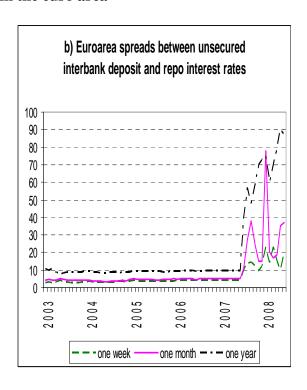
Note OFC – Offshore Financial Centres

5. A particularly striking feature is the high euro area exposure to the US market. Indeed, the euro area's US exposure is even higher than the euro area's exposure to other Member States. This point illustrates the close integration between the euro area and

- the US financial markets, and also the role of portfolio investments as a potential source of contagion between the two continents.
- 6. When the foreclosures in the US sub-prime mortgage market began to accelerate in mid-2007, few could have guessed the extent that these developments would have on Europe. However, it soon became clear that a considerable proportion of the US sub-prime claims had been securitised and sold throughout the world. European financial institutions were among the major investors.

Chart 5.2: Financial market unrest indicators in the euro area





Source: ECB (2008e)

- 7. How did the US sub-prime mortgage crisis transform into a market liquidity crisis in the European Union? The main cause was the opaqueness of the market. When it was neither possible to locate nor to estimate the size of the sub-prime losses, the market was drained of liquidity, see chart 5.2a.
- 8. In an attempt to restore the proper functioning of the interbank market, several rounds of central bank liquidity injections have been necessary. The lack of trust that had characterised the interbank market during the second half of 2007 and the first half of 2008 progressively destroyed the functioning of the interbank market, see chart 5.2b. The spread between the unsecured interbank deposit and repo interest rates progressively widened over the second half of 2007 and problems have continued in 2008. It is for this reason that the interbank market has not been able to perform its function as a source of short term bank funding.
- 9. For the EU *banking sector*, the turmoil emerged at a time when institutions had accumulated substantial reserves, reflecting a long period of favourable economic and financial conditions. Since August 2007, however, the sharp downward price

adjustments of financial assets have cut into bank reserves, reducing profitability and cost-to-income ratios in the sector, see chart 4.1. During the autumn of 2008, the fall in the market value of many financial institutions became dramatic, and an increasing number of EU banks and mortgage institutions needed to be bailed out. The severity of the impact has varied significantly among institutions, often depending on their underlying business model and whether or not they are listed institutions. In general, banks with a traditional focus on deposit/lending have been less affected than those banks that have relied more on wholesale market financing. By mid-October, a Euro group package to restore the confidence and proper functioning of the financial system was launched. It contained a commitment by euro group countries to guarantee the funding of EU financial institutions and to support the functioning of the interbank market. This package was later endorsed by all Member States.

- 10. Most EU *insurance firms* appear to have had limited exposure to sub-prime risks. Monoline insurers which insure structured credit products have been the exception.
- 11. The market turbulence has however increased the financial vulnerability of some of the *New Member States* in particular some of the countries where housing demand had been fuelled by rapid credit expansion including the Baltic countries, the Czech Republic and Hungary, see chart 23 in the annex. Tightening credit conditions as a result of increasing funding difficulties faced by parent banks have added to these stains. In some Member States, such as the Baltic countries, banks' asset values have also come under pressure, reflecting declining housing prices in these markets⁶⁴.

5.2 The new pattern of financial contagion

- 12. The backdrop to the US sub-prime mortgage crisis was a long period of strong economic growth, high profitability and ample liquidity in the world economy. These conditions fuelled demand for financial investments offering high return. The US subprime crisis quickly spread across the global financial market, and in particular, to Europe. A number of mechanisms transformed it into a global financial crisis (see chart 5.3). One such mechanism was the lack of transparency in the structured credit market. This made risk assessment difficult and also made it difficult to locate the exposures in the market. Another mechanism was the securitisation of lending in the US sub-prime mortgage market; it generated cross-border financial contagion by transferring credit risks from US lending institutions to the global financial market. At the same time, demand for sub-prime securities was fuelled by historically low interest rate levels, ample access to credit, and an over-reliance on credit ratings, which were not always sufficiently updated in parallel with the increase of underlying risks. Moreover, many risk models were based on historical probabilities and did not sufficiently take into account the risk for major market disturbances. To sum up there were significant failures in risk management, which resulted in a massive build up of large institutional exposures to the structured credit market.
- 13. Another striking feature of the financial turbulence is how quickly the US sub-prime mortgage crisis affected market liquidity. Rising funding costs, coupled with a more

⁶⁴ IMF (2008b) (to be checked)

pessimistic general economic outlook, also impacted on institutions without any direct exposure to the US sub-prime mortgage market.

MAJOR DEVELOPMENTS KEY MECHANISMS Securitisation. US sub-prime mortgage credit ratings & lack of risk management Sub-prime losses of European investors Lack of market transparency Market liquidity strains sharply declining market prices Valuation Absorption/losses/Credit problems in squeeze?? illiauid markets & high leverage ratios Impact on the real economy Source: Commission Services

Chart 5.3:Major financial crisis developments and mechanisms

- 14. The *lack of market transparency in the structured product market* was *the key issue that* transformed the sub-prime turmoil into a situation of general market illiquidity. Another amplifying mechanism was *the valuation of financial assets*. Although fair valuation principles in general contribute to market transparency, it became difficult for many firms to determine correct market values for their assets when these assets became illiquid. Concerns have also been expressed on the possible pro-cyclicality of current valuation principles. Section 5.4 below develops these issues further.
- 15. The *high leverage ratios* of many firms also seem to have worked as an amplifier. As chart 5.4 shows, major EU banking groups had accumulated relatively high ratios of total assets to risk weighted assets. The reason for this was that banks had increased their holding of highly rated securities that carry low risk weightings, for the purpose of calculating regulatory capital. However, the banks that were most aggressive in adopting this strategy have also become more vulnerable; even a small change in asset value led to a substantial reduction of the firm's capital, necessitating either capital injections or a tightening of lending.

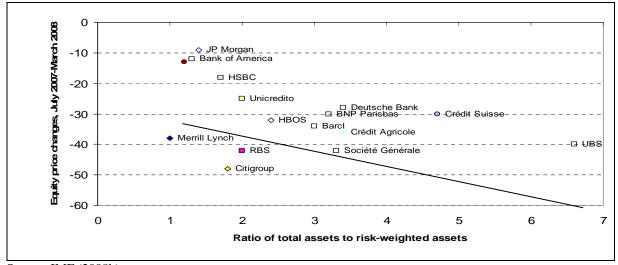


Chart 5.4: Leverage ratios of some international banks

Source: IMF (2008b)

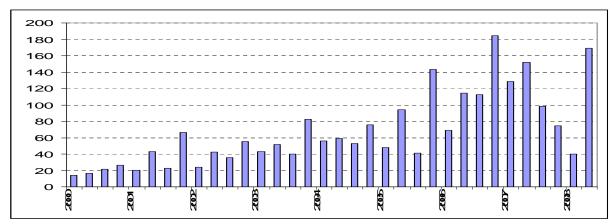
16. Chart 5.4 above also shows that by mid-2007, the leverage ratios of major EU international banking groups were around 2 to 3.5 times their risk-weighted capital – a high ratio, yet significantly lower than the leverage ratios of some of the major Swiss investment banks. It also shows that investors may have regarded a high leverage ratio as a "vulnerability indicator", resulting in reduction in the market value of these institutions. However, there are insufficient observations in the chart to allow us to draw any firm conclusions at this stage.

5.3 Risk propagation through securitisation

- 17. Securitisation has been one of the fastest expanding financial activities over the past decade. In the European Union, the volume of securitisation issuance increased almost tenfold from 2000 until mid-2007, see chart 5.5. However, as the sub-prime crisis unfolded, this expansion was swiftly interrupted, reflecting a world-wide confidence crisis for structured financial products.
- 18. From a business perspective, securitisation has long been an attractive technique since it gives access to wide pool of financing at a relatively low cost while at the same time widening long-term investment alternatives. As a result, securitisation increased the efficiency of the financial system as a whole. From a macro-prudential perspective, securitisation was believed to make the financial system more resilient by reducing the risk concentration in the banking sector, thereby diluting overall risk. However, the financial turmoil demonstrated that securitisation can also, at least in certain circumstances, impact negatively, and severely, on financial stability.

Chart 5.5: European Securitisation Issuance

Quarterly values in €billions



Source: European Securitisation Forum (2008).

- 19. Looking closer, the positive impact of securitisation on financial stability crucially depends on whether three assumptions have been fulfilled: firstly that the investors of these highly complex instruments know what they are acquiring, second, that they are capable and willing to assess their risk-resistance capability in times of stress, and, finally, in cases of financial stress, that they would not succumb to the temptation of herd behaviour. However, these assumptions were not met in the events leading up to the recent financial crisis.
- 20. The mechanism that seems to have been particularly important for creating market illiquidity was the lack of transparency in the structured product market. Once the subprime losses were known, the market needed information on the sub-prime exposures of their counterparties. When it became clear that such information was not available, the market went through a crisis of confidence which quickly resulted in severe and broad liquidity constraints, which were only mitigated by repeated central bank injections.
- 21. There were also other factors that fuelled the high levels of securitisation of bank lending. One was the *temporary "hole" in capital regulation*. Although the Basel II and the Capital Requirement Directive (CRD) had been agreed and adopted, it was not until after the 1st of January 2008 that all EU credit institutions and investment firms became subjected to the new rules. Some of the CRD provisions explicitly address risks related to the securitisation process; in particular, the CRD stipulates that EU banks will not be granted any capital discount when they transfer risks from their balance sheets to Special Purpose Vehicles, unless they can prove that the SPV is set up as an independent legal entity.
- 22. It is also likely that the extensive use of *the "originate-and-distribute" model* not only contributed to higher lending volumes, but also to a gradual deterioration in credit standards. A bank that grants credit but already knows that it will not keep the credit risk on its balance sheet has a significantly lower incentive to look at the creditworthiness of the debtor than would otherwise be the case. Securitisation also increases the possibility of credit expansion, because credit risks are progressively lifted off the banks' balance sheet. This means that credit may be granted to less and

less creditworthy clients, and this would continue as long as there was demand for mortgage-backed securities in the market.

Box 5.1 Securitisation

Securitisation is a risk transfer process. It turns the cash flow from a pool of underlying assets, such as bank mortgage lending, into bonds, and places it under the legal control of investors. A separate legal entity, a Special Purpose Vehicle (SPV), is set up as an intermediary between the originating bank and the investor. It packages the loans into tranches before transforming them into bonds. In the case of synthetic securitisation, the securities are created from a portfolio of derivate instruments.

In Europe, 62 % of the issuance volume consists of Mortgage Backed Securities (MBSs), while the remainder is Asset Backed Securities (ABS). In the latter group underlying assets could be anything from a car to credit card loans. An important proportion of European securitisation issuance is pan-European (28%), where several jurisdictions stand behind the securitisation. As regards issuance by country of collateral, UK is the most important one (with 35% of European securitisation volume in 2007). Other Member States with important securitisation volumes are Spain (12%), Netherlands (8%), Italy (5%) and Germany (4%).

Source: European Securitisation Forum (2008). Data refers to 2007.

- 23. The fragility of the financial system was also increased by the high exposure of many banks to sub-prime risks. In fact, many banks had issued guarantees to Special Purpose Vehicles, implying that they were ready to provide them with *credit lines* if needed. As a result banks became exposed to the structured assets that these SPVs held on their balance sheets. Reputational risk may also have played a part for banks' willingness to support SPVs and investors; the reasons may have been different but the result was the same: an unexpected amount of transferred credit risks returned to banks when investor appetite waned.
- 24. The stability concerns have been the same for both EU and US banks. This is because securitisation operates in the same way in the European Union as it does in the United States. The financial turmoil demonstrated that many EU banks made the same errors as their US counterparts; their risk management was inadequate which resulted in too high a risk exposure in relation to their reserves. There were also several examples of EU banks that had issued credit lines to SPVs. Moreover, following the turmoil, the European Union as well as the United States faced market liquidity problems, eased by repeated central bank liquidity injections.

Box 5.2: The EU policy response to the financial crisis

The European Union's major policy response to the financial crisis has involved both short term and medium term measures. In the short term, the Commission has promoted a coherent and coordinated approach to support EU financial institutions. The Commission has issued specific guidance to clarify the application of state aid rules to Member States' support measures for financial institutions and has worked swiftly to assess schemes and individual support measures. Following the Commission lead, Member States have all raised their minimum deposit guarantee level to a minimum of €0 000. The latter threshold will be raised to €100 000 across the Union in due time.

The Commission has also taken several legislative initiatives to strengthen the resilience of financial markets over the medium term; in October proposals were tabled to (i) tighten up the rules on own funds requirements for banks (i.e., through a revision of the Capital Requirement Directive), (ii) improve depositor protection and reinforce the confidence of depositors in the financial safety net (i.e., by revising the existing EU rules on deposit guarantee schemes) and (iii) amending existing accounting rules, thereby enabling the use of reclassification in order to mitigate the consequences of the financial crisis. In November, the Commission proposed a regulation for credit rating agencies. These new rules are designed to ensure high quality credit ratings which are not tainted by the conflicts of interest which are inherent to the ratings business. The Commission is also preparing initiatives to strengthen European supervisory arrangements covering all financial sectors, with the objective of establishing a more efficient, integrated and sustainable European system of supervision and also to reinforce cooperation between European supervisors and their international counterparts. A high level group, the 'de Larosière Group', has been set up by President Barroso to bring forward concrete proposals on how to strengthen European supervisory arrangements going forward. The Group will publish its initial recommendations in February 2009, in time to allow the Commission to take its work into account in preparing for discussion by Heads of State and Government at the Spring European Council in March. In its 2009 Work Programme, the Commission has announced its intention to present a longer term reflection on financial services policy and regulatory structures during the first half of next year. In doing so, the European Commission will be looking at the adequacy of regulation, oversight and transparency of all financial actors leading to measures to plug any gaps identified. This will also provide for the opportunity to respond to any recommendations made by the 'de Larosière Group'.

To dampen the negative impact of the crisis on the real economy, the Commission proposed, on 26 November, a European Economic Recovery Plan. The Recovery Plan, which aims at ensuring a coordinated EU response to the economic crisis, is based on two mutually reinforcing elements. Firstly, short-term measures to boost demand, save jobs and help restore confidence. Secondly, "smart investment" to yield higher growth and sustainable prosperity in the longer-term. Finally, the Commission has been in the lead to ensure a coordinated global response to the crisis. On 15 November, at the G-20 Summit in Washington, leaders agreed on an Action Plan to implement a set of principles for reforming the financial sector. The European Commission and the Member States will play a full role in transforming these principles into practical and concerted action.

- 25. There are, however, some important differences between the EU and the US situations. One difference relates to the root cause of the turmoil. The US subprime crisis was largely created outside the banking system by specialised mortgage institutions, which were subject to less rigorous regulation than banks. Such institutions exist in the European Union as well, but are marginal credit providers in most Member States. In the EU the lion's share of mortgage lending is carried out by banks. This makes a subprime crisis less likely in the European Union.
- 26. In 2008, progress has been made to address the risks that originated from securitisation. One such improvement concerns transparency. Starting from mid-June 2008, new statistics have become available on the structured financial product market. Another important improvement is the stricter capital treatment of a banks risk transfer operation which is required by Basel II / CRD from 1st January 2008. This requires banks to apply capital charges for risks transferred to SPVs unless the bank can demonstrate that the SPV in question is totally independent of the bank. On the 1st of October 2008, the Commission has tabled a proposal to amend the CRD; it will require banks to set some capital aside even when assets are securitised. In response to the liquidity problems experienced by banks, the need for more collateral and the use of more easily valued assets (than securitised products), the Commission has issued a proposal to enlarge the pool of collateral which is protected by the Financial Collateral Directive to also include credit claims.
- 27. Despite the concerns expressed, securitisation still provides some advantages both to institutions seeking financing in the market and investors seeking high yields. As with many financial innovations, a balance has to be struck between introducing too strict a regime that would hamper growth but ensure stability, and too loose a regime that may lead to higher growth but greater risk for market instability.

5.4 Asset valuation - a possible risk amplifier?

- 28. Fair value accounting was introduced, together with the International Financial Reporting Standards, to enhance transparency. One leading idea was to mark financial assets to market prices instead of valuing them at historical cost. According to EU regulation, fair value must be applied for the consolidated accounts of listed companies. In practice, however, many Member States have requested a much broader application of the fair value principles.
- 29. The transparency arguments are still valid. So far, no better alternative has been presented than mark-to-market. However, the debate has been fierce about one particular aspect of fair value; namely about *how to value financial assets in times of market illiquidity*.
- 30. The events immediately following the sub-prime mortgage crisis in the US illustrate the problem. The illiquid money market that followed, with a lack of representative transaction prices, made it next to impossible for financial institutions to value their assets at real market prices. Instead models were often used. This resulted in the application of different market prices between firms which depended on the underlying assumptions used in the model. Moreover, the valuation method did not take into account whether the institution intended to sell its assets or keep them to maturity. It

has therefore been argued that there is a risk that mark-to-market valuation in times of market illiquidity leads to uncertain and overly conservative asset values.

- 31. The heavy reliance by financial firms on *credit ratings* has also been a factor that has influenced asset valuation since credit ratings on certain structured products were used to derive the value of other structured products. However, this valuation method was questionable in several ways first, because credit ratings failed to keep pace with the swift deterioration of the US sub-prime market, second, because the limitations of credit ratings were not always fully understood, and third, because the valuation models differed, which generated different theoretical 'market values' for the same risks.
- 32. The Commission has taken several initiatives to address the problems related to valuation and credit ratings. In October, the Commission adopted amendments to the accounting standards, with the unanimous support of Member States. They ensure that EU companies have the flexibility reclassify assets held for trading into the held-to-maturity category. This implies that financial institutions in the EU would no longer have to reflect market fluctuations in their financial statements for these kinds of assets. These changes apply as from the third quarter of 2008. As regards credit rating agencies, the Commission has tabled a proposal on the regulation of such entities operating in the Union, stipulating conditions for their authorisation, operation and supervision.
- 33. A debate has also emerged about whether fair valuation principles as well as the capital requirements might even have a *procyclical impact*, that is, they may amplify the upswings as well as the downswings of the business cycle. As regards valuation, this concern is based on the belief that an upswing creates upward pressure on prices, leading to an upward adjustment of financial asset prices. This, in turn, may provide a larger base for credit expansion, which again may fuel asset prices. The same reinforcing mechanism, it is argued, may also operate in the current financial crisis but this time creating a negative spiral. The need for banks to restore their capital levels in major downswings may also create procyclicality. A working group under the Economic and Financial Committee has recently been mandated to look closer into the possible pro-cyclical elements of the EU regulatory framework and to give its advice on the best way forward.

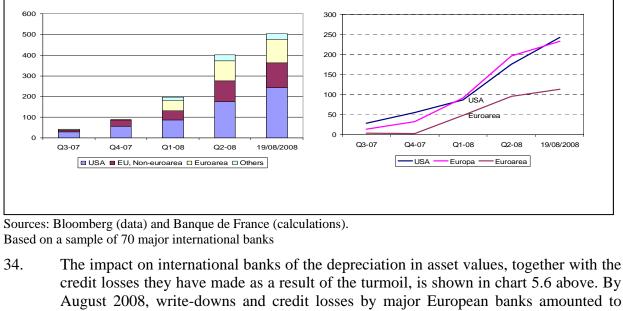
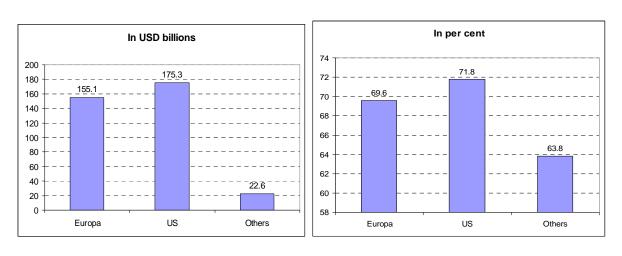


Chart 5.6: Write-downs and Credit losses by banks worldwide, in US dollar billions

- The impact on international banks of the depreciation in asset values, together with the credit losses they have made as a result of the turmoil, is shown in chart 5.6 above. By August 2008, write-downs and credit losses by major European banks amounted to around USD 230 billion, i.e. about the same level as for US banks. A significant amount of the European losses has, however, been generated outside the EU, and in particular by Swiss banks.
- 35. In terms of geographical distribution, the United Kingdom and Germany have been the most exposed market, but French, Dutch, Belgian and Italian banks have also been represented. The refunding process seems far from over, see chart 5.7, as write-downs and losses still continue to increase.

Chart 5.7: Capital raised by banks, in US dollars and in per cent of total write-downs and credit losses.



Source: Bloomberg data as of August 2008, Commission services calculations..

5.5 Conclusions

- 36. The advance of financial integration within Europe as well as the internationalisation of financial markets more generally have multiplied market linkages, and facilitated the cross-border transfer of financial risk. In most cases, internationalisation dilutes risks as they are spread across many markets and financial agents. However, integration and globalisation also increase the likelihood of international financial market unrest. Not only are common expectations and herd behaviour more likely in interconnected markets but the interacting mechanisms that are similar across markets may transform a local market problem into a full-blown financial crisis. The US sub-prime crisis, which was quickly transformed into a global financial turmoil, illustrated this.
- 37. There were several mechanisms that amplified and transformed localised market imbalances into a full blown crisis. Some factors have been identified, while others may yet need to be added. So far, lack of transparency, securitisation of sub-prime mortgage assets, problems in the valuation of illiquid financial assets, weaknesses in the credit risk rating system are seen as major root causes to the crisis. These problems were often combined with psychological factors that led to a high degree of uncertainty and fear as the crisis developed.
- 38. Major political initiatives have been taken at the EU level to address the financial crisis. Box 5.2 in this chapter offers a summary of the Union's response.

6 THE EXTERNAL DIMENSION

- 1. The global economy, as well as the financial services sector, will face some difficult and significant challenges over the short to medium term. The key global trends that are expected to have the most significant impact on financial services include the growth in emerging economies such as China and India; stronger global competition as markets continue to integrate and competition increases; developments in technology including the increasing use of alternative distribution channels; and demographic changes including ageing populations and the provision of retirement provisions to 'baby boomers'.
- 2. Faced with these global trends it is important that the EU improves its competitiveness and attractiveness as a global financial centre.

6.1 The size and relative performance of the EU financial sector

- 3. The EU, along with the US and Japan remain the key players in global financial services. However, the impact on the market by emerging countries, such as China and India, are increasingly being felt. Chart 6.1 (below) illustrates several sectors where the EU is a significant player in financial services. In terms of bank assets the EU holds over 50% of the world's assets, with Asia as a group holding around 14% (captured in the 'others' category), the same percentage as the US. In terms of foreign exchange turnover, the EU is the dominant player with nearly half of the world's daily average. A large component of this is the UK, itself accounting for almost 34% of the total.
- 4. According to an FOA report the EU-US financial services market supports nearly 7 million jobs, around US\$4.1 trillion/Euro2.8 trillion in direct investment and stock and bond flows of over US\$51.3 trillion/Euro35 trillion⁶⁵.
- 5. A recent City of London report⁶⁶ has shown that the EU27 wholesale financial sector is second only to the US and accounts for around one third of global output, with EU27 output reaching Euro225 billion in 2007.
- 6. On insurance, again the two major originators of global insurance premiums are the EU and US, each accounting for a third of global premium volume. Overall the OECD countries account for over 89% of global premium volume. The US is stronger than the EU in the area of stock market capitalisation which illustrates the structural difference between the market-based US financial system and the 'bank-based' European financial system.

See City of London (2008).

-

See EU-US Coalition on Financial Regulation (2008).

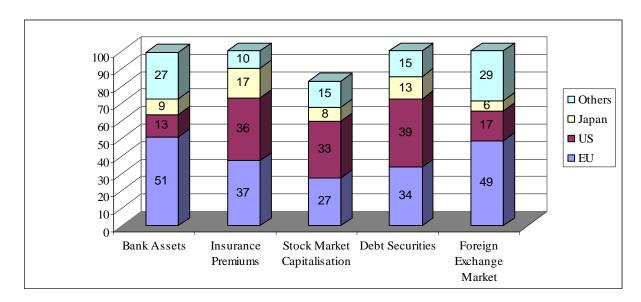


Chart 6.1: EU contribution to world financial activity in % (2006/2007)

Sources: BIS (2008), IMF (2008) and SwissRe (2007).

6.2 EU global competitiveness

- 7. The global financial services industry has gone through a period of substantial change over the past decade, and despite the recent turmoil; this trend is expected to continue. Not only has the industry changed but so too has its customers. It was estimated that in 1990 foreign investors owned less than 10 per cent of global equities, by 2006 this had grown to over 25 per cent⁶⁷.
- 8. The global banking sector has been and is still going through a period of significant consolidation, most notably in the US but also within individual EU Member States. In the US the largest 10 banks now hold around 50% of the country's banking assets, up from only 29% a decade ago.
- Globalisation remains a key issue for financial services, and especially for banking. There are several drivers that have been identified in the literature that has led to these changes including changes in technology and product innovation, policy liberalisation, the development of robust regulatory rules and institutions, financial sector development and a sustained period of economic stability over the past decade⁶⁸.
- 10. Global demand is also changing. The emergence of a significant middle class in India currently increases the number of customers entering the banking market by around 22 million per year. By 2010 the total number of 'new' banking customers in India is expected to reach 250 million. In parallel, China's credit card market has been growing to around 75 million new accounts per year. A recent survey by

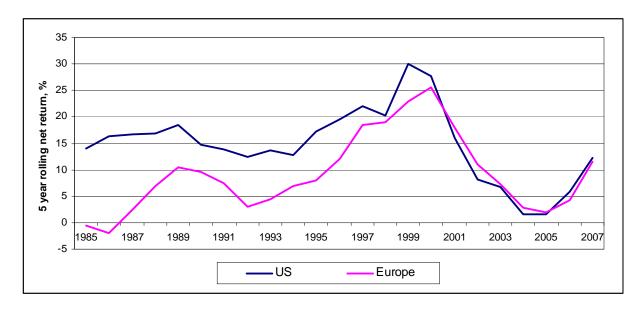
See McKinsey & Company (2008).

⁶⁸ See HM Treasury - UK (2008).

PriceWaterhouseCoopers⁶⁹ found that around 28% of Indian financial services firms expect to buy stakes in European groups in the next five years, with a similar percentage looking to enter the US.

11. Private equity has grown considerably as an asset class over the past two decades, due in part to higher returns than most public equity and bond markets. Chart 6.2 shows us the increased correlation between US and European private equity returns over the past 20 years. It is interesting to note the strong correlation that has occurred in these markets over this period.

Chart 6.2 Private Equity Returns – Europe vs. US



Source: IFSL (2008).

12. European Initial Public Offerings have continued to grow, and continue to exceed US levels. Since 2005 EU volumes of IPO's continued to be around twice that of the US (chart 6.3). It is noticeable that the EU exchanges attracted a large proportion of international IPOs (i.e. from companies registered in third countries). This may be linked to the increased competitiveness of the EU capital markets, but it could also be a result of the restrictive provisions within the Sarbanes-Oxley Act in the US.

⁶⁹ See PWC (2008).

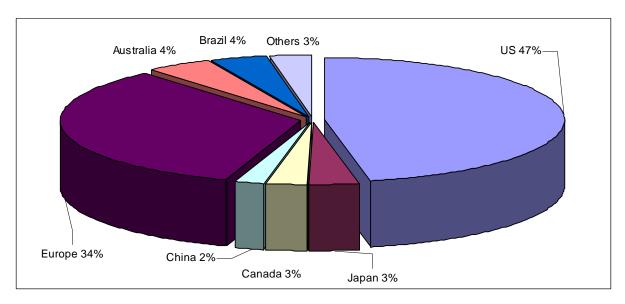
100 90 80 70 50 40 30 20 0 US EU US US EU EU US EU EU US EU US EU US 2001 2002 2004 2005 2006 2007 ■ All IPOs ■ International IPOs ■ Investment Companies

Chart 6.3 Initial Public Offerings in the EU and US

Source: PWC (2002-2007).

13. At the end of Q1 2008, the total value of investment fund assets worldwide was 15.7 trillion euros. The US and EU are by far the two largest players in this sector, accounting for 47% and 34% respectively (Chart 6.4).⁷⁰.

Chart 6.4 Worldwide Investment Fund Assets – Q1:2008



Source: EFAMA (2008).

14. Although Europe is a significant player in the global investment fund sector, there remains significant fragmentation within the European industry. It is currently reported that there are in excess of 51 thousand funds in Europe (excluding Russia). The small

⁷⁰ See EFAMA (2008).

average size of the European investment fund is seen as a significant inefficiency within the sector⁷¹.

6.3 The global regulatory environment – International regulatory dialogues

- 15. International regulatory dialogues on financial services are a valuable tool that provides a forum for open cooperation and discussion between the EU and other global markets to discuss current policy issues, and complement the work undertaken by multilateral bodies such as the G7, Financial Stability Forum, IMF and the OECD.
- 16. The aim of these dialogues is to promote the EU's regulatory framework, by working towards regulatory convergence and/or equivalence, improved market access and by providing a forum for financial market cooperation on issues of common interest, such as the response to the financial turmoil.
- 17. To date the most productive dialogue has been between the EU and the US which has resulted in some significant and real policy changes including changes in accounting standards including the acceptance in late 2007 in the US of the International Reporting Standards, and more recently, the joint statement for the EU and US SEC to work towards an integrated EU-US securities market by endorsing the mutual recognition of securities market law. The EU is also undertaking dialogues with Japan, who are also examining acceptance of IFRS, China, India and Russia. The importance and success of these dialogues, between the EU and cross-dialogues between other players in global financial services will continue to promote regulatory integration and increase competitiveness in the future.

6.4 Looking ahead – Global industry consolidation

- 18. For decades the US and EU financial markets have been the dominant players in global financial services, providing around 75% of global financial services. Although their combined dominance has not changed there is increasing evidence of growth and strength in financial services in the emerging economies which is putting competitive pressure on the both EU and US financial markets.
- 19. For example, in terms of bank size by market capitalisation, three Chinese banks, ICBC, CCB and Bank of China are all in the top five of the world's largest banks. Although driven by the rise in China's stock markets, this still serves to illustrate the substantial size of these firms. This, combined with substantial gains made by Chinese authorities on their regulatory and systemic frameworks suggests that China is well positioned to increase its presence in global financial markets.
- 20. China is not alone in developing as a financial centre. The Middle East is also developing their financial markets and regulatory structures with a view to establishing a Dubai as a financial hub for the region. Many market commentators are predicting significant growth in this market over the coming years due to its favourable trading and tax conditions and size of the local market.

_

See EFAMA International Statistical Release (2008).

- 21. By examining the M&A activity of various sectors we can gain an insight on both the growth and consolidation of an industry.
- 22. In Europe, there have been 274 cross-border European banking M&A transactions with an aggregate value of Euro 158bn over the last 10 years. The value of cross-border bank M&A in Europe has been rising over the last 3 years with more than 80% (by value) of European cross-border bank M&A involving 'western' European banks investing in other 'western' European banks. By contrast domestic bank M&A activity has been falling since 1999.
- 23. A recent report⁷² by PWC stated that around half of Chinese financial services companies expect to take part in mergers and acquisitions over 2008. India is also showing significant growth and consolidation with around 100 M&A deals in the Indian financial services sector over 2007, with a total value of US\$6.9bn a significant rise compared to the US\$1.9bn total in 2006.

6.5 Conclusions

- As we have seen, the global financial services sector has gone through a period of rapid and significant change over the last decade and this will continue. It is expected that players in the industry will continue to consolidate and that the demand, and competition in supply, for global financial services will increasingly come from the emerging financial services markets such as China, India and the Middle East. There is also a growing importance played by Sovereign Wealth Funds, especially those managed by China, the countries in the Middle East and other surplus countries. Moving forward it is important that these trends are closely monitored and that the opportunities that they provide for Europe are taken.
- 25. We have seen increasing co-operation and convergence between the EU and US markets and the importance, due to increased globalisation, of convergence in the global regulatory approaches taken in financial services. It is important that these fora continue and that the dialogues between all markets remain open.

⁷² See PWC (2008).

7. CONCLUSIONS

- 1. The traditional hypothesis on *the relationship between financial integration and financial stability* has been that financial integration and globalisation would dilute risks and reinforce financial stability. However, the financial crisis has offered a live demonstration that financial globalisation may indeed amplify the original financial shock; the US sub-prime mortgage crisis has not only spread across continents but has led to a major global financial crisis.
- 2. It is generally understood that the *financial crisis has had many root causes*, including irresponsible lending, a mortgage market bubble, lax lending policies, flaws in risk management, regulatory loopholes, weak supervision, biased incentive structures and psychological factors. This report has focussed on two of these areas namely securitisation and the valuation of financial assets.
- 3. The crisis has underlined the important task that market participants and regulators have in ensuring that appropriate rules and incentives are in place to both reinforce the stability of financial institutions and increase the resilience of the financial system. The recent financial crisis has also reminded us that due to the globalisation of financial markets, actions to address global risks need to be coordinated globally. For information about the European Union's policy response to the crisis, please see Box 5.2 in chapter 5 and Annex I: Policy achievements in 2008.
- 4. The financial turmoil has also impacted on the global structure of the financial services sector; mergers and acquisitions have been carried out between weak and strong firms, which have led to increased market consolidation. The investment bank model has also become less attractive, due to the major exposures of many investment banks to the sub-prime market. Instead, the attractiveness of the universal banking model seems to be increasing.
- 5. Despite the impact of the financial crisis, money and bond markets have shown a high level of *integration*, while retail financial services remain local, with major price differences and low levels of cross-border transactions. The level of financial integration in new Member States is lagging behind when compared to the rest of the EU, partly due to the development gap of the EU-12 countries, however integration is progressing in these member States. In the EU banking and insurance markets integration has continued to progress but has been focused on the service provider side through cross-border consolidation. The implementation of a euro area retail payment market (through the SEPA), the implementation of MiFiD and the post-trading infrastructures initiatives are likely to be catalysts for further progress. The adoption of a Single currency in an increasing number of EU-12 Member States is also expected to speed up the pace of integration in these countries.
- 6. Available data does not provide us with a definite answer on whether the advance of financial integration has intensified *competition*. On the one hand, competition between life products and other saving products has recently increased. The post-trading Code of Conduct for securities has injected momentum in the market by improving price transparency and lowering post-trading fees. In equity markets, the introduction of MiFiD has brought about considerable structural changes, especially

in relation to the number of trading venues and the division of market shares. On the other hand, especially in some EU-12 Member States the combination of higher margins, costs and profitability, all seem to reflect that customers could benefit from a more competitive environment.

- 7. In terms of *efficiency and profitability*, the financial turmoil has resulted in a reversal of the positive trends we have seen in the EU banking industry over recent years. EU financial institutions have faced increasing difficulties and higher funding costs; one reason for this is that they have increased their liquidity levels to protect themselves whilst at the same time being obliged to raise fresh capital, due to write-downs and credit losses.
- 8. The European equity markets have remained liquid throughout the financial crisis, even when both capitalisation and trading turnover fell. The impact of the MiFiD could have contributed to the falls; it facilitated the emergence of new trading venues as alternative to traditional exchanges with these Multilateral Trading Facilities having already gained significant market share.
- 9. As regards access to financial services, the situation varies considerably among the Member States. The increasing diversity of financial products and services offered to individuals and firms is positive. Nevertheless, several factors exclude an important part of the EU population from access to basic financial services. Moreover, inappropriate use of some financial services may contribute to or even lead people into over-indebtedness and social exclusion. The levels of financial inclusion tend to be significantly lower in the "new" Member States than in the "old" ones. Regarding financing of small and medium companies, the relative cost of banking loans and the level of development of Venture Capital also differ strongly across the EU. The Nordic countries seem to stand out with good financing conditions for SMEs.
- 10. As regards competitiveness, the EU and US financial sectors have become quite comparable in terms of global market shares. The correlation between the two markets has also increased, reflecting the increased links between them.
- 11. Structural changes are also under way and will continue to change the competitive conditions in the market. The financial crisis has resulted in consolidation, which will reduce the number of players and make the market more concentrated. Just as these changes are occurring, the global demand is also changing. China, India and the Middle East are increasingly developing as global financial centres with demand for global financial services also increasing in these areas
- 12. For the European Union, this development brings new competitors on the global scene but also new partners and market opportunities. Market access and a coordinated regulatory approach are necessary prerequisites if EU institutions are to benefit from these opportunities. Efficiency gains can also be achieved if EU and major partners agree on equivalence/mutual recognition of their different regulatory approaches. Such cooperation is in progress and is steered by the EU international regulatory dialogues in financial services. Equivalence agreements on accounting rules have already been achieved between the European Union and the United States, and work towards an integrated securities market is ongoing. In the same spirit, the EU is also undertaking dialogues with the United States, Japan, China, India and

Russia. Cooperation in multilateral fora, e.g. in the Basel committee, will also continue to be the key to enhance financial stability in the future.

ANNEX 1: Policy achievements in 2008

- 1. 2008 was a year characterised by the global financial crisis. The Commission was focused on preparing the regulatory response to the problems that emerged in various segments of the financial sector. Among various measures, the Commission implemented three Ecofin Roadmaps from October and December 2007: 'Actions taken in response to the financial turmoil', 'Review of the Lamfalussy process' and 'Strengthening EU arrangements for financial stability'.
- 2. Following the worsening of situation in the European financial sector in September 2008, the Union took additional steps to respond to the financial crisis. All Member States endorsed the Eurogroup action plan of 12 October, which involved temporary measures to restore the resilience of financial markets including guaranteeing refunding and the functioning of the intrabank market and increasing minimum deposit guarantee levels. In November the Commission adopted its Legislative and Work Programme for 2009 including two strategic initiatives: a package of measures reforming the EU financial sector and an outline of the future supervisory architecture in the EU. The latter shall reflect the recommendations of the High Level Group set up by the Commission and chaired by J. de Larosière. In November, the Commission also adopted the European Economic Recovery Plan to coordinate fiscal policies of the Member States to counteract the recession.
- 3. The Commission also continued its work plan set out in the White Paper on Financial Services Policy 2005-2010 and the Green Paper on Retail Financial Services (2007). By end of the year, the bulk of actions listed in the White Paper have been accomplished.

Financial market supervision

- 4. Following the review of the Lamfalussy process carried out in 2007 by the Commission 173, the Inter-Institutional Monitoring Group and the Council, the Commission initiated a range of actions with a view to strengthening the Lamfalussy process, and in particular, cooperation between supervisors and convergence in their practices. These included, amongst others, a review of national supervisory and sanctioning powers, of voluntary delegation of tasks, of provisions on supervisory cooperation and exchange of information and of consistency of terminology in EU financial services directives. At this stage, no legislative actions have been suggested. Work on these issues is ongoing with the results of the stock-taking and reviewing exercises that are being carried out jointly by the Commission and the EU Committees of Supervisors expected by end of 2008/beginning of 2009.
- 5. A major action resulting from the Lamfalussy review was the revision of the Commission Decisions establishing the EU Committees of Supervisors. Following an open consultation the Commission services have prepared new decisions establishing CESR, CEBS and CEIOPS with a view to aligning, clarifying and

⁷³ COM(2007) 727

- strengthening Committees' responsibilities in the areas of supervisory convergence and financial stability monitoring and reporting. The new Decisions are scheduled for adoption in early January 2009.
- 6. The Lamfalussy review concluded with a decision to establish a Community programme to finance specific actions of the EU Committees of Supervisors (CESR, CEBS and CEIOPS), as well as the work of EFRAG, IASB and PIOB in the area of financial reporting and statutory audit. The Commission is expected to adopt a budgetary proposal concerning the 2010 2013 period at the beginning of 2009.

Prudential legal framework

- 7. From the beginning of 2008, the new regime for banks' regulatory capital fully entered into force. The Capital Requirements Directive took effect in 2007, but it took an additional year before the implementation of the advanced risk assessment models. In October the Commission adopted proposals to amend the CRD in light of the recent financial crisis.
- 8. As one of immediate actions taken in response to the crisis, in October the Commission adopted the proposal for amendments to the Deposit Guarantee Schemes Directive. The proposal increases the minimum level of coverage for deposits from €20,000 to €100,000 and shortens the payout period in the event of bank failure from three months to three days.
- 9. In November, the Commission proposed a Regulation on Credit Rating Agencies, reacting to the negative role credit ratings played in the financial crisis. The proposal related to the conditions for the authorisation, operation and supervision of credit rating agencies in the EU.
- 10. Following the entry into force of the Markets in Financial Instruments Directive in November 2007, the Commission continued monitoring its implementation across Member States. In April, the Commission adopted a report on non-equity market transparency under the MiFID. A report on commodity derivatives under MiFID and the recast CRD, initially scheduled for adoption in December, was delayed until completion of the work on derivatives launched in the context of the financial crisis. Commodity derivatives were also the subject of a separate report to the European Council, in light of the volatile commodity prices on the global markets in the course of 2008.
- 11. Throughout the year the European Parliament and Council continued to work on the proposal for a directive on the take-up and pursuit of insurance and reinsurance business under the Solvency II banner which was submitted by the Commission in July 2007. The Commission assisted the negotiations on the outstanding issues, notably the group supervision regime.

Retail financial services

- 12. In July, the Commission adopted a proposal for amendments to the UCITS Directive⁷⁴. The changes were meant to increase the efficiency of the UCITS framework by removing barriers to the cross-border distribution of funds, creating a framework for mergers and master-feeder structures between UCITS, introducing the Key Investor Information concept and improving cooperation mechanisms between national supervisors.
- April saw the final adoption of the Consumer Credit Directive, which will contribute to breaking open the €800 billion EU consumer loans market with new rules on information and consumer rights. All consumers taking out a loan in the EU will receive the same standard, comparable information, set out in a single information sheet, and there will be an EU-wide calculation method for calculating the Annual Percentage Rate so consumers can see the real cost of their credit. There will also be a 14-day right of withdrawal and a right to repay a loan early at any time, with standards for calculating the compensation creditors are allowed to claim. The Directive follows a full harmonisation approach and will be transposed by May 2010.
- 14. Following a request from finance ministers at the ECOFIN Council in May 2007, the Commission organised a call for evidence and open consultation on the coherence of European disclosure and distribution rules for retail investment products. An Open Hearing was held in July 2008. The Commission's aim is to ensure a consistently high level of investor protection and a level playing field among different types of retail investment products. A Commission statement will be published in early 2009.
- 15. In November, the European banking industry, encouraged by the Commission, adopted the Common Principles for Bank Account Switching which aim at facilitating consumers to switch their bank accounts within a Member State. These principles were welcomed by the Commission. National banking associations will be expected to implement them in each Member State by 1 November 2009.
- 16. Following the publication of the White Paper at the end of 2007, the Commission continued its analysis of the costs and benefits of policy action in the field of mortgage credit. As part of the follow-up to the White Paper, a study on the activities, regulation and supervision of mortgage lenders that are not defined as 'credit institutions' under EU law was published in December. The study will contribute to the Commission's assessment of whether further action in this area is needed at EU level.

Financial market infrastructure

17. The Commission continued to monitor the implementation of the Code of Conduct for Clearing and Settlement. Since November 2006, the Code brought about price transparency across the EU post trading market. The progress was slower in terms of ensuring access and interoperability; however, September 2008 saw the signature of the first interoperability agreement under the terms of the Code between the London Stock Exchange, LCH.Clearnet Ltd and x-clear. On service unbundling and accounting separation, the first concrete results are expected in 2009.

⁷⁴ COM(2008)458, SEC(2008)2263, SEC(2008)2264

- 18. In April, the Commission adopted a proposal to amend the Financial Collateral Arrangements Directive and the Settlement Finality Directive⁷⁵. This update was necessary to strengthen the protection of settlement systems and financial collateral arrangements and adapt them to the new market conditions created by MiFID and the Code of Conduct.
- 19. The financial crisis has turned the spotlight on the credit derivatives markets. In October, the Commission met with the industry and European regulators to discuss how risks from credit derivatives can be mitigated in a systematic way. In particular, the Commission asked for moving Credit Default Swaps (CDSs) on to central clearing facilities. To achieve these objectives, the Commission set up a Working Group on Derivatives, which started its activities in November.
- 20. In 2008, SEPA (the Single Euro Payments Area) was officially launched: the first SEPA credit transfers using the new payment standards/formats were executed and SEPA payment cards issued. To mark the occasion and to promote the use of the new payment instruments, the Commission hosted a major conference in conjunction with the ECB and the EPC on 28th January called "SEPA goes live" which was attended by many distinguished bankers and industry stakeholders. The Commission also published a comprehensive study demonstrating the substantial potential benefits of an integrated market for euro payments. Thanks to a structured dialogue between the Commission and the industry it was possible to clarify and alleviate possible regulatory concerns arising from the market-driven nature of SEPA. To promote the launch of the pan-European direct debit scheme in 2009, the Commission and ECB published a joint press release providing guidance to the market on the subject of a possible multi-lateral interchange fee. The Commission also encouraged public administrations to play their full role in promoting SEPA migration, subject to respect of the non-deterioration principle.
- 21. In February, the Commission adopted a report on the application of Regulation 2560/2001 on cross-border payments in euro. Based on the report's conclusions, in October the Commission adopted a proposal for a new regulation replacing Regulation 2560/2001. This proposal aimed at extending the principle of equality of charges to direct debits, enhancing consumer protection and reducing the statistical reporting burdens.
- 22. In October, the Commission proposed a new E-Money Directive to facilitate take-up in the e-money market. The revision of the E-Money Directive was based on the extensive evaluation completed in 2006. It was delayed to ensure consistency with the Payment Services Directive which was adopted in November 2007.

Corporate environment

23. In June, the Commission adopted a proposal for regulation establishing a European Private Company statute. This is expected to offer smaller European companies an

⁷⁵ COM(2008)213, SEC(2008)491, SEC(2008)492

- opportunity to deploy cross-border business within the EU without the need to establish subsidiaries. ⁷⁶
- Following the Communication on simplifying rules on company law, accounting and auditing⁷⁷, in 2008 the Commission pursued review of a number of directives. Proposals for fast track amendments to 1st and 11th Company Law directives and 4th and 7th Directive (on accounting issues) were adopted in April⁷⁸. The proposal for amendments to the 3rd and 6th Company Law Directives was adopted in September.
- 25. A report on functioning of the International Accounting Standards Regulation was adopted in April 2008. In November, the Commission published the consolidated version of the International Financial Reporting Standards (together with their interpretations) endorsed for use in the EU in a new Regulation⁷⁹ replacing the previous regulations. In December, a number of standards and interpretations were endorsed for use in the EU.
- 26. In order to mitigate the consequences of the financial turmoil, the Commission, with the unanimous support of Member States, adopted in October 2008 the amendments to the accounting standards (IAS 39 and IFR 7) introducing a higher flexibility in the reclassification of financial instruments.
- 27. Concerning the governance of the International Accounting Standards Board (IASB), the Commission presented its 3rd report in March. Subsequently, the Commission worked with Member States and European Parliament as well as with leading international financial regulators in order to provide coordinated input to the upcoming IASB governance review.
- 28. Following the assessment of the equivalence of third country GAAPs with IFRS which was completed in April, the Commission prepared implementing measures to the Transparency and Prospectus directives that were adopted by the Council and the Parliament in December.
- 29. On audit regulation, the Commission adopted a decision in July which allowed audit firms from 30 third countries to, in principle, continue providing audits to third country issuers until 1 July 2010. During this transition period, the Commission will assess whether in the future the EU can continue to consider third country oversight bodies, such as the PCAOB from the US, to be equivalent. In spring 2008, the Commission adopted two recommendations with regard to the audits of listed companies: one designed for strengthening the independence of inspections and a second recommendation inviting Member States to limit auditor's liability, leaving it to individual MSs to decide on how to do it.

International regulatory dialogues

79

⁷⁶ COM (2008)396

⁷⁷ COM(2007)394

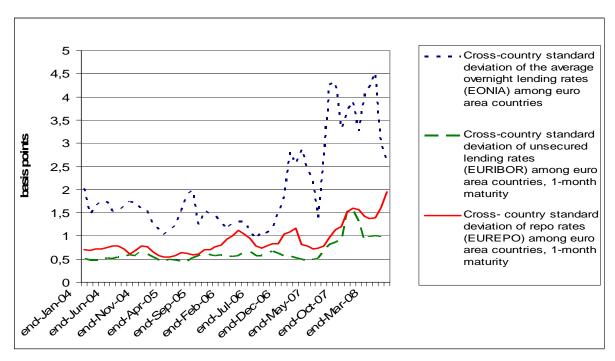
⁷⁸ COM(2008)194/195

- 30. In 2008, the Commission was very active in the area of international financial services regulation. The Commission has deepened its financial services regulatory dialogues with the US, Japan, Russia, India and China and increased the number of its meetings with other third countries. Some of the key issues discussed included accounting standards, auditing co-operation, prudential regulation and its implementation in the banking area, securities and investment funds regulation, the Solvency II proposals and reinsurance regulation, and the free movement of capital.
- 31. In the case of the EU-US Financial markets regulatory dialogue, progress was made on many key issues. Following the SEC decision of November 2007 which allowed foreign issuers to file accounts under IFRS without reconciliation to US accounting standards, in June the Commission submitted proposals concerning equivalence and/or transitional acceptance of US accounting standards as equivalent to EU IFRS. In August the SEC published a proposal for a roadmap to allow US domestic issuers to use IFRS by 2014. The Commission, in consultation with Member States and the European Parliament, also continued informal discussions with the SEC regarding mutual recognition in the field of securities as well as insurance and reinsurance issues.
- 32. Broad consensus existed between the EU and the US on the policy response to the financial turmoil. The recommendations of the US President's Working Group on Capital markets released in March⁸⁰ 2008 were very close to the EU roadmap on financial turmoil agreed by the ECOFIN Council in October 2007. This consensus was also reflected in the recommendations of the Financial Stability Forum and in the statement of the G7 Finance Ministers, both issued in April. The Commission was involved in preparation of the November G20 summit in Washington, which set out the Action Plan to Implement Principles for Reform.

http://www.ustreas.gov/press/releases/hp871.htm

ANNEX 2: Statistical Indicators

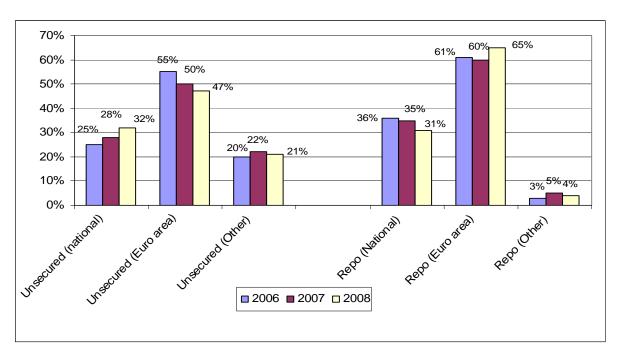
1. Cross-country standard deviation of euro-area interbank rates



Source: ECB (2008).

Note: The wider standard deviation of the EONIA is partly due to the different calculation method adopted in comparison to that used for the EURIBOR and EUREPO. See ECB (2007c).

2. Geographical counterparty breakdown in euro-area money markets (2006-08)



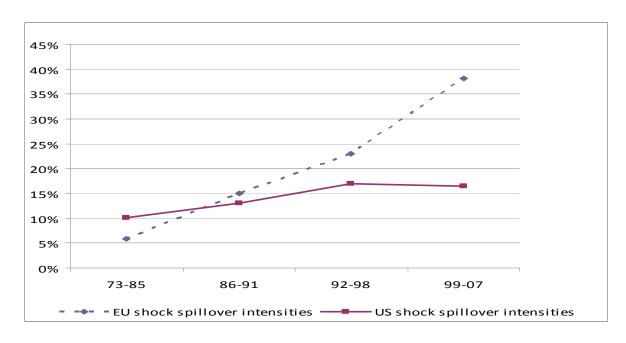
Source: ECB (2006-2008). Data on Repo Segment refers to the geographical breakdown of the collateral. The data represented herein refer to the second quarter of each respective year.

3. Convergence of 3-month money market rates in EU countries outside the euroarea (coefficient of variation in %)



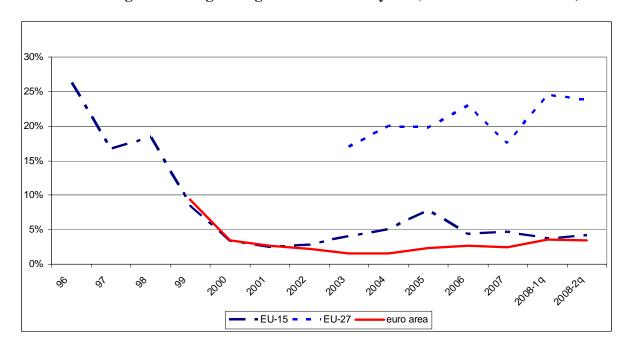
Source: Eurostat (2008), Commission services calculations.

4. Proportion of variance in local euro area equity returns explained by euro area and US shocks



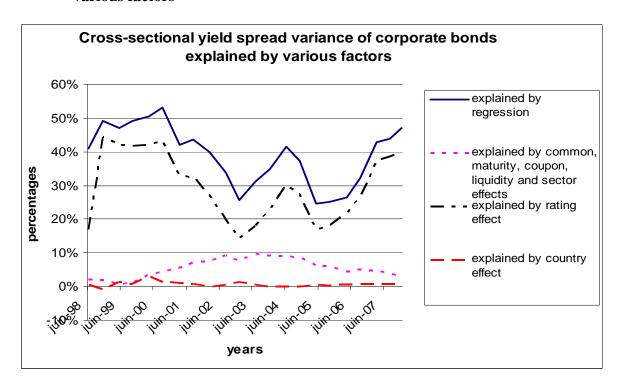
Source: ECB (2008a).

5. Convergence in long term government bond yield (coefficient of variation)



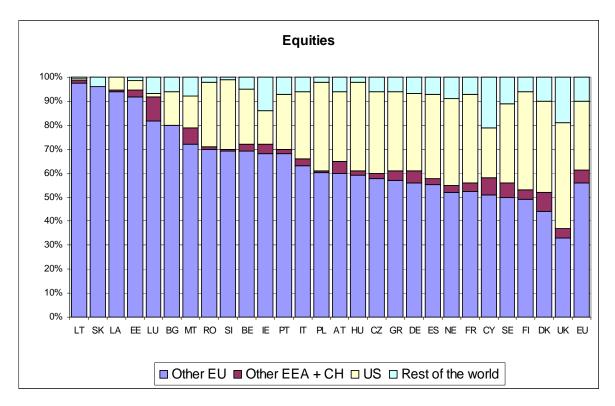
Source: Eurostat (2008), Commission services calculations. Data for 2008 refers to 1st and 2nd quarters.

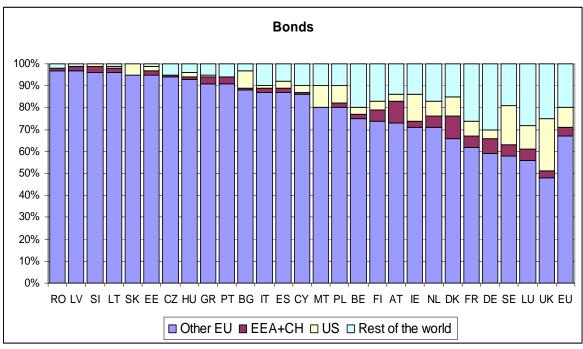
6. Cross-sectional yield spread variance of euro area corporate bonds explained by various factors



Source: ECB (2008a).

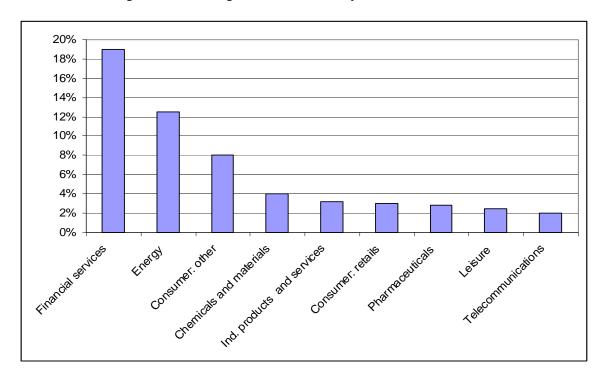
7. Foreign investment in the equity and bond markets by origin, 2006





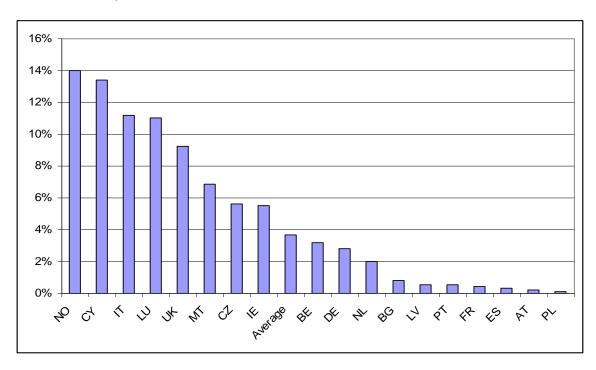
Source: IMF (2006-2008). Provisional data.

8. Sector split of all European M&A activity in 2007



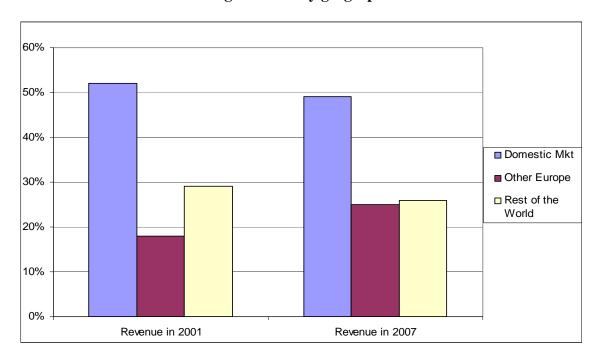
Source: PWC (2006-2008).

9. Gross premiums written by foreign branches as a % of total activity in the country



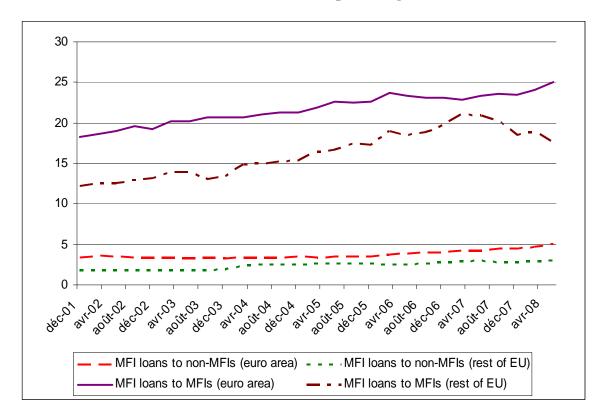
Source: CEIOPS (2008).

10. Revenues of the 20 largest banks by geographical location



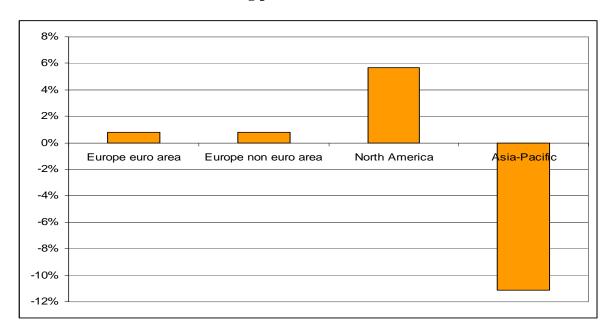
Source: DB Research (2008d)

11. Euro area MFI cross-border loans (in percentage of total loans)



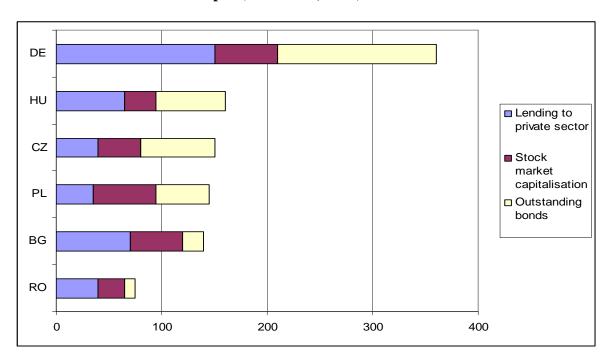
Source: ECB (2008a).

12. Evolution of retail banking prices 2007-2008



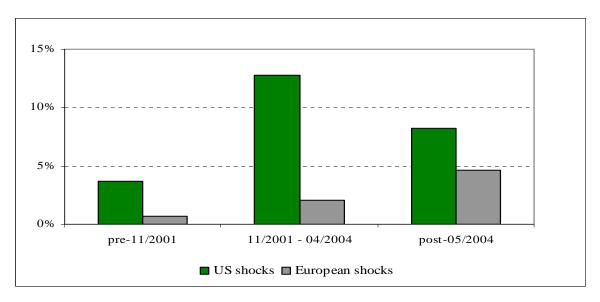
Source: Capgemini (2008).

13. Financial markets depth (% of GDP, 2007)



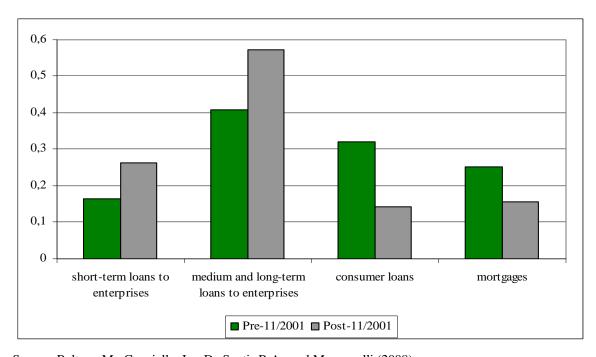
Source: DB Research (2008e).

14. Proportion of variance of equity returns explained in EU-12 by US and European shocks



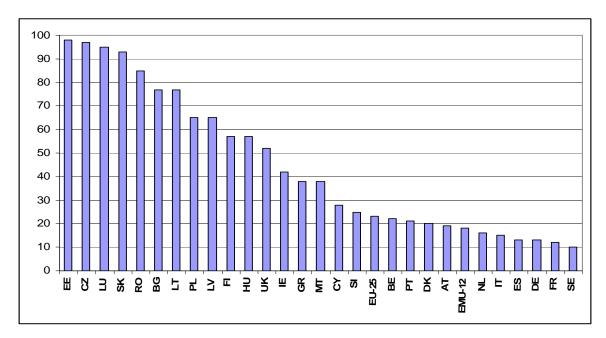
Source: Baltzer, M., Cappiello, L., De Santis R.A., and Manganelli (2008). Countries included are CZ, CY, EE, HU, LT, LV, PL, RO, SI, SK.

15. Proportion of variance of various interest rates in EU-12 explained by common factors (German benchmarks)



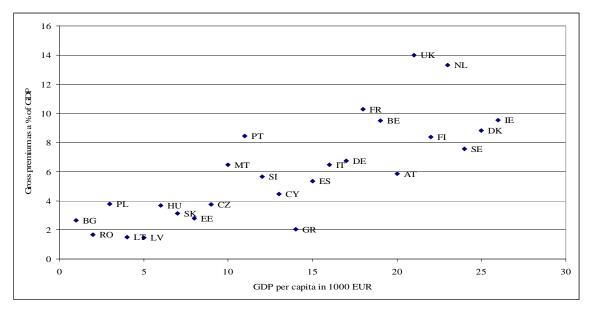
 $Source:\ Baltzer,\ M.,\ Cappiello,\ L.\ ,\ De\ Santis\ R.A.,\ and\ Manganelli\ (2008).$

16. Market share of foreign-owned banks (% of total assets, 2006)



Source: DB Research (2008b)

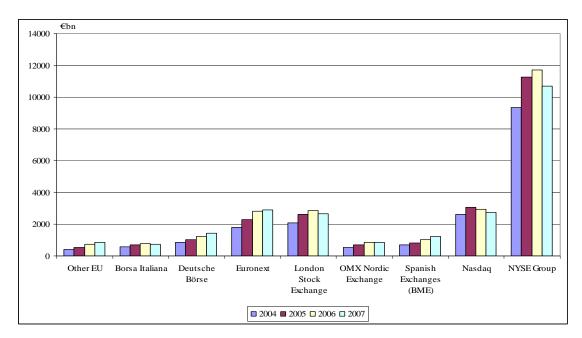
17. Development of insurance markets in the EU (2007)



Source: CEA (2008), Eurostat (2008), Commission services calculations.

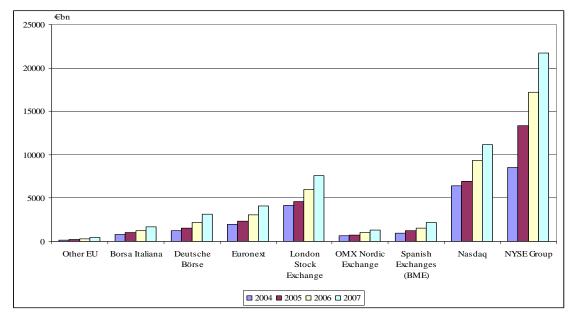
Note: Given the outstanding position of Luxembourg it has not been included in the chart

18. Market capitalisation in selected EU and US exchanges



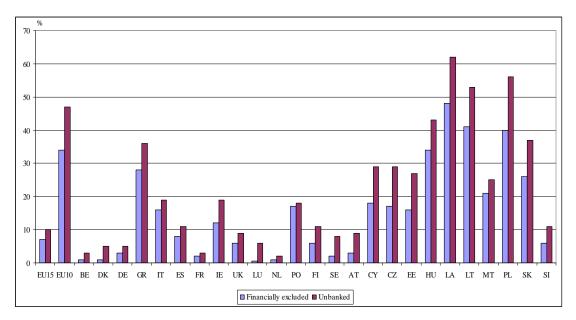
Source: FESE (2008) and WFE (2008a).

19. Annual turnover in selected EU and US exchanges



Source: FESE (2008) and WFE (2008)

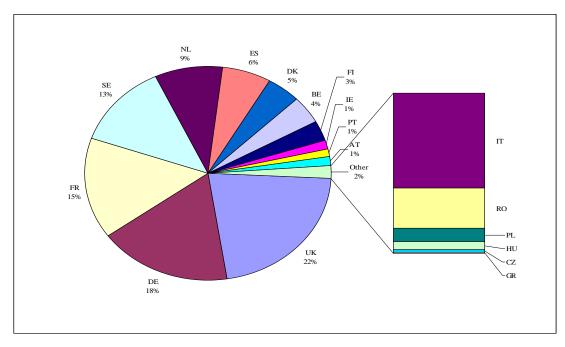
20. Levels of financial exclusion in the EU



Source: European Commission (2008).

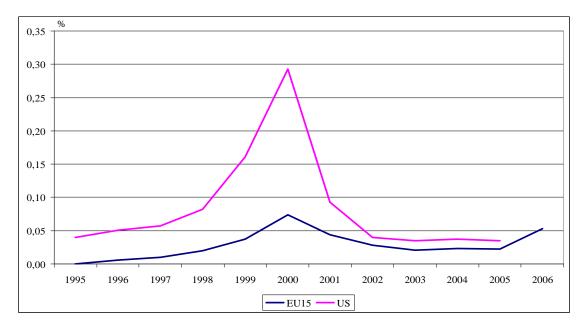
Note: Data based on Eurobarometer surveys conducted in 2003

21. Distribution of venture capital (seed and start-up) investment in the EU by country of investee company (2007)



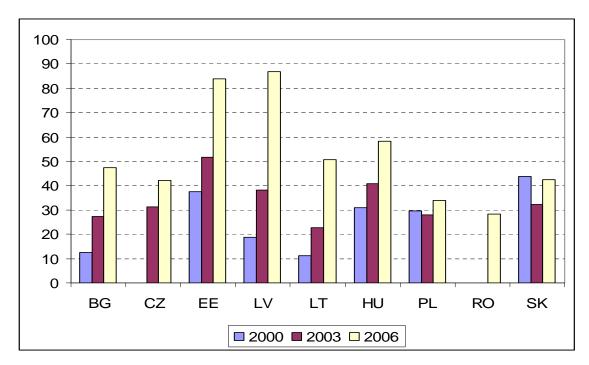
Source: EVCA (2008)

22. Venture capital (seed and start-up) investment as % of GDP



Source: Eurostat (2008).

23. Credit to the private sector as percentage of GDP



Source: ECB

ABBREVIATIONS

Member States

AT Austria IT Italy

BE Belgium LT Lithuania

BG Bulgaria LU Luxembourg

CY Cyprus LV Latvia

CZ Czech Republic MT Malta

DE Germany NL Netherlands

DK Denmark PL Poland

EE Estonia PT Portugal

ES Spain RO Romania

FI Finland SE Sweden

FR France SI Slovenia

EL Greece SK Slovakia

HU Hungary UK United Kingdom

IR Ireland

European Union

EU is used when referring to the 27 Member States of the European Union. When reference is made to other groups of Member States, this is explicitly indicated, e.g.

EU-15: the European Union before the 2004 enlargement

Euro Area: the area encompassing those EU Member States in which the euro has been adopted as the single currency. It comprises AT, BE, DE, EL, ES, FI, FR, IE, IT, CY, LU, MT, NL, PT, and SI.

EU-10: the 10 countries that became Member States in 2004

EU-25: EU-15+EU10

EU-12: EU-10 plus Bulgaria and Romania

REFERENCES

Baltzer, M., Cappiello, L., De Santis R. A., and Manganelli, S. (2008), *Measuring Financial Integration in New EU Member States*, ECB Occasional Paper N. 81.

BCG – Boston Consulting Group (2008), Creating Competitive Advantage, The European Insurance Landscape.

Capgemini (2007), SEPA: potential benefits at stake.

Capgemini (2008), World retail banking report.

CEA - Comité Européen des Assurances (2008), Insurance in figures, Brussels.

CEIOPS - Committee of European Insurance and Occupational Pensions Supervisors (2008), Report on Financial Conditions and Financial Stability in the European Insurance and Occupational Pension Fund Sectors 2007-2008, Frankfurt am Main.

City of London (2008), *The importance of Wholesale Financial Services to the EU Economy* 2008, London Economics, July 2008

CRA International (2006), *Potential cost savings in a fully integrated EU investment fund market*, a study for Internal Market and Services DG.

DB Research (2008a), European banks' foreign revenues: Europe gaining ground, Frankfurt am Main

DB Research (2008b), European banks: The silent (r)evolution, Frankfurt am Main.

DB Research (2008c), Online banking: The young and well-educated extend their lead until 2010, Frankfurt am Main.

DB Research (2008d), European banks' foreign revenues: Europe gaining ground, Frankfurt am Main.

DB Research (2008e), The economic catching-up process in the new EU member states, Frankfurt am Main.

DB Research (2008f), Mobility of bank customers in the EU: Much ado about little, Frankfurt am Main

EFAMA - European Fund and Asset Management Association (2008), *International Statistical Release*, Brussels.

ECB - European Central Bank (2005-2007), EU Banking Sector Stability, Frankfurt am Main.

ECB - European Central Bank (2006-2008), Euro Money Market Survey, Frankfurt am Main.

ECB - European Central Bank (2007a), *Financial Stability Review*, December 2007 Frankfurt am Main.

ECB - European Central Bank (2007b), *EU Banking Structures*, October 2007, Frankfurt am Main.

- ECB European Central Bank (2007c), Money Market Study 2006, Frankfurt am Main.
- ECB European Central Bank (2008a), Financial Integration Indicators, Frankfurt am Main.
- ECB European Central Bank (2008b), *Monthly Bulletin, Recent developments in government bond yield spreads*, May 2008, Frankfurt am Main.
- ECB European Central Bank (2008c), *Payment Systems and Market Infrastructure oversight report 2007*, Frankfurt am Main.
- ECB European Central Bank (2008d), Financial Integration in Europe, Frankfurt am Main.
- ECB European Central Bank (2008e), *Financial Stability Review*, June 2008, Frankfurt am Main.
- ECB European Central Bank (2008f), EU Banking Structures, October 2008, Frankfurt am Main.

European Commission (2007), Report on the Retail Banking Sector Inquiry, SEC (2007) 106, Brussels.

European Commission (2008), Financial Services Provision and Prevention of Financial Exclusion, March 2008

European Securitisation Forum (2008), online database.

EU-US Coalition on Financial Regulation (2008), Mutual Recognition, Exemptive Relief and "Targeted" Rules' Standardisation: The Basis for Regulatory Modernisation, 2008.

EVCA – European Private Equity & Venture Capital Association (2008), *Yearbook* 2008, Brussels.

Eurostat (2008), online database.

FDIC – Federal Deposit Insurance Corporation (2005-2008) *Quarterly Banking Profile*, Arlington

FESE – Federation of European Securities Exchanges (2008), online database.

HM Treasury – UK (2008): Embracing financial globalisation, May 2008.

ICMA – International Capital Market Association (2008), European repo market survey, Zurich

IFSL Research (2008), Private Equity 2008, London.

IMF - International Monetary Fund (2006-2008), *Coordinated Portfolio Investment Survey*, Washington D.C.

IMF - International Monetary Fund (2008a), Euro Area Policies: Selected Issues – Liquidity Management in the Euro Area, Washington D.C.

IMF - International Monetary Fund (2008b), *Global Financial Stability Report*, Washington D.C.

Invesco (2005), Building an Integrated European Fund Management Industry: cross-border mergers of funds, a quick win?

LSE - London Stock Exchange (2008), *Netting – Consultation Document*, 29 January 2008, London.

McKinsey & Company (2008), Long term trends in the Global Capital Markets, McKinsey Quarterly.

OenNB - Oesterreichische Nationalbank (2004), Financial Stability Report, No. 8, Wien

OeNB - Oesterreichische Nationalbank (2007), Financial Stability Report, No. 14, Wien

PWC – PricewaterhouseCoopers (2002-2007), IPO Watch Europe Survey.

PWC - PricewaterhouseCoopers (2006-2008), Financial Services M&A.

PWC - PriceWaterhouseCoopers (2008): 'Going for growth in Asia – Navigating the way'.

Reinhart, M. and Rogoff, K.S. (2008), *Is the 2007 U.S. Sub-Prime Financial Crisis So Different? An International Historical Comparison*, NBER Working Paper No. 13761 SwissRe (2007), *World insurance in 2006*, Sigma No 4/2007, Zurich.

Thomson Reuters (2008), Reuters European Equity Market Share Report.

Vajanne, L. (2007), *Integration in euro area retail banking markets – convergence of credit interest rates*, Bank of Finland Research Discussion Papers n. 27, Helsinki.

World Bank (2007) Finance for All? Policies and Pitfalls in Expanding Access, Washington, D.C.

WFE - World Federation of Exchanges (2008a), online database.

WFE - World Federation of Exchanges (2008b), Market highlights for the first half-year 2008

ZEW-OEE (2003), Towards a single European market in asset management.