The Comparison between Different EU Financial Markets

— Under the Background of the EU Financial Integration

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Abstract

This paper analyzes the integration processes of three EU financial markets-the banking market, the bond market and the equity market. The evolution, current state and future development of the integration of these three markets are the main research objectives of the paper. The different stages of integration of these three markets are identified and analyzed, and the different obstacles they confront are also within investigation. Answers are attempted as to questions "what is the essence of financial integration?" and "why these three markets differ in the level of integration?"

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Ⅰ. Introduction

Undoubtedly, European financial integration has been an important issue in both the regional and global sense, as well as both the theoretical and empirical sense, since last decade. One of the major goals of the European Union is to construct a single market for financial services. Since the financial system is important for the allocation of economic resources, a single market for financial services has the potential to significantly improve the efficiency of investment and increase economic growth by removing frictions and barriers over cross-border exchange.

The introduction of the euro and the measures adopted under the FSAP (Financial Service Action Plan) has spurred the integration of the EU financial markets. However, there continue to be varying degrees of integration across different markets, although they are all progressing towards integration. The retail banking market and the equity market are still considered to be fragmented, while wholesale money and bond markets tend to be relatively well integrated. Only the unsecured euro money market has reached a fully satisfactory level of integration.

In this paper we concentrate our attention on three financial markets in EU, the retail banking market, the bond market and the equity market, to investigate and compare the current states of integration in these three markets. Although these three sections concerning respective financial markets which shares little equivalence, we prefer to put them together in the same framework to discuss. Because our main purpose is not really to work over the precise differences among these three markets, but to dig out some key words or sticking points in the process of EU financial market integration. Why the degree of integration varies among different markets? What is the essence of the EU financial integration?

The paper is organized as follows. Section 2 discusses the situation of the EU banking market by focusing on the retail banking sector. Section 3 investigates the EU bond market comprising of the government bond market and the corporate bond market. Section 4 will discuss the situation in the equity market. And in section 5 we make a comparison among these three markets in the aspect of integration process before the conclusion in section 6.

Ⅱ.The Banking Market

1. An Overview

Most scholars share a consensus that the EU banking system has become increasingly integrated over time, particularly since the introduction of Euro in 1999. The ongoing consolidation of the EU banking sector may change competitive conditions and further improve the efficiency and diversification of EU banks. In this sector we will mainly focus on the EU retail banking sector. Because when compared to other financial sectors, integration in EU retail banking sector was relatively slower so far, as shown by both price and quantity-based indicators[1].

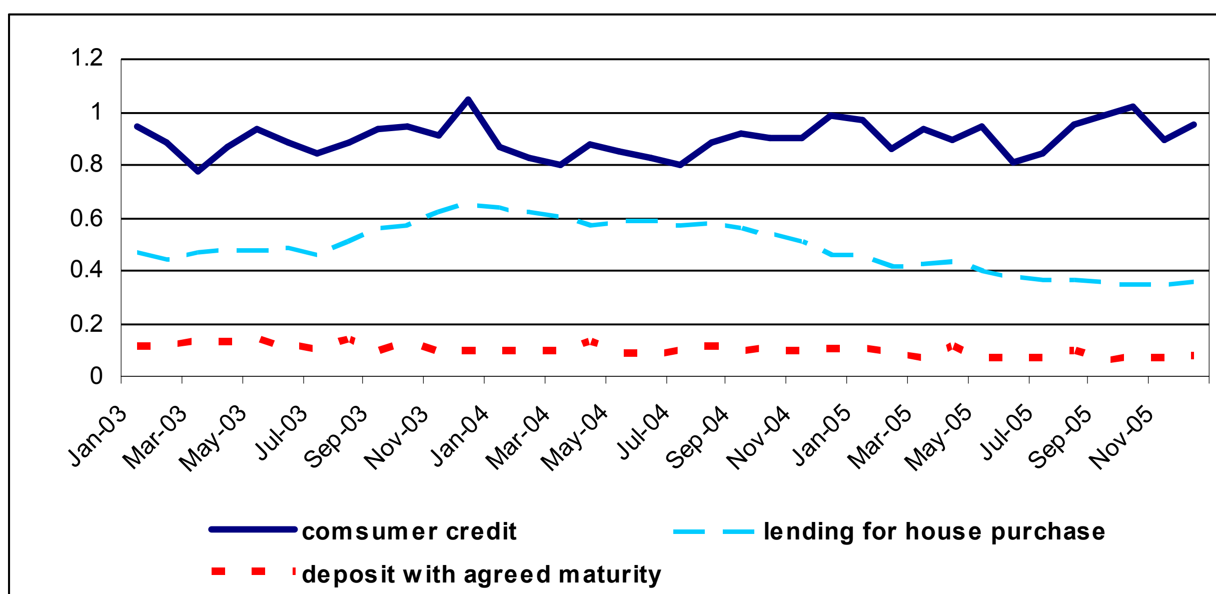
While the share of euro area cross-border MFI loans granted to non-MFIs stood at 2% at the end of 1997, this figure has risen to no more than 3.5% today. Moreover, as a price-based indicator, the cross-country standard deviation of interest rates on consumer credit has been rather high and constant, on average 0.9% over the past three years. Also, the cross-country dispersion of interest rates on lending for house purchase amounts to, on average, 0.5% over the past three years (Figure 1). Figure 1 suggests that cross-country dispersions of bank interest rates have remained relatively high since January 2003. And cross-border retail bank lending activity in the euro area remains very limited (around 3.5% of the total), which suggested a fragmented retail banking market (Figure 2).The research from Sørensen and Werner (2006)[2] shows that, there is a large degree of heterogeneity across the euro area countries, with respect to both the long run equilibrium pass-through and the speed of adjustment to the long run equilibrium. As everyone knows, in a well-integrated euro area banking sector, we should not expect to observe significant differences across countries in the way banks adjust their interest rates in reaction to changes in corresponding market rates. So the heterogeneity here probably suggests the fragmentation and lack of integration in the retail banking sector. It is interesting to understand the reasons behind the persistence of heterogeneity cross countries.

Figure1, Cross-country standard deviation of MFI interest rates: loans to households and

[1] Speech by Jean-Claude Triche, *"Economic Integration in the Euro Area"*, 15th European Regional Conference of the Board of Governors – Tel Aviv University. Paris, 31 March 2006.

[2] See Christoffer Kok Sørensen and Thomas Werner, *Bank Interest Rate Pass-Through in the Euro Area, A Cross Country Comparison*, ECB Working Paper Series No.580/January 2006.

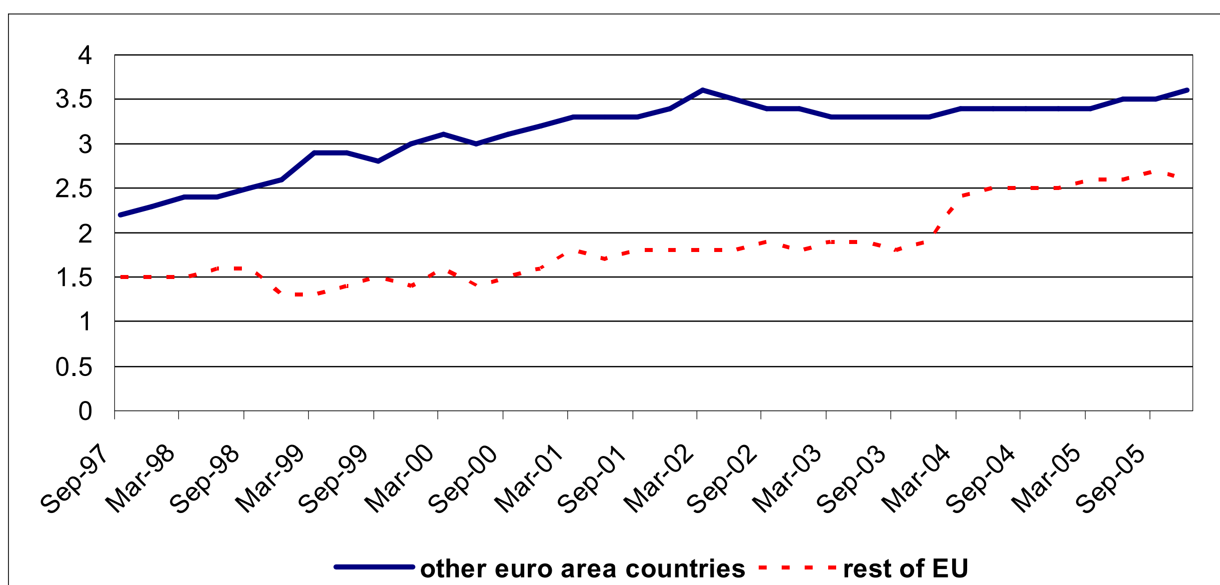
deposits with agreed maturity.



Source: ECB

Note: The measure is based on interest rates on new business.

Figure 2, MFI loans to non-MFIs: outstanding amounts by residency of the counterparty as a share of total loans granted by MFIs, excluding the Eurosystem. (percentages)



Source: ECB

Note: This indicator displays the geographical counterparty diversification of loans granted by euro area MFIs to non-MFI counterparties resident in other euro area countries and non-euro area EU Member States.

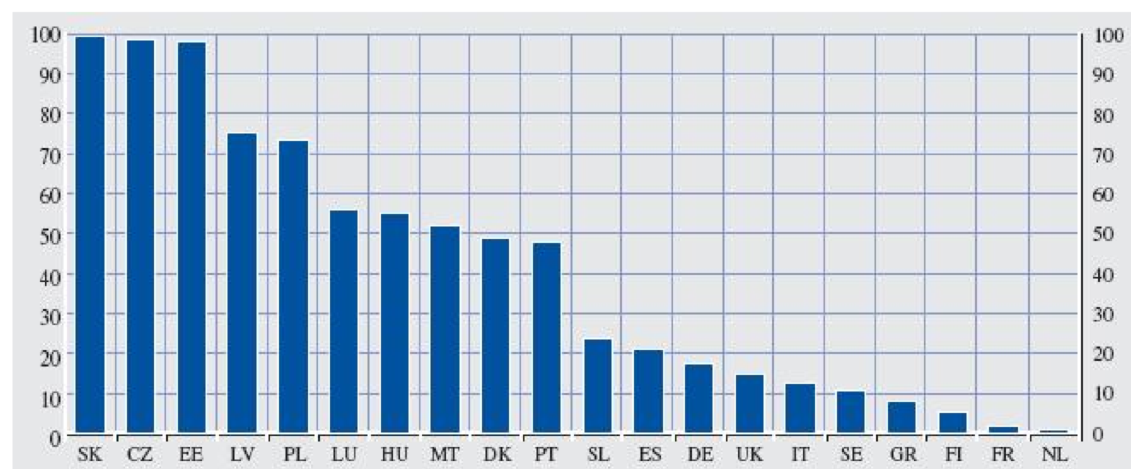
2. Consumer Lending and Mortgage Lending

When we talk about the EU retail banking business, we mainly focus on the mortgage and consumer lending operations in this section.

(1) Consumer Lending (CL)

As regard to consumer lending business in EU banking sector, the range of both products and providers appears to have expanded significantly during the past decade. But despite the ongoing integration of European financial markets, genuine cross-border consumer lending is still very limited. Here we notice a very interesting comparison: the cross-border holdings of interbank loans and securities are very significant in euro area, amounting to more than 45% of total holdings in 2004; by contraries, cross-border loans to the private sector as a percentage of the total loan book remain low. This may reflect the importance of proximity of banks to their clients and relationship lending in the consumer lending business. If we employ a wider definition of cross-border lending, however, particularly including the activity undertaken by foreign-owned branches and subsidiaries, cross-border consumer lending appears more significantly in some countries especially the NMSs (Newly Member States) [3]. According to available figures, CL by foreign branches and subsidiaries accounts for nearly 100% of outstanding CL in SK, CZ and EE in 2004. Also in LV, PL, LU, HU, MT, DK and PT[4], foreign providers, broadly speaking, have a market share above or close to 50% (see Figure 3).

Figure 3, Foreign presence in national CL markets via braches and subsidiaries (2004)



Source: BSC

[3] See European Central Bank, *EU Banking Structures*, October. 2005.

[4] AT-Austria, BE-Belgium, BG-Belgium, SK-Slovakia, CZ-Czech Republic, EE-Estonia, LU-Luxembourg, HU-Hungary, MT-Malta, DK-Denmark, PT-Portugal, SL-Slovenia, ES-Spain, DE-Germany, UK-United Kingdom, IT-Italy, SE-Sweden, GR-Greece, FI-Finland, FR-France, NL-Netherlands.

(2) Mortgage Market

Mortgage market is important with an outstanding volume of more than €4 trillion in residential mortgage debt that corresponds to around 40% of EU GDP. But the lack of integration in this market was of no less significance in numerous aspects as follows. In no national market can borrowers access the full range of mortgage products. Moreover, only a small portion of European mortgage credit is granted across borders, and the techniques for loan origination and servicing differ substantially from country to country. According to BSC member authorities, competition in mortgage markets has intensified significantly throughout most of the EU member countries over the past five to ten years, but mostly within domestic markets.

Lots of barriers still prevail across the mortgage markets of the EU countries. Firstly, there are some natural barriers such as culture, tradition and language. Secondly, the different consumer protection standards and the strong domestic competition, which strikingly limit foreign presence, are other significant barriers. Thirdly, the structural differences still exist across the mortgage markets of the EU countries, most probably because of the diversity in legal frameworks and consumption patterns, as well as differences in tax regimes, lender and intermediation structures, product characteristics and lending procedures.

3. M&A and Foreign Subsidies

The most common form of entrance into another country's retail banking market is through cross-border merger and acquisition or establishing a subsidiary. Since 1997, the number of credit institutions in the EU has been declining, and in 2004 it dropped by 2.8% with a total number of 8,374[5]. Although the decrease in the number of credit institutions indicates the consolidation of the European banking sector, the consolidation has this far occurred mainly at domestic level. Cross-border banking mergers have only recently started to happen. In this respect, while a number of euro area banks have considerably expanded their interests outside the euro area in recent years, cross-border activity within the euro area, has remained limited.

M&A activity has been declining since 1999, and this trend continued in 2004 and the first half of 2005. But the research of ECB (2005) shows that this decline can be explained mainly by a slowdown in domestic M&A activity. By contrast, cross-border M&As have increased compared to the period 1993-1998, both in absolute and relative terms, accounting for about 30% of the number and 24% of the value of all

[5] See ECB, *Consolidation and diversification in the euro area banking sector*, May. 2005. Monthly Bulletin, 79-87.

deals in the more recent period, up from 20% in the earlier period.
On the other side, around half of the foreign presence in EU countries is through subsidiaries. The market share of foreign branches and subsidiaries in the EU as a whole amounts to 24.7% at the end of 2004, and this figure was 23.4% in 2003[6]. And the high levels of foreign ownership features the banking sectors of NMS (Newly Member State). On aggregate, 71% of the NMS banking sector is foreign-controlled (of which 63.5% is by EEA banks), compared to 15.5% in the euro area.

4. Barriers and the Way Out

After investigating the retail banking market, we will do some research on the barriers that hinder the market from further integration. Obstacles of further integration in this market still exist, and some of which are inrooted and insurmountable such as language and cultural differences as we mentioned before. This kind of obstacles operates more evidently in the retail banking markets, as compared to other financial markets in EU. A report of the European Commission (2004)[7] shows that in retail markets consumer protection legislation, choice of law, access to national land registers, and the liquidity of secondary markets and efficient funding were highlighted as the main challenges to further integration.
Many EU member countries have already taken actions to remove entry barriers in banking markets. The First and Second Banking Directives (1977, 1988), and the Financial Services Action Plan (1999) consisted of large sets of initiatives to ensure the full integration of European banking markets; also various deregulations at the national level have helped to foster banking integration (Caviglia, Krause, and Thimann,(2002))[8]. Constant efforts are also being made to search for measures to remove legal barriers of banking market integration. In 2004 and early 2005, EU has accomplished numerous important regulatory developments in such as the finalization of the Basel II framework, the introduction of new International Financial Reporting Standards (IFRS), and the recension of some International Accounting Standards (IAS). The EU regulators paid a lot of attention to retail financial services and corporate governance. All of these will definitely promote the integration of the retail banking market through out EU.
However, how to take off and eliminate the natural barriers? Lenders now have the

[6] See European Central Bank, *EU Banking Structures*, October. 2005.
[7] See Report by the Forum Group on Mortgage Credit, European Communities, *The Integration of the EU Mortgage Credit Market*, 2004.
[8] See Caviglia, G,G. Krause, and C. Thimann, Key Feaures of the Financial Sectors in EU Accession Countries. In Financial Sectors in EU Accession Countries, ed. By C. Thimann, pp.15-30. European Central Bank, Frankfurt am Main.

possibility of offering cross-border loans rather than establishing a multi-country presence. For examples, CL providers that have a local front-office delivery but centralized back-office operations organized themselves on a pan-European basis. The use of multi-lingual call centers in one central location is part of their strategy to establish a leading position in the pan-European CL market. In this respect, the Internet can play a significant role in overcoming the effects of national boundaries. But the situation is that even in the absence of the regulatory or natural barriers hampering banking integration as above, bank may decide not to enter a foreign market. The reason behind it is that, when foreign banks enter, their market shares remain too small relative to domestic banks. Thus, these foreign banks will stay at the relative disadvantageous position in the market competition.

Ⅲ. The Bond Market

Nowadays, issuers and investors of the euro area bond market have come to regard this market as a single one. Both the primary and secondary bond markets have become increasingly integrated on a pan-European scale. Considerable benefits have been gained by investors and issuers in the market, because of the greater competition in the underwriting of private bonds and auctioning of public ones, and the greater liquidity of secondary markets.

1. The Government and Corporate Bond Markets

The EU government bond markets have achieved a very high degree of integration, mainly due to the disappearance of intra-euro area exchange rate risk and the convergence of inflation expectations across countries. Government bond yields in different euro area countries have been driven mainly by euro area-wide factors and news. Investors have started to focus more on credit and liquidity risk since the introduction of the euro and a common monetary policy. As a result, bond portfolios have become increasingly internationally diversified, especially in the smaller euro area countries. Table 1 (column 1) shows that by 2003 more than half of the assets of bond funds were invested with a Europe-wide strategy in each euro-area country except Spain[9]. In Belgium, Italy and Portugal, bond funds are more diversified.

[9] Being likely due to misclassification of Spanish funds in the FEFSI data base.

Table 1, International diversification of bond portfolios in the Euro area

Country	Share of assets invested in bond market funds with Europe-wide investment strategy, percent in 2003 (1)	International investor based as fraction of total investor base, percent in 2004 (2)
Austria	55	90-99
Belgium	88	48.4
Finland	61	62
France	60	37
Germany	52	-
Greece	-	55
Ireland	-	75
Italy	81	42
Netherlands	-	81
Portugal	98	80
Spain	0	37
Average	62	61.2

Source: The numbers in column 1 are from Baele et al. (2004), p.53. The numbers in column 2 are from MTS Group (2004),p.13.

While the push towards integration arose in the government bond market, it had a powerful spillover effect on the corporate bond market, where it generated a dramatic growth in issuance, secondary market trading and competition among underwriters[10]. Actually it was private sector issuance that nurtured the growth of the Euro-area bond market. The degree of integration of the euro corporate bond market is reasonably high. Pagano and Thadden's (2004) studies suggest that the EU corporate market is fairly integrated in the sense that the country of issuance is only of marginal importance in explaining yield differentials.

2. Convergence of Legislations and Infrastructures

The introduction of the Euro changed the behavior of both Euro-area issuers and investors. It stimulates the issuers to compete in the supply of more homogeneous securities to a much larger potential market, and the investors to shift their portfolio selection away from home issuers. At the same time, it provides great opportunities to trading platforms with pan-European capabilities, and to compromise willing to compete for underwriting business on a pan-European basis.

[10] Danthine, Giavazzi, and von Thadden (2001), Galati and Tsatsaronis (2001) and Hartmann, Maddaloni and Manganelli (2003) provide broader overviews, including other sectors of the financial market.

Shortly after the introduction of the Euro, all member countries switched the day-count of their outstanding and new issues to a common standard, and most of them switched to using the operating days of the TARGET (Transcontinental Automated Real-Time Gross-Receipt Transfer) settlement system as official business days for the service of their government debt. Subsequently, Euro-area governments took several even farther-reaching decisions concerning the harmonization of issuing practices, the coordination of issuing dates, and the optimal choice of issuing formats. These changes made government bonds more easily comparable and substitutable. And many corporate bond issuers adopted similar reconventioning plans[11].

Intensified competition among debt managers, intermediaries and investors has led to increase demand for efficiency. As a result, several structured trading platforms have emerged in the euro area such as MTS[12] and EuroMTS[13]. The supply of euro-area bonds increased and issuance policies converged. As a result, geographical diversification increased significantly in euro-area bond portfolios on the demand side. The fact that traders have gained access to a common marketplace in which counterparts can be found rapidly has delivered a beneficial impact on liquidity, particularly in some of the smaller countries. Indeed, many investors, who previously might not have found smaller government debt markets attractive enough to incur the costs of entering them, now invest in these markets through common, cross-border platforms.

3. Convergence of Yields

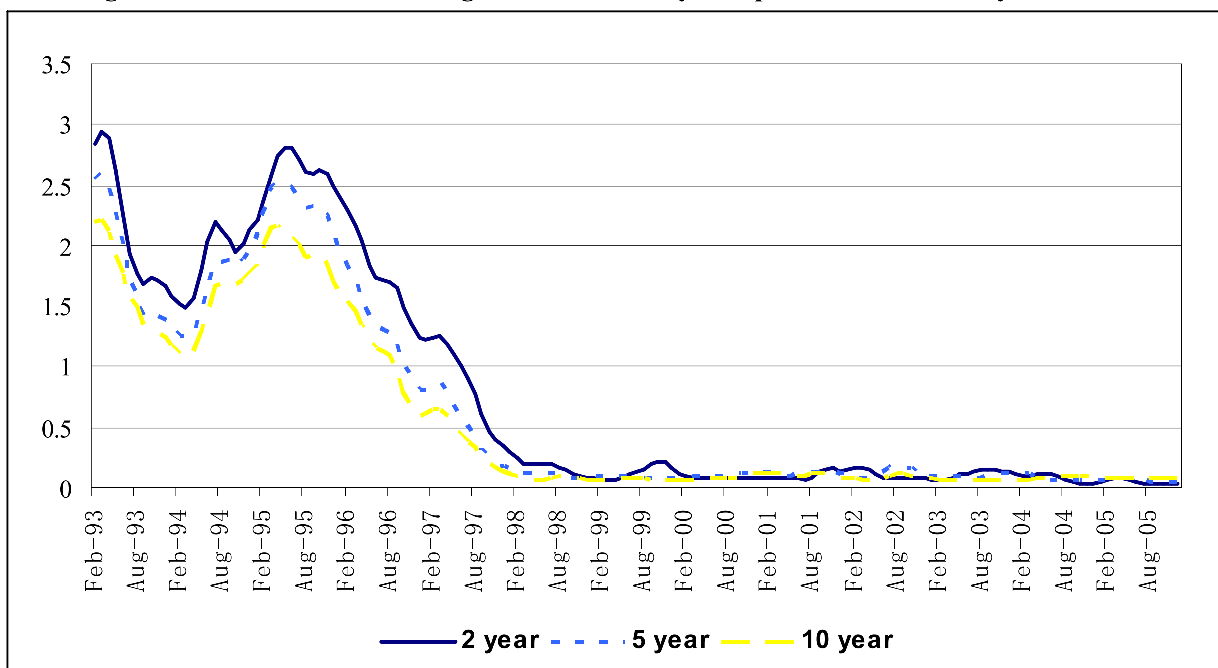
(1) Government Bond Market

The combined effect of Euro, convergence of the legislation and infrastructure developed into a dramatic convergence of the yields on government bonds of the same maturity. A simple way to quantify the degree of integration in this market segment is to look at developments in the standard deviation of yield spreads over time: the lower the dispersion, the higher the degree of integration. Figure 4 shows the evolution over time of the standard deviations of government yield spreads over German bonds (for 10-year bonds) and French bonds (for 2- and 5-year bonds). This shows a significant drop in these indicators in the run-up to the EMU, which then remain close to zero form 2001 onwards (the year in which Greece joined EMU). The sharp decline of these indicators signals that the euro area government bond market

[11] For details, see Bank of England (1998).
[12] For the national markets in Italy, the Netherlands, France, Belgium and Portugal.
[13] Based in London, for trading in benchmark government bonds of several euro area countries (Italy, Germany, Spain, Austria, the Netherlands, France, Belgium, Portugal and Finland).

has reached a very high level of integration.

Figure 4: Standard deviation of government bond yield spreads for 2-, 5-, 10-year maturities

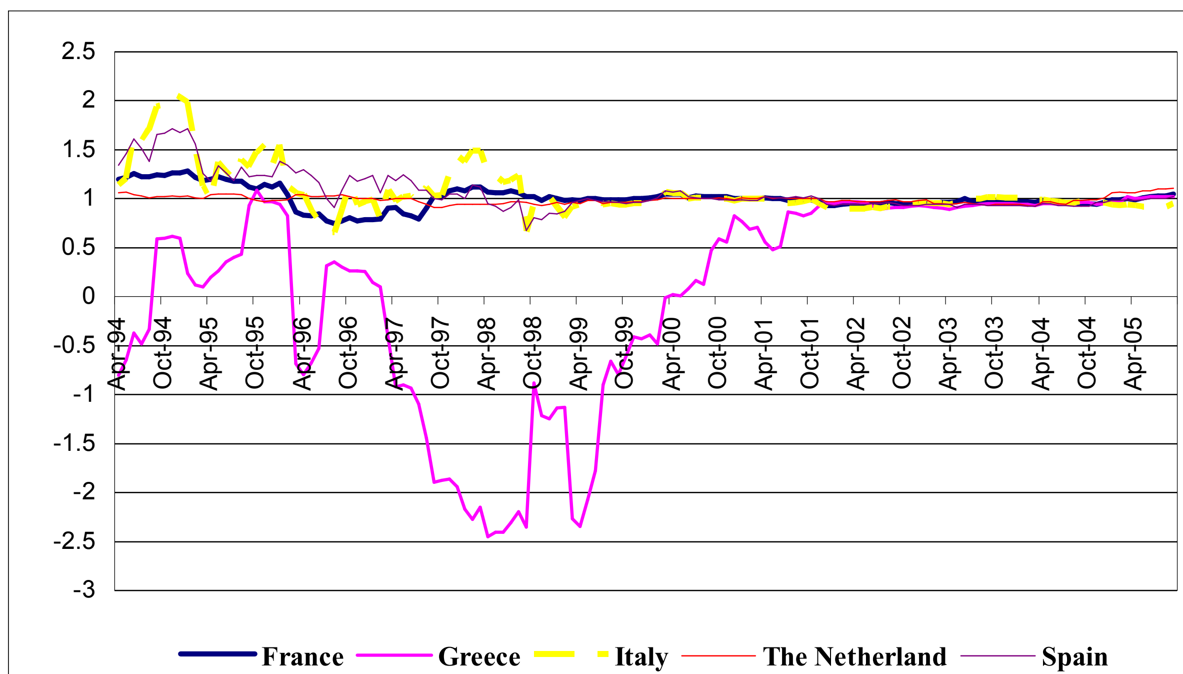


Source: ECB

Note: As a benchmark, the German government bond yield is taken for the 10-year maturity and the French government bond yields are taken for 2- and 5-year maturities. Greece enters the standard deviation calculations for all maturities at the dated of its entry to EMU.

Another indicator is the "beta-convergence", that is based on the economic intuition that the more integrated the market is, the more bond yields should react to common factors instead of local factors. The "betas" represent the estimated correlation of changes in the 10-year government bond yield of a given country with changes in the German 10-year government bond. Figure 5 shows that the betas varied substantially up to 1998 and converged afterwards towards1, the perfect integration level. Greek bond yields only converged after 2001.

Figure 5, Evolution of beta coefficients for some selected countries. (10-year government bond yields, 18-month rolling regression)



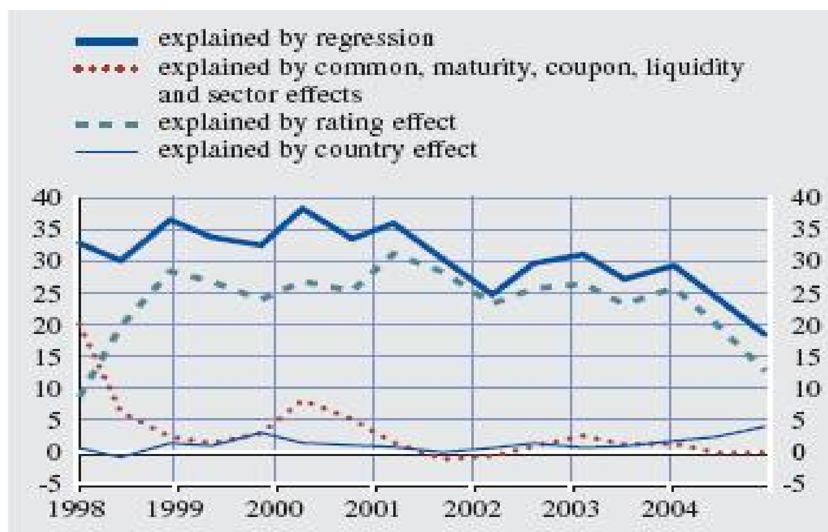
Source: ECB

Note: Based on a model regressing national 10-year government bond yields on benchmark German 10-year government bond yields.

(2) Corporate Bond Market

The yield on a corporate bond depends on more complicated factors than the government bond, such as the credit rating, time-to-maturity, liquidity and cash-flow structure. In a fully integrated corporate bond market, each factor should play the equal role across all countries, and the proportion of the total yield spread variance that is explained by country effects should be close to zero. Figure 6 shows that, country effects explain a very small proportion of the cross-sectional variance of corporate bond yield spreads. So the implication is the euro area corporate bond market is quite well integrated.

Figure 6, Proportion of cross-sectional variance explained by various factors (percentages)



Source: Bloomberg and ECB calculations.

Although bond yields have converged dramatically as all the figures show, the small and variable yield differentials for government bond under EMU don't disappear completely, which obviously shows that euro area bonds are still not perfect substitutes[14]. But can we just simply comprehend this as a phenomenon of persistent market segmentation? Actually, the answer may be no. Differences in credit risk and liquidity among individual countries account for the majority of these remaining yield differences, and determine the extent to which there is still scope for increased integration in euro area government bond markets[15].

4. Challenges Ahead

Although the EU bond markets, both the government bond market and the corporate bond market, have reached a high level of integration, the challenges lying ahead in the process of integration in the EU bond market still exist. Some frictions may still stand in the way of full integration: even after the removal of exchange rate risk, probably due to the introduction of Euro, persistent differences in tax treatment, standard contractual clauses and business conventions, issuance policy, security trading systems, settlement systems, availability of information, and judicial enforcement may still segment the markets along national borders. Another challenge

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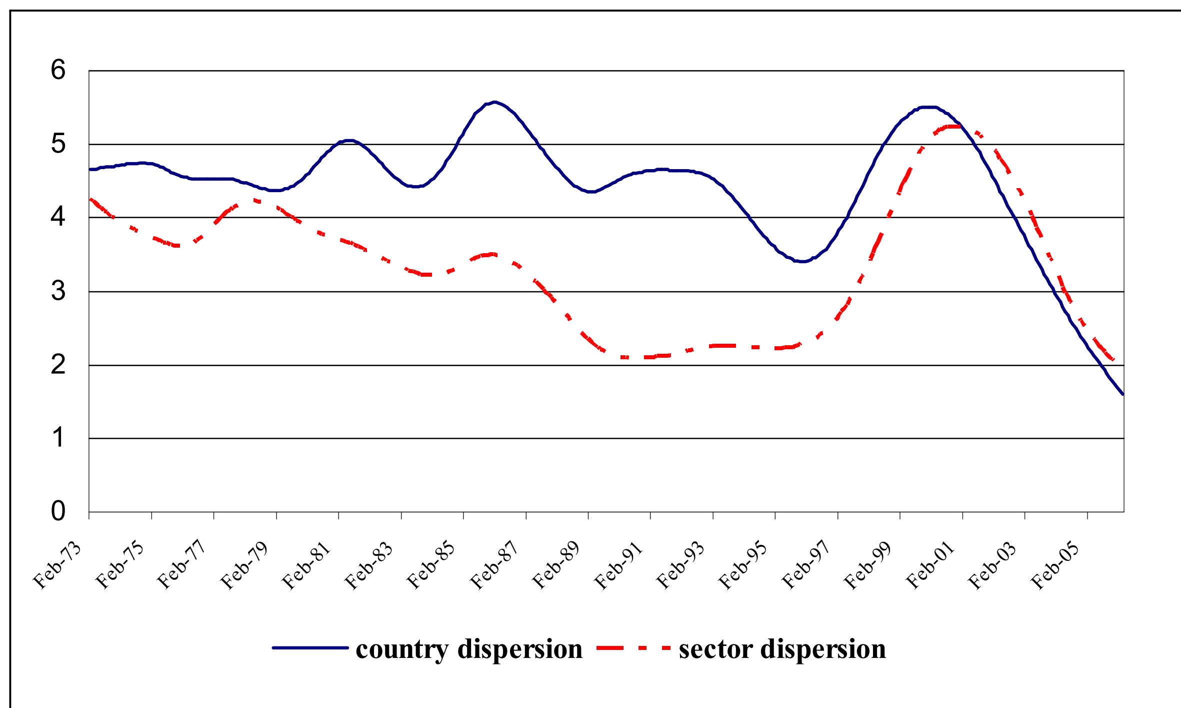
[14] See Marco Pagano and Ernst-Ludwig von Thadden, *The European Bond Markets Under EMU,* Centre for Economic Policy Research Discussion Paper Series No.4779.December 2004.
[15] See Lieven baele, Annalisa Ferrando, Peter Hördahl, Elizaveta krylova and Cyril Mnnet. Mearuring Financial Integration in the Euro Area. ECB Occasional Paper Series No.14/April 2004.

is to overcome the persistent fragmentation of clearing and settlement systems in the Euro-area bond market, which prevents a full integration of the corporate bond market. This problem needs to be paid more attention from all the EU financial regulators.

Ⅳ. The Equity Market

Recent empirical evidence shows that the degree of integration has increase in the EU equity market. Stock prices across the euro area increasingly react to the same euro area-wide factors and news. Furthermore, the elimination of intra-euro area currency risk has reduced the "home bias" in the equity holdings of institutional investors, but the country effect is still quite important.

Figure7, Filtered country and sector dispersions of euro area equity returns (percentages)



Source: Thomson Financial Datastream and ECB calculations.

Note: The figure shows Hodrick-Prescott filtered cross-sectional dispersions of monthly euro area country and sector equity returns.

In an integrated equity market, country-specific factors should be of less importance. The more integrated the market is, the greater the benefits of diversification through sector-based equity investment strategies rather than through country-based ones. Figure 7 plots the country and sector dispersions of monthly equity returns over time. For nearly the whole sample, the country dispersion has been higher than the sector

dispersion. This figure suggests that a country diversification strategy has been superior to a sector diversification strategy for most of the time. However, both country and sector dispersions have considerably decreased in the most recent years, which may imply a trend of integration in the EU equity market.

1. Construction of the Unified Infrastructure

The introduction of the euro has accelerated the development of equity market infrastructures into increasingly integrated and consolidated market structures comprising financial exchanges and clearing and settlement systems. Technological innovations have spurred the fundamental changes, causing less dependency on physical market locations and thereby exposing market locations and participants to an increasingly competitive environment in both the domestic and the global arena. But despite the single currency, the euro area equity infrastructure still remains highly fragmented and insufficiently integrated. There are still a large number of different providers for trading, clearing and settlement, and they are not efficiently connected to one another. Actually, most EU Member States have traditionally developed their own coherent national securities market infrastructures. The degree of integration and consolidation of the service providers involved and of the activities along the transaction value chain varies considerably across the countries in EU.

2. M&A of Stock Exchanges

In recent years, numerous new cooperative agreements, joint ventures and merger plans between exchanges have been announced in the EU securities exchange industry. Table 2 provides an updated overview of the securities exchange industry, highlighting most of the merger initiatives undertaken by various stock and derivatives exchanges in the euro area in the period from 1999 to 2004. Table 2 reveals that there have been some consolidation efforts towards more integrated infrastructures, as the total number of securities exchanges in those countries had decreased to 22 by October 2004.

Table 2, Stock and derivatives exchanges in the euro area, 1999-2004

Country	January-99	Octorber 2004
Austria	Vienna Stock Exchange	Vienna Stock Exchange
Belgium	Belgium Stock Exchange BELFOX (derivatives)	Euronext Brussels

Finland	HEX Integrated Markets	OMX Exchanges
France	Paris Stock Exchange MONEP MATIF Nouveau Marché	Euronext Paris
Germany	Deutsche Börse AG Berliner Börse Bremen Stock Exchange Börse Düsseldorf Hamburg Hanseatic Stock Exchange Lower Saxony Stock Market at Hanover Bayrische Börse AG Börse Stuttgart AG	Deutsche Börse AG Berliner Börse (merged with Bremen Stock Exchange) Börse Düsseldorf BÖAG Börsen AG (The Hamburg Hanseatic Stock Exchange and The Lower Saxony Stock Market at Hanover) Bayrische Börse AG Börse Stuttgart AG
Greece	Athens Stock Exchange S.A. Athens Derivative Exchange S.A. Thessaloniki Stock Exchange Center	Athens Exchange
Ireland	Irish Stock Exchange	Irish Stock Exchange
Italy	Borsa Italiana S.p.A.	Borsa Italiana S.p.A.
Luxembourg	Luxembourg Stock Exchange	Luxembourg Stock Exchange
Nertherlands	Amsterdam Stock Exchange	Euronext Amsterdam
Portugal	Lisbon Stock Exchange Oporto Derivative Exchange	Euronext Lisbon
Spain	Barcelona Stock Exchange Bilbao Stock Exchange Stock Exchange of Madrid Valencia Stock Exchange MEFF Renta Fija MEFF Renta Variable	Barcelona Stock Exchange (BME) Bilbao Stock Exchange (BME) Stock Exchange of Madrid (BME) Valencia Stock Exchange (BME) MEFF Renta Variable (BME) MEFF Renta Variable (BME)

Source: ECB
Note: Greece joined the euro area on 1 January 2001.

At the national level, many of the recent consolidation deals have been mergers of regional exchanges (e.g. in Germany). In August 2002 the Athens Stock Exchange and the Athens Derivatives Exchange merged to form the Athens Exchange. The transformation of the cash and derivatives exchanges also smoothed the way for further cross-border consolidation. In February 2002 the Portuguese exchange Bolsa de Valores de Lisboa e Porto (formed through the restructuring of the former Lisbon Stock Exchange Association and the Porto Derivatives Exchange Association) joined

the Euronext Group to become Euronext Lisbon as a wholly owned subsidiary of the Euronext Group.

While consolidation has proceeded at a remarkable pace in the period under consideration, the securities exchange market in the euro area still remains fragmented and the ultimate outcome of the consolidation process is uncertain. There have been more domestic than cross-border mergers. As a result of the consolidation process, the securities exchange industry has evolved towards a structure of more integrated exchange groups and thus contribute to the integration of the equity market.

3. Benefits

In this section discussing the EU equity market, we applied our mind to study the whole infrastructure thing. That is because the integration of European financial infrastructures is a very important issue. A fully integrated financial infrastructure will fully exploit the benefits arising form a more homogeneous euro area financial market. The integration and consolidation of financial markets and infrastructures within the EU would lead to additional business and investment opportunities, lower cost for cross-border transactions, improved opportunities for diversification, and more efficient allocation of capital.

Developments in technology, legal harmonization and the unified infrastructure at the European level have been promoting further integration in the EU equity market. As a consequence of these developments, there has been a rapid expansion in the number and volume of securities that are traded, cleared and settled across borders in the euro area. Economies of scale and scope and positive network externalities inherent in the equity services industry mean that substantial cost savings, increased efficiency and the positive effects of international portfolio diversification can be expected from further integration.

4. How to promote the integration?

As we mentioned before, the euro area equity markets are still quite fragmented, and the costs of cross-border transactions have remained high when compared with domestic trading, clearing and settlement costs. The most relevant factors underlying the lower degree of the integration of financial market infrastructures are likely to be, on the one hand, persistent cross-border differences in tax regimes, procedures and laws; and on the other hand, vested interests among users, owners and management of the systems. As identified by the Giovannini Group, these barriers tend to discourage

or eliminate competition among system operators and prevent the necessary conditions for an efficient securities infrastructure to emerge.
Substantial barriers continue to exist in this area, resulting in a highly fragmented European securities infrastructure, in particular with regard to efficient cross-border clearing and settlement. Current work at the Eurosystem level can be expected to be helpful in promoting further integration. In view of the EU accession process and the future participation of the new EU Member States in the euro area, a large number of reforms have taken and are taking place in the countries concerned. It has been and will continue to be one of the priorities of the Eurosystem and the ECB in particular to assist the new EU Member States in developing safe and efficient financial securities clearing and settlement infrastructures.

Ⅴ. A Brief Comparison

Firstly, we are going to compare the EU bond market and the equity market in the aspect of the effect of EMU adoption. Investor's revealed preferences disclosed in their portfolio holdings and rebalancing decisions suggest that the EMU adoption has improved financial risk sharing in Euro-zone, and enhanced cross-border holdings. It is positive evidence of reduced market segmentation. These effects have been significantly stronger for bond than for equity portfolios. This may not be surprising as bond portfolio returns are proportionally more affected by transaction costs, and currency risk, which have been significantly reduced or eliminated by the adoption of the single currency. Santis and Gerard (2006)[16] document a significant decrease in home bias over the 1997 to 2001 period, both for equity and bond portfolios. The decline in home bias was on average significantly more salient for euro area member states, and more so for fixed income than for equity portfolios.
Secondly, we'd like to investigate the different levels of integration among these three markets as we discussed above. As we discussed in Section Ⅱ,the pan-European banking sector is imperfectly competitive and less integrated compared to other financial markets like the bond market in EU. The main characteristics that imply imperfect competition in the retail banking market are the presence of switching costs, asymmetric information, reputation and institutional barriers to entry[17]. We also can see that the EU equity market is less integrated than the bond market.

[16] See Roberto De Santis, Bruno Gerard. Feb. 2006, *Financial Integration, International Portfolio Choice and the European Monetary Union,* ECB Working paper.
[17] See Vives, *Banking Competition and European Integration* in European Financial Integration,A.Giovannini and C.Mayer, editors, Cambridge University Press, 1991.

Here we want to discuss the information problem behind these phenomena. Theoretical predictions show that the participation of a large number of investors requires information to be more widely available in public securities than in private capital markets. The results point out that the degree of integration is highly variable. It is not surprised to perceive the salient integration in the public corporate bond issuance, but the public equity market activity also presents significant integration. In both cases however, there is more integration at the large end of the market. From these results there are some policy implications we could derive. Integration occurs where comparative benefits are greatest, so the failure to achieve integration in certain areas like in retail banking reflects mostly inherent impediments. For instance, the main deficiency in relation to SMEs and foreign consumers may not be explained by the failure to integrate bank lending. The key bottleneck is the limited managerial expertise and entrepreneurial capability for cross-border banking to expand foreign business.

Thirdly, the standard and unified legal and technological infrastructures are required for the further integration of these three markets. A modern and efficient legal framework will not only enhance the safety, soundness and efficiency of the clearing and settlement of financial instruments, it will also promote the integration and competitiveness. As with equity markets and bond markets, retail markets also need an integrated infrastructure in order to reap the full benefits of financial integration. European citizens' cross-border banking activities, such as mortgage credit, also depend on the further developments in and costs of cross-border payments. In this respect, the Eurosystem's support, together with the European Commission have contributed to create a Single Euro Payments Area (SEPA), with which European citizens should be able to make payments throughout the euro area from a single bank account, and use a single set of payment instruments, as easily and safely as in the national context today.

Fourthly, all these financial markets face the legal and natural cross-border barriers in the process of integration. In each of the three sections, we listed the barriers in all three markets face. We can see that they almost confront the same obstacles comprising the regulatory ones and natural ones. Obviously, however, the integration of the retail banking market suffers more from the natural barriers because of its own characteristics. The innovation of technology, the construction of infrastructure, and the reduction of transaction cost are not enough to achieve the success. There are more jobs to do and there will be a very long way to go. The integration of the

retailing bank market will progress hand in hand with the whole integration of EU both economically and politically.

Ⅵ. Conclusion

Here we come to the conclusions, after all the investigation of the three EU financial markets; we understand that the whole journey of the integration of EU financial markets is far beyond complicated. The process, the present state and the future plan of each EU financial market's integration are different and variable because of each market's own characteristics. For instance, the bond market is the most integrated one compared to retail banking market and the equity market. The removal of legal barriers will strongly promote the integration of all the financial markets. But the natural barriers have a more significant influence on the retail banking market, and the removal of which will rely on further economic and political convergence within EU. The unified technological infrastructure like the standard clearing and settlement system plays a basic and important role in the process of integration for each financial market, and this unified infrastructure should develop accordant with the unified financial legislation and regulatory. However, we should admit that the differences among different EU countries exist and will exist. The main purpose of the financial market integration is definitely not to eliminate the differences, but to make full use of the differences, to provide more diversified choices for market participants, and to inject energy and efficiency into the economy.

So finally, we want to ponder the question, what is the essence of financial integration? Firstly, Integration is not an end in itself, as a naive integration goal could lead to unwarranted harmonization. The key objective is to improve the access to financial services. Secondly, financial integration is not only a quantitative target but also a qualitative one. The implication of financial integration is not only the law of one price. The complete implication should be: 1) all potential market participants with the same relevant characteristics face a single set of rules when they decide to deal with those instruments and services; 2) they have equal access to all the financial instruments and services; 3) they are treated equally when they are active in the market. Thirdly, some achievements of integration have been made through institutional efforts and benefit-driven behaviors of market participants. But we believe that the ultimate objective of all these efforts is to form a benign circle. Because the benefits of financial integration are not the products of propaganda, but

the real economic outcomes which spontaneously stem from the health market mechanism and perfect competition.

What all the EU regulators have done and are doing is to remove all the non market-friendly barriers, to create an efficient infrastructure for all the financial market participants. In this sense, the integration process which is going on in EU financial market shares some resemblances with the market-oriented movements in China nowadays. Both the pan-European government and the Chinese government endeavor to smooth the market operation. Undoubtedly both jobs seem complicated and arduous, but also rewarding.

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