The integration of Europe's financial markets

This article gives an overview of the ongoing process towards the integration of Europe's wholesale financial markets and explains the ECB's interest in this process. Financial integration may be defined as a situation whereby there are no frictions that discriminate between economic agents in their access to – and their investment of – capital, particularly on the basis of their location. The achievement of financial integration implies the removal of obstacles to the optimal exploitation of the network externalities and economies of scale and scope available to participants in a broad market, and the emergence of rules, practices and standards common to all market players and service providers. Fostering integration requires an effective interplay between market forces, collective action within the market community to overcome coordination problems, and action by public authorities. An assessment of the current state of integration of the markets in the euro area, based in particular on quantitative measures of integration, reveals a heterogeneous situation, where integration has only been completed in a few market segments. These segments are characterised by standardised product specification, harmonised rules and practices, and the existence of a common infrastructure. Further integration requires a strong commitment by EU and national authorities. The ECB also sees a need for public authorities to foster collective action in the private sector at the EU level to solve coordination problems that hamper financial integration. The ECB provides support to several such initiatives and intends to continue to do so, within the limits of its capability and competence, with other initiatives that may arise in the future.

1 Introduction

The creation of an internal market for goods and services, labour and capital is a fundamental objective of the EU and part of its raison d'être. Since the initial declaration set out in the Treaty of Rome in 1957, this objective has been furthered with the adoption of the Single Market programme in 1985 and, as regards its financial component, with the subsequent full liberalisation of capital movements. The introduction of the euro has acted as a powerful catalyst for the creation of an integrated financial market by removing the most important obstacle to the cross-border provision of financial services. At the same time, it has led to a greater awareness of the existence of other impediments to a truly integrated financial market and of the need to remove them. In response, the European Commission adopted a Financial Services Action Plan (FSAP) in the spring of 1999, which listed a number of legislative and other measures geared towards achieving a single market for wholesale financial services, open and secure retail markets, and state-of-the-art prudential rules and supervision. The high priority given by the political authorities of the EU to financial market integration was underlined by the Heads of State or Government at the European Councils of Lisbon (March 2000) and Stockholm (March 2001). The European Council called for full implementation of the FSAP by 2005, with all parties concerned making every effort to achieve an integrated securities market by the end of 2003 by giving priority to the securities markets legislation provided for under the plan. Simultaneously, numerous other initiatives, at the instigation of both the public and private sectors, have emerged, all with the aim of completing the integration of the financial markets.

This article gives an overview of the ongoing process of integration of Europe's wholesale financial markets. Section 2 defines the notion of financial integration in the context of the EU and the euro area. Section 3 describes the three drivers of financial integration and highlights the role of the various parties involved in this process, in particular with regard to the complementary contributions of the public and private sectors. Section 4 addresses more specifically the interest of the European Central Bank in a full integration of Europe's financial markets and the role it plays in this context. Section 5 takes stock of the current state of integration of the market and highlights some ongoing initiatives and challenges that are representative of the whole integration process.

2 Definition of financial integration in a European context

Financial integration may be defined as a situation whereby there are no frictions that discriminate between economic agents in their access to – and their investment of – capital, particularly on the basis of their location.

The underlying objective of promoting financial market integration, as that of the whole Single Market policy, is to foster a more efficient allocation, and subsequent use, of the resources available to the European economy. Financial integration must therefore ultimately be understood in terms of, and measured against, this benchmark. More specifically, financial integration has important implications in relation to the roles that financial markets perform, such as the allocation of resources across time and space, the provision of information and incentives, the ability to manage risks and pool resources, as well as the clearing and settlement of payments and securities transactions. In the performance of these functions, markets are characterised by significant network externalities as well as a potential for sizeable economies of scale and scope. The purpose of promoting integration is the exploitation of these benefits. Integration should in particular benefit the corporate sector and stimulate competition and innovation in line with the conclusions of the Lisbon European Council.

The optimal level of integration is achieved when further consolidation or concentration of markets would mean that the benefits of integration are outweighed by the loss of opportunities, in particular for diversification of risk, or that markets are no longer contestable.

As mentioned by A. Lamfalussy in the first Report of the Committee of Wise Men on the regulation of European securities markets (November 2000), building an open European financial services and capital market is the logical and necessary complement to the euro.

The expected benefits of financial integration in the EU require the removal of the barriers and obstacles created by unnecessary differences in the various jurisdictions of the EU which are a persistent cause of market segmentation: the diversity of the Member States' legal systems, the patchwork of applicable legislation, taxation and cultural differences.

In the context of the EU, another relevant aspect of the definition of financial integration relates to the boundaries applicable. Insofar as financial integration aims to achieve a Single Market for financial services, its geographical scope should ultimately be that of the entire EU. This is of particular importance in the context of an enlarged EU incorporating ten new Member States as from 2004. Since the new Member States will have a derogation and will not introduce the euro immediately after their accession, they will retain their sovereign powers in the monetary policy field. However, the geographic extension of the single financial market will increase its economic benefits and, as stressed by the Commission in its last FSAP progress report of June 2003, "it is in all our interests that these new additional markets will be absorbed smoothly into the EU regulatory system".

At the same time, it must be recognised that perhaps the most important defining feature of any financial system – in fact the interconnecting element that justifies the use of the word "system" to refer to the whole financial sector – is the currency that supports it. There are, accordingly, situations in which the natural boundary for the integration of the financial system is either the euro area, when localisation is relevant (i.e. retail markets), or the euro-denominated financial markets (i.e. wholesale markets). Until all Member States of the EU have adopted the euro, the assessment of the appropriate level at which integration is to be pursued in each market segment should be made on a case-by-case basis, within the framework of the objectives and principles of the Treaty.

3 The three drivers of integration

Descriptions of the ongoing process towards the integration of Europe's financial markets often specifically emphasise the action of public authorities, in particular through legislation and regulation. This attention is justified by the need to build a comprehensive EU legislative framework for the financial sector enshrining effective Single Market freedom and common regulatory objectives in principles-based rules. This should not, however, overshadow the fact that, while the legislative and regulatory environment of the financial system creates the necessary conditions for financial integration and development, market participants also contribute towards creating and developing the Single Market by taking advantage – both individually and collectively – of the opportunities it opens up. The complementary role of public and private sector action in this process can be more explicitly described by distinguishing between three groups of beneficiaries of market integration and the three corresponding types of action that contribute to it. First, each market participant taken individually can expect to benefit from integration, for instance through opportunities to gain market share from competitors, or to launch or benefit from a wider range of financial products without having to operate across borders. Accordingly, integration can proceed from the expression of market forces. Second, integration benefits the community of market participants as a whole, for instance through increased market depth and liquidity, and integration should therefore be furthered by means of the collective action of the financial community. Finally, integration benefits the economy as a whole, in particular through externalities from the financial sector to the non-financial sector, and consequently integration may be furthered by the action of public authorities. In practice, the attainment of an optimal level of integration requires an effective interplay between (i) market forces, (ii) collective action and (iii) public action, and therefore also between the various parties involved.

Market forces

The first driver of financial integration, in line with the principle of an open market economy with free competition, is and should be the expression of market forces. Market users are, as previously mentioned, the first and main beneficiaries of financial integration. They benefit directly from the lower cost of intermediation that enhanced competition brings about. They also benefit from access to a broader range of financial instruments and more opportunities to diversify their portfolios. Financial service providers can also profit from the exploitation of the potential economies of scale and scope that a larger market offers.

Since individual market participants are the first beneficiaries of financial integration, and assuming that their incentives are properly aligned, the expression of market forces should lead to the elimination of inefficiencies, i.e. in this case, market segmentation. An example of partial integration brought about by market forces is provided by the convergence of issuance practices of sovereign debt issuers towards what was perceived as the "best" practice, in an environment where debt management offices found themselves competing to attract demand from a single pool of savings.

Another type of integration resulting from the expression of market forces can be seen in the numerous examples of consolidation, particularly in the form of mergers, that have taken place in the field of market infrastructure, including stock exchanges, clearing houses and securities settlement systems. Such consolidation is underpinned, to a large extent, by efforts to exploit the economies of scale and scope potentially available within a broader market. In this context, it should be emphasised that market forces can effectively further integration only if no legislative or regulatory obstacles stand in the way of cross-border consolidation of financial service providers, of the emergence

of a market for corporate control, or of a general availability of similar financial products across the entire area. This is a necessary condition if pan-European financial service providers are to be able to become established in all fields of finance.

Collective action

There are situations, however, where market forces alone are not sufficient to remove inefficiencies. Coordination problems occur when incentives for market participants are not properly aligned. In such cases, market forces may not be able to drive financial integration forward or towards an optimal outcome. Collective action is therefore necessary to achieve an optimal outcome, from the common perspective of the whole market community.

The widespread need for collective action to complement and enhance the freedom of the market originates arguably from the importance of network externalities in the financial system. The more participants use a particular market, the more benefits it brings to its users. These benefits include greater depth and liquidity, reduced transaction costs, as well as easier and more effective opportunities for risk management. Against this background, coordination of market participants can deliver unique benefits through agreements on standard technical features of financial instruments, the definition of common practices and conventions, or the establishment of reference indices, for instance.

The existence of powerful network externalities may have, however, the paradoxical effect of slowing the process of integration of Europe's financial system. Strong network effects are often associated with high switching costs, i.e. the cost of switching from one set of organisation, practices, conventions, rules and infrastructure to another. In the European context, national markets have been developed over decades, with their own coordinated arrangements and their own internal network externalities. For participants in each national market, a switch to a pan-European market entails costs – at least in the short-term – that may slow the transformation of the European system from a juxtaposition of national systems into a genuinely integrated one, unless the long-term benefits of such a switch are well understood.

Effective and market-led integration therefore requires new coordinated arrangements to be devised, with the aim of both lowering the switching costs and maximising the network externalities provided by the broader market that would be thus created. This, in turn, requires the existence of fora, in particular Europe-wide industry associations in all segments of the financial system, where such coordination can take place.

In practice, where collective action has been undertaken on a market-wide scale, it has achieved significant benefits. Market conventions contribute to the harmonisation of market practices within the EU. In 1998 a series of market conventions sponsored by several market organisations paved the way for a basic integration of wholesale markets at the launch of the single currency. This included the rules applicable to the basic market interest reference rate, the EURIBOR (euro interbank offered rate: the rate at which euro interbank term deposits are offered by one prime bank to another at 11 a.m. C.E.T.). A similar initiative permitted the establishment of the other basic interest reference rate for overnight unsecured interbank deposits, the EONIA (euro overnight index average). Recently, another market convention has added a new reference index, the EUREPO. This is the rate at which one prime bank offers funds in euro to another prime bank if in exchange the former receives eligible assets as collateral from the latter.

Public action

While financial integration benefits first and foremost the market community, its effects are much more widespread. Integration has,

in particular, the potential to raise the level of financial development of the area in which it takes place and, through this channel, to generate a higher level of sustainable non-inflationary growth. The existence of a causal relationship between financial development and economic growth is indeed well established by both theoretical and empirical research. One of the means by which financial integration may raise the level of financial development is by facilitating innovation, insofar as the economies of scale brought about by a larger market allow the investment costs associated with innovation to be recouped more easily. More generally, integration opens up new opportunities for risk-sharing across regions, which, according to recent empirical findings, creates the potential to enhance specialisation in production, itself a factor of higher potential growth.

Financial integration has the potential to alter the nature of the risks faced by the financial system and the rest of the economy. As financial integration takes place, it should lead to structural changes which may imply a redistribution of (especially system-wide) risk and a different configuration of channels for contagion. This means that public authorities, and in particular the central banks and supervisory authorities of the EU, must establish mechanisms that allow for the monitoring and analysis of such developments so as to obtain a better understanding of the change in systemic risk. In this respect, the Banking Supervision Committee of the European System of Central Banks (ESCB) has established a framework for macro-prudential analysis that focuses more specifically on the stability of the banking sector. Regular internal macro-prudential reports are produced twice a year, as well as ad hoc reports on relevant issues (such as developments in the banks' liquidity profile and management), a number of which have been published.

The pervasive effects of financial integration on the whole economy potentially justify the involvement of public authorities to support its development towards an optimal outcome, e.g. in situations where a public good cannot be supplied privately or where a market or coordination failure occurs. In both cases, neither market forces alone nor collective action within the private sector is sufficient to deliver the desirable level of integration.

In this context, action by public authorities may come in many forms. It can be a catalyst or facilitator of collective action to help overcome coordination problems (for instance, the neutral role of the ECB in the fixing of the EONIA rate as a service to the banking sector). It can extend to direct intervention, as in the case for instance of the development of TARGET (the EU-wide large-value payment system operated by the ESCB), which was instrumental in allowing inter alia the full integration of the interbank market for bank reserves at the start of Stage Three of Economic and Monetary Union (EMU).

However, an exclusive and essential responsibility of public action remains the establishment of an appropriate legislative and regulatory framework, able to deliver effectively the freedom of the Single Market and stability. This function cannot be underestimated, as financial markets and services are highly regulated activities, and market forces and collective action may only succeed where the legal and regulatory framework has paved the way, not only by removing obstacles but also by setting common basic rules. The European Commission's FSAP, described in the introduction, so far represents the main element of that framework, which aims to create a single wholesale market and an open and secure retail market. As most measures included in the FSAP have now been adopted or are likely to be adopted soon, the emphasis is gradually moving towards their full, consistent implementation and enforcement and the monitoring of their effects.

4 The interest of the ECB in a fully integrated European financial system

The reasons for the ECB's interest

The integration of Europe's financial markets is a policy objective and a political priority reiterated on several occasions by the European Council. The interest of the ECB in financial integration, and its support for initiatives that may contribute to furthering it, can therefore be interpreted in the light of the provision of Article 105 of the Treaty, which states that without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community.

In addition, the ECB has a particular interest in the further integration of Europe's financial system. An efficient and well-integrated financial system is pivotal to the smooth and effective transmission of monetary policy throughout the euro area. While this assessment applies to all segments of the financial system, it is of particular importance with regard to the market segments most directly relevant to the implementation of monetary policy, especially the market for bank reserves (unsecured interbank money market).

In the context of the operational implementation of monetary policy, more integrated financial markets may also help the ECB in another way. The Eurosystem grants credit to its counterparties against adequate collateral. In the current collateral framework, eligible assets are divided into two tiers, tier two consisting of a variety of asset types fulfilling national eligibility criteria. In view of the need to ensure the transparency of the collateral policy and a level playing-field for counterparties, the Eurosystem is investigating whether and how this heterogeneity could be reduced, and under what conditions the two tiers could be merged to obtain a single list. Its success is highly dependent on the further harmonisation of national laws and/or practices in the field of securities and collateral.

Another reason for the ECB's interest in financial market integration relates to the promotion of the smooth operation of payment systems. Financial integration, in particular at the level of infrastructure, may be instrumental in facilitating the pursuit of this task.

Finally, another reason for the ECB's interest in financial integration is its relationship with financial stability. Central banks have a natural interest in this area and this role is confirmed in Article 105(5) of the Treaty, which inter alia states that the ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the stability of the financial system. A high degree of integration has an impact on financial stability. A larger and more diversified financial system will be better able to absorb economic shocks than financial systems in individual countries. On the other hand, high integration may also increase the risk of cross-border contagion.

The nature of the ECB's contribution to financial integration

Reflecting the areas of and reasons for its interest, the support given by the ECB to financial integration is not only *passive*, it is also *active*. This support takes the form of (i) direct action, (ii) catalysis of collective action, and (iii) contribution to raising the level of awareness of the need for integration and the means to achieve it, and is reflected in a large number of initiatives of which a few representative examples follow. Direct action is undertaken in the areas of the ECB's immediate competence and within the context of the pursuit of its basic tasks. The establishment of TARGET, which, as already mentioned, was instrumental in the integration of the unsecured money market, falls into this category.

Owing to its particular institutional position, being both a public authority with a pan-European scope and a market participant, the ECB is well positioned to complement and support the action of other parties to promote financial integration. In this context, the advisory role entrusted by the Treaty to the ECB is particularly noteworthy, as the ECB's advice can contribute to the integration of financial markets, in particular from a regulatory and legal point of view. According to Article 105(4) of the Treaty, the ECB is to be consulted on any proposed Community act and by national authorities regarding any draft legislation in its fields of competence. In addition, the ECB may submit opinions to the appropriate Community institutions or bodies or to national authorities on matters within its fields of competence. In the field of prudential supervision (Article 25 of the Statute of the ESCB), the ECB may offer advice to and be consulted by the Council, the Commission and the competent authorities of EU Member States on the scope and implementation of Community legislation relating to the prudential supervision of credit institutions and to the stability of the financial system. In some instances, the Treaty or the Statute provide explicitly for a mission of harmonisation and/or integration, such as in the case of Article 5.3 of the Statute which foresees that the ECB shall contribute to the harmonisation, where necessary, of the rules and practices governing the collection, compilation and distribution of statistics in the areas within its field of competence.

The action of the ECB is also channelled through its participation in a number of EU committees whose missions encompass a contribution to financial integration. An example of this is the Economic and Financial Committee (EFC) and its working party on EU government bonds and bills (the "Brouhns Group"). The ECB participates as an observer in the newly established Financial Services Committee (FSC), which is the successor of the Financial Services Policy Group. In the new institutional setting, the FSC provides advice for the EU Council and the Commission on a range of financial markets issues, both internal (e.g. Single Market, including implementation of the FSAP) and external (e.g. in the framework of the World Trade Organisation). The ECB cooperates closely with the Committee of European Securities Regulators (CESR) with whom it has established a joint working group on issues of common interest in the field of securities clearing and settlement systems.[1] With the exception of the insurance sector, the ECB will also be present in the new European regulatory and supervisory committees that will be set up in the near future for the different financial sectors (see Section 5).

An example of the public action in which the ECB is involved is the recent work undertaken by the ESCB and the CESR to set out standards for securities clearing and settlement systems. One of the objectives of the work is "to promote and sustain integration in the European markets by referring to one single set of standards that provides a clear and rational regulatory framework and does not impose undue costs on market participants". More specifically, some standards, particularly those relating to settlement cycles, access criteria and efficiency, expressly require a degree of harmonisation at the EU level. As pointed out in the Giovannini Group's Second Report on EU Clearing and Settlement Arrangements ("the Giovannini Report", April 2003), harmonisation of settlement cycles is an important element in order to achieve more integrated repo markets. However, such harmonisation will be costly since it may require a significant review of current market practices. The joint work of the ESCB and the CESR calls for further analysis to identify the appropriate level of harmonisation.

Beyond its cooperation with other public authorities, the ECB also acts in partnership with the private sector to foster collective action. In the case of the development of the EONIA, as previously mentioned, the ECB acted as facilitator. At the request and on

1 See http://www.ecb.int/pub/cons/cesr2003/ecbcesr_announce.pdf

behalf of market associations, the ECB collects the data from which the index is derived and calculates the reference rate daily. Another example of the ECB's involvement in support of a private sector initiative is the work currently being undertaken by a group of market participants under the auspices of the ACI (the Financial Market Association) with a view to achieving effective integration of the multiple markets for short-term securities that exist across the continent. The purpose of this initiative, which draws upon input from issuers, investors, dealers and infrastructure providers from throughout the EU, is to define common conventions and market practices applicable to short-term securities across the area, thereby creating a de facto single market for these securities. As it did in the creation of the EONIA, the ECB is playing the role of facilitator in this initiative. In particular, the ECB hosted, at the request and on behalf of private sector participants, a market-wide consultation on the means of furthering integration of this particular market segment.[2] The ECB may also be asked to carry out some functions, such as compiling statistics, to support the smooth operation of this market.

Another private sector initiative that the ECB has sponsored is the establishment of the European Financial Markets Lawyers Group (EFMLG), which since 1999 has met at the ECB's premises in Frankfurt.[3] The members of the EFMLG are selected, on the basis of their personal experience, from among senior lawyers of those credit institutions based in the EU which are most active in the European financial markets. Recognising that, notwithstanding the introduction of the euro, the integration of European financial markets is still hampered by the absence of a single set of legal rules and harmonised contractual practices, the EFMLG aims to discuss the promotion of initiatives to foster the harmonisation of the laws and practices underpinning financial market activities. Among the issues discussed so far are the legal barriers to the cross-border use of collateral (pledges and transfer of title arrangements), addressed at the EU-wide level by the EU Directive on financial collateral arrangements, the legal obstacles to the integration of short-term securities markets (in cooperation with the ACI, see above) and the harmonisation of the legal framework for rights evidenced by book-entries in respect of certain financial instruments in the EU.

One important market-led initiative to harmonise contractual documentation was the European Banking Federation's launch of a Master Agreement for Financial Transactions in January 2001.[4] Drawn up in English, French, German, Italian, Spanish and Portuguese and subject to the governing law chosen by the contracting parties, this multi-lingual, multi-jurisdictional and multi-product master agreement seeks to consolidate into a single master agreement the various master agreements used within the euro area for the documentation of repurchase and securities lending transactions, as well as, in the near future, foreign exchange and standard derivatives transactions. The ECB is itself a user of this master agreement in connection with the ECB's own repo operations with all counterparties in the EU and Switzerland.

The fora in which the ECB cooperates with third parties to raise awareness of issues related to financial integration, in particular its effects, extend also to the academic sector. In cooperation with academic collaborators, the ECB established a research network on "Capital Markets and Financial Integration in Europe". Its purpose is to stimulate policy-relevant research that aims to contribute towards the understanding of the current and future integration and structure of the financial system in Europe.[5] Through the existence of this network, and by making its findings available to the public, the ECB aims to provide sound theoretical and empirical underpinnings to initiatives that may subsequently be adopted by the private or public sector to further market integration.

2 See *http://www.ecb.int/pub/cons/aci/*
3 See *http://www.efmlg.org/*
4 See *http://www.fbe.be/downloads/EMA_3.pdf*
5 See *http://www.eu-financial-system.org*

5 The current state of integration and ongoing challenges

Indicators of financial integration

In order to assess the current state of integration, and provided that a degree of comparability of products and services can be ensured across Member States, it is necessary, in principle, to evaluate the extent to which geographical considerations affect the price of financial instruments and the behaviour of market participants. One way of doing this is to test whether the so-called law of one price holds, i.e. whether similar financial instruments that provide the same risk/return profile trade at the same price, irrespective of the place of issuance, transaction, settlement and custody. Indicators of the extent to which market participants engage in cross-border activity also provide some indication of the degree of market integration. In the absence of geographical constraints, investors should, in theory, not be affected by a particular home bias, i.e. a preference for instruments issued locally rather than in other regions.

These indicators, however, need to be complemented by an overall assessment of the degree of integration of the financial system, i.e. of whether the diversity of markets can be explained by the different economic needs they serve, and whether markets are conducive to the most effective allocation and utilisation of capital.

With a view to monitoring in a dynamic fashion the process of European financial integration, the European Commission is in the process of developing a comprehensive set of indicators relating to the convergence of interest rates, the extent of cross-border activity, cost-effectiveness and market power. This exercise should make it possible, in particular, to identify the technical, legal and regulatory bottlenecks to the process and provide some basis for prioritisation of EU-level actions. See the box for some quantitative measures of financial integration developed at the ECB and applied to the euro area money, bond and equity markets.

Box

Measuring financial integration in the euro area

The strongest implication of financial integration in a given geographical area is that the law of one price should hold in the financial markets of this area. In this context, the law of one price states that assets with the same risk characteristics should have the same expected return, regardless of the location or identity of either the issuers or the holders of the assets. Full financial integration in the euro area would then imply that assets that are comparable and available throughout the various jurisdictions of the euro area and that generate identical cash flows trade at the same price in all countries of the area. In some markets, such as money and government bond markets, assets are often sufficiently comparable to permit the measurement of price differences directly as an indicator of the degree of integration. In other cases, such as equity markets, it is in practice very difficult to find securities in different markets that have sufficiently similar cash flows and risk characteristics to allow simple price comparisons as measures of integration. In these cases, integration measures need to estimate the relative importance of factors common to the euro area in the pricing of assets ("systematic risk"), as opposed to idiosyncratic factors (notably country-related factors). This box presents a selection of financial integration measures, based on the law of one price, and applies them to money, bond and equity markets in the euro area.[1]

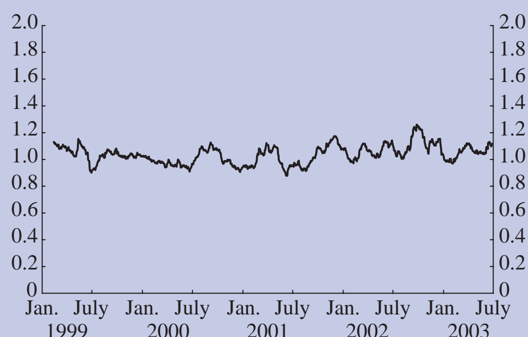
The first measure consists of directly capturing price differences within a country relative to price differences across borders. In Chart A this measure is illustrated using the case of the money market, and more

1 *Further details on these measures, as well as additional results based on alternative integration measures and other market segments, will be available in the forthcoming ECB Occasional Paper "Measuring financial integration in the euro area" by Baele et al.*

specifically the unsecured euro overnight market. This market is of special interest to the ECB, as it is of particular importance to the implementation of monetary policy. Moreover, it benefits from very detailed information on rates across the euro area, since the calculation of the EONIA is based on daily interest rates provided by individual EONIA panel banks, weighted by lending volume. The curve in the chart shows the ratio of average overnight rate differences between EONIA panel banks located in *different* euro area countries and average overnight rate differences between EONIA panel banks located *within the same* euro area country. On the plausible assumption that national money markets are fully integrated, a ratio very close to one indicates that the euro overnight market is also fully integrated. The higher the ratio is above one, the less integrated the market is. As the curve has been oscillating within a fairly narrow range around one since early 1999, Chart A clearly shows that the unsecured euro overnight market has been highly integrated since the start of Stage Three of EMU.

Chart A: Euro area overnight market integration: ratio of average "cross-border" rate deviations to average "within-country" rate deviations

(30-day moving average)



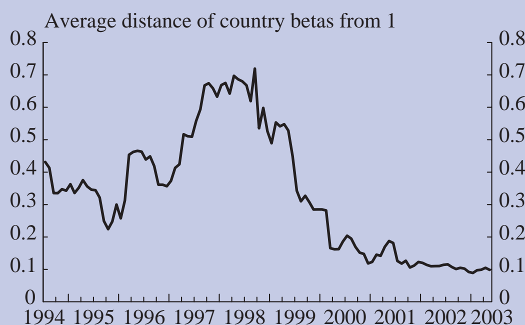
Sources: European Banking Federation and ECB.
Note: Deviations are calculated as absolute values of interest rate differences across all possible combinations of rates among banks located in different countries (for "cross-border") or located in the same country (for "within-country").

The other two measures presented in this box are of the more indirect type, where the relative importance of common factors across the area is estimated as an indicator of integration. The rationale behind these measures is that if there are no barriers to international investment, investors can diversify against local shocks by holding assets from different countries. Hence, these shocks should not constitute a source of systematic risk. In fully integrated financial markets, returns on similar assets should be equal across countries and should only be influenced by factors common to all.

Chart B shows one such measure, as applied to the euro area government bond market. The curve in the chart is derived from regressions estimating to what extent ten-year government bond yields in the euro area countries react to a common factor of the area, as constituted by the benchmark yield for this maturity. The idea is that a benchmark yield incorporates all the common factors relevant to price in the respective area. If the coefficient of the estimation for a given euro area country is close to 1, then this country's government bonds are highly integrated within the euro area market. The lower the coefficient is below 1, the less integrated these bonds are. In the case of Chart B, the curve is calculated as the average of the differences of the coefficients from 1 across all euro area countries, so that a value closer to 0 indicates greater integration and a value closer to 1 indicates less integration. The profile of the curve suggests that the introduction of the euro in 1999 was accompanied by a substantial increase in the integration of the ten-year government bond market in the euro area (the integration indicator

Chart B: Euro area government bond market integration: average "cross-country" deviation from 1 of the reaction of each country's ten-year bond yield changes to euro area-wide benchmark yield changes

(18-month rolling estimation window)



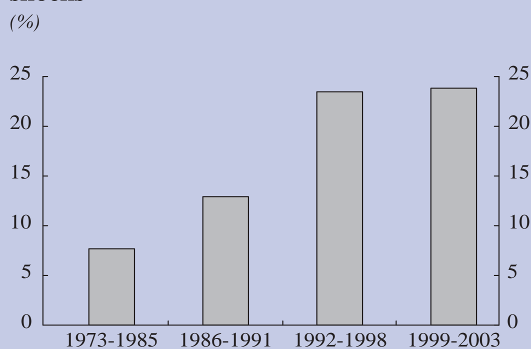
Source: ECB.
Note: The chart plots the average distance of a regression coefficient, measuring the reaction of local bond yield changes to changes in euro area-wide bond yield changes (using German ten-year government bonds as the benchmark), from 1.

declines from about 0.7 for 1998 to around 0.1 for 2000, and remains at that level thereafter). The current level of integration is, however, less advanced than in the case of the money market, as the indicator has not yet declined consistently below the level of 0.1. Hence, some obstacles to the full integration of the government bond market still seem to remain. Moreover, in the mid-1990s there was already a period during which euro area ten-year government bond yields moved closely in line with the euro area-wide benchmark, albeit to a somewhat lesser extent than since the introduction of the euro.

Chart C shows the results for another of the indirect measures, this time applied to euro area equity markets. The bars in the chart refer to the average variance ratios among euro area countries that measure the part of local equity return volatility explained by pure euro area shocks. The ratios, which are estimated using an approach that allows variances to vary over time, isolate the common euro area shocks from those that originate in the rest of the world, as proxied by US equity market shocks. The larger the variance ratio for euro area shocks, the more integrated equity markets are, with the limit being 100%. Overall, the results in the chart suggest that equity market integration in the euro area has advanced significantly since the 1970s. The euro area average variance ratio has increased from about 8% in the 1973-86 period to almost 25% for the period since the introduction of the euro, although in the most recent period between 1999 and 2003, the average increase was marginal. Despite the overall increase over the last decades, the fact that the average variance ratio is not higher than 25% can be interpreted as an indication that the level of equity market integration reached so far is not particularly high. Indeed, although the three measures presented in this box are not directly comparable, it seems that equity markets may be the least integrated markets of the three examples given here.

Chart C: Euro area equity market integration: average proportion of stock price variations explained by pure euro area shocks

(%)



Sources: Datastream and ECB.
Note: The chart shows the relative importance of euro area-wide factors (excluding the common impact of US equity market fluctuations) in explaining the variance of each euro area country's equity market index ("variance ratio"), averaged across countries for four different periods. The individual country variances, as well as the common euro area and US variances, were estimated using a GARCH model.

Heterogeneity of the wholesale capital market segments

Based on the above quantitative measures, the assessment that emerges is that, almost five years after the introduction of the euro, the level of integration achieved in the different segments of the European wholesale capital market is still heterogeneous. Integration appears to have progressed both faster and more deeply in market segments where product specification has been defined on a market-wide basis, where the rules applying to transactions and the practices followed by market participants have been harmonised across the area, and where a common infrastructure exists. In addition to the unsecured interbank money market mentioned above, another example of a perfectly integrated market segment is the overnight interest rate swap market, where the definition of the product (based on the EONIA reference) is fully standardised. Derivatives markets, including both money market futures contracts and government bond futures, can also be said to be perfectly integrated in the sense that all market participants use the same standardised products and market infrastructure, and follow the same market rules.

A lower level of integration has been achieved in markets where the segmentation of the infrastructure, especially with regard to securities clearing and settlement, remains in place. This is the case, for example, in the secured money market (repo market) where, despite collective action by market participants to harmonise product specification, obstacles to full integration remain.

A broadly similar assessment can be made for market segments where market specification is not entirely harmonised. Examples of these are the bond market in general and the government bond market segment in particular. Convergence of technical features of inflation-linked bonds denominated in euro issued by the French and Greek governments suggests, however, that this is one sub-segment of the market where integration through harmonisation of product specification appears to be occurring.

Markets for high-yield debt securities and asset-backed securities, both of which can play an important role in allowing risks to be spread across the area, remain fragmented and relatively underdeveloped. This is in part the consequence of the lack of harmonisation of product specification, itself a reflection of differences in national bankruptcy laws inter alia.

Another example of an imperfectly integrated market is the short-term securities market, where a lack of product feature harmonisation across the continent results in a segmentation of the market. In this context, it is noteworthy that efforts are being undertaken by the community of participants in this market to achieve better product standardisation and facilitate integration by means of the initiative on short-term securities referred to in Section 4.

Ongoing challenges

On 15 July 2003, the ECOFIN Council invited the FSC to examine the overall progress in financial integration and its economic benefits, notably in the context of the FSAP and its follow-up, to examine those key areas where further financial integration could deliver significant economic benefits to the EU, and to advise on those areas where progress needs to be made as a matter of priority in order to create a truly integrated EU financial services market. The FSC will report back on its work during the spring of 2004 in order to prepare a political debate in the Council on priority areas for further action. Within the limits of its field of competence, the ECB intends to contribute fully to the preparation of the "post-FSAP" strategy. Among the immediate and ongoing challenges related to financial integration, the issues of the consolidation of the financial infrastructure and of the EU regulatory and supervisory arrangements for the financial sector are of particular importance. Distortions arising from differences in taxation regimes also remain a source of concern.

Given the key role that the establishment of a common infrastructure appears to have in the process of capital market integration, the ongoing work of the Giovannini Group must be underlined as likely to facilitate considerably further integration in securities markets. The Giovannini Group is a forum of financial sector experts, in which ECB representatives also actively participate, which meets under the chairmanship of Alberto Giovannini and advises the European Commission. It has studied both the nature of the remaining obstacles to complete integration of the clearing and settlement arrangements in the EU and the means to remove these obstacles. The group has identified 15 barriers to efficient and integrated clearing and settlement arrangements. Of these, two relate to taxation and three to legal certainty. However, tellingly, no less than ten barriers relate to technical requirements and/or market practices, i.e. to issues that can potentially be solved by market participants themselves through coordinated action, sometimes with the support or shared responsibility of the public sector. Moreover,

the group suggested specific actions to remove each of these barriers and, in cases where coordination was needed, identified an institution that could act as coordinator.

A comprehensive review of the EU arrangements for financial regulation, supervision and stability is currently underway. The review, which should contribute to the further integration of the EU's institutional financial architecture, was initially triggered by the report (2001) of the Lamfalussy Committee on the regulation of European securities markets. The Committee of Wise Men made a number of recommendations to increase the speed and efficiency of the European regulatory and supervisory framework for securities. An overhaul of the existing structure was deemed necessary to meet the challenges of modern financial markets. In addition, based on the recommendations contained in two EFC reports on the subject, and following a public consultation, ECOFIN decided at the end of 2002 to extend the Wise Men's approach, i.e. the elements of the regulatory process applied in the securities sector, to the whole financial sector. A major challenge for the future will be to make this new financial architecture (comprising a network of financial regulators and supervisors) work speedily, effectively and in a flexible manner. As mentioned by the Inter-Institutional Monitoring Group in its first interim report of May 2003, the success of the Lamfalussy approach will depend on its ability to produce Level 1 legislation[6] that is not too detailed. In addition, Level 2 legislation should not become an amalgam of already existing detailed rules. The first experiences of Level 1 legislation seem to go beyond what are termed "framework principles" in the Lamfalussy approach. At the same time, in recent years Member States have introduced national financial legislation outside the still young Lamfalussy framework, the results of which constitute a more diversified legislative framework for financial services.

Another area where progress should be made in order to further the integration of financial markets is the area of taxation, which still gives rise to substantial distortions within the EU. The most critical part of this area, the taxation of savings income, has been tackled by way of a Directive adopted in June 2003.

6 Conclusion

In view of the considerable benefits that European financial integration can bring to the economy at large, the current situation, whereby numerous market segments remain insufficiently integrated, calls for continued commitment by all parties involved to further this process until its completion. The ECB itself intends to actively contribute to fostering European financial integration within the limits of its capabilities and competence. It is also necessary that the other public authorities of the EU maintain a strong commitment to foster the integration process. This implies in particular an unwavering commitment by national authorities to implement a legislative and regulatory framework that delivers Single Market freedom and financial stability, with the full acknowledgement that both the freedom to participate in the market and its stability constitute public interests at the European level.

In addition to the action of public authorities, it appears that collective action by market participants, when used effectively, can deliver unique benefits to achieve not only integration

6 *The Lamfalussy approach is a four-level process for approving legislation on securities regulation. Level 1 consists of framework principles, namely in the form of directives or regulations, to be decided by normal EU legislative procedures. Level 2 arranges for the implementation of detailed measures following the Level 1 framework principles. Level 3 consists in enhanced cooperation and networking among EU securities regulators to ensure consistent and equivalent transposition of Level 1 and Level 2 legislation. Level 4 consists in strengthened enforcement, notably with action by the European Commission to enforce Community law, underpinned by enhanced cooperation between Member States, their regulators and the private sector.*

per se, but also convergence towards the best market standards. There may be benefits for the financial community as a whole to be derived from a more systematic investigation of situations where collective action may contribute to the development of an integrated market for financial services. In this context, the ECB has on numerous occasions, only a few of which have been mentioned here, acted as a facilitator for such collective action in the private sector to solve coordination problems that have hampered financial integration. It is therefore foreseeable that other future initiatives may also elicit and receive its support.