

The Financial System and the Institutional Environment as Determinants of Economic Performance: Austria in Comparison

Friedrich Fritzer¹

Empirical studies suggest that the Austrian economy would benefit considerably from a further integration of financial systems (Guiso et al., 2004). Against this background, this paper highlights selected aspects of the Austrian economy's financial structure and institutional environment in a cross-country comparison and evaluates the extent to which these factors are conducive to economic performance.

Compared with the U.S.A. or the United Kingdom, the ownership structure of listed companies is highly concentrated in Austria and in many other euro area countries. In fact, the Austrian stock market stands out in terms of its high ownership concentration. However, empirical evidence indicates that an all too high level of ownership concentration has a negative impact on firm performance (see, for example, Gugler, 1999). Fostering investor protection is a natural lever to promote a higher degree of dispersion and hence a lower level of concentration. Although the standards of investor protection in Austria have improved substantially in recent years, they still need to be safeguarded and strengthened where necessary.

Another important issue in this context is the development of venture capital markets which are key to innovation and hence to productivity. It is no coincidence that the most liquid venture capital markets are found in countries with the most developed stock exchanges – e.g. the U.S.A., the United Kingdom and the Netherlands. The Austrian venture capital market is one of the smallest by international standards. In order to promote venture capital in Austria, the local stock market, which provides exit opportunities for venture capitalists, needs to be deepened.

According to several indicators (which were originally developed by Barth et al. (2004) – supervisory power, supervisory independence and private monitoring – and updated for the present purpose), the Austrian regulatory and supervisory framework seems to be fairly well designed to foster efficiency and stability in the banking sector: (1) Austria seems to be among those countries which grant a fairly high degree of power to the supervisory authority. (2) The supervisory power is complemented by adequate mechanisms to foster the reporting of reliable, comprehensive and timely information (private monitoring). (3) In comparison with other countries, the Austrian supervisory authority is quite independent from political interference and influences from the banking industry (supervisory independence).

JEL classification: G28, K22, O4

Keywords: financial systems, corporate governance, banking sector regulation.

1 Introduction

The Austrian financial system is increasingly shaped by policy initiatives and developments at the European and international levels, set off e.g. by the European Commission, the European Central Bank (ECB) and the Organisation for Economic Co-operation and Development (OECD). The European Commission's Financial Service Action Plan (FSAP), which was launched to foster financial integration in Europe, entailed the adoption of 42 measures at the European level, which now need to be implemented and enforced at the national level. Of the 21 EU directives², the Transparency Directive,

the Takeover Bids Directive and the Markets in Financial Instruments Directive have not yet been transposed into national law in any of the EU Member States (see European Commission, 2006).

The European Commission recently outlined new priorities for 2005 to 2010 in its White Paper on Financial Services Policy (see European Commission, 2005). The main objectives of the White Paper are to consolidate progress made so far, to monitor the implementation of the FSAP measures at the national level and to enhance supervisory cooperation (see box 1 in the annex). The driv-

Refereed by
Markus Knell,
OeNB.

¹ I thank Ernest Gnan, Patrick Darlap, Karin Hrdlicka, Markus Knell and Helene Schuberth for extensive comments on the paper. I am also grateful to the participants of a seminar on this topic organized at the OeNB, who provided input for future work.

² The other 21 measures of the FSAP are nonbinding recommendations.

ing force behind both the FSAP and the White Paper is the EU's ambition (as outlined in the so-called Lisbon strategy) to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs by 2010.

Not too long ago, the ECB for the first time published indicators of financial integration in the euro area (see ECB, 2005a) with the aim of monitoring financial integration. The ECB does not only look at financial integration from a growth perspective but also introduces a monetary policy view, since well-integrated financial systems contribute to the smooth and effective implementation of monetary policy.

Finally, the OECD recently launched an initiative to quantitatively assess the impact of financial system regulation on economic growth (OECD, 2006). Unfortunately, the quantification of growth effects is substantially hampered by a lack of appropriate data.³ For that reason, the OECD, the European Commission and the ECB are currently exploring the possibility of constructing a database on new financial system indicators, i.e. variables which go beyond the financial structure variables usually encountered in the empirical literature. For instance, the ECB has recently published a collection of measures describing various dimensions of the financial system, some of which are rarely considered in the empirical literature (ECB, 2005b and box 2 in the annex).

The present paper follows this line of research. It will focus on some aspects of the Austrian financial system and compare them to euro area coun-

tries and other benchmark countries (for instance the U.S.A.). As the literature on new financial indicators is still very much at the beginning, some limitations are inevitable.

First, the study will present a few important determinants of the institutional environment in which an economy operates. Second, the paper will try to assess the impact of the institutional environment on the efficiency of the allocation of resources (at the micro-level) and aggregate economic performance (at the macro-level). Financial stability effects, however, will not be considered. Third, this study aims at a qualitative assessment based on available empirical results as the sample of countries is very limited and institutional factors are not available over an extended period of time.

This paper is partly based on work done at the ECB (Hartmann et al., 2005). The new data reported in section 2 stems from replies by national authorities (see also Hartmann et al., 2005); the design of the related questionnaire was based on a World Bank survey (see box 3 in the annex).

Section 2.1 describes the broad theoretical link between financial systems and economic growth, with a particular focus on the role of corporate governance, legal systems and regulatory rules in determining economic growth. Section 2.2 discusses financial system size in contrast to financial structure. Section 2.3 evaluates the potential growth-enhancing effect of further financial integration in Europe. Section 2.4 finally analyzes selected issues of financial structure and institutions which are assumed to have an impact on economic performance, i.e. the different ownership structures

³ The OECD study evaluates regulatory variables which basically measure competition (for instance foreign bank entry).

of listed companies (section 2.4.1), recent developments in company law and regulation (section 2.4.2) and the modest size of the venture capital market in Austria as well as most other euro area countries (section 2.4.3). Section 3 concludes.

2 Theoretical and Empirical Links between Financial Systems and Economic Performance

2.1 The Theoretical Framework in a Nutshell

Financial systems influence economic growth via (1) the allocation of savings across investment projects, (2) the amount of resources consumed for the provision of financial services (i.e. financial systems' efficiency) and (3) their direct impact on the savings rate of an economy. Channel 1 improves the productivity of capital, while channels 2 and 3 influence the steady state per capita capital stock and thereby output.⁴

As it is costly to provide financial services, it is inevitable that financial systems absorb a certain amount of resources (channel 2). However, the amount of resources absorbed may be larger than necessary owing to monopolies and/or inefficient regulation, for instance. In such cases the functioning of financial systems is inefficient, as it does not promote as well as possible the growth potential of an economy.

The direct effect of financial systems on the savings rate (channel 3) may be negative or positive. Financial systems pool savings of individuals and thus improve growth prospects, e.g. via the potential funding of large-scale investment projects which could

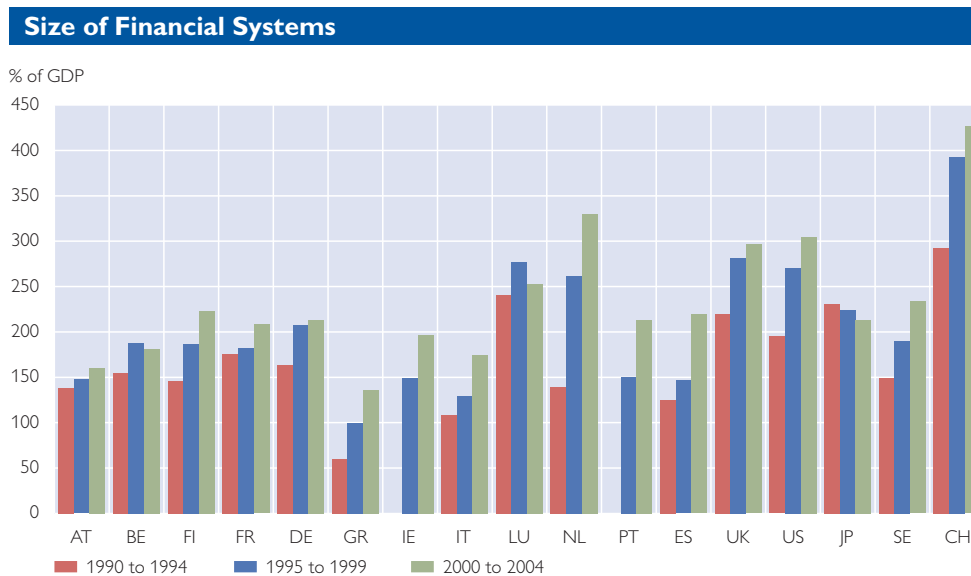
otherwise not be realised. However, the risk-reducing function of financial systems also tends to reduce households' precautionary savings, as there is less need to insure against liquidity shocks. As a consequence investments in growth-enhancing projects which are of a more illiquid nature are reduced.

Finally, financial systems enhance the efficient allocation of capital (channel 1) via the provision of information, their risk-sharing function and indirectly through the legal environment and other regulatory measures which protect investors and provide incentives to adhere to financial contracts. This, in turn, facilitates the full exploitation of the growth potential of the economy.

Good corporate governance tends to reduce the conflict of interest between managers and shareholders. In this context, institutions play an important role as they set up the legal system and regulatory rules which have an impact on the quality of information. For instance, accountants and auditors evaluate the content of information that is conveyed to investors, and regulation often requires the disclosure of information that would otherwise not be provided. A good legal system promotes delegation of control from investors to managers, which facilitates the resolution of commercial disputes and hence is of particular importance for the development of financial markets. The legal and regulatory framework establishes parameters under which financial systems operate. These parameters, however, are not immutable but subject to the changing influence that interest groups may exert.

⁴ The description of the channels follows Pagano (1993). The framework is clearly an endogenous growth models perspective as neoclassical growth models explain growth exogenously (via for instance exogenously assumed technological progress or labor force growth).

Chart 1



Source: ECB (2005b) based on BIS, Eurostat, IMF International Financial Statistics, World Federation of Exchanges and ECB calculations.

Note: The indicator is the sum of bank loans over GDP, stock market capitalization over GDP and domestic debt securities of the private sector over GDP. Following the IMF definition, banks are all financial institutions that have liabilities in the form of deposits transferable by check or otherwise usable in making payments. Market capitalization is defined as the value of domestic equities listed on domestic exchanges. For the Netherlands and Portugal, data is up to 2001, while data for Luxembourg excludes debt securities.

Hence, financial structures have an impact on economic performance via corporate governance codes, law, institutions and politics.

2.2 Financial System Size versus Structure

Financial system size can be measured as the sum of bank loans to the private sector, plus stock market capitalization and the value of debt securities of the private sector, each as a share of GDP. In terms of relative size, the Austrian financial system currently ranks behind many other developed countries. For instance, the Austrian financial system is only about half the relative size of the U.K. or U.S. financial system or only about one-third of the Swiss financial system.

It is a fairly robust and generally accepted claim that a larger financial

system is positively linked to economic and productivity growth.⁵ King and Levine (1993) is one of the most influential studies establishing this empirical link. However, size is not the whole story.

Banks provide other services than stock markets. For instance, stock markets may be better prepared to promote riskier but also higher return projects. Levine and Zervos (1998) showed the specific growth impact of stock markets empirically. As yet, there are mixed answers to the question whether stock markets or banks have a more beneficial impact on growth. The link between financial structure and economic growth seems to be too complex to be reduced to the “bank versus security market” dichotomy. An interesting empirical result was recently published by Carlin and

⁵ However, causality does not necessarily run in one direction only, i.e. finance may either lead real activity or follow real activity.

Mayer (2003). They provide evidence that financial structure is a key determinant of the industrial structure of an economy. They argue that market-oriented financial systems and those with dispersed company ownership favor high-risk research and development activities. On the other hand, bank-oriented systems and those with concentrated ownership are associated with longer-term investment of a less innovative nature.⁶ Before presenting an in-depth analysis of some structural features of the euro area financial system, a general assessment of the growth potential of the European financial system will be made in the following.

2.3 Financial Integration and Growth

Baele et al. (2004) take stock of financial integration in the euro area and conclude that the state of integration is heterogeneous across financial instruments. Money markets, for instance, are at a very advanced stage of integration, while the opposite is true for the retail banking sector.⁷ The report confirms the incomplete stage of retail banking sector integration across euro area countries. The level of integration also seems to be low (if growing) for equity markets.

Guiso et al. (2004) measure the economic growth effects of financial

integration and conclude that the potential benefits of further financial integration in Europe are substantial (ranging from 0.6 to 0.7 percentage point of additional economic growth in the manufacturing industry per year) and that they are distributed unevenly across countries depending on their stage of financial integration and/or quality of institutions. Hence, notwithstanding the fairly advanced stage of financial integration in Europe, deepening integration is expected to foster economic growth.

For the Austrian economy the study delivers two noteworthy results: In a simulation, Austria belonged to the countries which would benefit considerably if the development level of the European financial system were raised to the U.S. benchmark (slightly below 1 percentage point additional annual output growth in the manufacturing industry and about 0.2 percentage point of GDP growth).⁸ On the other hand the United Kingdom and the Netherlands, i.e. the most advanced financial systems in Europe, would (not surprisingly) benefit the least of further financial development. Second, Austria (together with Germany) is one of the countries which would benefit most if exogenous institutional determinants which are assumed to determine financial development

⁶ Rajan and Zingales (2003) argue that monetary and financial integration in Europe favors the development of financial markets (i.e. stock markets), as external competition weakens established companies' tendency to repress entry into financial systems. Murinde et al. (2004) find evidence which suggests partial convergence of the EU financial system on a variant of the Anglo-Saxon model, as the EU financial system increasingly relies on internal financing as well as direct financing via equity and bond markets, while bank debt is becoming less important. Full convergence, however, would most likely require an adaptation of the regulatory and legal as well as the tax systems of the euro area.

⁷ The ECB has recently published a report on financial integration indicators for the euro area (ECB, 2005a) and will update it on an annual basis. The statistical indicators without the report will be updated semiannually and published on the ECB's website.

⁸ The simulation methodology used by Guiso et al. (2004) simulates the impact of raising financial development (bank credit to the private sector and stock market capitalization as share of GDP) to the U.S. value on output in the manufacturing industries. Given that manufacturing accounts for slightly more than 20% of total output, the impact on GDP growth is about 0.2 percentage point (assuming that further financial integration has no impact on the non-manufacturing industries).

would be raised to the maximum EU standard. The institutional features Guiso et al. (2004) take into account are measures of enforcement (private and public enforcement), the duration and cost of judicial procedures, and creditors rights.⁹ It has to be noted, however, that the institutional measures used in the paper are not very recent ones. The creditor rights variables are taken from La Porta et al. (1998), private and public enforcement measures are from La Porta et al. (2003), measures on court efficiency and cost of judicial proceedings are from Djankov et al. (2003) and the World Bank Doing Business Indicators. Since those measures were constructed the institutional framework has partly changed (see also section 2.4 on other indicators measuring the development of institutional quality over time).

Another empirical study which provides evidence of the growth-enhancing effects of removing regulatory obstacles is Demirgüç-Kunt et al. (2003). The authors argue that regulations on bank entry, restrictions on bank activities and regulations that restrain the freedom of banks to conduct their business boost banks' net interest margins. In turn, the function of the financial system to ensure the most efficient use of available resources is hampered.¹⁰ De Ávila (2003) and Dehejia and Lleras-Muney (2003) investigate the growth impact of the harmonization and liberalization of banking sector regulation for the EU and the U.S.A., respectively. Like Demirgüç-Kunt et al. (2003) they arrive at the conclusion that past dereg-

ulation has had a positive impact on economic growth. According to the ECB (2005b) Luxembourg and Finland have the least regulated banking sectors, while Austria is comparable to most other euro area countries in terms of restrictiveness of banking sector activities. The measure used in the study to determine this restrictiveness is the degree to which banks are allowed to undertake fee-based activities in addition to deposit taking and lending.

2.4 Selected Structural and Institutional Issues with an Impact on Economic Performance

2.4.1 Ownership Structure of Listed Companies

The ownership structure of companies listed on the Austrian stock exchange (and on other euro area stock exchanges) is much more concentrated than in the U.S.A. or the United Kingdom. According to Gugler et al. (2004) the median largest shareholder on the Austrian stock market owns more than 50% of a company's market capitalization (similar to Germany), while in the U.S.A. and the United Kingdom the corresponding value amounts only to about 10% to 20% (table 1). In addition, there are substantial differences with respect to the identity of owners. In the U.S.A. and the United Kingdom, ownership is primarily associated with institutional investors. (In the U.S.A. this mainly applies to the 500 largest enterprises; smaller businesses are largely family-owned.) At the Austrian stock exchange, ownership is to a large extent in the hands of other corporations, as

⁹ Guiso et al. (2004) performed a simulation in which they raised exogenous institutional features to the maximum EU standard due to the fact that policymakers cannot directly influence financial developments but only exogenous institutional features which in turn determine financial development.

¹⁰ The sample of countries they investigate, however, also comprises developing countries, in which banking markets might be less competitive than in better developed European economies.

Table 1

Concentration and Types of Ownership								
Country	Number of firms	Largest holder ¹		Family-holdings ²	Financial holdings ²	Non-financial holdings ²	State holdings ²	Dispersed holdings ²
		mean	median					
United Kingdom	687	16.00	11.78	17.9	37.0	15.1	1.8	28.2
Ireland	24	17.62	12.20	29.2	20.8	16.7	8.3	25.0
U.S.A.	largest 3,070	21.89	16.83	47.3	25.9	14.6	0.9	11.3
U.S.A.	largest 500	15.75	10.95	12.4	43.2	18.6	0.2	42.6
Denmark	40	23.13	15.00	25.0	12.5	25.0	2.5	35.0
Finland	34	26.90	20.70	5.9	17.6	38.2	23.6	14.7
Sweden	54	28.33	25.00	16.7	38.9	33.3	3.7	7.4
Austria	30	59.37	54.50	6.7	23.3	53.3	16.7	0.0
Germany	240	54.01	51.72	26.7	15.4	48.8	7.0	2.1
Switzerland	66	45.63	48.00	33.3	10.6	42.4	4.6	9.1
Japan	1,036	15.08	8.85	5.9	6.6	58.1	0.2	29.2
Belgium	41	44.54	43.00	9.8	34.1	53.7	0.0	2.4
France	187	48.88	50.00	25.1	17.6	51.3	2.3	3.7
Greece	5	52.44	51.00	0.0	0.0	80.0	20.0	0.0
Italy	57	45.24	47.52	3.5	40.4	47.4	3.4	5.3
Netherlands	66	27.13	16.00	6.1	13.6	43.9	6.1	30.3
Portugal	10	42.48	51.35	0.0	20.0	30.0	50.0	0.0
Spain	59	37.76	29.10	1.7	23.7	57.6	8.5	8.5

Source: Gugler et al. (2004).

¹ Mean or median of largest shareholders of listed companies.

² Share of companies directly controlled by type of holder.

is the case with most other euro area exchanges.

Furthermore, the dispersion of shareholders (i.e. the cumulative amount of small ownerships) is much higher in the U.S.A. and the United Kingdom than in Austria and other euro area countries, where dispersion is in most cases less than 10%¹¹, compared to about 40% (for the 500 largest companies) in the U.S.A. and almost 30% in the United Kingdom. At the aggregate level there is no clear evidence whether the high ownership concentration and low dispersion of shareholders in euro area countries

has a negative impact on economic performance; however, firm level evidence suggests that high ownership concentration tends to have a negative influence on firm performance and the size of the capital market.¹²

For instance, Gugler (1999) showed for a sample of Austrian firms that high ownership concentration negatively influences corporate performance (measured as the profit-to-sales ratio and the real internal rate of return). As a policy conclusion he suggests granting small shareholders better protection against large shareholders and improving corporate transpar-

¹¹ The exceptions are Denmark, Finland and the Netherlands. The share of dispersed holdings also decreases for the U.S.A. if more than the 500 largest enterprises are considered.

¹² Berle and Means (1932) point out that there is little incentive for shareholders to exercise corporate control in the presence of high dispersion as exit is cheaper than intervention. To mitigate these "free-rider problems" of corporate control the presence of large shareholders may be necessary. In fact, it was found that corporate performance increases with concentration levels if the concentration ratio is initially low. Only if the ownership ratio surpasses a critical level does it tend to exert a negative influence on corporate performance as the incentives for very large shareholders to exploit private benefits dominate. Accordingly, Franks and Mayer (2001) argue that it is largely an empirical matter whether free-rider benefits outweigh private benefits of control.

ency. However, it has to be borne in mind that Gugler's evidence is based on two samples of Austrian firms from the periods from 1991 to 1994 and 1975 to 1994. Since the mid-1990s the Austrian corporate governance system has to some extent improved (section 2.4.2 a).

In fact, what Gugler (1999) suggests, i.e. increasing shareholder protection in order to boost firm performance, has empirical support. Using a sample of about 1,500 large German firms, Gompers et al. (2003) constructed a governance index during the 1990s based on corporate governance commitment, shareholder rights, transparency, the influence of management and supervisory boards and auditing. They found that an investment strategy based on the purchase of firms with the strongest shareholder rights and the sale of firms with the weakest rights would have earned abnormal returns, which points to the possibility that weakly monitored management tends to extract private benefits at the expense of shareholder interests. Drobetz et al. (2003) constructed a corporate governance rating for German firms and documented a positive relationship between a firm's corporate governance rating and its value. Results are robust for endogeneity with causation running from corporate governance practices to firm fundamentals. However, aggregate indices of corporate governance have to be interpreted with caution as the weighting of individual elements of the indices does not provide information on whether these elements are in a complementary or substitutive relationship with each other.

One could argue that market forces would lead to a closer monitoring of

corporate management once it becomes evident for the shareholders that the former extract too many private benefits. Davis (2002) argues that the growing importance of institutional investors in the euro area may lead to enhanced corporate control. Different types of investors, i.e. family holders with large stakes, institutional investors (life, pension and mutual funds), nonfinancial holders, state holders or small individual holders, exert corporate control in different ways. Institutional investors usually do not hold large stakes in companies but are large enough to have decisive influences on management decisions. Furthermore they tend to monitor firm performance closely. The strengthening of private pension schemes in many European countries will further increase institutional investors' importance as corporate equity holders.

However, it seems doubtful whether these developments will lead to a performance-enhancing system without an adaptation of the regulatory framework. For instance, Gugler et al. (2004) investigate cross shareholdings and corporate pyramids across a large sample of countries and conclude that a strong concentration of ownership is not as important for company performance as strong legal protection for shareholders.

While it would be premature to argue that empirical studies provide robust evidence for the claim that highly concentrated corporate ownership negatively influences economic performance, a key message is that enhancing the protection of minority shareholders is crucial in order to promote firm performance (and possibly the efficient allocation of capital).

2.4.2 Institutions Generate and Administer Company Law, Supervise Financial Market Actors and Define Disclosure Standards

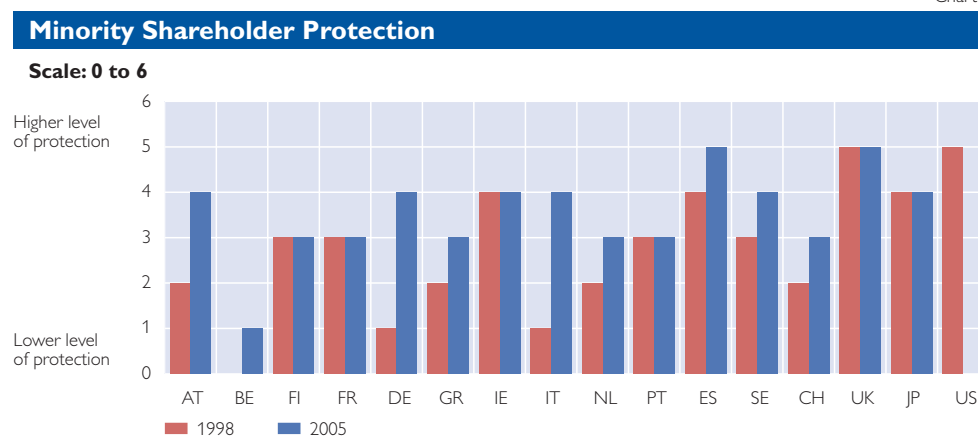
a) Improved corporate governance framework

Consumer and investor protection, corporate law and disclosure measures in euro area countries are in part laid down in binding rules and in part in voluntary codes. They form the environment in which financial systems evolve but they are not carved in stone. Policymakers need to constantly review the existing legal and regulatory framework to make it possible to adapt to major changes or to react to weak spots in the legal and regulatory framework. Large corporate failures

in the recent past (e.g. Parmalat in 2003) have led to regulatory action and a debate about a good framework for corporate governance. The most recent bankruptcy of a financial service provider in Austria shows that Austria is not exempted from corporate misbehavior.¹³

However, what is good corporate governance? Good corporate governance tends to reduce the potential conflict between managers and investors. A measure of good corporate governance is the shareholder protection index developed by La Porta et al. (1998). Specifically, the index measures the extent to which minority shareholders are protected against opportunistic behavior on part of the management.

Chart 2



Source: La Porta et al. (1998) for 1998 data; June 2005 update based on information provided by the OECD Corporate Governance and Company Law Database.

Note: This index is formed by the sum of quantified responses in the following areas: 1) proxy by mail; 2) shares not blocked before meeting; 3) cumulative voting or proportional representation; 4) oppressed minorities mechanism in place; 5) preemptive rights; 1) to 5) 1 = applicable, otherwise 0; 6) percentage of share capital required to call an extraordinary shareholders' meeting; 1 = minimum required percentage is less than 20 percent, otherwise 0. The index ranges from 0 to 6 with lower scores indicating low shareholder rights. The 2005 update for the U.S.A. is not yet available. The underlying data were originally published by the OECD. However, this presentation does not necessarily reflect the official views of the governments of its member countries.

Chart 2 shows that minority shareholder protection has substantially improved in Austria since La Porta et al. (1998) constructed their index (higher values indicate stronger minor-

ity shareholder rights). Austria is among those euro area countries with the strongest minority shareholder protection. Despite the improvement of minority shareholder protection in

¹³ In November 2005, Amis Financial Consulting AG went bankrupt.

recent years, euro area countries still slightly lag behind the degree of shareholder protection in the United Kingdom and the U.S.A. (For the purposes of the present paper we assume that minority shareholder rights in the U.S.A. have not deteriorated since

1998.) Shareholder rights are positively linked to the development of financial markets. Not surprisingly, thus, the United Kingdom and the U.S.A. are those countries in our sample with the most developed stock markets.

Table 2

Recent Changes to Company Law and Regulation

Country	Binding corporate governance code ("comply or explain") ¹	Defined audit functions and limitations ²	Improvements in transparency ³	Mitigation of potential conflicts of interest ³	Role of independent directors ⁴
Austria			+		
Portugal				+	
Greece		+	+	+	+
Belgium		+		+	+
Italy			+	+	+
Finland					
Denmark					
Sweden					
Germany	+		+		
France			+		
Netherlands	+	+	+		
Spain	+	+	+	+	
Japan		+	+		+
Ireland		+			
U.S.A.		+	+	+	+
United Kingdom			+		

Source: OECD (2004).

¹ Listed companies have to commit themselves to compliance with the corporate governance code. Any case of noncompliance has to be officially explained.

² Regulation to prevent that financial statements violate investor interests.

³ Conflicts of interest between managers and shareholders.

⁴ Non-executive directors protect investor interests in areas of potential conflict.

Note: "+" indicates a legal or regulatory change based on data collected by the OECD in 2002 and 2003.

Apart from general increases in shareholder protection, there have been several other common developments in company law in euro area countries (table 2): First, countries are trying to improve board supervision and the selection of board members. Second, there is a tendency to set standards to improve company's access to capital via for example stricter disclosure standards. One could argue that it is not necessary to regulate transparency as it would be

self-enforcing if it helps companies to gain easier access to capital. However, studies have shown that voluntary compliance with transparency standards proves to be rather low (OECD, 2004). Furthermore, small shareholders are usually less well informed than major shareholders and hence more vulnerable to market abuse. Third, there has been a general shift toward increasing the accountability of managers vis-à-vis shareholders. Fourth, policymakers have been trying to pro-

mote a stricter implementation of good corporate governance principles.¹⁴ For instance, Austrian companies listed on the Prime Market must (since 2004) state in their reports whether they comply with the Austrian Corporate Governance Codex and, if not, explain why (this amendment is not covered by table 2). Needless to say that this comply or explain rule is comparatively “soft,” as there is no substantial threat of negative consequences for companies ignoring the corporate governance code.

Generally speaking, policymakers in Austria and other euro area countries have been improving the design of corporate governance frameworks so as to secure the benefits of large shareholders as effective monitors of management whilst preventing them from extracting excessive private benefits. One important obstacle hampering the promotion of economic performance, however, is the diversity of legal and regulatory rules and (mostly nonbinding) corporate governance codes across the euro area. See OECD (2004) or the OECD Corporate Governance and Company Law Database for evidence.¹⁵

b) Regulatory framework in Austria seems to be conducive to growth

Viewed from the angle of economic efficiency, regulation in the financial sector should be tighter than in other markets (as for example the goods mar-

ket). First, financial crises can be extremely costly as they may spread quickly and spill over into the real sector of the economy. According to Caprio et al. (2003) the fiscal costs of the banking crises in Japan during the 1990s amounted to more than 20% of GDP. Europe is likewise not immune against large failures in the banking sector, as the banking crises in Finland (1991 to 1994), Italy (1990 to 1995) and Spain (1977 to 1985) show.¹⁶ Furthermore (almost) all private households use retail financial services and are hence exposed to failures in the banking sector.¹⁷ Second, asymmetric information is particularly prevalent in financial markets, the investor usually being the less well informed. In absence of mechanisms (self-enforcing mechanisms, regulations or legal rules) which compensate this informational disadvantage, investors might be exploited.

The OECD is working on a project to assess the impact of financial system regulation on economic growth (OECD, 2006). The preliminary findings suggest that economic growth is enhanced by a regulatory environment conducive to competition in the financial sector.¹⁸ However, regulation affecting competition is only one aspect of the regulatory and supervisory environment.

There are three measures which can be used to assess in how far the regulatory and supervisory framework in

¹⁴ There are several approaches ranging from stricter to less rigorous implementation. The strictest approach would involve a legally binding corporate governance code. A less rigorous implementation would only require that listed companies formally adhere to a (nonbinding) corporate governance code. However, a corporate governance code could also be seen as a key – if voluntary – element of good investor relationships.

¹⁵ The OECD Corporate Governance and Company Law Database will be made available to the general public in due course.

¹⁶ According to estimates by Caprio et al. (2003), however, the fiscal costs incurred in these countries were much lower than in the case of the Japanese banking crises during the 1990s.

¹⁷ Deposit insurance schemes may cushion this exposure to some extent.

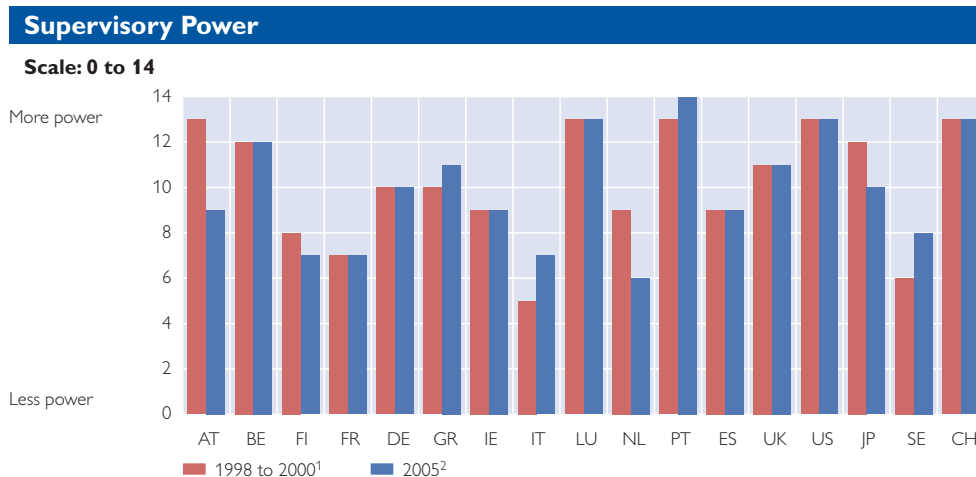
¹⁸ Fritzer (2004) provides a related result. In a cross-country setting, banking sector concentration proved to be detrimental to economic growth.

euro area countries is conducive to the efficiency of the banking sector and/or economic growth. These measures relate to *supervisory power*, *supervisory independence* and *private monitoring* (more specifically to rules and incentives which promote and/or facilitate monitoring on part of the private sector). The three indicators are based on a questionnaire developed by the World Bank. Updates of these indicators were received from national supervisory authorities (see also box 3). Findings in Barth et al. (2004) suggest

that these three measures are key indicators for assessing banking sector performance and stability.

The specific *supervisory power* indicator proposed here measures the degree to which supervisory authorities can take actions to prevent or correct problems in the banking sector. In particular, it assesses in how far action against external auditors, bank management and shareholders can be taken. Furthermore, the supervisory authorities' discretion in taking action is also considered.

Chart 3



Source: World Bank Survey with National Supervisory Authorities (1998 to 2000); 2005 values are the result of the author's calculations based on replies by national authorities.

¹ For BE a response to item 11.6 of the questionnaire is missing (value 0 assumed).

² FR, IT, NL, PT, SE: 2004 World Bank Survey (due to missing items).

Note: The index combines information on the following categories (yes = 1, no = 0): 1) Auditing/management: A) Can supervisors meet external auditors to discuss the report without bank approval? B) Are auditors legally required to report misconduct by managers/directors to the supervisory agency? C) Can legal action against external auditors be taken by supervisors for negligence? D) Can supervisors force banks to change the internal organizational structure?

2) Questions on disclosure and discipline: A) Are off-balance sheet items disclosed to supervisors? B) Can the supervisory agency order directors/management to constitute provisions to cover actual/potential losses? C) Can the supervisory agency suspend directors' decision to distribute dividends, bonuses or management fees? D) Can the supervisory agency supersede bank shareholder rights and declare a bank insolvent? E) Does banking law allow the supervisory agency to suspend some or all ownership rights of a problem bank?

3) Questions regarding bank restructuring and reorganization:

Can the supervisory agency or any other government agency do the following: A) supersede shareholder rights? B) remove and replace management? C) remove and replace directors?

At the time the World Bank Surveys were conducted (1998 to 2000 and 2001; 2001 figures are not shown in chart 3), Austria had a banking supervisory authority with fairly strong and "above average" supervisory

powers based on this methodology. According to data received from national authorities in 2005, supervisory power in Austria is slightly lower now.¹⁹ In April 2002 the Austrian Financial Market Authority (FMA)

¹⁹ In particular disciplining devices of the supervisory authority (the power to constitute provisions, the possibility to supersede shareholder rights, item 2) B) and D) and item 3) of the notes to chart 3) were to some extent cut back.

was established as an *integrated supervisory authority* responsible for the banking, insurance and securities sectors. Hence, the new legal basis provides the Austrian supervisory authority with a larger scope of supervisory responsibilities, which is not taken into account by the bank supervisory power index. The larger scope of supervisory responsibilities (banking, insurance and securities) is of increasing importance given the rise of financial conglomerates. Hence, it seems that the bank supervisory power index omits important aspects of current developments in financial systems. Furthermore, the new legal basis for the Financial Market Authority established rights which strengthen the FMA's supervisory power but which are not reflected in the supervisory power index. For instance, the FMA's enforcement rights have been strengthened (and now for instance include the right to execute legal notifications and to impose administrative fines).²⁰ According to the supervisory power index, the FMA currently has a higher degree of supervisory power than France, Italy, Sweden and the Netherlands and lower supervisory power than Switzerland, Luxembourg, Portugal and the U.S.A.

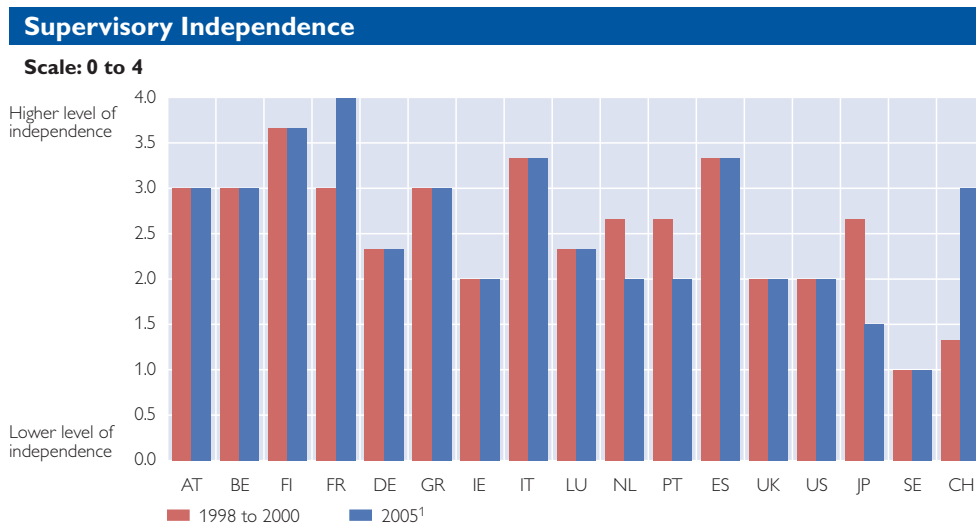
In the literature it is also argued that supervisory power is not necessarily conducive to economic performance, as regulators may sometimes abuse their power. In a cross-country setting, Barth et al. (2004) provide empirical evidence for the negative impact too much supervisory power has on economic performance.

The negative economic impact of too much supervisory power discussed in the literature can be counterbalanced by a high degree of *supervisory independence* and rules which facilitate private monitoring. Barth et al. (2004) investigated the effect of banking supervision on financing obstacles based on a sample of almost 5,000 corporations across 49 countries and found that creating a supervisory agency that is independent of influence exerted by the government or banks mitigates the adverse consequences of overly powerful supervision.

The supervisory independence index measures the degree to which the supervisor is outside the sphere of political and banking sector influence. For instance, the extent to which supervisory authorities are protected against lawsuits from banks increases their independence. The index ranges from zero (low level of independence) to 4 (very high level of independence).

²⁰ The Oesterreichische Nationalbank would like to stress that this survey does not cover all legal and regulatory changes which may have contributed to the enhanced supervisory power and independence of the newly established Austrian Financial Market Authority.

Chart 4



Source: World Bank Survey with National Supervisory Authorities (1998 to 2000); 2005 values are the result of the author's calculations based on replies by national authorities.

¹ FR, IE, IT, NL, PT: 2004 World Bank Survey (due to missing items).

Note: The index combines information on 1) independence of the supervisory authority vs. the political sphere (independence from government) and 2) independence vs. banks, i.e. the protection against lawsuits from banks. On 1) replies to the following questions are considered: A) To whom are supervisors accountable? B) How is/are the head of the supervisory agency/other directors appointed? C) How is/are the head of the supervisory agency/other directors removed?

Austria is among those countries with a relatively high degree of supervisory independence.²¹ The index of supervisory independence consists of three items, the evaluation of which requires considerable judgment (independence from the government, independence from the banking industry, accountability of supervisors). Hence, the supervisory independence indicator is subject to a higher degree of uncertainty. However, in any case, chart 4 shows that the Austrian supervisory authority's independence can be considered to be high and above average.²² It enjoys a level of independence similar to the Belgian and Spanish supervisors. Countries with lower levels of independence are for instance Sweden, the U.S.A. and the United Kingdom as well as Ireland.

Furthermore, bank supervisory agencies that force accurate information disclosure and promote private monitoring tend to reduce the financing obstacles faced by firms and enhance economic performance. See for instance Barth et al. (2004), who present empirical evidence that regulations which encourage or facilitate the private monitoring of banks are associated with better banking sector performance (lower net interest rate margins, fewer nonperforming loans).²³

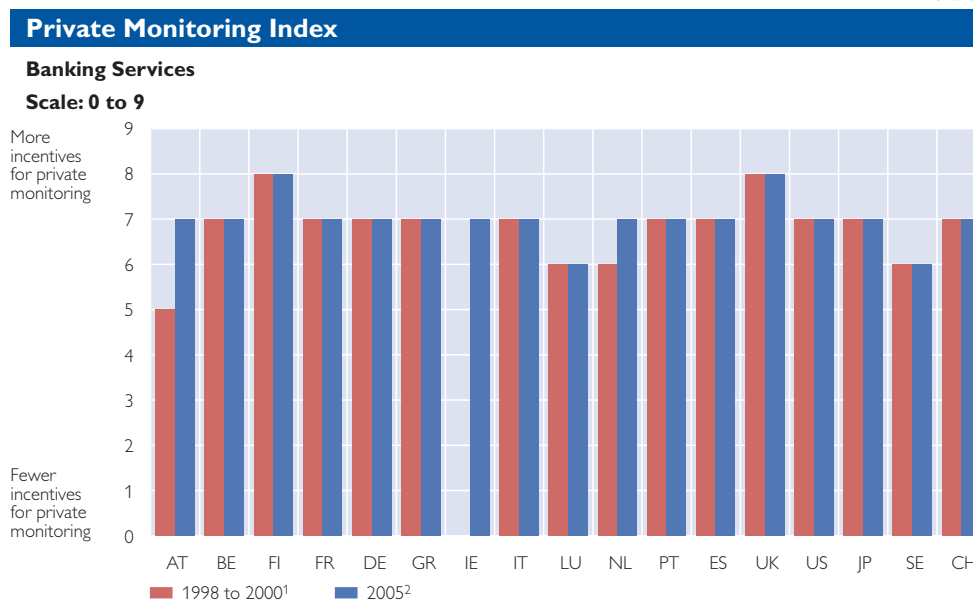
A third indicator is therefore the *private monitoring index*, which reflects the liability of directors for the accuracy of disclosed information, the share of rated banks in a country and the reliability of the rating agencies. The index moves on a scale from 0 to 9. The higher the index, the more

²¹ It has to be noted, however, that there is a higher degree of judgment involved in evaluating the degree of supervisory independence.

²² See also footnote 20.

²³ The development of stock markets also tends to be fostered by the enhancement of private monitoring (La Porta et al., 2003).

Chart 5



Source: World Bank Survey with National Supervisory Authorities (1998 to 2000); 2005 values are the result of the author's calculations based on replies by national authorities.

¹ No value available for IE between 1998 and 2000 (due to missing items).

² FR, IT, NL, PT, SE, CH: 2004 World Bank Survey (due to missing items).

Note: The index combines information on the following categories (values assigned: yes = 1, no = 0): 1) Are externally certified auditors required? 2) Are all top 10 banks rated? 3) Is there an explicit deposit insurance scheme? 4) Comprehensiveness of bank accounting? 5) Are off-balance sheet items disclosed to the public? 6) Do banks disclose risk management procedures to the public? 7) Is subordinated debt allowable as part of capital?
On 4) Comprehensiveness of bank accounting (yes = 1, no = 0): A) Does the income statement contain accrued but unpaid interest/principal while loan is nonperforming? B) Are consolidated accounts covering bank and any nonbank financial subsidiaries required? C) Are directors legally liable for erroneous/misleading information?

information disclosure is enforced and hence the easier the monitoring of banks by the private sector is.

For Austria, the private monitoring index has improved substantially in comparison with the World Bank Survey 2001, which reported survey results from 1998 to 2000. According to the most recent updates, the possibilities of conducting private monitoring are similar to other countries in our sample.

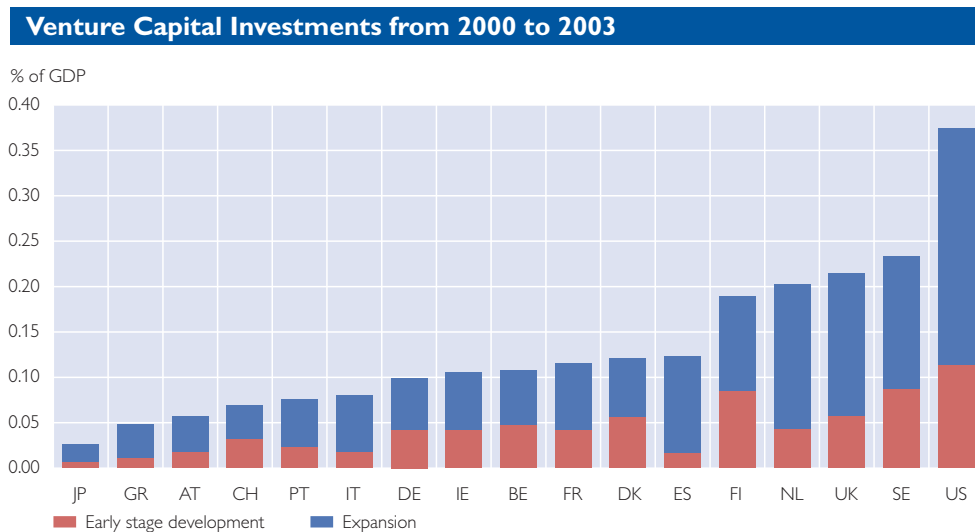
The above-mentioned measures of *supervisory power*, *supervisory independence* and *private monitoring* suggest that the Austrian regulatory framework is fairly well designed to foster the efficiency of the banking sector. According to the supervisory power index, Austria is among those countries which grant a fairly high degree of power to

supervisory authorities. In comparison with other European and benchmark countries, the Austrian supervisory authority is fairly independent from political interference and influence exerted by the banking industry (as shown by the supervisory independence indicator). Finally, the private monitoring indicator shows that sufficient mechanisms promoting the disclosure of reliable, comprehensive and timely information are in place.

2.4.3 Lack of Venture Capital

Business creation is an important source of innovation and hence a lever for economic growth. High-tech startups are particularly promoted in economies with developed venture capital markets.

Chart 6



Source: OECD based on data from EVCA (Europe); NVCA (United States); Asian Venture Capital Journal (The 2003 Guide to Venture Capital in Asia).

The Netherlands and Finland are the only euro area countries with relatively developed venture capital markets, comparable in size to the United Kingdom (chart 6). The particularly modest size of the venture capital market in Austria is likely to be an obstacle to economic performance. One reason for the (by comparison) underdeveloped venture capital market in Austria might be the small and illiquid Viennese stock exchange, which limits exit opportunities for venture capitalists. Furthermore, it seems that the development of the Austrian risk capital market is hampered by a lack of demand. It goes without saying that the heterogeneous tax systems across the euro area negatively affect the liquidity of venture capital markets.

3 Conclusions

Financial systems promote economic performance via the provision of information, their incentive-enhancing features and their risk-sharing function. Reliable information allows better investment decisions, while the diversification of risk promotes investment in

high-return but also high-risk projects. Furthermore, a legal system which improves the incentives for entrepreneurs to repay debt leads to a relaxation of credit and equity constraints.

The present study highlighted selected issues relating to the financial structure and the institutional environment of the Austrian economy (in a cross-country comparison) and assessed the degree to which they are conducive to economic performance.

The removal of the remaining barriers to financial integration (e.g. in the retail banking sector) may enhance economic performance if, at the same time, sufficient consumer choice is guaranteed, e.g. by ensuring that the terms and conditions at which financial services are provided are transparent. The European Commission has taken steps to foster integration in the retail banking sector and has set up an expert group to identify existing problems associated with user mobility, closing fees etc.

According to empirical studies, Austria would benefit considerably (in terms of additional economic growth)

from further financial development (see Guiso et al., 2004).

The most developed financial systems, e.g. those of the U.S.A., the United Kingdom and the Netherlands, also have the most liquid venture capital markets. Venture capital markets are key to innovation and hence productivity. The Austrian venture capital market is one of the smallest by international comparison and its development should be promoted. For that purpose, stock markets which provide exit opportunities for venture capitalists need to be deepened. Furthermore, the tax system should be reviewed and, if necessary, amended so as to ensure a more equal treatment of different types of investments (including cross-border investments), which in turn would promote the development of venture capital markets.

The ownership structures of listed companies are highly concentrated in Austria and many other euro area countries (compared to U.S. or U.K. standards). In fact, the Austrian stock market stands out in terms of ownership concentration. Empirical evidence suggests that high ownership concentration has a negative impact on firm performance at the micro-level (see for example Gugler, 1999).

Higher investor protection is a natural lever for greater dispersion and hence less concentration. Although investor protection in Austria has improved substantially over past years it needs to be strengthened further.

Corporate governance codes should be made legally binding, since compliance with voluntary codes seems to be rather reluctant.

Overall, the indicators originally developed by Barth et al. (2004) (supervisory power; supervisory independence; private monitoring) and updated for the present purpose suggest that the Austrian regulatory and supervisory framework is fairly well designed to foster efficiency and stability in the banking sector: 1) Austria seems to be among those countries which grant a fairly high degree of power to supervisory authorities. 2) Supervisory power is complemented by sufficient mechanisms which foster the disclosure of reliable, comprehensive and timely information (private monitoring). 3) In comparison with supervisors in other countries, the Austrian supervisory authority is quite independent from political interference and influence exerted by the banking industry (supervisory independence).

4 Annex

Box 1

Financial Services Policy in Europe: FSAP and White Paper

After the introduction of the euro, political attention in Europe focused on the creation of a single, liquid financial market which would foster growth, job creation and higher competitiveness. In 1999 the European Commission adopted an action plan designed to promote the rapid progress toward a single market for financial services. This **Financial Services Action Plan (FSAP)** (European Commission, 1999) consists of 42 measures of either legislative or non-legislative nature (e.g. nonbinding recommendations). The FSAP is an important initiative with far-reaching impacts on the financial services industry and the European economy. The FSAP measures cover a broad range of sectors: accounting and auditing (6 measures), banking and financial conglomerates (3), company law and corporate governance (7), financial market infrastructure (3), insurance and occupational pensions (6), insurance and securities markets (1), retail financial services and payments (8), securities and investment funds (7) and taxation (1). Most of these measures have already been officially adopted by European institutions (European Parliament, European Council) and hence are backed by political support and implicitly by industry. Most of the legislative measures still need to be transposed into national law by the Member States. To monitor and promote the implementation of the adopted FSAP directives an evaluation process will be carried out until 2008.

The European Commission's **White Paper on Financial Services Policy (2005 to 2010)** sets out the overall objectives of the financial services policy until 2010 (European Commission, 2005). In the upcoming five years the European Commission aims to a) consolidate progress made so far, b) complete unfinished business, c) enhance supervisory cooperation and convergence, and d) remove the economically significant barriers that remain. The White Paper specifies 72 concrete tasks and activities designed to promote the achievement of these goals (see Annex 1 to the White Paper). These tasks and activities include ex-ante evaluations for the preparation of new proposals, ex-post evaluations of measures, the development/assessment of efficient regulatory and supervisory structures for the financial services sector and the promotion of integration in the retail banking sector. Many of these tasks are handed over to specialized committees to avoid bureaucratic procedures and to ensure efficient implementation.

Box 2

Major Data Sources for Financial System Analysis:

A New Data Landscape Emerges

The changing character of European finance also brings about new challenges for policy analysis as well as altered data requirements. Originally, only **size indicators** (for instance, stock market capitalization as a ratio of GDP or bank credit as a ratio of GDP) were considered in cross-country evaluations of the finance-growth link. Typically, the IMF's International Financial Statistics database served as a data source (as for instance in the classical paper by King and Levine, 1993).

However, size indicators are not the whole story. The **efficiency** of the banking sector (e.g. the net interest rate margin), **banking sector competition** (e.g. requirements for entry into the banking industry), **ownership** (e.g. public versus private ownership) and the **institutional environment** (e.g. the degree of legal protection of property rights) play a role as well. Beck et al. (2001) compiled a financial structure database with statistics on some of these indicators for a vast range of countries. Currently, this database probably contains the most comprehensive compilation of financial system indicators for a panel of countries. As regards **banking sector regulation** (e.g. supervisory indicators), Barth et al. (2006) have recently completed a database based on a World Bank Survey for a cross section of countries. Several **corporate governance indicators** (which for instance assess creditor/investor protection or board structure) have been found to be relevant for the finance-growth link by individual researchers; however, there is currently no single database which assembles these indicators. Commercial providers offer firm level data on board structure, remuneration of executives etc. (for instance "Hoppenstedt Firmeninformation" for Germany and Austria). The well-known investor and creditor protection indicators by La Porta et al. (1998) are available only in the cross section (and not in the time dimension) for the end of the 1990s.

Recently, the OECD has made available a Corporate Governance and Company Law Database, which contains a vast array of information on corporate governance for OECD countries and which is certainly a useful source of information on company law and corporate governance. However, for the analysis of the finance-growth link, specific indicators need to be constructed.

What is missing at the moment is a database which comprises most of above-mentioned indicators (as well as those additional indicators which are found to be important for the analysis of financial system performance in individual research papers). Another problem is that many important indicators used by researchers for projects are not updated and hence of limited value for further research work (e.g. regulatory indicators or corporate governance indicators). The ECB recently initiated a research agenda which includes the construction of a **database comprising indicators of financial system characteristics**. The latter are supposed to facilitate a structured assessment of financial system performance (see e.g. ECB, 2005b). The indicators which are to be updated on a regular basis relate to 1) the size of capital markets and financial structure, 2) financial innovation and market completeness, 3) transparency and information, 4) corporate governance, 5) the legal system, 6) regulation, supervision and financial stability, 7) competition, openness and financial integration, and 8) economic freedom as well as political and socio-economic factors. The database could prove to be of particular relevance for the assessment of the European financial system, as its framework and selection of indicators are particularly geared toward an assessment of industrialized countries with relatively developed financial systems.

Box 3

Data on Banking Sector Regulation

The indicators on banking sector regulation are based on a questionnaire originally developed by the World Bank. This questionnaire was sent to the banking supervisory authorities of the euro area countries, the United States, the U.K. and Japan for an update in spring 2005. By November 2005 all national authorities had sent replies. However, the present study could not incorporate the most recent data on the Netherlands, France, Italy, Portugal and Sweden (due to missing items).

For the 2005 values, the following national authorities were contacted:

Austria	Financial Market Authority, Oesterreichische Nationalbank
Belgium:	Commission Bancaire, Financière et des Assurances
Finland:	Rahoitustarkastus – Finansinspektionen
Germany:	Federal Financial Supervisory Authority (BaFin)
Greece:	Bank of Greece (Banking Supervision Department)
Ireland:	Central Bank and Financial Services Authority of Ireland
Luxembourg:	Commission de Surveillance du Secteur Financier
Portugal:	Banco de Portugal
Spain:	Banco de España
United Kingdom:	Banking Supervision Authority
U.S.A.:	Office of the Comptroller of the Currency
Japan:	Financial Services Agency
Sweden:	Finansinspektionen
Switzerland:	Swiss Federal Banking Commission

The following table contains a detailed specification of the construction of the indicators (based on the World Bank questionnaire).

Indicator	Economic meaning and/or remarks	Correlation with economic performance/efficiency	Time span of data availability
Regulation and supervision			
Index of bank supervisory power	<p>The Index of bank supervisory power measures the extent to which official supervisors have the authority to take specific actions to prevent and correct problems in the banking industry. The composition of official supervisory power is built on the broad categories of auditing/management, disclosure and discipline. Values to the answers of the questions are quantified according to the answers yes = 1 and no = 0 and then summed up to yield the index. The index is on a scale from 0 to 14 with higher numbers indicating more supervisory power.</p> <p><i>Questions on auditing/management:</i> Can supervisors meet external auditors to discuss the report without bank approval? Are auditors legally required to report misconduct by managers/directors to the supervisory agency? Can legal action against external auditors be taken by supervisors for negligence? Can supervisors force banks to change the internal organisational structure?</p> <p><i>Question on disclosure:</i> Are off-balance sheet items disclosed to supervisors?</p> <p><i>Questions on discipline:</i> Can the supervisory agency order directors/management to constitute provisions to cover actual/potential losses? Can the supervisory agency suspend directors' decision to distribute: a) dividends b) bonuses c) management fees Can the supervisory agency supersede bank shareholder rights and declare a bank insolvent? Does banking law allow the supervisory agency to suspend some or all ownership rights of a problem bank? Regarding bank restructuring and reorganisation: Can the supervisory agency or any other government agency do the following: a) supersede shareholder rights b) remove and replace management c) remove and replace directors</p>	rather (+)	<p>Current data based on replies from national supervisory authorities</p> <p>World Bank Survey released March 9, 2004)</p> <p>World Bank Survey 1998–2000 (released March 16, 2001)</p>

THE FINANCIAL SYSTEM AND THE INSTITUTIONAL ENVIRONMENT AS DETERMINANTS OF ECONOMIC PERFORMANCE: AUSTRIA IN COMPARISON

Indicator	Economic meaning and/or remarks	Correlation with economic performance/efficiency	Time span of data availability
Index of bank supervisory independence	<p>The index of overall independence measures to whom the supervisor is accountable. The components are (1) independence vs. the political sphere (independence from government) and (2) independence vs. banks, i.e. the protection against lawsuits from banks (values assigned: yes = 1, no = 0).</p> <p>Values for independence vs. the political sphere are assigned according to the answers below as 1 = low, 2 = medium, 3 = high independence.</p> <p>1.1 To whom are supervisors accountable? 1.2 How is/are the head of the supervisory agency/other directors appointed? 1.3 How is/are the head of the supervisory agency/other directors removed?</p> <p>The overall index is the mean of the values assigned to responses to 1.1, 1.2, 1.3 plus the value assigned to (2) the independence vs. banks. Hence the index is on a scale from 0 to 4.</p>	(+)	<p>Current data based on replies from national supervisory authorities</p> <p>World Bank Survey (released March 9, 2004)</p> <p>World Bank Survey 1998–2000 (released March 16, 2001)</p>
Private monitoring index	<p>The private monitoring index is the sum of the values assigned to the following items: 1) whether an external certified auditor is required, 2) the percentage of rated top 10 banks (values assigned: 1 if all are rated, 0 otherwise), 3) whether there is an explicit deposit insurance scheme, 4) the comprehensiveness of bank accounting, 5) whether off-balance sheet items are disclosed to the public, 6) whether banks disclose risk management procedures to the public, 7) whether subordinated debt is allowable (required) as part of capital (1 if yes, 0 otherwise). Values assigned to items 1, 3, 5, 6 and 7 are 1 (if answer is yes) or 0 (if answer is no).</p> <p>The comprehensiveness of bank accounting (item 4) is the sum of the values (yes = 1, no = 0) assigned to the following questions: Does the income statement contain accrued but unpaid interest/principal while loan is non-performing? Are consolidated accounts covering bank and any non-bank financial subsidiaries required? Are directors legally liable for erroneous/misleading information?</p> <p>The higher the index the more the supervisory authorities force the banking sector to disclose information to the public (scale 0 to 9), i.e. 0 = monitoring of banks by the private sector is very difficult due to missing voluntary and mandatory disclosure, 9 = the ease of monitoring of banks by the private sector is high.</p>	(+)	<p>Current data based on replies from national supervisory authorities</p> <p>World Bank Survey (released March 9, 2004)</p> <p>World Bank Survey 1998–2000 (released March 16, 2001)</p>

References

- Baele, L., A. Ferrando, P. Hördahl, E. Krylova and C. Monnet. 2004.** Measuring Financial Integration in the Euro Area. ECB Occasional Paper Series. April 14.
- Barth, J. R., G. Caprio and R. Levine. 2004.** Bank regulation and supervision: what works best? In: *Journal of Financial Intermediation* 13. 205–248.
- Barth, J. R., G. Caprio and R. Levine. 2006.** *Rethinking Bank Regulation: Till Angels Govern.* Cambridge University Press: New York.
- Beck, T., A. Demirgüç-Kunt and R. Levine. 2001.** The Financial Structure Database. In: Demirgüç-Kunt, A. and R. Levine (eds.). *Financial Structure and Economic Growth. A Cross-Country Comparison of Banks, Market, and Development.* Cambridge, Mass.: The MIT Press. 17–80.
- Berrer, H., B. Felderer, I. Fortin, C. Helmenstein, A. Kleissner, W. Polasek and T. Slavova. 2004.** Die Bedeutung von (Eigen-)Kapitalmärkten für dynamische Volkswirtschaften Europas. Eine vergleichende empirische Studie. Studie im Auftrag des Kuratoriums für den Kapitalmarkt. IHS. January.
- Berle, A. and G. Means. 1932.** *The Modern Corporation and Private Property.* New York: Macmillan.

- Caprio, G., D. Klingebiel, L. Laeven and G. Noguera. 2003.** Banking Crises Database. An Update of the Caprio-Klingebiel Database (1996, 1999). Available on the World Bank's website.
- Carlin, W. and C. Mayer. 2003.** Finance, investment, and growth. In: *Journal of Financial Economics* 69. 191–226.
- Davis, E. P. 2002.** Institutional Investors, corporate governance and the performance of the corporate sector. In: *Economic Systems* 26. 203–229.
- De Ávila, D. R. 2003.** Finance and Growth in the EU: New Evidence from the Liberalisation and Harmonisation of the Banking Industry. In: *European Central Bank Working Paper Series* 266.
- Dehejia, R. and A. Lleras-Muney. 2003.** Institutions, Financial Development, and Pathways of Growth. In: *NBER Working Paper* 9551.
- Demirgüç-Kunt, A., L. Laeven and R. Levine. 2003.** Regulations, Market Structure, Institutions and the Cost of Financial Intermediation. In: *NBER Working Papers* 9890.
- Djankov, S., R. La Porta, F. López-de-Silanes and A. Shleifer. 2003.** Courts. In: *Quarterly Journal of Economics* 118. 453–517.
- Drobetz, W., A. Schillhofer and H. Zimmermann. 2003.** Corporate Governance and Expected Stock Returns: Evidence from Germany. In: *Wirtschaftswissenschaftliches Zentrum/Department of Finance. Working Paper* 2/03.
- ECB. 2005a.** Indicators of financial integration in the euro area. September.
- ECB. 2005b.** Assessing the performance of financial systems. In: *ECB Monthly Bulletin*. October. 75–89.
- European Commission. 1999.** Financial Services: Implementing the Framework for Financial Markets: Action Plan. May 11.
- European Commission. 2005.** White Paper: Financial Services Policy 2005–2010. December.
- European Commission. 2006.** Single Market in Financial Services Progress Report 2004–2005. January 5.
- Franks, J. and C. Mayer. 2001.** Ownership and Control of German Corporations. In: *The Review of Financial Studies* 14(4). Winter. 943–977.
- Fritzer, F. 2004.** Financial Market Structure and Economic Growth: A Cross-Country Perspective. In: *Monetary Policy & the Economy* Q2/04. OeNB. 72–87.
- Gompers, P., J. Ishii and A. Metrick. 2003.** Corporate Governance and Equity Prices. In: *The Quarterly Journal of Economics* 118. 107–155.
- Gugler, K. 1999.** Eigentümerstruktur und Profitabilität. In: *Wirtschaftspolitische Blätter* 6/1999. 583–589.
- Gugler, K., D. Mueller and B. Yurtoglu. 2004.** Corporate Governance and Globalization. In: *Oxford Review of Economic Policy* 20(1). 129–156.
- Guiso, L., T. Jappelli, M. Padula and M. Pagano. 2004.** Financial Market Integration and Economic Growth in the EU. In: *Economic Policy* 40. October. 523–580.
- Hartmann, P., A. Maddaloni and S. Manganeli. 2003.** EMU and the European Financial System: Structure, Integration and Policy Initiatives. In: *Oxford Review of Economic Policy* 19(1). 180–213.
- Hartmann, P., A. Ferrando, F. Fritzer, F. Heider, B. Lauro and M. Lo Duca. 2005.** The Performance of the European Financial System. Mimeo.
- King, R. G. and R. Levine. 1993.** Finance and Growth: Schumpeter Might be Right. In: *The Quarterly Journal of Economics* 108(3). August. 717–737.
- La Porta, R., F. López-de-Silanes, A. Shleifer and R. Vishny. 1998.** Law and Finance. In: *Journal of Political Economy* 106(6). 1113–1155.
- La Porta, R., F. López-de-Silanes, A. Shleifer and R. Vishny. 2003.** What works in securities laws? In: *NBER Working Papers* 9882.
- Levine, R. and S. Zervos. 1998.** Stock Markets, Banks, and Economic Growth. In: *The American Economic Review* 88(3). June. 537–558.

- Murinde, V., J. Agung and A. Mullineux. 2004.** Patterns of Corporate Financing and Financial System Convergence in Europe. In: Review of International Economics 12(4). 693–705.
- OECD. 2004.** Corporate Governance: A Survey of OECD Countries. Paris.
- OECD. 2006.** Regulation of Financial Systems and Economic Growth. In: Economic Policy Reforms. Going for Growth. 115–128.
- Pagano, M. 1993.** Financial markets and growth. An overview. In: European Economic Review 37. April. 613–622.
- Rajan, R. G. and L. Zingales. 2003.** The great reversals: The politics of financial development in the twentieth century. In: Journal of Financial Economics 69(1). 5–50.
- Waschiczek, W. and F. Fritzer. 2000.** Austrian Stock Market Survey and Outlook. In: Focus on Austria 4/2000. OeNB. 86–108.
- Waschiczek, W. and G. Mauerhofer. 2000.** Venture Capital in Austria In: Focus on Austria. 2/2000. OeNB. 128–143.