Bank- and Market-oriented Financial Systems: Fact or Fiction? *

BERT SCHOLTENS

1. Introduction

The debt crisis of the developing countries together with the fast-growing Southeast Asian economies, the transition of former centrally planned economies and European economic integration, all have contributed to renewed interest in financial system architecture. Furthermore, in the US, there has been generic discussion concerning the difference between universal banking and banking in line with the Glass-Steagall Act. One generally hopes for or expects a boost from a well-developed financial system for investment and economic growth because the financial sector performs three basic functions within the economy: 1) to obtain financial resources by offering savings and investment products; 2) to allocate resources; 3) to provide a payments and clearing mechanism. There are various ways in which the financial sector may perform these functions. Many distinguish between financial systems with a dominant role for banks and those with a dominant role for financial markets, and assume this is of great importance for economic development.[1] But is this distinction fact or fiction? Can countries be classified as belonging to either one of these two systems? Our answers are in the negative. Section 2 analyzes why the distinction might matter as it investigates how bank and mar-

□ University of Amsterdam, Department of Economics, Amsterdam (The Netherlands).

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[1] Examples are Frankel and Montgomery (1991), Hellwig (1991), Allen (1993), Goodhart (1994), Steinherr and Huveneers (1994) and Davis (1995).

ket finance affect economic development. Furthermore, we develop a framework to analyze the financial system. In Section 3, comparative analysis of Germany, Japan, the UK and the US aims at revealing whether or not there actually are fundamental differences between the financial systems of these countries. These countries are chosen as they are frequently regarded as the archetypal bank-oriented (Germany, Japan) and market-oriented (UK, US) financial systems. The conclusion is in Section 4.

2. Direct and indirect finance

The problems resulting from the separation between ownership and control are the subject of intense study.[2] A distinction must be made between debt versus equity finance and bank versus market finance. The first distinction focuses on products (different types of securities), the second on institutions (different types of intermediaries). All too easily, bank finance is associated with debt, and market finance with equity. In a large number of countries, stock markets are dominated by banks and the issue of stock generally depends just as much on banks as does credit extension. Bonds also have more in common with stocks than with loans (Stiglitz 1991). The remainder of this paper focuses on bank and market finance. Bank or indirect finance is the intermediation between surplus and deficit spending households. The financial intermediary is permanently in a position between the ultimate borrower and the ultimate lender. The intermediary issues (contingent) claims on himself and sells these to the borrower. At the same time, it holds (contingent) claims on lenders in return for (access to) funds. In market or direct finance, the financial intermediary only very briefly takes a position between borrower and lender. The claims issued by the deficit spending unit are bought by the ultimate borrowers. The financial intermediary brings together supply and demand for these claims and passes through or underwrites the securities. With bank finance, the intermediary acts as a delegated monitor. This is an efficient solution to free riding problems that arise in financial markets where the incentive structure to monitor the issuer of debt or equity is weak (Diamond 1984). Fixed costs in monitoring are crucial to achieve economies of scale in gathering and processing information. It is much more efficient for one information specialist to screen and monitor a large number of firms than for a large number of individual lenders. The intermediary collects funds from the depositors/investors and promises them a fixed return. The intermediary diversifies these funds among various projects. Thereby it reduces risk (as returns on projects are not perfectly correlated) and offers diversification to those from which it lends. From a purely theoretical perspective, it appears that bank finance is a superior means of financing in virtue of the information acquisition and information processing potential of banks *vis-à-vis* financial markets. Banks are supposed to have better access to information about a firms' behavior. Furthermore, they have the incentives and the ability to operate in order to maximize the present value of their stake in the firm.

[2] The seminal paper is by Jensen and Meckling (1976). A recent overview is Hart (1995).

However, Gerschenkron (1962) argues – on the historical evidence of the UK, Germany and Italy – that bank prominence in economic development results from economic backwardness. When economic growth takes off, direct finance gradually replaces indirect finance. Therefore, there is a prominent role for financial markets in the financial sector of highly developed countries. Allen (1993) argues that market finance is superior to bank finance: financial markets have a comparative advantage in controlling firm behavior as large numbers of investors collect and analyze information and reveal their findings through price signals on financial markets. Allen argues that industrial structure and market structure are important determinants of the financing decision: knowledge about production technologies is not evenly distributed. It seems to be widespread in competitive sectors, such as agriculture. In oligopolistic market structures, the production technology in use will seldom be known. When this knowledge is lacking, it is very difficult to analyze whether the decisions made by the firm are right or wrong. The market is, then, a superior source of finance, as a large number of potential investors will screen the firm. With bank finance, screening takes place only incidentally. Allen sees his opinion supported by innovative actions of the automobile, airplane, electronics and computer industries in the US and a passive and copying attitude of German and Japanese industry.

In the real world, we see both direct and indirect finance going together in almost all economies, during various stages of economic development; financial systems actually differ, both in their architecture and in their performance (see Goldsmith 1969 and 1985). Another complication is that in most countries investments are mainly financed internally, and external finance, either by banks or markets, makes up only a relatively small part of the overall financing of investments (Mayer 1988, Corbett and Jenkinson 1994).[3] Then, can practice be regarded as a good judge to decree which type of finance is superior? The question supposes a clearcut criterion to determine superiority but, in my opinion, there is no such criterion. Interpersonal and international welfare comparisons are notoriously tricky and the superiority of some type of finance particularly relates to such a welfare comparison. A much more relevant question is whether or not the actual financial systems really do differ as much as suggested. We shall try to answer this question by comparing Germany, Japan, the UK and the US. The first two are generally regarded as typical representatives of bank finance, frequently referred to as the Continental European and Japanese type of financial system (hereafter CEJ), whereas the UK and the US are seen as the prototypes of a market-oriented financial system (the Anglo-Saxon type of financial system, hereafter AS).

Frankel and Montgomery (1991, pp. 257-59), Steinherr and Huveneers (1994, pp. 274-75), Allen and Gale (1995, pp. 184-88) and Davis (1995, pp. 23-28), all provide various 'characteristics' of bank and market finance. From their observations, we may derive the main stylized facts about bank- and market-oriented systems:

1) banks have a much more dominant role in corporate finance in CEJ countries.

[3] Corbett and Jenkinson (1994) find the following figures for internal and external net sources of finance during 1970-1989 (figures indicate percentage of total net sources):

	Germany	Japan	UK	US
Internal	80.6	69.3	97.3	91.3
External	19.4	30.7	2.7	8.7
– of which bank finance	*11.0*	*30.5*	*19.5*	*16.6*
– of which new equity	*0.9*	*3.7*	*-10.4*	*-8.8*

2) Banks in AS countries only lend short term, whereas those in CEJ countries lend both short and long term.

3) In AS countries, there is considerable competition and interaction between banks and financial markets, whereas there is little competition in CEJ countries.

4) The securities markets and institutional investors in CEJ countries are underdeveloped, with a low level of reliance by firms on market finance.

5) CEJ countries' futures and options markets are illiquid, in contrast to those in AS countries.

6) In CEJ countries, corporate governance is enacted through long-term relationships and debt and equity holdings are usually combined. In AS, relations are less well cemented.

7) The level of indebtedness for companies is much higher in CEJ than in AS countries.

From the discussion and from the seven points set out above, four factors appear to distinguish bank- and market-oriented finance: financial markets, financial institutions, private finance, and financial regulation. The basic differences between bank- (CEJ countries) and market-oriented systems (AS countries) are as follows: in AS countries, financial markets are well developed and the financial industry is subject to fierce competition. Institutional investors make up an important part of the financial system, whereas in CEJ countries, banks dominate the picture. Equity finance is important in AS countries, and corporate control is enacted through stock. In CEJ countries, bank finance is prominent and corporate control is enacted through 'voice' (long-term relations, representation in corporate boards, etc.). Financial regulation is much more liberal in AS countries, where trust in the market mechanism prevails.

Given that only a small part of investments is actually financed through external means, why should one bother about the structure of the financial system? The answer is that there appears to be a symbiotic relationship between finance and growth, as there is a significant and positive association between financial and economic development (Goldsmith 1969, King and Levine 1993a, 1993b and 1993c, Demirgüç-Kunt and Levine 1996), but the causality between

the two is not clearcut (see e.g. Sussman 1995). Furthermore, how can a bank- or a market-oriented financial system be of importance for economic development? The theory of financial intermediation and modern growth theory in tandem offer various arguments for why financial markets and/or banks might spur economic growth. We shall briefly outline them here.[4]

For financial markets, the most important transmission channel is their creation of liquidity. Liquid financial markets reduce investment risk and open up opportunities for diversification by investors. This is accompanied by enhanced access to firm finance. Financial markets stimulate information acquisition and help improve corporate governance by allowing for takeovers. A counterargument is that increased liquidity might encourage myopia with investors, which weakens their commitment and reduces their incentives to exert corporate control. In contrast, establishing long-term relationships is regarded as the comparative advantage of bank finance. As such, banks acquire information and exert corporate control. By providing indirect finance they enable savers to diversify risk while offering liquidity. The development of the real sector reduces the premium attached to external finance, basically through changes in borrower net worth and financial efficiency. This, in turn, stimulates further development (Sussman 1995). Increasing returns to scale in financial production and external effects of finance on (expected) profitability are crucial. As a result, financial development may affect the real sector through the intermediation of savings towards investments, as it improves the allocation of capital and affects the savings rate (Pagano 1993). Thus, the financial system develops in order to take care of agency and information problems, but it cannot solve them completely. It provides incentives to optimize the efforts by the manager/entrepreneur, the investment ratio and the cost of capital. Four factors make up the structure of the financial system: financial markets, financial institutions, private finance, financial regulation. Financial markets provide liquidity and offer the opportunity to diversify risk. Financial institutions provide liquidity and diversification opportunities to savers and supply credit to firms. These tasks can be split up, allowing for specialized financial intermediaries. Private finance is a crucial link with the real sector. Financial markets and institutions offer opportunities to finance investment and to exert

[4] Recent reviews are by Berthélemy and Varoudakis (1996) and Galetovic (1996).

influence on firm management. Financial regulation may safeguard depositors and investors from inflation and from the liquidity shocks that may stem from financial markets and institutions, since they do not expel informational asymmetries but merely reduce or transform them. In the remainder of this paper, we concentrate on the status of the financial system and leave aside the potential relations between the type of financial system and economic development.

3. The structure of financial systems: Germany, Japan, the UK and the US

In this Section we go on to deal with financial markets, financial institutions, the financing of the private sector and financial regulation. With respect to each of these four factors, we investigate the present situation in Germany, Japan, the UK and the US, and try to find out whether the dichotomy between bank- and market-oriented financial systems actually holds and whether or not it appears right to regard Germany and Japan as typical bank-oriented financial systems and the UK and the US as market-oriented ones at the end of the 20th century.

3.1. *Financial markets*

Financial markets provide liquidity to investors as well as diversification opportunities (King and Levine 1993a). Table 1 provides key indicators of financial markets in the four countries. All four countries have a number of exchanges. In Germany and the UK, there is one dominant exchange. In Japan and the US, there are important competitors. The greatest number of firm listed in stock exchanges is in the US, the smallest in Germany. The German and UK stock exchanges are the most international. Market capitalization in relation to GDP is highest in the UK and lowest in Germany. Trade in equities in the US is almost tenfold that of Germany and fivefold that of Japan and the UK; the turnover ratio is highest in Germany and lowest in Japan. Stock market concentration is highest in the UK and

Germany. As to the bond markets, the largest number of listings is in Germany, mainly of private institutions. In the UK, foreign listings are important (especially eurobonds). Market value of the bonds in relation to GDP is highest in Germany and lags somewhat in the US. Derivative trading has developed most in the UK, apart from exchange traded interest rate contracts. Here, Japan takes the lead.

From Table 1, we can derive no single occasion where the four countries fit into the traditional pattern of the bank *vis-à-vis* the market-oriented financial system. The financial markets in general appear to be most liquid in the UK and Japan. In the US, the stock market is highly developed, whereas in Germany it is the bond markets that show major development. The US bond and German equity and derivatives markets lag somewhat behind. Note that there is a substantial contrast in the development of the German bond and equity market (see also Kregel 1992). All countries offer substantial diversification opportunities, though the 'mix' differs. Therefore, there is no empirical basis for 'fact' 4 in Section 2 on the underdevelopment of financial markets in CEJ countries. Stylized fact 5 on illiquid derivatives markets in CEJ countries is also contradicted by the evidence in Table 1.

3.2. *Financial institutions*

Like financial markets, financial institutions offer liquidity and diversification opportunities (Levine 1993). Furthermore, they may exert control over the business sector. For example in the UK domestic financial institutions own more than 60% of the shares; in Germany and the US they own half this number (see Subsection 3.4). In the US and the UK pension funds are by far the largest shareholders among financial intermediaries, while in Germany and Japan it is the banks and insurance companies that have this role. We first investigate the composition of the financial sector and then turn to the structure of bank credit.

Table 2 gives the composition of the financial sector by the distribution of financial assets along the main types of financial intermediaries, i.e. banks, life and non-life insurance companies, investment funds and pension funds. In Germany and Japan, banks dominate the financial landscape, whereas in the UK and the US banks face competition for funds with institutional investors. Thus,

TABLE 1

FINANCIAL MARKETS IN 1995

	Germany	Japan[a]	UK	US[b]
Financial market places	8	8	5	8
	Stocks			
Number of firms listed	1622	3013	2502	8432
– of which foreign	*944*	*77*	*531*	*705*
Market capitalization ($ bn)	577	3667	1347	8473
Market capitalization[c]	24	86	107	61
Trade in shares ($ bn)	594	1146	1153	5660
– of which foreign ($ bn)	*14*	*1*	*627*	*342*
Turnover ratio[d]	103	31	86	67
Market concentration[e]	67	51	72	58
	Bonds and debentures			
Number of listings	22280	2361	6954	2170
– of which foreign	1034	104	3260	201
– of which public sector	1573	247	184	785
Market value ($ bn)	2181	3887	998	2748
Market value[f]	90	82	85	35
	Derivatives			
Foreign exchange – OTC	45	112	292	132
Interest rates – OTC	11	26	59	32
Foreign exchange – exchange traded	0	0	9	5
Interest rates – exchange traded	36	451	238	191

[a] Osaka, Tokyo.
[b] Amex, Chicago, Nasdaq, NYSE for stocks and Nasdaq and NYSE for bonds.
[c] As a percentage of GDP; 1994.
[d] Volume of shares traded divided by market capitalization.
[e] Percentage share of the five largest funds in total market capitalization.
[f] Daily average turnover in $ bn, April 1995.

Sources: Bank for International Settlements, Press Communiqué 18th December 1995, Bank for International Settlements, *Central Bank Survey of Derivatives Market Activity*; Fédération Internationale des Bourses de Valeurs, *Annual Report and Statistics 1995*.

Table 2 confirms 'fact' 4 on weak institutional investors in CEJ countries. However, a closer look reveals that life insurance companies have a bigger stake in total financial assets in Japan than in the US. The key difference is in the financial assets with the pension funds *vis-à-vis* those with banks (banks' off-balance sheet items only

TABLE 2

COMPOSITION OF THE ASSETS OF THE FINANCIAL SECTOR OVER THE VARIOUS TYPES OF FINANCIAL INSTITUTIONS

(1993; as a percentage of total financial assets of the financial sector)

	Germany	Japan	UK	US
Pension funds	1	2	27	30
Life insurance companies	9	17	24	15
Other insurance companies	5	2	4	5
Investment funds	5	5	5	17
Banks	80	73	40	33

Sources: IMF, *International Capital Markets*, 1995, p. 166; IMF, *International Financial Statistics Yearbook*, 1995.

partially offset the picture). Here, institutional differences are decisive. The functional reach of banks in Japan, the UK and the US is much more limited than that of the German banks (see Subsection 3.4). As a result, the banking landscape and the potential for competition differ widely. For example, Germany harbors a very wide range of various types of banks and the commercial banks own just a small part of total assets.[5] In the US, the commercial banks own two thirds of the bank assets. Bank competition – as measured by concentration ratios – is highest in the US and lowest in the UK.

German and Japanese bank concentrations are closer to that in the US than to the UK figures.[6] This violates stylized fact 3 on competition among financial institutions.

As to pension funds in the UK and the US, private pension schemes are common. They are accompanied by a government pension, incorporated in the social security system, and by individual pensions provisioning (see Kidwell, Peterson and Blackwell 1993 and

[5] E.g. Germany's three largest banks in 1994 owned 9% of overall bank assets. Commercial banks owned 24% (source: Deutsche Bundesbank, *Annual Report 1996*).

[6] The assets of the top five (top ten) banks as a percentage of all banks in our four countries in 1995 are as follows.

	Germany	Japan	UK	US
C5	17	27	57	13
C10	28	43	78	21

Source: Bank for International Settlements, *Annual Report 1996*.

Piesse, Peasnell and Ward 1995). In Japan, provisioning for pensions is an individual responsibility, though there is a small government pension funded on a pay-as-you-go basis (Ito 1992). Furthermore, nearly every worker receives severance payment upon retirement. Corporate pensions are rare. Average workers usually participate in corporate pension plans and receive annuities, rather than one-time payments, after retiring. Pension funds constitute a significant portion of the Japanese trust banks' total liabilities. In Germany, private pension provisioning through independent pension funds is in its infancy. The German pension system has three components (Edwards and Fischer 1994). First – and foremost – is the state pension, funded on a pay-as-you-go basis. The second component involves personal provision of pensions through saving in the form of contributions to pension funds and life insurance companies. The third component is the enterprise pension scheme, which allows for various types of schemes. Widespread is direct commitment by a firm to its workers: the firm makes pension provisions by investing its contributions within the enterprise itself. Pension payments are financed by provisioning in the firm's balance sheet with the result that the companies have huge internal pension reserves.

Table 3 highlights the main characteristics of private credit. The main item is total credit as a ratio of GDP. This ratio is highest in Japan. Credit to consumers is highest in the UK and the US, doubling that of Japan. Securitized credit in the UK and the US is threefold that in Germany and double that in Japan. These last two items are the only ones which distinguish the four countries along the traditional dichotomy of bank and market-oriented financial systems. Non-bank financial intermediation is highest in the US and Japan. Short-term credit prevails in the UK and Japan, where it makes up about 30% of total credit; twice as much as in the US and Germany. Adjustable rate credit is available in the UK much more than anywhere else. The US and Germany show little flexibility in this respect. Remarkable is the difference between the flexibility of household credit and that of business credit. As to the former, flexibility is small in Japan and very large in the UK (especially due to adjustable rate mortgages). With credit to the business sector, the differences are much smaller. Again, it is highest in the UK, but Japan follows closely. As an indicator of collateralization, the share of loans backed by real estate is taken. In the US, it is double that of the number elsewhere. From Table 3, we conclude that the structure of credit

to the private sector differs significantly among the four countries. However, only in two cases out of ten is this along the stylized demarcation line.

TABLE 3

THE STRUCTURE OF CREDIT TO THE NON-GOVERNMENT SECTOR IN 1993

	Germany	Japan	UK[a]	US
Total credit (% GDP)	125	202	117	114
Share of credit to households	38	28	54	53
Share of securities in total credit	6	10	19	20
Share of other financial intermediaries' loans and securities in total credit	10	42	6	40
Share of other financial intermediaries' loans in total loans	11	46	8	50
Share of short-term credit in total credit	16	30	31	15
Share of adjustable rate credit related to short-term rates ($\leqslant$ 1 year) in total credit	23	35	73	20
Share of that adjustable rate credit in total credit to households	30	8	90	25
Share of adjustable rate credit in total credit to businesses	19	38	48	15
Share of bank loans backed by real estate collateral in total lending	30	28	32	56

[a] UK includes building societies.

Source: Borio (1996, pp. 79-103).

The role of financial institutions clearly differs in the four countries. This primarily results from differences in the provisioning of old-age requirements as well as from the scope of banking activities and the structure of the banking sector. There is no empirical basis for stylized facts 2 and 3 (short-term lending and more competition respectively prevailing in AS). Pension funds are underdeveloped in CEJ countries ('fact' 4). However, the insurance business is certainly not.

3.3. *Private finance*

The influence of the financial system on the economy has been attributed to how the corporate sector is funded and to how the private sector allocates its resources. Table 4 reveals that total tangible assets in relation to GDP are highest in Japan and the US and lowest in the UK. Fixed capital is high in Germany. As to debt claims, the US is clearly an outlier. Trade credit is important in Japan and negligible in Germany. Equity holdings of US firms are almost non-existent, whereas they are substantial elsewhere. As to financial liabilities, Germany is the outlier with large external claims. For the other countries, financial liabilities are of about the same importance (almost 45% of tangible plus financial assets). Note that debt claims in relation to total financial liabilities are large in Japan and the US, but not in Germany. Therefore, it turns out that there is no empirical basis for 'fact' 7 on the relative indebtedness of firms in CEJ countries. A marked difference appears between Germany and Japan on the one hand and the UK and the US on the other hand with respect to equity. Here, the typical CEJ-AS distinction clearly holds and stylized fact 4 is confirmed.

Corbett and Jenkinson (1994) found internal finance to be by far the most important source for investments (see footnote 3). With 70%, internal finance is lowest in Japan. In Germany it is 80% and in the UK and the US it is more than 90% of total net sources of finance. As to the external financial sources, bank finance is clearly number one in three of the four countries, the US being the exception as bank and bond finance are of almost equal importance as external sources. Banks in the UK and the US have contributed a larger proportion of funds for investment than German banks, while equity has actually been a net use, rather than a net source, of funds over the last two decades. Thus, external finance is more important in Japan and Germany than in the US and the UK. In the case of external finance, bank finance is the most important source. External finance through stocks appears to contribute very little to financing net investments. These figures contrast with the traditional distinction between bank and market finance and reveal that the relationship between well-developed financial markets, the business sector balance sheet and investment financing is not as straightforward as has been assumed. Furthermore, in combination with the evidence of Table 4, stylized fact 1 on bank dominance in corporate finance in CEJ countries is not confirmed.

TABLE 4

BALANCE SHEET OF THE NON-FINANCIAL ENTERPRISE SECTOR
(1993; as a percentage of total tangible and financial assets; Japan 1992)

	Germany	Japan	UK	US
Total tangible assets	67.7	73.7	66.8	79.1
– of which fixed capital	*58.6*	*32.9*	*25.8*	*44.0*
– of which inventories	*9.1*	*4.6*	*9.4*	*10.9*
Total financial assets	32.3	26.3	33.2	20.9
– of which debt claims	*15.6*	*16.3*	*8.2*	*8.5*
Trade credit granted	2.7	15.5	7.9	9.7
Equity	8.4	5.9	10.3	0.1
Total financial liabilities	93.9	44.1	44.0	43.7
– of which debt claims	*34.1*	*41.7*	*26.6*	*35.7*
Equity	13.9	4.3	65.8	70.6
Trade credit received	1.6	11.9	8.4	7.9
PM: total assets as % of GDP	*197*	*243*	*152*	*232*

Source: Kneeshaw (1995, p. 28).

Prowse (1994) argues that hostile takeovers are the main disciplining mechanism in the US and the UK, in contrast to Japan and Germany, where they seldom occur. In Japan, discipline is derived through monitoring by financial institutions or through informal contacts (Berglöf 1991). In Germany, there is also monitoring by individual and non-financial stakeholders and the board has some power over management. UK and US firms to a much greater extent rely on the external market for corporate control than German and Japanese firms: internal disciplining mechanisms are weaker in the Anglo-Saxon countries. Edwards and Fischer (1994) – as well as Chirinko and Elston (1995) and Gorton and Schmid (1996), but in contrast to Cable (1985) – show that the impact of the corporate control mechanism in Germany, especially with respect to the role of banks, has not resulted in a significant improvement of firms' performances. Horiuchi and Okazaki (1994) and Weinstein and Yafeh (1995) doubt the benefits of the Japanese banking system, whereas Hoshi, Kashyap and Scharfstein (1990 and 1991) find beneficial effects.

Thus, corporate finance significantly differs among the four countries. This relates to balance sheet structure, financing of investments and corporate control. For all three, the countries can be

grouped according to the bank-market dichotomy. However, with investment financing this grouping is based on the 'counterintuitive' observation that external finance is more prominent in Germany and Japan than in the UK and the US.

Table 5 shows the relative composition of the balance sheet of the household sector in our four countries. Tangible assets are the most important claims for German and Japanese households. German and Japanese households also have relatively less in financial assets than their counterparts in the UK and the US. Furthermore, debt claims are the main type of financial claims in the former two countries, whereas insurance and pension claims as well as direct share ownership are more important in the latter two. Thus, we may conclude that for the composition of household assets, the traditional bank- and market-oriented distinction between our four countries does hold. However, note that in terms of private household debt, Japan is a clear outlier. Financial liabilities are predominantly of a short-term nature, whereas in the other three countries, the financial liabilities of the public are mainly long-term, especially in Germany.

TABLE 5

BALANCE SHEET OF THE HOUSEHOLD SECTOR
(1993; as a percentage of total tangible and financial assets; Japan 1992)

	Germany	Japan	UK	US
Total tangible assets	56.3	59.2	43.8	36.5
– of which housing	–	–	*39.4*	*26.2*
Total financial assets	43.7	40.8	56.2	63.5
– of which debt claims	*28.9*	*27.3*	*15.9*	*17.2*
– of which shares	*2.3*	*2.5*	*7.2*	*11.0*
– of which mutual funds	–	*1.5*	*1.2*	*4.0*
– of which insurance/pension claims	*12.5*	*9.4*	*30.3*	*19.4*
Total financial liabilities	15.6	11.7	16.1	16.0
– of which long-term debt	*14.5*	*4.7*	*12.2*	*11.8*
PM: total tangible and financial assets as % of personal disposable income	*498*	*818*	*635*	*576*

Source: Kneeshaw (1995, p. 12).

The investigation into private finance reveals that with respect to the role of equity in non-financial enterprises as well as households balance sheet, we see a marked distinction between the UK and the

US *vis-à-vis* Germany and Japan: equity is much more important for people and enterprises in the former two countries than in the latter. However, in the case of almost all other indicators of private finance, we do not find the dichotomy. In all, the evidence in this Subsection contradicts stylized facts 1 and 7 of Section 2 (on bank dominance in corporate finance and firm indebtedness respectively), whereas stylized fact 6 (on bank-firm relationships) is not refuted.

3.4. *Financial regulation*

Regulation of the financial sector is widespread, primarily as a result of illiquidity with the financial intermediary (Diamond and Dybvig 1983). The main arguments for prudential supervision are the protection of depositors and safeguarding the stability of the financial system (Goodhart and Schoenmaker 1995). Financial regulation is also used to achieve other aims, for example influencing industrial structure (Gertler and Rose 1994) and economic development (Fry 1995). Variations in regulation stem mainly from variations in political preferences and from cultural differences. It is worth noting that financial regulation in Japan was modelled on that of the US after the Second World War. Largely because of the directives of the European Union, financial regulation in Germany and the UK is quite similar, too. Nevertheless, there are still some marked differences. In this Subsection, we focus on the supervision of banks and financial markets and on the constraints on corporate control by financial institutions.

Table 6 shows the responsibilities for the supervision of banks and financial markets. Monetary policy and banking supervision are combined in the UK[7] and, to a much lesser extent, in Japan and the US. The two functions are strictly separated in Germany. The independence of the monetary authorities from government interference is relevant as the basic idea holds that more independent central banks produce lower levels of inflation. Furthermore central bank independence is thought to affect the level and variability of growth, unemployment and (real) interest rates. In Table 6, central bank independence is an index (increasing in the amount of independence)

[7] In the summer of 1997, the new UK government announced the separation of these two functions of the Bank of England.

composed by Alesina and Summers (1993). The Bundesbank is seen as the most independent bank, whereas the independency of the Bank of England is seen as being smallest. As to prudential supervision, all four countries adhere to the Basle Accord principles on bank equity and solvency. Policies on bank liquidity differ widely. In the US, a number of institutions interfere with banking supervision. In the UK and Germany, there is one single agent responsible for the prudential supervision of banks (Bank of England and Bundesaufsichtsamt für den Kreditwesen – Federal Banking Supervisory Office respectively). In Japan, supervision is a combined responsibility of the Bank of Japan and the Ministry of Finance. The supervisors of financial markets of the four countries cooperate, among others, in the International Organisation of Securities Commission. Supervision of the financial markets and their participants in Japan is exclusively enacted by the Ministry of Finance. In contrast to the other countries, the Japanese authorities advise large shareholders on particular aspects of their trading. Elsewhere, regulation aims at orderly market practices and reliability for market participants. The German Federal Securities Supervisory Office (Bundesaufsichtsamt für den Wertpapierhandel) supervises exchanges and market participants. In the UK, the Securities and Investment Board (hereafter SIB) is responsible for a range of investment activities. This responsibility is delegated to a number of individual bodies, the self-regulatory organizations. The SIB monitors the effectiveness of the latter. This regulatory system results in a considerable overlap, which increases the cost of regulation. In the US, there are a number of federal agencies that have responsibilities in regulating securities markets. Individual state securities laws affect securities market participants too.

Table 6 clearly illustrates that financial regulation is organized in various ways. Only at the level of supervising financial markets we recognize the traditional demarcation line between bank- and market-oriented systems: the former have centralized supervision, the latter adheres to decentralized supervision.

Prowse (1994) investigates legal constraints on corporate control by financial firms in the four countries. These constraints are most binding in the US. In the UK and Japan informal regulation is widely used, whereas in Germany a more liberal attitude prevails. In the US, all financial institutions face considerable constraints on their ability to hold and use large stock positions in firms. Furthermore, there are impediments to non-financial firms' holding stock. Apart from anti-

TABLE 6

BANK AND FINANCIAL MARKET SUPERVISION
(mid-1990s)

	Germany	Japan	UK	US
Monetary agency	Deutsche Bundesbank	Bank of Japan	Bank of England	Federal Reserve Board
Central bank independence	4	2,5	2	3,5
Prudential bank supervisory agency	Federal Banking Supervisory Office	Bank of Japan, Ministry of Finance	Bank of England	Comptroller of the Currency, Federal Reserve Board, State Governments, Federal Deposit and Insurance Corporation
Financial markets supervisory agency	Federal Securities Supervisory Office	Ministry of Finance	Securities and Investment Board, Self-regulatory organizations (Recognised Investment Exchanges, Securities and Futures Authority)	Securities and Exchange Commission, Commodity Futures Trading Commission, Federal Agencies, State Securities Laws

Sources: Alesina and Summers (1993), Edwards and Fischer (1994), Goodhart and Schoenmaker (1995), Ito (1992), Kidwell, Peterson and Blackwell (1993), Piesse, Peasnell and Ward (1995).

trust motives, these regulations also serve in the interests of diversification. The Japanese rules restrict bank and insurance company stock holdings, while mutual funds and pension funds are unaffected by these regulations. The antitrust and insider trading laws are similar to those in the US. The UK has fewer formal restrictions, but banks require the approval of the Bank of England before they may acquire substantial shareholdings. Other financial intermediaries operate according to self-imposed limits. German financial institutions are given latitude to own shares and exert control over firms. Shareholder protection is weak. Thus, the prototypical distinction between bank and market finance is reflected in constraints on corporate control. The resulting allocation of shares within the economy is given in table 7. This Table shows that banks are substantial shareholders in

Germany and Japan, but not in the UK and the US. In the latter two countries, pension funds are the main shareholding financial institutions. Note that overall shareholding by financial institutions in Germany is much smaller than in Japan, where it is almost equal to that in the US. With non-financial institutions, the enterprise sector is the main shareholder in Germany and Japan. Note that consumer households own half the shares in the US.

Financial regulation structures the operations of financial intermediaries, but the organization and content of financial regulation differ widely. This Subsection showed that monetary policy, prudential bank supervision, financial market supervision and constraints on corporate control in the countries are not in line with the traditional distinction between bank- and market-oriented financial systems. Only in the case of share ownership do we find some demarcations along the traditional lines: banks and enterprises are relatively important owners of shares in Germany and Japan but not in the UK and the US. Here, pension funds are the main 'financial' shareholders, whereas consumers are the dominant 'non-financial' shareholders.

TABLE 7

OWNERSHIP OF SHARES
(1993, as a percentage of total)

	Germany	Japan	UK	US
Banks	14	22	1	0
Insurance companies	7	17	17	5
Pension funds	0	1	34	26
Investment funds	8	3	7	11
Other financial institutions	0	1	3	4
Non-financial firms	39	24	2	0
Consumer households	17	23	18	49
Governments	3	1	1	0
Non-residents	12	7	16	5
PM: financial institutions	*29*	*44*	*62*	*46*
PM: non-financial institutions	*71*	*56*	*38*	*54*

Source: OECD (1995, pp. 17 and 88).

4. Conclusion

Conventional wisdom has it that there are two different models of financial systems, the Anglo-Saxon (AS) and the Continental Europe-Japanese (CEJ). In the AS model, securities markets are well developed. Bank control of firms is sporadic and arm's length banking is the rule. Firms are externally financed, especially through securities. In the CEJ model, securities markets are underdeveloped. Banks have a close and continuing relationship with their corporate clients. This translates into a substantial commitment by banks. External finance is dominated by bank lending. Because of the information quality that can be obtained, the CEJ model is regarded as superior to the AS mould. Note, however, that in all countries external finance is only to a small extent responsible for the financing of net investments. Internal finance is the main source for investments.

We have analyzed whether or not seven stylized facts – derived from the literature on financial systems – actually do hold for the two pairs of prototypical representants of bank- and market-based systems, namely Germany and Japan and the UK and the US respectively, in the mid-1990s, demonstrating that in most cases the 'facts' are contradicted by the empirical evidence. The countries actually differ along the lines of the AS and CEJ model only with respect to some characteristics of the four groups of key factors (financial markets, financial institutions, private finance, financial regulation). The main differences are in asset distribution among financial intermediaries. Financial assets with banks in Germany and Japan are substantially larger than those with UK and US banks. Relatedly, pension fund assets in the latter two countries overwhelm those in the former two. This difference stems from different ways in which retirement systems have been organized and from the scope of banking activities allowed. Another important characteristic that confirms the dichotomy is equity in firms' balance sheets and in household finances. However, external finance of net investments is larger in Germany and Japan than in the UK and the US. Corporate control also appears to be in line with the traditional distinction: banks and firms hold a lot of shares in Germany and Japan, whereas institutional investors are prominent shareholders in the UK and the US. With respect to all the other presumptions (bank dominance in corporate finance, short-term lending, bank and market competitiveness, financial market development/market finance, derivatives markets, firm indebtedness), we found that the evidence contradict the stylized facts as the four countries could not be distinguished along the prototypical bank- and market-based financial system.

Therefore, our analysis reveals that the qualification of the German and Japanese financial system as bank-oriented and of the UK and the US as market-oriented is inappropriate in the mid-1990s. It turns out that all four countries show a set of unique financial characteristics. Any similarities between their financial systems appear not to be on a systematic basis. The differences among the four countries result mainly from differences in regulation, culture and tradition. This may imply that the four groups of variables are not independent from each other but that rather financial regulation – being the result of politics, ideology and culture – do have a significant impact on the structure of the financial system.

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