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Differences between Financial Systems in European Countries: Consequences for EMU[2]

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Differences between Financial Systems in European Countries: Consequences for EMU

April 1999

Summary

Major differences between national financial systems might make a common monetary policy difficult. As within Europe, Germany and the United Kingdom differ most with respect to their financial systems, the present paper addresses its topic under the assumption that the United Kingdom is already a part of EMU.

Employing a comprehensive concept of a financial system, the author shows that there are indeed profound differences between the national financial systems of Germany and the United Kingdom. But he argues that these differences are not likely to create great problems for a common monetary policy.

In the context of the present paper, one important difference between the two financial systems refers to the structure of the respective financial sector and, as a consequence, to the strength with which a given monetary policy impulse set by the central bank is passed on to the financial sector. The other important difference refers to the typical relationship between the banks and the business sector in each country which determines to what extent the financial sectors and especially the banks pass on pressure exerted on them by a monetary policy authority to their clients in their national business sector.

In Germany, the central bank has a stronger influence on the financial sector than in England, while, for systemic reasons, German banks tend to soften monetary policy pressures on their customers more than British banks do. As far as the transmission of a restrictive monetary policy of the ECB to the real economy is concerned, these two differences tend to offset each other. This is good news for the advocates of a monetary union as it eases the task of the ECB when it comes to determining the strength of its monetary policy measures.

Keywords:Financial Systems, European Monetary Union, Transmission Mechanism

JEL classification: E51, E58, G20

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1. Introduction

There are three main issues which must be discussed if one wishes to answer the question which the organisers of this conference have asked me to address:

(1) Which features of a financial system are important for monetary policy or, in other words, how is monetary policy conducted, and how does it affect the real economy, and how and to what extent does this depend on the specific features of an economy?

(2) How different are the financial sectors – or more generally: the financial systems – in Europe?

(3) If significant differences existed between countries, would this have consequences for how monetary policy should, and can, be conducted in a common currency framework?

I want to warn the readers at the outset that I am not a financial macroeconomist and apologise to my discussants for this fact. Because this is not may field of specialisation, my knowledge of how monetary policy is conducted and how it affects the real economy - that is, of the so-called transmission mechanism - is only superficial. I can only hope that this does not invalidate all that I would like to offer in my attempt to fulfil the role assigned to me as a microeconomically oriented scholar in banking and business finance. In order to clarify the basis on which I stand, I want to first present two simple ideas about why differences between the national financial systems in Europe might matter for monetary policy in "Euroland".

In essence, I see monetary policy and its effects as follows: There is a central bank which has the ability to provide a monetary policy impulse: The central bank can, for instance, raise the short-term interest rate or reduce the quantity of central bank money in the economy (and will typically do both at the same time). This impulse has immediate consequences for the interest rate structure and the quantity of money (according to some specific definition of a monetary aggregate) in the economy and for the banking sector. To the extent that banks refinance themselves, or hold voluntary or compulsory reserves, at the central bank, they have less funds to offer to their potential borrowers and/or lending becomes more costly to them. The resulting change in the situation of the banking sector has, in turn, consequences for the real economy to the extent that the firms, households and government bodies that want to borrow from the banks have less credit available, or have to pay more for the funds borrowed from the banking sector. The restrictive monetary policy impulse thus works itself through the system and determines aggregate demand and ultimately output and income, and possibly the price level as well. Some details of this process have to be left for further discussion, but evidently I assume that monetary policy is effective, at least in the short run.

The second idea is taken from a paper by Dornbusch et al.(1998): Differences between the national financial systems might matter because different national economies might react differently to monetary policy impulses of a given kind and size. If this is so, it might be the cast because of differences in the ways in which central bank action influences the respective financial sectors and in particular the banking sectors, or because of differences in the ways in which a change in the situation of the financial sectors affects the real economy. If there are two countries A and B in a monetary union, with A being more sensitive to monetary policy impulses than B, then a given monetary policy measure might be too strong for country A and too weak for country B even if it is just right for the intended effect on the (weighted) average the two economies in terms of, say, their inflation rates.

If I may claim any comparative advantage at all for discussing the consequences of national differences for EMU, it has to do with the second question - that is, the differences between the financial systems in Europe.[3] However, here I must also make two reservations:

From the way I have formulated the title of my paper and the questions listed above, it can be seen that I will not confine myself to looking at differences between financial sectors, but wish to, and I will later show that I need to, discuss differences between national financial systems. This is not simply a terminological difference, but a difference in substance. I use the term financial sector in a narrow way: It denotes those specialised institutions such as banks, pension funds, securities markets etc. which provide financial services to the non-financial sectors of the economy, and to the ways in which these institutions are shaped and managed and how they operate and are regulated. The term financial system encompasses not only the financial sector, but also the real sectors to the extent that they demand the financial services of the financial sector and also to the extent to which they forego using the financial sector, as well as the interaction between the demand for and the supply of the services of the financial sector. Thus for instance the extent to which internal financing of investment takes place, the extent to which saving takes the form of real investment, the extent to which banking services are appropriate to the demand for them etc., are features of a given financial system.[4]

[3] There is a growing body of econometric literature on differences regarding the monetary transmission mechanisms in European countries (see for instance BIS (1995), Dornbusch et al. (1998), Britton/Whitley (1997), Ramaswamy/Sloek (1997) and Giovanetti/Marimon (1998)). To me this literature, which is partly surveyed in Dornbusch et al. (1998), does not provide unambiguous evidence of great differences in the transmission mechanisms. However, to the extent that these papers discuss differences between national financial systems at all, they do not go very far in this respect. But see Kashyap/Stein (1997a) who follow a similar approach to the one in the present paper.

[4] See Schmidt/Tyrell (1997) for this terminological distinction.

The second reservation refers to the countries which I will take into consideration. Anticipating a likely future course of events, I will assume that the United Kingdom is already part of the EMU. Moreover, my empirical references will be mainly restricted to the three largest financial systems in the "enlarged EMU", namely those of France, Germany and the United Kingdom. Even if the Italian economy were larger than that of Great Britain, I would wish to include that of the United Kingdom because, as I will describe below, its financial system differs markedly from those of the continental European economies, and from that of Germany in particular. An understanding of these differences helps to underscore the heterogeneity that makes for national diversity, and for possible problems of a common monetary policy, in the EMU.

The paper is structured as follows: In the next section I shall discuss the transmission mechanisms. Given my background, it appears almost self-evident to me that the so-called credit channel is important,[5] though not so much as an alternative to the "conventional" channels of the transmission of monetary policy, but rather as a complement to them. The discussion of the various channels serves the purpose of providing the criterion for selecting those aspects of national financial systems which I will then go on to characterise in some detail. In section 3, I will argue that the financial systems – *as well as* the financial sectors – of the three countries are vastly different, and point out the main differences. In section 4, I will bring the two lines of reasoning together and argue that, in spite of what I perceive as important differences, I do not think that these differences matter very much for the design and conduct of a common monetary policy. The main reason for this is that what I consider to be the characteristic features of the different financial systems – though *not* of the different financial sectors – might have *two* effects on the functioning of monetary policy which tend to offset each other.

2. Transmission mechanisms or channels of monetary policy

2.1 The classification of channels

As the name suggests, a transmission mechanism is a conceptual or formal model of the ways through which monetary policy influences the real economy. These ways are complicated

[5] See already Schmidt (1990).

and, as far as I can judge, still imperfectly understood. In the relevant literature, four different transmission mechanisms or channels are distinguished.[6] These are

a) the interest rate channel
b) the channel of relative prices
c) the exchange rate channel, and
d) the credit channel.

The interest rate channel (a) and to a certain extent also the channel of relative prices (b) are standard elements of what may be regarded as the traditional view of the transmission mechanism. The exchange rate channel (c) is not relevant in the context of the present paper, as the – enlarged – EMU area is a very large economy for which exchange rates are not a terribly important factor because external trade accounts for only a relatively small share of total GDP. The credit channel (d) is the "newcomer" in the market of ideas and by now the main "competitor" to the incumbents (a) and (b).

2.2. The interest rate channel and the channel of relative prices

The interest rate channel is based on the conventional Keynesian IS/LM-model. According to this model, the central bank determines short-term interest rates. With *given* and *unchanged* expectations about the inflation rate, this also has an effect on real longer-term interest rates, which determine the investment decisions of profit maximising firms, as the firms compare marginal internal rates of return on their investment projects with "the cost of capital" when they decide whether to invest or not. Similar considerations apply to certain consumption decisions[7], so that an unexpected change in that interest rate which the central bank can set influences aggregate demand and ultimately also output. Given that prices are inflexible only in the short run – not only by definition, but also in reality – an expansionary or restrictive monetary policy impulse provided by the central bank loses its effect on the real economy over the course of time when prices start to react.

In order for the interest rate channel to function, two conditions must be met: For one thing, monetary policy must not only affect short-term interest rates but also (real) medium to long-term rates, and, for another, investment decisions must be interest-elastic. Differences between financial sectors and, more generally, financial systems, can translate into differences

[6] See for instance the articles by Bernanke/Gertler (1995), Meltzer (1995), Mishkin (1995) and Taylor (1995) in the Journal of Economic Perspectives symposium on monetary transmission mechanism, and Goodhart (1989) , Cecchetti (1995) and Illing (1997) pp.145ff, for overviews.
[7] Especially to households' decisions concerning the acquisition of homes and of consumer durables.

in terms of the strength of the links between nominal short-term and real longer-term interest rates and in terms of the strength of the links between these rates and investment and consumption decisions. The effects of monetary policy are stronger if financial contracts and in particular the terms over which interest rates are contractually fixed are shorter and thus more easily adjusted. Another factor which may influence the effectiveness of monetary policy, as its working is described in the interest rate channel view, is the extent to which central bank money is being used in the economy.

The channel of relative prices (b) – which is also sometimes called asset price channel, which is presented in two different versions in the literature, namely in the "monetarist" version and that developed by Tobin (1969) - assumes that central banks influence the composition and/or prices of the assets which are held in the portfolios of economic agents. An unexpected monetary policy impulse disturbs the equilibrium composition of the portfolios and induces attempts to adjust their composition. Ultimately, an expansion of the monetary base by open market operations leads to more demand for securities, to rising security prices and thus falling interest rates and possibly also to an increase in consumption and investment expenditure. The extent to which these effects on asset prices merely lead to price level changes, or also to real effects, depends on the rigidity of prices and the "disturbances" which may arise from changes in the expectations concerning the future monetary policy. The two versions mentioned above differ with respect to the asset categories which the agents try to bring into balance and their respective rates of return and also as regards the extent to which the process of the restructuring portfolios directly affects the demand for real vs. financial assets and thus investment decisions.

According to the proponents of the asset price channel, the main instrument of the central bank is its influence on the quantity of central bank money in the economy. This suggests that different procedures in which central banks operate in practice, and in particular differences in terms of the types of financial assets which are eligible as reserves may lead to differences in the effectiveness of monetary policy. However, even also including the United Kingdom, the differences between the various economies in Europe which existed in these respects in the past, are giving way to a common approach.[8] Another aspect, and one in which the various European economies still differ considerably and which is important for this channel, is the extent to which the agents hold financial assets whose prices may vary in reaction to central bank policy. The larger the share of such financial asset in agents' portfolios, the greater will

[8] See Borio (1997) for an exhaustive analysis of different monetary policy procedures and their recent convergence.

be the likelihood that central bank impulses will work in the ways postulated by the advocates of the asset price channel.[9]

It appears plausible that monetary policy is able to have an effect on the real economy primarily because of interest effects and also, to a certain extent, because of asset price effects. However, the recent empirical literature argues that in reality the effects of monetary policy, in particular those of a monetary contraction, are stronger and of a different pattern than those which could be expected if the interest rate and asset price channels were the only relevant mechanisms, and also that they exhibit a different pattern than the effects one would expect to encounter if these were the only pertinent mechanisms.[10] At a theoretical level, the interest and the asset price channels assume that the agents in the economy behave in an overly mechanistic fashion, and fail to address directly the question of how the financial sector, and in particular the banks, react to monetary policy impulses. These two weaknesses suggest that looking only at the traditional channels might prevent one from acquiring a deeper understanding of the implications of inter-country differences for a common monetary policy.

2.3. The credit channel

At the heart of the so-called credit channel are those aspects which are largely left out by the two traditional channels. Because of the information and incentive problems which are widely discussed in the current corporate finance literature, financial systems do not function in a frictionless manner, and for many non-financial firms external financing is simply difficult to obtain and more costly than internal financing. The cost difference is called the "external finance premium". In the relevant theoretical and empirical literature this external finance premium is assumed to be not only an expense incurred in addition to the basic interest costs, but also a positive function of the interest rate. In other words, if the central bank raises or lowers "the interest rate", the external finance premium will also go up or down. [11]

The second aspect which is highlighted in the credit channel view of the transmission mechanism comprises the availability of bank credit and the specific quality, i.e. the limited substitutability, of bank credit. Working in combination, the external finance premium and the availability of bank credit strengthen the effectiveness of monetary policy considerably, and it

[9] See Meltzer (1995).
[10] See Bernanke/Gertler (1995) for this argument.
[11] For surveys of this transmission channel with empirical results for the U.S. see also Bernanke/Gertler/Gilchrist (1996) and Kashyap/Stein (1997b).

seems thoroughly plausible to assume that these two factors may differ much more between countries than those at which the traditional views of the transmission mechanism focus.

As this brief introduction suggests, the credit channel can be broken down into two separate but complementary channels. The first one, the broader of the two, is called the balance sheet channel. It focuses on the ability to borrow. The external finance premium for a given borrower is determined by its financial position, in particular by its net worth, and the value of the collateral which it can provide. The borrower's financial position is influenced by the monetary policy and by the business cycle. A restrictive monetary policy raises the interest rates, reduces the cash flow of firms and depresses net asset values of borrowers and the value of their collateral, and may thus severely restrict their financing options and raise the premium. The likely consequence is a reduction of investment and in particular of investment in working capital, which is typically financed by short-term bank credit. Due to economy-wide accelerator effects, the impact of a monetary contraction may not only be stronger, it may also last longer than the traditional view suggests.[12]

The second "branch" of the credit channel is the more narrowly defined bank lending channel. Its proponents proceed from the highly plausible assumption that the central bank is in a position to limit the quantity of credit which the banking sector can provide to borrowers. A restriction or rationing of bank credit in turn restricts the scope of firm investment; and this is all the more likely the less bank credit can be substituted by other sources of funding at the bank and firm level. In claiming that bank credit is indeed difficult and in some cases even impossible to substitute as it provides a certain liquidity insurance, advocates of the credit channel of the transmission mechanism borrow heavily from the recent advances in the theory of financial intermediation which shows why "bank loans are unique"[13]. Banks are specialists in lending to firms in those cases in which it is important to monitor the borrower carefully or, in other words, in overcoming information and incentive problems.

The balance sheet channel and the bank lending channel, moreover, interact in such a way that the effects of monetary policy on the ability of firms to borrow from banks and on the ability of banks to lend, reinforce each other. This makes their relevance for the effects of monetary policy all the greater. As these brief explanations suggest, it would be wrong to consider the credit channel as an outright alternative to the interest rate channel. Instead, the effects of borrowing capacity and the availability of bank credit which this channel emphasises reinforce

[12] See Bernanke/Gertler/Gilchrist (1996).
[13] For an overview see Freixas/Rochet (1997). Most recent contributions include Rajan (1996) and Kashyap/Rajan/Stein (1999). The quotation paraphrases the title of an influential article by James (1987).

those effects which have traditionally been assumed to exist and to underlie the transmission of monetary policy into the real economy. But both for practical monetary policy and for the problem which is discussed in this paper, namely that of possible consequences of differences between national financial systems, it is important to know more than merely that monetary policy has an effect. One needs to know why it matters and how it affects the real economy in order to be able to assess how strong its effects are in order to be able to determine the direction and the strength of policy measures.[14]

The credit channel view suggests a list of items which can be used to check which elements of a financial system might be particularly relevant when one tries to analyse the implications of differences in financial systems between countries for monetary policy. This list would be too comprehensive to develop it here, and thus I will restrict myself to indicating classes of factors.

The central bank and the money market structure are the first category. Some of the key questions here are: How is monetary policy implemented? Who interacts directly with the central bank? How deep and liquid are the markets for short-term securities like CDs, commercial paper and government bills? What scope for administrative interference in the short-term operations of banks do the government and the central bank have?

At the level of the banking sector, some of the relevant issues are: What are the most prevalent types of banks? What is the typical relationship between banks and firms? What are the legal forms and ownership patterns of banks? What is the level of concentration and competition in the banking sector? What is the nature of the relationship between banks and non-bank financial intermediaries; are the NBFIs competitors or subsidiaries of banks? What is the asset and liability structure of the banks' balance sheets?

Non-bank financial intermediaries and capital markets constitute the main alternatives to banks. They need to be looked at if we wish to determine the extent to which firms and banks are able to circumvent the effects of a restrictive monetary policy which would be transmitted through the bank lending channel. As far as non-bank financial intermediaries are concerned, some of the most important factors are (a) the nature of their relationship to the central bank

[14] So far, and according to my knowledge, the credit channel is the subject of only a few empirical investigations in Germany. Stöß (1996) and Guender/Moersch (1997) come to a negative conclusion concerning the importance of the bank lending channel in Germany. Worms (1997) finds some positive evidence with respect to the balance sheet channel. Küppers (1998a, 1998b) forcefully criticises the results of Guender/Moersch and Stöß and finds strong support for a credit channel in his own empirical study. For the United Kingdom Dale/Haldane (1995) and Ganley/Salmon (1997) show some importance of the credit channel. Recent reseach on the credit channel in France includes Goux (1996), Candelon/Cudeville (1996) and Payelle (1996). Their results are somewhat ambiguous, but support the assumption that the credit channel is relevant in France too.

and to the banks, (b) how important they are in the financial sector, and (c) their asset and liability structures. As far as capital markets are concerned it is important to know which markets exist, who has access to them, how deep and how liquid they are.

Finally it would be important to look in detail at the sector of the non-financial firms and at the household sector to assess how the actors in these sectors are affected by monetary policy measures of the central bank. Key questions here would be: How are they typically financed? What is the prevailing mode of holding liquidity? How many of them have access to security markets or to foreign sources of funding? And last but not least, how are they governed and what is the time horizon of their strategies?

If the goal is to conduct a reasonably comprehensive comparison of financial systems to assess the consequences of national differences for a common monetary policy, then the view one adopts concerning the transmission mechanism of monetary policy evidently has a strong influence on the specific choice of aspects which must be examined. The credit channel implies a much longer list of factors than the traditional channels. The characteristics of some of these items in the financial systems of France, Germany and United Kingdom will be described in section 4.2 and the appendix. However, even more important than the individual items in this list – which is not even intended to be complete - is the question how they are related to each other. This is a topic to which I will return in the next section. In my opinion, the credit channel view is extremely helpful for an analysis of the consequences which differences in *entire* financial systems have for the topic under discussion here – an assertion whose validity I will seek to demonstrate in the following section and in the final section of the paper.

3. How different are financial systems in Europe?

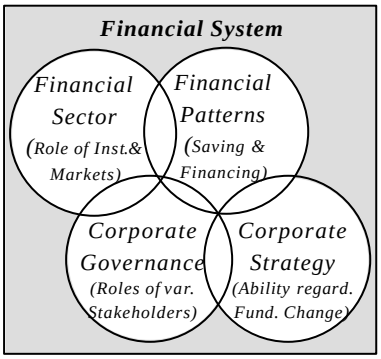
3.1. How different can financial systems be?

To start this section, I want to recall the definition of the financial system provided in the introduction. The financial system includes the financial sector as the provider of financial services as well as the real sectors of the economy in so far as they demand or, as the case my be, fail to demand, these services, and the complex relationships between the financial and the non-financial sectors. Evidently, it does not only depend on the financial sector but also on the real sectors and the relationships between them, how monetary policy affects the real economy. Thus, the broad definition is appropriate for any analysis of monetary policy.

This definition is also important for another reason. It helps to get a more comprehensive picture of the extent to which the financial systems of countries differ, and the respects in which they differ, than could be obtained using the narrow concept of the financial sector. Indeed, as I will argue in this section, both financial sectors and financial systems differ between countries, but the latter are more dissimilar than the former, and differences in other parts of the financial systems – i.e. in parts other than the financial sectors could be highly relevant for the design and conduct of a common monetary policy. Thus the broad definition of the financial system is particularly appropriate for studying the problems of a common monetary policy in different countries, as it points to the fact that those aspects of the real economy which are important for the working of the transmission mechanism and differ between countries may correspond *in a systematic or non-accidental way* to the differences between the financial sectors. *This correspondence is crucial for the effects of a common monetary policy.*

If I make this claim, I am obliged to take a closer – which is at the same time also a more abstract - look at the concept of a financial system.[15] The broadly defined financial systems is an open system; there is no clear factual criterion to determine what belongs to it and what does not. Rather, the boundaries of the system at large are drawn by the observer who, in a given case, seeks to addresses a certain problem in the most fruitful way. For the purpose of this paper, one can distinguish four closely interrelated subsystems which are, in turn, composed of several elements. Figure 1 shows these subsystems, which are at the same time elements of the larger system, the financial system. They include, first of all, the financial sector. The second subsystem consists of the surplus and the deficit units in so far as they provide funds to the financial sector or obtain funds from it, and thus of the savings behaviour of households and of the financing of business or corporations and governmental bodies, and of the financial instruments used by the parties to financial contracts. It is advisable to include corporate governance as the third subsystem and corporate strategies and structures – for short: the business system – as the fourth one. Note that there is no need to define these subsystems in such a way that they do not overlap.

Figure 1: Financial System



[15] The following discussion is based on Hackethal/Schmidt (1999b). See also Milgrom/Roberts (1995), Hackethal/Tyrell (1998) and Aoki (1999).

It is imperative to see how these subsystems are composed and function individually, and how they are related to each other. As the colloquial use of the term "system" suggests, a system is more than a collection of elements. For a system to be "really a system", its elements must "fit together". In economic life, one can assume that it has positive consequences if this is the case, and negative consequences if the elements do not fit. One can speak of "important" differences between financial systems, if not only the main elements of which they are composed, but also the way in which they are related, are different.

The interesting thing about the subsystems and their interrelationship, and thus he interesting thing about the entire financial system is that they are composed of complementary elements. Elements of a system are called complementary (to each other) if they mutually increase the "benefit" they yield in terms of whatever the objective function or the standard for evaluating the system may be, and mutually reduce their disadvantages or "costs".[16] A system is called *consistent* if its complementary elements indeed take on the values which make the system attain a local optimum. Systems of complementary elements typically have more than one optimum, and the local optima are clearly distinct configurations of the values of the elements.

Financial systems are systems in this specific sense. The complementarity of their elements and the economic benefits which a consistent financial system can be assumed to produce are the factors which account for the tendency of countries' financial sectors and non-financial sectors to co-vary in a systematic way. To illustrate the concepts of complementarity and consistency in the case of financial systems and also to lay the foundation for the next argument, I would now like to take a look at common two-way classifications from the literature for the four subsystems shown in Figure 1.

(1) For the subsystem "financial sector" it is common to distinguish between a bank-dominated and a capital market-dominated variant based on certain measures of the size and "importance" of banks and capital markets, respectively.

(2) The second subsystem refers to how savers hold their financial wealth and the sources from which corporations obtain the bulk of the funding for their investments. This suggests a similar two-way classification distinguishing a bank- and a capital market-oriented system.[17]

[16] For this definition see also Milgrom/Roberts (1995). The mathematics behind the concept of complementarity are surveyed by Topkis (1998).
[17] See Rybczinski (1984) and Berglöf (1990) for this classification with respect to the first and second subsystem.

(3) With respect to the third subsystem, corporate governance, there are two-way classifications according to different criteria depending on whether the safeguarding of the interests of owners, of creditors, or of the staff is involved. The details need not interest us here.[18] Suffice it to say that these classifications can be brought together under the heading of "insider-" and "outsider-controlled" corporate governance systems.[19]

(4) Lastly, firms can be classified according to their business systems into two groups: those which make ample use of firm-specific human capital, rely to a large extent on long-term and trust-based relationships – or implicit contracts - with their various "stakeholders" and partners, and are more suited to undertake strategic adjustments through longer sequences of small changes, and those with the opposite characteristics.[20]

Looked at individually, each of these eight specific subsystems can be interpreted as consistent systems of complementary elements. Due to space limitations, I cannot demonstrate this here. Instead, I will concentrate on the question of how the four sets of subsystems are related to each other: The subsystems are themselves complementary elements of the overall system; and only two specific combinations constitute consistent systems. As far as the first two elements are concerned, this seems plausible. Even though there may be an empirical problem in demonstrating this correspondence, which I shall discuss below, one would tend to think that there is a one-to-one correspondence between the two classifications in these two subsystems: A system in which savers entrust a large fraction of their wealth to banks or closely bank-related non-bank financial intermediaries should also be one in which the banks are the dominant element in the financial sector; and capital market dominance should equally be reflected in the patterns of saving and financing and the size and role of the capital market as an institution.

Moreover, a bank-dominated financial sector and a bank-oriented system of savings and financing also "fit", or correspond in functional terms, to an insider-controlled governance system and a business system with much firm-specific human capital, many implicit contracts and a tendency towards gradual change.[21] The set of other "values" for the four subsystems as elements also constitute a consistent financial system. It is characterised by a greater importance for capital markets than for banks in the financial sector, more saving and financing via

[18] These dichotomies and the way in which they are related, are discussed in Hackethal/Schmidt (1999b).
[19] See Franks/Mayer (1994), Schmidt (1997b) and Tirole (1999).
[20] See Boot/Macey (1998), Hackethal/Schmidt (1999b) and Aoki (1999).
[21] The link between bank-oriented financing, insider-controlled governance and firm-specific human capital is more deeply analysed in Hackethal/Tyrell (1998) and Berkovitch/Israel (1998). The correspondence to the business systems is discussed by Milgrom/Roberts (1995), Aoki (1999) and Hackethal/Schmidt (1999b). See also Mayer (1998).

the capital-market than with, and from, banks, outsider-controlled corporate governance and highly flexible corporations which are able to undertake strategic adjustments with "big leaps". Evidently, these two systems are clearly distinguishable types of financial systems or, to use Williamson's suggestive term, "discrete alternatives". [22]

So at least in theory, financial systems can be fundamentally different. And since the four subsystems influence each other in their functional values, entire financial systems can be "more different", i.e. different in a more fundamental way, than financial sectors alone might.

3.2. How different are those in Europe really?

The fact that one can distinguish two types of – consistent - financial systems at a conceptual level does not imply that one could also find these different types in reality, nor does it imply that real financial systems do in fact correspond to this typology. Therefore, the questions of whether real financial systems have complementary elements, and thus whether they are "really systems" - and if they are, whether they are also consistent systems – are empirical questions. It should also be noted that the theoretical distinction does not tell us whether the financial systems of the major European economies are different. Thus, we shall now turn to the empirical issues. It goes without saying that – not only due to the limited space avaliable - only a very brief discussion of this complicated subject can be provided here; however, I hope that by drawing attention to a few key aspects I will be able to make my point. It is equally clear that one cannot expect to find a perfect correspondence between a given type of financial system and a given real financial system, i.e. that of a specific country.

Nevertheless, the classification of financial systems suggests differences in reality. [23] The example which immediately come to mind are the German and the British financial systems – and this is the main reason why I anticipate a likely future course of events and assume that the United Kingdom is already part of "Euroland".

The German financial system is of the first type. The German banking sector is big and some banks are important and powerful, whereas capital markets and capital market-oriented institutions such as pension funds are "underdeveloped", as can be measured by indicators such as the total assets of banks and stock market capitalisation as percentages of GDP, respectively.[24] Corporate governance in Germany functions mainly through internal mechanisms and involves "insiders" to the corporations or, in other words, people and institutions which have

[22] See Williamson (1988).
[23] See also Goodhart (1993).

long-term interests in safeguarding their specific relationships with a corporation and that are typically better informed about its prospects and problems than anonymous market participants could be.[25] There does not seem to be an active market for take-overs. The role of banks, of other corporations and of employees having codetermination rights in the governance of corporations epitomise this system, and despite the widely publicised declarations to the contrary, the maximisation of the shareholder value is not the dominant objective of most large German firms. Even though this may be more speculative, one can also add the observation that at least on an economy-wide level German firms are more woven into nets of implicit contracts, that labour turnover is lower and that the corporations are less able and willing to undertake abrupt adjustments to changing circumstances than British corporations. Thus it is fair to say that at least as regards the first, the third and, to a certain degree, the fourth element (or subsystem), the German financial system is consistent.

Without doing too much violence to a reality which is of course much more complex, one can characterise the British financial system as one in which core elements - or subsystems - (1) and (3), and possibly also (4),[26] take on values which are precisely the opposite of those determined for Germany. In the United Kingdom, the relative importance of banks in the financial sector is not as great; capital markets and institutions, notably pension funds which are capital market-oriented and in most cases independent of the banks, play an important role; there is no formal and no de facto codetermination; and financial intermediaries are scarcely involved in the governance of corporations.[27] The corporate objective is unrestricted maximisation of profits or shareholder value, and given the nature of the UK financial system there is also no reason why this should be otherwise. The basic mechanism of corporate governance is the take-over market, and the entire corporate governance system is clearly an outsider control system.[28] Overall, the British financial system relies very much on market mechanisms and less on institutions in the conventional meaning of the term, i.e. it relies less on groups of people who interact directly with each other over a long period and not only have a certain degree of mutual commitment but also find that their interaction gives rise to intense conflicts over important issues which are, however, resolved internally and ultimately in a peaceful way.[29]

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[24] See the empirical results in ECB (1999) and Davis (1998). Some indicators are presented in the annex.
[25] See Schmidt/Tyrell (1997) and Prigge (1998).
[26] For the UK we do not know enough about (4), but see Hackethal/Schmidt (1999b) for first results and some rather speculative conclusions.
[27] See Goergen/Renneboog (1998) and Franks/Mayer/Renneboog (1998).
[28] See Charkham (1994) Franks/Mayer (1996) and Wymeersch (1998).
[29] For a similar characterisation of the British system, see also Prevezer/Ricketts (1994).

Despite far reaching changes in the regulatory and competitive environment in which financial sectors and non-financial corporations in Germany and the United Kingdom operate, it is fair to say that the characteristic features of these two financial systems, as far as I have characterised them up to now, are surprisingly stable. Many details of the financial systems have been modified, but their fundamental or structural features have not changed over the last 20 years, and, indeed, they have probably remained essentially unaltered for much longer than that.

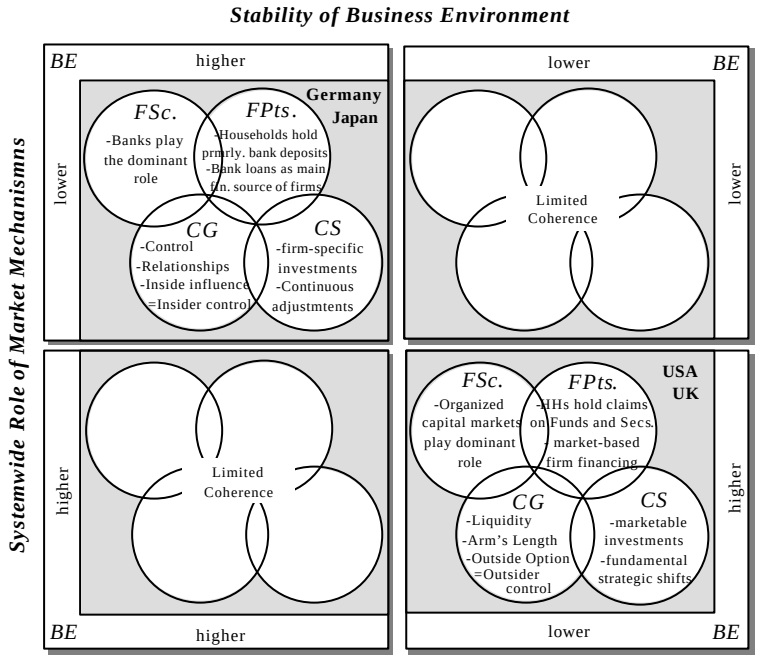
In the case of the French financial system, it is more difficult to find a unifying "logique". At least the efforts in this area which I have undertaken with colleagues and students – for some time now, we have been trying to locate the French financial system along the spectrum of market and institution-based (or Anglo-Saxon and German-type) systems – have not been successful.[30] This is so for at least two reasons. One is the strong role which the French state (or government) has played in the financial system over the years. It is extremely difficult to integrate the extent and the forms of state or government intervention into the two-way classification which was described in the last subsection, or to invent a different classification incorporating the additional dimension of state activity.[31] The second reason is that the French financial system and its four subsystems have experienced dramatic and fundamental changes during the last two decades. If one looks at individual elements, it appears that these changes have already converted the French financial system from the being of the German type - except for the pervasive state intervention - to one of the Anglo-Saxon type.[32] This may indeed be the case. But in the past the French financial system had a number of elements which were certainly not congruent with the German model or the German financial sector type, and today it includes several elements which do not "fit" the general structure of the Anglo-Saxon model or financial sector type.

Referring not only to European financial systems, but also to those of Japan and the U.S., Figure 2 summarises the characteristic features of consistent financial systems. The tables in the annex provide empirical support for my brief summary description of the three financial systems. Nevertheless, it would be good to have more empirical evidence to underscore the profound differences between Germany and the United Kingdom and to support my view that the system in France does not conform to either of the two "polar" models and is at present

[30] See Schmidt (1997) for some details. A recent book by Plihon (1998) pp.79, is among the numerous supporting French references which one could quote here.
[31] For a similar conclusion see OECD (1995).

unstable in so far as it is undergoing a process of rapid change. In particular, additional evidence is called for in one respect: In my account of the financial systems, I have intentionally left out the second subsystem of financial patterns. It is logical to ask why, and of course the obvious answer is that might not accord with the general pictures of the systems. And while the savings part does not offer any problem in this respect, the financing part does. At least this appears to be the case if one accepts at face value the results of an important strand in the academic research about how firm investment is financed. The findings presented in this literature are plainly inconsistent with the view underlying my argument which is inspired by the theory-based assumption that there should also be differences in the financing patterns of the firms in the different countries and that these should correspond to the differences between, both, the respective financial sectors and corporate governance systems. This inconsistency has to be clarified if my claim that there are in fact fundamental differences is to be regarded as valid.

Figure 2: Consistent Financial Systems



In a series of highly influential papers, Colin Mayer and his adherents[33] have arrived at the opposite conclusion. First of all, they take the position that there are hardly any systematic differences between national patterns of corporate financing, and secondly that those differences which do exist, are inconsistent with what one would expect on the basis of theory and of the empirical features of the subsystems (1) and (3) in the various countries. For instance, Mayer (1988, 1990) found in his early studies that bank financing is more important in the United Kingdom than in Germany and that equity financing is even negative in the United Kingdom. Corbett/ Jenkinson (1996, 1997) supported these results in more recent and

[32] For instance, this can be concluded from the in recent years mere active market for corporate control (Wymeersch, 1998). On the other hand, ownership concentration and voting power in French public corporations indicates an insider–control system (Bloch/Kremp (1998).

much more extensive studies. These findings do indeed pose a puzzle. If they were true, they would break the logical chain connecting the four subsystems and contradict the proposition that the German and the British financial systems are consistent. Moreover, they would invalidate the whole concept of financial systems as consistent sets of complementary elements.

From the perspective adopted in the present paper, it is fortunate that the methodology developed by Mayer and used by him and others has a flaw. Because of this flaw, their findings are simply misleading on an empirical level. Mayer and his followers look at net flows of funds between economic sectors whereas they should have looked at gross flows, because in the process of aggregating over real and financial investments and over time, netting eliminates the relevant differences which might exist, and thus the role of external debt financing disappears almost completely. In his dissertation, Andreas Hackethal (1999) has identified this flaw, suggested a way to avoid it and recalculated the financing structures of firms in Germany, Japan and the United States. As the first columns per country (with the heading "gross") in Table 1 show, his correction yields patterns of long term financing which are consistent with expectations based on the structure of the entire financial systems. The second columns ("net") and the first line concerning internal funds, for which the net and gross figures are identical, show the corresponding net figures derived by Corbett/Jenkinson (1997) for comparison.[34]

[33] See Mayer (1988, 1990) and Corbett/Jenkinson(1996, 1997) for international comparisons of financing patterns and Edwards/Fischer (1994) for a study of Germany and Bertero (1994) for France .

[34] In the work of Mayer and his followers, one can find another distinction. It is the distingction between net and gross figures, which concerns a different aspect from the one under discussion here. Their "gross figure" are calculated after the aggregation which is identified in Hackethal (1999) and Hackethal/Schmidt (1999a) as the cause of the bias.

Table 1: Financing patterns in various countries

	Germany		***Japan***		***USA***		***UK***
Sources of Finance	gross	net	Gross	net	gross	Net	net
	% of physical investment (gross: 1970-1996; net: 1970-1994)						
Internal funds	78,9		69,9		96,1		93,3
Bank finance	72,9	11,9	152,3	26,7	65,3	11,1	14,6
NBFI finance	9,3	n.a.	0,0	n.a.	24,6	n.a.	n.a.
Bonds	7,0	-1,0	14,3	4,0	48,5	15,4	4,2
Commercial paper	0,0	n.a.	5,7	n.a.	9,2	n.a.	n.a.
New equity	3,8	0,1	3,8	3,5	14,9	-7,6	-4,6
Trade credit, others and statistical adjustment	n.a.	10,1	n.a.	-4,1	n.a.	-15,0	-7,5

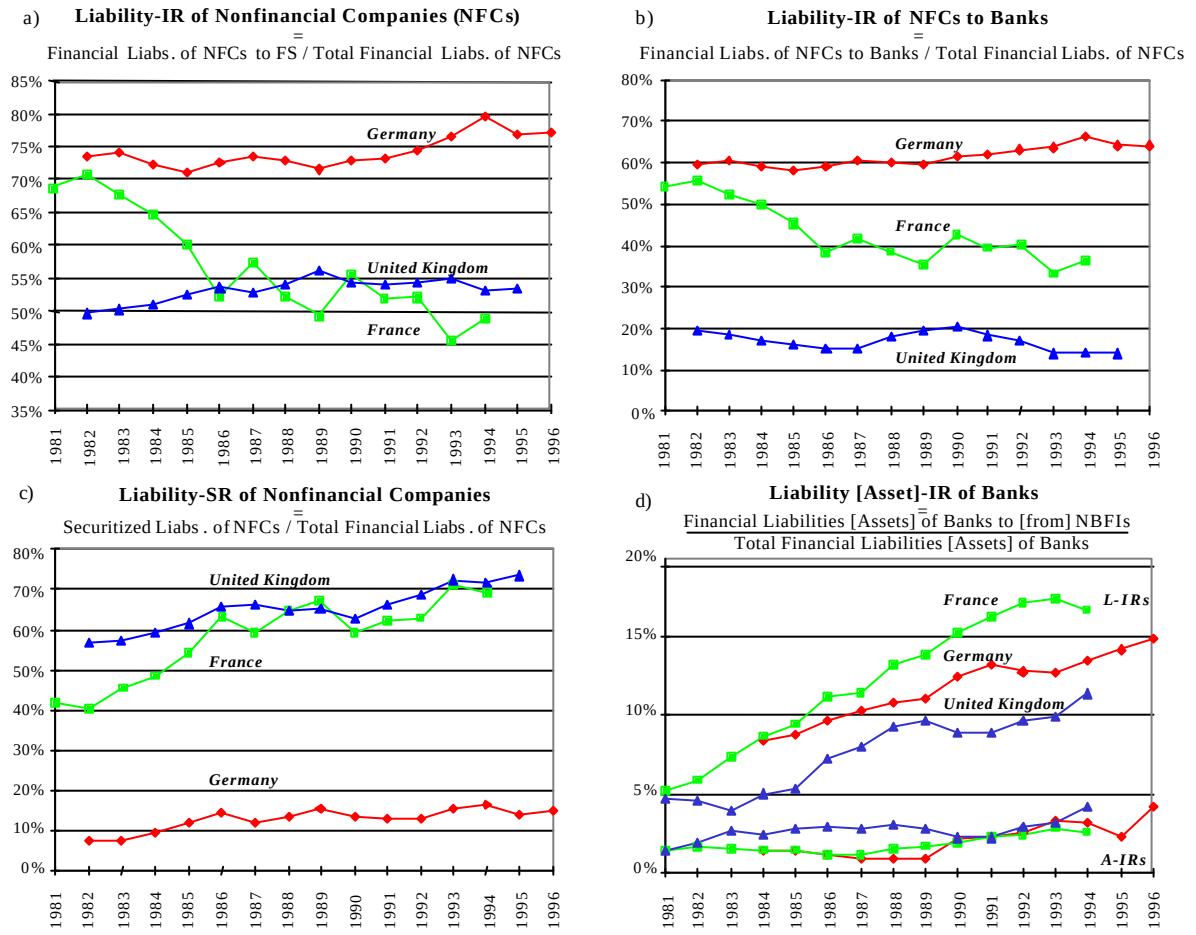
Note: Net figures and the those for “Internal Funds” are taken from Corbett/Jenkinson (1997). They add up to 100%. These authors include both “NBFI Finance” and “Commercial Paper” in “Bank Finance”(except for the U.S., where “Commercial Paper” is included in “Others”. Gross figures, which by construction do not add up to 100%, are taken from Hackethal (1999). Only long-term external funds are shown.

The data needed to recalculate the figures for French and British firms, and thus provide a more accurate picture of their financing patterns, are not yet available, but it seems plausible that, given the similarity of the financial systems of the US and the United Kingdom, those for the United Kingdom will not differ too much from those for the US. If this is indeed the case, the claim that the British and the German financial systems are consistent and differ in a fundamental way can be upheld.

In another empirical study we have found further interesting evidence to support the assumption of fundamental differences between the British and the German financing systems and the proposition that dramatic changes are under way in France.[35] In this paper, we have calculated various intersectoral intermediation and securitization ratios for the three countries over a span of fifteen years. In contrast to the "conventional wisdom" to the effect that there is a general tendency towards disintermediation and securitisation and that, overall, the financial systems in Europe are becoming more similar, our study shows that the levels of disintermediation and securitisation differ substantially between countries and that, except for France, they are surprisingly stable over time. As Figure 3 shows, the "liability intermediation ratios of non-financial companies", which measures the fraction of external financing which comes from intermediaries, (Fig. 3a) and the "intermediation ratios of non-financial companies to banks", which measure the share of bank financing in the total external financing of firms (Fig. 3b) and the ratios of securitisation of corporate financing (Fig. 3c)

differ greatly between Germany and Great Britain, and are almost completely stable in these two countries. For France, these ratios exhibit not only a great instability, but also a tendency to move away from the German to the British model.

Figure 3: Intermediation and Securitisation Ratios



This may suffice to demonstrate that the general characterisations of the three financial systems are empirically valid, that the overall financial systems of Germany and the United Kingdom are consistent configurations of the subsystems as complementary elements and that there are indeed considerable and, at least in some cases, persistent differences between the financial systems of the major European countries. Having established this, I can now analyse what consequences this might have for a common monetary policy within EMU.

[35] See Schmidt/Hackethal/Tyrell (1999).

4. Consequences for EMU: Financial systems' structures and common monetary policy

4.1. Is there a common reaction of the different national systems to monetary policy?

After having argued that the credit channel is probably relevant in Europe too, and that financial systems in Europe differ in fundamental ways, I will now offer a theoretically inspired speculation as to what main consequence for a common monetary policy these differences entail. One could be inclined to think that marked differences make it very difficult to design and to implement a common monetary policy. Is this conclusion justified or would adopting this position – which would of course also have significant political implications – mean simply to jump to conclusions?

The transmission of monetary policy goes from the central bank (CB) to the (other parts of the) financial sector (FSc) and from there to the real economy (RE), which reacts to monetary developments by changing investment and possibly consumption decisions, which in turn determines aggregate income, employment and the price level. The top line in Figure 4 below shows the elements of the transmission mechanism. A denotes the relationship between CB and Fsec, while B denotes the relationship between FSec and RE.

Since I wish to focus on different financial systems in a monetary union, differences between countries at the level of CB are of no concern for my mental experiment; as I assume that there is just one single CB. But financial systems may vary in four respects: (1) The FSec's may be, and indeed are, dissimilar; (2) the way in which the financial sector (FSec) is influenced by central bank policy measures (A) can, and probably does, differ; and (3) important aspects of RE, notably company financing, governance and strategies and structures are likely to differ, and (4) the ways in which the financial sector changes credit supply to firms and households, and in which the real sectors change their demand for financial services, in reactions to the changing conditions in the financial sector (B) seem to be different. Or to put it more succinctly: financial and real sectors and the sensitivities of the financial sector to central bank policies, and of the real sectors to changing conditions in the financial sector may differ between countries.

Comparing Germany and the United Kingdom, one can ask: In which system does a central bank impulse *of a given kind and size* have a stronger effect on the financial sector (A)? And in which of the two countries does a given amount of influence of the central bank on the financial sector have a stronger effect on the aggregate demand of the real sectors (B) - and ultimately on income, employment and prices?

The answers depend on how one sees these relationships and on the structures of the financial systems and in particular on the roles of the banking sector in the respective financial system. I use the concepts underlying the notion of a credit channel. Here the immediate effect of central bank action is assumed to be mainly an effect on the banks. Thus, the strength of the relation A between the central bank and the financial sector is likely to be stronger in a country in which the relative importance of banks in the financial sector is greater. This is the case in Germany. I therefore hypothesise that the financial sector of Germany reacts more strongly to monetary policy impulses than the British financial sector.

As a second step, one has to ask how changing conditions in the entire financial system and in particular in the banking sector affect decisions of firms and households. To provide a concrete example, let us examine the case of a tightening of monetary policy.[36] Would funding opportunities and funding costs for the real sectors be restricted or raised more in Germany or in the United Kingdom? I presume that the restrictive effect of a *given* influence of the central bank on the financial sector and in particular on the situation of the banks would be less in Germany than in the United Kingdom, and this for three reasons.

The first reason is that the relationship between banks on the one side and firms and households on the other is closer in Germany than in the United Kingdom. Due to their closer multi-faceted and more long-term oriented relationships with their customers, German banks might be more hesitant to tighten credit terms for their clients in order not to burden them too much and not to disturb their longer-term investment and business strategies in which a "housebank"[37] has a lively interest . In a system like that of the United Kingdom, in which arm's length banking prevails, banks and other financial intermediaries simply have less reason to refrain from passing on restrictive monetary policy impulses to their customers; they are less committed to their long-term strategies.[38] An additional argument is that, compared

[36] This is more than a way of making the discussion more concrete. It might well be that the arguments which follow, only apply to the special case of a restrictive monetary policy.

[37] This reflects that there is some truth to the belief that the old system of "housebanks" still prevails. This has been vigorously challenged in a well-known book by Edwards and Fischer (1994). But note that the empirical basis of their attack on this presumed myth is an empirical analysis of financing patterns using the methodology of Colin Mayer (1988), which was discussed as yielding unreliable empirical results in section 3.2 above. Recent studies by Elsas/Krahnen (1998) and Harhoff/Körting (1998) indicate that banks which perceive themselves as the "housebank" of a given customer firm, and which are also perceived as such by the customer firm itself, behave systematically differently, that is in a more co-operative and more long-term oriented manner. Thus relationship banking and housebanks still seems to be real factors.

[38] Furthermore, a recent study of the monetary transmission mechanism in Germany with segregated bank balance-sheet variables by Küppers (1998a) demonstrates the relevance of the “housebank-relationship". His results show that, in contrast to empirical findings for the US by Kashyap/Stein (1997b), credit terms and loan volumes of smaller German banks, namely the Savings Banks and the Co-operative Banks, react to a monetary tightening to a much smaller extend than the German "Grossbanken". In doing so, they isolate their customers

with a typical British bank, the typical German bank would have more information on its customers, and would thus need to worry less about their net values declining as a consequence of higher interest rates.[39]

The second reason is that credit terms differ systematically between countries, and that these differences are in line with the general characteristics of the respective financial systems. In Germany, credit contracts have a longer maturity on average, and interest rates are typically less adjustable than in the United Kingdom. Thus, the financial sector would simply find it more difficult to pass on rising interest rates. Furthermore, German accounting principles allow firms to build up hidden reserves to a much greater extent. As a consequence, the investment decisions of German firms should be less sensitive to short-run changes in the costs and availability of external funds. By contrast, UK accounting principles are such that fluctuations in the cash flow have a greater influence on investment, which in turn amplifies the effects of larger fluctuations in the cash-flow on aggregate demand and income.

The third reason why non-financial companies in Germany do not react as sensitively when the banks and the rest of the financial sector find themselves in a more restrictive situation is to be found in the prevailing governance and ownership patterns in both the financial and the non-financial sectors. The standard models in the macroeconomic literature about the reactions of banks to a restrictive monetary policy of the central bank and about the reactions of firms' investment decisions to a tightening of credit terms are almost always based on the assumption that all economic agents are strictly profit-oriented and have a rather short-term perspective. This assumption is not equally valid for German banks and corporations on the one side and UK banks and corporations on the other side. The bulk of the institutions comprising the German banking system are not privately owned, profit-oriented joint stock corporations or limited liability companies. And even those big banks in Germany which are joint stock corporations have a governance system which shields their management almost perfectly from the performance pressure of their shareholders, and thus their behaviour may not be too different from that of a "*Sparkasse*" or a "*Volksbank*". Thus the assumption that as a general rule, banks will react to central bank impulses in accordance with standard models, may be wrong, at least for certain financial systems. In Germany, for instance, they have a long-term interest in maintaining stable and "healthy" relations with "healthy" clients, and it seems plausible to assume that they pursue this interest by dampening monetary shocks,

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from monetary shocks. Küppers argues that Savings Banks and Co-operative Banks are those credit institutions in Germany which conform most to the model of a housebank with respect to a large number of their customers.

[39] That this more efficient way of gathering and processing information by banks can also result in more efficient investment decisions by firms, is theoretically shown in Dewatripont/Maskin (1995) and von Thadden (1995).

irrespective of whether these are intended by the central bank or not. At the level of large companies, a strict and exclusive short-term profit-orientation[40] is also the exception and not the rule in Germany. The more moderate profit orientation of many large corporations tends to make them "ignore" changing financial conditions so as to promote their long-term strategies, and they probably are more prone to do this than their counterparts in the United Kingdom. Here I would like to reiterate that this behavioural pattern on the part of German banks and the large firms is not necessarily a "problem" or a "flaw"; rather, it is a feature that is consistent with the general logic of the German financial system. [41]

In the United Kingdom, both banks and corporations are more forced to strive for profit and in so doing react to changing price signals. Both in their relationships with clients and in the way they value outstanding securities, privately owned and unambiguously profit-oriented banks and other financial intermediaries react more strongly to central bank activity; and private firms which have to be extremely conscious of their stock price performance are more strongly motivated, indeed forced, to react more to price signals, as it is to be expected in a more market-oriented system.

Thus one can conclude that the two systems also have different reaction functions with respect to the relationship between the financial sector and the non-financial sectors (B). The British system reacts more, and the German system reacts less, to changes in the situation of the respective financial sectors. Figure 4 summarises the two parts of the argument presented so far. As can be seen, the German system combines a stronger influence of the central bank on the situation of the financial sector (A, with 4 stars in the second line of Figure 4) and a weaker influence of the financial sector on the real economy (B, with 2 stars). The situation in the United Kingdom is

Figure 4: Monetary policy effectiveness in Germany and the UK

CB	⇨	FSc	⇨	RE	
Credit Channel	****		**		*Germany*
	**		****		*UK*
Interest Rate Channel	***		*		*Germany*
	*		***		*UK*

[40] A genuine profit-orientation is typically an orientation towards short-term profits because otherwise it would be difficult to make this orientation operational. Long-term profit orientation would be indistinguishable from an orientation towards the maximisation of total value or growth potential or "strategic advantage"; see Schmidt/ Massmann 1999.

[41] This argument reflects the effect of inter-generational risk smoothing through the financial system which is discussed on a theoretical level by Allen/Gale (1997). These authors show that the limited - or merely long-term - profit orientation of the banking sector can lead to welfare gains.

the reverse. The dominance of the central bank over the financial system is weaker (A, with 2 stars in the third line) and that of the financial sector over the real sector is stronger (B with 4 stars).

It would, of course, be naive to quantify the strength of these effects solely on the basis of the arguments which I have provided. Accordingly, all that I would like to do here is to present the idea that the relative strengths of the two relationships A and B are inversely related. That this should be so, is not by coincidence. Instead, it follows from the systemic features of the – broadly defined – financial systems, which are consistent in each of these two countries.

If one carried the exercise of "counting stars" to an extreme, one would find that the net effect of monetary policy may be the same in both countries under consideration here. But I do not mean to imply that the two differences between the partial channels A and B in the two countries cancel out completely. I chose to use stars, and not numbers, because the latter might have suggested a greater degree of precision, perhaps leading to misunderstandings.

However, it does seem safe to assume that the differences between the stylised financial systems have offsetting effects with respect to A and B, and in itself this may be an important factor for assessing the potential for a common monetary policy in an enlarged "Euroland". The two financial systems may differ in a fundamental way, and yet the net effectiveness of monetary policy may not be all that different. If this is news, it is good news for the proponents of a monetary union in Europe and its future enlargement.

The argument presented here in a very non-technical manner here, implicitly draws on the credit channel literature. It could be rendered more precise and more technical by making this basis explicit and spelling out in some detail how the differences between the financial systems determine the strength of the relationships A and B in the two countries. Not unexpectedly, this exercise would demonstrate that the effects of institutional features on the transmission mechanism are complex, difficult to aggregate and in some cases ambiguous. Nevertheless, the basic thrust of the argument would not change; the overall effects of the working of the bank-lending and the balance sheet channels are in line with my intuitive argument.[42] But even a more technical approach would not solve one important aggregation problem: How can one "add" the different effects of the links A and B given that the relevance of the link B depends on how strong the link A is? It seems that this question requires much more work and in-depth econometric studies. I would be delighted if the brief

[42] I am extremely grateful to Marcel Tyrell and Falko Fecht for having helped me to arrive at this result, which is not elaborated in the present paper because of space limitations.

non-technical discussion I have presented here were to be the inspiration for such a research project.

Having admitted that my attribution of stars to the partial channels A and B in the two stylised financial systems owes a lot to the credit channel literature, I should briefly add a conjecture concerning whether the result is stable with respect to the theoretical basis. As the general thrust of the credit channel argument is that the possible effects of monetary shocks, including those engineered by a central bank, are probably greater than those which the literature based on the interest rate channel takes into account. If one retains the notion of the financial system as a system of complementary elements, and the premise that Germany and the United Kingdom have consistent but differing financial systems, and combines them with the assumptions of the interest rate channel, than the effects for both partial channels would be weaker: The effect of the central bank on the banking system (A), which could be approximated by the multiplier, would be less pronounced in both countries and the difference between the effect in Germany and the effect in the UK would still be about the same. The effect of a change in the situation of the banks and other financial institutions on the real economy (B) would probably also be weaker in general, and at least some of the arguments which would suggest that in the United Kingdom this effect is stronger, would also still apply. Thus, the main result, namely that the two parts A and B of the transmission mechanisms tend to exhibit offsetting differences between the two countries, would also be valid if one disregarded the specific aspects of the credit channel. This is shown by the stars in brackets on the lower lines in Figure4.

I take it to be a good sign that the validity of my main result does not depend on the theoretical basis which I have used and for which the empirical basis is still weak as far as Europe is concerned. However, this - very limited - support of its validity comes at a price: leaving out all of those aspects which are specific to the credit channel creates an inconsistency between the ways in which financial systems on the one hand, and transmission mechanisms on the other, are seen. And as inconsistency is a likely source of error, it should also be avoided when one is presenting an intuitive and non-technical argument.

4.2. Are the different reaction functions likely to be stable?

I would like to conclude the paper with some brief remarks about dynamic issues. Financial systems and their subsystems are not immutable. European integration, regulatory convergence and, last but not least, the common currency, have already brought important

changes, and are likely to lead to more change in the future. What does this imply for the argument presented in the preceding section?

I do not believe that the introduction of the euro and even the enlargement to include the UK will change the basic structures of the financial systems of the participating countries in any fundamental way. Money and central banks are *not* core elements of the concept of a financial systems on which the main proposition in this paper is based. Different countries can have different financial systems in the sense of consistent sets of complementary elements and subsystems even though they have a common currency and thus necessarily an almost identical monetary policy. This suggests that the introduction of the euro *per se* will also not invalidate my proposition that some financial systems in Europe are fundamentally different and that a common monetary policy may nevertheless be feasible.

The common currency and especially the enlargement to include the United Kingdom will, however, magnify all of the forces which are currently working to transform the financial systems, and speed up ongoing processes of change. This raises the question of how financial systems change in general and what this implies for the common monetary policy in "Euroland". Due to space reasons, I will have to restrict myself to a few brief remarks.

The "fact" that financial systems have the property that every element of a financial system is functionally related to many others and that a consistent financial system constitutes a local optimum is relevant here. It implies that partial reforms are not likely to be sustainable, and this in turn implies that financial systems are not likely to change and to converge gradually.

But if there is no gradual convergence, what else could happen? If, for instance, political forces or dynamic entrepreneurs in the financial service industry succeed in introducing elements of one system – for instance the active take-over market of the British system - into the another system - for example that of Germany - the immediate result would be an inconsistent "non-system". If this happens, there will be pressure to restore consistency. A "restauration" of the old system is one way of achieving consistency. In this case the "innovation" is rejected. This is one possible course of events.

The other possibility is that the forces which make changes appear desirable are strong and the forces of "restauration" weak and that the formerly consistent system of a given country undergoes not only a series of partial changes, but will in fact experience a "gestalt switch"

from one type to the other. The resulting new configuration of the elements of the system may be better or worse; one local optimum is replaced by another one.[43]

In both cases - that is in the case of partial reforms which only lead to a "restauration" and in the case of a complete transformation of the system's architecture - the task of monetary policymakers will be extremely difficult because of the transmission mechanism will have become instable. In such a situation the ECB would scarcely be able to predict the overall effects of its policy on the economy of "Euroland" and would therefore find it difficult to determine the precise strength of the monetary impulses which it should provide. There would be less of a chance of such a destabilisation and loss of orientation of monetary policymakers occurring in Europe as a consequence of changes in the national financial systems if different national currencies and monetary policies had been retained and not replaced by a unified currency regime; and under the old system of national monetary policies, such a destabilisation would have less serious consequences. I want to conclude by expressing my belief that this increased risk of instability and disorientation constitutes a bigger problem for a common currency than the need to design and implement a common monetary policy for different, but essentially stable, financial systems, on which the existing literature focuses.

[43] In Schmidt/Spindler (1999) it is shown that, and why, there is a possibility that in the "competition" between different (consistent) national systems of corporate governance the one which is *less* efficient under stable conditions may be universally adopted.

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Appendix

Table A1: Financial System Indicators: Financial Sectors

	Germany	*UK*	*France*
a) Capital Markets			
Number of domestic listed shares (1997)	699	2,465	683
Market capitalization of shares related to GDP (1996)	22%	136%	30%
New listings between 1995 - 1997	60	765	109
Certificates of deposit as a percentage of GDP (1997)	0.32%	10%	18.1%
b) Banks			
Market share as percentage of deposits by the non-bank public (1990)			
Commercial Banks[1)]	39.7%	56.7%	53.6%
Savings Banks	36.1%		3.4%
Co-operative and rural banks[2)]	19.6%	42.7%	30.1%
5- firm concentration ratio of commercial banks (1995)	17%	57%	47%
Interest margin (1995)	2.66	2.21	1.66
Profit before tax (average 1990-94 as percentage of balance sheet total)	0.55	0.66	0.06
c) Non-bank financial intermediaries			
Private pension financing as percentage of GDP (1996)	5.8%	75.6%	4.5%
Pension funds portfolio composition (1996)			
equities	8%	78%	14%
bonds	74%	14%	38%
property	7%	5%	8%
liquid assets	12%	4%	40%

Notes: [1)] For UK authorized banks; [2)] For UK building societies
Sources: Davis (1998); Wymeersch (1998); ECB (1999)

Table A2: Financial System Indicators: Corporate Governance

		Germany	*UK*	*France*
a) Takeovers (1988- 1996)		4	1190	155
b) CEO compensation structure (1998)				
Total remuneration (average) in US $		398,430	645,540	520,389
Variable bonus as a percentage of annual basic compensation		27%	22%	19%
Options/ long-term incentive plans as a percentage of annual basic compensation		2%	38%	30%
c) Ownership concentration of listed companies (1994-95)				
Main shareholder	> 50%	68%	7%	37%
	25-50%	21%	12%	32%
	< 25%	11%	81%	31%
d) Share ownership structure (1995)				
Private households/ Individuals		14.6%	20.3%	19.4%
Public sector		4.3%	0.8%	3.4%
Insurance companies		12.4%	21.9%	1.9%
Pension/ Investmentfunds		7.6%	36.6%	2.0%
Banks		10.3%	0.4%	4.0%
Enterprises/ commercial corporations		42.1%	1.1%	58.0%
Rest of the world		8.7%	16.3%	11.2%

Sources: Wymeersch (1998); Towers Perrin's 1998 Worldwide Total Remuneration report

Table A3: Financial System Indicators: Financial Sectors

	Germany	*UK*	*France*
a) Capital Markets			
Number of domestic listed shares (1997)	699	2,465	683
Market capitalization of shares related to GDP (1996)	22%	136%	30%
New listings between 1995 - 1997	60	765	109
Certificates of deposit as a percentage of GDP (1997)	0.32%	10%	18.1%
b) Banks			
Market share as percentage of deposits by the non-bank public (1990)			
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