Housing Finance Systems: Which system serves its goals best?

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Abstract

The subprime crises of the US which led to the global financial meltdown economies are experiencing currently, led to the question of how housing finance systems need to be designed to provide affordable housing and financial stabile macroeconomic conditions. This paper compares critically the development of housing finance systems of EU15 member states with the US using data from 1999-2006. First housing finance systems need to be classified. In this respect the paper applies the methodology of the World Bank in distinguishing national finance systems in bank based and market based for the housing sector. EU15 member states as well as the US can be clearly classified into a specific housing finance system. To answer the research question the paper develops in the following two different strands: Firstly the effectiveness in reaching the social goal of providing affordable housing is analyzed and on the other hand the effects for financial stability are discussed in the light of the current housing crises. This paper aims to highlight the impact of housing finance systems and its institutional setting for social policy and financial stability and gives a broader view on housing market structure than their impact on house prices.

Keywords: housing finance, affordability, cross-country, financial stability, national financial systems

Introduction

The current financial crisis, which took off as a house price crisis and the US, showed one more the importance of proper housing finance schemes and the necessity to focus on the social impacts of housing finance in terms of affordability. Although the situation in the US economy is far from homogenous, the overall amount of foreclosures increased according to RealtyTrac (2009) in February 2009 by around 30 per cent compared to the data of February 2008. This fact can be quoted as failure in the structure of the US housing finance system or as an increase in instability due to the selection of housing financing modes. Does the state fail in its housing finance policies due to these empirical evidences or can it be stated as element of the neoliberal paradigm of economic policy of the US?

To answer this research question and to point out, which housing finance system serves its social goal best, different housing finance systems are distinguished from a macroeconomic perspective. As a starting point for the distinction the classification in national financial systems is transformed into the spheres of housing finance. To enable a quantitative analysis of the different housing finance systems in cross country analysis the methods of the World Bank despite all their weaknesses (discussed below) are applied. As studies on national financial systems pointed out clearly in the past, is a simply consideration of financial flows and the analysis of financial stocks in the banking sector and the stock exchange insufficient to grasp the structural differences implied by the selection of national finance systems. Following these critical points a qualitative assessment of housing finance systems is added, which focuses on the role of the state in housing finance and the underlying social goals of housing financing scheme.

It is assumed in this paper that from a structural point of view housing finance systems are promoted by state policies as long as the pronounced state policies coincide with the goal that is to be achieved. Which means housing finance schemes can rather promote homeownership via enabling cheap financing and refinancing possibilities or can offer a rental sector in sufficient sized and affordable rents.

To follow this line of discussion the paper is organized as follows: The first part gives an overview over the current situation on the housing sector, following the most important indicators – the house price developments and the residential mortgage debt ratio to GDP. In the second part the quantitative and qualitative classification of housing finance system for selected European Economies and the US is derived. The third part adds the notion of housing affordability to the classification of housing finance systems. Besides of the search for structural mis-matches between the housing finance structure and the public promotion of different social goals, the effects on homeownership rates and affordability are investigated in that section.

1. Stylized Facts: Housing Finance and Developments of European Economies

In the last years most European Economies experienced a sharp increase in housing prices. Additionally mayor differences between housing prices[1] across member states of the European Union could be observed, see Figure 1. Despite of sharp increases in some economies, countries like Germany or Austria showed only minor fluctuation. Similarly to European Economies, the US housing showed significant regional and state-wise differences in house price increases (Springler/Wagner, 2009). Among others, Catte et al. (2004:6) and Girouard et al (2006:6) point out clearly, that the movements in house prices in the last decade did not follow - with a lag - the economic cycle as they used to in the past. Additionally the duration of the house price cycle, which was in the 1980s around 10 years and was accompanied with a minor upward trend, as Czerny/Wagner (2003) show, changed. Empirical data shows that especially in the United States, Great Britain and Spain house prices even accelerated after the business cycle reached its cyclical downturn.

Simultaneously to these developments in housing prices also major changes in housing market could be observed. These trends were partly promoted by changes in European demographic structures, socio-economic changes – which in turn had an influences on housing market demand especially the decreasing number of household members – and overall macroeconomic indicators, like the need to reduce public debt and deficit ratio to fulfils the Maastricht criteria, which required in turn a decrease in public spending and lower volumes of housing subsidy programs to fulfil social aims (see among others Czerny, 2001; Springler 2005). Additionally the liberalization of credit markets also had an important influence on housing finance structure, which followed the model of the US housing finance structure and focused on strengthening secondary mortgage markets and the implementation of innovative housing finance products.

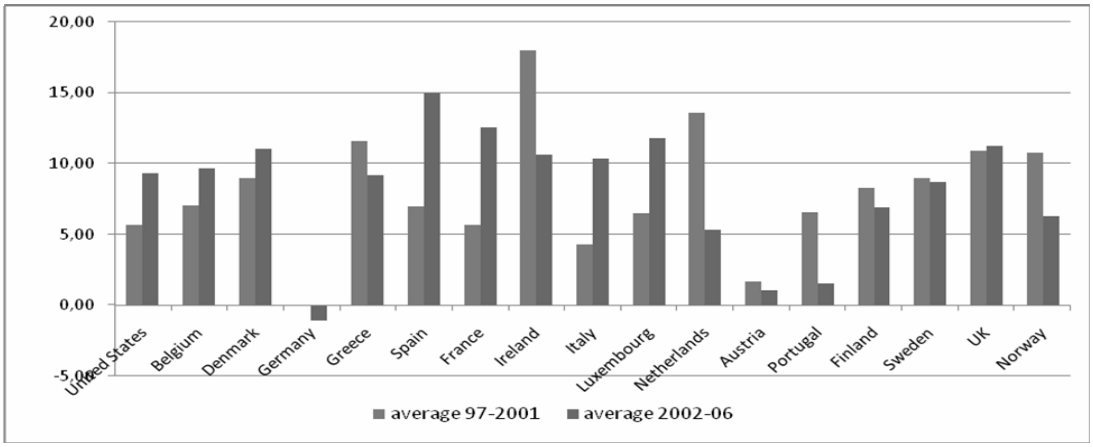


Figure 1: House Price Developments: %-Changes, 5 year average

Source: European Mortgage Federation

[1] The author is aware of the fact that cross national dataset in house prices include some inconsistencies, as the size and shape of the sample flat might vary across economies and the data might be restricted to new housing. To minimize these inconsistencies the authors aimed to keep as well the number of resources for cross country data as low as possible. In this paper the dataset of the European Mortgage Federation is used.

The impact of these innovative housing finance products for the residential mortgage sector can be seen, when taking the development of residential mortgage debt to GDP ratios into account. As observable in Figure 2, major structural differences between European Economies exist. The striking feature in this respect is not so much the difference in the level of household indebtedness across European Economies, but the sharp increase of household indebtedness in the period 2002-2006 compared to the average data for the period 1997-2001. Despite the fact that a comparison between the sharp increases in house prices and the rise in household indebtedness holds for some economies, it does not allow to conclude that there is an immediate causality between those two movements, as economies like Spain and France faced a sharp price increase accompanied with just minor rises in household indebtedness.

But does this immediately imply that households finds themselves in a situation when housing becomes unaffordable or less affordable or is it this increase in household debt together with an increase in house prices rather a sign of increasing wealth accumulation over time?

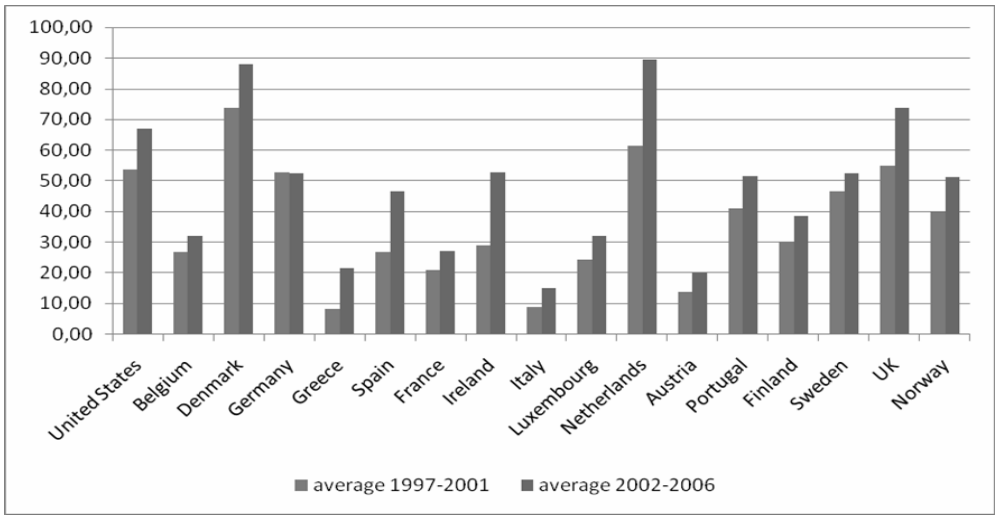


Figure 2: Residential Mortgage Debt to GDP %, 5 year average

Source: European Mortgage Federation, International Union for Housing Finance (n. d.), IMF (2008).

2. What is meant by housing affordability?

As the states significantly reduces their social responsibilities and shifts social risks into the sphere of individuals, also the definition of formerly “social housing” was transformed into housing “affordability”(Stone 2006). The mayor difference between these terms regards the degree of state influence. By *“social housing”* primarily the provision of *low rents* due to state intervention, by rent ceilings or the construction of new dwellings with state subsidies is meant. Housing affordability covers not only this social aim, but aims simultaneously to ease access to financial means for housing to low income classes. As housing finance systems become the crucial factor for fulfilling the social aim, this paper distinguishes different housing finance systems. It is assumed that housing finance systems, with a strong emphasis on market finance – via secondary markets – also aim to improve financial assistance to all income classes and therefore promote the social aim of increasing homeownership as affordability measure. Conversely have housing finance systems with a focus on a bank based

national financial systems no social goal in easing financial access to lower income classes. Therefore housing affordability is promoted in these systems via a stronger emphasis on state intervention by supply side housing subsidies, which aim to decrease rents by producing cheaper – subsidised - dwelling stock.
A combination of housing finance systems that are characterized by similar features – which are discussed in above - as bank based national financial systems and a focus on demand side state subsidies, which aim to promote the poorest income classes but do not aim to provide cheaper housing by subsidize dwelling stock can be regarded as *"mis-performing"* any social aim of affordability – neither focus on homeownership increase nor in social housing via low rents. On the other hand does a combination of financial systems following a market approach and therefore promoting homeownership and a focus of state authorities on supply side subsidies not necessarily lead to a mis-performance of the social aim of affordability, as in this case poorer income classes have both easier access to the financial market and can benefit from lower rents provided by state subsidies dwellings.

Basing on these definitions the following hypotheses will be derived for this paper:

Housing finance systems have different effects on housing prices and affordability. Housing finance systems which resemble in qualitative *and* quantitative terms *bank based financial systems* hamper strong housing price increases and fulfil their aim of social protection and affordable housing. Housing finance systems which resemble in qualitative and quantitative terms market based financial systems force strong housing price increases. Due to high prices and a weaker institutional framework housing is less affordable; since the primary goal of market based housing systems is to increase the ownership society, the fact of less affordable housing cannot be quoted as mis-performance of the system. Only the simultaneous existence of low rates of homeownership, high household debt and high rates of homelessness could be raised as arguments of a mis-performance of the system. If qualitative and quantitative indicators to not show the same characteristic, but contain bank based *and* market based factors high housing prices and mis-performance of public goals will be the result.

A further step in the evaluation of housing system performance besides of the systemic coherence has to be the measurement of affordability improvements. Both of the two basic concepts to measure the affordability of housing suffer from similar problems. For the definition of affordable versus unaffordable housing a ratio is introduced at 25% of household income for housing costs on the rental sector and 30% of annual gross income to cover mortgage payment for homeowners. Whenever a household spends more that the respective ratio, housing is regarded unaffordable. The definition between financial burden and heavy financial burden follows a similar approach. In this case a financial burden is detected whenever 20%-50% of household income is spent on housing. The classification of heavy financial burden applies for households who spend more than 50% of their income on housing. No concise cross country data sets exist for both measurements. Therefore this paper relies in section 4 on the available EUROSTAT and HUD data, which classifies into households with financial and heavy financial burden.

3. National financial systems and housing finance systems

From a macroeconomic point of view the development in financial innovations enabled the creation of new financial products, which enlarged the availability of loans for lower income classes – the best example for this development is the enlargement of the US subprime market – but promoted as well economic growth, via higher macroeconomic demand. The downside of such a development can be seen in a larger instability of the system. Although risk mitigation measure are established financial fragility increases as seen by the most recent international developments on financial markets (Debelle 2004:59).

From an institutional perspective the implementation of these innovative finance products led to a shift in housing finance structures. From the traditional classification into *basic form* of housing finance out of individual savings, *systems of contractual savings*, systems build on *mortgage bonds* and those system relying on *secondary market instruments*[2] the latter experienced clearly the highest boom in recent year. Although this classification does not necessary imply a path of development, it is evident that developed economies focus basically on a mixture of contractual savings and mortgage bonds or systems of secondary market instruments. Due to the increasing depth of the housing finance system an analysis of their functioning requires a more structural approach than it can be done from a pure flow of funds perspective. Therefore this paper connects housing finance systems with existing national finance systems. This enables the integration of important elements as risk transfer, the position of the debtor/creditor in the financing process as well as the role of the state for the development of a specific national housing finance system.

3.1. National finance systems

When trying to classify national financial systems flow of funds for investment and firms' financing used to the starting point for economists (OECD, 1995:15; Allen and Gale, 2000). Although it turned out that this functional finance approach has its limits due to the minor importance for firms' financing, since the main source of finance are retained earnings (see among others Schaberg, 1999:20; Huffschmid, 1999: 18) it remained the main starting point for analysis. To different paths to deal with the consequences of the analysis of Schaberg and Huffschmid were drawn. On the one side economists like Corbett and Jenkinson, 1994:74 or Mayer, 1988 concluded that the classification has to be enriched by qualitative factors which aim to investigation the *relationship between creditor and debtor* in a national financial system. On the other side economists, especially those of the World Bank (Levine, Demirgüc-Kunt, and others) developed a more sophisticated *data base* (Demirgüc-Kunt and Levine, 1999) as to measure not only flow of funds but also depth and efficiency by comparing volume and turnover of the banking sector and the stock exchange. Although the method introduced by economists of the World Bank suffers from strong sample dependency it can serve as a first step to grasp the financial flow of funds interrelations between banks based and market based economies.

[2] See for the classification of housing finance structure among others Lea (2001); Mooslechner (1994: 190).

When additionally looking for example at the methods of banking regulation to account for the qualitative factors a better overview over different national financial systems can be given. It can be shown (Springler 2006) that in developed economies qualitative and quantitative characteristics of financial systems (market based or bank based) simultaneously aim to promote higher short term / or long term growth and enable more / less innovation by less / more rigid institutional frameworks, which in tern promote a lower or higher degree of stability, see Figure 3. Such an enlarged concept of financial systems enables the analysis of institutional and structural in-homogeneity, which in turn has an impact on economic development in terms of output growth and the stability of the system. Numerous studies show, that bank based financial systems promote financial stability and are only able to provide a fair development of economic growth. Whereas market based financial systems focus on the development of economic growth but might lead to an overall higher degree of instability of the financial system.

	Bank based	**Market based**
Financing	Credit	Stock Exchange
Relation creditor /debtor	Tight – "Hausbankensystem"	Loose – split ownership (shareholder)
Time horizon	Long term (Invervention – "voice")	Short term / shareholder value – "exit" option is used
Growth and Stability	Moderate growth, high stability	High growth (promotion of innovation), higher instability
Regulatory regime	Protective banking reg. (strong direct state intervention)	Preventive banking reg. (strong self-regulatory modes)

Figure 3. Classification of National Financial Systems

Basing on this analysis this paper states that similar to the distinction into national financial systems for financing investment project of firms, different financing systems for durable consumption goods of households – housing – can be distinguished.

3.2. National housing finance systems

Similar to the findings of the analysis of national financial systems figure 4 distinguishes between bank-based and market-based housing finance systems by introducing quantitative and qualitative indicators.

	Bank Based		Market-Based	
	Financial System	**Housing System**	**Financial System**	**Housing System**
Financing	Credit	Mortgage	Stock Exchange	securitization products
Relation creditor /debtor	tight	tight	loose	loose
Time horizon	Long term	Long term / housing	Short term / shareholder value	Short term / liquidity
Regulatory regime	Protective banking reg.	Primary social goal / strong state interference	Preventive banking reg.	Ownership society / strong market mech.

Figure 4. National financial systems and housing finance

The primary source of financing investment projects serves as starting point for quantitative measurement.

The criteria *financing* will be a dummy variable for a so called "*structure index*", which will be explained in more detail when analyzing the different housing systems and follows the methodical approaches of the world bank in conducting a more sophisticated data base on roots of financing by distinguishing between size, volume and efficiency of the banking sector compared to the stock exchange in a respective country. Similarly the indicator financing resembles the focus of housing finance systems on mortgages or secondary market instruments like asset backed securities. Although the main actor in this case the household does not actively aim to use securitization instruments limited or excessively shows the importance of the stock exchange. The quantitative criterion of financing is amended by several qualitative criteria which represent the institutional and structural framework of the housing finance sector.

The *relation between creditor and debtor*, that can be rather tight or loose helps to understand how the individual household is seen in the system. In case of a tight relation, which is the case in a bank based national finance system or housing finance system changes in the loan contract might be added in case of illiquidity of the household or changes in the overall wealth position. In case of a loose relationship, there might be less intention to discuss alterations in the contract. The existence of tight or loose creditor / debtor relations emerges immediately out of the quantitative analysis of the volume, size and efficiency of the housing finance system.

Another qualitative criteria is the *time horizon* of the system, similar to the respective characteristic of bank based and market based financial systems also the housing finance system might be settled in a long term or short term institutional framework (see figure 4). A quantitative measurement to grasp this qualitative factor might be the amount of equity withdrawals in a system, which are not used to housing purposes.

The *regulatory regime* is a further important qualitative indicator for a rather bank based or market based financial system. This criterion emerges from banking theory to explain differences in regulatory methods between bank based and market based financial system and

aims to show the strength and directness of state intervention on the national financial system (Bernet, 2003). Preventive and protective measures can be distinguished then looking at different regulatory frameworks. Protective measures would imply a stronger and more direct interference of the state with the financial structure, whereas preventive measures would focus on self-regulatory market mechanisms for regulation and therefore resemble a market based financial system. In the case of housing systems the volume and structure of state subsidy programmes, which the aim of either promoting an ownership society or promoting affordable housing seems to be the major difference between bank based and market based housing finance systems. The influence of the state can therefore be measured in quantitative terms by introducing to ratios, first of all the general volume of housing subsidy programs measured by the GDP shows the degree of interference of the state with market mechanisms. Furthermore the question arises whether an ownership society or affordable housing is the primary goal of state intervention. Therefore the volume of subsidy programs spend on so called objective-measures[3] is distinguished from subjective-programs. The indicator is conducted as volume of objective measures by GDP divided by the volume of subjective-measures by GDP. The bigger the result the stronger are objective measures and therefore the aim to create affordable housing, which leads to a bank based housing finance system.

The immediate empirical investigation suggests that the US reflects a market based housing finance system. In the US the development of secondary markets in the housing finance sector emerged already in the 80s and reached a remarkable volume in the mid 90s. Compared to these developments the situation in Europe is far not that elaborated (see figure 5). Out of the Member States of the European Union the secondary housing finance market in the UK is by far most developed and accounts for 31.9% of total residential mortgage backed securities in Europe. (ESF 2008) Although with lower volume, similar trends towards secondary mortgages and sub-prime mortgage lending can be observed in many other European economies (Miles 1994:38; Committee on the Global Financial System 2006: 16; see table 1.1 in Annex).

Country	Share of European Securitisation Market 2008 Q4, Issuance (RMBS) in% of total European RMBS Issuance – selected Economies
UK	31.9
Spain	9.8
Italy	11.2
Netherlands	16
Portugal	1.1
France	2.2
Belgium	6.4
Germany	11.5

Figure 5: Share of European Securitisation Market in %, 2008 Q4

Source: European Securitisation Forum 2008, Q4 Report, own calculations

[3] Objective-measures of housing subsidy programs are spent to construct new dwellings or renovate existing housing units at lower costs, which enable the sell or renting of these housing units at lower prices. Subjective measures are conversely given to a household, which mostly has to meet certain income requirements or additionally requirements of family status to enable primary homeownership.

Comparing developments of increasing housing prices in European Economies from figure 1 with the share of European securitization Markets as described in figure 5 it becomes evident that most countries with extensive use of securitization housing finance products also experienced a strong increase in house prices. This relationship is not investigated further in this paper as it does not help to answer the research question. The fact that market based housing finance system might increase the upward pressure on house prices per se does not lead to less affordability of the system, as market based system might increase homeownership rates. Under the assumption of increasing homeownership rates the rise in house prices leads to an increase in the assets of the households and affordability of not hampered. Rather the question of a mis-performance between qualitative and quantitative indicators.

3.2.1 Measurement of quantitative indicators

The Evaluation of quantitative indicators follows the approach of the World Bank (Demirgüc-Kunt/Levine 2001) for the classification of National Financial Systems, which constructs a "*structure index*" basing on three indicators that resemble the relation between national credit markets and the stock markets. Indicators for size, activity and efficiency show the importance of one or the other form of financing for firms and the underlying financial structure.
Size refers to domestic assets of deposit money banks relative to domestic stock market capitalization. *Activity* refers to the ratio of private credit by deposit money banks relative to the total value of stock transactions on domestic exchanges. The higher the ratio the stronger is the bank sector compared to the stock exchange. The third indicator discusses the *efficiency* of the banking sector compared to the stock exchange by computing two relations: Trading – the total value traded divided by GDP – related to overhead costs of the banking sector and trading in the same definition as above related to the interest margin. The higher the outcome of each indicator the more bank based an economy is. This means, that the outcome can just cluster a specific number of countries into more or less bank or market based, but lacks an absolute valuation for classification. Therefore the measurement is strong sample depended. Additionally these variables help distinguishing financial systems according to the *financing motive* presented in figure 3, but fail to give a full picture by not referring to any qualitative or institutional features of the respective national financial system[4].

Despite of the disadvantages of this approach a similar definition is used as a first step for a classification of different housing finance systems, as it enables an international comparison on a macroeconomic level. Figure 6 shows the results for the housing finance system, using the average from the ratios (size and activity) resulting from annual data from 2002 to 2005 and reflects the quantitative assessment of the ratios presented in Figure 4.
The indicator ***activity*** resembles the relationship between *lending for house purchases divided by GDP* and the *volume of issuance of mortgage backed securities divided by GDP* as variable

[4] See Appendix Table 1.0 for the classification into bank-based and market-based financial systems for European Economies, which were selected according to data availability. For a more detailed analysis on the impact of sample dependency of this method of national financial system classification see Springler, 2006.

for stock market importance. The higher this ratio the more important are bank lending for housing finance and the more bank based is an economy. Similarly the indicator ***size*** presented in figure 5 discusses the relationship between *lending for house purchases divided by GDP* and the *volume of outstanding covered bonds by GDP*. Due to a lack of more differentiated data covered bonds, which includes as well mortgage bonds, have to be used here. Although mortgage bonds are not a tool of stock exchanges but are issued by banks, this variable is used as a measurement for stock market size as it is assumed that the stock of mortgage back securities, which are another major part of covered bonds counts for the differences in the volume of outstanding covered bonds and enable therefore the international comparison. As data for overhead costs was not available for the countries presented in figure 6 the indicator ***efficiency*** is not used for the quantitative classification of housing finance systems.[5] To grasp the underlying institutional features it is important to analyze qualitative factors, which are resembled by the role of the state in housing policies (compare with figure 4).

	Activity	**Size**	**Structure Index**	**Housing Finance System**
BE	58,10	0,00	58,10	b
DE	82,95	0,00	82,95	**b**
GR	38,79	0,00	38,79	b
ES	9,87	0,00	9,88	m
FR	48,16	0,00	48,16	b
IE	23,75	0,23	23,98	m
IT	5,23	0,00	5,23	m
LU	25,70	0,00	25,70	m
NL	15,09	0,06	15,14	**m**
AT	117,11	0,06	117,17	**b**
PT	9,79	0,00	9,79	m
FI	0,00	0,00	0,00	m
UK	0,37	0,00	0,37	**m**
			Mean	33,4806344

Figure 6. Classification of Housing Finance Systems – Quantitative indicators

Datasource: Statistik Austria; ESF- Securitization; European Mortgage Federation; own calculations

3.2.2 Measurement of qualitative indicators

The impact of the role of the state can be measured in quantitative terms. This method allows quantifying qualitative indicators. The importance of the mode of intervention is clearly presented in figure 7. A strong direct intervention of the state in terms of objective[6] or direct subsidy programs does not lead (conversely to the often stated myth) to overall higher

[5] As figure 6 shows, have most European Economies similar classification in national finance systems and housing finance systems – bold letters indicate a difference between those two classifications using quantitative indicators (see Appendix Table 1.0 for a detailed comparison). From this mismatch it cannot be concluded that housing finance is not fulfilling its social goals. As it is a gradual measurement not an absolute one, it is simply possible that one market shows a stronger emphasis on a specific form of financing.

[6] Objective-measures of housing subsidy programs are spent to construct new dwellings or renovate existing housing units at lower costs, which enable the sell or renting of these housing units at lower prices. Subjective measures are conversely given to a household, which mostly has to meet certain income requirements or additionally requirements of family status to enable primary homeownership.

expenditure of the state – and therefore to a higher fiscal burden. Compare in this respect especially the data of Great Britain with Austria. The first reflects an economy with an overall strong indirect intervention, the later an economy with a strong focus on objective measure.

This means that there is not ex-ante preference of less state intervention from a fiscal point of view, it is rather the resemblance of a nation's economic policy paradigm, which rather tries to avoid direct state intervention and focuses on indirect – subjective – housing measure as social residuum or focuses on an alternative of social housing for a larger income spectrum. Therefore the volume of subsidy programs spend on so called supply side programs or objective / direct methods is distinguished from demand side programs or subjective / indirect methods.

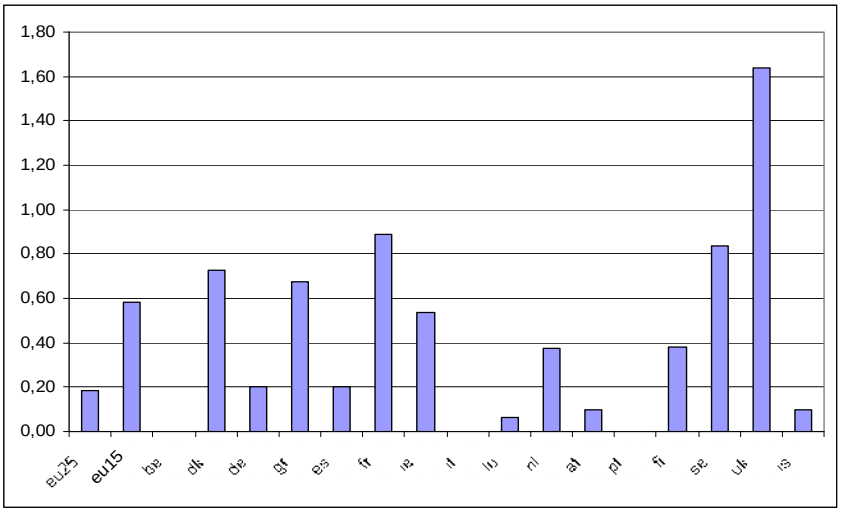


Figure 7. Housing expenditure in % of GDP (data 2005)

Datasource: Eurostat

	Structure	State Subsidy Programs
BE	0,85	b
DE	0,20	m
GR	--	--
ES	--	--
FR	0,21	m
IE	0,81	b
IT	--	--
LU	0,08	m
NL	0,08	m
AT	0,76	b
PT	0,26	m
FI	0,07	m
UK	0,12	m

Figure 8. Classification of State Subsidy Programs

Datasource: Stagel, 2004, Eurostat; own calculations

To find out whether an economy focuses on a homeownership or a renters-society therefore an indicator is conducted as volume of supply side measures to GDP to the volume of demand side measures to GDP. The bigger the result, the stronger are objective measures – supply side programs - and therefore the aim to create affordable housing in the sense of a renter's society. Similarly to figure 6 renters societies are classified in figure 8 as bank based (b) and homeownership societies as market based (m).

3.3. Evidences for systemic imbalances

An immediate systemic inconsistency can be detected when comparing the focus of financial structure on the housing sector with the underlying goals of the state.

Figure 9 shows the results comparing the structural evaluations of national housing finance systems and state subsidy programs. Most EU15 member countries - with the exception of France, Germany and Ireland - show a homogenous outcome comparing financial structure and state intervention. In the case of France and Germany the mismatch can be quote as structural mis-performance as both countries have a more rigid housing finance system which does not promote housing finance for lower income classes and a state subsidy program which does not focus on lower rents but provides only the lowest income classes with state subsidies. Housing policy programs aim to fulfil a redistributive goal, but lower middle income households do neither have the opportunity to create homeownership nor can they profit from lower rents.

In the case if Ireland structural mismatch does not seem to lead to a structural mis-performance of housing policies immediately, as lower income classes and lower middle income households are on the one hand promoted by cheaper rents due to supply side state intervention and on the other hand have easier access to the financial market to finance homeownership than bank based housing finance systems. Are the theoretical arguments supported by empirical evidences of the last years?

	Financial Structure	**State subsidy programs**	**Homeownership-rates**
BE	b	b	--
DE	**b**	**m**	41
GR	b	--	--
ES	m	--	85,26
FR	**b**	**m**	64,6
IE	**m**	**b**	77,4
IT	m	--	67
LU	m	m	--
NL	m	m	52
AT	b	b	49,1
PT	m	m	64
FI	m	m	64,6
UK	m	m	67

Figure 9. Structural harmonization and mismatch

4. Effects on affordability: Which system is better?

To show the effects on affordability first a general assessment on the risk of poverty rates is given. Additionally, as mentioned above affordability is measured by the indicators financial and heavy financial burden for housing costs.

4.1. Risk of poverty rates

In general two different levels of at risk of poverty rates after social cash transfer according to housing can be distinguished in Europe. On the one countries like Italy, Ireland, Great Britain, Spain and Greece are constantly well above EU15 average using data from 1999 to 2004[7]. One the other hand countries like Austria, Sweden, Finland and Luxemburg are constantly below EU15 average and show a similar trend as EU15 average.

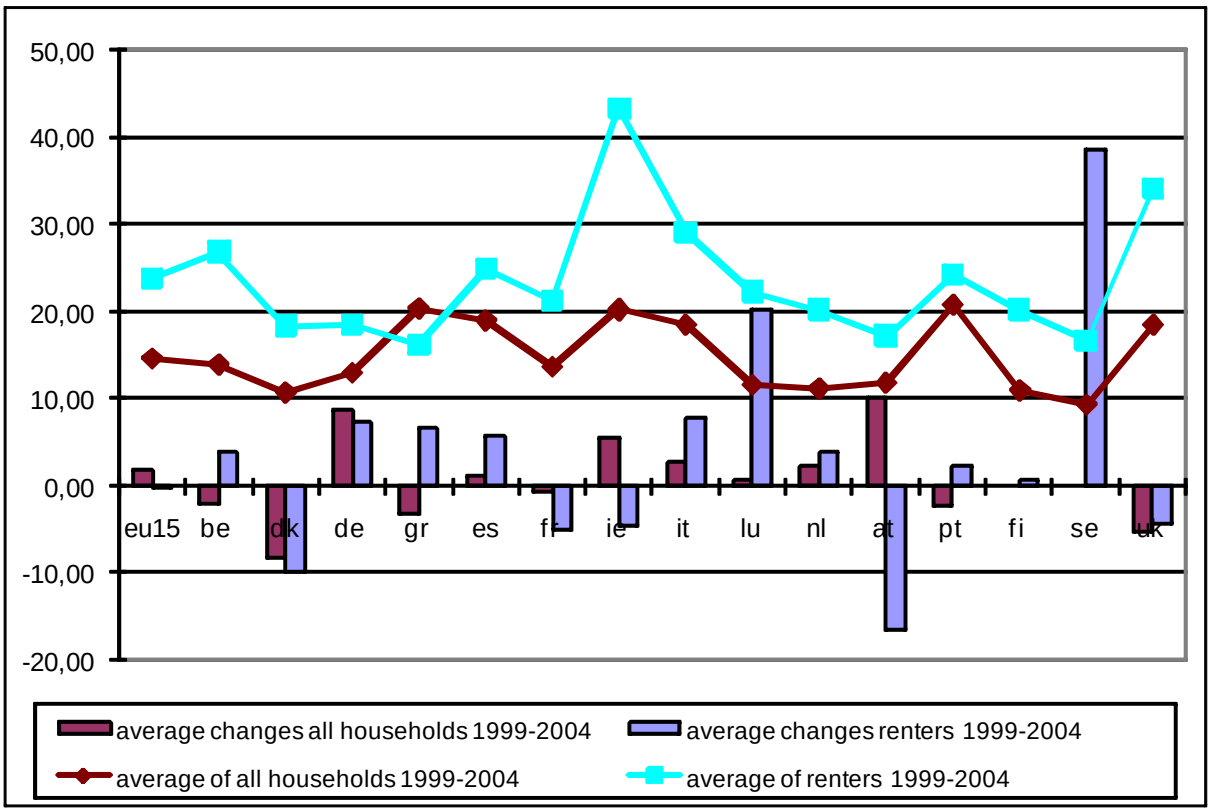


Figure 10. At risk of poverty rate after social cash transfer according to housing - cut-off point: 60% of median equivalised income after social transfers

Datasource: Eurostat

Germany, France and Belgium fluctuate across EU15 average with a strong increase in the last years of the sample. Comparing this empirical evidence with data plotting from a

[7] Data cuts off at 2004 as this is the last available data for cross country comparison. Eurostat data on financial burden and heavy financial burden enables only access till 2001. This is also the reason why to comparable indicators were selected, to broaden the time horizon and compare the quality and outcomes of two different macroeconomic indicators.

continuum of financial structure and subsidy structure in European Countries it becomes evident that economies with market based structures have a higher level of risk of poverty. Secondly it can be seen that the more bank based the financial and subsidy structure is the more stable and at a lower level is the risk of poverty rate.

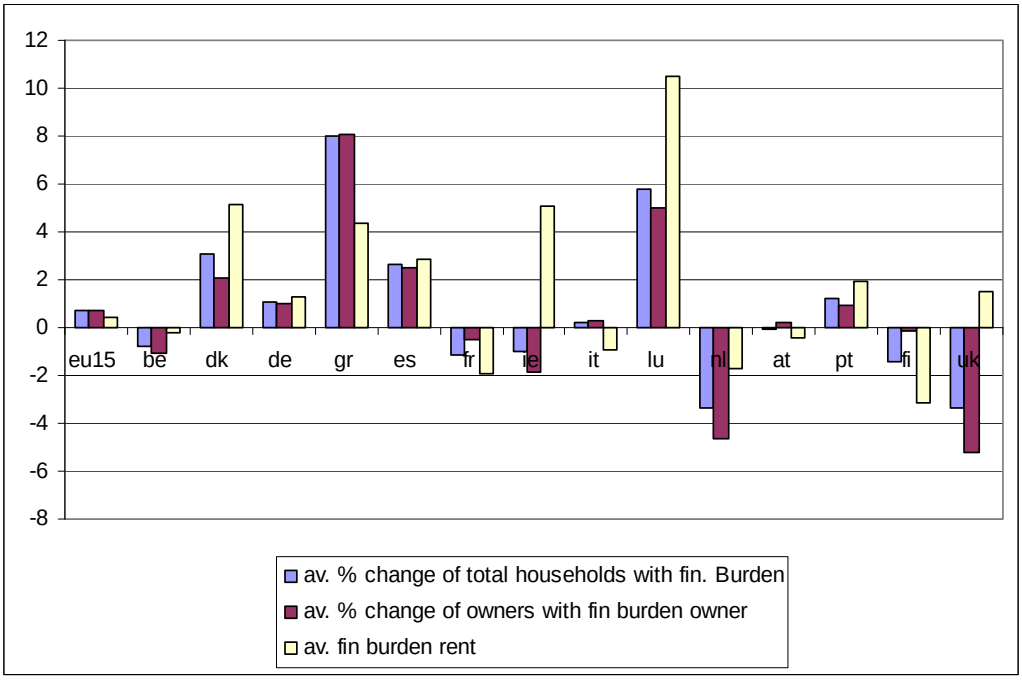
Besides of different levels of risk of poverty rates between European Countries also different developments in the years 1999 to 2004 can be observed. Although starting from a higher level of risk of poverty rate Great Britain faces a decrease in the years 1999 to 2004 for all households and renters. Apart from Great Britain, a similar trend can only be observed in Denmark, Austria, Ireland and France for renters.

Especially for the case of France is has to be kept in mind that figure 10 shows the average development from 1999 to 2004, and does not show the severe annual fluctuations that occurred. These severe fluctuations can be seen as a sign for the systemic imbalances detected with the structural analysis but not clear evidence can be given. For all other economies in the sample of figure 10 the situation of renters worsened compared to the average of all households. Again, this is especially worrying for those economies – bank based ones – that aim to promote affordable housing for renters. For those economies only Austria a clear decrease in the risk of poverty rate for renters can be observed. As figure 10 shows is data missing for Finland; Belgium and Germany show a strong increase in the risk of poverty rate and the data for France is characterized by strong fluctuations. Similar results can be obtained when taking the developments of financial burden between 1996 and 2001 into account. Also in the case of Germany the sudden strong increase in the risk of poverty rates can be taken as a sign for structural imbalances.

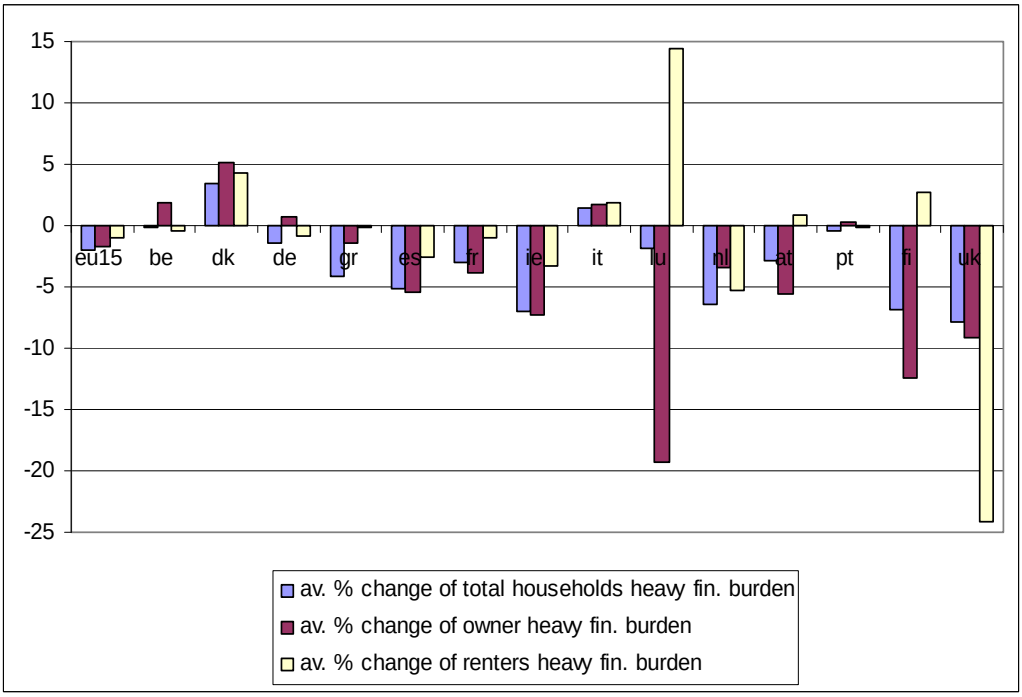
4.2. Affordability: Financial burden versus heavy financial burden

Basing on Eurostat data figure 11 a) and b) show the developments of households with financial burden and households with heavy financial burden.

The overall decrease of the percentage amount of households facing a heavy financial burden that is also shared by renters households can similarly not be observed for households with financial burden. This strengthens the hypothesis that housing subsidy schemes aim especially to reduce financial burden for the lowest income classes but do not promote lower middle income classes which in an increasing number face a financial burden due to raising housing costs. As the promotion of purely the lowest income classes is in line with a wider definition of affordability as it is used by so called “market based” economies. As is regards the two strong “bank based” economies in the sample – Austria and Belgium, show both a decrease in the percentage of renters’ households under financial burden on average of the period 1996-2001.



a Households with financial burden due to the housing costs



b. Households with heavy financial burden due to the housing costs

Figure 11. Measuring financial burden 1996-2001

Datasource: Eurostat; own calculations

As it regards economies with "*structural mismatch*" according to the structure of housing finance and subsidy programs are the empirical data mostly in line with theoretical assumptions: In Germany an increase in the general percentage of households with financial burden on average of 1996-2001 could be detected, which implies an increase of ownership'

and renters' households. In Ireland a strong average increase of renters' households with financial distress occurred, which was offset by a sharp decrease in ownership households. The data for France, which is not in line with the theoretical assumption of "*structural mismatch*", can be explained by the strong fluctuations in data. Countries with "market based" background like Great Britain, Portugal, Luxemburg or the Netherlands all show a better development for ownership households than for renters' households. To compare these results with the development in another market based housing finance sector, affordability data for the USA can be added. The picture is similar. To enable a comparison a similar time framework is selected – which resembles the situation before the subprime market enlargement. Although this market showed the strongest growth rates in the past years and enabled especially lower income classes to obtain homeownership, these developments are also not included in the analysis of the European Market. As figure 12 shows the increase of heavy financial burden of all households is reflected by the increase in the costs of renters. This shows the strong emphasis of the American Society on the increase of homeownership as goal for housing affordability. Nevertheless the strong increase in the overall financial burden suggests that also the financing situation for homeowners got worse in the period 1999-2003.

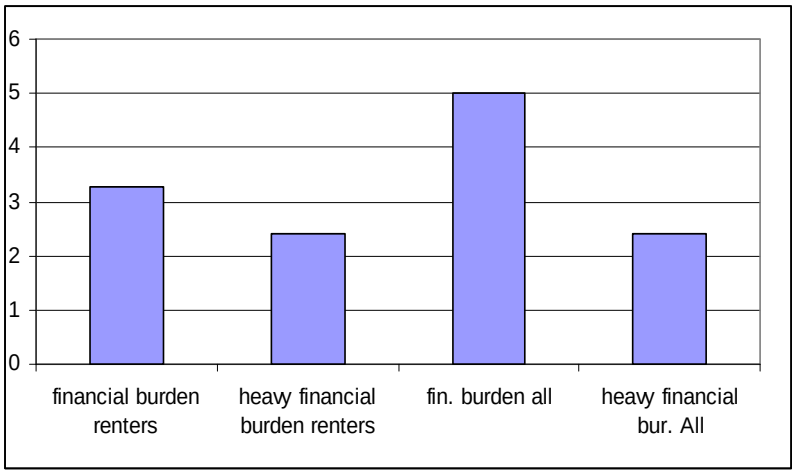


Figure 12. Financial burden of 1999-2003 (annual % change).

Data source: HUD, HADS Data base; own calculation

Despite of the weaknesses of the empirical analysis due to the poor data availability, it can be concluded that, although focusing on a wide definition of affordability in most European Economies, the potential of *"new poverty"*, which affects mostly lower middle class income households, increased substantially. Countries aiming to promote homeownership could not prevent major cost increases during the last years. Although, in general, the situation for renters was even worse than for homeowners, economies focussing on a more narrow definition of affordability by focusing on lower rents managed to keep housing costs at a lower level and faced on average a lower percentage increase in households with financial burden due to housing costs.

Conclusion

Housing finance system changed in some European Economies in the past decade to more "market based" financial systems, which can be constructed similarly to national financial systems. Similarly to these developments can different national goal of housing affordability be distinguished: renters' societies with a strong emphasis on a substantially large rental sector versus homeownership societies, which focus on the enlargement of homeowners.
Using structural indicators it can be shown that despite of 3 economies with structural imbalances national goal and the promotion of rather bank based or market based housing finance systems are coordinated. Effects of systemic imbalances could be observed from a macroeconomic point of view by strong fluctuations and a strong increase in the risk of poverty rate in the last year.

In terms of affordability it could be seen, that despite of the goal of increasing homeownership financial burden increased in market based housing finance systems stronger than in bank based ones and increase the financial burden as well for homeowners. From this macroeconomic perspective it seems that bank based housing finance systems with a strong emphasis on a large and sustainable rental sector provide for stable housing affordability and avoid the problem of "New poverty" in lower middle classes better than in market based housing finance economies. As housing structure and state intervention might also vary substantially between regions a macroeconomic analysis can only spot a framework for housing structures in Europe, but can give trends and show the potentials and weaknesses of state intervention and the promotion of pure market housing finance systems.

Bibliography

Allen / Gale 2000, Comparing Financial Systems, MIT Press

Bernet 2003, Institutionelle Grundlagen der Finanzintermediation, Oldenbourg Verlag.

Catte et al 2004, Housing Markets, Wealth and the Business Cycle, OECD Economics Department Working Papers, No. 394, OECD Publishing.

Colton 2002, Housing Finance in the United States: The Transformation of the US Housing Finance System, Joint Center for Housing Studies Harvard University W02-5.

Committee on the Global Financial System 2006, Housing finance in the global financial market, in: BIS-CGFS Papers, No.26.

Corbett / Jenkinson 1997, How is investment financed? A study of Germany, Japan and the United Kingdom and the United States; The Manchester School Supplement.

Czerny / Wagner 2003, Strukturelle Einflussfaktoren auf dem österreichischen Wohnungs- und Immobilienmarkt, in: OeNB, Berichte und Studien 3/2003.

Czerny 2001, Wohnungswirtschaft vor neuen Herausforderungen, WIFO, Vienna.

Debelle 2004, Household debt and the macroeconomy, in: BIS Quarterly Review, March 2004.

Demirgüc-Kunt / Levine 1999, Database Financial Structures, downloadable: www.worldbank.org

Demirgüc-Kunt / Levine 2001, Bank based and Market based Financial Systems, in: Demirgüc-Kunt / Levine (ed.), Financial Structure and Economic Growth, MIT Press.

ECB 2003, Structural Factors in the EU housing Markets, March 2003.

ESF 2008, ESF Securitisation Data Report, Q4, 2008.

ESF 2006, ESF Securitisation Data Report, Spring 2006.

Eurostat, online database, access April 2009.

European Mortgage Federation, Hypotstat, various issues.

Girouard et al 2006, Recent House Price Developments: The Role of Fundamentals, OECD Economics Department Working Papers, No. 475, OECD Publishing.

HUD, HADS database, http://www.huduser.org/datasets/hads/hads.html, access: April 2009.
Huffschmid 1999, Politische Ökonomie der Finanzmärkte, VSA.
International Union for Housing Finance (n.d.). Fact Sheet USA, downloadable: www.housingfinance.org.
IMF (2008) World Economic Outlook, Housing & Business Cycle, April 2008.
Mayer 1988, New Issues in Corporate Finance, in: European Economic Review, Vol.32, 1167-89.
OECD 1995, Financial Market Trends, No. 62.
Quigley / Raphael 2004. Is Housing Unaffordable? Why isn't It More Affordable?, in: Journal of Economic Perspectives, Vol. 18, No.1, 191-214.
Lea, M. (2001): Overview of Housing Finance Systems. International Housing Finance Sourcebook 2000 (International Union for Housing Finance).
Miles 1994, Housing, Financial Market and the Wider Economy, John Wiley & Sons Series in Financial Economics and Quantitative Analysis, Chichester.
Mooslechner 1994, Das System der Wohnbaufinanzierung in makroökonomischer Perspektive.in: Korinek/Nowotny: Handbuch der Wohnungswirtschaft, Wien: Orac, 185-204.
RealtyTrac 2009, U.S. Foreclosure Market Report, February 2009, www.realtytrac.com
RICS 2006, European housing review 2006, downloadable www.rics.org
Schaberg 1999, Globalization and the Erosion of National Financial Systems, Is Declining Autonomy Inevitable?
Shleifer / Vishny 1997, A Survey of Corporate Governance, in: Journal of Finance, Vol.52, No.2, 737-783.
Springler 2005, Housing Subsidies between Maastricht fiscal requirements and social aims: Can the Austrian System be a model for the New Member States?, in: Business and Economics Society Anthology.
Springler 2006, Evolution of Banking Regulation and Supervision in Insider Financial Systems, in:
Springler / Wagner 2009 (forthcoming), Determinants of Homeownership rates: Housing Finance and the Role of the State, in: Arestis/Mooslechner/Wagner, housing Market Challenges in Europe and the United States – any solutions available?, Palgrave McMillan.
Statistik Austria 2003, 2004, Wohnungen, Ergebnisse der Wohnungserhebung im Mikrozensus. Statistik Austria: Wien.
Stagel 2004, *Wohnbauförderung und Wohnversorgung im internationalen Vergleich*, ISW Endbericht, im Auftrag der oö. Landesregierung, Ressort Wohnbau.
Stone 2006, What is Housing Affordability? The Case of the Residual Income Approach, in: Housing Policy Debate, Vol. 17, Issue 1, pp.151-184.
Suarez / Vassallo 2004, European Mortgage Market, An Overview 1992-2003, in: IESE Universidad da Navarra WP No 562.
Zingales 1997, Corporate Governance. NBER Working Paper 6309.

Appendix

Table 1.0

Country Name	Banks vs. Capitalization	Bank Credit vs. Trading	Trading vs. Overhead	Index	Financial System
Austria	3,86	8,53	-16,33	-3,93	bank
Belgium	-0,12	1,18	-13,23	-12,17	bank
Denmark	-0,41	-1,93	-10,78	-13,12	bank
Finland	-1,16	-2,50	8,06	4,41	market
France	-0,56	-1,81	-8,20	-10,57	bank
Germany	1,48	-0,61	-7,62	-6,76	bank
Greece	-0,21	-2,61	-8,33	-11,15	bank
Ireland	0,43	-0,28	20,97	21,12	market
Italy	0,18	-1,32	-11,85	-12,99	bank
Luxembourg	-1,52	12,70	-15,09	-3,91	bank
Netherlands	-0,98	-2,88	58,50	54,64	market
Norway	0,45	-1,03	-8,06	-8,64	bank
Portugal	0,80	0,56	-9,82	-8,46	bank
Spain	-0,05	-2,54	5,64	3,04	market
Sweden	-1,24	-3,19	14,52	10,09	market
United Kingdom	-0,93	-2,24	9,16	5,99	market
			Mean	**0,47**	

Datasource: World Bank Data Set, own calculations;

Table 1.1. Securitization for housing finance in European Economies and the USA

Country	Introduction of securitization - mortgage backed securities (MBS)	Usage of mortgage backed securities
Austria	--	no
Belgium	yes	limited
Denmark	yes	limited
Germany	yes	limited
Greece	yes	limited
Spain	1992	extensive
France	1999	limited
Ireland	second half 1990s	yes
Italy	yes	extensive
Luxembourg	yes	yes
Netherlands	yes	extensive
Portugal	yes	limited
Finland	1989	limited
Sweden	yes	limited
UK	1987	extensive
USA	yes	extensive

Annotation: Especially for Finland and Germany Tsatsaronis and Zhu (2004), note that the introduction of securitization remained very limited in volume. MBS might be allowed from a legal point of view but not used for housing finance. With the change in the legal framework in Germany in 2005 (Funding Register Act) also a promotion of MBS, especially residential mortgage backed securities is expected, as registration of special purpose vehicle is facilitated (European Mortgage Federation, 2007b). Nevertheless especially due to the recent financial crisis[8] the volume of MBS is still very limited compared to the extensive use in covered bonds in Germany. Latest comparable data (year 2006) for Germany displays a volume of 35,336 million EUR of Covered Bonds Issuance and 6,200 million EUR of issued Residential Mortgage Backed Securities (European Mortgage Federation, 2008).

Source. Springler/Wagner, 2009, Table 4.1. basing on Suarez/Vasallo 2004.

[8] Volk (2008) states, that the total secondary market for MBS almost closed in the first quarter of 2008 compared to the first quarter of 2007, while the covered bonds market declined sharply in the same period but was still operating.