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Abstract

The main objective of this paper is to estimate and analyse a relatively long and homogeneous time series (from 1980 onwards) on the wealth of households in Portugal. Wealth components covered are financial wealth (financial assets and liabilities) and the housing component of non-financial wealth. We then analyse the results, in terms of developments over the twenty five years under review. For a more recent period, some international comparisons are made, focusing on trends and changes in composition of wealth.

Keywords: wealth, capital stock, financial assets, liabilities

JEL classification: G19, C82, O16

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1. Introduction

The analysis of the composition and developments of household wealth is often regarded in economic literature as important for better understanding a number of macro-economic aggregates and, more generally, the performance of an economy. The study of wealth effects is particularly relevant in several areas, such as, the analysis of the effect of changes in wealth on consumption *vis-à-vis* saving decisions of households, or the influence of household wealth on investment (namely in housing). On the other hand, the behaviour of household wealth and of its composition influence financial markets, thus affecting developments in the financial system.

In Portugal, as in other countries, the study of wealth effects has been hindered by the absence of statistical data on wealth. The European System of National and Regional Accounts (ESA 95),[1] which provides the conceptual and methodological framework for wealth estimates in European countries, foresees the compilation and regular reporting of annual balance sheets by institutional sector with data from 1995. However, there is a generalised lack of complete balance sheets for several countries, and these data on stocks are far less developed and harmonised than those that refer to flow variables. This view is shared by the OECD (2002), which mentions the lack of information, particularly with regard to the non-financial component. In the case of Portugal, some work has been undertaken on this matter, albeit of a fragmented nature. Banco de Portugal, in the framework of the financial national accounts, has been regularly reporting to Eurostat stocks of financial assets and liabilities, by institutional sector, with data from 1995 based on the ESA 95. Non-financial wealth (in charge of INE but whose reporting is not mandatory) has not been calculated yet. There is a paper by Cartaxo and Santos (1984) containing estimates for household financial assets for 1958-1981. No series have been published on household non-financial wealth. Santos (1984) presents estimates regarding the fixed capital stock in the Portuguese economy for the period 1953-1981, by sector of activity and by type of goods, namely the stock in

[1] Regulation (EC) No 2223/96 of the Council, of 25 June 1996.

housing. The latter, albeit corresponding to the stock for the whole economy, can be regarded as a proxy to household housing wealth.

In an attempt to overcome these gaps, this paper aims at constructing and analysing a relatively long and homogeneous time series (as from 1980) on wealth of households resident in Portugal. The choice of the starting year is mainly due to raw data constraints, in particular money and banking and financial information. Wealth components covered are financial wealth (financial assets and liabilities) and the housing component of non-financial wealth, which, according to some surveys,[2] accounts for a very significant share of household non-financial wealth.[3] Therefore, these estimates should cover a high percentage of total household wealth. An attempt was made to preserve some disaggregation of the series, in order to enable its use in a wide variety of studies. For instance, household consumption may have different elasticities against various wealth components, which in turn may require its separate assessment when estimating a consumption function.

This paper is organised as follows: section 2 presents the concepts and methodology adopted in the construction of the estimates for the housing stock and financial wealth; in section 3 the results for housing, financial assets and liabilities are analysed in terms of developments over the twenty five years under review and comparing them (for a more recent period) with those of other countries. Appendix A1 includes the estimated time series and appendix A2 includes supplementary statistical information to section 2 (methodology).

2. Concepts and methodology

2.1. Concepts

In order to achieve higher consistency with the other aggregates of national accounts and for international comparison purposes, this paper follows the concepts and methodology defined by ESA 95. According to ESA 95, for each institutional sector the balance sheet records the value of all its assets and liabilities, and the balance (i.e. the difference between assets and

[2] Household wealth and indebtedness survey, 1994 and 2000, INE.
[3] Also in other countries, housing is usually the most significant component of non-financial wealth, according to OECD (2001), pp 39: "Dwellings and other buildings usually account for the larger part of the capital stock".

liabilities) corresponds to **net worth** (often called **net wealth**). Assets entered in balance sheets are economic assets defined by Eurostat (ESA 95) as follows: "**economic assets** are entities functioning as a store of value over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them or using them over a period of time."

Assets comprise financial and non-financial assets (produced and non-produced) and liabilities correspond, by definition, to financial liabilities. **Net financial wealth** is the difference between financial assets and liabilities. The following table shows the content of the household balance sheet, based on ESA 95, for 2004 (which is the last year covered in this paper).

Table 1

Household balance sheet

Year: 2004 EUR million

Assets			**Liabilities and net worth**		
AN	Non-financial assets	215556	AF	Liabilities	124239
AN.1	Produced assets	215556	AF.2	Currency and deposits	0
AN.11	Fixed assets	215556	AF.3	Securities other than shares	0
AN.12	Inventories	n.a.	AF.4	Loans	112356
AN.13	Valuables	n.a.	AF.7	Other accounts payable	11883
AN.2	Non-produced assets	n.a.			
AF	Financial assets	269808			
AF.2	Currency and deposits	117179			
AF.3	Securities other than shares	29624			
AF.4	Loans	11			
AF.5	Shares and other equity	77285			
AF.6	Insurance technical reserves	45710			
AF.7	Other accounts receivable	n.a.			
			B.90	Net worth	361125

It should be noted that, within the scope of ESA 95, balance sheets entries do not include:

a) human capital;

b) natural assets that are not economic assets (e.g. air, river water);

c) durable consumption goods;

d) contingent assets which are not financial assets[4] (e.g. guarantees of payment by third parties and lines of credit, such as credit ceilings associated with credit cards).

Among the excluded items, special mention should be made to human capital and durable consumption goods. Human capital is often mentioned in literature as a component of household wealth. However, given that it does not fit in the definition of "economic asset" mentioned above, it is not included in the balance sheets in ESA 95. Durable consumption goods could give rise to some discussion, as these goods might be considered to be part of wealth. From the point of view of households, assets, functioning as a store of value, can also be seen as potential sources of consumption in the future. However, goods purchased by households for durable consumption purposes (e.g. vehicles, appliances and furniture) are not generally purchased with a store of value purpose,[5] as their depreciation rate is relatively high, their liquidity is low and their quality is less perceptible than that of economic assets (e.g. housing). Therefore, they are not easily traded on the market or, even when they are traded, their resale value is clearly lower than that of the expected consumption service in the future. Thus, currently they are not regarded as a store of value and are therefore excluded from household assets.

From the description above, even within the framework of ESA 95 it is possible to distinguish between several concepts of wealth: financial assets, total assets, net financial wealth or net worth. Also, in many economic studies, the term household wealth is usually associated with the stock of household assets and, often, only financial assets are taken into account.

According to ESA 95, wealth should be valuated at market prices, which in the case of some assets (namely housing and shares) raises a number of measurement problems. In fact, the valuation of housing wealth implies the use of the corresponding gross fixed capital formation (GFCF) deflator which is not free of some uncertainty due to the lack of

[4] Contingent assets are only recognised in the system as financial assets if they are under contractual arrangements with market value, as is the case of certain financial derivatives.
[5] Unless they are valuables (e.g. antiques), which are classified under produced assets.

information on housing purchase prices in Portugal (particularly for less recent periods).[6] On the other hand, when valuating shares and other equity (e.g. quotas) the proxy used was the value of corporate own funds at book value, which might not reflect its exact market price. However, this is the method used in some European countries[7] where, as in Portugal, the stock market is narrow, that is, when quoted companies account for a negligible share of the corporate sector.

The concept of the institutional sector "**households**" should also be clarified. ESA 95 defines this sector as all resident households,[8] which mainly covers individuals or groups of individuals as consumers, and also sole proprietorships and partnerships without independent legal status, either as market producers or producers for own final use (S.14). However, in the context of financial accounts, accounts for this sector are presented together with those for sector "non-profit institutions serving households" (NPISHs) (S.15). The NPISHs sector consists of private non-profit institutions that are separate legal entities, which serve households and which are other non-market producers.[9] Therefore, and as over all Europe, financial accounts are calculated jointly for sectors S.14 and S.15. This paper follows the same procedure, and thus wealth estimates presented refer to households and NPISHs, an aggregate that is usually known as "**private individuals**".

2.2. Estimates of the housing stock – perpetual inventory method

The housing component[10] of wealth was calculated using the **perpetual inventory method**. This method is used in most OECD countries that have estimates for capital stocks, given that in general there are no annual sources of information allowing a direct estimation.[11] The perpetual inventory method consists in the cumulative sum of Gross Fixed Capital Formation

[6] Developments in the deflator used are close to those of index *Confidencial Imobiliário* (for the period after its creation, that is from 1989), which is normally used as an indicator for housing purchase prices.
[7] As it is the case of the Netherlands and Spain (for a number of sectors).
[8] According to SNA 93, a household is a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food.
[9] For example, trade unions, professional, learned or religious societies, consumers' associations, political parties, social, recreational and sports clubs.
[10] Includes the value of land underlying dwellings.
[11] In some cases, such as in France, the results of the estimation using the perpetual inventory method are combined with those of direct estimation, and are adjusted in order to getting closer to survey results, where they exist (in the case of France, there is a survey every 4 years).

(GFCF) of the capital good concerned (in this case, GFCF in housing) at constant prices of a given year. Thus, a (gross) stock of housing is obtained in terms of volume for each period. Considering that all dwellings purchased at a given moment remain active up to the end of its expected service life (T), and are deducted as a whole from the capital stock at the end of that period,[12] gross capital stock at t is simply calculated as the sum of investments in the T periods ending in t, i.e.:

$$GK_t = \sum_{i=0}^{T-1} GFCF_{t-i} \qquad (1)$$

where variables (gross stock and GFCF) are evaluated at constant prices of a basis year.

The net capital stock K is the concept relevant to calculate wealth and is obtained by the formula:

$$K_t = K_{t-1} + GFCF_t - CFC_t \qquad (2)$$

where CFC is the consumption of fixed capital (or depreciation) in period t and corresponds to the loss in value of the asset associated with age. In terms of national accounts (ESA 95), it "represents the amount of fixed assets used up, during the period under consideration, as a result of normal wear and tear and foreseeable obsolescence, including a provision for losses of fixed assets as a result of accidental damage which can be insured against."[13]

As this cumulative calculation is applied to GFCF series at constant prices, the stock, either gross or net, must be re-evaluated (to current prices) by taking into account the purchase price of the asset concerned, i.e. the price index of GFCF.

In order to calculate the capital stock, the construction of long series of GFCF is essential as well as the estimate of consumption of fixed capital, which, in turn, depends on the assumed depreciation pattern.

[12] This hypothesis is equivalent to considering that the survival function of these assets is rectangular, i.e. the survival probability is 1 during period t and period t+T-1, dropping to zero from t+T onwards.

[13] The obsolescence also reflects the loss in quality associated with technological innovation, which can be very significant in the case of some assets (e.g. industrial and computer equipment). However, in the case of dwellings, this issue is not very relevant.

2.2.1 Depreciation method

Housing stock estimates were made taking into account the **linear depreciation method**, assuming a service life of 65 years.[14]The linear depreciation method is one of the most used depreciation methods in OECD countries for this type of estimates (see OECD (2001)). It consists in assuming that assets (at constant prices) depreciate at a constant amount during their service life. The consumption of fixed capital (or depreciation) corresponds to a fixed proportion of the initial value of the asset, 1/T, where T is the average service life of the asset. Therefore, the depreciation value depends on the service life considered. Based on this assumption, the net capital stock (at constant prices) is calculated as follows:

$$K_t = \sum_{i=0}^{T-1} (1 - i/T) GFCF_{t-i} \qquad (3)$$

The stock value (at current prices) can be easily obtained, using the deflator of the corresponding GFCF series. Thus, this method only requires (in addition to the assumption regarding its service life) long enough GFCF series in value and in volume[15].

Defining the depreciation rate as the value of consumption of fixed capital within period t as a percentage of the stock value at the end of the previous period (t-1), i.e.

$$\delta_t = CFC_t / K_{t-1} \qquad (4)$$

it is possible to calculate the implicit depreciation rate starting from the net capital stock equation (2) and from (4),

$$K_t = K_{t-1} + GFCF_t - \delta_t K_{t-1} \quad (5)$$

resulting in

$$\delta_t = 1 - \frac{K_t - GFCF_t}{K_{t-1}} \qquad (6)$$

[14] This hypothesis falls within the assumptions of several countries in the context of housing stock estimates mentioned in OECD (2001) and was also used in a study for Portugal (Departamento Central de Planeamento (1994)). It should de noted that GFCF in housing includes the corresponding repairs, thus allowing considering this service life.

[15] Even if there is a stock value for a more recent period (initial value), the linear depreciation method requires the knowledge of the back series of GFCF, i.e. the information on when the assets included in that initial stock were purchased.

As an alternative to this depreciation method, the geometric depreciation method could have been used. It consists in assuming a fixed depreciation rate δ, where the depreciation value (consumption of fixed capital) is calculated by applying a factor δ to the stock of the asset in the previous period. Usually, it is assumed that δ=R/T, where T is the average service life and R (also known as declining balance rate) is defined according to the asset concerned.[16] With this method, the depreciation amount does not depend on the age of the asset, as in the linear case. [17] It should be noted that, in the cases where the value for δ is directly assumed (e.g. in Banco de España (2002)), it is not necessary to make any assumptions about the service life of the asset. Thus, if the depreciation rate is known (or set), the capital stock may be calculated by taking an initial value for the stock, using the following expression, which results from equation (1)

$$K_t = (1-\delta)^t K_0 + \sum_{j=0}^{t-1} (1-\delta)^j GFCF_{t-j}$$

With the linear method the depreciation value is constant, while with the geometric method the depreciated value is decreasing, which means that a higher depreciation is assumed during the first years of the life of the asset. On the other hand, according to the latter method, the accumulated value of the depreciation tends to the initial value of the asset but never reaches it, and therefore the asset is never completely repaid.

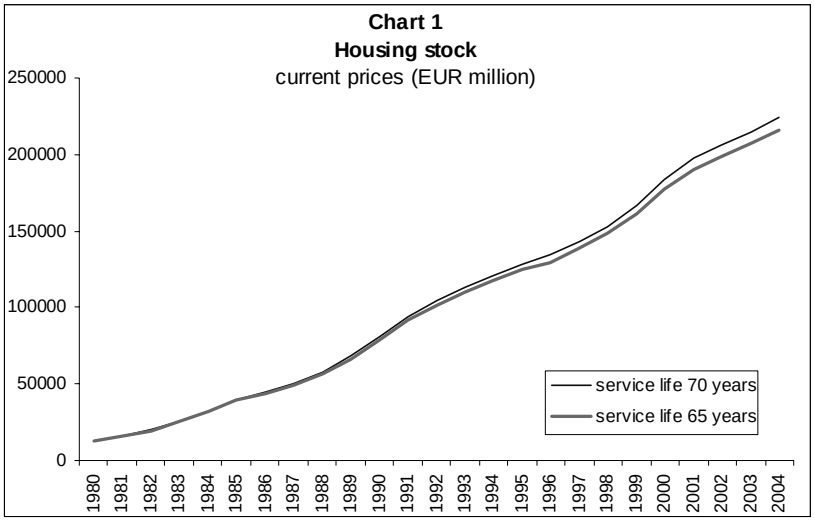
Both the Eurostat (ESA 95) and the United Nations (SNA 93) recommend the linear depreciation method to calculate the consumption of fixed capital, when there is no information on the structure of decreasing efficiency of the asset. In addition, the linear depreciation method, besides being easily applied, may be considered adequate in the case of dwellings (as well as in the case of other assets with a long service life), given that the service supplied by this type of asset does not record significant quality changes over time.[18]

[16] This value can be obtained from empirical studies or by drawing up hypotheses. For example, for the USA, studies were made regarding several assets, and in the case of housing, coefficient R=0.91 was used.

[17] With the linear depreciation method, the implicit depreciation rate is in fact variable, depending on the age structure of dwellings, i.e. the more recent the housing stock, the lower the depreciation rate.

[18] For other types of assets, such as machinery and equipment, whose productive efficiency may decline significantly during the first years, compared with the new asset, it may be more adequate to use a method in which the depreciated value would decrease (and therefore would be higher during the first years).

The service life of assets may be obtained in many ways: surveys, expert opinions, company accounts or by consulting the life defined for tax purposes. As can be seen in OECD studies,[19] this parameter is usually defined relatively *ad hoc*. Papers of several countries indicate that this figure is based on expert opinions or that it consists of estimates based on figures for other countries.[20] Table A2.1 presents the depreciation method and the service lives taken into account in several countries' estimates. As can be seen, the methodology followed in this paper is similar to the ones used by most other countries. With regard to the service lives considered, the range of hypotheses assumed is relatively wide, and the average is 65-70 years. Within these estimates, the 65-year hypothesis was considered reasonable. However the stock values would be very similar (albeit somewhat higher) if a 70-year service life were considered instead of the 65-year hypothesis, as can be seen in the following chart.



For comparison purposes, the housing stock was also calculated using the geometric depreciation method with δ=2%[21] and assuming as initial value the value obtained in 1980 using the linear depreciation method or, as an alternative, the value calculated by Santos (1984) for dwellings in 1980. Table A2.2 compares the estimates for the housing stock proposed (hypothesis 1) with the estimates obtained using other hypotheses regarding the depreciation method and the initial value of the stock.

[19] See OECD (1992) and OECD (2001).

[20] In this context, see in OCDE (2001), pp 47 "The main sources for estimating service lives are asset lives prescribed by tax authorities, company accounts, statistical surveys, administrative records, expert advice and other countries' estimates."

[21] This rate is slightly lower than implied depreciation rates obtained with the linear depreciation method (see Table A2.3). However, it seems to be a reasonable figure when compared with the rates assumed by other countries (for example, this rate is assumed by Spain for housing stock estimates).

2.2.2 Construction of the GFCF series

The calculation of the housing stock as described above requires a long series of GFCF values in housing; considering a 65-year service life for dwellings and aiming at obtaining stock series for the period starting in 1980, it was necessary to have estimates for GFCF in housing (in terms of value and volume) starting in 1915.

The series were constructed using the GFCF figures of INE's National Accounts according to ESA 95 and estimates of Banco de Portugal. The National Accounts series at current prices resulted from the sum of GFCF in household housing, included in GFCF in construction, with GFCF in services associated with house purchase (margins of real estate companies, property registers and taxes on real estate transactions. This is the usual procedure for this type of estimates where GFCF in services is distributed by the capital goods to which it is associated. Thus, the valuation of GFCF corresponds to that made by the investor (market price) and not only to the construction costs. Accordingly, to GFCF in housing was added the share of GFCF regarding the national accounts item 701 "Margins of real estate companies" as well as the component "Property registry and tax on real estate transactions" included in national accounts item 74 (INE figures). These services were not fully added given that they are not only associated with house purchase but also with transactions involving other buildings. The share used (68.3 per cent) was based on INE figures for GFCF – percentage of GFCF in housing in total GFCF in buildings (average between 1990 and 1995, which are the last INE figures for GFCF in residential and non-residential buildings).[22] The share of GFCF in household housing in total GFCF in housing (which is available for the most recent National Accounts) was also applied to this estimate of costs associated with total house purchase. This component of housing costs (i.e. GFCF in services associated with housing) leads to an increase in GFCF in household housing between around 20 per cent in 1995 and over 30 per cent in 2003. In addition to correcting the level, the growth of GFCF in housing thus calculated, between 1995 and 2003, is more marked than when taking into account only the

[22] In the new National Accounts series, based on ESA 95, GFCF in construction is broken down only into housing and other buildings, while in the previous series, based on ESA 79, GFCF in construction was broken down into housing, non-residential buildings and other buildings.

construction-housing component (these services recorded very strong rises during this period, in terms of volume and particularly in terms of value, reflecting a significant price effect).

Given that the component GFCF in housing is only available in INE's National Accounts at current prices, these figures were deflated using the deflator of GFCF in housing implied in macroeconomic estimates of Banco de Portugal. The series thus calculated, at current prices and at constant prices of 1995 (and extended into 2004 with estimates of Banco de Portugal for GFCF in housing in terms of volume and value), were retropolated using change rates in terms of value and volume of GFCF in housing published in Banco de Portugal's "Long time series"[23] for 1953-1995. For the period prior to 1953, use was made of rates of change in terms of value and volume of GFCF in construction published in Banco de Portugal's "Historical series".[23]

Table A2.3 summarises the series obtained regarding GFCF and the housing stock (in terms of level and rates of change), also including the depreciation rate implied in these estimates.

2.3 Estimates of financial wealth

The financial component of household wealth (assets and liabilities) was also estimated based on the methodology of ESA 95. As mentioned above, the concept "private individuals" includes households[24] (S.14) and non-profit institutions serving households (S.15). The main source of information for the period 1995-2003 consists in financial accounts calculated by Banco de Portugal. The following table shows the structure of financial assets and liabilities of households in 1995 and 2003, based on that information. However, for certain components, there are some differences between the current estimates and the financial accounts, given that homogenous procedures were followed throughout the entire time series and that it was not always possible to use the financial accounts methodology in the period 1980-1994. Preliminary estimates were made for 2004, taking into account the information available at the closing date of the information used in this paper.

[23] Banco de Portugal (1997).
[24] Including emigrants, whose investments are compared to investments by residents in the Banco de Portugal statistics.

Table 2

Composition of household financial wealth in Portuguese Financial Accounts

In percentage

	Assets		Liabilities	
	1995	**2003**	**1995**	**2003**
Financial assets/Liabilities	100.0	100.0	100.0	100.0
Currency and deposits	**48.9**	**41.9**	**0.0**	**0.0**
Currency	1.9	1.3	0.0	0.0
Transferable deposits	8.3	12.7	0.0	0.0
Other deposits	38.7	27.9	0.0	0.0
Securities other than shares	**0.9**	**11.1**	**0.0**	**0.0**
Securities other than shares, excluding financial derivatives	0.9	11.1	0.0	0.0
Short-term	0.5	0.8	0.0	0.0
Medium-term and long-term	0.4	10.3	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0
Loans	**1.1**	**0.0**	**66.0**	**84.3**
Short-term	0.0	0.0	13.2	6.6
Medium-term and long-term	1.1	0.0	52.8	77.7
Shares and other equity	**36.6**	**28.4**	**0.0**	**0.0**
Shares and other equity, excluding mutual fund units	30.4	19.6	0.0	0.0
Mutual funds shares	6.1	8.8	0.0	0.0
Insurance technical reserves	**10.3**	**16.9**	**0.0**	**0.0**
Net equity of households in life insurance reserves and in pension funds reserves	9.1	15.5	0.0	0.0
Life insurance	2.7	8.8	0.0	0.0
Pension funds	6.5	6.7	0.0	0.0
Prepayments of insurance premiums and reserves for outstanding claims	1.2	1.4	0.0	0.0
Other accounts receivable/payable	**2.2**	**1.7**	**34.0**	**15.7**
Trade credits and advances	1.0	0.8	23.8	10.5
Other	1.2	0.9	10.2	5.2

Source: Financial Accounts, Banco de Portugal.

The same methodology was followed whenever possible for the period 1980-1994. Owing to the lack of primary data, which was more significant for the components of portfolio securities, including shares and other equity, and investments and external financing, we were forced to resort to some working hypotheses. The residual items "Other accounts receivable/payable", with the exception of "Trade credits and advances received", in the Financial accounts compiled by the Banco de Portugal, were not considered in this paper, given the lack of information for the period prior to 1995 and its small weight in the wealth of private individuals in recent years.[25] The following table presents in more detail the sources and methods used in the estimation of the financial wealth.

[25] For the same reasons, liabilities for securities issued (commercial paper issued by NPISHs) were not included.

Table 3

Financial wealth

Assets	Scope	Observations	Source
Currency	Notes and coins in circulation that are commonly used to make payments (escudo up to 2002 and euro after 2002)	The component held by households was estimated pro rata to the weight of this sector on total transferable deposits held by households and non-financial corporations with the resident banking system.	Money and Banking Statistics (MBS) and Financial Accounts
Transferable deposits	Deposits immediately convertible into currency or transferable by cheque, bank's order, debit entry or similar means, without significant restriction or penalty. These deposits may be held in national or foreign currency with resident or non-resident Monetary Financial Institutions (MFIs).	Investments in deposits abroad are only assumed to be relevant after 1996, and under the form of transferable deposits. For the period 1993-1995, data are available for investments by the non-monetary sector as a whole, but the part relating to households was considered nil.	MBS, International Investment Position (IIP) and Financial Accounts
Other deposits	It covers all types of deposits (in national or foreign currency) that are not included in the transferable sub-section, in particular, time deposits, non-transferable savings deposits, non-marketable certificates of deposit, repurchase agreements that are MFI liabilities and investments in savings certificates, including capitalised interest.		MBS, Ministry of Finance and Financial Accounts

Assets	Scope	Observations	Source
Short-term securities, other than shares[26]	Investments in debt securities, which are bearer instruments, and usually traded with original maturity, in general, of up to one year or up to a maximum of two years, such as commercial paper and money market paper issued by non-residents. Includes namely: - Treasury bills and CLIP: securities sold without recourse by MFIs - Commercial paper: securities issued by residents and domiciled in resident financial institutions - Securities issued by non-residents: investments in money market instruments	It was only deemed to be relevant from 1995 onwards. The value for this year was estimated using flows from the Balance of Payments (BoP) for the first quarter of 1996 and the trend of the Effective Exchange Rate Index (EERI) for the same period, given that the IIP is available since March 1996.	MBS MBS up to 1999 and Integrated system of securities statistics after 2000 IIP and BoP
Medium- and long-term securities, other than shares	Investments in traded debt securities with original maturity over one year, such as bonds and "títulos de participação".	The component issued by residents and held by households was estimated residually as follows: - for public debt securities: financial institutions' and non-residents' portfolios were deducted from the consolidated debt stock (since 1992); - for private debt securities: financial institutions', social security institutions' and non-residents' portfolios were deducted from the stock of securities issued (excluding those issued by Banco de Portugal) (since 1993); - after 1987: only 90% of the residual value was allocated to	Ministry of Finance , INE, ISP, Portuguese Association of Investment Funds, Pension Funds and Asset Management, BP (MBS, Integrated system of securities statistics, Net external

[26] The values obtained differ from those presented in financial accounts, namely in the breakdown by maturity, given that this exercise focuses on the consistency of the time series over the 25 years, instead of "replicating" all the financial accounts values.

Assets	Scope	Observations	Source
Medium- and long-term securities, other than shares (cont.)	Securities issued by non-residents correspond to investments in bonds and notes (except money market instruments).	households, as implied in the Financial Accounts (percentage confirmed by the Integrated system of securities statistics after 2000).[27] - from 1992 to 1994 20% of investments of the non-monetary sector were included in portfolio investment, i.e. the same weight of households calculated for 1995. The estimation of this value was based on BoP flows for the first quarter of 1996 and the trend of the EERI in the same period.	position, External debt and IIP) Net external position, IIP and BoP
Loans	It includes (long-term) investments in "*obrigações do Tesouro Familiar*" (Treasury bonds that can only be held by households), which are non-marketable and issued on the initiative of the debtor, and are therefore classified under Financial Accounts as loans and not as securities. It also includes loans under foreign direct investment operations.		Ministry of Finance BoP and IIP

[27] Changes in procedures were due to the significant increase in issues of long-term private debt in that year (1987): the debt stock of other MFIs and non-financial corporations nearly doubled as a result of changes introduced in the tax system and of issuance regulations. The interest on bonds at over eight years was exempted from capital tax and inheritance and gift tax and the authorisation requirement was waived by the Ministry of Finance for issues up to PTE 500,000,000. In this context, 10% of the residual value was considered to be held by non-financial corporations and 90% was allocated to households.

Assets	Scope	Observations	Source
Shares and other equity, excluding mutual funds shares	Consists of financial assets representing property rights on corporations or quasi-corporations that generally entitle the holders to a share in the profits of the corporations and to a share in their net assets in the event case of liquidation.	As regards shares and other equity issued by resident corporations the following methodology was applied for the years up to 1999: i) compilation of non-financial private corporations' capital stock; ii) calculation of the ratio of dividends received by households to total dividends paid by corporations (average ratio in the year and in the previous year, considering actual volatility); iii) estimation of the capital stock held by households, at nominal value, by applying ii) to i); iv) market value proxy using the "own funs at book value"[28] (OFBV) criterion: the ratio of capital stock to OFBV was applied for corporations listed in the Central Balance Sheet Data Office (for data prior to 1986, the ratio for that year was used). As from 1999, shares issued by other MFIs and held by households were also included. This component represents less than 4% of the total estimated for the portfolio of shares and other equity issued by residents, wherefore it was not included in previous years. Equities issued by non-residents were included after 1995. There is no information on previous periods and it is assumed that it was not significant before that year.	-up to 1999: INE -since 1986: Central Balance Sheet Data Office (BP) Integrated system of securities statistics Financial Accounts (after 2000) IIP and BoP
Mutual funds shares	Investments in mutual funds shares, i.e. units issued by a specific type of financial corporations, whose exclusive purpose is to invest the funds collected on the money market, the capital market funds and/or in real estate.	From 1986 (start-up date for these funds) to 1994, a percentage identical to that of households' investments was applied to the total value of the mutual funds in the years for which information is available (85% of the value of mutual funds and 20% of real estate funds). As from 1995, account was taken of the values entered in the Financial Accounts, which also include mutual funds shares, issued by non-residents but do not represent a significant percentage.	BP (Supplement to the Statistical Bulletin-Dec 1999, Financial Accounts and Banking Supervision Department)

[28] Includes nominal capital, shares premium accounts, reserves, retained earnings and profit/loss for the year and provisions (excluding provisions for pension funds).

Assets	Scope	Observations	Source
Insurance technical reserves	Net equity of households in insurance technical reserves set aside in the insurance corporations for the purpose of satisfying, once the conditions established are met, the claims and benefits foreseen. Each year, transactions correspond to the difference between "total premium acquired plus income from the investment of reserves of insurance corporations" and "payments due to households" (due to the maturing of insurance policies or outstanding claims).	Changes in stocks each year correspond to the sum of transactions and changes in the corresponding asset prices.	
Life insurance	It includes net equity of households in life insurance reserves, outstanding claims and, when applicable, insurance technical reserves for participation of policyholders in profit.	These claims are considered to be allocated in full to resident households.	ISP
Pension funds	It includes net equity of households in autonomous and non-autonomous pension funds, established by employers and/or employees or groups of self-employed, aimed at ensuring the payment of their pensions. The Funds may be autonomous entities (classified in sector S.125) or non-autonomous entities (classified in the sector of the entity establishing and managing the funds – financial or non-financial corporations) They can be defined benefit schemes (the vast majority in the Portuguese case), money purchase or mixed schemes.	The following funds were considered: - autonomous funds (created in 1986): value of the pension funds as at year-end. - non-autonomous funds: only banking sector funds were included, corresponding to the value of reserves for retirement and survivors' pensions implemented by Circular-letter no 129/DSB of 3 August 1989. Information is available from 1990 onwards and was included in this working paper.	ISP, Banking Supervision Department
Other reserves	Claims of households on prepayments of insurance premiums and reserves for outstanding claims established by insurance corporations.	For the years prior to 1995, it was considered that the household percentage is identical to that estimated in the same year and provided by INE, based on the structure of premiums paid: 70% of total other reserves.	ISP, INE, Financial Accounts

Liabilities	Scope	Observations	Source
Loans	Loans of funds granted by non-resident and resident financial institutions (MFIs and other credit institutions, such as credit-purchase financing companies, financial leasing companies, credit-card issuing and managing companies and securitisation companies and funds). It includes loans to households, as consumers or producers, for house purchase, for consumption and other purposes. It does not include other types of liabilities, such as trade credits and advances (AF.7). Non-performing loans are considered until they are written-off from the creditor institutions balance sheets.	Up to 1993, it was necessary to draw up hypotheses for the breakdown of credit granted by other financial institutions by counterpart sectors and by maturities, as follows: - the short-term: it includes total credit granted by credit-card managing companies and 50% of credit granted by credit-purchase financing companies to households (previously estimated to stand at 90% of total credit granted by those companies); - the long-term: it includes the other 50% of credit granted by credit-purchase financing companies to households and 10% of credit granted by financial leasing companies. This breakdown was based on information made available by the Association of credit-purchase financing companies and financial leasing companies and on data provided by the Central Credit Register of the Banco de Portugal for more recent years. As regards loans obtained from non-residents, it was also necessary to draw up some hypotheses for the years up to 1996 (IIP data is only available since 1997). External financing to households was considered to be relevant after 1993 and, - in short-term credit, a constant growth rate was used up to 1996;[29] - in medium- and long-term credit, the estimates for 1995 and 1996 were based on BoP flows and on the trend of the EERI, whereas for 1993 and 1994 it was assumed that households accounted for 15% and 20% of credit granted to private non-financial corporations and households, respectively, while in 1995 that percentage stood at 25 per cent.	MBS, INE, Banking Supervision Department, IIP and BoP Net external position, IIP and BoP

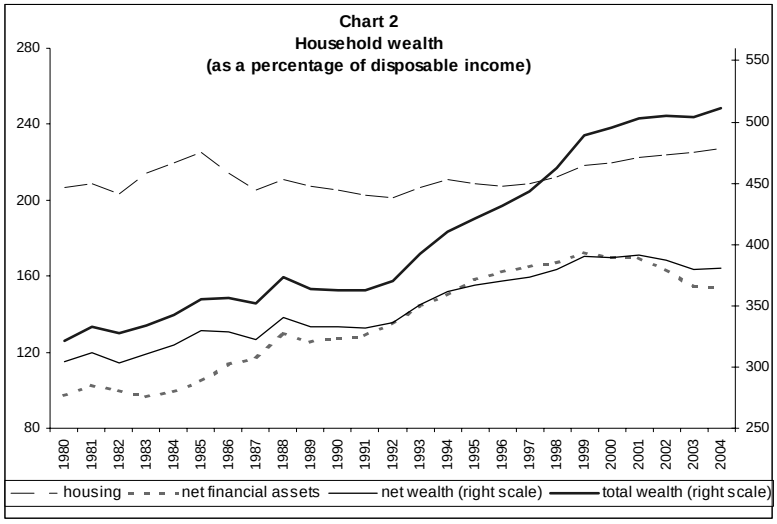
[29] This option implies that the data available for that period related to companies and households as a whole is likely to correspond mainly to companies, given that these loans corresponded to trade credits.

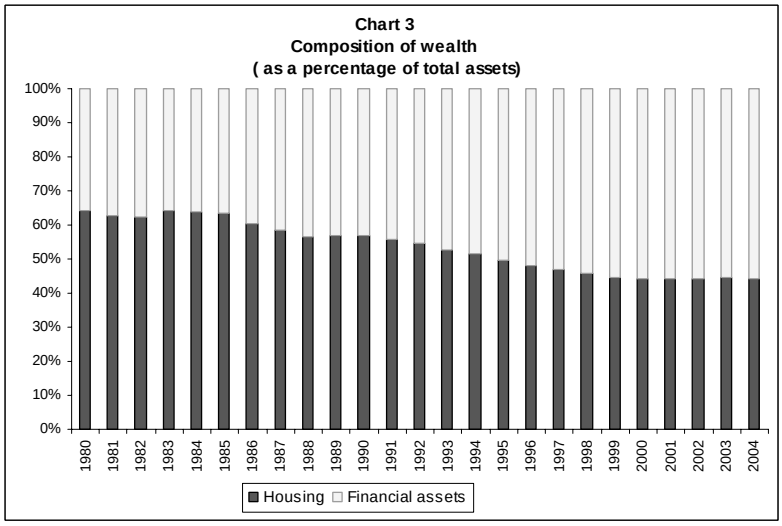
Liabilities	Scope	Observations	Source
Trade credits and advances	It covers liabilities resulting from credit granted by suppliers of goods and services and advance payments for work that is in progress or to be undertaken. These correspond chiefly to credit obtained from resident non-financial corporations, but include also debts to non-resident suppliers.	For the period before 1994, it was considered the same rate of change of loans granted by resident MFIs; from 1994 onwards financial accounts data is used.	MBS, Financial Accounts

3. Results

3.1. Overall results

The analysis of Tables A1.1 to A1.3 (Appendix 1) indicates an upward trend in household wealth as a percentage of the disposable income over the past 25 years, notably during the 1990s. In parallel, over the period under review there was an increase in the share of household financial wealth in total wealth, alongside a decrease in the relative weight of the housing component (Charts 2 and 3).



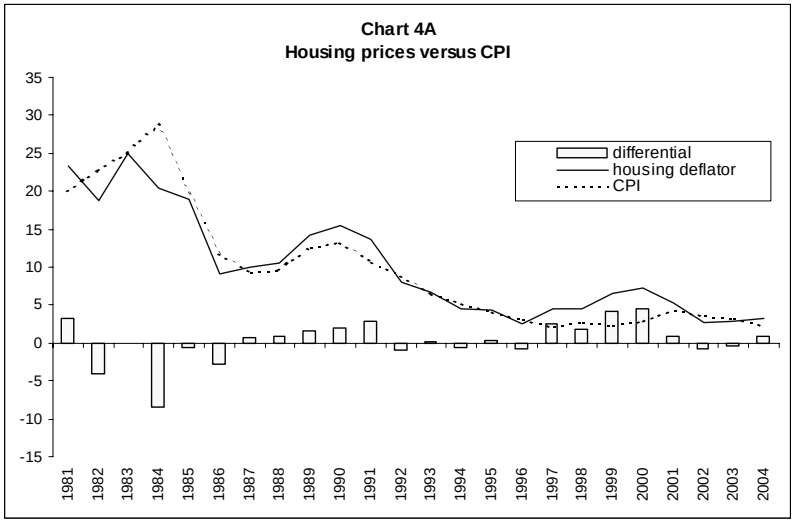


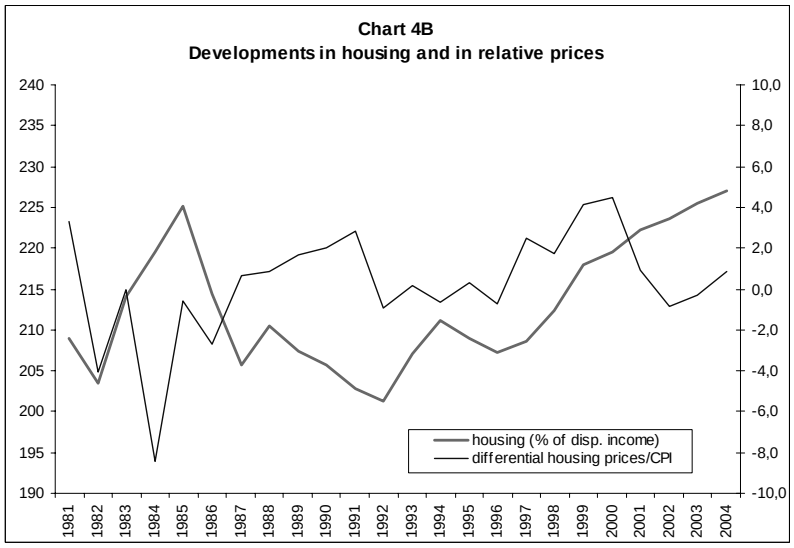
Growth in household wealth was counteracted by a very significant increase in indebtedness, mainly concerning long-term loans for house acquisition. Nevertheless, wealth net of indebtedness has also evolved positively in the period considered, albeit less than assets, maintaining the rising profile until the end of the 1990s. More recently (as from 2000) household indebtedness decelerated (although it has increased further as a percentage of

disposable income), as well as assets held by households (mainly financial assets), and the weight of net wealth in disposable income of households has stabilised somewhat (Chart 2).

3.2. Housing

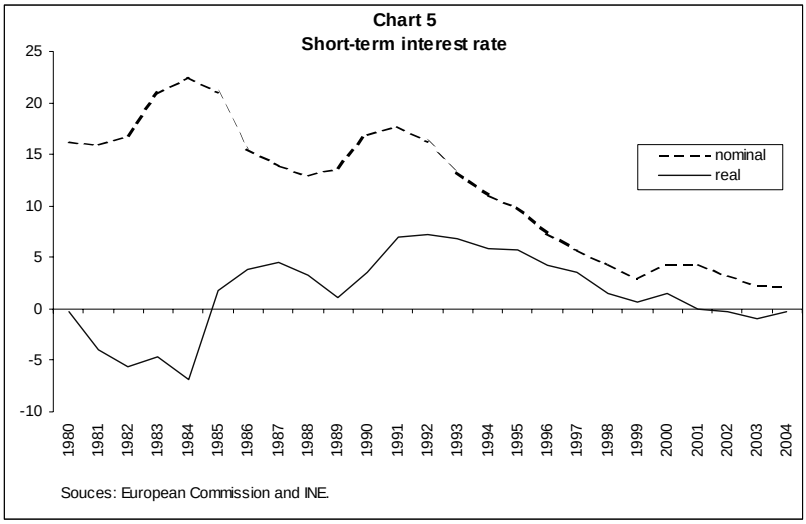
Appendix 1 presents estimates of the housing stock of households in level and as a percentage of disposable income. The housing stock as a percentage of disposable income increased considerably in the period under review, but not uniformly, as it grew more strongly in 1983-85 and in the second half of the 1990s, while its relative values declined in 1982 and 1989-1992 (Chart 2 and table A1.3).



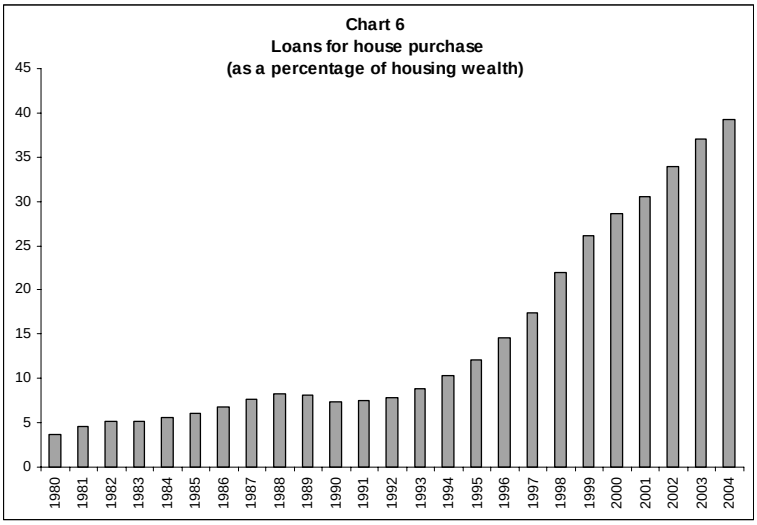


The analysis of these outcomes raises the question of the influence of developments in house prices relative to general price indicators (such as the CPI). Charts 4A and 4B clearly show different patterns in the 1980s and in the 1990s concerning the relationship between housing prices and the housing stock as a percentage of disposable income. In the 1980s, there is a

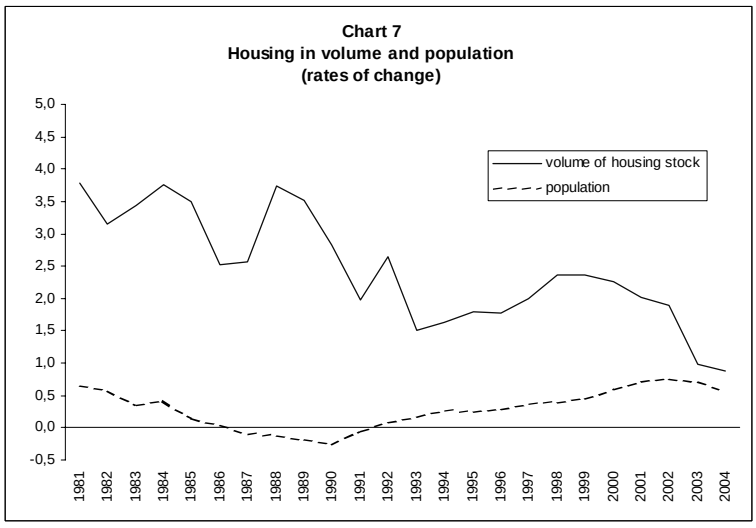
negative correlation between relative housing prices and the housing ratio (e.g. the rise in the housing stock value in 1984 was associated with a decrease in its relative prices, while the decrease observed in the second half of the 1980s corresponds to an increase in relative prices). In the second half of the 1990s, the increase in the relative value of the housing stock as a percentage of disposable income took place alongside an increase in relative house prices. This, combined with the decline in interest rates, may have encouraged housing investment. Over the 1990s (mostly over the second half) dynamics in the housing market led to an upward trend in the housing stock value (as a percentage of disposable income) and stabilised somewhat from 2000 onwards. The increase in relative house prices in the 1990s reflected the strong growth in housing demand.[30] The latter was stimulated by easier bank credit for house acquisition, associated with both the significant decrease in interest rates (Chart 5) and higher competition in the banking sector. Indeed, the ratio of mortgage loans for house purchase to the housing wealth value shows a significant increase in the 1990s. While this ratio ranged from 4 to 8 per cent from 1980 to 1992, it grew strongly as from 1993, standing at around 39 per cent in 2004 (Chart 6 and Table A1.2). In this context, the number of owner-occupied houses grew, as evidenced by the INE population and housing census data. In 2001, 76 per cent of the dwellings were occupied by the respective owners, against 65 per cent in 1991.



[30] It should be noted that strong growth in demand in the second half of the 1990s did not led to price increases as it did in other countries. Although these price increases were considerable, they occurred alongside a significant increase in housing supply.



The path of the housing stock net of the corresponding share of credit for house purchase was quite different, showing a marked declining trend in non-mortgage housing wealth (as a percentage of disposable income) as from the second half of the 1990s (table A1.2).



Unlike the housing value as a percentage of disposable income (which also reflects developments in relative prices), housing stock per capita at constant prices followed an upward trend over the period under review, as the growth rate in volume of housing stock stood permanently above that of population (Chart 7). This trend reflects two chief factors. First, over the past decades the average size of households dropped: according to the INE census data, the average number of persons per household fell from 3.4 in 1981 to 3.1 in 1991 and to 2.8 in 2001, and the number of one-person households grew from 1991 to 2001, currently accounting for 17 per cent of total households (14 per cent in 1991 and only 13 per cent in 1981). Second, the expansion of the housing stock also reflects the increase in the

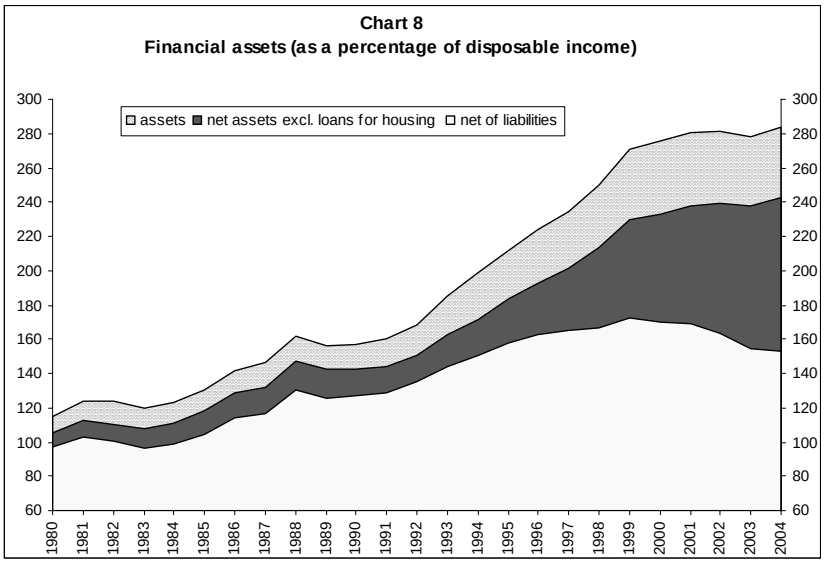
number of houses per household (1.4 houses per household in 2001, 1.3 in 1991 and 1.2 in 1981) associated with the growing importance of seasonally occupied houses (which in 2001 corresponded to 18 per cent of total houses vis-à-vis 16 per cent in 1991).

The housing stock as a percentage of total wealth estimated followed a downward path until the end of the 1990s, as financial wealth grew more strongly (Table A1.2 and Chart 3).

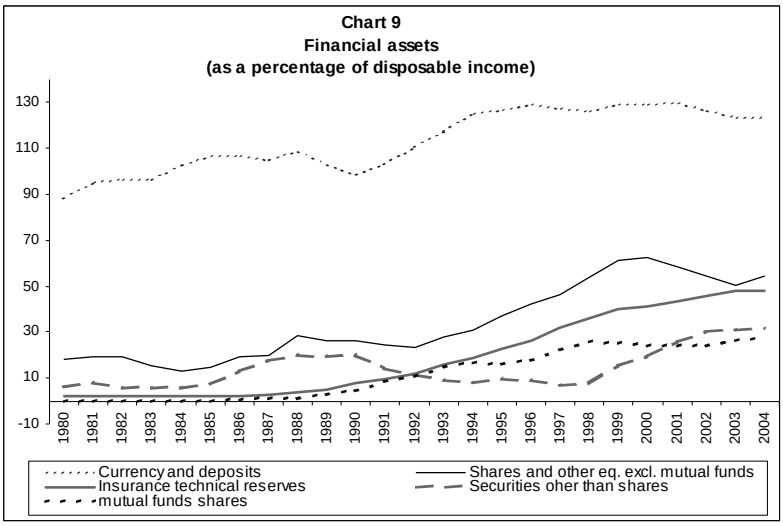
3.3. Financial wealth

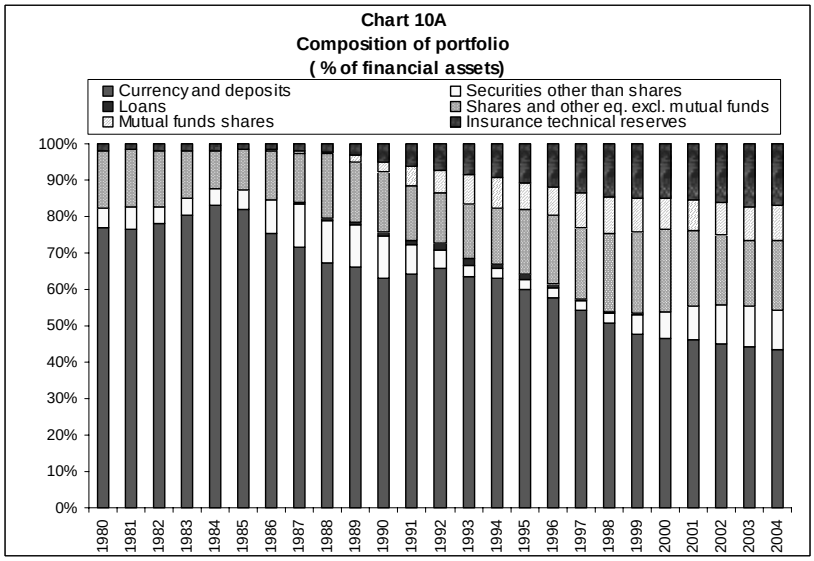
The financial wealth relative to disposable income followed a clear upward trend both in assets and in assets net of liabilities. This trend, much more marked than in the housing component, became more pronounced as from the early 1990s, which is likely to be associated with the abolition of credit limits and the strengthening of the financial system that followed the liberalisation of capital movements at the end of 1992. However, as liabilities showed a growing importance, the trend in the net financial wealth is less steep than that in assets, albeit maintaining the rising profile until the end of the 1990s. More recently, financial assets as a percentage of disposable income kept their upward trend, but decelerated more than liabilities did and, therefore, net financial wealth decreased as a percentage of disposable income. (Table A1.3 and Chart 8).

Chart 8
Financial assets (as a percentage of disposable income)

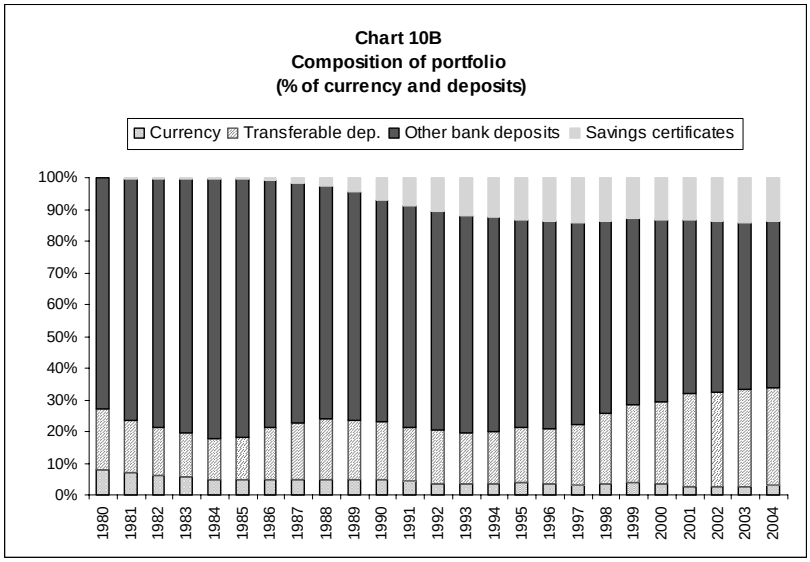


Household financial investments comprise mainly deposits.[31] These have been growing in importance in terms of disposable income, and, although their relative weight has been declining in terms of the portfolio composition over the period under review, deposits continued to account for more than 40 per cent of the financial investment value in 2004 (Charts 9 and 10.A). Among them, households continue to prefer non-transferable bank deposits (namely, time deposits and savings deposits), despite the increase in transferable deposits and savings certificates (Chart 10.B).





[31] This category comprises bank deposits and savings certificates, which, according to ESA95, are equivalent to deposits.

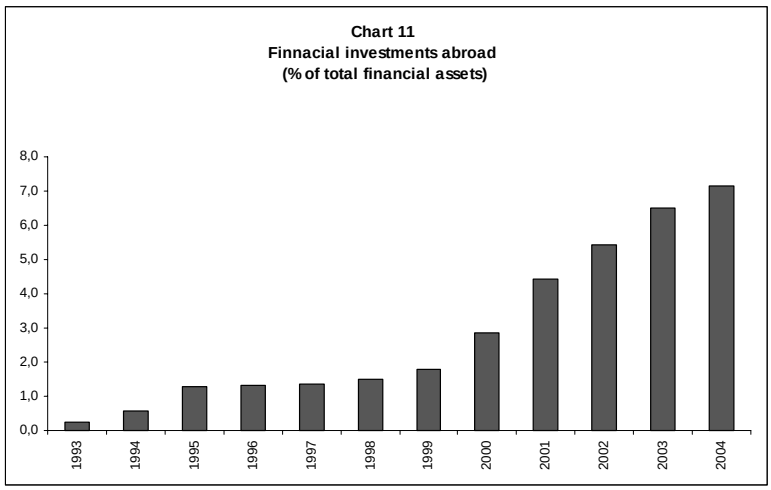


Over the period under analysis, the degree of bank intermediation declined: in the first half of the 1980s investments in deposits accounted for around 80 per cent of total financial wealth, but the development of the financial system together with the decline in the relative remuneration of this type of investment in the 1990s, in particular in the second half of the decade, contributed to reduce this share to 40 per cent. The liberalisation process started in 1983 with the opening of the banking and insurance sectors to private initiative. The process of European integration achieved in 1986 reinforced it with the subsequent strengthening of the financial system through the emergence of new institutions and financial products. Regulatory changes, comprising the liberalisation of interest rates and the abolition of credit limits, as well as the liberalisation of capital flows in the early 1990s and the privatisation process initiated in the second half of the 1980s and reinforced in the 1990s, also contributed to the strengthening of capital markets and thereby to the increased diversification of households' financial portfolios.

Therefore, the weight of the shares and other equity in disposable income of households increased significantly, from around 20 per cent in the first half of the 1980s to almost 90 per cent in 2000. This value had been declining in the past few years, but in 2004 it recovered slightly (Charts 9 and 10.A).

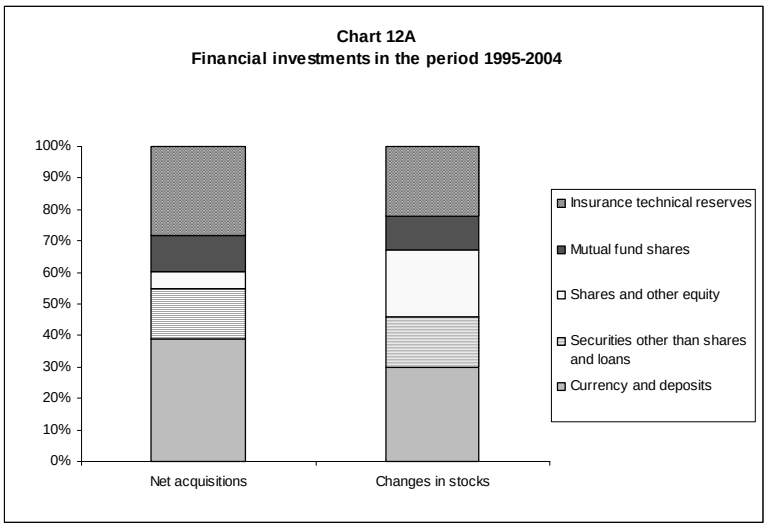
These developments occur both at the shares and other equity in corporate capital level and at the mutual funds shares level. The latter emerged in Portugal in 1986 and have been mostly acquired by households, as an alternative to investments in bank deposits. They are mostly

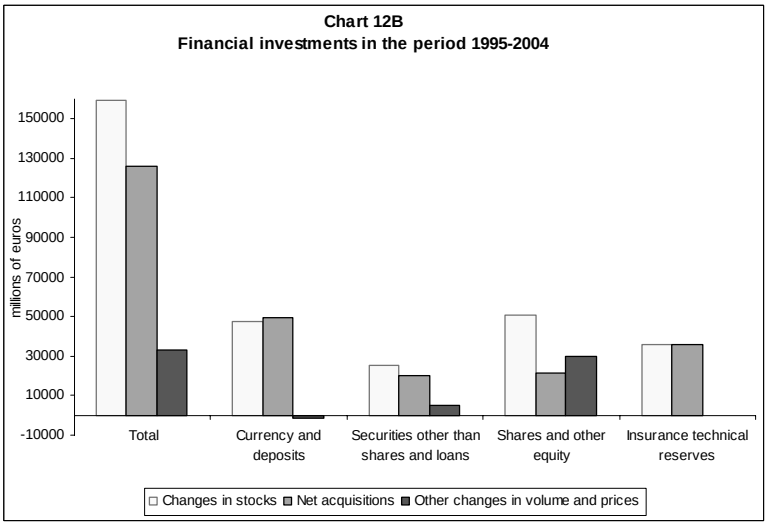
funds constituted by bonds and other low-risk investments, showing high liquidity and competitive effective remuneration rates against those of direct investments in deposits or securities. The privatisation process initiated at the end of the 1980s, and with greater incidence in the second half of the 1990s (in particular in 1997), contributed significantly to the increased importance of shares in the portfolio of households. These operations, associated with investment incentives to small subscribers (notably discounts on the acquisition of shares and the provision of bonus shares) and tax benefits, led to an increased participation of households in the stock market. For illustrative purposes, the number of buying orders by employees, small subscribers and emigrants in privatisation operations from 1996 to 1998 reached almost 4 billion, and by the end of the year the number of residents holding shares of a single company accounted for around 8 per cent of the Portuguese population. In turn, the share of direct equity issued by non-residents, despite following an upward trend, more marked after the participation in the euro area, continued to be negligible in the equity portfolio, as it is the case of total direct financial investments abroad (Chart 11). In terms of indirect investments, i.e. via institutional investors (mutual funds, life insurance and pension funds), the share is higher: the percentage of securities issued by non-residents in the portfolio of these investors rose from less than 10 per cent in 1995 to over 60 per cent in 2004, according to the last estimates.



As shown in Charts 12A and 12B, the rise in the stock of household wealth in shares and other equity since 1995 is due to the increases in shares prices (which account for around 60 per cent of the change in stock) rather than to net acquisitions. These price effects were stronger until early 2000, but still, by the end of 2004, the PSI General index had increased by around 140 per cent against the end of 1994. In fact, holding gains in shares were the most significant price effects in financial wealth, while net acquisitions of these assets continued to account for a quite small percentage of household's investments. The latter have been mainly in deposits, followed by investments in insurance (namely life insurance) and pension funds,

and by acquisitions of securities (other than shares, mutual funds shares and other equity), denoting the preference by households for low-risk assets.





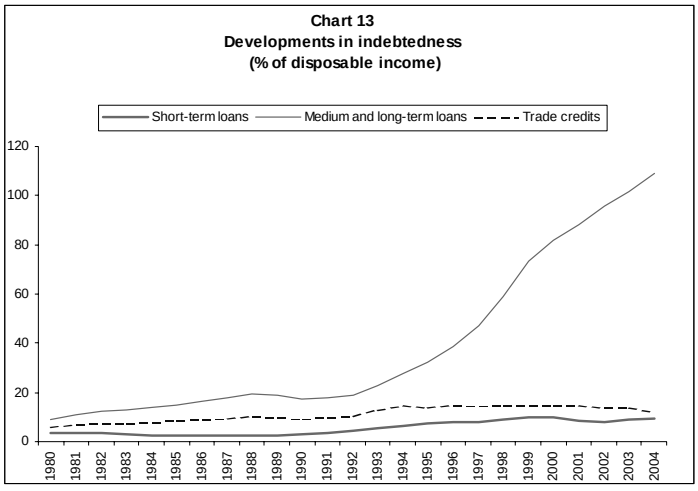
Securities other than shares also recorded some nominal holding gains, albeit relatively small (close to 20 per cent of total change in stock from 1994 to 2004).[32] Direct investments in securities, mostly in government debt, grew over the 1980s, but they seem to have been replaced by mutual funds shares in the 1990s, a trend that was only reversed in the last years of the period under review (Charts 9 and 10.A).

[32] It should be noted that income under the form of interest is classified as transaction rather than as a holding gain. According to ESA95, interest is recorded in the income account on an accrual basis. In financial transactions, accrued interest not paid is recorded as transaction together with the financial asset that gave rise to it (as a reinvestment). Therefore, the changes in stocks of deposits and securities, excluding exchange rate fluctuations, correspond mostly to financial transactions. The negative change in currency and deposits (Chart 12.B) reflects mostly escudos banknotes and coins that ceased to have legal tender in the beginning of 2002, and were deducted from the stock of currency held by households and reclassified in other assets.

Net equity of households in insurance technical reserves has followed a continued upward trend since the early 1990s both in terms of disposable income and of weight in the structure of assets. This trend reflects developments in life insurance and pension funds as private systems complementary to social security schemes. Autonomous pension funds, created in 1986, have gained increasing importance, supported by the transfer of non-autonomous pension funds reserves of the internal banking sector[33] to autonomous funds as from 1995. These are mostly closed funds (created by employers or for certain groups of beneficiaries defined in advance) and defined benefit funds. Investments in life insurance and pension funds (closed and open, such as in retirement-saving schemes) has also benefited from more favourable tax regimes than more traditional investments, favouring demand for these less liquid products.

Overall, in the period under review, the strengthening of the financial system, the downward path of interest rates and capital gains offered by shares and other equity, as well as developments in social security schemes have conditioned households' choices in the composition of the respective portfolio of financial assets. It became more diversified and less liquid, but still quite "conservative" when compared with other European countries (see section 3.4).

On its turn, there was a very significant increase in household indebtedness in terms of disposable income, although total wealth in net terms maintained an upward path (Chart 2). In terms of breakdown by type of credit, long-term loans are the most relevant item, mainly for house acquisition, which recorded the most significant growth (Table A1.2 and Chart 13). Short-term loans, including trade credits, are negligible in terms of disposable income of households over the period under

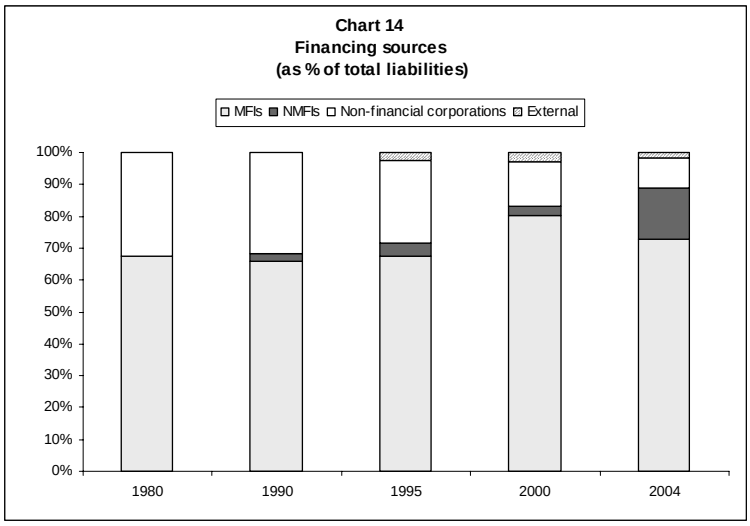


[33] Reserves for retirement and survivors' pensions implemented by Banco de Portugal Circular Letter no. 129/DSB of 3 August 1989 are also considered in these estimates and therefore the amounts transferred do not influence the total value presented for pension funds.

review. In the 1990s, indebtedness evolved in a context of declining interest rates, which encouraged consumption and investment expenditure and the corresponding increase in demand for credit. The effect of declining interest rates occurred both in real terms, by reducing the opportunity cost of expenditure, and in nominal terms, by easing households' liquidity constraints. By the end of the 1990s, the strong competition in the banking sector raised the availability, diversification and sophistication of financial products, notably in the housing credit segment, stimulating recourse to this type of credit. A recent study[34] based on micro data shows that developments in the second half of the 1990s have resulted from a marked increase in the accessibility of households to the credit market rather than from higher indebtedness and the respective effort rate at the level of individual households. Younger individuals were the main contributors behind the increase in indebtedness in aggregate terms. However, as they have lower levels of formal education, they are more vulnerable in situations of higher unemployment and therefore in their ability to fulfil indebtedness commitments. The fact that each economic agent faces an intertemporal budget constraint that does not allow it to sustain an indebtedness trend indefinitely has also contributed to the slowdown in demand for credit.

Households preferably choose to borrow from the resident banking system (around 80 per cent of total financing is obtained from resident institutions). The importance of non-monetary financial institutions, that started their activity in the mid-1980s, is negligible. It increased somewhat in the past few years with the emergence of entities specialised in credit securitisation. Non-residents, in turn, accounted for only 3 per cent of total financing by direct credit. Trade credits, in turn, have been declining in terms of relative importance, with the widespread recourse to consumer credit and credit for other purposes offered by financial institutions (banks and non-banks) under more favourable conditions than those offered by commercial firms. By the end of 2004, they accounted for around 10 per cent of total indebtedness of households (Chart 14).

[34] Farinha (2004).



It is still worth mentioning that these aggregated indicators do not allow an evaluation of the financial wealth of households at a micro level, and one should expect an asymmetric distribution in households' wealth. In fact, according to a recent study[35], the wealth distribution, in particular the financial segment, is quite concentrated. For instance, the study reveals that in the sample used, in 2000, only 10 per cent of households held almost 74 per cent of financial assets. However, the net wealth is positive for most households as a significant part of their liabilities take the form of loans for house purchase, which have the corresponding asset as guarantee.

3.4. International comparisons

This section aims to briefly compare estimates for Portugal with data for other countries. The comparison was based on data from 1995 onwards, period for which there are financial wealth data on a comparable basis for at least the European Union countries within the scope of regular reports of Financial Accounts in accordance with ESA 95 to the Eurostat. Housing data are even scarcer and less harmonised. Among euro area countries, only France publishes complete official series of non-financial wealth. The United Kingdom also circulates this type of data within the scope of National Accounts. For this reason, the analysis of this component was made for a narrower group of European countries for which housing data were available (in some cases, such as Spain and Italy, estimates are non-official).

[35] Farinha and Noorali (2005).

Table 4 shows some differences both in the structure of net wealth (weight of housing, financial assets and liabilities) and in its value as a percentage of disposable income. However, with regard to developments from 1995 onwards, there are some movements similar to those observed in other countries. Overall, from 1995 to 2000 there was an increase in household wealth as a percentage of disposable income, in both the housing and the financial component. This increase was more marked in financial wealth, resulting in a loss of importance in the housing component in total assets. From 2000 to 2003, the financial assets component declined in most countries considered (in some cases, such as the United Kingdom, its value in level even decreased) reflecting the devaluation effect of shares in this period, while in some countries dwellings continued to valuate considerably. This effect was also observed in Portugal, albeit to a lesser extent, partly due to a slight slowdown in the housing market over the period. With regard to the weight of housing in total assets, in the group of European countries considered Portugal is the country with the lowest share in 2003 (in 1995 and 2000 the United Kingdom showed a lower weight than Portugal). In Spain, the housing component has a very significant weight in total assets (above 70 per cent in 2002), reflecting a high percentage of house owners (main and secondary houses). On the other hand, the increase in the weight of the housing component in this country (as in the United Kingdom) from 2000 to 2003 reflects stronger growth in house prices in this period. In contrast, the weight of housing in the United States and Japan (both as a percentage of disposable income and total assets) is considerably below that observed in the European countries under review.

With regard to liabilities, although the respective values have increased in several countries from 1995 to 2003, this trend was much more pronounced in Portugal, which recorded the highest share of liabilities in total assets in 2003, in the group of 8 countries to which housing estimates were obtained. Considering a wider group of countries, the indebtedness level in Portugal as a percentage of disposable income is only below that observed in Denmark, the Netherlands and the United Kingdom (Table 4).

In 2003, in terms of financial wealth composition, comparing the values in Portugal with the euro area average[36], investments in securities, shares and other equity are identical, but the

[36] Ireland, Luxembourg and Greece, countries that do not have Financial Accounts in accordance with the ESA95, were excluded from this analysis.

component currency and deposits is significantly above the average, while net equities in insurance technical reserves continue to have a smaller weight (Table 5A and 5B).

Table 4

International comparisons - household wealth

	as a percentage of total assets								
	Housing			Financial assets			Liabilities		
	1995	2000	2003	1995	2000	2003	1995	2000	2003
Portugal	49.7	44.3	44.7	50.3	55.7	55.3	12.8	21.4	24.6
Germany	55.4	51.8	50.6	44.6	48.2	49.4	19.2	20.1	19.7
Spain	65.2	63.4	72.0	34.8	36.6	28.0	10.8	12.4	11.9
France	49.0	45.2	52.3	51.0	54.8	47.7	13.5	12.0	12.1
Italy	64.9	53.6	60.8	35.1	46.4	39.2	4.3	5.6	5.7
United Kingdom	36.6	39.0	49.0	63.4	61.0	51.0	17.9	14.7	18.0
Europe (6)	53.7	48.6	55.5	46.3	51.4	44.5	13.8	13.6	14.0
USA	27.1	25.4	30.9	72.9	74.6	69.1	17.5	16.7	19.8
Japan	41.6	37.2	33.7	58.4	62.8	66.3	18.9	17.8	17.7

	as a percentage of disposable income								
	Housing			Financial assets			Liabilities (a)		
	1995	2000	2003	1995	2000	2003	1995	2000	2003
Portugal	209	219	226	212	276	279	54	106	124
Belgium	-	-	-	362	468	398	63	69	67
Denmark	-	-	-	279	356	308	175	225	214
Germany	271	276	268	218	256	262	94	107	104
Spain	371	437	635	198	252	247	61	86	105
France (b)	234	270	318	243	328	290	64	72	74
Italy	437	385	477	237	333	308	29	40	44
The Netherlands	-	-	-	411	560	465	108	175	201
Austria	-	-	-	181	203	210	52	72	75
Finland	-	-	-	100	185	177	65	60	70
Sweden	-	-	-	211	295	262	95	101	117
United Kingdom	218	301	381	378	471	397	107	113	140
Europe (6)	291	314	378	251	332	303	75	88	95
Europe (12)	-	-	-	238	308	289	72	87	91
USA	146	157	184	391	460	411	94	103	118
Japan (c)	262	240	216	367	407	424	119	115	113

Sources: Eurostat, National central banks and European statiscal institutes, Observatoire de L'Épargne Européenne, Federal Reserve Bank, Cabinet Office (Government of Japan) and Banco de Portugal.

Notes:
(a) The concept of liabilities considered here is more general than the one usually commented by Banco de Portugal (which considers only the interest bearing liabilities), the main difference being the inclusion of trade credits. Considering the strict concept, the ratios for Portugal are 38, 91 e 110 per cent, respectively in 1995, 2000 and 2003.
(b) The value of housing for France, in 2003, was estimated assuming the ratio of that value, as a percentage of disposable income, equal to the one observed in 2002 (last available figure).
(c) In the case of Japan, housing includes 3/4 of the value indicated in non-financial accounts as land underlying buildings and other constructions of households, as in OECD (2003).

Table 5

International comparisons - composition of financial assets (a)

As a percentage of total financial assets

Table 5A - Composition at the end of 2003

	Currency and deposits	Securities other than shares	Shares and other equity	Of which: mutual funds shares	Insurance technical reserves	Of which: life insurance and pension funds
Portugal	44	11	27	9	17	16
Belgium	32	19	29	16	19	17
Denmark	28	8	17	9	46	44
Germany	36	12	22	12	30	28
Spain	42	3	39	13	16	15
France	31	2	36	10	31	28
Italy	27	22	35	17	15	13
The Netherlands	25	4	11	4	60	58
Austria	56	8	16	10	21	14
Finland	35	1	41	5	23	20
Sweden	20	3	40	12	37	37
United Kingdom	27	1	16	5	56	54
Euro area (9)	33	11	29	11	27	25
European Union (12)	31	8	26	9	34	32
USA	16	6	48	10	30	30
Japan	56	6	11	2	27	27

Table 5B - Composition at the end of 1995

	Currency and deposits	Securities other than shares	Shares and other equity	Of which: mutual funds shares	Insurance technical reserves	Of which: life insurance and pension funds
Portugal	60	3	25	7	11	9
Belgium	30	31	29	9	10	8
Denmark	27	15	23	7	34	32
Germany	42	13	19	7	26	24
Spain	53	4	31	11	10	9
France	37	5	35	12	21	19
Italy	43	28	20	4	10	9
The Netherlands	23	3	20	5	53	52
Austria	62	15	6	4	16	12
Finland	73	6	5	1	15	10
Sweden	29	9	30	7	31	31
United Kingdom	25	2	20	4	53	51
Euro area (9)	41	13	24	8	22	20
European Union (12)	37	11	23	7	29	27
USA	16	9	46	5	29	29
Japan	52	8	14	2	26	26

(a) Luxembourg, Greece and Ireland are not considered in this table, since financial accounts according to ESA 95 are not available for these countries.

Vis-à-vis European Union countries, the results of the comparison are similar, with the exception of a larger difference concerning investments in the insurance sector. Indeed, the latter increased its relative weight with the inclusion of the United Kingdom, where more than half of the financial investments of households is made in this type of assets (among the countries under review, only the Netherlands show a higher value of almost 60 per cent).

The results of the European countries average (Monetary Union and others) mask considerable differences between countries when considered on an individual basis. In the currency and deposits component, for instance, Austria shows the highest value (56 per cent), only comparable with Japan, and followed by Portugal (44 per cent), which is very close to the value recorded in Spain. In most other countries, the currency and deposits component has a smaller weight. In contrast, in the insurance and pension funds segment, Portugal stands (together with Spain, Italy and Belgium) in the group of countries in which investments have the smallest weight in total financial wealth (from 15 to 19 per cent), while most Northern European countries attach higher relative importance to these assets. The debt securities and equities components also show large variability between the countries considered; Portugal stands close to the average.

Compared to 1995, developments in Portugal followed the trend observed in most other European countries, with a decline in the relative weight of deposits and an increase in other financial investments. The only exception was securities, which raised their importance in Portugal, but remained below the euro area average. Overall, the structure of households' portfolios in Portugal over the last eight years came closer to the average of European countries, notably euro area countries. These movements contrast with those observed in the United States, where the weight of deposits stabilized, and in Japan, where deposits gained relative importance reflecting the devaluation of shares. In the United States, the weight of shares and other equity remains above that observed in all the other countries under review. The increase in the weight of insurance technical reserves, in turn, was broadly based across all countries under review, accounting for around one third of the financial assets of households in the areas considered.

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Appendix A1: Estimates

Table A1.1 - Estimates of household wealth

EUR million

	Financial assets								Liabilities								
	Currency and deposits	Securities other than shares	Loans	Shares and other equity	*of which*: mutual funds shares	Insurance technical reserves	*of which*: life insurance and pension funds	Total assets	Loans	*of which*: housing	Trade credits	Total liabilities	Net financial wealth	Non-financial wealth Housing	Total wealth	Net total wealth	Net financial wealth (excl. loans for house purchase)
1980	5354	380	0	1112	0	123	50	6969	732	467	352	1084	5885	12501	19470	18386	6352
1981	7284	580	0	1497	0	148	56	9510	1113	736	532	1645	7864	16000	25510	23865	8600
1982	9298	530	0	1832	0	223	68	11884	1528	1003	729	2257	9626	19591	31474	29217	10629
1983	11400	669	0	1843	0	269	79	14182	1859	1318	886	2745	11437	25337	39519	36775	12755
1984	14771	786	0	1907	0	314	94	17779	2366	1763	1127	3493	14285	31659	49437	45944	16048
1985	18453	1228	0	2501	0	368	104	22550	2996	2366	1423	4419	18131	39000	61550	57131	20497
1986	21681	2674	0	3957	43	460	129	28772	3811	2989	1810	5621	23151	43601	72373	66752	26140
1987	25097	4122	85	5046	230	670	260	35019	4867	3758	2307	7173	27846	49199	84219	77045	31604
1988	29208	5081	268	7850	201	1049	541	43456	5865	4689	2764	8628	34827	56424	99879	91251	39516
1989	33300	5779	408	9229	883	1602	973	50317	6785	5426	3183	9967	40350	66733	117050	107083	45776
1990	38075	6977	609	11747	1712	2967	2176	60375	7825	5845	3635	11460	48914	79180	139555	128094	54760
1991	46653	5699	787	14881	3865	4402	3476	72421	9717	6896	4406	14122	58299	91775	164196	150073	65195
1992	56000	4052	1734	17207	5415	6078	4924	85072	11590	7985	5233	16823	68249	101767	186840	170016	76234
1993	62581	3251	1606	22880	7919	8446	7027	98764	15205	9730	6744	21949	76815	110203	208967	187018	86545
1994	69485	3093	1305	26289	9113	10257	8656	110429	18913	12078	8223	27136	83293	117118	227547	200412	95372
1995	75535	3797	1755	31573	9454	13504	11650	126164	23691	15076	8268	31959	94205	124486	250650	218691	109281
1996	80895	4204	1382	37441	11051	16571	14486	140492	29461	18978	9386	38847	101645	129775	270267	231420	120623
1997	84451	4040	438	45613	14887	21041	18538	155583	36635	24169	9555	46190	109393	138483	294066	247876	133562
1998	88142	5091	346	55382	17695	25268	22516	174229	47503	32521	10258	57761	116468	148125	322354	264593	148989
1999	95664	11010	294	63750	18442	29809	26863	200527	61614	42272	11173	72787	127740	161435	361963	289175	170012
2000	104161	15733	55	69645	19364	33351	29891	222945	73791	50829	11992	85783	137162	177187	400132	314350	187991
2001	111239	21700	12	70439	20607	37144	33388	240534	82758	58204	12636	95394	145140	190299	430833	335439	203344
2002	112920	26836	7	70050	21409	40960	37045	250773	92319	67717	12543	104862	145911	199217	449990	345128	213628
2003	113222	28111	7	69990	23914	44357	40337	255687	101369	76708	12651	114020	141667	207044	462731	348711	218375
2004 p	117179	29624	11	77285	25667	45710	41770	269808	112356	84659	11883	124239	145569	215556	485364	361125	230228

Table A1.2 - Composition of household wealth

In percentage

	Financial assets (as a percentage of total financial assets)							Liabilities (% of total financial assets)	Liabilities (% of total liabilities)		Liabilities (% of total wealth)	Net financial wealth (% of total net wealth)	Housing (% of total wealth)	Housing net of loans (% of total net wealth)	*memo item*
	Currency and deposits	Securities other than shares	Loans	Shares and other equity	*of which* : mutual funds shares	Insurance technical reserves	*of which* : life insurance and pension funds		Medium and long-term	of which housing					Loans for house purchase (% of housing wealth)
1980	76,8	5,4	0,0	16,0	0,0	1,8	0,7	15,6	49,3	43,1	5,6	32,0	64,2	65,5	3,7
1981	76,6	6,1	0,0	15,7	0,0	1,6	0,6	17,3	50,8	44,7	6,4	33,0	62,7	64,0	4,6
1982	78,2	4,5	0,0	15,4	0,0	1,9	0,6	19,0	53,0	44,4	7,2	32,9	62,2	63,6	5,1
1983	80,4	4,7	0,0	13,0	0,0	1,9	0,6	19,4	55,9	48,0	6,9	31,1	64,1	65,3	5,2
1984	83,1	4,4	0,0	10,7	0,0	1,8	0,5	19,6	57,5	50,5	7,1	31,1	64,0	65,1	5,6
1985	81,8	5,4	0,0	11,1	0,0	1,6	0,5	19,6	58,9	53,5	7,2	31,7	63,4	64,1	6,1
1986	75,4	9,3	0,0	13,8	0,2	1,6	0,4	19,5	58,6	53,2	7,8	34,7	60,2	60,8	6,9
1987	71,7	11,8	0,2	14,4	0,7	1,9	0,7	20,5	59,8	52,4	8,5	36,1	58,4	59,0	7,6
1988	67,2	11,7	0,6	18,1	0,5	2,4	1,2	19,9	60,2	54,3	8,6	38,2	56,5	56,7	8,3
1989	66,2	11,5	0,8	18,3	1,8	3,2	1,9	19,8	60,5	54,4	8,5	37,7	57,0	57,3	8,1
1990	63,1	11,6	1,0	19,5	2,8	4,9	3,6	19,0	57,8	51,0	8,2	38,2	56,7	57,3	7,4
1991	64,4	7,9	1,1	20,5	5,3	6,1	4,8	19,5	57,0	48,8	8,6	38,8	55,9	56,6	7,5
1992	65,8	4,8	2,0	20,2	6,4	7,1	5,8	19,8	56,1	47,5	9,0	40,1	54,5	55,2	7,8
1993	63,4	3,3	1,6	23,2	8,0	8,6	7,1	22,2	55,7	44,3	10,5	41,1	52,7	53,7	8,8
1994	62,9	2,8	1,2	23,8	8,3	9,3	7,8	24,6	56,7	44,5	11,9	41,6	51,5	52,4	10,3
1995	59,9	3,0	1,4	25,0	7,5	10,7	9,2	25,3	59,9	47,2	12,8	43,1	49,7	50,0	12,1
1996	57,6	3,0	1,0	26,6	7,9	11,8	10,3	27,7	62,7	48,9	14,4	43,9	48,0	47,9	14,6
1997	54,3	2,6	0,3	29,3	9,6	13,5	11,9	29,7	67,6	52,3	15,7	44,1	47,1	46,1	17,5
1998	50,6	2,9	0,2	31,8	10,2	14,5	12,9	33,2	71,5	56,3	17,9	44,0	46,0	43,7	22,0
1999	47,7	5,5	0,1	31,8	9,2	14,9	13,4	36,3	74,8	58,1	20,1	44,2	44,6	41,2	26,2
2000	46,7	7,1	0,0	31,2	8,7	15,0	13,4	38,5	76,9	59,3	21,4	43,6	44,3	40,2	28,7
2001	46,2	9,0	0,0	29,3	8,6	15,4	13,9	39,7	79,1	61,0	22,1	43,3	44,2	39,4	30,6
2002	45,0	10,7	0,0	27,9	8,5	16,3	14,8	41,8	81,3	64,6	23,3	42,3	44,3	38,1	34,0
2003	44,3	11,0	0,0	27,4	9,4	17,3	15,8	44,6	81,9	67,3	24,6	40,6	44,7	37,4	37,0
2004 p	43,4	11,0	0,0	28,6	9,5	16,9	15,5	46,0	83,4	68,1	25,6	40,3	44,4	36,2	39,3

Table A1.3 - Estimates of household wealth
As a percentage of disposable income

	Financial assets										Non-financial wealth				
	Currency and deposits	Securities other than shares	Loans	Shares and other equity	*of which* : mutual funds shares	Insurance technical reserves	*of which* : life insurance and pension funds	Total assets	Total liabilities	Net financial assets	Housing	Total wealth	Net total wealth	Non-financial wealth Housing net of loans	Net financial wealth excl. loans for housing
1980	88,4	6,3	0,0	18,4	0,0	2,0	0,8	115,1	17,9	97,2	206,5	321,6	303,7	198,8	104,9
1981	95,1	7,6	0,0	19,5	0,0	1,9	0,7	124,2	21,5	102,7	208,9	333,1	311,6	199,3	112,3
1982	96,6	5,5	0,0	19,0	0,0	2,3	0,7	123,5	23,5	100,0	203,5	327,0	303,5	193,1	110,4
1983	96,3	5,6	0,0	15,6	0,0	2,3	0,7	119,8	23,2	96,6	214,0	333,8	310,6	202,9	107,7
1984	102,4	5,4	0,0	13,2	0,0	2,2	0,6	123,2	24,2	99,0	219,4	342,7	318,5	207,2	111,2
1985	106,5	7,1	0,0	14,4	0,0	2,1	0,6	130,2	25,5	104,7	225,2	355,4	329,9	211,5	118,3
1986	106,6	13,1	0,0	19,5	0,2	2,3	0,6	141,5	27,6	113,8	214,4	355,9	328,3	199,7	128,5
1987	104,9	17,2	0,4	21,1	1,0	2,8	1,1	146,4	30,0	116,4	205,6	352,0	322,0	189,9	132,1
1988	109,0	19,0	1,0	29,3	0,8	3,9	2,0	162,1	32,2	129,9	210,5	372,7	340,5	193,0	147,4
1989	103,5	18,0	1,3	28,7	2,7	5,0	3,0	156,4	31,0	125,4	207,4	363,8	332,8	190,5	142,3
1990	98,9	18,1	1,6	30,5	4,4	7,7	5,7	156,8	29,8	127,0	205,6	362,4	332,7	190,4	142,2
1991	103,1	12,6	1,7	32,9	8,5	9,7	7,7	160,1	31,2	128,9	202,9	363,0	331,8	187,6	144,1
1992	110,7	8,0	3,4	34,0	10,7	12,0	9,7	168,2	33,3	135,0	201,2	369,5	336,2	185,4	150,7
1993	117,6	6,1	3,0	43,0	14,9	15,9	13,2	185,5	41,2	144,3	207,0	392,6	351,4	188,8	162,6
1994	125,2	5,6	2,4	47,4	16,4	18,5	15,6	199,0	48,9	150,1	211,1	410,2	361,2	189,3	171,9
1995	126,8	6,4	2,9	53,0	15,9	22,7	19,6	211,8	53,7	158,2	209,0	420,8	367,1	183,7	183,5
1996	129,2	6,7	2,2	59,8	17,6	26,5	23,1	224,4	62,0	162,3	207,2	431,6	369,6	176,9	192,6
1997	127,2	6,1	0,7	68,7	22,4	31,7	27,9	234,3	69,6	164,7	208,5	442,8	373,3	172,1	201,1
1998	126,3	7,3	0,5	79,4	25,4	36,2	32,3	249,7	82,8	166,9	212,3	462,0	379,3	165,7	213,6
1999	129,2	14,9	0,4	86,1	24,9	40,3	36,3	270,8	98,3	172,5	218,0	488,9	390,6	161,0	229,6
2000	129,0	19,5	0,1	86,3	24,0	41,3	37,0	276,1	106,3	169,9	219,5	495,6	389,4	156,5	232,8
2001	129,9	25,3	0,0	82,2	24,1	43,4	39,0	280,9	111,4	169,5	222,2	503,1	391,7	154,2	237,4
2002	126,7	30,1	0,0	78,6	24,0	46,0	41,6	281,4	117,7	163,8	223,6	505,0	387,3	147,6	239,8
2003	123,3	30,6	0,0	76,2	26,1	48,3	43,9	278,5	124,2	154,3	225,5	504,1	379,9	142,0	237,9
2004 p	123,4	31,2	0,0	81,4	27,0	48,1	44,0	284,1	130,8	153,3	227,0	511,1	380,3	137,8	242,4

Appendix A2: Supplementary information - methodology

Table A2.1 - Service life and depreciation methods of "housing" assumed in some countries

Country	Service life (years)	Depreciation method	Depreciation rate (%)	"Declining balance rate" - R	Source
Japan	45-50	linear			OECD (1993)
Belgium	80				"
Finland	55				"
Germany	70				"
Iceland	85				"
Norway	90	linear			"
Sweden	75				"
United Kingdom	60	linear			ONS (2003)
USA	80-65	geometric	1.40% - 1.14%	0.91	OECD (2001)
Singapore	80	linear			"
Spain	-	geometric	2.0%	-	Banco de España (2002)
Italy	80	linear			ISTAT
Brazil	50	geometric	4.0%	2.0	Marquetti (2000)
The Netherlands	100	linear			Statistics Netherlands (1997)
Australia	60-90	linear			Australian Bureau of Statistics (1997)
France	-	linear			INSEE (2002)
Canada	-	geometric	2.0%	-	Statistics Canada (2004)
South Africa	50	linear			South African R. Bank (1997)

Table A2.2 - Estimates of housing stock of households - summary

EUR million

	GFCF				housing stock - linear depreciation					
	current prices	volume (r.c.)	nominal (r.c.)	prices (r.c.)	current prices	% disp.income	nominal (r.c.)	constant prices 1995	volume (r.c.)	implicit rate of depreciation
1980	583.7				12501.2	206.5		82005.0		
1981	897.9	24.7	53.8	23.3	16000.3	208.9	28.0	85112.2	3.8	2.04%
1982	986.7	-7.4	9.9	18.7	19590.8	203.5	22.4	87792.6	3.1	2.05%
1983	1346.0	9.1	36.4	25.0	25337.5	214.0	29.3	90808.8	3.4	2.06%
1984	1777.5	9.7	32.1	20.4	31658.7	219.4	24.9	94217.9	3.8	2.07%
1985	2100.2	-0.7	18.2	19.0	38999.9	225.2	23.2	97507.8	3.5	2.08%
1986	1966.4	-14.1	-6.4	9.0	43601.5	214.4	11.8	99976.3	2.5	2.09%
1987	2244.9	3.8	14.2	10.0	49199.2	205.6	12.8	102547.4	2.6	2.11%
1988	3194.6	28.7	42.3	10.5	56423.7	210.5	14.7	106394.1	3.8	2.12%
1989	3638.5	-0.3	13.9	14.3	66732.5	207.4	18.3	110133.2	3.5	2.13%
1990	3826.6	-8.9	5.2	15.4	79179.9	205.6	18.7	113252.3	2.8	2.14%
1991	3720.8	-14.4	-2.8	13.7	91774.9	202.9	15.9	115500.5	2.0	2.15%
1992	4768.8	18.6	28.2	8.0	101767.3	201.2	10.9	118553.6	2.6	2.17%
1993	3997.7	-21.4	-16.2	6.7	110202.9	207.0	8.3	120335.9	1.5	2.18%
1994	4411.5	5.5	10.3	4.6	117118.3	211.1	6.3	122297.3	1.6	2.20%
1995	4899.1	6.4	11.1	4.4	124485.8	209.0	6.3	124485.8	1.8	2.22%
1996	5109.2	1.8	4.3	2.4	129774.8	207.2	4.2	126693.7	1.8	2.23%
1997	5778.3	8.1	13.1	4.6	138482.7	208.5	6.7	129234.8	2.0	2.25%
1998	6709.7	11.1	16.1	4.5	148125.1	212.3	7.0	132298.8	2.4	2.27%
1999	7324.7	2.5	9.2	6.5	161435.3	218.0	9.0	135429.0	2.4	2.28%
2000	7899.5	0.5	7.8	7.3	177187.4	219.5	9.8	138500.7	2.3	2.29%
2001	8056.8	-3.1	2.0	5.3	190299.0	222.2	7.4	141291.3	2.0	2.30%
2002	8253.1	-0.3	2.4	2.7	199217.2	223.6	4.7	143980.0	1.9	2.32%
2003	6782.0	-20.2	-17.8	2.9	207043.7	225.5	3.9	145382.7	1.0	2.33%
2004	6901.7	-1.4	1.8	3.2	215556.2	227.0	4.1	146653.7	0.9	2.36%

Table A2.3 - Linear versus geometric methods

EUR million

	housing stock					
	linear depreciation - hip.1		geometric method - hip.2		geometric method - hip.3	
	value	% disp. income	value	% disp. income	value	% disp. income
1980	12501,2	206,5	12501,2	206,5	7645,9	126,3
1981	16000,3	208,9	16005,8	209,0	10138,2	132,4
1982	19590,8	203,5	19605,9	203,7	12780,2	132,8
1983	25337,5	214,0	25370,5	214,3	17006,5	143,6
1984	31658,7	219,4	31719,4	219,9	21848,4	151,4
1985	38999,9	225,2	39101,4	225,8	27586,6	159,3
1986	43601,5	214,4	43749,3	215,1	31444,9	154,6
1987	49199,2	205,6	49410,5	206,5	36145,3	151,1
1988	56423,7	210,5	56719,6	211,6	42349,7	158,0
1989	66732,5	207,4	67147,5	208,7	51057,5	158,7
1990	79179,9	205,6	79755,1	207,1	61561,1	159,9
1991	91774,9	202,9	92550,0	204,6	72286,0	159,8
1992	101767,3	201,2	102753,1	203,2	81299,2	160,8
1993	110202,9	207,0	111427,5	209,3	88997,2	167,2
1994	117118,3	211,1	118601,7	213,8	95615,3	172,3
1995	124485,8	209,0	126268,5	212,0	102745,6	172,5
1996	129774,8	207,2	131861,6	210,6	108248,5	172,9
1997	138482,7	208,5	140962,3	212,3	116754,3	175,8
1998	148125,1	212,3	151049,4	216,5	126261,4	181,0
1999	161435,3	218,0	164925,8	222,8	139062,6	187,8
2000	177187,4	219,5	181363,2	224,6	154161,2	190,9
2001	190299,0	222,2	195174,8	227,9	167109,6	195,1
2002	199217,2	223,6	204748,9	229,8	176493,8	198,1
2003	207043,7	225,5	213306,8	232,4	184806,5	201,3
2004	215556,2	227,0	222650,8	234,5	193824,3	204,1

Notes:

hip.1 - linear depreciation method , T= 65 years.

hip.2 - depreciation rate = 2%, K0 (value in 1980)= value obtained by linear method.

hip.3 - depreciation rate = 2%, K0 (value in 1980)= value from Santos (1984) for the housing stock in 1980.

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