Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

11-Sep-2007
_____
English - Or. English

STATISTICS DIRECTORATE
DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS

THE HOUSEHOLD AGGREGATE FINANCIAL WEALTH:
EVIDENCE FROM SELECTED OECD COUNTRIES

The complete document is available in PDF format only

To be held on 2-3 October 2007
Tour Europe, Paris la Défense
Beginning at 9:30 a.m. on the first day

This document has been prepared by R. De Bonis - Bank of Italy and D. Fano and T. Sbano - Pioneer Global Asset Management Economic Research

JT03231710

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English - Or. English

The Household Aggregate Financial Wealth: Evidence from Selected OECD Countries

by R. De Bonis*, D. Fano** and T. Sbano**

Abstract

The OECD, jointly with the Economic Research Unit of Pioneer Global Asset Management and UniCredit, and with the support of a number of Central Banks and National Statistics Offices, is working on a project that aims at extending back the currently available time series of financial accounts for a group of countries. This paper presents the state of art of the project, with reference to household financial assets and liabilities in the US, UK, Canada, Japan, Italy, Spain, Germany and France. We summarize the methodology followed and the issues addressed, presenting initial comments on some trends of household wealth.

*   Bank of Italy, Economic Research Department.
** Pioneer Global Asset Management Economic Research.

The Household Aggregate Financial Wealth: Evidence from Selected OECD Countries[1]

1. Introduction

The OECD, jointly with the Economic Research Unit of Pioneer Global Asset Management and UniCredit and with the active support of a number of Central Banks and National Statistics Offices is working on a project that aims at extending back the currently available time series of the financial accounts for a group of OECD countries: Canada, France, Germany, Italy, Japan, Spain, the UK and the USA.

The introduction of the method of classification based on the SNA93 and on the ESA95 has made it necessary to reconcile past data with the new series. The goal of the project is to produce full time series. In order to help studying changes in aggregate wealth over time and comparing trends in financial systems across different countries, these series must be as much as possible consistent and cover a reasonably long time horizon. We have engaged in a broad and detailed statistical reconstruction that has allowed us to reconcile the series preceding SNA93 with the series that have followed.

Even if data availability would potentially allow to analyze all the institutional sectors, this project has focused, as an initial step, on households and non-financial corporations. The emphasis is on stocks and their trends for both assets and liabilities from 1980 onwards. For some countries data are available for a longer time span.

Although both consolidated and non-consolidated data are potentially usable, the analysis takes into account only non-consolidated data; the reason is that there were in the past no clear indications about how consolidation was carried out by each country. We are aware that this might limit the possibility of making reliable international comparisons, essentially for the non-financial corporations.

In this paper we concentrate on households. The rest of the document is organized as follows. In paragraph 2 we present the general methodology and the characteristics of the sources of financial accounts for each country. Paragraph 3 contains a preliminary analysis of the evolution of household financial assets and liabilities in the countries examined. Paragraph 4 summarizes some first conclusions.

---

2. Sources and methodology: SNA93 vs Golden Book

We have worked on the recent series from OECD.Stat, based on the SNA93, and on the previous OECD *Golden Books*, the database managed by the OECD DAFFE Directorate. The possibility to superimposing the data of the old and new time series for a number of years (different according to the countries) has allowed us to check for the consistency of the reconstruction. We have highlighted a set of differences in the years for which both sources provide data. The results of this analysis have been sent to the participating countries, in order to discuss the discrepancies directly with each country's Central Bank, and to collect further suggestions about which source to rely upon.

In this paper data published directly by the Central Banks are used whenever possible. In the other cases, estimations presented at the OECD National account meeting 2006 are used. Further progress in data collection and analysis is expected in conjunction with the OECD National Accounts Annual Conference in October 2007 with special reference to the UK.

2.1 SNA93 versus the Golden Books

The sector breakdown of the *Golden Books* is more or less the same as the one requested by the SNA93 and used in the OECD.Stat. The main difference between the two classifications concerns the instruments, the SNA93 being more detailed because of the introduction of new instruments as from the conversion table that follows:

SNA93   **Golden Books**

Sectoring

Institutional sectors
Total economy ....S
 Non financial corporations................................S11
 Financial corporations................................S12
 General Government S13
 Household and non profit institutions serving households......S14–S15
Rest of the world S2

Sectoring

Financial institutions...31F, 31B
General Government 32F,32B
Other domestic sectors (NEI) 33F, 33
 1. Non financial enterprises, corporate and quasi-corporate, pr
 2. Household (including private non financial unicorporated ent
  and private non-profit institution serving households
 3. Also social security when independent and not allocated
Rest of the world...34F, 34B

Classification of instruments

AF1	Monetary gold and special drawing rights	
AF2	Currency and deposits	
	AF21	Currency
	AF22	Trasferable deposits
	AF23	Other deposits
AF3	Securities other then shares	
AF4	Loans	
AF5	Shares and other equity	
	AF51	Shares and other equity, excluding mutual funds shar
	AF511	Quoted shares
	AF512	Unquoted shares
	AF513	Other equity
	AF52	Mutual funds
AF6	Insurance technical reserves	
	AF61	Life insurance and pension
	AF611	Life insurance reserves
	AF612	Pension funds reserves
AF7	Other accounts receivable	

Classification of instruments

1.	Gold
2.	Cash and other transferable deposits
3.	Other deposits
4.	Short-term securities
5.	Short-term loans
6.	Trade credits
7.	Bonds
8.	Shares
9.	Long-term loans
10.	Net equity of households on life insurance reserves and pension funds
11.	Others

2.2 Conversion table

In order to merge data from the two sources, we have constructed the following conversion table, which allows us to obtain a good degree of correspondence both over time and across the majority of the countries analysed:

Golden Book		SNA93	Instruments
1	⟹	AF1	Monetary gold and special drawing rights
2+3	⟹	AF2	Currency and deposits
4+7	⟹	AF3	Securities other than shares
5+9	⟹	AF4	Loans
8	⟹	AF5	Shares and other equities
10	⟹	AF6	Insurance and pension technical reserves
11+6	⟹	AF7	Other accounts receivable

2.3 Sources by country[2]

Canada - The Central Bank/NSO dataset covers the period from 1961 to 2005. Looking at the relevant 1969-70 period for series continuity for Households, the data line up fairly well, with the major difference being a historical revision affecting government unfunded pension schemes.

France – Official data are available for France since 1976 from different sources (Bank of France, OECD.Stat, OECD golden book). The Bank of France is, at the moment, working on a further analysis aimed at verifying and improving the quality of the time series.

Germany – The complete German financial accounts since 1991, following ESA95, are available on the Bundesbank web site. Data up to 1991 is available through a Bundesbank publication of 1994 which contains complete information on all the sectors and instruments with stocks and flows for the period 1960-1992. In this publication we used the estimations presented at the OECD national accounts meeting in October 2006.

Italy – The complete Italian financial accounts, following ESA95 since 1995, are available in the Bank of Italy web site, on a quarterly basis. In Italy, the household sector includes Non-Profit Institutions Serving Households and Non-Financial Quasi-Corporate Enterprises with less than 5 employees, while those with a larger number of employees are classified among Non-Financial Corporations. For more information see Banca d'Italia (2003) and (2007). Bonci and Coletta (2007) presented estimates of annual stocks of financial accounts since 1950, aggregating the original data following the ESA95 definitions of instruments and sectors.

---

[2] For a more detailed analysis see "Project on Historical Financial Accounts Time Series", OECD working party on financial account, 9-10 October.

Japan – The data of Japan's financial accounts are taken from Bank of Japan, Japan's Flow of Funds Accounts. The Bank of Japan has been releasing the FFA statistics since 1954 based on the international standards formulated by the United Nations Statistics Commission. The Bank has begun releasing the following retrospective data for the Flow of Funds Accounts (based on SNA93): data from fiscal year 1980 to 1989, and stock data from end of fiscal year 1979 to end of fiscal year 1988.

Spain – The complete Spanish financial accounts since 1990, following ESA95, are available on the Banco de Espana web site. Data up to 1991 are available from the Golden Book OECD publication. In this publication we used the estimation presented at the OECD national accounts meeting in October 2006.

UK - The current data available (source Office of National Statistics, SNA93 classification) covers the period 1987-2006. Pioneer work on balance sheets in UK was presented in a book written by Professor Jack Revell. That work was later extended by Revell and Roe, with CSO and Bank of England sponsorship, to include annual estimates of the period 1957-1966. Information on the balance sheet figures by sector is available in the annual national accounts (Blue Book) publications for 1975-1986. We expect estimates for a longer period to be presented at the next OECD National Accounts Meeting.

USA – The USA started publishing financial accounts in the Fifties (see De Bonis and Gigliobianco, 2007). The financial accounts data are taken from the publication Flow of Funds Accounts of the United States, edited by the Federal Reserve Board of Governors. In the definition of the institutional sectors, the data on households (households and nonprofit organizations) in the United States do not include artisan firms, which are included in the statistics on non-financial business. The reaction of the United States to the OECD project has been to provide OECD with long times-series from 1950 to 2005.

3. The evolution of household financial assets and liabilities

In this paragraph we bring into focus five themes. We will first discuss the trend of household financial assets in the last 25 years (section 3.1). We will then have a closer look at the composition of wealth by financial instrument (section 3.2) and discuss the set of household portfolio choice (3.3). Real wealth is crucial for households; therefore we will compare household financial assets with household non-financial wealth (section 3.4). There is also a lot of concern on the recent increase of household financial liabilities, a subject that we will briefly comment in section 3.5.

3.1 Trends in household financial assets: the last 25 years

We start by exemplifying the evolution of household financial assets in the last 25 years as it appears from a still provisional construction of the time-series according to the methodology described in paragraph 2. Figure 1 shows household financial assets as a percentage of gross disposable income (GDI). The use of gross disposable income at the denominator makes the series comparable, as it adjusts both for the size of an economy and its inflation.

Figure 1. Household financial assets as percentage of gross disposable income: evolution and selected years

6
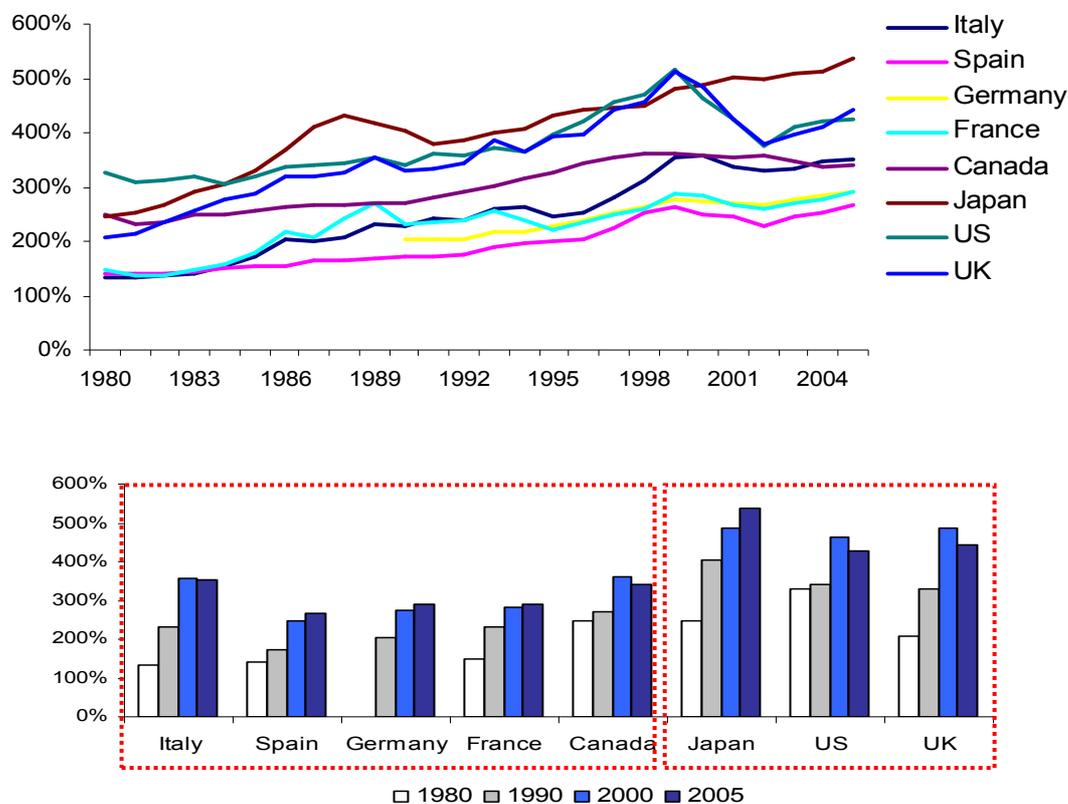
Over the past 25 years, household wealth as a percentage of GDI presented an upward trend in all the countries analysed. The ratio increased moderately between 1980 and 1990. Signs of a stronger growth are evident since 1995. The majority of countries benefited from the boom of the stock markets between 1995 and 2000, while suffering from the following slowdown and newly obtaining advantage from the recent positive behaviour of financial markets.

Sigma-convergence measures whether countries tend to become more similar in terms of deviation from the benchmark over the time. We measured sigma convergence with the standard deviation of the logarithm of the ratio of household financial assets to GDI (figure 2). In 1980 the standard deviation of the indicator was 16.31 per cent, while in 2005 it decreased to 10.51 per cent. The convergence was quite a continuous process.

Figure 2. Sigma- convergence
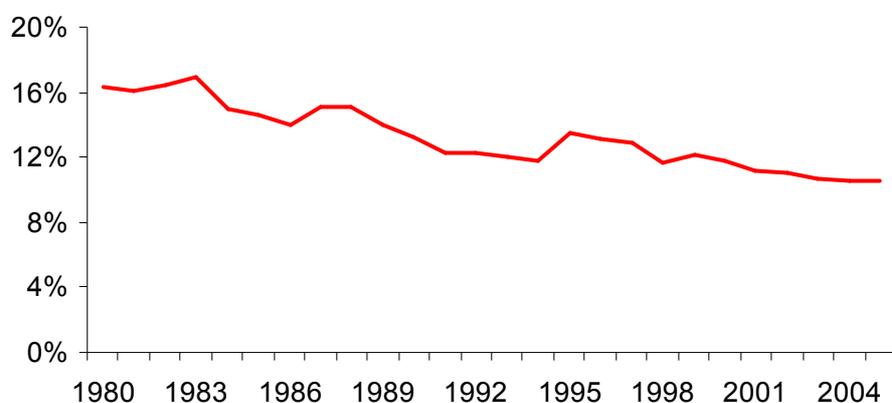
In the appendix we present, for each country examined, the compound annual growth rates of household financial wealth over GDI for each year and each sub-period, under the form of triangular matrices. This allows to compare data independently from base-year biases and to highlight periods and years characterized by relatively higher or relatively lower growth rates. We have verified that convergence appears to be verifiable for most of the sub-periods. We do however consider that the period 1980-2005 deserves to be considered overall, both because it appears long enough and because 1980 has marked the beginning of disinflation after the oil crises of the seventies.

Convergence in the weight of financial assets might be the result of increasing financial integration and of the effort of some countries to reach, through reforms, a higher degree of financial development. In our future research we will try to disentangle the role of appreciation and depreciation of asset categories, to study the split of the allocation across equities and other instruments, to analyze the role of the business cycle and savings rates[3].

With these caveats in mind, it is possible to divide the countries into two groups. The first group includes Japan, the US and UK, where household financial wealth is today more than 4 times disposable income. The second set comprises Italy, Spain, Germany, France and Canada,

---

[3]   See IMF (2000), de Serris and Pelgrin (2003), Oecd (2004) on these subjects.

where the ratio is between 2.5 and 3.5. The ratio of household financial wealth to disposable income is today at its peak in some countries, but not in Italy, Canada, the US and UK, where the maximum level was reached in 2000.

Per capita financial assets broadly confirm the difference between the two sets of countries (figure 3). In the US average financial wealth per capita is over 120,000 euros and around 80,000 in Japan and UK. Per capita household financial assets are under 60,000 euros in the other countries. In Italy per capita financial wealth was small at the beginning of the Eighties, with only Spain showing lower levels. Today Italian per-capita financial wealth is higher than in Spain, Germany, France and even Canada. Since the Eighties the Italian financial system underwent a strong development both in terms of new instruments and new intermediaries[4].

Figure 3. Household financial assets in per capita terms in selected years (in euro)
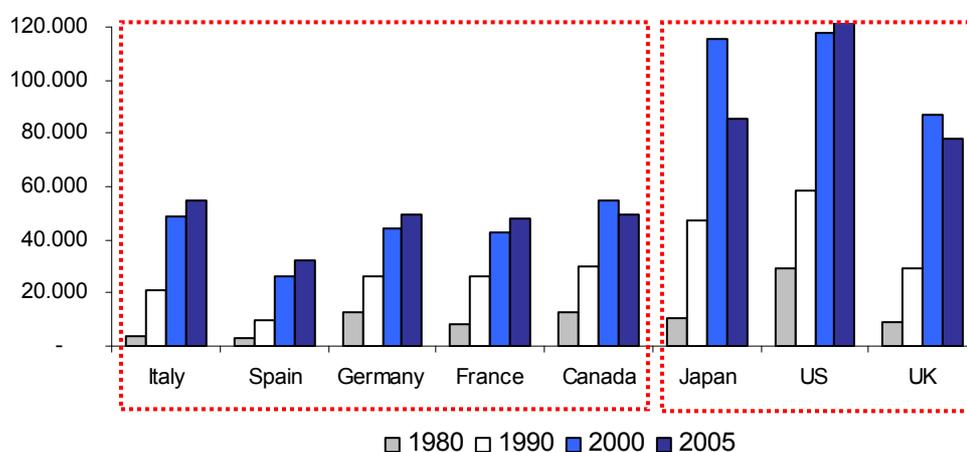
3.2 The composition of financial wealth by instrument

The evolution of financial instruments has followed different patterns across countries[5]. The following table presents a detailed breakdown since 1995. This is the result of a previous OECD joint project with Observatoire de l'Epargne Européenne and Pioneer Global Asset Management that has led to the recommendation of collecting statistics along these lines, a suggestion now followed by many OECD members (see Babeau and Sbano, 2002). Many of the details we comment are not compulsory according to the ESA95 requirements. This more precise classification helps to highlight recent phenomena such as the rise of defined contribution pension funds and unit-linked (or variable annuities) insurance policies and, moreover, to break down mutual funds according to broad risk categories.

---

[4] See for example Filippa and Franzosi (2001), De Bonis (2007).

[5] See Schmidt, Hacketal and Tyrell (1999), ECB (2002), Guiso et al (2003), Massaro (2004), Fano (2005), Bartiloro and De Bonis (2005), Fano and Sbano (2007).

We start from a comparison of five European countries: France, Germany, Italy, Spain and United Kingdom (table 1). Due to the improvement in payment systems, the role of currency decreased in all the countries; it remains relatively more important in Spain. The weight of bank deposits become smaller in all the countries between 1995 and 2000. The slowdown of the stock exchange between 2000 and 2003 induced the households to move newly towards deposits, a trend that affected the behavior of M3 in the euro area.

Holdings of securities other than shares are larger in Italy and Germany than in other countries; in both the nations they include mainly securities issued by the General Government and banks. In last years the latter became more important than the former.

Shares and other equity are greater in Italy and Spain than in the other financial systems. At this stage we do not present a further discussion of this point: in the future we would like to present a split between the holdings of quoted shares and the incidence of unquoted shares and other equity.

With the exemption of France, mutual funds are in 2005 less important than they were when the stock exchange reached its peak in the year 2000. Mutual funds were still relatively unimportant in Italy in 1995, but have played a much more important role in the following years, even if the drop has been strong after 2000. Also the weight of mutual funds classified according to their investment policy differs between European countries. Bond mutual funds are particularly important in Italy, while equity ones are more remarkable in the other financial systems.

Investments in life insurance are especially great in UK, where they represent the first financial asset chosen by the households. While insurance instruments are widespread in France and Germany, their significance is lower in Italy and, especially, Spain.

Pension funds are much less important than insurance countries, with the exemption of the UK. Notwithstanding the reforms of public pension schemes, investment in pension fund instruments are still negligible in Italy and low in France. Due to the problems encountered in the nineties by the defined benefit pension funds, defined contribution pension funds have strongly increased their importance relatively to 1995 and 2000. Further comments and examples of the use of such more detailed classification of insurance and pension fund instruments are given in section 3.3.

Table 1. Composition of household wealth in 5 European countries

Household financial assets mix	Italy			France			Germany			Spain			UK		
	2005	2000	1995	2005	2000	1995	2005	2000	1995	2005	2000	1995	2005	2000	1995
Currency	2%	2%	4%	1%	2%	2%	1%	2%	3%	5%	5%	7%	1%	1%	1%
Bank depositis	24%	22%	36%	31%	32%	39%	34%	32%	39%	33%	35%	43%	25%	19%	23%
Sucurities other than share	20%	18%	31%	1%	3%	6%	10%	10%	13%	3%	3%	4%	1%	1%	2%
Shares and other equity	25%	28%	14%	18%	19%	11%	12%	16%	11%	25%	27%	20%	11%	18%	16%
Mutual funds	10%	17%	4%	10%	11%	13%	12%	11%	7%	14%	14%	10%	5%	5%	4%
Money mutual funds	2%	1%	1%	1%	1%	4%	1%	1%	1%	3%	2%	6%	0%	0%	0%
Equity mutual funds	2%	6%	1%	5%	6%	3%	4%	6%	1%	5%	4%	0%	4%	4%	3%
Bond mutual funds	5%	6%	2%	2%	1%	4%	3%	2%	3%	4%	4%	4%	1%	0%	0%
Balanced mutual funds	1%	4%	1%	1%	2%	2%	1%	1%	0%	2%	3%	1%	0%	0%	0%
Real estate mutual funds	0%	0%	0%	0%	0%	0%	3%	2%	2%	0%	0%	0%	0%	0%	0%
Life insurance unit linked	4%	2%	1%	6%	6%	1%	1%	0%	0%	1%	1%	0%	13%	12%	12%
Life insurance non unit linked	7%	4%	2%	23%	20%	18%	19%	19%	16%	6%	5%	4%	16%	17%	16%
Pension Funds DC	0,9%	0,9%	0,6%	2%	1%	1%	3%	1%	1%	6%	4%	2%	6%	3%	3%
Pension Funds DB	0,4%	0,3%	0,2%	1%	0%	0%	3%	4%	5%	1%	2%	2%	17%	20%	19%
Others	6%	5%	7%	7%	7%	8%	6%	5%	5%	5%	5%	7%	4%	4%	5%

Table 2 concentrates on the comparison of household choices in the Us, Japan and Europe; for the latter we present the average figures of the five countries of table 1. The data confirm the importance of bank and post-office deposits in Japan and, to a much lesser extent, in Europe where the role of deposits has overall declined. American households have low deposits. On the contrary holdings of equity and mutual funds are more significant in the Us than in Japan and Europe: the difference is particularly high for equity mutual funds but also for real estate ones. Life insurance is characterized by the appearance of unit linked (variable annuity) policies in the US and Europe, that parallel the growth of defined contribution pension funds in that they adopt mark-to–market portfolio evaluations and shift the risk directly on final investors. Japan does not show a similar development, possibly because the deflationary environment experienced in those years made such instruments devoid of interest.

Table 2. Composition of household wealth in the US, Japan and Europe

Household financial assets mix	US			Japan			Europe		
	2005	2000	1995	2005	2000	1995	2005	2000	1995
Deposits and money funds	17%	14%	16%	51%	53%	50%	31%	28%	37%
Bonds	8%	7%	9%	4%	5%	8%	7%	7%	10%
Equity	27%	34%	32%	11%	9%	11%	17%	20%	14%
Mutual funds	11%	12%	10%	3%	2%	2%	9%	9%	5%
Equity mutual funds	8%	10%	6%	2%	1%	1%	4%	5%	2%
Bond mutual funds	2%	2%	3%	0%	0%	0%	2%	2%	2%
Balanced mutual funds	1%	1%	1%	1%	1%	1%	1%	1%	1%
Real estate mutual funds	0%	0%	0%	0%	0%	0%	1%	1%	1%
Life insurance unit linked	5%	4%	3%	0%	0%	0%	6%	6%	4%
Life insurance non unit linked	4%	3%	4%	15%	16%	17%	15%	14%	13%
Pension Funds CD	8%	8%	7%	0%	0%	0%	3%	2%	1%
Pension Funds DB	16%	16%	16%	10%	9%	8%	6%	10%	9%
Others	3%	2%	2%	5%	5%	5%	5%	5%	6%

3.3. Helping define the set of household portfolio choice

It is known that, due to the strong inequalities in the distribution of wealth, we cannot infer from macro financial data any indication about representative portfolios and representative individual investors[6]. However macro data do allow to represent a general picture of the relative weight of broad categories of financial instruments, as exemplified in the previous section 3.2.. Thus, macro data reflect the impact of institutional and regulatory factors and allow to give, as it were, a quantitative dimension to the set of choices that individual households face, the more so when a relatively greater breakdown of items is available.

The set of portfolio choices can also be characterized by large risk categories. Figure 4 classifies the different financial instruments into four groups: safe instruments (currency and deposits), bonds, shares and other equity and, finally, longer term vehicles such as insurance and pension funds. There has been recently a large debate on households' different propensities for risk in industrialized countries (see IMF, 2002). According to some scholars, banks transferred some risks from their portfolios to households. According to other views, households simply changed the composition of their holdings due to the development of new intermediaries and instruments, the crisis of First Pillar pension schemes, the growth of the stock exchanges and banking disintermediation.

---

[6] On the comparison between micro and macro data see Antoniewicz *et al* (2005) and Bonci, Marchese, Neri (2007).

Figure 4. Household financial asset mix – 1980-2005
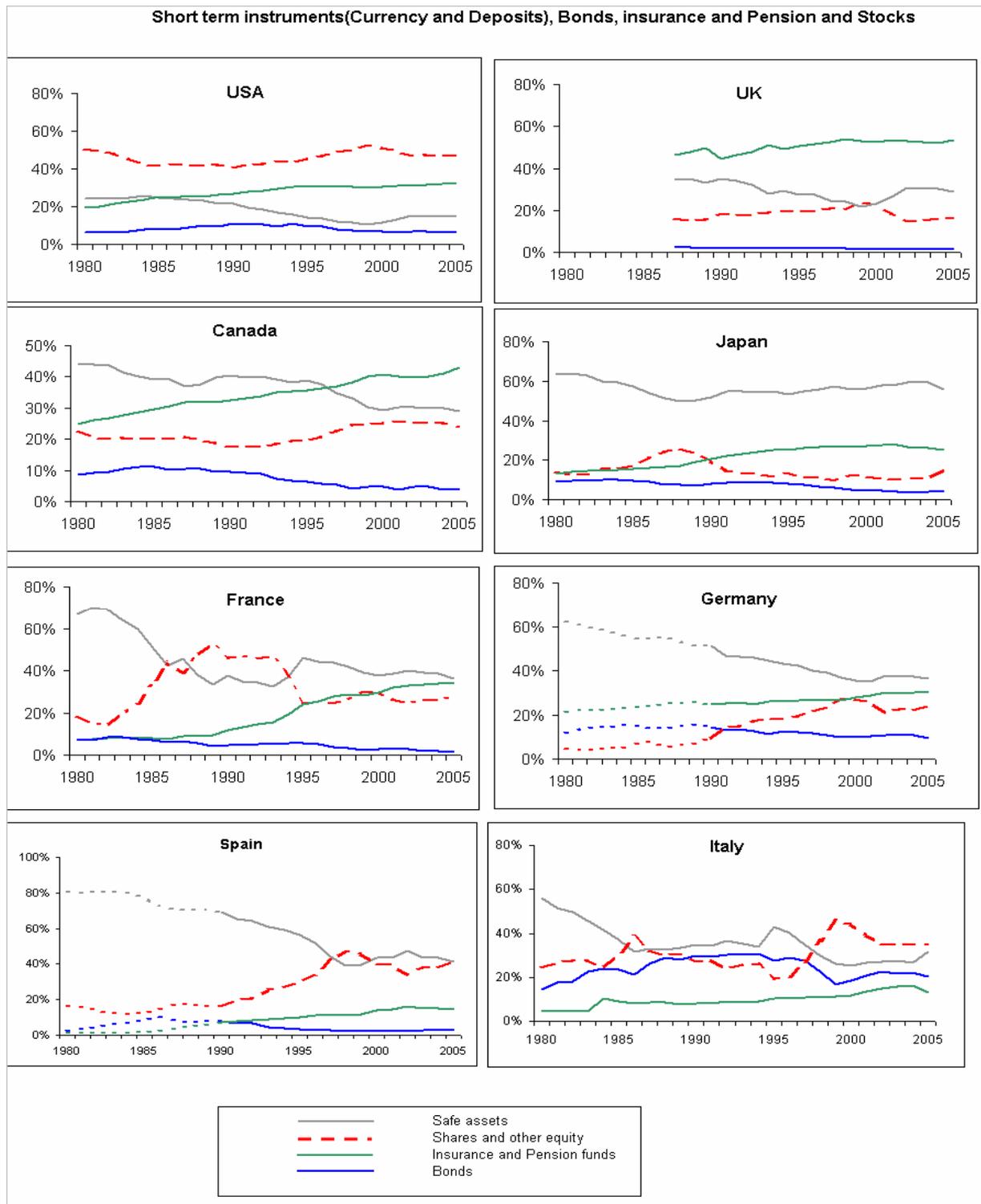
Figure 4 shows that in European countries safe instruments are today less important than in the Eighties. In France, Germany, Spain and Italy safe instruments are around 40 per cent of the household financial wealth. In Germany, Spain and chiefly Italy households increased their holdings of shares and other equity since the half of the Nineties, while in France this growing importance of markets took place earlier. As expected, in the US and UK safe assets are smaller than in euro area countries. Japan is a specific case, because deposits maintain, as already seen above, a strong role in household choices.

It is important however to consider explicitly instruments that are more long-term oriented such as life insurance and pension funds, because instruments that are safe in the short term (deposits, short-term bonds) may be exposed to inflation and other risks on the longer terms that institutions may be better equipped to face. Table 3 allows this analysis, showing the weight of pension funds and life insurance on GDP. The data confirms that Italian and French households have a much more restricted access to longer term institutionalized savings vehicles with respect to those of other countries.

Table 3 – Institutional assets as a percentage of GDP

Institutional assets as a % of GDP - 2005							
	Italy	Germany	Spain	France	Netherlands	US	UK
Pension funds DC	2%	6%	9%	3%	0%	24%	17%
Pension funds DB	1%	5%	2%	2%	96%	48%	51%
Life insurance - Unit Linked	9%	2%	1%	13%	21%	14%	39%
Life insurance - Traditional	15%	37%	11%	41%	33%	12%	46%
Total Financial Assets	**221%**	**190%**	**172%**	**183%**	**268%**	**293%**	**294%**

Figure 5 shows, on the horizontal axis, the household relative exposure to securities, as measured by the complement of overall financial wealth to deposits. On the vertical axis we plotted the degree of saving institutionalization as measured by the relative incidence of mutual funds units, life insurance policies, pension funds; i.e. the vertical axis does not include direct holdings of equities and securities other than shares.

In most instances an increasing household exposure to securities is compensated by a higher degree of institutionalization of saving. In other words there is a correlation between the greater exposure to securities and the diffusion of non-banking intermediaries. Italy appears to be an outlier. The US are also less institutionalized than the UK or the Netherlands, countries having a slightly lower household exposure to securities.

Figure 5 – Household exposure to securities and institutionalization of saving
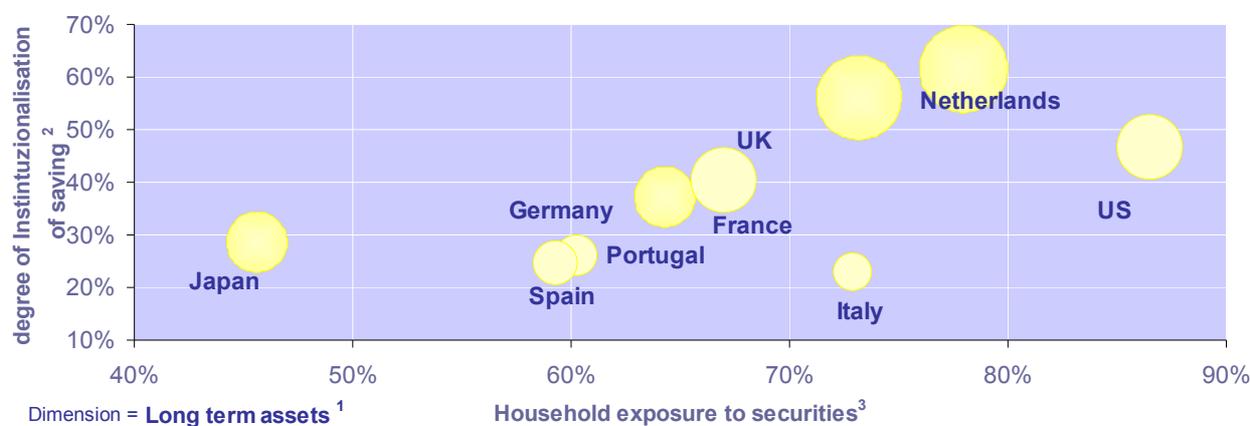
(1) Pension funds and life insurance policies are considered long-term assets.
(2) The degree of institutionalization refers to the share of family financial assets in pension funds, life insurance policies and mutual funds, which are usually considered institutional investors.
(3) We refer to the transferability of the assets in the financial market, and specifically all financial products excluding deposits.

3.4. Household financial assets versus non financial wealth

Financial assets are only one of the forms in which household accumulate their wealth. Real estate, i.e. houses, are the main other way to hold assets[7]. As confirmed by some papers presented at this conference there is always a great interest in the link between consumption and real/financial wealth. At the same time statistics on real estate are traditionally less discussed than financial wealth. Figure 6 presents the ratio of household financial wealth to non financial assets, according to the data published by the OECD in its Economic Outlook.

Financial wealth has been traditionally high in the US, benefiting from the large development of financial markets; the boom of the Stock exchange in the second half of the Nineties strengthened this old American peculiarity. With the exemptions of Japan and Germany, in all the countries the ratio of household financial wealth to non financial assets decreased after the year 2000, because of the difficulties of the Stock exchanges until 2003 and, chiefly, of the strong rise of house prices. The ratio of household financial assets to non financial wealth increased in last years only in Japan and Germany. The Japanese economy underwent a recovery of financial markets in the Nineties while the house prices decreased for all the period, bursting the bubble of the Eighties. Germany is the only main European country where house prices remained stable in last years. Lastly, Italian, French and German households confirm to have the larger weight of real estate investments over financial wealth.

---

[7]   See ECB (2003), Neri and Sierminska (2005), Catte *et al* (2004).

Figure 6. Household financial wealth versus non financial assets
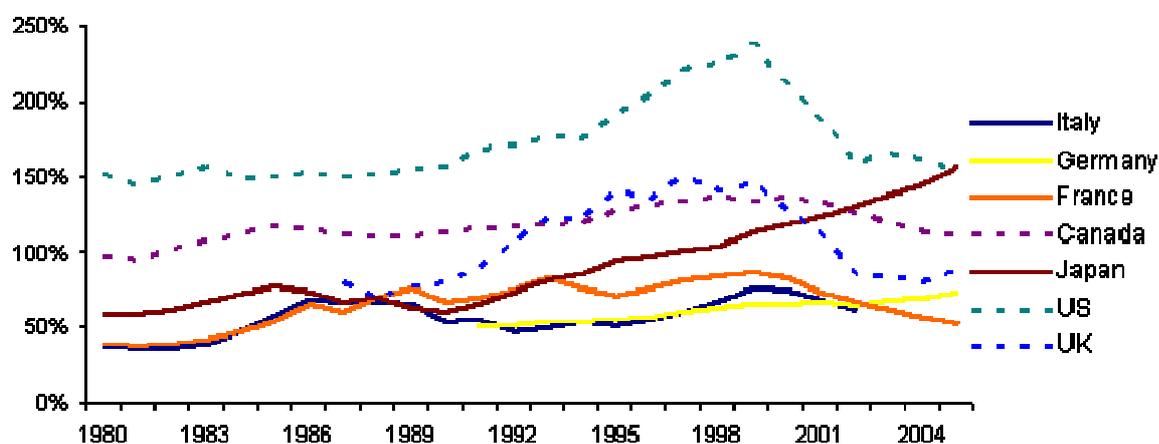
3.5 On household debt

A large literature has investigated the factors that may influence household indebtedness[8]: saving, inflation and interest rates, usury laws, tax deductibility of interest payments, the trend of real estate prices, the types of loan contacts available, for example for the distinction between fixed and variable interest rates, the existence of the mortgage equity withdrawal mechanism, the efficiency of loan guarantee recovery procedures in the event of debtor insolvency.

Figure 7 shows the household liabilities relative to gross disposable income. The ratio has been more stable compared to the growth of financial assets. The countries belonging to the euro area show a moderate increase during the period under review, with the only exception being Spain, with a large growth in the last years. Notwithstanding the recent increase, German and Italian households have low amounts of debt. Household debt increased also in the US and Canada and, especially, in UK, rising concerns for the sustainability of the process. These three countries have greater household debt than other European nations. Indebtedness is also significant in Japan, where the growth was less rapid, given that household debt was already high in the Eighties.

The composition of household debt is different in each country. While in UK and the US consumer credit and mortgage loans were already important in the past, in countries like Italy and Spain credit to sole proprietorships has always been large, given the centrality of small firms in these economies. In Europe, it is some time difficult to distinguish between loans to consumer households and to sole proprietorships, because this distinction is not compulsory according ESA95. The subject is well known and largely debated in international organizations. The same

---

[8] See Bartiloro, De Bonis, Generale and Longhi (2007), Bank of England (2003).

definition of non financial corporations and sole proprietorships is not harmonized in Europe, changing according to the threshold of employees and legal status of the firms. Even if these statistical differences probably do not influence the economic interpretation of household debt, we plan to investigate some methodological issues in the future.

Figure 7. Household financial liabilities as a percentage of gross disposable income
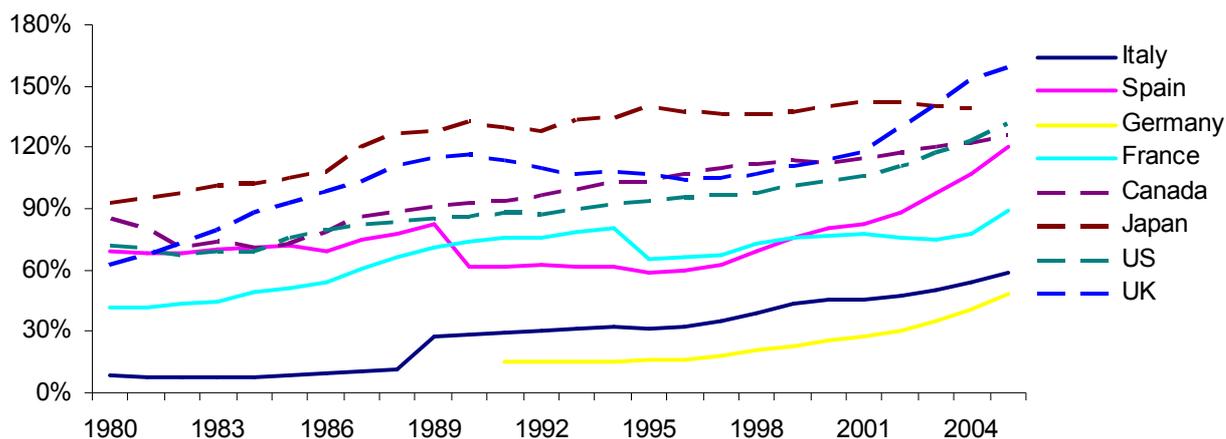
4. Conclusions

The availability of longer-term time series for national financial accounts represents an important tool for better understanding the factors underlying economic and financial development. We have illustrated the methodology used for reconstructing time series and have given a "first cut" illustration of their interest with reference to household wealth.

More detailed data analysis is required for formulating more sophisticated models and testing new hypotheses with reference to the household sector. Moreover we will need to understand better the overall picture, the relationships between the various institutional sectors, their evolution and their relative importance.

According to our preliminary evidence, in the last 25 years the importance of financial assets increased in the selected OECD countries. There are signal of sigma convergence for the incidence of financial wealth over gross disposable income. Of course important differences persist. Household financial wealth is larger in the Us, UK and Japan than in the other countries. Also the composition of financial wealth by instrument differs, even if in euro area countries there was a common trend towards a decrease of safe assets. With the exemption of Italy, there is a correlation between the larger weight of securities in household portfolio and the degree of institutionalization of saving. Countries also differ for the incidence of real wealth, that is larger in European countries and the weight of household debt, still low in countries like Italy and Germany.

We hope that the availability of these data and the issues we have highlighted will help develop new research in the near future.

Bibliography

Antoniewicz R., R. Bonci, A. Generale, G. Marchese, A. Neri, K. Maser, P. O'Hagan, (2005), *Household Wealth: Comparing Micro and Macro Data in Canada, Italy and United States*, paper presented at the International Conference on "Construction and Usage of Comparable Microdata on Wealth", Luxembourg Wealth Study, Perugia, January 2005.

Babeau, A. e Sbano T., (2002), *Household Wealth in the Financial Accounts of Europe, the United States and Japan*, OECD, available at www.savingsandwealth.com.

Bank of England (2003), *Mortgage Equity Withdrawal and Household Consumption*, Inflation Report, November.

Bank of Italy (2003), *The Italian Financial Accounts*, available at www.bancaditalia.it.

Bank of Italy (2007), *Financial accounts: history, methods, Italy, international comparisons*, proceedings of the conference held at Perugia, 1-2 December 2005, forthcoming.

Bartiloro L. and R. De Bonis, (2005) *The Financial Systems of European Countries: Theoretical Issues and Empirical Evidence*, Irving Fisher Committee Bulletin 21.

Bartiloro,L., R. De Bonis, A. Generale and I. Longhi (2007), *The financial structures of the leading industrial countries: a medium term analysis*, in Bank of Italy (2007).

Bonci R. and M. Coletta (2007), *Italy's Financial Accounts since 1950*, in Bank of Italy (2007).

Bonci, R., G. Marchese and A. Neri (2007), A., *Financial Wealth in Italy's Financial Accounts and Survey of Household Income and Wealth*, in Bank of Italy (2007).

Catte, P., Girouard, N., Price, R., and André, C. (2004), *Housing markets, wealth and the business cycle*, Oecd.

De Bonis R. (2007), *Italy's Financial Wealth and Debt from 1950 to 2004*, in Bank of Italy (2007).

De Bonis R. and A. Gigliobianco (2007), *The Origins of Financial Accounts in the United States and Italy: Copeland, Baffi and the Institutions,* in Bank of Italy (2007).

de Serres,A. and F. Pelgrin (2003), *The Decline in Private Saving Rates in the1990s in OECD Countries: How Much Can be Explained by Non-Wealth Determinants?*, OECD.

European central bank (2002), *Report on Financial Structures*, Frankfurt.

European central bank (2003), *Structural Factors in the EU Housing Markets*, Frankfurt.

Fano D., Sbano T. (2007) *"I portafogli delle famiglie 1995-2004 e la previdenza nei principali paesi OCSE. Primi segnali di convergenza verso veicoli a più lungo termine?"*, Quaderni Europei sul nuovo Welfare.

Fano D. (2005), *Assessing risk in household portfolios: progress and open issues at the macro and micro/survey level*, Luxembourg Wealth Study.

Filippa, L. and A. Franzosi (2001), *Market capitalisation, institutional sectors and households portfolio. An analysis of the recent trends for the Italian equity market*, Borsa Italiana, Notes n.2, November.

Guiso, L., M. Haliassos and T. Jappelli, (2003), *Equity Stockholding in Europe: where do we stand and where do we go?*, in Economic Policy, n. 36, April.

IMF (2000), *Asset Prices and the Business Cycle*, World Economic Outlook.

IMF (2002), *World Economic Outlook*, chapter 2, September, Washington.

Iwaisako, Tokuo (2003), *Household portfolios in Japan*, NBER Working paper, April.

Kapteyn, A. and C. Panis (2003), *The Size and Composition of Wealth Holdings in the United States, Italy, and the Netherlands*, NBER Working Paper, n. 10182, December.

Massaro R. (2004), *Household's financial assets and liabilities in Europe*, Eurostat.

Neri, A. and E. Sierminska (2005), *The measurement of housing wealth: conceptual issues and Practice*, Bank of Italy, mimeo.

OECD (2004), *Comparison of household saving ratios: Euro Area/United States/Japan*.

Paiella,M. (2004), *Does wealth affect consumption? Evidence for Italy*, Banca d'Italia, Temi di discussione, n. 510.

Revell J., (1967), *The wealth of the Nation*, Cambridge University Press.

Schmidt R.H., A. Hacketal and Tyrell, M. (1999), *Disintermediation and the role of banks in Europe: an international comparison*, Journal of Financial Intermediation.

In the following tables we illustrate the annual variation of the ratio *household financial assets/gross disposable income* (in the diagonal) and its compound annual growth rate for any series of years This approach helps to discriminate, at first glance, the different periods (years) in terms of financial wealth growth. We express the indicators across the countries examined in the paper. This exercise may be a starting point for more sophisticated analyses.

Canada	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	-6%	-3%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%
1981		1%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
1982			6%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
1983				0%	1%	2%	2%	1%	1%	1%	1%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	1%	1%
1984					2%	3%	2%	2%	2%	1%	2%	2%	2%	2%	2%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
1985						4%	3%	2%	1%	1%	2%	2%	2%	2%	2%	3%	3%	3%	3%	2%	2%	2%	2%	2%	1%
1986							1%	1%	1%	1%	1%	2%	2%	2%	2%	3%	3%	3%	3%	2%	2%	2%	2%	1%	1%
1987								0%	0%	0%	1%	2%	2%	2%	3%	3%	3%	3%	3%	2%	2%	2%	2%	1%	1%
1988									1%	0%	1%	2%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	1%	1%
1989										0%	2%	2%	3%	3%	3%	3%	3%	3%	3%	2%	3%	2%	2%	2%	1%
1990											3%	4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%	2%	2%	2%
1991												4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	2%	2%	1%	1%
1992													5%	4%	4%	4%	4%	4%	4%	3%	3%	2%	2%	1%	1%
1993														4%	4%	4%	4%	4%	4%	3%	2%	2%	2%	1%	1%
1994															4%	4%	4%	4%	3%	3%	2%	2%	2%	1%	1%
1995																4%	3%	3%	2%	2%	1%	1%	1%	0%	0%
1996																	5%	3%	3%	2%	1%	1%	1%	0%	0%
1997																		2%	1%	0%	0%	0%	0%	-1%	0%
1998																			0%	0%	-1%	0%	-1%	-1%	-1%
1999																				0%	-1%	0%	-1%	-1%	-1%
2000																					-1%	0%	-1%	-2%	-1%
2001																						0%	-1%	-2%	-1%
2002																							-3%	-3%	-1%
2003																								-3%	-1%
2004																									1%
2005																									

France	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	-9%	-4%	-1%	2%	4%	6%	5%	6%	7%	5%	4%	4%	4%	3%	3%	3%	3%	3%	4%	3%	3%	3%	3%	3%	3%
1981		1%	4%	6%	7%	10%	7%	9%	9%	6%	6%	6%	5%	5%	4%	4%	4%	4%	4%	5%	4%	4%	3%	3%	3%
1982			7%	8%	9%	12%	9%	10%	10%	7%	6%	6%	6%	5%	4%	4%	4%	4%	4%	5%	4%	4%	3%	3%	3%
1983				9%	10%	14%	9%	11%	11%	7%	6%	6%	6%	5%	3%	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%
1984					11%	17%	9%	11%	11%	7%	6%	5%	5%	4%	3%	3%	3%	4%	4%	4%	4%	3%	3%	3%	3%
1985						22%	8%	11%	11%	6%	5%	4%	5%	3%	2%	3%	3%	3%	4%	3%	3%	2%	2%	2%	3%
1986							-5%	6%	7%	2%	2%	2%	2%	1%	0%	1%	1%	1%	2%	2%	1%	1%	1%	1%	2%
1987								18%	14%	4%	4%	3%	4%	2%	1%	1%	2%	2%	3%	2%	2%	2%	2%	2%	2%
1988									11%	-2%	-1%	0%	1%	0%	-1%	0%	0%	1%	2%	1%	1%	0%	1%	1%	1%
1989										-13%	-6%	-1%	-1%	-2%	-3%	-2%	-1%	0%	1%	0%	0%	0%	0%	0%	1%
1990											2%	1%	3%	1%	-1%	0%	1%	1%	2%	2%	1%	1%	1%	1%	2%
1991												1%	4%	3%	3%	3%	3%	3%	4%	3%	3%	3%	3%	3%	3%
1992													8%	0%	-3%	0%	1%	1%	3%	2%	1%	1%	1%	1%	2%
1993														-7%	-8%	-3%	-1%	0%	2%	1%	0%	0%	1%	1%	1%
1994															-8%	-1%	1%	2%	4%	3%	2%	1%	1%	1%	2%
1995																7%	6%	6%	7%	5%	3%	2%	3%	3%	3%
1996																	6%	5%	7%	5%	3%	2%	2%	2%	2%
1997																		4%	8%	4%	2%	1%	2%	2%	2%
1998																			11%	5%	1%	0%	1%	1%	2%
1999																				-2%	-4%	-3%	-2%	-1%	0%
2000																					-6%	-4%	-1%	-1%	1%
2001																						-3%	1%	1%	2%
2002																							4%	3%	4%
2003																								2%	4%
2004																									6%

Italy

Italy	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	0,5%	1%	1%	3%	5%	7%	6%	6%	6%	5%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%	4%	4%	4%	4%	4%
1981		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1982			1%	6%	8%	10%	8%	7%	8%	7%	6%	6%	6%	6%	5%	4%	5%	5%	6%	5%	5%	4%	4%	4%	4%
1983				11%	12%	14%	9%	8%	9%	7%	7%	6%	7%	6%	5%	5%	5%	6%	6%	6%	5%	5%	4%	4%	4%
1984					12%	15%	9%	8%	8%	7%	7%	6%	6%	5%	4%	4%	5%	5%	6%	5%	5%	4%	4%	4%	4%
1985						19%	7%	6%	8%	6%	6%	5%	5%	5%	5%	4%	4%	4%	5%	5%	5%	4%	4%	4%	4%
1986							-3%	1%	4%	3%	3%	2%	4%	3%	2%	2%	3%	4%	4%	4%	3%	3%	3%	3%	3%
1987								4%	8%	5%	5%	4%	5%	4%	3%	3%	4%	4%	5%	5%	4%	3%	3%	3%	3%
1988									11%	5%	5%	3%	5%	4%	2%	3%	3%	4%	5%	5%	4%	3%	3%	3%	3%
1989										-1%	2%	1%	3%	3%	1%	1%	3%	3%	4%	4%	3%	3%	3%	3%	3%
1990											5%	2%	4%	3%	1%	2%	3%	4%	5%	5%	4%	3%	3%	3%	3%
1991												-2%	4%	3%	0%	1%	3%	4%	5%	4%	3%	3%	3%	3%	3%
1992													10%	5%	1%	2%	3%	5%	6%	5%	4%	3%	3%	3%	3%
1993														1%	-3%	-1%	2%	4%	5%	5%	3%	3%	2%	3%	3%
1994															-6%	-2%	2%	4%	6%	5%	4%	3%	3%	3%	3%
1995																3%	5%	5%	5%	5%	5%	4%	4%	4%	4%
1996																	11%	11%	12%	9%	6%	4%	4%	4%	4%
1997																		11%	8%	5%	3%	3%	3%	3%	3%
1998																			13%	7%	3%	1%	1%	2%	2%
1999																				1%	-2%	-2%	-1%	0%	0%
2000																					-6%	-4%	-2%	-1%	0%
2001																						-2%	-1%	1%	1%
2002																							1%	3%	2%
2003																								5%	3%
2004																									1%

Japan

Japan	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	3%	4%	6%	5%	6%	7%	8%	7%	6%	5%	4%	4%	4%	4%	4%	4%	4%	3%	4%	3%	3%	3%	3%	3%	3%
1981		6%	7%	6%	7%	8%	8%	8%	6%	5%	4%	4%	4%	4%	4%	4%	4%	3%	4%	4%	3%	3%	3%	3%	3%
1982			9%	7%	7%	8%	9%	8%	7%	5%	4%	4%	4%	4%	4%	4%	3%	3%	4%	3%	3%	3%	3%	3%	3%
1983				4%	7%	8%	9%	8%	6%	5%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
1984					9%	10%	10%	9%	7%	5%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
1985						11%	11%	9%	6%	4%	2%	2%	2%	2%	3%	3%	3%	2%	3%	3%	3%	2%	2%	2%	2%
1986							11%	8%	4%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
1987								5%	1%	0%	-2%	-1%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%
1988									-3%	-3%	-4%	-3%	-1%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1989										-4%	-5%	-3%	-1%	0%	1%	1%	1%	1%	2%	2%	2%	2%	1%	1%	2%
1990											-6%	-2%	0%	0%	1%	2%	3%	3%	3%	2%	3%	3%	3%	2%	2%
1991												2%	3%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	3%
1992													4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	3%
1993														1%	4%	3%	3%	2%	3%	3%	3%	2%	3%	2%	2%
1994															6%	4%	3%	2%	3%	3%	3%	2%	3%	3%	3%
1995																2%	2%	1%	3%	2%	3%	2%	2%	2%	2%
1996																	1%	1%	3%	2%	3%	2%	2%	2%	2%
1997																		0%	4%	3%	3%	3%	3%	2%	3%
1998																			7%	4%	4%	3%	3%	2%	3%
1999																				1%	2%	1%	1%	1%	2%
2000																					3%	1%	1%	1%	2%
2001																						-1%	1%	1%	2%
2002																							2%	1%	2%
2003																								0%	3%
2004																									5%
2005																									

Spain

Spain	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	1%	0%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	2%	2%	2%	3%
1981		0%	0%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	2%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1982			1%	3%	3%	3%	3%	3%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1983				5%	4%	3%	4%	3%	3%	3%	3%	2%	3%	3%	3%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1984					2%	2%	3%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1985						2%	4%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1986							6%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1987								-1%	1%	1%	1%	1%	2%	3%	2%	3%	3%	3%	4%	3%	3%	2%	3%	3%	3%
1988									2%	2%	2%	2%	3%	3%	3%	3%	4%	4%	4%	4%	3%	2%	3%	3%	3%
1989										3%	2%	2%	3%	3%	3%	3%	4%	5%	5%	4%	3%	2%	3%	3%	3%
1990											1%	1%	3%	3%	3%	3%	4%	5%	5%	4%	4%	2%	3%	3%	3%
1991												2%	3%	4%	4%	3%	4%	5%	5%	4%	4%	2%	3%	3%	3%
1992													7%	6%	4%	4%	5%	6%	6%	4%	4%	3%	3%	3%	3%
1993														4%	2%	4%	6%	6%	6%	4%	3%	2%	3%	3%	3%
1994															1%	2%	4%	6%	6%	4%	3%	2%	2%	3%	3%
1995																3%	6%	8%	7%	5%	4%	2%	2%	3%	3%
1996																	9%	11%	9%	5%	4%	2%	2%	3%	3%
1997																		12%	8%	4%	3%	0%	2%	2%	2%
1998																			4%	-1%	-1%	-3%	-1%	0%	1%
1999																				-5%	-3%	-5%	-2%	-1%	0%
2000																					-1%	-4%	0%	0%	1%
2001																						-8%	0%	1%	2%
2002																							8%	5%	6%
2003																								3%	4%
2004																									6%

US

US	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1980	-5%	-2%	-1%	-2%	0%	0%	0%	1%	1%	0%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%
1981		1%	1%	-1%	1%	2%	1%	1%	2%	1%	2%	1%	1%	1%	2%	2%	2%	2%	3%	2%	2%	1%	1%	1%	1%
1982			2%	-1%	1%	2%	2%	2%	2%	1%	2%	1%	1%	1%	2%	2%	3%	3%	3%	2%	2%	1%	1%	1%	1%
1983				-5%	0%	2%	1%	1%	2%	1%	2%	1%	1%	1%	2%	2%	3%	3%	3%	2%	2%	1%	1%	2%	1%
1984					5%	5%	4%	3%	3%	2%	3%	2%	2%	2%	2%	2%	3%	3%	4%	3%	2%	1%	2%	2%	2%
1985						5%	3%	2%	2%	1%	2%	2%	2%	1%	2%	2%	3%	3%	3%	2%	2%	1%	1%	1%	1%
1986							0%	1%	2%	0%	1%	1%	1%	1%	2%	2%	3%	3%	3%	2%	2%	1%	1%	1%	1%
1987								1%	0%	0%	2%	1%	2%	1%	2%	2%	3%	3%	4%	2%	2%	1%	1%	1%	1%
1988									3%	0%	2%	1%	2%	1%	2%	2%	3%	3%	4%	3%	2%	1%	1%	1%	1%
1989										-4%	1%	0%	1%	1%	2%	3%	3%	3%	4%	2%	2%	0%	1%	1%	2%
1990											6%	2%	3%	2%	3%	4%	4%	4%	5%	3%	2%	1%	1%	2%	1%
1991												-1%	1%	0%	2%	3%	4%	4%	5%	3%	2%	0%	1%	1%	1%
1992													4%	1%	4%	4%	5%	5%	5%	3%	2%	0%	1%	1%	1%
1993														-1%	4%	4%	5%	5%	5%	3%	2%	0%	1%	1%	1%
1994															9%	7%	8%	7%	7%	4%	2%	0%	1%	1%	1%
1995																6%	7%	7%	6%	3%	1%	-1%	0%	1%	1%
1996																	9%	6%	6%	3%	2%	-2%	0%	0%	0%
1997																		3%	6%	0%	-2%	-4%	-2%	-1%	-1%
1998																			9%	-1%	-3%	-6%	-3%	-2%	-1%
1999																				-10%	-9%	-10%	-5%	-4%	-3%
2000																					-8%	-10%	-4%	-2%	-2%
2001																						-12%	-1%	0%	0%
2002																							10%	6%	4%
2003																								2%	2%
2004																									1%