Household Wealth in New Europe: Towards the EU

Debora Revoltella[*] and
Fabio Mucci[**]

Abstract

The process of real convergence generates important challenges and opportunities for old, new and perspective EU members. While much has been said concerning convergence in terms of per capita GDP in PPS, a new way to look at the process of equalisation in standards of living of the population in an enlarged Europe, is to focus on individuals' wealth accumulation and indebtedness choices. In order to investigate these issues, this paper analyses aggregate household wealth accumulation as well as savings' allocation choices in the New Europe presenting more updated and detailed figures for financial assets compared to national published accounts. With the objective of explaining the main trends in recent years and the differences across countries, we also investigate the determinants of household wealth and liabilities accumulation as well portfolio allocation choices, focusing on macroeconomic variables, financial markets developments and households' specific characteristics. We find out that the build-up of financial wealth in the New Europe is and will continue to be mainly a product of economic growth and income levels. However, with increasing convergence in income, we expect on the one side increasing share of the population becoming able to save, on the other, increasing households demand for consumption and investment, leading to a non increasing saving propensity of individuals throughout the region. We also investigate households' financial investment choices, by distinguishing among risk-less and risky assets. In view of macroeconomic stabilisation and more or less gradual EMU convergence, as well as full integration in the EU financial market, we expect individuals in the region to gradually shift towards a relatively more diversified portfolio, adding to their basket more sophisticated products.

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[*] *Debora Revoltella, New Europe Research, Foreign Bank Division, Unicredito Italiano, Italy.*

[**] *Fabio Mucci, New Europe Research Team, Foreign Bank Division, Unicredito Italiano, Italy.*

1 Introduction

One of the main challenges of the EU integration process is to guarantee real convergence, which means, among other things, equalisation in standards of living of the population. A number of studies have focused on time for convergence in terms of per capita GDP in PPS, with estimates ranging from 5 to 30 years, according to single country development.

If the gap in terms of per capita GDP is huge, another area where differences between EU15 and "New Europe countries"[1] are particularly relevant is related to wealth accumulation and saving choices of individuals. The most significant figure is probably the following: while in the region wealth is only 47% of GDP, in the EU15 the ratio is 170%, thus revealing a poor capitalization record. Differences in terms of portfolio allocation choices are also significant.

In order to further investigate these issues, this paper analyses aggregate household wealth accumulation as well as savings' allocation choices in the New Europe. Difficulties in making such kind of analysis refer to the fact that the information necessary for such a measure and its "sectoral" allocation in a fast developing region like the New Europe, is usually available with considerable delay.

We present new figures for financial assets, with a more detailed classification with respect to standard Eurostat figures and with an update to 2003. We also provide comparisons with other industrialized nations (par. 2 and 3).

Leveraging on these new collected figures, we investigate the determinants of household wealth and liabilities accumulation, focusing on macroeconomic variables, financial markets developments and households' specific characteristics (par. 4). The latter class of variables is particularly significant, as it shows a strong divergence in saving and indebtedness attitudes of individuals, according to their income group.

We also analyse the determinants of portfolio allocation choices of individuals and we aggregate individuals' risk/return choices (par 5). In par. 6, we investigate the experience of Italy and other EU15 countries in the last decade provides some interesting insight for

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[1] *The present research focuses on New Europe Countries, including EU new members, plus other candidate or EU approaching countries (i.e. Bulgaria, Romania, Croatia and Turkey). Due to lack of data, Slovenia has been excluded from the analysis.*

future developments. In particular, in view of macroeconomic stabilisation and more or less gradual EMU convergence, as well as full integration in the EU financial market, we expect individuals in the region to gradually shift towards a relatively more diversified portfolio, adding to their basket more sophisticated products.

2 Data Description

Wealth of individuals is usually measured using financial account data, collected by National Statistical Offices or by the Central Bank. In the New Europe countries, however such data are not always available or they are available or they are collected with a considerable delay, that, given the fast pace of development of the financial sector, generates considerable problems.

To overcome those limitations, efforts have been directed towards collection of the data from Supervisory Authorities and Central Banks in an attempt of analysing personal financial wealth using a nomenclature and methodology as near as possible to the official European ones (ESA95). Using such kind of approach allows us to focus specifically on resident household (sector S.14 in the European definition) financial holdings[2] with further breakdowns in order to account for different financial instruments and/or risk categories and all figures updated to 2003. The detailed classification we used for financial assets has the primary goal to better specify the level of risk actually borne by the individual household. Thus, in case of mutual funds, we wanted to identify the relevance of equity-heavy funds and those invested primarily in bonds. When it comes to pension funds, we introduced the distinction between defined-contribution schemes, where the contributors bears the management risk, and defined-benefit funds, where is the company that accepts this risk.

Apart from some adjustments due to difficulties in gathering information and the aforementioned further breakdowns, our classification of financial instruments strictly resembles the current one prevailing in the European System Accounts. Financial wealth is thus defined as the sum of currency (mainly local currency with an estimate for FX included only for Hungary and Croatia), bank deposits including housing savings, securities other than shares, quoted shares, mutual funds shares (including those funds

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[2] *Except for the Czech Republic where all figures refer to household in the broad sense (S.14 and S.15).*

domiciled abroad and promoted by national providers), insurance technical reserves and pension funds (second and third pillar). One should note that unquoted shares, other equity and other accounts receivable have been excluded for all countries, meaning an underestimation of household financial holdings.[3] These aggregate usually suffer of serious problems also in national published accounts, with the breakdown sometimes not provided and when it is, barely plausible.

As far as concerns financial liabilities, our definition refer to loans granted by monetary and financial institutions including mortgage, consumer and other forms of lending excluding leasing contracts (expect for the case of Bulgaria). Consumer credit is however underestimated, given that lending from non-bank financial institutions is only marginally covered. It should be noticed also that in all countries all transaction in other accounts payable where there are timing difference between transactions and the corresponding payments have been excluded for homogeneity.

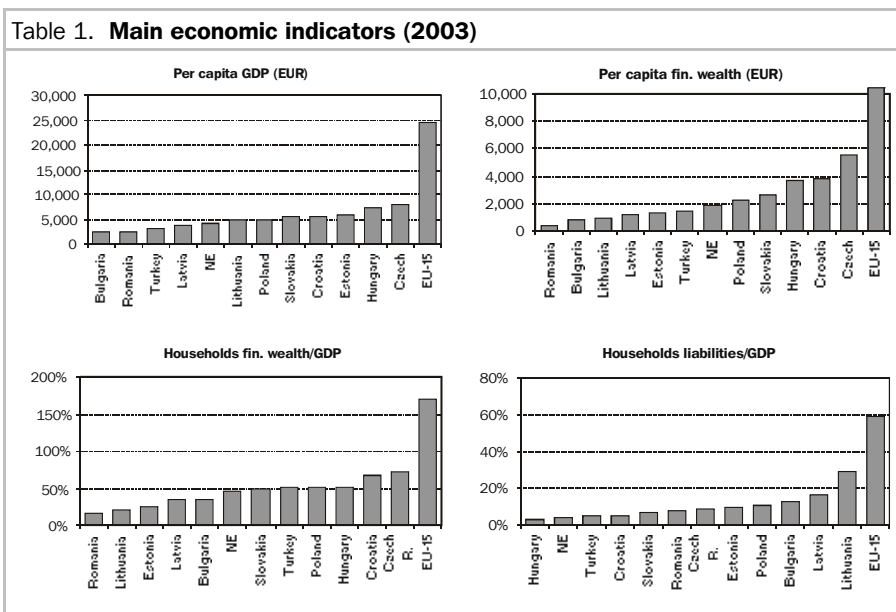# 3 Household Financial Wealth in the New Europe Countries

Aggregate household financial wealth in the New Europe is equal to € 335 bln, which is approximately only 2% of the EU15 level. Even more importantly, the average per capita wealth of individuals is equal to €1,897, which means only 47% of the annual per capita GDP (around €4,000). If one considers that at the EU15 level per capita wealth is equal to roughly €42,000 (170% of per capita GDP) the low savings capitalisation records in the New Europe emerge.

This is likely to be a consequence of historical reasons, rather than of current trends. Despite high involuntary savings[4] during the planned era (Denizer, Wolf 1998 and 2000a), indeed, real assets values erosion and the reforming shock substantially depleted households financial wealth. Accumulation has gradually evolved since then, in line with economic recovery and the development of the financial sector.

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[3] *It should also be noted, that the estimate of shares held by individuals is the most difficult calculation to be performed in investigating total wealth. In our analysis, we generally have only a rough estimate of quoted shares, while the unquoted component is excluded (with the only exception of the Czech Republic and Latvia).*

[4] *Involuntary saving as a consequence of consumption constraint, determined by rationing.*

By contrast, in the EU 15 countries trends are typical of more mature economies. Asset growth has been impressive, especially from 1995 to 2000, due to the combination of savings flows and market return effects.

Table 1. **Main economic indicators (2003)**

Per capita GDP (EUR)

Per capita fin. wealth (EUR)

Households fin. wealth/GDP

Households liabilities/GDP

Note: data for EU-15 are as of 2002 and refer to a proxy including Italy, France, Germany, Spain, The Netherlands and UK.
Source: PFA Database (UniCredit New Europe Research Network, OEE, Pioneer), based on data from National Central Banks and Financial Supervisory Authorities and Statistical Offices.

Considering relative figures, Central European countries emerge with a ratio of financial assets over GDP above or close to 50% (table 1). Other countries lag behind: Bulgaria and Romania with a ratio still close to 20-30% and the Baltic countries, with a low level of recorded financial wealth penetration, to a large extent explained by the decision to exclude, for homogeneity reasons, unquoted shares and other equities from the analysis.

Cross-country disparities are a result of several factors, ranging from traditional and historical patterns (different kinds of socialism implemented in different countries), divergences in the kind, speed and success of the transition process and current macroeconomic and financial sector developments. Generally speaking, those countries which started the process earlier and from a better position have been able to benefit from a longer period of wealth accumulation fuelled by strong economic growth, price stabilisation and increasing overall stability.

A slightly different pattern concerns Turkey, where individuals continue to hold a large share of their wealth in the form of non-financial assets (particularly gold). If such holdings were included, the ratio of wealth over GDP for Turkey would equal 81%. Instability of the macroeconomic environment and repeated financial crises, indeed, suggested in the country a prudent approach towards financial holdings, while recent successes can be the stimulus for further financial deepening.

A ranking among countries in both per capita wealth and per capita income confirms the existence of a strong direct relationship between the level of country development and accumulated wealth of individuals. This is a first indication that in the New Europe wealth accumulation is to a large extent a matter of earning capacity, while heritage does not have a significant role.

Graph 1. **Per capita financial wealth and GDP (2003)**
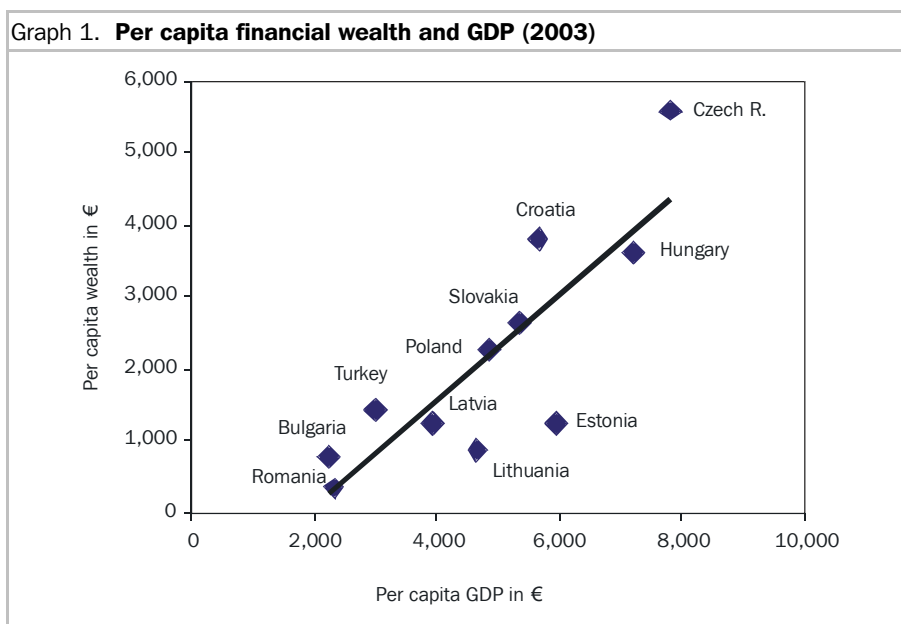
The financial penetration gap envisaged on the asset side between New Europe countries and the EU15 is even reinforced on the liability side, given the very recent start from scratch of a retail lending market throughout the whole region. The average liabilities over GDP in the New Europe is equal to 9%, compared to 59% of the EU15 level. Croatia, Hungary, Poland and Estonia emerge, as a consequence of a one or two years advantage in the lending boom process, compared to other regional players.

By focusing on individuals' indebtedness, measured as the ratio of financial liabilities to financial wealth, it is interesting to note that Croatia and Estonia are even exceeding the average level of financial liabilities over wealth of the EU15 countries, which is now equal to 35%. This should not be perceived however as a worrying signal. Increasing indebtedness, indeed, is part of structural development of the financial sector.

Different levels of indebtedness of individuals in different countries suggest the need of focusing on net financial assets as a further indicator of households wealth. This is an important correction, as it might be the case that, with a growing lending market, individuals continue to accumulate assets, only by increasing their debt stock.

A first immediate result is that in terms of net wealth over GDP the gap between the New Europe and EU15 is reduced. By comparing New Europe countries, the overall framework does not change much, with the central European ones, plus Turkey, leading the ranking and inter-country disparities being partially reabsorbed.

Table 2 presents main figures in terms of flows, focusing on the saving ratio of households, originating from official national accounts and the change in wealth and liabilities (the difference of which represents change in net financial position of individuals). The first indicator is thus saving – i.e. the difference between disposable income and consumption, while the second is net change in individuals' exposure towards the financial sector.

Notwithstanding the substantial heterogeneity and variability of household saving ratios, the data suggest some important similarities within groups of NE countries, with a positive relation between income levels, saving attitudes and wealth. Such relationship is however likely to lose strength over time, with consumption appetite increasing in high income countries.

Central European economies (Hungary, Poland, Slovakia, Croatia and the Czech Republic) present substantially higher gross saving ratios, being almost in line with saving ratios currently prevailing in the EU15. In the Czech Republic, Croatia and Poland we also measure relevant changes in net financial wealth. This means that individuals' savings are actually transferred into financial wealth accumulation. In Slovakia and Hungary, instead, a low or even negative delta in net financial stocks signals that a substantial part of the saving effort is directed outside the financial sector, towards real assets.

Table 2. **Wealth accumulation and indebtedness (2003)**	BULGARIA	CROATIA	CZECH R.	HUNGARY	POLAND	ROMANIA	SLOVAKIA	TURKEY	ESTONIA	LITHUANIA	LATVIA
Gross saving ratio %[1]	n.s.	12.1	5.6	12.2	10.3	5.5	6.7	n.a.	2.4	3.1	2.2
Change in Hous. Wealth as % of GDP[2]	5.7	8.1	7.1	5.9	4.7	3.1	2.5	9.6	4.4	2.4	3.1
Change in Hous. Liabilities as % of GDP[2]	3.3	6.3	2.2	6.3	1.5	2.9	2.0	1.2	3.2	1.4	1.6
Net change Hous. Wealth as % of GDP[2]	2.4	1.8	4.9	-0.4	3.2	0.2	0.5	8.4	1.2	1.0	1.5

Note: [1]Data are as of 2001 for Hungary, Estonia and Latvia; as of 2000 for Romania and Lithuania; [2]Data as of 2001 for Estonia and Latvia; as of 2002 for Lithuania.
Source: PFA database and [1]National Accounts except for Croatia where data are estimated by Zagrebacka Banka Research.

Turkey is showing a relatively high net financial wealth accumulation, with a strong increase in financial assets, matched by only marginal developments on the liability side. The other countries traditionally show a lower gross saving attitude.

In Bulgaria and Romania, given the low average income, a large share of the population cannot afford strong saving patterns, while the accumulation effort is mainly a privilege of the higher income classes.

The households saving rate in the Baltic countries is low in an international perspective. It seems that individuals are already focusing on consumption expansion, leveraging on expectations of future income growth, rather than addressing precautionary savings.

4 Wealth, Indebtedness and Saving Choices: Main Determinants

To better understand the rationale of the differing regional patterns in terms of financial assets and liabilities, we focused on the analysis of determinants of households' wealth accumulation and indebtedness at the regional level. Identifying such determinants represents a key step in order to evaluate future developments in this area and on financial systems overall.

There are only a few empirical studies on the determinant of individuals' savings in the transition economies, partly due to the unavailability (until recently) of adequate data[5].

Among those, there are two World Bank studies by Denizer and Wolf (2000a and 2000b). The first, analyses the determinants of savings during the initial period of transition (until 1995, using IMF estimates of savings) stating that substantial similarities exist between saving patterns in transition and market economies. However, it reports one remarkable exception finding a negative link between domestic savings and GDP growth for its sample of 21 transition economies in Central Europe, the Baltics and the former Soviet Union. In contrast, the second work, devoted to more narrow aspect of household saving behaviour and based on survey data for Bulgaria, Hungary and Poland, finds out that income has a positive influence on household saving.

Other studies, that are based on large international data sets including both industrialised and emerging economies, explain trends in domestic and private savings mainly through growth and age structure (Edwards, 1995; Loayza et al., 1999; Loayza et al., 2000). On this perspective, a recent contribution by Schrooten and Stephan (2003) finds support for the hypothesis that private savings in EU candidate countries are driven by the same determinants as at the EU level. In particular, in both groups of countries, saving behaviour shows a certain degree of persistence, being positively related to changes in per capita income growth and to the performance of domestic financial markets, while being negatively influenced by the dependency ratio and the relaxation of international borrowing constraints.

By using country-level data for a sample of 11 New Europe countries in the 2000-2003 period, we ran several panel regressions in order to identify the main determinants of household wealth and indebtedness (measured as financial wealth over GDP and total liabilities over GDP) and of individual wealth accumulation choices (measured as change in gross financial wealth over GDP). We investigate the relevance of a number of potential determinants, which can be grouped in terms of macroeconomic indicators, investors' specific characteristics and attitude, as well as financial development. We further extend our analysis also on the determinants of individual wealth accumulation mainly focusing on factors driving demand for deposits and mutual funds shares.

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[5] *Among the others see Borensztein and Montiel (1991), Conway (1995) and Denizer and Wolf (1998).*

The model estimated is:

$$(1) \qquad W_{it} = \alpha_0 + \alpha\, I_{it} + \beta F_{it} + \gamma X_{it} + \varepsilon_{it}$$

where:

- W_{it} is the independent variable (either households' financial wealth over GDP, change in financial wealth over GDP or households' liabilities over GDP) for country i at time t;
- I_{it} are investors' type variable for country i at time t;
- F_{it} is a financial market variable for country i at time t;
- and X_{it} are macroeconomic variable for country i at time t. Further, α_0 is a constant, and α, β and γ are coefficients, while ε_{it} is an error term.

The estimation is by feasible Generalized Least Squares applied to panel data with correction for heteroskedasticity and panel specific AR(1) autocorrelation.

In general, the model appears to be quite successful in explaining the variation in the dependent variable and most of the estimated coefficients have the expected signs. The only variable whose direction of impact is indeterminate, the real interest rate has a statistically and negative coefficient in the equation for the determinants of households' wealth (Table 3). This result however might reflect distortions in saving behaviour caused by the endemic incidence of negative real interest rates in the transition economies.

4.1 Empirical Estimation

The first regression investigates the determinants of individuals' wealth, as measured by the ratio between households' wealth and GDP. Among the variables which summarise the individuals' characteristics (I_{it}) we included:

- per capita GDP (pcgdp) to account for differences in the level of income between countries;
- a measure of the share of population in poor income classes (below $10.000 in PPP) to account for differences on the distributional side;
- and the stock of financial wealth lagged one period (fingdp) to correct for the impact of past accumulated wealth.

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The level of inflation (infla) and real interest rate on deposits (realrate) have been used to control for the specificity of the macroeconomic environment. Finally, the ratio between M2 and GDP have been included to account for the impact of financial markets development on wealth.

Table 3. **Determinants of households' wealth**				
FINGDP	**Coefficient**	**Std. err.**	**z**	**P>z**
Pcgdp	0.0008053	0.0004115	1.96	0.050
Infla	-0.0523997	0.0282751	-1.85	0.064
Realrate	-0.3757938	0.1303815	-2.88	0.004
dependency	-3.356694	1.029337	-3.26	0.001
distribution	-12.08725	4.857263	-2.49	0.013
m2gdp	0.0745523	0.0318517	2.34	0.019
fingdp_1	0.7694837	0.05062	15.20	0.000

One immediate result (table 3) is that the current level of wealth over GDP is a positive function of past wealth (figdp_1) and current income (pcgdp), meaning that the rich/high income people, can save more. Moreover, a negative relationship with the variable measuring distribution of income (distribution) suggests that individuals in the poorest income classes cannot afford saving. Also a positive relation with share of working population over the total (dependency) is detected. In transition countries, the working age population is now holding the largest amount of wealth, while the old age population has not been able to accumulate wealth in the past. All those results suggest that wealth of individuals throughout the region is not widespread, but is still strongly concentrated in the hands of those classes which have, more than others, profited from the transition process.

Similar results are confirmed when considering changes in financial assets (table 4). Again, past wealth, as well as income distribution, age and education of individuals affect their saving choices. Moreover, a positive relationship with interest rates (nomrate) and economic growth (gdpgrowth) is detected, while the share of obligatory social insurance contribution (contribution) has a negative impact on saving, in that it reduces the amount of disposable income of individuals.

Table 4. **Determinants of wealth accumulation**				
DFINGDP	Coefficient	Std. err.	z	P>z
fingdp_1	0.1548243	0.0037842	40.91	0.000
gdpgrowth	0.6694922	0.0603146	11.10	0.000
Nomrate	0.1137354	0.0184941	6.15	0.000
dependency	-1.6669980	0.3230576	-5.16	0.000
contribution	-0.1979993	0.0221073	-8.96	0.000
distribution	-2.3203910	0.9511225	-2.44	0.015
education	0.0278331	0.0074577	3.73	0.000
Spread	0.4050061	0.0455180	8.90	0.000

By focusing on liabilities of individuals, a similar scenario emerges (table 5), with a strong selection on the side of banks for the best clients (income distribution and age patterns are important determinants of credit allocation). Cost of debt (nomrate) appears to strongly influence credit demand, with both the level of interest rates and the recent trend being significant determinants. A further variable to take into consideration is the relevance of household expenditures as a percentage of GDP (consgdp), meaning that the recent credit boom is financing an increase in consumption demand by households. This appears as a rational behaviour, once the real convergence process to EU standards is assumed and individuals internalise their future higher spending patterns.

Table 5. **Determinants of household indebtedness**				
DFINGDP	Coefficient	Std. err.	z	P>z
Spread	-.1595262	0.1035925	-1.54	0.124
Consgdp	0.2967492	0.0786329	3.77	0.000
M2gdp	0.0675383	0.0343367	1.97	0.049
dependency	-4.937807	1.62485	-3.04	0.002
Nomrate	-0.1436353	0.0563376	-2.55	0.011
Drate	-0.0946097	0.0551709	-1.71	0.086
distribution	-23.77084	7.435876	-3.20	0.001

The above analyses suggest an interesting environment in the New Europe.

Contrary to the experience of most EU15, being rich is a matter of income flows rather than of past accumulation. Heritage still does not represent a significant inter-generational transfer.

Differences among income classes also reflect on saving and accumulation options. In particular, some segments of the population are still unable to save, with income largely

passed towards final consumption or investment (i.e. house purchase, etc). Also, to a large extent, the low income share of the population is excluded from the lending market.

Given expected convergence towards the EU and resulting increase in individual income, we expect in the forthcoming years a significant number of new households to become customers of the financial sector, both as lenders and as savers.

With an increasing percentage of the population able to save, we would expect a hike in the saving propensity of households at the country level and stronger net financial assets accumulation. However, increasing income also means higher consumption and expenditure appetite, as testified by the current behaviour of high income share of the population in the region.

On balance, we can not say whether the first or the second effect will prevail and thus if saving propensity and financial asset accumulation will remain increase or decline. Most probably, a stable/negative trend could be forecasted.

Table 6. **Financial wealth by instrument (2003)**									%
	BULGARIA	CROATIA	CZECH R.	HUNGARY	POLAND	ROMANIA	SLOVAKIA	TURKEY	EU [1]
Currency	32.8	17.2	12.0	13.3	12.0	14.9	15.8	5.1	2.1
Deposits	58.7	71.2	53.3	47.8	51.8	63.2	64.7	55.4	35.4
LC Deposits	24.5	12.7	36.5	41.8	43.0	34.8	48.4	25.1	n.a.
FX Deposits	34.1	56.0	4.0	6.0	8.8	28.4	9.2	30.4	n.a.
Housing savings	0.0	2.5	12.8	0.0	0.0	0.0	7.1	0.0	-
Securities other than shares	0.6	0.1	0.8	11.4	4.7	8.3	0.0[2]	17.6	9.4
Quoted shares	1.2	3.9	13.2	1.6	2.8	9.5	0.0[2]	5.2	4.9
Mutual funds	0.1	1.1	8.4	6.9	7.3	0.2	6.9	11.1	10.6
Open-end	0.1	1.0	5.8	0.0	7.3	0.1	6.6	11.0	n.a.
Close-end	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.0	n.a.
Investment funds	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	n.a.
Foreign funds	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	n.a.
Insurance technical reserves	2.4	2.9	8.2	8.4	10.3	3.9	10.5	2.4	24.5
Claims on life insurance reserves	0.6	2.9	6.5	7.3	7.5	2.8	8.1	1.5	22.4
Claims on non-life insurance reserves	1.7	0.0	1.7	1.1	2.8	1.0	2.4	0.9	2.1
Pension funds	4.3	3.6	4.2	10.5	10.9	0.0	2.1	3.2	13.1
Defined-benefit funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
Defined-contribution funds	4.3	3.6	4.2	10.5	10.9	0.0	2.1	3.2	2.1

Source: PFA Database. Note: [1] *Proxy for the EU aggregate including Germany, The Netherlands, France, UK, Italy and Spain.* [2] *A proxy – assets allocated in securities are of negligible volume and prevailingly low liquidity.*

Even a decline, however, would not necessarily have a negative impact on the macroeconomic environment and on real convergence perspectives. As long as FDI is financing the widening CA deficits and fiscal consolidation leads to increases in Government savings, indeed, we can expect high and sustainable growth.

This will revert also in higher income of individuals and higher volumes of savings, as well as continuing strong demand for indebtedness. Obviously, this means an increasing penetration of financial products and a demand side push for financial sector development.

5 Portfolio Composition of Financial Wealth

The portfolio composition of financial wealth of individuals among different forms of savings is a function of:

- the macroeconomic environment,
- the level of development of financial markets and availability of products,
- the level of wealth of individuals and their risk propensity, as well as the need for precautionary saving,
- the institutional framework in terms of pension reforms, health insurance, etc.
- the relative value of assets and prospective returns.

Given the above, we are not surprised in detecting a substantially different pattern in terms of portfolio allocation between the EU15 and NE countries, the latter being still strongly focused on more traditional products. Expected changes in the above mentioned fundamentals are likely however to push towards a higher diversification.

By comparing the New Europe countries, some stylised factors immediately emerge.

As far as currency is concerned, our data, in most cases do not allow to split for households and non financial corporations, thus causing a general overstatement of the relevant value. Moreover, we have included only in Croatia and in Hungary an estimate for holdings in foreign currency.

Traditionally, all over the region, currency relevance has been a function of relatively low banking penetration, when measured in terms of number of individuals holding a

current account. However, in order to explain an increasing, rather than a declining trend in the last few years, we have to consider the strong demand for transactions, as a consequence of consumption expenses growth, not fully matched by increases in the use of electronic means.

Bulgaria stands out for a relatively high weight of currency holdings. Such preference for liquidity in the country can be explained by considering the relevance of cash as a form of payment and the large share of grey economy[6]. On the other hand, Turkey has a relatively low share of wealth in currency, given the high inflationary environment and the lack, in our figures, of the FX component.

Bank deposits still represent the most relevant form of savings for individuals, accounting for 50% or more of total financial wealth in all markets. Financial markets in the region tend to be banking based, with capital markets playing only a limited role both in terms of collection of savings and in terms of financing. The relatively more developed financial markets are those for the Czech Republic, Poland and Hungary and it comes as no surprise that those countries are the ones showing a lower share of saving in traditional banking deposits. Croatia and Slovakia stand out as strongly bank-based systems, with 65/70% of financial wealth kept in this form. In both countries, the government bond market is not significant, while the corporate sector is still not strong enough to support autonomous development of the equity and the private bond market. Irrespectively of demand, indeed, there is a supply problem still hindering diversification of individuals investments.

The share of foreign exchange deposits continues to be relevant in Croatia , Bulgaria and Turkey, and to a lower extent, in Romania. While the first two countries have a stable currency (Bulgaria running a successful currency board and Croatia an informal exchange rate stabilisation), Turkey and Romania are pursuing a policy of real appreciation of the currency, against a USD/Euro basket. Being all countries still far away from EMU convergence, we do not expect a substantial change in the currency mix.

Finally, it is interesting to note the relevance of building societies as a form of savings in both the Czech Republic and Slovakia, where they account for 7 to 13% of financial wealth of individuals. This form of savings, strongly linked to future mortgage contracts,

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[6] *Some studies have shown that Bulgaria, in addition to Estonia, emerge in the region for a relative high weight of grey economy with an estimate close to 36% of GDP in 2000/2001. For details, see Schneider (2002).*

however, is gradually losing relevance, with the development of a direct banking mortgage market and the end of specific treatments for those institutions, as part of the EU accession process.

To further understand the determinants of traditional deposits demand (compared to other intermediated assets), we have decided to expand the analysis presented in the previous paragraph. A simple panel regression (table 7) shows that individuals stick to deposits (depoia) when interest rates (drate) are higher and thus a good remuneration from the investment is guaranteed. Still, they strongly feel the pressure of alternative forms of savings (thus a negative relation with returns in stock markets – yield – is detected). Traditional deposits are preferred by the low income part of the population (a positive relation with percentage of the population in low income classes is detected), being perceived as safer products, but also as a liquid instrument, which can be associated to transaction services (a positive relation with consumption expenditure over GDP – consgdp -is found).

Table 7. **Determinants of deposits' demand**				
DEPOIA	**Coefficient**	**Std. err.**	**z**	**P>z**
pcgdp	-0.0012083	0.0009966	-1.21	0.225
gdpgrowth	1.066214	0.458186	2.33	0.020
consgdp	0.4830092	0.222601	2.17	0.030
realrate	-0.3899753	0.4252184	-0.92	0.359
infla	-0.0908936	0.0946645	-0.96	0.337
yield	-0.0278079	0.0105106	-2.65	0.008
drate	0.4858929	0.2792154	1.74	0.082
distribution	60.66912	22.67691	2.68	0.007

Given the above, we can thus expect demand for bank deposits in the region to gradually decrease, leading to an increase in portfolio diversification.

First signals of such trend are already present. The growth of the mutual funds market in the region is indeed mirroring, with a few years lag, the development in other EU countries in the last decade. In these countries a switch away from traditional bank deposits has been recorded as a consequence of the reduction of interest rates and the increase in individuals' appetite for more developed financial products, with a sudden increase in AuM.

Mutual funds represent 9 to 11% of intermediated financial assets[7] held by individuals in the Czech Republic, Poland, Hungary and almost 8% in Slovakia, with a substantial growth path in the last year. In Turkey, the share of mutual funds in total intermediated assets is even higher, close to 15% in 2003.

The relevance of investment funds as savings instruments is growing fast also in those countries where the market is still small, supported by macro-trends and demand/supply ones. The ongoing process is such that not every product will benefit, neither will every supplier be able to keep and/or capture market share as clients are going through the learning process: gradually 'asset management products' will be understood and, more importantly appreciated at least among younger generations. Clients will be able to distinguish between suppliers and between funds. Elements such as track record and performance will become more and more relevant, especially in countries like Bulgaria and Romania where frustration with, and distrust in, 'investment funds companies' as a results of past collapses has induced individuals to be more cautious towards these products.

By focusing on the determinants of preferences for mutual funds some interesting results emerge (table 8). While in some developed financial markets mutual funds tend to be a mass product, in the New Europe region, a strong correlation is observed between average wealth, percentage of population in higher income classes and relative weight of mutual funds on total financial assets.

Demand for mutual funds is also associated to higher propensity of individuals to risk, which is measured as the share of risky assets (mainly equity) in individuals' portfolios. This is not however yet reflected in a shift of mutual funds towards a more risky composition.

Finally, preference for mutual funds increases when interest rates on traditional deposits decrease, while a high bank mark down (difference between interbank rate and deposit rate, which means high margins for the banks and higher costs for the client), leads to shift of preferences away from deposit instruments.

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[7] *Our definition of intermediated financial assets includes bank deposits, mutual funds shares, insurance technical reserves and pension funds assets.*

Table 8. **Determinants of mutual funds' demand**				
MUTUALIA	**Coefficient**	**Std. err.**	**z**	**P>z**
Pcgdp	0.0010018	0.0005258	1.91	0.057
Risk	0.0819855	0.0459009	1.79	0.074
distribution	-19.72801	10.48603	-1.88	0.060
nomrate	-0.2639881	0.0944061	-2.80	0.005
differential	0.4375116	0.1667978	2.62	0.009

All in all, we can expect that macroeconomic stabilisation, a decrease in interest rates and development in financial markets integration will accelerate the ongoing switch from traditional deposits towards AUM, already perceived as more innovative and advanced financial products.

The relevance of equity markets and securities as a form of investment is quite limited all over the region, with some exceptions, mainly related to the structural features of the economy.

Securities other than shares are a relatively more interesting form of saving for individuals in Turkey (where they account for 18% of individuals' wealth), Hungary (11%), Romania (roughly 8%) and Poland (5% of wealth). These four countries feature a relatively strong Government bond market, as a consequence of past and present financing needs of the authorities and continue to have interest rates above the regional average. The corporate bond market, instead, is still quite underdeveloped .

The level of development of equity markets in different countries and the relative relevance of shares as a saving instrument for individuals is mostly a consequence of the privatisation process adopted throughout the region. Countries which adopted a voucher scheme privatisation - mainly the Czech Republic and Romania - tend to show a sizable role for equity investments; it is less common in those countries which focused on a mixed approach – like Poland – based on both coupon privatisation and foreign direct investments or fully dependent on foreign direct investment – as in the case of Hungary .

In the forthcoming period, individuals' preferences for share-holdings are likely to be strictly determined by expected return and risk, with the EU accession/convergence process, integration of financial markets at the cross-border level (thus leading to an increase in supply of financial products) and decreasing return of alternative products likely to play a significant role.

One point to mention is that from our analysis we had to exclude figures concerning unquoted shares, as we could not find reliable estimates for most of the countries considered. Such shares account for roughly 30% of financial wealth in Hungary and 45% in the Baltic countries and represent an important form of indirect investment, particularly due to the relevance of small and medium enterprises in the local economies. A similar correction has been done also for EU15 data.

The choice to invest in insurance products or in pension funds is a function of precautionary attitude of individuals and institutional features, such as the level and quality of state protection, as well as the pension legislation and the fiscal treatment.

As far as insurance is concerned, on the one side, the level and the quality of state protection is negatively related to need of insurance, on the other, insurance policies are usually a benefit for workers, thus meaning a direct relationship between economic growth and insurance market development. We can distinguish two groups of countries in the region: Central East European ones, where reserves for insurance account for 8-10% of total individuals' financial wealth, and other countries, with an incidence going from 2 to 4%.

Investment in pension funds is strongly influenced by the specificities of pension reform. Even more than in the EU15, most New Europe countries have already passed radical reforms in the pension area, by switching from a first pillar to a multi-pillar funded system. Such reform is already implemented in Poland, Hungary, Croatia, Bulgaria and in the Baltic countries, while new laws have been recently passed or are in the process of being passed in the remaining ones. In Turkey, a second pillar pension system is in place as a substitute for first pillar for those categories which were not covered in the basic system and plans to transform the first pillar are still not in place.

Accumulation of assets in mandatory second pillar is thus a function of time (system inception) and specific features of the reform (i.e. mandatory contribution by employer and employee, possibility of switching from old to new pension scheme, etc). The participation in fully funded pillars is indeed already high in those countries where 2nd mandatory pillar has been introduced as first – like in Poland and Hungary with 67% and 54% participation ratio respectively and in Croatia. Expectation for further rises in the near future concern those countries where second pillar started recently – as in the case of Slovakia and Lithuania – or is supposed to start in the near future –Romania and Czech Republic.

Being mandatory, accumulation of wealth for the second pillar should not be considered as an autonomous investment choice by the individuals. Despite that, it can impact the propensity for long term investment in other products, in that individuals feel that they are already covering the long-term precautionary need.

On the contrary, as far as the voluntary third pillar is concerned, the accumulation of resources is fully dependent on the individual attitude towards precautionary savings and the level of average contribution. In particular, the evaluation of current and prospective life-styles, and more specifically tax treatment, are playing a major role in determining the decision to participate or not in the system. In the Czech Republic, as an example, participation is unusually high, mainly as a consequence of very attractive state subsidies. In Poland, the TEE tax system – coupled with other macro-based factors – constrained growth in the sector.

6 Investment Risk Profile – Behaviour of Individuals in New Europe and Lessons from EU15

Table 9. **Financial products: portfolio structure, returns, volatility and sharpe indices (2003)**	CZECH R.	HUNGARY	POLAND	SLOVAKIA	CROATIA	BULGARIA	ROMANIA	TURKEY
Portfolio structure								
Risk Free Inst	68.2	63.0	66.1	83.3	87.2	91.6	78.3	65.2
Bonds	16.8	34.9	30.9	14.6	8.5	7.2	12.1	29.2
Equities	15.0	2.1	3.0	2.1	4.3	1.2	9.6	5.6
Returns								
Risk Free Inst.	1.4	6.5	3.3	1.3	-	1.3	-	37
Bonds [1]	2.0	7.4	5.1	5.9	-	-	-	38
Equities	30	13	28	24	-	68	-	18
Volatility								
Risk Free Inst	0.1	0.1	0.3	0.1	-	0.0	-	1.5
Bonds	0.6	0.5	0.7	0.6	-	-	-	6.6
Equities	6.4	6.8	8.2	5.8	-	11.5	-	14.9
Sharpe Index [2]								
Bonds	1.05	1.56	2.72	7.96	-	-	-	0.2
Equities	4.41	0.97	2.97	3.82	-	5.82	-	-1.3

Note: [1]Bond index returns as from ELMI, the JPM index on local currency bonds, providing for a conversion returns in local currency. [2]Sharpe index is measured as (return on asset i – return on risk free assets)/Standard deviation asset.

As a final step, by focusing on individuals' asset allocation choices, we compare the risk/return choice in the New Europe and at the EU15 level. By considering the experience of Italy and other EU15 countries in the last decade, and in view of the expected macroeconomic stabilisation and EMU convergence process, we believe we can gain some insight for future developments.

A caveat: one should remember that the exercise is somehow arbitrary given the small time period examined (2000-2003).

Moreover, on the demand side, the exercise assumes strong flexibility of individuals in their investment choices. The experience of more advanced financial countries shows that this is obviously not always the case. In the New Europe countries, however, reactivity of individuals to market conditions tends to be relatively high.

The equilibrium level is also influenced by the supply side, with supply of financial products continuing to be an important constraint, which could be at least partially relaxed in the future, in view of integration of EU financial markets.

6.1 Current Trends in New Europe

A simplified version of households' investment portfolio has been considered. In particular, available saving instruments have been aggregated in three different groups, with some adjustments in order to take into account peculiarities in New Europe countries. The three types of investment considered are:

- risk free activities (holdings in local currency, deposits, short term bonds and money market funds)
- bonds/securities (including government bonds and other bonds, bond funds, real estate funds and pension funds, life insurance)
- equities (including equity, equity funds, balanced funds).

Table 9 presents the portfolio structure, returns (in 2003) and volatility of returns (in the 2000-2003 period) of these various instruments, for a sub-sample of countries in the region.

Generally speaking, the strong relevance of risk free and bond products is striking. This is a natural pattern in the early stage of development of financial markets, given the high level of interest rates on the short term instruments and high risk of equities.

A synthetic index of the return/risk matching for investors is provided by the Sharpe index, i.e. the incremental return that can be obtained by investing in riskier instruments in terms of its units of risk. The higher the value the better the return/risk trade-off.

We decided to show only 2003 data, as they represent the current stage of development of financial sectors, although again we do realize that looking at only one year can prove highly misleading. Considering previous years, the scenario would point to the relevance of macroeconomic stabilisation and financial sector development in shaping individuals' choices, with risk free assets representing the best choice in terms of risk return in the early years of transition and other products gradually picking up.

Only in the Czech Republic, and to a lesser extent in Poland, the Sharpe index in 2003 suggests the rationality of a relative preference for equity products. In the Czech Republic the combination of a significant share of equity investments as a result of the past coupon privatization process and the positive stock market performance in the last two years, in an environment of low interest rates, have jointly been successful in attracting individuals' investors towards more risky assets. In Poland, the gap in terms of Sharpe index is very close. On the one side still relatively high interest rates suggest the rationale for traditional products, on the other, positive results in the stock market suggest a gradual shift towards equities. The fact that equity markets are relatively well developed in the two countries obviously plays a role.

In Slovakia and Hungary, the bond market still has to be preferred, given high guaranteed returns. In Slovakia, moreover, low size of the equity market generates a substantially higher volatility and risk of returns. In Turkey, the current macroeconomic environment is still allowing a significant return even in the risk free categories. This leads to a very low Sharpe index for bond products and even a negative one for equity markets.

On the overall, we highlight a fast developing scenario, strongly based on fundamentals. We can thus expect changes in macroeconomic or financial sector determinants to rapidly affect individuals' choices, leading to increasing portfolio diversification.

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6.2 The Experience of Past Convergence Processes: the Italian Case

As already mentioned, we now focus on the Italian experience for the last decade. In view of the expected macroeconomic stabilisation and EMU convergence process for most New Europe countries, we believe we can gain some insight for future developments.

Italy has gone through a convergence process with a strong decrease in the risk premium on its bonds. From 1995 to 2000, the share of bonds in individuals' portfolios decreased from 31% of the total to 20%. As interests rate decreased the relative long term value of equities has increased, with their weight, in individuals portfolios going from 14 to 27%.

The mutual fund industry and, more broadly on the asset management industry played a significant role in the process. Mutual funds started in Italy in 1985 and have had an impressive growth, encompassing, since the very start, equity as well as balanced and bond funds. To date they account for approximately 15% of household assets. In the initial phase, similarly as now in New Europe, there were strong restrictions as far as mutual fund international diversification was concerned. As these regulations were lifted at the end of the eighties and as the market matured, the industry started to focus on fund specialization. Soon the Italian mutual fund market was able to cover a very wide spectrum of alternatives.

As already mentioned, convergence coincided with the need for Italian households to rebalance their portfolios towards a more diversified composition and, correspondingly, for the Italian banking and insurance industry to improve its servicing capabilities. In this context, mutual funds proved to be a very powerful instrument, as shown by the strong growth in assets in the later part of the 1990ies.

From a regulatory point of view the trend towards greater liberalization was not limited to international diversification. Gradually management companies were allowed to broaden their scope and to manage assets other than mutual funds such as segregated accounts and pension funds. The possibility of establishing non-ucit funds, such as hedge funds and funds of funds, was also introduced in the late nineties thus putting the Italian market virtually at a par with leading international financial markets and, in some instances, as for example for domestic hedge funds and absolute return products, at the forefront of financial innovation.

The Italian asset management industry has in less than 15 years, changed the structure of the Italian financial system. The key differentiating factors are part of a "best practice" virtuous circle that is based on competitiveness, transparency of governance processes and communication, ability to deliver efficient portfolio solutions, strong administrative and operational capabilities, economies of scale and of scope.

What can we learn for the New Europe?

First a comparison with Italy has elements of interest both in terms of similarities and of differences.

While macroeconomic trends are likely to be relatively similar, the end of the Italian convergence has coincided with the equity market bubble and this has made the transition bumpier. From this point of view the New Europe countries may be in a better position, because they enter the world of portfolio diversification in a context that is less characterised by "irrational exuberance".

Another advantage for New Europe could arise from the fact that these countries have directly "jumped" into a phase where institutional investors have a role. As we have shown in our study on Household Wealth in the National Accounts of Europe, the United States and Japan (PGAM Research February 2003) it appears that institutional investors act as stabilizers with respect to the natural tendency of retail investors to have a pro-cyclical behaviour in equity markets, with the risk of "buying high and selling low".

Another very relevant difference is that , for the historical reasons mentioned, the level of financial wealth is quite substantially lower in those countries than in Italy. So while switch effects have been a main driver in the EU 15 we may expect accumulation effects to be more important in the New Europe countries.

As a final point, it should be noted that the EU financial sector per se has been subject to a strong transformation process, aimed at increasing efficiency and integration. The New Europe countries are thus joining in an already different and progressively more integrated market, and will be able to jump-start into the latest "state of the art" products.

6.3 Lessons for the New Europe Countries

The experience of past macroeconomic convergence processes provides useful suggestions in terms of possible future developments in individuals' portfolio allocation choices in the New Europe.

The analysis of returns and volatility associated to each instrument, based on the Sharpe ratio, has shown how in those NE countries where the convergence process is relatively ahead, a rationality for the preference for alternative and more risky products exists.

Using tools derived from the modern portfolio theory we try to push further the analysis, focusing on a mean-variance approach. Essentially, the lowering of short-term interest rates and the appearance of a truly risk free rate tends to favour portfolio rebalancing towards a more equilibrated mix.

The usual caveat about the limited time-period examined should be borne in mind as far as the empirical verification is concerned. Given the aforementioned selection of asset classes – risk-free, bond and equity – and the average returns and historical volatility associated to each instruments, we sketched comparative "efficient frontiers".

The evolution in the portfolio allocation choices of individuals between 2001 and 2003 is presented in graph 2. For the sake of clarity, we decided just to present the evolutionary path of the portfolio allocation chosen.

The results confirm the intuition provided by the Sharpe index analysis. The trend is towards lower returns, which is consistent with interest rate convergence. The generally higher volatility could be explained partly by the fact that the volatility of bonds in the earlier period may not have been fully reflected in the risk premium, partly because of switches to equity instruments, partly to "noise". The Czech Republic, where macroeconomic convergence is largely achieved and risk free rates are low, is a special case. In this country a very positive equity market performance in the last two years allowed individuals to increase their returns.

Graph 2. **Portfolio allocation evolutionary path – 2001 vs. 2003**
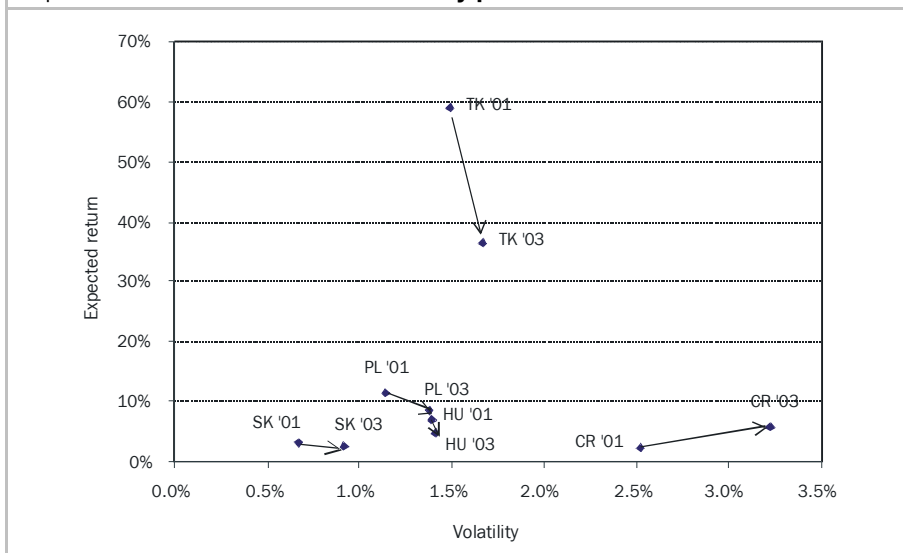
In Graph 3 we have highlighted what we can call "biased" efficient frontiers: before convergence high short-term rates and high rates on bank deposits may not appear to domestic investors as risky as they appear to foreign ones. The "efficient frontier" has therefore an upward bias with apparently (and often ex-post effectively) superior risk/returns characteristics. With convergence lower risk and lower return instruments prevail together with an "unbiased" and lower risk/return frontier.

Graph 3. **"Biased" efficient frontiers and convergence**
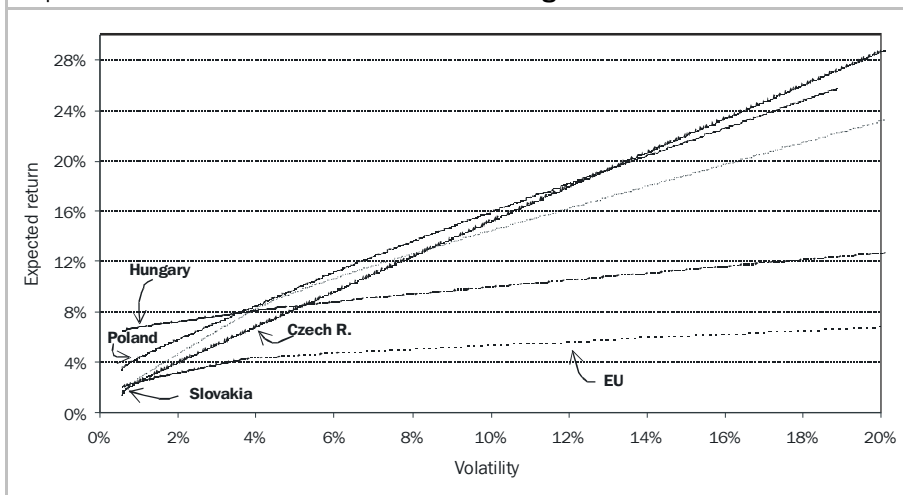
Thus, with full macroeconomic convergence, the efficient frontier for New Europe countries will finally coincide with the markets at the EU level. Only a fully integrated market can guarantee potential for broad diversification, allowing investments in the liquid global equity markets, along with international bonds and money market instruments.

7 Concluding Remarks

The in-depth analysis of household wealth in New Europe confirms the existence of a strong gap in terms of wealth accumulation with EU-15 countries and significant disparities across the region. This is a consequence of both historical reasons and different patterns in the transition process among countries.

In the New Europe "being rich" seems to be more a matter of flows rather than of stocks, meaning that the rich are those earning high incomes, thus being able to save and accumulate, while the relevance of "heritage" still seems to be low. Moreover, low income groups are still unable to save, being substantially excluded from the financial market.

Overall, we expect in the next decade the stock of individuals' wealth to increase, thus increasing even more growth opportunities for the financial sector.

In terms of individual portfolio allocation choices, we foresee a gradual shift of preferences towards more risky and sophisticated products. Macroeconomic stabilisation and integration in the EU financial markets are gradually reducing return opportunities biased by high risk premia and individuals have to increase diversification to at least partially compensate for lower returns. We expect in the forthcoming years the efficient frontiers for the New Europe to finally coincide with the that of the EU15.

Overall, forthcoming developments of the financial sector infrastructure in the New Europe will be characterised by a more or less straightforward shift towards market oriented systems. Banks will however continue to play a leading role, while strong discontinuities are possible in the process, in view of differences in the regulatory and legal framework, and in particular in the key area of pension reform.

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