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Global Wealth Report 2013

Contents

03 Introduction

- 04 Global wealth 2013: The year in review
- 12 Global trends in household wealth
- 21 The global wealth pyramid
- 26 Wealth mobility
- 38 The outlook for wealth to 2018
- 45 Wealth of nations
 - 46 United States
 - 47 Japan
 - 48 China
 - 49 India
 - 50 France
 - 51 United Kingdom
 - 52 Switzerland
 - 53 Russia
 - 54 Singapore
 - 55 Taiwan
 - 56 Indonesia
 - 57 Australia
 - 58 South Africa
 - 59 Chile
 - 60 Brazil
 - 61 Canada
- 62 Authors
- 63 Imprint / Disclaimer

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Introduction

The 2013 Credit Suisse Global Wealth Report and the more detailed accompanying Global Wealth Databook aim to provide the most comprehensive study of world wealth. Unlike other studies, they measure and analyze trends in wealth across nations, from the very bottom of the "wealth pyramid" to ultra high net worth individuals.

This fourth Wealth Report continues our close collaboration with Professors Anthony Shorrocks and Jim Davies, recognized authorities on this topic, and the principal authors of "Personal Wealth from a Global Perspective," Oxford University Press, 2008.

Global wealth has reached a new all-time high of USD 241 trillion, up 4.9% since last year and 68% since 2003, with the USA accounting for 72% of the latest increase. Average wealth per adult reached a new all-time high of USD 51,600, with wealth per adult in Switzerland returning to above USD 500,000.

We expect global wealth to rise by nearly 40% over the next five years, reaching USD 334 trillion by 2018. Emerging markets are responsible for 29% of that growth. China will account for nearly 50% of the increase in emerging economies' wealth. Wealth growth will primarily be driven by growth in the middle segment, but the number of millionaires will also rise markedly over the next five years.

Five years on from the global financial crisis, our detailed wealth data shows a number of interesting trends. Emerging country wealth growth has slowed, with some notable winners (Mexico) and decliners (Brazil and Russia, both hurt by weaker currencies). We also find that the distribution of wealth in China is very different, and apparently more balanced than that of India, and reflects China's role as the vanguard of the emerging consumer.

In the "old world" we so far fail to see a positive wealth effect in Japan, while there has been a resurgence in Eurozone wealth, with our new estimates challenging the findings of the recent European Central Bank survey, as we find that the ECB understates the household wealth per adult in most Eurozone countries, with the notable exceptions of Cyprus and Malta.

This year, our special focus is on wealth mobility, which appears surprisingly high in the short run. For instance, less than two-thirds of the 2000–01 Forbes billionaires remained in the list by 2005, and barely half by the end of the decade. Across generations, the latest evidence points to more persistence, although continued high wealth growth in countries like China will ensure that many individuals rise rapidly in the wealth pyramid.

Taking a broader perspective, our analysis suggests that ten generations or more have to lapse before the wealth of an individual in North America is completely independent of the wealth of their ancestors. From a global point of view, individuals in China and India have a relatively high probability to be upwardly mobile as a result of the high economic growth in these countries.

The Credit Suisse Global Wealth Report lays the foundation for a long-running examination by the Credit Suisse Research Institute of one of the crucial research areas in economics, and a vital driver of future megatrends. Moreover, it continues the thought leadership and proprietary research undertaken by the Research Institute over the past three years.

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Global wealth 2013: The year in review

Although wealth is one of the pillars of the economic system, reliable data on personal wealth ownership is in short supply. The Credit Suisse Global Wealth Report aims to help bridge this deficit by providing the most comprehensive, reliable and timely source of information on global household wealth. Global wealth has reached a new all-time high of USD 241 trillion, up 4.9% since last year, with the US accounting for most of the rise. Average wealth hit a new peak of USD 51,600 per adult, but inequality remains high, with the top 10% of the world population owning 86% of global wealth, compared to barely 1% for the bottom half of all adults.

Average wealth passes USD 50,000 and sets new all-time high

Despite the continuing challenges posed by the economic environment, the underlying factors this year have been broadly positive for global household wealth. For the world as a whole, we estimate that personal wealth increased by 4.9% during the year to mid-2013 and now totals USD 241 trillion (see table 1). Aggregate total wealth passed the pre-crisis peak in 2010, and since then has set new highs every year. Average wealth also established a new high at USD 51,600 per adult, the first time that average global wealth has passed the USD 50,000 threshold since 2007.

A tale of two countries: the United States and Japan

Looking in more detail at the global pattern, the story this year is a tale of two countries. The United States posted a fifth successive year of rises in personal wealth. Fuelled by a recovery in house prices and a bull equity market which drove the Dow Jones to new highs, the United States added USD 8.1 trillion to the global wealth stock, increasing wealth ownership by 12.7% to USD 72.1 trillion. This is 20% more than the pre-crisis high in 2006 and 54% above the recent low in 2008.

Aggressive monetary policy by the Bank of Japan (BOJ) spurred an even greater rise in equity prices – up 52% in the year to mid-2013. But equities in Japan are very low by international standards, accounting for less than 10% of household financial wealth, and the same aggressive BOJ

policies drove the yen-USD exchange rate down by 22%. As a consequence, total household wealth in Japan has fallen by USD 5.8 trillion this year, equivalent to 20% of Japanese net worth. Japan suffered very little during the global financial crisis – in fact personal wealth grew by 21% between 2007 and 2008. However, in marked contrast to recent performance by the United States, total wealth is now just 1% above the 2008 level.

In most other parts of the world, the economic environment has been generally favorable to wealth acquisition. While the Japanese experience led to a net loss for the Asia-Pacific region (excluding China and India), gains were recorded in all other regions and were particularly evident in Europe and China, which together added a further USD 7 trillion. Despite the gain in Europe, total wealth in North America overtook European holdings to become the leading region for the first time since 2005.

Overall, the rise in net wealth was split evenly between financial assets and non-financial assets, but the pattern varied across regions. The change in financial assets dominated in North America and Asia-Pacific. In all other regions – especially China and India – non-financial assets accounted for most of the increase. Household debt also rose according to our figures. Although the global rise of 1.7% was relatively small, India and China recorded sizeable increases: 16% and 20%, respectively.

Asset price changes

Over long periods, trends in household wealth are strongly related to economic growth, saving rates, and other economic and demographic factors. Over



Table 1

Change in household wealth 2012–2013, by region

	Total wealth	Change in total wealth		Wealth per adult	Change in wealth per adult	Change in financial assets		Change in non- financial assets		Change in debts	
	2013 USD bn	2012–13 USD bn	2012–13 %	2013 USD	2012–13 %	2012–13 USD bn	2012–13 %	2012–13 USD bn	2012–13 %	2012–13 USD bn	2012–13 %
Africa	2,711	32	1.2	4,929	-1.5	8	0.6	22	1.4	-2	-0.8
Asia- Pacific	48,075	-4,510	-8.6	43,445	-10.2	-3,344	-10.4	-1,902	-6.4	-737	-7.8
China	22,191	1,402	6.7	22,230	5.5	531	5.2	1,110	9.4	238	20.5
Europe	76,254	5,475	7.7	130,712	7.6	3,048	8.4	3,300	6.9	873	6.5
India	3,613	249	7.4	4,706	5.1	10	1.8	271	8.9	31	15.9
Latin America	9,139	317	3.6	23,265	1.8	133	3.5	204	3.2	20	1.5
North America	78,898	8,362	11.9	296,004	10.5	5,376	9.4	3,270	11.6	284	1.9
World	240,881	11,328	4.9	51,634	3.3	5,761	4.1	6,274	4.9	708	1.7

Figure 1

Change in market capitalization, house prices and USD exchange rate (%), 2012-2013

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



shorter timespans, however, changes in household wealth across countries tend to be driven by movements in asset prices and exchange rates. Last year these movements were generally encouraging.

Figure 1 summarizes the position for the G8 countries plus China and India. Capital markets in France and Germany recovered from the declines experienced a year or two ago, each increasing in value by more than 15%. The United States matched this performance and the United Kingdom was not far behind. Elsewhere, stock markets were noticeably robust in Argentina, Australia, Indonesia, the Netherlands, Pakistan, Switzerland, Thailand and the United Arab Emirates where equity prices rose by more than 20%. They were even more buoyant in Japan, Luxembourg and Serbia, where the rise exceeded 50%, and Greece did better still, reversing much of the recent market decline with a rise of 139%. In contrast, market capitalization fell by 2%-3% in China and India and by 12% in Russia. The other significant losses were recorded in relatively small economies: Peru (-20%), Czech Republic (-22%) and Bangladesh (-39%).

House prices are another useful predictor of the non-financial component of household wealth. They have been flat or gently rising in most countries this year, typically lying in the -5% to +5% range. China (6%) and the United States (7%) did rather better than average, along with Brazil, South Africa and India. Hong Kong (17%) and the United Arab Emirates (20%) topped the table. Elsewhere,

house prices declined by more than 5% in Russia, Spain, the Netherlands and Hungary, and by 11% in Greece, according to the latest available figures.

US dollar appreciation

In recent years exchange rate movements versus the US dollar have had a significant impact on the relative wealth rankings of individual countries within the global league table. During the year to June 2013, exchange rate changes were confined to a narrower range (typically -5% to +5%) than in the past, and hence had less impact. As already noted, the principal exception was Japan, which depreciated by 22%. Egypt, Argentina and South Africa also devalued by more than 15%. In contrast, currencies appreciated in Poland and New Zealand by about 7% and in Sweden and Mexico by about 10%. On the whole, exchange rate movements had a slightly negative impact. Between mid-2012 and mid-2013, total global wealth grew by 4.9% when measured in current USD but by 6.6% when using constant USD exchange rates.

Winners and losers among countries

The extent to which the United States and Japan dominate the world picture this year is illustrated by Figure 2, which shows the countries with the largest total wealth gains and losses. China (USD 1.4 trillion), Germany (USD 1.2 trillion) and France (USD 1.1 trillion) are the only other countries where the change in wealth exceeded USD 1 trillion. Total wealth changed in a further eight countries by more than USD 200 billion (all gains): Italy, the United Kingdom, Spain, Mexico, Sweden, India, Korea and Canada.

The equity price increase and the slightly favorable euro-dollar movement enabled the Eurozone countries to recover more than half of the very large wealth loss experienced 12 months earlier. The United Kingdom, India and Switzerland also managed to recover a significant portion of recent losses.

Expressing the wealth gains and losses in percentage terms produces a different league table, illustrated in Figure 3. Fifteen countries registered double-digit wealth gains. With a 13% growth rate, the United States lies in the middle of this group and no longer stands out. Household wealth rose at a slightly faster rate in Uruguay, Sweden, New Zealand, Azerbaijan and Mexico. According to our calculations, Libya surpassed them all by a considerable margin. However, wealth data for Libya are of very poor quality, so our estimate of 60% growth for the year ending mid-2013 is less reliable than the figures for other countries.

Even in percentage terms, Japan continues to be the worst performer, although several other countries – especially Argentina and Egypt – are little better. Much of the wealth decline in Argentina, Egypt, South Africa and Brazil is due to currency depreciation versus the USD. In contrast, the 5% loss in Russia reflects the 12% fall in market capitalization combined with a 6% drop in house prices.

Wealth per adult across countries

As already noted, global household wealth equates to USD 51,600 per adult, a new all-time high for average net worth. This average global value masks considerable variation across countries and regions, as is evident in Figure 3. The richest nations, with wealth per adult over USD 100,000, are found in North America, Western Europe, and among the rich Asia-Pacific and Middle Eastern countries. They are headed by Switzerland, which in 2011 became the first country in which average wealth exceeded USD 500,000. It dropped below this mark in 2012, but this year equity price rises resulted in a new peak value of USD 513,000 per adult. Australia (USD 403,000), Norway (USD 380,000) and Luxembourg (USD 315,000) all experienced an increase in wealth per adult and retain their respective second, third and fourth places from 2012. The United States, Sweden, France, Singapore, Belgium and Denmark are close behind, with average wealth per adult in the USD 250,000 to USD 300,000 range. A year ago, Japan moved up to fourth place in the table, but it has now been demoted and no longer ranks among the top ten countries.

Interestingly, the ranking by median wealth per adult is slightly different, favoring countries with

Figure 2

Change in total wealth 2012–2013 (USD bn), biggest gains and losses

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 3

Percentage change in household wealth 2012–2013, biggest gains and losses

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Notes on concepts and methods: Net worth or "wealth" is defined as the value of financial assets plus real assets (principally housing) owned by households, less their debts. This corresponds to the balance sheet that a household might draw up, listing the items which are owned and their net value if sold. Personal pension fund assets are included in principle, but not entitlements to state pensions. Human capital is excluded altogether, along with assets and debts owned by the state (which cannot easily be assigned to individuals).

For convenience, we disregard the relatively small amount of wealth owned by children on their own account, and frame our results in terms of the global adult population, which totaled 4.7 billion in 2013 The *Asia-Pacific* region excludes China and India, which are treated separately due to the size of their populations.

Data for 2012 and 2013 refer to mid-year estimates; the figures for earlier years indicate year-end values

Figure 4

World wealth levels 2013

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



lower levels of wealth inequality. Australia (USD 220,000) tops the list again this year, with only Luxembourg (USD 183,000) in close contention. Median wealth in Belgium, France, Italy, the UK, and Japan lies in the USD 110,000 to 150,000 range. Switzerland, Finland and Norway have slightly lower values of around USD 95,000, but the United States is much further back with median wealth of just USD 45,000.

The rich country group with wealth per adult above USD 100,000 has very stable membership over time. Greece dropped out of the group a year ago, but has now returned. Cyprus and Spain have also seemed vulnerable to demotion in recent years, but no longer appear to be at immediate risk, with mean wealth per adult of USD 120,000 and USD 124,000 respectively.

Intermediate wealth

The "intermediate wealth" group portrayed in Figure 4 covers countries with mean wealth in the USD 25,000 to USD 100,000 range. Some European Union (EU) countries (Portugal, Malta and Slovenia) are situated at the top end of the band, while more recent EU entrants (Czech Republic, Estonia and Slovakia) are found lower down. The intermediate wealth group also encompasses a number of Middle Eastern nations (Bahrain, Oman, Lebanon and Saudi Arabia) and several Latin American countries (Chile, Columbia, Costa Rica, Mexico and Uruguay) considered to be emerging markets. Hungary and Poland returned to the intermediate wealth group after a year's absence. Libya and Turkey moved back into the group after several years away.

Frontier wealth

The "frontier wealth" range from USD 5,000 to 25,000 per adult covers the largest area of the world and most of the heavily populated countries, including China, Russia, Indonesia, Brazil, Philippines, Egypt and Iran. The band also contains many transition nations outside the EU (Albania, Armenia, Azerbaijan, Bosnia, Georgia, Serbia, Kazakhstan and Mongolia), most of Latin America (Argentina, Ecuador, El Salvador, Panama, Paraguay, Peru and Venezuela), and many countries bordering the Mediterranean (Algeria, Jordan, Libya, Morocco, Syria and Tunisia). South Africa recently belonged to the intermediate wealth group, but now falls in this category alongside other leading sub-Saharan nations: Botswana, Equatorial Guinea and Namibia. Laos and Sri Lanka moved above USD 5,000 this year, to join their neighbor Thailand in this group.

The final group of countries with wealth below USD 5,000 is heavily concentrated in central Africa and south Asia. This group encompasses all of central Africa apart from Angola, Equatorial Guinea and Gabon. India is the most notable member of the Asia contingent, which also includes Bangladesh, Cambodia, Myanmar, Nepal, Pakistan and Vietnam. Languishing in the middle of this wealth range are also three countries bordering the EU: Belarus, Moldova and Ukraine.

Wealth of regions

The distinctive regional pattern evident in the world map is captured succinctly by comparing the share of household wealth of each region with its share of the adult population. North America is the region with the highest average wealth. It is also the region with the highest share of total wealth (32.8%), although Europe's bigger population means that its wealth share (31.7%) is only fractionally lower (see Figure 5). The 20% share of wealth held in Asia-Pacific countries (excluding China and India) is guite similar to the population share of the region (23.7%). Elsewhere, the disparity between population and wealth becomes increasingly apparent. Despite making enormous strides in recent years, Chinese residents account for 21.4% of the adult population of the world, yet only 9.2% of global wealth. In Latin America the ratio is similar: 8.4% to 3.8%. But for Africa and India, the population share exceeds the wealth share by a factor of ten.

Distribution of wealth across individuals

To determine how global wealth is distributed across households and individuals – rather than regions or countries – we combine our data on the level of household wealth across countries with information on the pattern of wealth distribution within countries. Our estimates for mid-2013 indicate that once debts have been subtracted, an adult requires just USD 4,000 in assets to be in the wealthiest half of world citizens. However, a person needs at least USD 75,000 to be a member of the top 10% of global wealth holders, and USD 753,000 to belong to the top 1%. Taken together, the bottom half of the global population own less

Wealth and population by region, 2013

Figure 5

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



than 1% of total wealth. In sharp contrast, the richest 10% hold 86% of the world's wealth, and the top 1% alone account for 46% of global assets.

Regional membership in global wealth deciles (i.e. population tenths) is shown in Figure 6. The most prominent feature is the contrast between China and India. China has very few representatives at the bottom of the global wealth distribution, and relatively few at the top, but dominates the upper middle section, accounting for 40% of the worldwide membership of deciles 6-9. The sizeable presence of China in the upper middle section reflects not only its population size and growing average wealth, but also wealth inequality which, despite recent increases, remains modest by the standards of the developing world. China's position in the global picture has shifted towards the right in the past decade due to its strong record of growth, rising asset values and currency appreciation. China now has more people in the top 10% of global wealth holders than any other country except for the USA and Japan, having moved into third place in the rankings by overtaking Italy and Germany. In contrast, residents of India are heavily concentrated in the lower wealth strata, accounting for a guarter of people in the bottom half of the distribution. However, its extreme wealth inequality and immense population mean that India also has a significant number of members in the top wealth echelons.

As Figure 6 shows, residents of Asia-Pacific nations (excluding China and India) are fairly evenly spread across the global wealth spectrum. However, this uniformity masks a substantial degree of polarization. Members of high-income Asian countries, such as Japan, Singapore and Hong Kong, are heavily concentrated at the top end: half of all adults in high-income Asian countries are placed in the top global wealth decile. In contrast, residents of lower-income countries in Asia, such as Indonesia, Bangladesh, Pakistan and Vietnam, tend to be found lower down in the wealth distribution. In fact, when high-income countries are excluded from the Asia-Pacific group, the wealth pattern within the remaining countries resembles that of India, with both regional groupings contributing about one guarter of the bottom half of wealth holders. Africa is even more concentrated at the bottom end. Half of all African adults are found in the bottom two global wealth deciles. At the same time, wealth inequality within and across countries in Africa is so high that some individuals are found among the top 10% of global wealth holders, and even among the top 1%.

Latin America is another region whose wealth distribution closely mimics the global pattern, with individuals fairly evenly spread across the wealth deciles. North America and Europe are skewed much more towards the high end, together accounting for 62% of adults in the top 10%, and an even higher percentage of the top percentile. Europe alone accounts for 38% of members of the

Figure 6

100% North America 90% 80% 70% Europe 60% China 50% India 40% 30% 20% Asia-Pacific 10% 0% 2 5 8 ò 3 4 6 7 10 Decile

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013

Regional composition of global wealth distribution 2013

top wealth decile, a proportion that rose considerably over the past decade alongside the euro appreciation against the US dollar.

World wealth spectrum

Wealth is a key component of the economic system. It is valued as a source of finance for future consumption, especially in retirement, and for reducing vulnerability to shocks such as unemployment, ill health or natural disasters. Wealth also enhances opportunities for entrepreneurial activities when used either directly or as collateral for loans. These functions are less important in countries that have generous state pensions, adequate social safety nets, good public healthcare, high quality public education and well-developed business finance. Conversely, the need to acquire personal assets is particularly compelling in countries that have rudimentary social insurance schemes and restricted options for business finance, as is the case in much of the developing world.

The Credit Suisse Wealth Report aims to provide a comprehensive portrait of world wealth, covering all regions and countries, and all parts of the wealth spectrum from rich to poor. Despite a decade of negative real returns on equities, several equity bear markets and the collapse of housing bubbles, we find that total global wealth has more than doubled since 2000. Strong economic growth and rising population levels in emerging nations are important drivers of this trend. The top ten countries in the wealth-per-adult league table include many smaller, dynamic economies – Switzerland, Norway, Luxembourg, Singapore, Sweden, Belgium and Denmark – as well as France, Australia and the USA. Notable cases of emerging wealth are found in Chile, Columbia, the Czech Republic, Lebanon, Slovenia and Uruguay, while "frontier" wealth is evident in Egypt, Indonesia, Malaysia, Tunisia and Vietnam.

For a number of reasons, wealth varies greatly across individuals. Our estimates suggest that the lower half of the global population possesses barely 1% of global wealth, while the richest 10% of adults own 86% of all wealth, and the top 1% account for 46% of the total. Over time, this may change, particularly if enough low-wealth countries experience rapid growth, and if China and India fulfill their potential to be major catalysts of global metamorphosis. However, any trend towards equalization is likely to be slow.

This chapter has outlined some of the main changes in personal wealth during the year to mid-2013 and key results concerned with the pattern of total wealth ownership across regions and countries. The more extensive Credit Suisse Wealth Databook that accompanies this report describes the methodology used and the results obtained in greater detail. The following chapters look at the longer-term wealth trends and the pattern of wealth holdings across individuals. This year we also examine wealth mobility – the extent to which people move between wealth strata.



Global trends in household wealth

This chapter examines how household wealth and its components have changed over time. Household wealth has more than doubled since 2000, but gains were concentrated more in the first half of the period. Deleveraging pressures are still evident, with debts per adult flat since last year. We also provide new estimates of wealth per adult in the Eurozone that challenge the findings of the recent ECB survey.



Regional trends in global wealth

By our estimation, global household wealth in mid-2013 totaled USD 241 trillion, equivalent to USD 51,600 per adult. Despite the setback in 2008, Figure 1 shows that household wealth has trended strongly upward since the start of the millennium. The global aggregate has more than doubled from the USD 113 trillion recorded for the year 2000, and wealth has more than doubled in each region apart from North America and Asia-Pacific, where the rises were limited to 88% and 74%, respectively. During the same period, personal wealth in India rose by 211% and in China by 376%. Even allowing for the rise in the adult population, net worth per adult increased by 68% from 2000, a growth rate of 4.1% per annum.

Figure 2 captures the variety of regional experiences since 2000. Personal wealth fell by 14% worldwide in the aftermath of the financial crisis. The Asia-Pacific region excluding China and India posted a 1% gain during 2007–08, but all other regions suffered a decline in wealth ranging from the 14% reduction in Latin America to the 24% drop recorded for India. In the period since 2008, wealth has increased in every region. In most cases the rise has reversed any loss during the crisis, but total wealth remains below the 2007 peak in Europe and Africa.

The outstanding wealth performance of China – and, to a lesser extent, India – since the year 2000 is evident from Figure 2. Another interesting feature is the timing of the growth spurts. Wealth growth in China during the first half of the period was about three times the growth achieved since 2008. For Asia-Pacific and Latin America the multiple is closer to two. But the multiple rises above five for India, and above ten for Africa and Europe.

Figure 1

Total global wealth 2000-2013, by region

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 2

Wealth growth rates since 2000, by region

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 3 Total wealth by region using constant USD exchange rates 2000–2013

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



North America is the outlier. It had the second lowest wealth growth rate during 2000–07, and the second highest growth rate since 2008. As a consequence, the wealth gains during the two subperiods are roughly in balance. It is this recent spurt that has enabled North America to overtake Europe and re-establish itself as the region with the highest aggregate level of household wealth.

Recent time trends in household wealth have been heavily influenced by the prevailing USD exchange rates, which have often varied by 10% or more from year to year. To remove this source of volatility, Figure 3 shows the separate regional series based on constant USD exchange rates. The graphs are smoother than those based on prevailing USD exchange rates and reinforce the view that the underlying wealth trends have been, and continue to be, broadly positive. Wealth losses above 1% were experienced only in 2001-02 in North America (-3%) and in the aftermath of the financial crisis in all regions except Latin America. But even during 2007-08, only three regions suffered double-digit losses: China (-22%), North America (-21%) and Africa (-10%).

Trends in wealth components

Another important and interesting dimension of personal wealth is the split between financial assets, non-financial assets and debts. Figure 4 displays the trends in each of these components, which are expressed here in terms of the average value per adult. Echoing the trends in total wealth, net worth per adult trended upwards from 2000 until the financial crisis caused it to fall by approximately 10%. After 2008, average global wealth increased each year and now exceeds the pre-crisis level. Using constant USD exchange rates yields a smoother graph and a single significant downturn, after which the recovery has continued unabated.

The time series for the financial and non-financial components of wealth per adult closely follow the pattern for net worth, and this year both returned above the pre-crisis peak in 2007. At the start of the millennium, financial assets accounted for well over half of the household portfolio, but the share decreased until 2008, at which point the global wealth portfolio was split equally between financial and non-financial assets (mostly property). In the period since 2008, the balance has again tipped towards financial assets, which have been worth about 10% more than non-financial assets for the past couple of years.

On the liabilities side of the household balance sheet, average debt rose by 80% between 2000 and 2007, and then leveled out. It now amounts to USD 8,900 per adult, unchanged from a year ago. Expressed as a proportion of household assets, average debt has moved in a narrow range, rising from 16.6% in 2000 to 20% in 2008 and then falling every year. The current proportion is 17.3%. Trends in household debt vary widely across countries. Since the start of the century, household debt has grown at a particularly fast rate in transition countries, and more recently in emerging market economies.

The composition of household portfolios varies widely and systematically across countries. The most persistent feature is the rise in the relative importance of both financial assets and liabilities with the level of development. For instance, financial assets account for 43% of gross assets in Europe and 67% in North America, but just 14% of gross assets in India. Household debt as a percentage of gross assets is 16% in both Europe and North America, but only 6% in India and 9% in Africa. There are also variations in portfolios unrelated to the level of development. Some developed countries, such as Italy, have unusually low liabilities (10% of gross assets), while others have surprisingly high debt, for example Denmark (31% of gross assets). In addition, the mix of financial assets varies greatly, reflecting national differences in financial structure. The share of equities in total financial assets, for example, ranges from 42% in the USA down to just 17% in Germany and 9% in Japan.

Focus on the Eurozone

The macroeconomic problems facing Eurozone countries have attracted much attention in recent years. Some of the repercussions - for example, low growth rates, volatile equity prices and depreciation of the euro relative to the USD - affect household wealth, so the release by the European Central Bank (ECB) of results from the first wave of its Household Finance and Consumer Survey provides a timely and welcome source of additional information on assets and debts in the Eurozone area. Some of the findings from the ECB data were unexpected and highly controversial: for example, the suggestion that average wealth in Germany is significantly lower than that in Cyprus and Malta. Here we review what our data says about wealth trends in the Eurozone, and compare our wealth estimates with those of the ECB.

Figure 5 plots the wealth per adult for the whole Eurozone area since the start of the century and compares the graph with the world and European average. Using current USD exchange rates, Eurozone wealth per adult rose by almost 150% between 2000 and 2007, then dropped by about 20% and has remained relatively flat since 2008. The pattern for Europe as a whole was similar, but average global wealth followed a different path, increasing at a slower pace during the first half of the period, then making up most of the deficit after the financial crisis.

It turns out that the relative performance portrayed in Figure 5 is almost entirely due to appreciation of the euro versus the USD during the early part of the century, and the subsequent depreciation. Using constant USD exchange rates produces the graph depicted in Figure 6. Wealth per

Figure 4

Global trends in wealth per adult

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Non-financial wealth
Debt

Figure 5

Eurozone wealth per adult at current USD exchange rates

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 6

Eurozone wealth per adult at constant USD exchange rates



Figure 7

Wealth per adult in Eurozone countries, 2013

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



adult in the Eurozone now marches in tandem with the rest of Europe for the entire period since 2000, and is also in tandem with the rest of the world until 2007. The rest of the world suffered slightly more than the Eurozone (and Europe) during the financial crisis, but has rebounded with wealth growth about twice as fast in the years since 2008.

Variation in average wealth across the Eurozone

Wealth per adult was EUR 154,900 in mid-2013 for the Eurozone as a whole, but there are significant differences between countries (see Figure 7). Our estimates indicate that average household wealth in Austria, Germany, Ireland and the Netherlands is similar to the Eurozone level, but wealth is about 20% higher in Italy and Belgium, and about 50% higher in France and Luxembourg. Countries lower down the ranking include Spain and Cyprus with about 60% of the Eurozone average, Greece with half of the Eurozone average, and Estonia and Slovakia with less than 20% of the Eurozone level. The country positions remain relatively stable over time, although some variations are evident. For example, France has moved up from mid-table since the year 2000, while Ireland has moved down a little in the last few years.

Figure 8

Wealth per adult in Eurozone countries: Credit Suisse vs ECB



Comparison of Credit Suisse and ECB wealth estimates

The ECB results from the Household Finance and Consumer Survey suggest a markedly different pattern across the 15 Eurozone countries for which data was collected (Estonia and Ireland were not included in the first survey). Most of the data were collected in 2010, although figures for Finland, Greece and the Netherlands refer to 2009, and those for Spain refer to 2008. The ECB crosscountry comparisons are framed in terms of wealth per household, which complicates matters given that household size varies across the countries. To facilitate comparability with our results, the ECB figures for wealth per household have been converted into corresponding figures for wealth per adult. This causes a few changes in the rankings in the average wealth table, but the differences are not significant.

Figure 8 shows the two sets of estimates for the countries and years concerned, with the countries ordered according to the Credit Suisse estimates of wealth per adult reported in the Global Wealth Report. The most prominent features are the ECB values for Cyprus and Malta, which are about triple our estimates, and the ECB level for Luxembourg, which is 50% higher. Interestingly, these are the three Eurozone countries to which we give the

lowest wealth data quality rating: wealth data for Luxembourg and Malta are classed as "poor", and Cyprus is regarded as "fair".

Our estimate of wealth per adult exceeds the ECB value for most of the other countries. Our value is about 20% higher for Finland, Germany and Greece, about 35% higher for Italy and the Netherlands, and 50% above the ECB level for France. This leads to some notable reversals in the country comparisons. For example, the average adult in France has more than double the wealth of that in Cyprus according to our estimates, but less than half the level according to the ECB. Malta has 50% more wealth per adult than the Netherlands according to the ECB, but our calculations suggest that the Dutch are more than twice as rich.

Components of wealth in Eurozone countries

Looking in more detail at the components of wealth reveals even more glaring discrepancies. For the Eurozone as a whole, ECB wealth averaged 84% of our estimated level. The ECB figures capture 115% of our valuation of non-financial assets, but only 59% of our household debts, and just 33% of financial assets (see Table 1). Regarding country level differences, we estimate that the ECB has uncovered only 79% of non-financial assets in

Table 1

Comparison of Credit Suisse and ECB estimates of components of wealth per adult

		ECB	Credit Suisse	Ratio of ECB to Credit Suisse values (%)				
Country	Year	Wealth per adult (EUR)	Wealth per adult (EUR)	Wealth per adult	Financial assets per adult	Non-financial assets per adult	Debts per adult	Data quality
Austria	2010	156,844	137,095	114	40	151	41	Satisfactory
Belgium	2010	189,682	193,297	98	53	140	71	Satisfactory
Cyprus	2010	322,455	97,005	332	41	489	85	Fair
Finland	2009	100,781	118,816	85	38	108	82	Good
France	2010	137′690	212,984	65	36	79	56	Good
Germany	2010	117,372	138,235	85	38	120	71	Good
Greece	2009	69,283	82,587	84	16	104	34	Satisfactory
Italy	2010	134,255	182,806	73	19	101	34	Good
Luxembourg	2010	375,156	238,225	157	32	248	75	Poor
Malta	2010	163,847	52,030	315	47	790	37	Poor
Netherlands	2009	100,719	133,072	76	31	172	82	Good
Portugal	2010	70,844	67,822	104	21	161	38	Satisfactory
Slovakia	2010	35,989	16,413	219	33	245	21	Satisfactory
Slovenia	2010	71,307	51,386	139	16	206	34	Satisfactory
Spain	2008	135,413	93,178	145	33	186	57	Good
Eurozone		125,242	148,542	84	33	115	59	

France, but exaggerates non-financial assets in Cyprus by a factor of almost five and in Malta by a factor of almost eight. Less than 40% of household debt is revealed in the ECB results for Greece, Italy, Malta, Portugal, Slovakia and Slovenia, and less than 30% of financial wealth appears in the ECB figures for Greece, Italy, Portugal and Slovenia. While some of these discrepancies may have legitimate explanations, it seems implausible that non-financial assets in Cyprus are worth three times as much as in Germany or the Netherlands, or that Cyprus has double the financial assets of Italy. More significantly, the ECB figures suggest that non-financial assets in the Eurozone are worth five times as much as financial assets, and ten times as much as net financial assets (when debts are subtracted). This does not square with everyday experience.

Household balance sheets versus survey data

Some of the discrepancies between the ECB results and our own may arise from the different way in which the figures are calculated. Our estimates are based on household balance sheets (HBS) which have been constructed for financial assets and debts in all Eurozone countries, although only four Eurozone countries have HBS data for non-financial assets as well. The ECB wealth estimates do not make use of these HBS data, but instead rely wholly on household surveys. While HBS data try to cover all household assets, household wealth surveys typically exclude assets that households are unlikely to report accurately, including financial items such as cash, antiques and collectibles, personal loans (as an asset), and equity in occupational pension plans. Together, these comprise over half of all household financial assets in some countries. In addition, the assets of small businesses are treated as real assets in the ECB framework, whereas HBS data apportion the financial assets of small businesses to the financial side of the balance sheet. Finally, non-profit institutions serving households (like churches, hospitals, universities) are often included with the household sector and typically inflate asset values by 5%–10%. All of these reasons lead us to expect that our estimates of financial assets will be higher than the ECB results, and that expectation is borne out in practice.

Sources of errors in wealth survey data

Apart from differences in the coverage of assets and debts, the only other source of differences between the Credit Suisse and ECB valuations of financial assets and debts is errors in the data. We believe that the HBS data are less prone to error because they are assembled using the best evidence from a range of sources. Household wealth surveys, on the other hand, are subject to two kinds of non-sampling error: differential response rates – the fact that wealthier people are less likely to respond – and reporting error, which most usually comprises under-reporting of financial assets and debts. Differential response is thought to cause underestimation of 20%–30% or more, while under-reporting of some financial assets, for example bank accounts, can range up to 50%.

Differential response has less of an impact on non-financial assets because the largest component is owner-occupied housing, and housing is less concentrated in the hands of the wealthier individuals (who may fail to respond to the survey) than stocks and bonds. Reporting error may be even less problematic because, compared to financial assets, homeowners tend to report the value of their houses with much greater accuracy - within 2%–6% of the true value according to a number of studies. As regards debts, homeowners may be happy to report an outstanding mortgage, but less comfortable revealing short-term loans and credit card balances. So the 50% shortfall indicated in Table 1 is in line with what might be expected from under-reporting of debts.

Conclusions

While the Global Wealth Report aims to provide the best information on household wealth, we recognize that reliable estimates of household wealth remain a challenge. The ECB data is a welcome new source of evidence which we have used this year to improve our estimates of wealth distribution in Eurozone countries, and may use in future to improve our techniques for estimating wealth levels. On balance, however, the ECB results do not lead us to radically change our view of wealth in the Eurozone. We have confidence in the HBS data which underpin our figures for financial assets and debts throughout the Eurozone, and which also report non-financial assets in the core countries of France, Germany, Italy and the Netherlands. We believe that the differences between the Credit Suisse and ECB figures revealed in Figure 8 and Table 1 are largely due to our wider coverage of financial assets and "teething problems" in the smaller countries where wealth surveys were conducted for the first time. Survey problems of differential response and reporting error can be addressed through careful research and improved survey strategies. It is to be hoped that over time the ECB survey results for the smaller countries will become more reliable through such efforts.

Our estimates for the years 2008 to 2013 suggest that wealth per adult changed very little in the Eurozone countries during that period. Austria may have edged up a little, and the Netherlands shaded down a touch, but we see no significant change in the relative country rankings. When the ECB conducts the next round of wealth surveys, we hope that our predictions for wealth per adult in Eurozone countries can be used as a benchmark for comparison with the survey results.





The global wealth pyramid

This chapter looks at the pattern of wealth ownership across individuals, examining not only the top echelons of wealth holders, but also the often neglected middle and bottom sections of the wealth pyramid. Two-thirds of adults in the world have wealth below USD 10,000 and together account for merely 3% of global wealth, while the 32 million dollar millionaires own 41% of all assets.

Wealth disparity

Personal wealth varies across adults for many reasons. Some individuals with little wealth may be at early stages in their careers, with little chance or motivation to accumulate assets. Others may have suffered business setbacks or personal misfortunes, or live in parts of the world where opportunities for wealth creation are severely limited. At the other end of the spectrum, there are individuals who have acquired a large fortune through a combination of talent, hard work or simply being in the right place at the right time.

The wealth pyramid in Figure 1 captures these differences in striking detail. It has a large base of low wealth holders, alongside upper tiers occupied by progressively fewer people. In 2013 we estimate that 3.2 billion individuals – more than two-thirds of adults in the world – have wealth below USD 10,000. A further one billion (23% of the adult population) fall within the USD 10,000 – 100,000 range. While the average wealth holding is modest in the base and middle segments of the pyramid, their total wealth amounts to USD 40 trillion, underlining the potential for novel consumer products and innovative financial services targeted at this often neglected segment.



The remaining 393 million adults (8% of the world) each have net worth in excess of USD 100,000. They include 32 million US dollar millionaires, a group that comprises less than 1% of the world's adult population, yet collectively holds 41% of global household wealth. Within this group we estimate that 98,700 individuals are worth more than USD 50 million, and 33,900 are worth over USD 100 million.

The base of the pyramid

The different strata of the wealth pyramid have distinctive characteristics. Although those in the base level are spread widely across all regions, representation in India and Africa is disproportionately high, while Europe and North America are correspondingly underrepresented (see Figure 2). The base tier has the most even distribution across regions and countries, but it is also the most heterogeneous, spanning a wide range of family circumstances. In developed countries, only about 30% of the population fall into this category, and for most of these individuals, membership is a transient or lifecycle phenomenon associated with youth, old age, or periods of unemployment. In contrast, more than 90% of the adult population in India and Africa are located within this band. In some low-income African countries, the percentage of the population in this wealth range is close to 100%. For many residents of low-income countries, life membership of the base tier is the norm rather than the exception.

Middle class wealth

The one billion adults located in the USD 10,000-100,000 range are the middle class in the context of global wealth. The average wealth holding is close to the global average for all wealth levels, and total net worth of USD 33 trillion provides this segment with considerable economic clout. This is the tier whose regional composition most closely matches the regional distribution of adults in the world, although India and Africa are underrepresented and China is over-represented. The contrast between China and India is particularly interesting. India hosts just 4% of the global middle class, and the share has been rising quite slowly in recent years. China's share, on the other hand, has been growing fast and now accounts for more than onethird of global membership, almost ten times higher than India's.

High wealth segment of the pyramid

The regional composition changes significantly when it comes to the 393 million adults worldwide who make up the high segment of the wealth pyramid – those with net worth over USD 100,000. North America, Europe and the Asia-Pacific region (omitting China and India) together account for 89% of the global membership of this group, with Europe alone home to 153 million members (39% of the total). This compares with 2.8 million adult members in India (0.7% of the global total) and a similar number in Africa. The pattern of membership changes once again when attention shifts to dollar millionaires at the top of the pyramid. The number of millionaires in any given country is determined by three factors: the adult population size, average wealth and wealth inequality. The United States scores high on all three criteria and has by far the greatest number of millionaires: 13.2 million, or 42% of the worldwide total (see Figure 3). A few years ago the number of Japanese millionaires was not far short of the United States figure. But the number of US millionaires has crept up just as the number of Japanese millionaires has fallen - especially this year. As a consequence, the share of global millionaires from Japan has dipped below 10% for the first time in 30 years or more.

The eleven remaining countries with more than 1% of the global total are topped by the European G7 countries, France, Germany, the United Kingdom and Italy, all of which have shares in the 5–7% range. China is close behind with a 4% membership share and seems likely to overtake the leading European countries within a decade. Sweden and Switzerland have relatively small populations, but their high average wealth elevates them to the list of countries which have at least 300,000 millionaires, the required number for 1% of the world total.

Changing membership of the millionaire group

Changes to wealth levels since mid-2012 have affected the pattern of wealth distribution. The rise in average wealth combined with a population increase has raised the number of adults with at least USD 10,000 by about 10%. The number of millionaires worldwide has risen by 1.8 million, of which the United States alone accounts for 1.7 million new members (see Table 1). It may seem strange that the Eurozone acquired so many new millionaires last year, most notably in France (287,000), Germany (221,000), Italy (127,000), Spain (47,000) and Belgium (38,000); but this simply compensates in part for the big drop in millionaire numbers experienced a year ago. Australia, Canada and Sweden also ceded millionaires in 2011-2012 and now appear among the top ten gainers. Japan completely dominates the list of countries that shed millionaires, accounting for 1.2 million losses, or 98% of the global total.

High net worth individuals

To estimate the pattern of wealth holdings above USD 1 million requires a high degree of ingenuity because at high wealth levels the usual sources of wealth data – official household surveys – become increasingly unreliable. We overcome this deficiency by exploiting well-known statistical regularities to ensure that the top wealth tail is consistent with the annual Forbes tally of global billionaires

Figure 2

Regional membership of global wealth strata

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 3 Dollar millionaires by country of residence

Taiwan 1% Spain 1% Sweden 2% Switzerland 2% Canada 3% Australia 4% USA 42% China 4% Italy 5% UK 5% Germany 5% France 7% Rest of world 12% Japan 8%

and similar rich list data published elsewhere. This produces plausible estimates of the global pattern of asset holdings in the high net worth (HNW) category from USD 1 million to USD 50 million, and in the ultra high net worth (UHNW) range from USD 50 million upwards.

While the base of the wealth pyramid is occupied by people from all countries at various stages of their lifecycles, HNW and UHNW individuals are heavily concentrated in particular regions and countries, and tend to share fairly similar lifestyles, participating in the same global markets for luxury goods, even when they reside in different continents. The wealth portfolios of individuals are also likely to be similar, dominated by financial assets and, in particular, equity holdings in public companies traded in international markets. For these reasons, using official exchange rates to value assets is more appropriate than using local price levels.

We estimate that there are now 31.4 million HNW adults with wealth between USD 1 million and USD 50 million, most of whom (28.1 million) lie in the USD 1-5 million range (see Figure 4). This year, for the first time, more than two million adults are worth between USD 5 million and 10 million, and more than one million have assets in the USD 10-50 million range. Two years ago Europe briefly became the region with the greatest number of HNW individuals, but North America regained the lead and now accounts for a much greater number: 14.2 million (45% of the total) compared to 10.1 million (32%) in Europe. Asia-Pacific countries excluding China and India have 5.2 million members (17%), and we estimate that there are now more than one million HNW individuals in China (3.6% of the global total). The remaining 804,000 HNW individuals (2.5% of the total) reside in India, Africa or Latin America.

Ultra high net worth individuals

Worldwide we estimate that there are 98,700 UHNW individuals, defined as those whose net worth exceeds USD 50 million. Of these, 33,900 are worth at least USD 100 million and 3,100 have assets above USD 500 million. North America dominates the regional rankings, with 48,000 UHNW residents (49%), while Europe has 24,800 individuals (25%), and 14,200 (14%) reside in Asia-Pacific countries, excluding China and India.

Among individual countries, the USA leads by a huge margin with 45,650 UHNW individuals, equivalent to 45% of the group (see Figure 5) and almost eight times the number in China, which is in second place with 5,830 representatives (5.9% of the global total). This year Switzerland (3,460) moved up to fourth place leapfrogging Japan (2,890) and the United Kingdom (3,190), but still behind Germany (4,500). The number of UHNW individuals in Japan actually fell this year. The numbers in Canada, Hong Kong and Russia went up, but not as fast as in other countries, so they dropped a place or two in the rankings. A strong showing of UHNW individuals is also evident in Turkey (1,210), which moved up a couple of places, and in India (1,760), Brazil (1,700), Taiwan (1,370) and Korea (1,210), all of which retained their positions in last year's country rankings.

Conclusion

Differences in personal asset holdings can be captured by a wealth pyramid, in which millionaires are located in the top strata and the base tiers are populated with poorer people. Commentaries on wealth often focus exclusively on the top part of the pyramid, which is unfortunate because USD 40

Table 1

Change in the number of millionaires by country, 2012–2013

Main gains							
Country	Adults (thousand) with wealth above USD 1m						
	2011 2012 change						
USA	11,534	13,216	1,682				
France	1,924	2,211	287				
Germany	1,514	1,735	221				
Italy	1,323	1,449	127				
UK	1,412	1,529	117				
Sweden	406	506	100				
China	1,033	1,123	90				
Spain	355	402	47				
Canada	948	993	46				
Belgium	231	269	38				
World	29,867	31,680	1,814				

Main losses								
Country	Adults (thousand) with wealth above USD 1m							
	2012 2013 chang							
Japan	3,964	2,655	-1,309					
Brazil	233	221	-12					
Argentina	32	27	-5					
South Africa	47	43	-5					
Russia	88	84	-4					
Egypt	25	22	-3					
World	29,867	31,680	1,814					

trillion of household wealth is held in the base and middle segments, and satisfying the needs of these asset owners may well drive new trends in consumption, industry and finance. Brazil, China, Korea and Taiwan are countries that are already rising quickly through this part of the wealth pyramid, with Indonesia close behind and India growing fast from a low starting point.

At the same time, the top-of-the-pyramid segment will likely continue to be the strongest driver of private asset flows and investment trends. Our figures for mid-2013 indicate that there are now over 30 million HNW individuals, with more than one million located in China and 5.2 million residing in Asia-Pacific countries other than China and India.

Changing fortunes

At the apex of the pyramid, 98,700 UHNW individuals are now worth more than USD 50 million. The recent fortunes created in China lead us to estimate that 5,830 Chinese adults (5.9% of the global total) now belong to the UHNW group, and a similar number are residents of Brazil, India or Russia.

While there is little reliable information on trends over time in the wealth pyramid data, it seems almost certain that wealth has been growing faster in the top strata of the wealth pyramid since at least the year 2000, and that this trend is continuing. For instance, total global wealth grew by 4.9% from mid-2012 to mid-2013, but the number of millionaires in the world grew by 6.1% during the same period, and the number of UHNW individuals rose by more than 10%. It therefore appears that the world economy remains conducive to the acquisition and preservation of large and mediumsized fortunes.

Figure 4

The apex of the pyramid

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 5

Ultra high net worth individuals 2013: selected countries



Wealth mobility

The wealth pyramid provides a snapshot of wealth ownership among adults. The overall features change slowly over time, but the strata are fluid, and individuals seldom remain in the same place over the whole of their lives. This chapter discusses wealth mobility, supplementing what is known about changes in individual wealth positions with new material based on our global wealth estimates.

Introduction

The wealth pyramid depicts in stark fashion the differences in personal asset holdings present in today's world. At the apex of the pyramid, the top two per cent of adults account for half of all global wealth, while the bottom half of the pyramid collectively owns less than one per cent of net worth. The exact wealth pyramid numbers vary from year to year depending on prevailing economic conditions, particularly equity price movements. But changes in the shares of wealth over time tend to be very modest, both within countries and worldwide. Thus the distribution of wealth is both highly unequal and relatively stable over time.

While the wealth pyramid provides a snapshot of wealth ownership at a given point of time, this is not the complete picture. Within the overall structure, individuals – and generations of the same family – move regularly between the various strata. The extent to which the disparity evident in the wealth pyramid is tolerated – perhaps even encouraged – depends crucially on these dynamic considerations: the ability of individuals to accumulate wealth, and the degree to which the opportunities are more equal, wealth holdings should change with greater frequency and magnitude; in other words more wealth mobility should be observed.



Mobility has been widely studied in economics in the context of transitions in and out of unemployment, and in and out of poverty. Earnings and income mobility have also been given attention. In other social science disciplines, social and occupational mobility have been core topics for many years, and very often refer to intergenerational transitions, rather than movements within generations. The study of wealth mobility poses special difficulties, because the asset holdings of specific individuals, or groups of individuals, need to be tracked through time. As a consequence, there is very little direct evidence via sample surveys, although other unconventional sources of information can help fill in the gaps. In addition to reviewing survey evidence, we discuss recent findings based on the analysis of rare surnames across many generations, and summarize results derived from modeling changes in global wealth distribution. But first we take a look at a



readily available source on changes in the wealth holdings of specific individuals, namely those who appear on the Forbes list of world billionaires.

Mobility of billionaires

Tracking changes in the asset holdings of ultrahigh net worth individuals over time has become easier due to the regular publication of rich lists for a growing number of countries. Several studies have examined movements into and out of the Forbes 400 list of the 400 wealthiest Americans, and analyses could also be undertaken for the UK using the Sunday Times Rich List, and for China, India, and several other countries with similar data. Given our global perspective, we will focus on wealth mobility among those who appear on the Forbes list of the world's billionaires during the period 2000 to 2010. To improve accuracy, the Forbes lists for 2000 and 2001 have been merged into 613 names for 2000-01, which are compared against the 693 names listed in 2005 and the 1,011 names recorded in 2010. Table 1 shows the number of billionaires in the G7 and BRIC countries, the percentage of the 2000-01 billionaires still on the list in 2005 and in 2010, and the percentage of the 2005 billionaires remaining in 2010. The increase in number of billionaires is particularly evident in BRIC countries, where the number of billionaires nearly doubled between 2000-01 and 2005, and nearly quadrupled between 2005 and 2010, raising the fraction of billionaires in BRIC countries from 5% of the world total in 2000–01 to 19% in 2010. Particularly striking is the rise from 2 to 64 billionaires in China from 2005 to 2010. Also notable is the decline in the number of billionaires over the decade in France, Italy and, most especially, Japan.

Studies of mobility often make a distinction between structural and exchange mobility. Pure exchange mobility refers to changing positions within an unchanging overall distribution. In contrast, structural mobility relates to the movements induced by a change in the overall distributional pattern. Given the expansion in the number of billionaires, especially between 2005 and 2010, structural considerations lead us to expect a low degree of downward mobility - it should have been relatively easy for billionaires to remain in the elite group. However, wealth mobility was surprisingly high. Less than two-thirds of the 2000-01 Forbes billionaires survived until 2005, and barely half (52%) survived the decade. The higher five-year "survival rate" (76%) for the 2005 billionaires compared with the 66% rate for the 2000-01 group suggests less mobility at the extreme upper-end of the world wealth distribution, possibly confirming the reduced downward mobility linked to the expansion in overall billionaire numbers.

Comparisons between countries

Table 1 indicates that the chance of a billionaire remaining a billionaire is broadly similar across countries, although there are some notable outliers and some interesting wealth mobility differences between countries. Among the G7 countries, France, Italy and Japan might be expected to have a lower percentage of stayers because their billionaire ranks shrank considerably over the decade. However, Canada, Germany and the UK also have fairly low retention rates. Among G7 countries, the United States has by far the highest fraction of stayers, with 78% of the 2000–01 billionaires surviving to 2005 and 65% remaining in 2010. This may reflect the fact that US billionaires have higher mean wealth than billionaires elsewhere, so that they have to fall further on average to exit the list. In addition, they face little or no exchange rate risk; in other countries, for those close to the billionaire threshold, entry and exit from the billionaire list is sometimes due simply to fluctuations in the USD exchange rate.

Among the BRIC countries, China had only one billionaire in 2000-01, no longer present in 2005, and two billionaires in 2005, both of whom had left by 2010. The notable feature for China is the sharp increase in the number of billionaires after 2005, reflecting the rapidly lengthening upper tail of the Chinese wealth distribution, resulting in high upward structural mobility. The BRIC country in which billionaires have the highest chance of surviving is Russia, where six of the original eight billionaires from 2000-01 were still on the list in 2005 and five were still present in 2010. Of the 26 Russian billionaires in 2005, 25 of them were still on the list in 2010 – a higher survival rate than any other BRIC or G7 country. The number of Russian billionaires more than doubled between 2005 and 2010, so the high survival rate likely reflects low downward structural mobility in the upper wealth tail, as well as higher than average wealth among world billionaires and - possibly - state protection of billionaire interests.

The lower-than-expected level of billionaire retention rates, and the variations observed across countries, call for a more detailed explanation. The structural impact of expanding billionaire numbers

Table 1

Mobility of Forbes World Billionaires, 2000–2001 to 2010

Source: Authors' calculations using Forbes world billionaire lists.

Country	Number of billionaires				ntage of 2000-01 res still on list in:	Percentage of 2005 billionaires still on list in:	
	2000-01	2005	2010	2005	2010	2010	
Canada	18	17	24	56	44	88	
France	19	14	12	63	47	79	
Germany	47	57	51	60	40	74	
Italy	17	10	13	47	41	70	
Japan	43	24	22	51	33	58	
United Kingdom	18	24	29	56	39	79	
United States	269	342	405	78	65	77	
G7 Total	431	488	556	70	55	76	
Brazil	10	9	18	40	30	89	
China	1	2	64	0	0	0	
India	9	13	50	44	56	85	
Russia	8	26	63	75	63	96	
BRIC Total	28	50	195	50	46	88	
World	613	693	1011	66	52	76	

has already been noted, along with fluctuations in exchange rates. The overall economic environment can also be expected to contribute to wealth mobility, especially episodes of market turbulence and severe recession, such as the one experienced in 2005–2010. The final obvious factor is mortality. Billionaires tend to be older than the average adult, and perhaps 10%-20% are likely to die in any 5-year period. Their exit from the Forbes list of billionaires counts as mobility here even when one or more billionaire heirs spring onto the list to replace the decedent. This could affect wealth mobility comparisons between countries - for example, between China, where the wealthy are relatively young, and Japan, where billionaires are older on average.

Billionaire spells

Drawing conclusions about mobility using the Forbes list of world billionaires is complicated by the fact that the number of people on the list changes each year, sometimes by a large amount. This problem may be circumvented by limiting attention to the top 100 billionaires in each year. Figure 1 summarizes the survival records for this smaller group, and provides a more continuous history of billionaire spells by reporting annual data for the period 2001 to 2013.

Starting with the top 100 billionaires in a given year from 2001 to 2012, Figure 1 traces the number remaining in the top group in each year up to 2013. On average, 17 of the top 100 billionaires exit the group within one year. If this exit rate was constant and no one returned to the top 100, then

only ten of the top 100 billionaires in year 2001 would still be present in 2013. In fact 37 of the 2001 cohort remained on the list in 2013. There are two reasons for this. First, many of those who exit the top 100 list return in later years. These people are typically on the margins of the top 100, and may enter and exit the group depending on their fortunes that year and the prevailing USD exchange rate. Secondly, those who have been members of the top 100 for some time are less likely to exit the group in future, if only because their wealth is probably some way above the membership threshold. The term "duration dependence" is used to refer to similar considerations in the context of spells of unemployment or poverty.

The "survival curves" depicted in Figure 1 show that mobility increases with the length of the time period - as expected - but the increase tails off, and about one-third appear to remain in the top 100 indefinitely. The mobility pattern for succeeding cohorts is fairly similar, and there is little evidence of a trend toward greater or lesser mobility over time. However, the curve for the 2002 cohort is steeper than that for the 2001 cohort, suggesting slightly greater mobility. There is also a hint that the curves flatten out earlier for the cohorts from 2006 to 2009, indicating less mobility during this period. For each of the cohorts from 2011 and 2012, 88 names remained in the top 100 list after one year, the highest survival rate seen in the chart, and well above the average figure of 83. While it is unwise to draw firm conclusions from a small sample, it appears that the last couple of years have been a period of comparative stability in the land of the top billionaires.

Figure 1



Number of Forbes billionaires remaining in the top 100 over time, 2001-2013

Source: Authors' calculations using Forbes world billionaire lists.



The impact of the global financial crisis

The most interesting and striking feature of Figure 1 is the apparent departure from the normal pattern in the aftermath of the global financial crisis. The first-year survival rate dropped suddenly for the 2008 cohort of top 100 billionaires. Only 74 remained on the list in 2009. The smallest number of survivors for any other base year is 80, and the average figure across all years is 83. Interestingly, 16 of the 26 leavers were not among the top 100 in 2007. So 16 billionaires appeared in the top 100 in 2008 and then promptly dropped out in 2009. This reflects the enhanced volatility of the financial markets during this period.

The abrupt departure of so many from the list of top 100 billionaires in 2009 was matched, of course, by an equal and offsetting entry of others. Some of the entrants had never been on the list before, but others returned after an absence. Those returns account for the rise in the survival rate in 2009 for the cohorts of 2001 to 2004. A similar return phenomenon occurs in 2010 for the 2008 cohort itself, reflecting the restoration of some of the market losses experienced by the top billionaires in 2009.

Sources of wealth mobility

There are many reasons why individual wealth levels vary over time. As a birth cohort ages, its members rise and fall in wealth relative to each other, and relative to members of other cohorts. Some of this mobility could be due to structural factors, for example members of one generation doing comparatively worse than the baby boomers at any given age. But much is exchange mobility. While the latter can reflect random effects or luck, it can also be caused by other factors that change relative wealth within a cohort, such as education, migration, occupational choice, saving rates, inheritance and investment choices. Some of these variables reflect individual choice, others family background or the institutional environment. Finally, as a cohort ages its average wealth first tends to rise compared with the country's overall average and then decline during retirement. This age-related movement induces a form of exchange mobility – it happens even when the overall distribution of wealth is stable.

Another useful perspective considers wealth mobility in relation to the three possible sources of wealth change: savings; gifts and bequests; and capital gains. The accumulation of saving generates life-cycle or self-accumulated wealth, with differences across families resulting from differences in labor income and saving rates. Changes in this source of wealth tend to be gradual and to generate moderate levels of inequality. In contrast, inheritance or capital gains can cause large and abrupt changes in wealth for the recipients. Thus they tend to be an important cause of wealth mobility in the short run. However, gifts and bequests can also have the opposite effect, as they may be used by parents to offset the lower earnings of their less fortunate offspring, preventing some downward wealth mobility.

Intragenerational wealth mobility in the USA

Evidence on mobility is often summarized in a transition matrix indicating the percentage of those in a given initial state x who are later found in end state y. Table 2 reports a wealth transition matrix for families of men aged 45–59 and women aged 30–44 in 1966 and 1967, and is derived from net worth in the "mid-1960s" compared to values ten years later (the "mid-1970s"). Wealth quintiles (lowest 20%, next 20% etc.) are used for the initial and end states, so the rows and columns refer to the same number of observations, and each of the rows and columns sum to 100%.

From one viewpoint, wealth mobility appears to be sizeable: averaging the diagonal elements shows that 51% of the sample transit to a different quintile within a ten-year period. On the other hand, few people transit very far: 87% of the households in Table 2 are found in the same or an adjacent quintile after ten years. Further analysis of the sample revealed little evidence of age effects, although this may reflect the focus on prime age men and women: age effects may well be larger for the population as a whole, since this would include, for example, elderly people running down their wealth in retirement.

The groups with the highest levels of wealth mobility included those aged 30-39, the more highly skilled, workers in the service sector, higher educated individuals, women, those whose marital status changed, blacks, and those who did not own their home. These results suggest that there can be a dark side to wealth mobility. The higher mobility of the young, blacks and women may reflect loss of earnings, periods of unemployment, episodes of poor health, divorce and other unhappy events, as much or more than they do rising fortunes. Some of these results may reflect the conditions prevailing around 1970 in the USA, so that at other times, or in other places, the relative wealth of single people or blacks, for example, could rise rather than fall. But the upward wealth mobility associated with high skills and education seems likely to persist, along with the downward mobility associated with divorce, ill health and death of family members.

Intergenerational mobility

In addition to wealth mobility within a generation, there is also great interest in intergenerational mobility, which has been studied for a long time using probate and tax records on wealth left at death. Wealth mobility within and between generations is affected by similar factors, but there are a couple of significant differences. First, while there is no natural time period to study mobility within a generation, intergenerational wealth movements are invariably considered over a generation (or several generations).

Second, estate taxes and patterns of estate division have an impact on intergenerational mobility, but little or no bearing on mobility within a generation.

Francis Galton pioneered the study of intergenerational links in the 19th century, and popularized the "regression toward the mean" framework, which allows a single parameter β to reflect the degree of mobility, or more accurately, the degree of rigidity, since higher values of β indicate lower mobility. When comparing the heights of fathers and sons, Galton estimated β to be about twothirds. This is a useful benchmark for intergenerational mobility, since height is perhaps the inherited personal characteristic most evident and most easily measured. If wealth opportunities are open to all, then much lower values of β are expected.

An early study of intergenerational wealth mobility in the UK traced the close relatives of wealthy male decedents from the mid-1920s, and found that about a third of the sample had inherited most of their wealth, another third owed their wealth partly to inheritance and partly to their own efforts, and a final third appeared to be self-made. A similar study for the 1960s and 1970s found that the fraction of self-made individuals had increased a little and the fraction of inheritors was somewhat lower. It also estimated the "regression toward the mean" parameter β and reported values ranging from 0.48 to 0.59 for the intergenerational wealth data. Related USA work for the state of Connecticut obtained β = 0.8 after correcting for sample selection bias. This broadly agrees with recent new evidence based on wealth data for people with rare surnames discussed below which yields estimates of β for the UK between 0.7 and 0.8. In contrast, the values of β obtained for intergenerational rigidity in earnings, education and occupation in the USA, UK, Germany, Sweden and other countries have tended to be somewhat lower, ranging from about 0.2 to 0.5. But there are good reasons why wealth mobility is expected to be lower than earnings mobility, so the value of β for intergenerational wealth is almost certain to lie between 0.5 and 0.8. As already noted, the midpoint of this range is close to the value obtained for the relationship between the heights of parents and children.

Mobility estimates based on rare surnames

Techniques have recently been developed to measure mobility over multiple generations based on people with rare surnames. People with common surnames, like Smith and Brown in the UK, have about the same distribution of wealth as the population as a whole. But those with a particular rare surname generally do not. This allows β to be estimated from changes over time in the wealth of people with different rare surnames.

Table 2

Probability (%) of being in a wealth quintile in the 1970s, given the wealth quintile in the 1960s

	Wealth q	uintile in n	nid-1970s					
		1	2	3	4	5		
	1	62	24	9	3	2		
	2	27	39	21	10	3		
Wealth quintile in mid-1960s		8	23	37	26	6		
	4	5	7	25	41	21		
	5	2	4	7	20	68		

In two exercises beginning in the early 1800s and in the mid-1800s, using data spanning five generations, a study for the UK obtained estimates of β ranging from 0.7 to 0.8 for pairs of adjacent generations. Interestingly, these estimates do not decline over time, suggesting that the major social and economic changes seen in the UK in the last two centuries have had little impact on intergenerational wealth mobility. Supporting evidence for high persistence in social status and wealth has been provided by studies of the prevalence of initially wealthy rare surnames in elite occupations or at elite universities. One study looked at the representation among Cambridge and Oxford ("Oxbridge") students in the UK, physicians, attorneys and members of parliament over the last two centuries of surnames whose holders were wealthy in the 1800s. Relative to their occurrence in the population at large, these surnames were found to be over-represented at Oxbridge by a factor of 95 in 1800–1829, and were still over-represented by a factor of 11 in the period 1980-2009, indicating that regression toward the mean takes place, but that convergence is far from complete even after 180 years. Similar results were found for attorneys and MPs. For doctors, there was actually no decline from 1830-1859 to 1980-2009 in the representation of elite surnames from the early 1800s.

Surname evidence from other countries

Similarly striking results have been obtained for a number of other countries, including Sweden, China, Japan, India and the USA. In Sweden, for example, use of noble names has been largely limited to members of families that belong to the guild of nobles, the Riddarhuset, founded in 1626. These names are still common in the ranks of wealthy Swedes, and are over-represented among professional groups such as physicians. Estimates of β can also be obtained from these studies of status and occupation, and are found to lie mostly in the range from 0.7 to 0.8.

The very high estimates of intergenerational rigidity obtained from analyses based on rare surnames contrast with the evidence on wealth mobility over shorter periods of time, and with evidence on the source of wealth of high net worth individuals, which tends to suggest that fortunes have been largely self-made in recent years. There are good reasons to expect that wealth mobility in the long run will be lower than predicted from forward projections of short-run wealth mobility. The "regression toward the mean" framework typically assumes zero correlation in the error terms over time, thus discounting the possibility of random shocks that last a single generation, or other changes that may be reversed in future years. Measurement error is a classic example of such a shock, but short-run fluctuations in stock prices provide another example. A rich investor who died in 2009 would likely have left a much smaller

estate than if he died in 2007, but that does not mean that he was less successful over his lifetime, or that the prospects for his descendants are worse. These temporary shocks can obscure or disguise the underlying persistence of a family's true economic resources. In statistical terms they cause a downward bias in β . Looking at groups of people with the same rare surname averages out some of these temporary shocks, removing some of the bias in estimated β , and making it more likely that the true pattern of wealth mobility will be revealed.

Simulating wealth mobility

To compensate for the lack of direct evidence on many aspects of wealth mobility, we have tried to model the underlying process governing wealth changes in order to explore wealth mobility in a global context. The analysis is based on the "regression toward the mean" framework described above, with parameters chosen so that transitions between quintiles over ten years closely approximate the empirical data reported in Table 2. We distinguish between regions of the world, and make future projections based on the average growth rate of wealth per adult for each region over the past decade. However, no attempt is made to model individual country differences, apart from China and India, which are treated as separate regions as usual. The overall framework is necessarily simplified. Nevertheless, some interesting insights emerge.

We first consider how wealth mobility varies with the length of time between observations, the expectation being that a longer time period allows greater opportunity for changes in wealth levels. We focus on transitions between wealth quintiles as in Table 2 and summarize the results in a more succinct way by merging the probabilities of jumps of one class, two classes etc. Thus, Table 2 generates a 49% chance of remaining in the same quintile over ten years, a 19% chance of moving up one group, and so on. The probabilities sum to one and are depicted in the lowest row in Figure 2. In normal circumstances, a transition matrix will converge over long periods of time to a "perfectly mobile" structure for which the chance of ending up in any given state is the same for all starting positions. The elements in Table 2 are then identical, and a probability of 4% is attached to each of the 25 cells. This yields the mobility pattern in Figure 2 labeled "perfect mobility."

The intermediate rows in Figure 2 were obtained by applying the Galtonian regression toward the mean framework to wealth estimates for North America in 2013. The model was calibrated so that the ten-year transition pattern approximates data for the USA. We report results for ten-year intervals up to 60 years and regard 30 years as representing roughly one generation, and 60 years as two generations or one lifetime.



Figure 2

Simulated probability of moving between wealth quintiles in North America over different time horizons

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



Figure 3

Probability of moving between wealth quintiles over 30 years and 60 years, by region

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



■ Down 4 ■ Down 3 ■ Down 2 ■ Down 1 ■ No change ■ Up 1 ■ Up 2 ■ Up 3 ■ Up 4

The results shown in Figure 2 conform to expectations. As the time period increases, the chance of remaining in the same wealth guintile diminishes, and the chance of a large transition improves. But the time gradient is less than might have been anticipated. The probability of being found in the same wealth quintile is still 36% after one generation, and 31% after two generations. This probability will eventually shrink to the "perfectly mobile" figure of 20%, but it seems unlikely to get close to this value for several centuries. Notice that the estimates do not imply that 31% remain in the same quintile in each of the 60 years: for example, a person's wealth state can be recorded as unchanged if they move up a couple of guintiles during one time period, and then revert back again later.

Convergence toward the end points of the "perfectly mobile" pattern provides the other main indicator of wealth mobility. Our estimates show that the chance of moving up or down four quintiles is less than 2% after one generation, and less than 3% after two generations, well below the 8% that will be achieved if the process continues indefinitely. This again suggests that ten generations or more have to lapse before the wealth of an individual in North America is completely unrelated to the wealth of their ancestors. Our simulations for North America are therefore highly consistent with the relatively immobile outlook that emerges from the intergenerational evidence discussed earlier.

Regional variations

Repeating the exercise for other regions yields the results displayed in Figure 3 for 30-year and 60-year horizons, with countries arranged in accordance with the probability of upward mobility. Differences across regions are much greater than may appear at first sight. North America is evidently an outlier, less mobile than other regions, especially over longer time horizons. Europe is next in line, followed by the middle group of Asia-Pacific, Latin America and Africa. The most mobile regions are China and India: both regions are close to being perfectly mobile over 60 years, and China is not far off even after one generation. China's position as the most wealth mobile region is unlikely to come as a surprise, but India is not usually regarded as a candidate for the most mobile region, and North America is not widely viewed as the least mobile continent. Although the causes of these regional differences are not entirely clear, some aspects of the explanation can be identified.

The same process governing wealth change has been applied to all regions, and – given the lack of evidence to the contradictory – the same parameter values have been chosen everywhere. So the explanation cannot be found in the underlying model. One obvious factor is wealth inequality, since the mobility ranking has some correspondence with the regional values of the Gini coefficient for wealth inequality, which is highest in Asia-

Pacific, Africa, North America and Europe, and lowest in China, Latin America and India. The connection with mobility between wealth quintiles is plausible, because a given change in wealth is more likely to result in a transition between quintiles if wealth distribution is more compressed. The growth rate of wealth is another obvious factor, not least because over the past decade India experienced the highest rate of wealth growth using a constant USD exchange rate. Higher wealth growth will magnify wealth changes and make a transition to another quintile more likely, although the endpoints of the wealth quintiles will also be scaled accordingly, neutralizing much of the impact. Revision of the quintile endpoint for the world as a whole is less correlated with the growth rates of individual regions, so differences in regional growth differences will certainly tend to increase mobility between global wealth quintiles, the pattern for which is also depicted in Figure 3. Global wealth mobility has similarities with the "relatively immobile" pattern for North America, most likely reflecting the very high level of wealth inequality for the world as a whole.

The changing structure of the wealth pyramid

Our final exercise looks at wealth mobility in the context of the global pyramid in order to answer questions such as: "What is the chance that a person in China today with wealth between USD 10,000 and USD 100,000 will be a millionaire in 30 years' time." As will become evident, differences in regional growth rates have a major impact on the results. We examine a long time horizon and – in the absence of an obvious alternative – project past

growth rates forward. To avoid unnecessary complications, we also assume the number of adults remains fixed at the 2013 level. These simplifications mean that the following results should not be regarded as estimates or predictions, but rather the outcome of one "what if" question which provides insights into possible future scenarios.

As Figure 4 shows, future projections based on average growth rates during the past decade have an enormous impact on the structure of the wealth pyramid. The fraction of adults with wealth below USD 10,000 is 68.7% in 2013, but falls at an even pace by almost a half over a 30-year period. Most of the persons displaced move to the second tier with wealth between USD 10,000 and USD 100,000, causing the fraction of adults in this range to rise by two thirds. By year 40, tier 2 is the most common wealth range, although tiers 1, 2 and 3 each contain roughly 30% of the global adult population. Tier 2's pre-eminence is short-lived, since outward migration from tier 2 to tier 3 exceeds the inward migration from tier 1. The wealth range from USD 100,000 to USD 1 million has the greatest number of worldwide members from year 50 onward. Meanwhile, the number of dollar millionaires accelerates slowly initially, but the group has the greatest net inward migration after 40 years. Two generations ahead, future extrapolation of current wealth growth rates yields almost a billion millionaires, equivalent to 20% of the total adult population. If this scenario unfolds, then billionaires will be commonplace, and there is likely to be a few trillionaires too - eleven according to our best estimate.

The regional composition of the pyramid tiers also changes, driven almost entirely by regional

Figure 4

Change in global wealth pyramid over 60 years

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013



🛛 < USD 10 000 🔳 USD 10 000–100 000 🔳 USD 100 000–USD 1 m 📕 > USD 1 m 💻 Africa 🔳 India 📕 Latin America 🔳 China 📕 Asia Pacific 📕 Europe 🔳 North America

growth differences. During the past decade, the rate of wealth growth at constant USD exchange rates has been roughly 8% in India and China, 6% in Latin America and Africa, and 4% in North America and Europe, with Asia-Pacific lagging with 2% growth, largely due to the performance of Japan. When these rates are extrapolated into the future, the much reduced number of adults with wealth below USD 10,000 becomes dominated by Asia-Pacific whose share of the membership grows from 25% in 2013 to 56% in 60 years' time (see Figure 4). In contrast, the fraction from India – which starts with a similar share in 2013 (23%) – drops to just 3%.

With the same wealth growth rate as India and higher initial wealth per adult, China sees its membership of the bottom tier vanish. China's membership in the range from USD 10,000 to USD 100,000 also shrinks significantly, from 37% in 2013 to 4% in future. The displaced individuals are found in the wealth tier above, where the Chinese share grows from 7% to 32%. More dramatic still is the impact on the millionaires, where the fraction from China jumps from 4% in 2013 to 47% of the group in 60 years' time. The fraction of millionaires from India also jumps by a factor of ten. But while the number of millionaires in North America, Europe and Asia-Pacific rises significantly in absolute terms, the percentage share drops from 45% to 14% for North America, from 32% to 19% for Europe, and from 17% to 4% for Asia-Pacific (excluding China and India). To emphasize again, these are not predictions of future events, but simply the consequences of extrapolating historical wealth growth rates forward for the next 60 years.

Mobility within the global wealth pyramid

The major changes which have affected the wealth pyramid during the past decade, and which we assume will continue into the future, have profound consequences for wealth transitions because the upward shift of population between wealth ranges



imparts a strong structural element to wealth mobility. In particular, growth in the number of Chinese and Indians in the upper reaches of the wealth pyramid provides a huge structural magnet for upward mobility in those countries. The outcome is evident in Figure 5 where, as in Figures 2 and 3, we combine some of the cells in the underlying transition matrix to summarize more succinctly the results pertaining to mobility over a 30-year period.

China and India have the highest growth rate and both regions are characterized by a very high chance that individuals will move up exactly one tier over the course of 30 years. Almost half of the Chinese sample falls in this category, and the proportion in India is not much less. China and India also have in common a very small probability – less than 3% – that individuals will drop downward in the wealth pyramid. However, adults in China have a

Figure 5

Probability of movement between wealth pyramid strata over 30 years, by region

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2013

Down 3 Down 2 Down 1 No change Up 1 Up 2 Up 3




very high chance -24% – of moving up two strata, in contrast to India for which the corresponding value (6%) is well below the figure for Latin America and North America (both 15%), and even lags the value for the world as a whole (12%). Given the similarity in the wealth growth rates of China and India, the source of the different outcomes likely relates to the pattern of wealth distribution in the two countries.

At the other end of the mobility scale, almost two thirds of Africans are found in the same wealth range after one generation, and more than half of adults in Asia-Pacific are also immobile in this sense. North America and Europe are somewhat unusual because these regions record the highest chance of moving from the bottom stratum to the millionaire class: 8% and 5%, respectively, compared to 2% for China and 1% for the world as a whole. But these millionaire entrants in North America and Europe are offset by the greater chance of downward mobility in these regions, which is the highest in the world apart from Asia-Pacific.

Conclusion

While the wealth pyramid changes only gradually over time, there is a great deal of movement within it. Individuals and families rise and fall in the wealth distribution. When opportunities are more equal, wealth holdings tend to change with greater frequency and magnitude, and wealth mobility is higher. We have used statistical evidence, and simulations linked to that evidence, to study patterns of wealth mobility in the world today. Both for the population as a whole, and for those at the top of the pyramid, there is significant mobility, although not as much as is sometimes thought. While some individuals do alternate wildly between rags and riches, many stay for their whole lifetime in the same wealth neighborhood for people of their age. Dividing the population into wealth quintiles, about half the population remains in the same quintile after ten years, and we estimate that at least a third would be in the same quintile after thirty years. Looking across generations, the latest evidence points to more persistence in family wealth than previously thought. Crude comparisons of the wealth of adjacent generations suggest that virtually complete mobility would occur over three or four generations. But there is significant persistence if corrections are made for measurement error and other biases, or if data is used covering several generations.

To explore the implications of current wealth trends and mobility for the future, we have simulated the evolution of the global distribution of wealth on the assumption that regional growth rates of wealth per adult over the last decade continue, and that patterns of wealth mobility seen within countries like the USA also apply in other countries. The results are illustrative, rather than being predictions or forecasts, since country growth rates may well change. The populations of fast-growing countries like China and India are found to rise rapidly in the wealth pyramid, while the bottom tiers of the pyramid become increasingly dominated by people in other countries in the Asia-Pacific region, as well as Africa. Within regions, wealth mobility tends to be higher within regions with more equal distributions of wealth, and in those with higher growth rates. Among regions, China has the highest mobility, followed by India. North America has the lowest mobility, with Europe just a little more mobile. For the world as a whole, wealth mobility is similar to that seen in North America and Europe.

The outlook for wealth to 2018

Global wealth is projected to rise by nearly 40% over the next five years, reaching USD 334 trillion by 2018. Emerging markets are responsible for 29% of the growth, although they account for just 21% of current wealth, while China will account for nearly 50% of the increase in emerging economies' wealth. Wealth will primarily be driven by growth in the middle segment, but the number of millionaires will also grow markedly over the next five years.

Figure 1

Change in aggregate wealth by income group



Introduction

Global wealth reached a new all-time high in 2013 and is expected to continue rising in the coming years. However, there is great uncertainty regarding the path of wealth in the future. Like other economic variables, wealth does not grow at a steady pace, but is subject to gyrations due to economic cycles and asset price fluctuations. Financial wealth in particular is inextricably linked to stock prices, and can therefore be volatile and hard to predict. The estimates in this chapter represent a central scenario of how wealth is likely to evolve over the next five years. However, several other outcomes, either better or worse, are also possible.

There is considerable scope for global wealth growth to accelerate in the coming years. Emerging markets tend to grow faster than developed economies. They are now an increasingly important segment of the global economy and are expected to account for a greater share of world wealth (Figure 1). In addition, several high-income economies in the Eurozone are just exiting from recession, while growth momentum elsewhere in the developed world is relatively healthy. The increase in global wealth will also be underpinned by gains in



the middle segment (wealth range of USD 10,000 to 100,000 per adult). The number of millionaires worldwide is projected to rise by 50% to 47.6 million by 2018.

Global wealth growth to accelerate slightly

Since 2000, global wealth at prevailing USD exchange rates has increased at an annual rate of 6.2%, lagging the rate of nominal GDP growth, which was 6.6% according to IMF estimates. This is due in part to the decline in financial and real asset prices during the global financial crisis. Over the next five years we believe that the rate of annual wealth growth will accelerate by 0.4% to 6.6%. This will generate an additional USD 93 trillion in global wealth over the five-year forecast horizon, equivalent to an extra USD 14,900 per adult. This will raise global wealth in 2018 to USD 334 trillion, or USD 67,000 per adult. This forecast is more conservative than last year's, when we anticipated that total wealth would increase by 8% per annum. The reasons for this downgrade include more demanding equity market valuations as well as more conservative expectations regarding the growth prospects of the global economy.

The USA will remain the undisputed leader in terms of aggregate wealth, with total net

worth approaching USD 100 trillion by 2018. At today's prices, this corresponds to approximately USD 88 trillion, 23% higher than the 2013 level (Figure 2). Japan will likely remain the second wealthiest economy in the world until China overtakes it, probably at some point in 2016. By 2018, Chinese wealth is expected to approximate the level of US wealth in 1993. The Eurozone, currently accounting for 24% of global wealth, will likely see its share decline a little to 23%. In absolute terms, however, its wealth will rise by more than 29% over the 5-year period, putting the Eurozone where the US was in 2011.

Among emerging markets, it is worth highlighting the cases of Brazil and Indonesia. Since 2000, Brazil has seen its wealth triple – equivalent to an annual growth rate of 10.4% – while net worth in Indonesia has increased more than six-fold. If these rapid rates of growth continue, aggregate wealth in Indonesia will rise to where the USA was in the early 20th century, while Brazil will improve by the equivalent of 18 USA years. India will also see a significant increase in its wealth, which from a historical point of view, is expected to take it from where the USA was in 1912 to the USA level 15 years later (in 1927). However, the recent deceleration in growth in

Figure 2

Total wealth in the USA and relative position of selected economies

Source: Credit Suisse





Figure 3



Figure 4

Evolution of wealth by component

Source: Credit Suisse



Figure 5 World wealth distribution (% adults)

Source: Credit Suisse



2013 2018

these economies, as well as the weakness in their currencies, means that there are significant downside risks to this forecast.

Top of the league table

In terms of wealth per adult, Switzerland, Australia and Norway will likely remain at the top of the league table, while the USA will still be among the top five nations. Large emerging economies, such as Brazil, China, Russia and South Africa, may see a substantial improvement in their wealth ranking as a result of relatively high GDP growth. Among large developing economies, wealth per adult in Turkmenistan and Chile will likely approach the levels of some developed economies, such as Slovenia and Malta.

Emerging markets to increase their share of global wealth

Between 2000 and 2013, emerging markets nearly doubled their share of global wealth from 12% to 21%, thus increasing their share of global wealth by 0.7% each year. We expect that the pace of wealth generation in emerging markets will continue to be greater than that of developed markets, although this difference will be less striking in the next five years. The share of wealth of emerging markets will likely reach 23% by 2018, an increase of 0.5% on average each year (Figure 3). The annual rate of increase is projected to be 9.1% for emerging markets against 6.1% for developed markets.

Among major economies, China will likely be the largest gainer in relative terms. Since 2000, Chinese wealth has increased by 13.3% per annum, and we expect it to continue to grow at a rapid pace of 10.1% over the next five years. China accounts for 9.2% of global wealth, and this will rise to 10.7%, while the USA will lose some share, but will still account for 29% of global wealth in 2018. Wealth in India will also grow very rapidly, at an annual pace of 9.3%, although a fraction down on the 9.5% growth rate since 2000. On a per adult basis, China will increase its wealth by USD 12,100 to USD 34,400 and India by USD 1,900 to USD 6,600.

Financial assets will drive wealth gains

Advances in wealth will result from gains in both real and financial assets. Financial assets accounted for more than half of gross wealth during the past decade, but the collapse in asset prices during the financial crisis caused the share of wealth to fall in 2008. Since then, financial assets have staged a remarkable recovery and are up 32% (6.4% per annum) against an increase of 23% (4.8% per annum) for real assets. We believe that financial assets will continue to do well, and will rise by 7.5% per annum, against an increase of 5% per annum for real assets (Figure 4).

Middle segment

We expect the middle segment of the wealth pyramid – individuals with wealth holdings between USD 10,000 and 100,000 – to represent 27.4% or 1.4 billion adults by 2018 (Figure 5). Of the additional 307 million adults in the middle segment by 2018, 89% are from Asia-Pacific (including China and India) and an astonishing 58% are from China alone (Figure 6).

Who wants to be a millionaire?

The catching-up process by the emerging economies is also evident in the increasing proportion of members in the top segment of global wealth distribution. Our estimates suggest that the number of global millionaires could exceed 47 million in 2018, a rise of almost 16 million. While the number of millionaires in emerging economies is still far below the level in the USA (18.6 million) or Europe (15.0 million), it is expected to increase substantially in the next few years. Asia-Pacific is expected to increase its number of millionaires by 3.8 million, reaching 9 million by 2018. China could see its number almost doubling by 2018, raising the total to 2.1 million. Pushed by Brazil (an extra 186,000) and Mexico (an extra 87,000), we also expect a substantial increase in the number of millionaires in Latin America, which will reach almost 1 million in five years' time.

Methodology

We project total wealth at the country level by forecasting the two components of wealth - financial and non-financial – separately, but by using the same inputs (GDP and inflation) from the IMF's latest World Economic Outlook database. For aggregate financial wealth we estimate a 5-year projection of market value using a dividend discount model at the country level. To compute the discount rate we assume normalization in market conditions (risk appetite and volatility). We estimate dividends by using analyst consensus expectations and trend GDP growth. Then we estimate the 5-year forward price target and finally compute the corresponding change in market value (this typically grows at a higher rate than the price index). We have estimates for 42 countries in local currency and they are converted to dollars using IMF exchange rate projections.

For non-financial wealth, we base our model on a regression of non-financial wealth on GDP and inflation and we produce a forecast based on IMF projections of these variables. Again, forecasts are in local currency and they are converted into dollars using IMF FX projections. For countries where we do not have projections we use GDP per capita growth to forecast net worth, and assume that the percentage in financial/non-financial/debts is the same as for 2013.

Figure 6

China wealth distribution (% of adults)

Source: Credit Suisse



Table 1

Number of millionaires in 2013 and 2018 (regions and selected countries)

Source: Credit Suisse

	Num	Change	
	2013	2018	(%)
USA	13,216	18,618	41
France	2,211	3,224	46
UK	1,529	2,377	55
Germany	1,735	2,537	46
Brazil	221	407	84
Korea	251	449	79
Mexico	186	273	47
Singapore	174	235	35
Indonesia	123	194	58
Russia	84	133	58
Hong Kong	103	168	63
Turkey	102	158	55
Poland	45	85	89
Malaysia	38	67	76
Chile	54	86	59
Africa	90	163	81
Asia-Pacific	5,266	9,074	72
China	1,123	2,112	88
Europe	10,236	15,027	47
India	182	302	66
LAC	569	936	64
North America	14,213	20,001	41
World	31,680	47,614	50



Wealth of nations

Countries differ greatly in the levels and pattern of wealth holdings. The following pages provide a sample of the variety of country circumstances and the range of experiences.

While wealth data are good in the rich countries that have most of the world's wealth, data quality is patchy elsewhere. The countries discussed below differ with regard to the reliability of the source material. For each of the countries covered, data quality is rated no worse than "fair," meaning that there is at least an independent source of data on wealth, such as a recent household survey. In most of the selected countries quality is "good," indicating that there is an official household sector balance sheet as well as an acceptable way to estimate wealth distribution. A "satisfactory" rating is given when the data are good but somewhat out of date.

The accompanying charts summarize some of the most important facts, and are typically based on wealth per adult in US dollars at the prevailing exchange rate. The first chart shows changes in average wealth for the period 2000–13. Since exchange-rate fluctuations can alter the apparent trend, an alternative series is provided for each country using the respective average USD exchange rate for the 13 years. A typical pattern is a mild decline in average wealth between 2000 and 2002, an increase until 2006 or 2007, and a drop in 2008 with a subsequent recovery. Generally, wealth in 2013 is higher than in 2000, and in most cases it is now higher than in 2007. Many currencies appreciated against the US dollar over the period, so wealth growth often appears slower when measured using average exchange rates.

Countries that show typical features over 2000–13 include the USA itself (where there is no exchange rate factor), Canada, Denmark, France and the UK. Some countries, notably China, India and Indonesia, record significantly above-average growth rates. At the other extreme, Japan's wealth has grown very little in terms of US dollars, and not at all in yen. Experiences varied in the immediate aftermath of the 2007 financial crisis. The UK, for example, recorded a very large drop in wealth, but Switzerland registered little decline in US dollar terms. Wealth in most major OECD economies has now regained or exceeded the 2007 level in constant exchange rate terms.

Our second chart shows the breakdown of countries' assets between financial and real (nonfinancial) forms, as well as average debt and net worth. Worldwide, financial assets on average comprise 52% of total gross assets, and debt accounts for 15%. There are several countries, however, for which financial assets are more important, including Japan, the USA and Switzerland. At the other extreme, real assets dominate in India and Indonesia, and in Australia and France among the wealthy countries.

The last chart shows wealth distribution. There are some interesting contrasts. For example, 94% of adults in India have net worth less than USD 10,000, whereas the corresponding percentage is only 58% in China. Moreover, the percentage of those with very little wealth is surprisingly high in some developed countries, while in others it is very low. This reflects such factors as the availability of credit, including student loans, and the number of young adults who live separately from their parents, making their wealth more evident in household surveys.

United States

Full steam ahead

The US economy and its stock markets performed well in 2012-13, leading to a fifth successive year of rising wealth. Average wealth was USD 192,400 at the turn of the century and rose fairly steadily until 2006, before falling in the run-up to the financial crisis. After a fairly tumultuous period, wealth per adult has fully recovered, and is now 10% above the 2006 level. The forthcoming reduction in monetary stimulus announced by the Federal Reserve raises doubts about whether the recovery will continue, but the signs are positive for household wealth in the immediate future.

The USA is unusual in having a very high proportion of assets (68%) reported as held in financial form, partly because it includes business equity wholly as a financial asset. Adopting the more usual procedure of treating unincorporated enterprises as part of the household sector, would reduce the share to about 60%, which is still relatively high. The USA has a larger number of active shareholders than most other countries. Besides, compared with many other OECD countries, it has more economic activity in the private sector than the public sector, and more outward foreign investment - both of which rely partly on financing by households through their ownership of bonds, stocks and other financial instruments. Debts of USD 56,800 per adult are not extreme by international standards.

Compared to the rest of the world, the USA has a high proportion of the population with wealth above USD 100,000, and the percentage becomes even more disproportionate at higher wealth levels. The USA has by far the greatest number of members of the top 1% global wealth group, and accounts for 42% of the world's millionaires. The number of UHNW individuals with wealth above USD 50 million is nearly eight times that of the next country, China.

Country summary 2013		
Population	327	million
Adult population	239	million
GDP	68,673	USD per adult
Mean wealth	301,140	USD per adult
Median wealth	44,911	USD per adult
Total wealth	72.1	trillion USD
Dollar millionaires	13,216	thousand
Top 10% of global wealth holders	98,102	thousand
Top 1% of global wealth holders	18,166	thousand
Quality of wealth data	ል ቅቅቅቅ	good

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



United States of America

Japan

Shock therapy

After two decades of coasting along, Japan is now experimenting with shock treatment: a combination of fiscal stimulus and monetary expansion labeled "Abenomics." The results include a small increase in GDP, a large rise in the stock market, and significant depreciation of the yen. In the year to mid-2013, wealth grew 2% in yen terms, but dropped 21% when measured in USD, wiping out household wealth totaling USD 5.8 trillion.

Despite falling behind over the years in rankings according to wealth per adult, Japan still ranks second after the USA in terms of aggregate wealth. It began the new century with wealth per adult of USD 191,900. Average wealth today is 13% higher in US dollar terms, but 1% lower when measured in Japanese yen. This decline is due to the combined effect of the lackluster performance of equities until recently, low interest rates and investment income, a housing market that has been on a downward trend since the 1990s, and a reduced saving rate.

The decline in property values means that financial wealth is now the major component of household wealth, making up 59% of gross assets. Debts have been declining and are modest by international standards, at 14% of total assets.

Japan has a relatively equal wealth distribution by international standards, reflected in a Gini coefficient of 64%. Together with its high average wealth, this relative equality means that few individuals have assets below USD 10,000. The proportion of the population with wealth above USD 100,000 is over six times the global average. At the turn of the century, Japan was a close second to the USA regarding the number of residents in the top 10% and top 1% of global wealth holders. Japan still retains second place, but the gap has widened considerably.

Country summary 2013

Population	126	million
Adult population	104	million
GDP	57,422	USD per adult
Mean wealth	216,694	USD per adult
Median wealth	110,294	USD per adult
Total wealth	22.6	trillion USD
Dollar millionaires	2,655	thousand
Top 10% of global wealth holders	62,869	thousand
Top 1% of global wealth holders	4,353	thousand
Quality of wealth data	****	good

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



China

Tenacious growth

Wealth per adult in China has grown robustly since 2000, almost quadrupling from USD 5,700 to USD 22,230 in 2013. Wealth fell by approximately 20% as a result of the financial crisis, but soon recovered and despite recent uncertainties is well above its pre-crisis peak. The level has increased more in US dollars than in yuan, due to the appreciation of China's currency since 2009; but most of the rise in wealth reflects real growth.

Total household wealth in China is the third highest in the world, just 2% behind Japan and 56% ahead of France (in fourth place). Due to a high savings rate and relatively well developed financial institutions, a high proportion (46%) of Chinese household assets are in financial form compared with other major developing or transition countries. At the same time, privatized housing, new construction and rural land are very important forms of wealth in China, accounting for much of the USD 12,900 in real assets per adult. Debt averages USD 1,400, equivalent to 6% of gross assets. While this is relatively low, personal debt has been rising at a fast rate in recent years.

Although significant inequality is created by the strong urban-rural divide in China, at the turn of the century overall wealth inequality was low – both by broad international standards and in comparison to other transition countries. This was due to factors such as the virtual absence of inherited fortunes, and relatively equal division of both rural land and privatized housing. Inequality has been rising strongly, however, with the increasing wealth of successful entrepreneurs, professionals and investors. China now has over one million millionaires, and more residents with wealth above USD 50 million than any other country except the USA.

Country summary 2013		
Population	1,357	million
Adult population	998	million
GDP	8,380	USD per adult
Mean wealth	22,230	USD per adult
Median wealth	8,023	USD per adult
Total wealth	22.2	trillion USD
Dollar millionaires	1,123	thousand
Top 10% of global wealth holders	36,595	thousand
Top 1% of global wealth holders	1,644	thousand
Quality of wealth data	***	fair

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



India

Emerging wealth

As the world's largest democracy with a strong federal structure and vibrant markets, India has seen rapid growth in wealth since the year 2000. Wealth per adult rose from USD 2,000 in 2000 to USD 4,700 in 2013, but the 35% rise in the adult population caused aggregate wealth to more than triple during the same period. In US dollar terms, there was a significant contraction in 2008, mostly due to depreciation of the rupee. The rupee took another dive in 2011–12, prompting a 20% decline in wealth in USD terms. Adjusted for exchange rate movements, however, wealth per capita has grown quite steadily since 2000, managing an average annual rate of 8%.

Along with most countries in the developing world, personal wealth in India is heavily skewed towards property and other real assets, which make up 86% of household assets. Personal debts are recorded at only USD 296 per adult. However, it is thought that household liabilities may be significantly underreported in the large and well-established household survey used to estimate debt in India, so the true figure may be much higher.

While wealth has been rising strongly in India, and the ranks of the middle class and wealthy have been swelling, not everyone has shared in this growth and there is still a great deal of poverty. This is reflected in the fact that 94% of the adult population has wealth below USD 10,000.

At the other end of the scale, a very small proportion of the population (just 0.4%) has net worth over USD 100,000. However, due to India's large population, this translates into 2.8 million people. India has 254,000 members of the top 1% of global wealth holders, which equates to a 0.5% share. There are 1,760 UHNW individuals with wealth over USD 50 million and 770 with more than USD 100 million.

Country summary 2013		
Population	1,263	million
Adult population	768	million
GDP	2,497	USD per adult
Mean wealth	4,706	USD per adult
Median wealth	1,040	USD per adult
Total wealth	3.6	trillion USD
Dollar millionaires	182	thousand
Top 10% of global wealth holders	3,923	thousand
Top 1% of global wealth holders	254	thousand
Quality of wealth data	***	fair

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



France

Uncertain prospects

Although the euro crisis has receded for the moment, France continues to struggle with high unemployment and low growth. Despite these challenges, it remains seventh in the world in terms of household wealth per adult.

After the turn of the century, wealth per adult grew very strongly in France, almost trebling in USD terms between 2000 and 2007. It then decreased by 15% in 2008. Recovery has proved elusive, although the pre-crisis peak was almost overtaken this year. Much of the pre-2007 rise was due to the appreciation of the euro against the US dollar. However, France also experienced a rapid rise in house prices, as a result of which real property now accounts for about two-thirds of household assets. Personal debts are just 12% of household assets, a relatively low ratio for a developed economy.

The total wealth of French households is very sizeable. Although just 1.0% of the world's adults reside in France, in terms of aggregate household wealth in current USD it ranks fourth among nations – behind China and just ahead of Germany. Europe as a whole accounts for 34% of individuals in the top 1% of global wealth holders, but France alone makes up almost one quarter of the European contingent. This reflects not only the high average net worth of French households, but also greater financial inequality than seen in most other EU countries.

Relatively few households in France are recorded as having less than USD 10,000 per adult. The proportion with assets over USD 100,000 is over six times the global average. There are more millionaires in France than in any other European country. But above USD 50 million or above USD 100 million, residents of Germany, Switzerland and the UK outnumber the French.

Country summary 2013		
Population	63	million
Adult population	48	million
GDP	57,047	USD per adult
Mean wealth	295,933	USD per adult
Median wealth	141,850	USD per adult
Total wealth	14.2	trillion USD
Dollar millionaires	2,211	thousand
Top 10% of global wealth holders	28,554	thousand
Top 1% of global wealth holders	3,579	thousand
Quality of wealth data	****	good

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3 Wealth distribution relative to world (in %)



United Kingdom

Still in recovery

The UK has some of the best data in the world on wealth holdings, with information on both the level and the distribution of wealth dating back more than a century. These data document a substantial decline in wealth concentration from 1900 to about 1970, and the relative stability of the wealth to income ratio during the same period, with the value lying between 4 and 5 for much of the time.

The picture changed around 1985, when UK wealth embarked on a period of sustained growth fuelled by a robust housing market and good equity returns, which ended with the financial crisis in 2007. At that time, the wealth-income ratio had risen above 9, the highest level recorded for any country except for Japan at the peak of its asset price bubble in the late-1980s. The subsequent fall in both real property and financial assets led to a 12% drop in average wealth measured in pounds sterling, but the simultaneous GBP depreciation caused wealth per adult in USD to plummet by 36%. Average wealth in pounds sterling has fluctuated around the pre-crisis peak in the past few years, but wealth per adult in USD still remains well below the level achieved in 2007.

Financial and non-financial assets are of roughly equal importance in the UK. Along with many other countries, household debt grew quickly as a multiple of income from 1980 onwards, tripling in value to reach 180% in 2008, although the debt to income ratio has since subsided to 150%. At 17% of gross wealth, debt is not exceptionally high by international standards.

Nowadays the pattern of wealth distribution in the UK is very typical for a developed economy. Slightly more than half the population has wealth exceeding USD 100,000, and there are 1.5 million US dollar millionaires. Also, 2.4 million people in the UK are among the wealthiest 1% in the world.

Country summary 2013		
Population	63	million
Adult population	48	million
GDP	51,824	USD per adult
Mean wealth	243,570	USD per adult
Median wealth	111,524	USD per adult
Total wealth	11.7	trillion USD
Dollar millionaires	1,529	thousand
Top 10% of global wealth holders	28,932	thousand
Top 1% of global wealth holders	2,391	thousand
Quality of wealth data	*****	good

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



Switzerland

Top of the world

Average wealth in Switzerland in 2000 was among the highest in the world. By 2011, it had more than doubled (expressed in US dollars), propelling Switzerland to the top of the global rankings, where it remains today. With wealth per adult of USD 512,600 in 2013, Switzerland is more than USD 100,000 ahead of its nearest rival, Australia. However, most of the rise in wealth since 2000 is due to the appreciation of the Swiss franc. Measured instead in Swiss francs, household wealth fell in 2001 and 2002, and then showed a gentle upward trend, interrupted only by the global financial crisis.

Given the strength of the Swiss financial sector, it is not surprising to find that most household wealth is held in financial assets, whose share of total assets is 56%. Debts average USD 121,400 per adult, one of the highest levels in the world, again reflecting the high level of financial development and the strength of the domestic currency.

Among the small group of advanced countries with long time series on wealth distribution, Switzerland is the only nation to display little or no reduction in wealth inequality over the past century. As a consequence, a large proportion of the Swiss population is located in the upper echelons of the global distribution. Switzerland accounts for 1.6% of the top 1% of global wealth holders, remarkable for a country with just 0.1% of the world's adult population. More than 90% of Swiss adults have assets above USD 10,000 and 49% of the population is worth more than USD 100,000. Over 3,400 individuals are in the UHNW bracket, with wealth over USD 50 million, and 900 have net worth exceeding USD 100 million.

Country summary 2013		
Population	8	million
Adult population	6	million
GDP	99,362	USD per adult
Mean wealth	512,562	USD per adult
Median wealth	95,916	USD per adult
Total wealth	3.1	trillion USD
Dollar millionaires	610	thousand
Top 10% of global wealth holders	3,376	thousand
Top 1% of global wealth holders	763	thousand
Quality of wealth data	ት ት ት ት ት	good

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3 Wealth distribution relative to world (in %)



Russia

No sign of growth

At the time of transition there were hopes that Russia would convert to a high skilled, high income economy with strong social protection programs inherited from Soviet Union days. This is almost a parody of what happened in practice. Efforts were made at the outset to distribute state assets equitably: most of the housing stock was given away to residents and shares in Gazprom were allocated to Russian citizens. But other choice assets in resource-rich companies went to the chosen few, and subsequent developments in a nation notorious for weak institutions have reinforced the importance of political connections rather than entrepreneurial talent.

While recent performance has been bearish, the period since 2000 as a whole has seen robust growth fuelled by a world hungry for the natural resources that Russia has in abundance. Using constant exchange rates, household wealth has risen over sevenfold, from USD 1,650 in 2000 to USD 11,900 today. Wealth per adult is above the post-crisis low, but still remains below the peak in 2007 when the US dollar bought less than 25 rubles: now it buys 33.

The quality of wealth data for Russia is mixed. Financial balance sheets are now available and indicate that gross financial assets average a little over USD 4,000. There is less information on real assets, but our estimates suggest that they are twice as high. Personal debt grew by a factor of 20 during 2000-07, and although it seems low in absolute terms, at USD 2,550 per adult, it amounts to 19% of gross assets.

Russia has the highest level of wealth inequality in the world, apart from small Caribbean nations with resident billionaires. Worldwide, there is one billionaire for every USD 170 billion in household wealth; Russia has one for every USD 11 billion. Worldwide, billionaires collectively account for 1%–2% of total household wealth; in Russia today 110 billionaires own 35% of all wealth.

Country summary 2013		
Population	139	million
Adult population	110	million
GDP	19,205	USD per adult
Mean wealth	10,976	USD per adult
Median wealth	871	USD per adult
Total wealth	1.2	trillion USD
Dollar millionaires	84	thousand
Top 10% of global wealth holders	1,011	thousand
Top 1% of global wealth holders	110	thousand
Quality of wealth data	***	fair

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3

Wealth distribution relative to world (in %)



Singapore

Robust and stable growth

Household wealth in Singapore has grown rapidly in recent years, rising from USD 112,800 at the turn of the century to USD 281,800 by mid-2013. Most of the rise is due to the high saving rate and asset price increases rather than exchange rate movements, although the latter provided a strong boost after the global financial crisis. Singapore currently ranks eighth in the world in terms of wealth per adult. Interestingly, it is now well ahead of Hong Kong, which ranked tenth in the world in 2000, just above Singapore. Wealth in Singapore grew at 7.3% per annum between 2000 and 2013 versus just 2.1% for Hong Kong. The underlying wealth data for Hong Kong are poor compared to those for Singapore, but the difference in these estimated growth rates is credible. A similar difference is found in the growth rates of per capita GDP: 6.3% per annum for Singapore compared to 3.1% for Hong Kong.

Household assets in Singapore are divided evenly between financial and real assets, reflecting strong government encouragement for both saving and home ownership. The average debt of USD 54,500 is moderate for a high wealth country, at just 16% of total assets, although it has grown fairly quickly in recent years. Singapore publishes official household balance sheet data, which means that wealth information is more reliable than for other countries in Southeast Asia, which lack such high quality data.

The distribution of wealth in Singapore reveals a moderate level of inequality. Just 20% of its people have wealth below USD 10,000, versus 69% for the world as a whole. The number with wealth above USD 100,000 is about six times the global average. Reflecting its very high average wealth rather than high inequality, 0.6% of its population or 262,000 individuals are in the top 1% of global wealth holders, while its adult population accounts for just 0.1% of the world total.

Country summary 2013		
Population	5	million
Adult population	4	million
GDP	64,393	USD per adult
Mean wealth	281,764	USD per adult
Median wealth	90,466	USD per adult
Total wealth	1.1	trillion USD
Dollar millionaires	174	thousand
Top 10% of global wealth holders	2,238	thousand
Top 1% of global wealth holders	262	thousand
Quality of wealth data	ት ት ት ት ት	good

Figure 1 Wealth per adult over time







Figure 3 Wealth distribution relative to world (in %)



Taiwan

Asian Tiger

Taiwan is a prime example of a successful Asian Tiger economy. Its average wealth is USD 151,800, well above the level of even the most successful developing and transition countries, and close to some countries in Western Europe. Wealth rose from USD 107,000 in the year 2000 to USD 167,900 in 2010, with no decline during the global financial crisis of 2007-09. Currency depreciation caused a 12% drop in wealth in USD in 2011, but wealth stayed level in domestic currency terms and has since edged upwards again. Over the entire period 2000-13, wealth per adult grew by 2.7% per annum using current USD and by 4.3% per year using constant exchange rates.

Reflecting a high saving rate and well-developed financial institutions, the composition of household wealth is skewed towards financial assets, which comprise 64% of gross assets. Debt is modest, equaling just 14% of total assets.

Relative to the rest of the world, wealth distribution in Taiwan is skewed towards the high end, with less than a quarter of the adult population having wealth below USD 10,000 compared to 69% in that bottom range for the world as a whole. Almost a third of adults in Taiwan have net worth over USD 100,000, which is four times greater than the worldwide average of 8%. The large number of Taiwanese with high wealth reflects high average wealth rather than high wealth inequality: the Gini coefficient of 74% lies in the moderate range for wealth holdings.

Country summary 2013		
Population	23	million
Adult population	18	million
GDP	26,642	USD per adult
Mean wealth	151,752	USD per adult
Median wealth	53,336	USD per adult
Total wealth	2.8	trillion USD
Dollar millionaires	309	thousand
Top 10% of global wealth holders	7,757	thousand
Top 1% of global wealth holders	457	thousand
Quality of wealth data	ት ት ት ት	satisfactory

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3 Wealth distribution relative to world (in %)



Indonesia

Impressive growth

The rise in personal wealth in Indonesia has been very strong, with the average increasing more than fourfold since the year 2000. The rebound from the Asian financial crisis of 1997–98 has been impressive. In USD terms, the global financial crisis caused a small setback, but growth recovered quickly and wealth per adult is now well above the pre-crisis level. The declines in wealth observed in 2007–08 and in 2011–12 were due to exchange rate fluctuations. In fact, in terms of domestic currency, Indonesia has recorded an increase in average wealth every year this century.

The wealth comparison between Indonesia and India is noteworthy. In some respects the two countries exhibit common features. The composition of wealth is similar, with real assets making up 84% of gross assets in Indonesia compared to 86% in India. Personal debts in both countries are very low, averaging just 5% of total assets in Indonesia and 6% in India. However, although wealth per adult in the two countries was fairly similar in 2000, with Indonesia just 23% ahead, the figure for Indonesia is now more than double that for India. This is in line with the faster pace of growth in Indonesia's GDP, which grew at an average annual rate of 13.1% between 2000 and 2013 compared with 9.9% for India.

In Indonesia, 81% of adults own less than USD 10,000, which exceeds the global figure of 69%. At higher wealth levels, there are progressively smaller numbers in relative terms, compared with the world as a whole. This reflects the fact that while wealth has risen strongly in Indonesia in recent years, it is still low by international standards. However, due to considerable dispersion in wealth distribution, 175,000 people in the country are within the top 1% of global wealth holders, and 123,000 are US dollar millionaires.

Country summary 2013		
Population	240	million
Adult population	158	million
GDP	6,104	USD per adult
Mean wealth	11,839	USD per adult
Median wealth	2,393	USD per adult
Total wealth	1.9	trillion USD
Dollar millionaires	123	thousand
Top 10% of global wealth holders	3,121	thousand
Top 1% of global wealth holders	175	thousand
Quality of wealth data	ት ት ት	fair

Figure 1 Wealth per adult over time







Figure 3 Wealth distribution relative to world (in %)



Australia

Losing momentum

In US dollar terms, household wealth in Australia grew rapidly between 2000 and 2013, apart from a brief interlude in 2008. The average annual growth rate has been 13%, but about half of the rise is due to exchange rate appreciation. Using constant exchange rates, wealth has grown on average by just 3.3% per annum since 2007. Despite this recent slowdown, Australia's wealth per adult in 2013 is USD 402,600, the second highest in the world after Switzerland. Even more strikingly, its median wealth of USD 219,500 is the highest in the world.

Interestingly, the composition of wealth is heavily skewed towards real assets, which amount on average to USD 294,100 and form 59% of gross household assets. This average level of real assets is the second highest in the world after Norway. In part, it reflects a sparsely populated country with a large endowment of land and natural resources, but it is also a manifestation of high urban real estate prices.

Compared to the rest of the world, very few Australians have net worth below USD 10,000. One reason for this is relatively low credit card and student loan debt. The proportion of those with wealth above USD 100,000 is the highest of any country – eight times the world average. With 1,762,000 people in the top 1% of global wealth holders, Australia accounts for 3.8% of this wealthy group, despite having just 0.4% of the world's adult population.

Country summary 2013			
Population	22	million	
Adult population	17	million	
GDP	93,244	USD per adult	
Mean wealth	402,578	USD per adult	
Median wealth	219,505	USD per adult	
Total wealth	6.7	trillion USD	
Dollar millionaires	1,123	thousand	
Top 10% of global wealth holders	12,463	thousand	
Top 1% of global wealth holders	1,762	thousand	
Quality of wealth data	****	good	

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3 Wealth distribution relative to world (in %)



South Africa

Emerging problems

Household wealth per adult in South Africa grew vigorously prior to the global financial crisis, tripling from USD 8,400 in the year 2000 to USD 25,800 in 2007. Exchange rate movements had little overall effect during this period. Since 2007, progress has been slower. In constant exchange rate terms, wealth declined a little in 2008, but growth soon recovered and gathered pace in 2012-13. Depreciation of the rand greatly amplified the wealth drop in 2008. This was reversed the following year, but more recent declines in the exchange rate have caused wealth per adult in USD terms to trend downwards since 2010.

Unusually for a developing country, household wealth in South Africa is largely comprised of financial assets, which contribute 71% to the average household portfolio. This reflects a vigorous stock market and sophisticated life insurance and pension industries, which are key aspects of the strong modern sector of the economy. Due in part to relatively low real estate prices, average real assets of USD 7,100 are not worth much more than the average level of debt (USD 5,000). South Africa is also unusual among developing countries in having an official household sector balance sheet, which provides a more reliable basis for the wealth composition numbers.

South Africa resembles Indonesia in having a distribution of wealth which is similar to the distribution for the world as a whole, although fewer individuals have wealth above USD 100,000. Nevertheless, we estimate that 62,000 South Africans are members of the top 1% of global wealth holders and that 43,000 are USD millionaires. While indicative of considerable wealth at the top end, these numbers are down a little from last year, reflecting the fall in the exchange rate.

Country summary 2013			
Population	51	million	
Adult population	31	million	
GDP	13,776	USD per adult	
Mean wealth	19,613	USD per adult	
Median wealth	3,051	USD per adult	
Total wealth	0.6	trillion USD	
Dollar millionaires	43	thousand	
Top 10% of global wealth holders	1,250	thousand	
Top 1% of global wealth holders	62	thousand	
Quality of wealth data	***	fair	

Figure 1 Wealth per adult over time



Figure 2 Composition of wealth per adult



Figure 3



Wealth distribution relative to world (in %)

Chile

Sustained growth

Chile has one of the strongest economies in Latin America. Compared to Argentina and Brazil, for example, its GDP is growing faster, inflation is lower, and the stock market has been performing better. Household wealth provides an even greater contrast. While GDP per capita in Chile is 36% higher than in Argentina and 26% above Brazil, average wealth in Chile is more than double that of Brazil and about three times greater than for Argentina. Since the year 2000, wealth per capita has risen 181% in terms of current exchange rates and 142% based on constant exchange rates, reflecting the strength of the peso. Using constant exchange rates, it is evident that wealth fell only slightly during the global financial crisis and has been on an upward path since that time.

Chilean households own almost as much financial wealth as real assets. Holdings of financial assets have been encouraged by low inflation, well developed financial markets, and pension arrangements which pioneered the privatization option. The home ownership rate of 70% is relatively high and contributes to substantial holdings of real property. At 14.2% of gross assets, household debts are on the low side by international standards.

Wealth per adult in Chile is USD 49,000, well above the world average, and also high relative to most emerging market countries. Compared with the world as a whole, Chile has many more people in the USD 10,000–100,000 range and fewer below USD 10,000 or above USD 1 million. Overall inequality is relatively high, as indicated by a Gini coefficient of 81.4% and by the fact that Chile has 54,000 millionaires and 76,000 adults in the top 1% of global wealth holders.

Country summary 2013			
Population	18	million	
Adult population	12	million	
GDP	22,496	USD per adult	
Mean wealth	49,032	USD per adult	
Median wealth	11,742	USD per adult	
Total wealth	0.6	trillion USD	
Dollar millionaires	54	thousand	
Top 10% of global wealth holders	1,243	thousand	
Top 1% of global wealth holders	76	thousand	
Quality of wealth data	***	fair	

Figure 1 Wealth per adult over time







Figure 3

Wealth distribution relative to world (in %)



Brazil

Slumbering giant

Brazil's average household wealth has almost tripled since 2000, rising from USD 7,900 per adult to USD 23,300. While exchange rate movements have caused fluctuations, including sizeable drops in 2008 and 2011–13, using current or constant USD exchange rates makes no difference to the overall rise over the last 13 years. Current wealth is now well above the level reached before the global financial crisis on either exchange rate basis.

Financial assets are of special importance in Brazil. At 42% of gross assets, they are not far below the 50% benchmark that represents the rough average for advanced countries. The strong representation of financial assets has been achieved despite a stock market decline of about 12% since 2009 and Brazil's earlier history of inflation, which discouraged the holding of otherwise safe financial assets (e.g. deposits) and fostered investment in real property. Household liabilities are 21% of gross assets, again reflecting financial development but also indicate vulnerability of the household sector to fluctuations in macroeconomic conditions.

Along with several other Latin American countries, Brazil has more people in the USD 10,000–100,000 range relative to the rest of the world, but fewer numbers in each of the other ranges. This may give a misleading impression that inequality is lower than average. In fact, overall inequality is relatively high, as indicated by the Gini coefficient value of 82% and by the number of wealthy residents. Brazil has 221,000 millionaires and 315,000 adults in the top 1% of global wealth holders. The high level of wealth inequality in part reflects high income dispersion, which is in turn related to very uneven education across the population and the divide between formal and informal sectors of the economy.

Country summary 2013			
Population	200	million	
Adult population	135	million	
GDP	18,613	USD per adult	
Mean wealth	23,278	USD per adult	
Median wealth	5,117	USD per adult	
Total wealth	3.2	trillion USD	
Dollar millionaires	221	thousand	
Top 10% of global wealth holders	5,552	thousand	
Top 1% of global wealth holders	315	thousand	
Quality of wealth data	***	fair	

Figure 1 Wealth per adult over time







Figure 3

Wealth distribution relative to world (in %)



Canada

High wire act

With just a mild and short recession in 2008–09, Canada weathered the global financial crisis better than the USA. The long-term rise in real estate was interrupted only briefly, and since 2008 the market has seen both new construction and house price increases. Rapid growth in mortgages has fuelled a continuing rise in household debt. Mortgage terms were tightened in 2012 and the market cooled somewhat, but there are continuing concerns. It is not clear whether the final landing will be soft or hard.

Measured in US dollars, household wealth grew at an annual rate of 6.7% between 2000 and mid–2013. Discounting exchange rate effects, the rise in wealth is a more modest 3.7% per annum. The 25% contraction in USD wealth in 2008 is also much less evident when expressed in Canadian dollars.

In some respects, the pattern of wealth holdings in Canada resembles that in the USA: in both countries, for example, financial assets account for more than half of household wealth. Canada has lower wealth per adult than the USA, and the gap grew last year from 9% to 17%, reflecting both USD appreciation and better stock market performance in the USA. However, as a result of a more equal wealth distribution, Canada has much higher median wealth: USD 90,300 compared to USD 44,900 for the USA. Relative to the USA, Canada has both a smaller percentage of people with less than USD 10,000 and a larger percentage with wealth above USD 100,000. It has 993,000 millionaires, and accounts for 3% of the top 1% of global wealth holders, despite having only 0.5% of the world's population.

Country summary 2013			
Population	35	million	
Adult population	27	million	
GDP	67,006	USD per adult	
Mean wealth	251,034	USD per adult	
Median wealth	90,252	USD per adult	
Total wealth	6.8	trillion USD	
Dollar millionaires	993	thousand	
Top 10% of global wealth holders	14,009	thousand	
Top 1% of global wealth holders	1,542	thousand	
Quality of wealth data	ት ት ት ት ት	good	

Figure 1 Wealth per adult over time





Composition of wealth per adult



Figure 3 Wealth distribution relative to world (in %)



About the authors

Anthony Shorrocks is Director of Global Economic Perspectives Ltd. After receiving his PhD from the London School of Economics (LSE), he taught at the LSE until 1983, when he became Professor of Economics at Essex University, serving also as Head of Department and Director of Economic Research for the British Household Panel Study. In 2001 he was appointed Director of the World Institute for Development Economics Research of the United Nations University (UNU-WIDER) in Helsinki where he remained until 2009. He has published widely on income and wealth distribution, inequality, poverty and mobility and was elected a Fellow of the Econometric Society in 1996. Publications include "The age-wealth relationship: A cross section and cohort analysis" (Review of Economics and Statistics1975), "The portfolio composition of asset holdings in the United Kingdom" (Economic Journal 1982), and, with Jim Davies and others, "Assessing the quantitative importance of inheritance in the distribution of wealth" (Oxford Economic Papers 1978), "The distribution of wealth" (Handbook of Income Distribution 2000), "The world distribution of household wealth" in Personal Wealth from a Global Perspective (Oxford University Press 2008), "The global pattern of household wealth" (Journal of International Development 2009) and "The Level and Distribution of Global Household Wealth" (Economic Journal 2011).

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