



Global Wealth Report 2023

Leading perspectives
to navigate the future



UBS

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Introduction



Iqbal Khan

President, UBS Global Wealth Management

Now in its fourteenth edition, the Global Wealth Report explores how wealth is created, how it varies across regions globally, and how it transforms, evolves, and migrates across generations.

This 2023 edition is brought to you jointly by Credit Suisse and UBS for the first time. By bringing our two banks together, we have created an organization stronger than ever before, even better positioned to deliver leading expertise and insights – such as the ones you’ll find in this report – to even more clients.

Over the years, the Global Wealth Report has explored a wide range of macro and micro themes surrounding the development of wealth. We’re proud to add this influential annual study with its long legacy to UBS’s portfolio of respected and equally long-running flagship reports including the UBS Billionaires Report, the UBS Global Family Office Report, and many others.

At UBS, wealth management isn’t just one thing we do, it’s who we are. Wealth management is a people business and a deep understanding of our clients, their personal circumstances and aspirations, and the world around them lies at its heart. This report – alongside our others and our award-winning Chief Investment Office insights – gives our clients unmatched intelligence to help inform their financial decisions, be they personal or business-related.

As the world’s largest truly global wealth manager, present in every major market, we are uniquely positioned to draw on knowledge and insights from across our wealth management business. This year’s report covers the estimated wealth holdings of 5.4 billion adults around the world and across the wealth spectrum. It is the most comprehensive and up-to-date source of information available on global household wealth anywhere in the world.

This Global Wealth Report reveals valuable insights about the state of our economy and society, as well as the shifting meaning and potential of prosperity. This sweeping analysis of household wealth looks to future trends, helping us to frame expectations, understand the ever-changing nature of wealth creation, and better conceive of the power of wealth to broadly benefit our society.

Today, UBS is stronger than ever and our clients can feel even more secure and even better served by our combined team. We’re proud that no other wealth manager can offer the same depth and breadth of knowledge and experience, all for our clients’ benefit. The 2023 Global Wealth Report is proof of that conviction.

Paul Donovan

Chief Economist

UBS Global Wealth Management

The global economy is experiencing a period of astonishing economic alteration. The sweeping changes of the fourth industrial revolution represent the most dramatic structural upheaval in two hundred and fifty years. Revolutions, it turns out, are revolutionary – social as well as economic relationships will be challenged by this process.

At the same time, the economic needs of humanity have evolved from the crude pursuit of material possessions represented by output economics. Society today has advanced to impact economics, adding broader demands for a sustainable and more equitable future to our traditional material demands.

Properly mobilizing private wealth is critical in this period of change. Whether as a source of investment or philanthropy, private wealth will shape the opportunities that are presented by technological change. It is private wealth that will lead the funding needed to create diverse, sustainable societies.

To mobilize global private wealth we must first understand where that wealth is, how it is created, and what policies might risk its destruction. The insights shared in this report help us to deepen this understanding and I would like to thank my colleagues at the Credit Suisse Research Institute, Nannette Hechler-Fayd'herbe and Richard Kersley, as well as the report authors: Professors Anthony Shorrocks, Rodrigo Lluberias, James Davies, and Daniel Waldenström who made this edition possible.

Wealth needs to work for a better future, and the Global Wealth Report represents the starting point in analyzing how that can happen.



Executive summary

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Global wealth declines for the first time since 2008

The 2023 edition of the Credit Suisse Global Wealth Report reflects on a year that has delivered a significant setback in what had been a consistent uptrend in the accumulation of wealth in the household sector. 2022 recorded the first fall in net global household wealth since the global financial crisis of 2008.

Measured in current nominal USD, total net private wealth fell by USD 11.3 trillion (–2.4%) to USD 454.4 trillion at the end of the year. Wealth per adult also declined by USD 3,198 (–3.6%) to reach USD 84,718 per adult at end-2022. Much of this decline comes from the appreciation of the US dollar against many other currencies. If exchange rates are held constant at 2021 rates, then total wealth increased by 3.4% and wealth per adult by 2.2% during 2022. This is still the slowest increase of wealth at constant exchange rates since 2008. Keeping exchange rates constant but counting the effects of inflation results in a real wealth loss of –2.6% in 2022.

A more detailed examination shows that financial assets contributed most to wealth declines in 2022 while non-financial assets (mostly real estate) stayed resilient, despite rapidly rising interest rates. But the relative contributions of financial and non-financial assets may reverse in 2023 if house prices decline in response to higher interest rates.

Regional and demographic themes

Regionally, the loss of global wealth was heavily concentrated in wealthier regions such as North America and Europe, which together shed USD 10.9 trillion. Asia Pacific recorded losses of USD 2.1 trillion, while Latin America is the outlier with a total wealth increase of USD 2.4 trillion, helped by an average 6% currency appreciation against the US dollar. Heading the list of losses in country terms in 2022 is the United States, followed by Japan, China, Canada and Australia. The largest wealth increases at the other end were recorded for Russia, Mexico, India and Brazil.

In terms of wealth per adult, Switzerland continues to top the list followed by the USA, Hong Kong SAR, Australia and Denmark despite sizeable reductions in mean wealth versus 2021. Ranking markets by median wealth results in a different list, with Belgium in the lead followed by Australia, Hong Kong SAR, New Zealand and Denmark.

When looked at in demographic terms, Generation X and Millennials continued to do relatively well in 2022 in the USA and Canada but were not immune to the overall wealth reduction. Broken down by race, non-Hispanic Caucasians in the USA saw their wealth decrease in 2022, while African-Americans were left almost unscathed by the downturn. In contrast, Hispanics achieved 9.5% growth in 2022, owing to their greater holdings of housing assets compared to financial assets.

Reduction in wealth inequalities

Along with the decline in aggregate wealth, overall wealth inequality also fell in 2022, with the wealth share of the global top 1% falling to 44.5%. The number of USD millionaires worldwide fell by 3.5 million during 2022 to 59.4 million people before taking into account 4.4 million “inflation millionaires” who would no longer qualify if the millionaire threshold were adjusted for inflation in 2022. Global median wealth, arguably a more meaningful indicator of how the typical person is faring, did in fact rise by 3% in 2022 in contrast to the 3.6% fall in wealth per adult. For the world as a whole, median wealth has increased five-fold this century at roughly double the pace of wealth per adult, largely due to the rapid wealth growth in China.

A brighter outlook

According to our projections, global wealth will rise by 38% over the next five years, reaching USD 629 trillion by 2027. Growth by middle-income countries will be the primary driver of global trends. We estimate wealth per adult to reach USD 110,270 in 2027 and the number of millionaires to reach 86 million while the number of ultra-high-net-worth individuals (UHNWIs) is likely to rise to 372,000 individuals.



Global wealth levels 2022

Anthony Shorrocks and James Davies

The fourteenth edition of the Credit Suisse Global Wealth Report presented this year for the first time in collaboration with UBS continues our aim of providing the most comprehensive available information on global household wealth. Wealth evolution proved resilient during the COVID-19 era and grew at a record pace during 2021. But inflation, rising interest rates and currency depreciation caused a reversal in 2022. Measured in nominal US dollars, global wealth fell 2.4% to USD 454.4 trillion, while wealth per adult dropped 3.6% to USD 84,718. These losses can be attributed to the appreciation of the US dollar, which caused global wealth to decline by 5.8%. But this was offset by inflation, which raised nominal USD values by a similar amount. Expressed in terms of real US dollars at fixed exchange rates, lower financial asset valuations caused total global wealth to fall by 2.6% in 2022 and wealth per adult to fall by 3.8%.

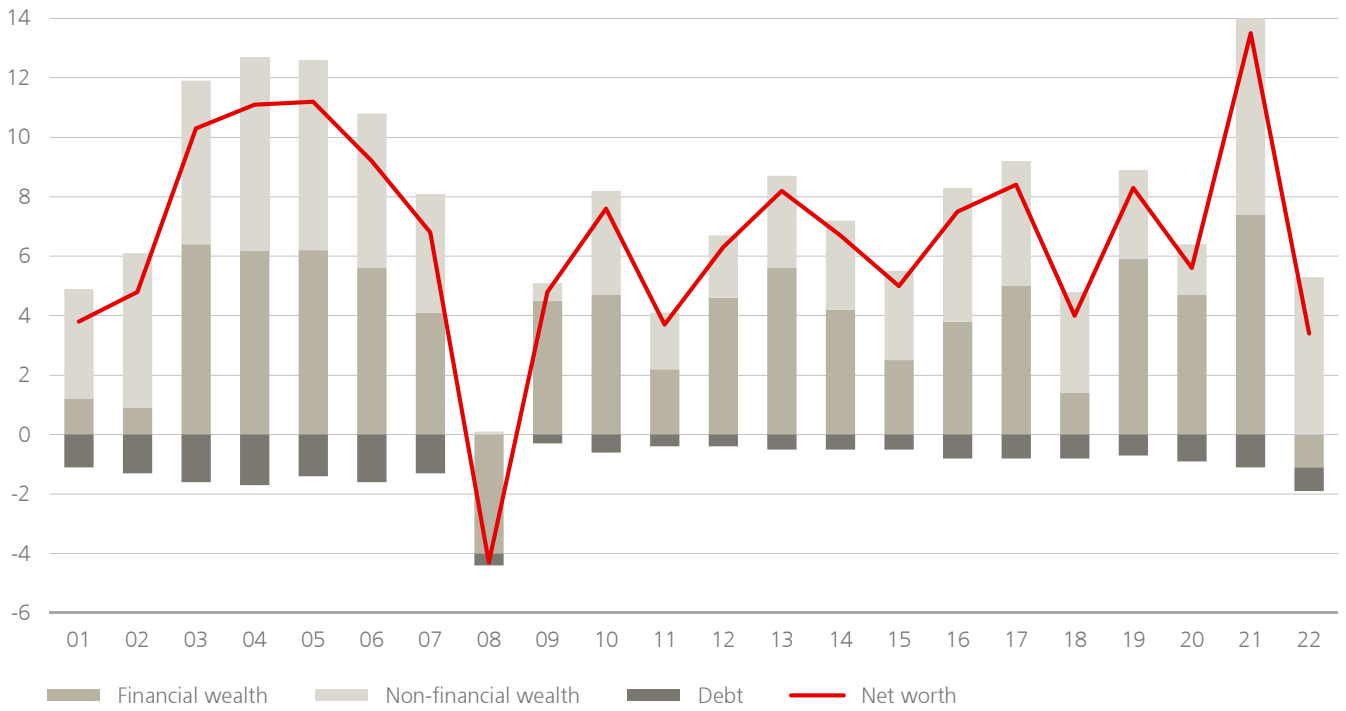
The evolution of household wealth during the past few years has been unusual in several respects. During the first phase of the COVID-19 pandemic in 2020, household wealth proved highly resilient to the economic setbacks experienced throughout the world. The financial support given to households by central government in many advanced countries, coupled with lower interest rates and limitations on consumption opportunities, raised household savings and led to widespread increases in share prices and house prices. The result was a significant rise in household wealth in many countries. In 2021, these trends were reinforced as macroeconomic activity recovered in a low-interest environment. This produced exceptionally advantageous conditions for household wealth growth, resulting in the most rapid rise in household wealth recorded.

This combination of favorable conditions was unlikely to last. The Russia-Ukraine war, alongside other factors, caused inflation to increase rapidly in 2022. This prompted rises in interest rates, which hampered economic growth, depressed asset prices and contributed to a widespread depreciation of currencies against the US dollar. As a result, measured in

current nominal US dollars, total global household wealth fell by USD 11.3 trillion, or 2.4%, to end the year at USD 454.4 trillion. This is the first decline in household wealth since the global financial crisis in 2008, and the second-largest reduction this century in terms of either absolute dollar amounts or the percentage change. Wealth per adult also recorded the second-largest reduction since 2000, dropping USD 3,198 to reach USD 84,718 per adult at end-2022, a fall of 3.6%.

While this outcome represents a break in the almost uninterrupted expansion of household wealth this century, it is less of a departure than it may appear at first sight. Further examination reveals that wealth losses are heavily concentrated among the richer nations in Europe, North America and Asia-Pacific, and affect financial assets much more than non-financial assets. Depreciation against the US dollar also plays a significant role in determining the extent of the measured losses. Indeed, depreciating currencies account for the total loss in aggregate wealth. If exchange rates are held constant at 2021 rates, then total wealth increased by 3.4% during 2022 and wealth per adult grew by 2.2%.

Figure 1: Annual change in total global household wealth and its components using smoothed exchange rates (%), 2001–22



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Figure 2: Annual change in real global household wealth and its components using smoothed exchange rates (%), 2001–22



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Trends in wealth per adult

Depreciation against the US dollar was also evident in 2021 and several other years since the financial crisis, while appreciating currencies were the norm in the early years of the century. So, to compare annual wealth growth rates this century, **Figure 1** uses smoothed exchange rates (with 2021 as the reference year) to minimize the impact of year-on-year exchange rate movements.

The overall pattern indicates fairly steady growth in total global household wealth, averaging 6.6% per year, with minor variations associated with share price and house price changes. The single major departure from the pattern of growth is the dip in 2008 linked to the collapse of asset prices during the global financial crisis. The outcome last year represents a sizable decline in growth compared to 2021, which the graph confirms as the record year this century, surpassing even the “golden years” between 2003 and 2006. At the same time, 2022 does not come close to repeating the negative growth experienced in 2008 once exchange rate changes are discounted. Nevertheless, the 3.4% growth in 2022 is the lowest rate recorded in any year this century apart from 2008. It is also the only year this century, other than 2008, in which the total value of household financial assets declined even when exchange rate changes are discounted.

The overall pattern indicates fairly steady growth in total global household wealth, averaging 6.6% per year, with minor variations associated with share price and house price changes

While inflation has eroded the real value of wealth this century (and made it easier for adults to become dollar millionaires), it has not greatly distorted the year-on-year wealth growth comparison, at least not until recently. **Figure 2** presents a similar series to **Figure 1**, again using smoothed exchange rates, but this time converted into real wealth values using the household consumption deflator for each country. For most of the period, inflation reduces wealth growth by 1–2 percentage points, in line with the inflation target of many central banks. Hence the overall pattern remains similar. However, inflation considerably reduces the year-on-year growth in debt. Inflation also reinforces the wealth decline in 2008, raising the loss from –4.3% to –7.2%, with both financial and non-financial assets now contributing to the overall reduction.

More notable is the impact last year, when inflation reduced wealth growth by 6.0%, turning a nominal wealth gain of 3.4% in 2022 into a real wealth loss of 2.6%

As inflation has risen in recent years, so has the impact on measured wealth growth. Taking inflation into account reduces the rise in 2021 from 13.5% to 9.2%, although it remains the peak year for growth this century. More notable is the impact last year, when inflation reduced wealth growth by 6.0%, turning a nominal wealth gain of 3.4% in 2022 into a real wealth loss of 2.6%. This is the only real wealth decline this century, apart from 2008, and the losses in the two years have many similarities. Inflation reduces debt growth to roughly zero in both years and increases the (negative) contribution of the reduced value of financial assets to –4.6% in 2022 compared to –5.7% in 2008.

The core difference between 2022 and 2008 is therefore growth of non-financial assets, which accounted for about one-quarter of the real wealth loss in 2008, but still made a positive contribution in 2022, at least as far as the available evidence indicates. In many countries, however, the decline in house prices due to rising interest rates was not felt until the second half of 2022. As a consequence, they may not yet have been fully taken into account in the household balance sheets and it is possible that future revisions to household balance sheets will reduce, or even reverse, the positive growth recorded for non-financial assets in 2022.

Table 1: Change in household wealth in 2022, 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 debt	
	USD bn	USD bn	%	USD	%	USD bn	%	USD bn	%	USD bn	%	
Africa	5,909	85	1.5	8,345	-1.3	57	2.1	36	1.0	8	1.9	
Asia-Pacific	77,974	-2,070	-2.6	61,154	-4.0	-2,931	-6.5	476	1.0	-385	-3.6	
China	84,485	-1,462	-1.7	75,731	-2.2	-116	-0.3	-1,632	-3.1	-285	-2.8	
Europe	104,410	-3,703	-3.4	177,179	-3.4	-5,736	-10.4	1,552	2.3	-480	-3.2	
India	15,365	675	4.6	16,500	2.8	34	1.0	679	5.4	38	3.0	
Latin America	15,071	2,359	18.6	32,760	16.9	819	12.9	1,745	22.7	204	15.1	
North America	151,170	-7,166	-4.5	531,826	-5.3	-11,226	-9.0	5,025	9.5	965	4.9	
World	454,385	-11,281	-2.4	84,718	-3.6	-19,099	-6.8	7,882	3.2	65	0.1	

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

An overview of 2022

The main features of wealth changes during 2022 are summarized in **Table 1**. Aggregate global wealth totaled USD 454.4 trillion at the end of the year, down USD 11.3 trillion or 2.4% over the 12-month period. Wealth per adult fell by 3.6% to reach USD 84,718 at year-end. These losses are exaggerated because they refer to US dollars at current exchange rates and depreciation against the US dollar was widespread during 2022. If exchange rates had remained the same as in 2021, total wealth would have grown by 3.4% and wealth per adult by 2.2%.

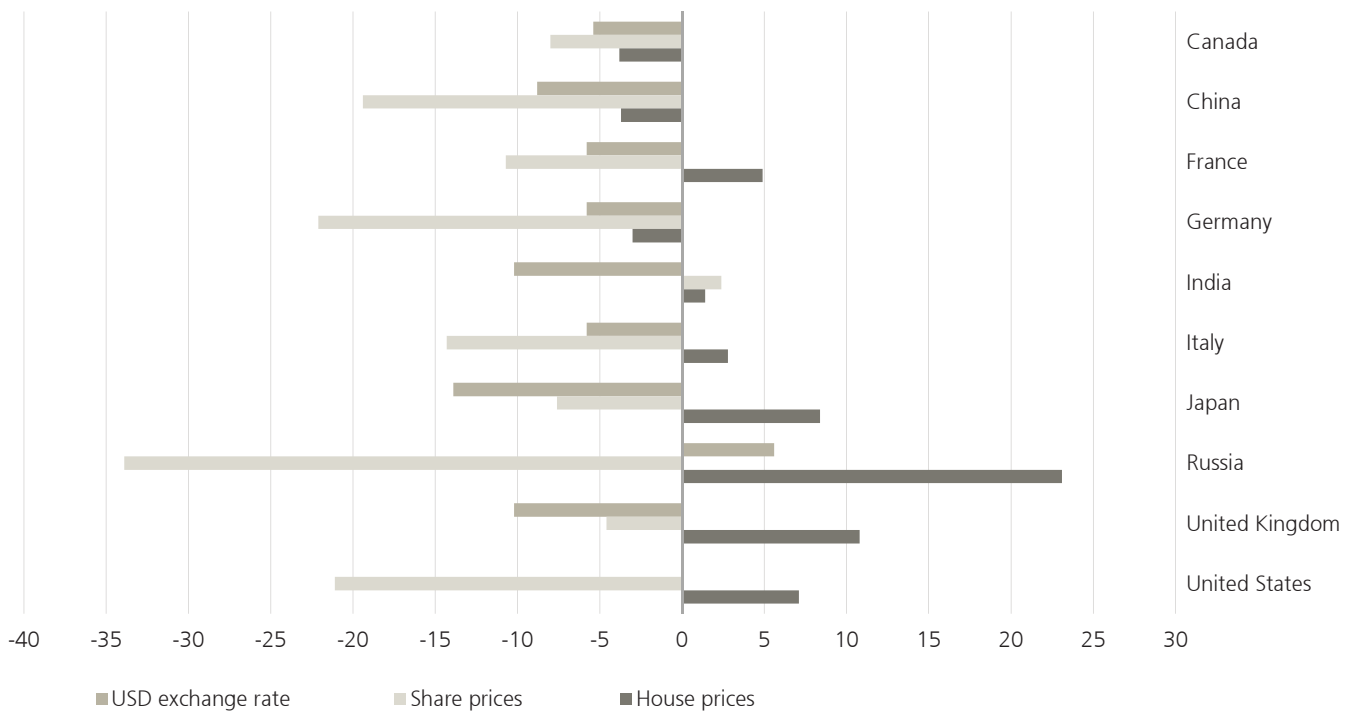
The loss of global wealth was heavily concentrated in North America and Europe, which together shed USD 10.9 trillion. China and the Asia-Pacific region also posted losses totaling USD 3.5 trillion, but these were offset by small gains in India and Africa. The regional outlier was Latin America, where, according to our calculations, total wealth rose by USD 2.4 trillion or 18.6%. This increase partially reverses several recent years of wealth losses and was helped by an average 6% currency appreciation versus the US dollar. With regard to wealth per adult, Europe and Asia-Pacific registered declines similar to the global average of -3.6%, while the percentage loss in North America was slightly higher. Population growth in Africa turned the modest 1.5% gain in total wealth into a 1.3% drop in wealth per adult.

Financial assets have accounted for most of the increase in total wealth since the financial crisis. However, share prices declined almost everywhere in 2022 causing total financial wealth to decline by USD 19 trillion, or 6.8%. This contrasts with a rise of USD 7.9 trillion in non-financial assets, perhaps reflecting the fact that housing markets remained relatively buoyant in the low-interest environment prevailing in the first half of 2022. The reduction in financial assets was particularly marked in Europe, North America and Asia-Pacific countries. Non-financial assets performed relatively better in most regions, the main exception being China, where both financial assets and non-financial assets shed value in terms of US dollars, although not in terms of yuan (renminbi).

The loss of global wealth was heavily concentrated in North America and Europe, which together shed USD 10.9 trillion

Total household debt was almost unchanged in terms of current US dollars, but fell by 6.0% if exchange rate movements are discounted. The regional pattern is mixed, with debt reductions in China, Europe and Asia-Pacific, but increases in North America and, especially, Latin America.

Figure 3: Percentage change in USD exchange rate, share prices and house prices, 2022



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Asset prices and exchange rates

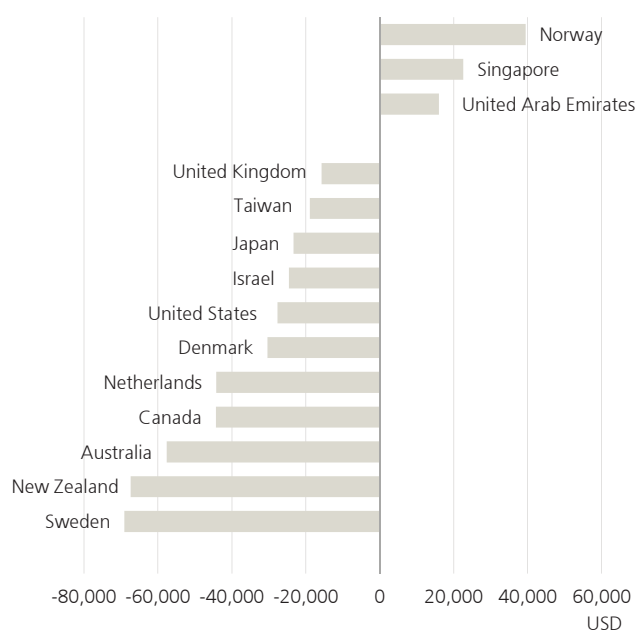
Year-on-year variations in the value of household wealth in individual countries can often be traced to changes in asset prices and exchange rates. Currency depreciation against the US dollar was widespread and pronounced in 2022. Among the countries covered in **Figure 3**, (G7 countries plus China, India and Russia), Eurozone countries lost 5.8%, a similar drop to that experienced in 2021. China (-8.8%), India (-10.2%), the United Kingdom (-10.2%) and Japan (-13.9%) recorded larger reductions. Elsewhere, Norway (-10.5%) and Sweden (-13.3%) were among those posting bigger losses, but came nowhere close to rivaling the depreciations experienced by Egypt (-37%), Argentina (-42%) or Turkey (-46%). In contrast, the Russian ruble appreciated by 5.6% and Peru, Mexico and Brazil recorded similar gains. Overall, we estimate that exchange rate movements during 2022 led to a 5.8% decline in total global wealth measured in current US dollars.

Sizable rises in share prices were common in 2021 and made a large contribution to the record rise in household wealth, whereas 2022 saw a retrenchment of these gains, often in the same countries. The countries listed in **Figure 3** illustrate what

happened in much of the world. India posted a small rise, but the other countries all recorded losses, averaging about 10%, but rising to about 20% in China, Germany and the United States, and exceeding one third in Russia. In the wider world, share prices fell by more than 20% in Poland, Hungary, the Netherlands, Taiwan, Korea and Sweden, and declined by 44% in Vietnam. Significant gains were recorded in Egypt, United Arab Emirates and, most notably, Argentina and Turkey, although the gains in the latter countries were accompanied by high inflation and currency depreciation.

High inflation encourages a shift to non-financial assets, but this is offset by interest rate rises set in response to inflationary pressure. Month-to-month data in 2022 suggest that housing markets remained bullish in the early part of the year, tailing off later, but not soon enough to prevent house prices rising by 7.1% in the United States, 8.4% in Japan and 10.8% in the United Kingdom. The small declines recorded for Canada, China and Germany are probably more representative of expected house price movements in the immediate future, although Denmark (-6.8%), New Zealand (-9.0%) and Hong Kong SAR (-13.6%) already posted larger losses in 2022.

Figure 4: Change in wealth per adult (USD), 2022 – biggest gains and losses



Source: James Davies, Rodrigo Lluberás and Anthony Shorrocks, Global Wealth Databook 2023

Biggest gains and losses among markets

The record wealth growth in 2021, fueled in part by vigorous stock markets, resulted in large wealth increases in many markets. Stock market losses in 2022 often reversed – at least in part – the gains made a year earlier. As a consequence, the markets that lost substantial wealth in 2022 – of which there are many – were often those that made sizeable gains the year before.

Heading the list of losses in 2022 is the United States, which shed USD 5.9 trillion. This compares to a rise of USD 19.5 trillion a year earlier and is the first break in a remarkable sequence of gains dating back to the global financial crisis. Losses exceeding USD 1 trillion were also recorded by Japan (down USD 2.5 trillion), China (down USD 1.5 trillion), Canada (down USD 1.2 trillion) and Australia (down USD 1.0 trillion). Excluding Japan, which made losses in both years, the fall in wealth in 2022 was less than the rise in wealth a year earlier. Wealth increases among markets were more common overall than wealth losses, but the gains were generally small in magnitude. According to our calculations, the main exceptions were Russia (up USD 600 billion), Mexico (up USD 655 billion), India (up USD 675 billion) and Brazil (up USD 1.1 trillion).

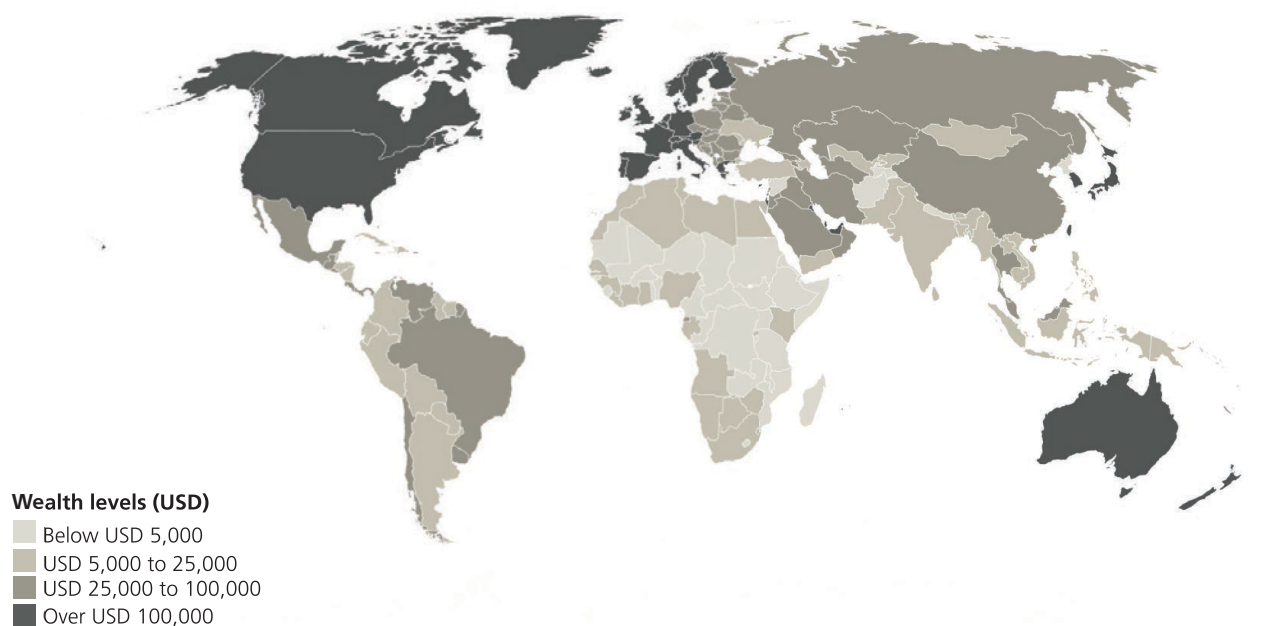
The change in wealth per adult is a better guide to the relative performances of different markets, and **Figure 4** reports the biggest gains and losses according to this criterion. While average wealth rose in Singapore and Norway by more than USD 20,000, these increases are modest in comparison to losses exceeding USD 40,000 in the Netherlands, Canada, Australia, New Zealand and Sweden. Each of these countries had previously experienced wealth growth in 2021, apart from the Netherlands. These reductions refer to nominal US dollars. In real terms, mean wealth fell by another 5.8%, so that the real losses in Denmark, the United States and Switzerland exceeded USD 50,000, the real losses in Canada and the Netherlands were above USD 60,000 and the real losses in Australia, New Zealand and Sweden were more than USD 80,000.

The countries that lost substantial wealth in 2022... were often those that made sizeable gains the year before

Wealth per adult across countries

An overall perspective on the disparity of wealth across countries and regions is captured by the World Wealth Map (**Figure 5**). It shows that nations with high wealth per adult (above USD 100,000) are concentrated in North America and Western Europe, and among the richer parts of East Asia, the Pacific and the Middle East, with a sprinkling of outposts in the Caribbean. China and Russia are core members of the “intermediate wealth” group of countries with mean wealth in the range of USD 25,000–100,000. This group also includes more recent members of the European Union and important emerging-market economies in Latin America, the Middle East and East Asia. One step below, the “frontier wealth” range of USD 5,000–25,000 per adult is a heterogeneous group that covers heavily populated countries such as India, Indonesia and the Philippines, plus much of South America and many of the coastal nations in Africa. Fast-developing Asian countries like Cambodia, Laos and Vietnam also fall within this category. Countries with average wealth below USD 5,000 comprise the final group, which is dominated by countries in central Africa.

Figure 5: World Wealth Map 2022



Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

The composition of these groups has remained fairly stable over time, but our estimates suggest that Brazil and Thailand passed the threshold for the intermediate group in 2022, while Egypt and Sri Lanka moved in the other direction and dropped into the frontier category.

The overall regional disparities evident in **Figure 5** are reflected in the fact that North America and Europe together account for 56% of total household wealth, but contain only 16% of the world adult population. The wealth share in the Asia-Pacific region (excluding China and India) is quite similar to its share of adults and the same is true for China. But the adult population share is more than double the wealth share in Latin America, five times the wealth share in India and ten times the wealth share in Africa.

Table 2 shows the top ranking markets by mean and median wealth among the 60 markets with the highest total wealth. Within this group – which excludes smaller countries like Liechtenstein and Monaco – Switzerland again tops the list with wealth per adult of USD 685,230, down USD 13,450 on the year. The United States (USD 551,350) is in second place, fractionally above Hong Kong SAR (USD 551,190) and ahead of Australia (USD 496,820). There is then a substantial gap before a cluster of countries appears (Denmark, New Zealand,

Norway, Singapore, Canada, the Netherlands and Belgium) all with wealth per adult between USD 350,000 and USD 410,000. Most of this top group experienced often sizeable reductions in mean wealth. The exceptions were Norway, which gained USD 39,440 per adult and five places in the ranking, and Singapore, which gained USD 22,590 and three places.

Ranking markets by median wealth per adult favors markets with lower levels of wealth inequality and results in a different list. Switzerland (USD 167,350) places sixth by this criterion, while the United States (USD 107,740) drops to thirteenth place. Interestingly, the shift from financial wealth to non-financial wealth in the United States in 2022 enabled median wealth to rise at the same time as mean wealth fell. This year, for the first time, we think that Belgium (USD 249,940) has overtaken Australia (USD 247,450) at the top of the median wealth ranking. Median wealth in Hong Kong SAR (USD 202,410) changed little from 2021, enabling it to regain third place ahead of New Zealand (USD 193,060, down USD 30,640) and Denmark (USD 186,040, down USD 10,210). The United Kingdom, Norway, Canada and France complete the list of the top ten median wealth markets. Belgium, Spain, Italy and Japan are among the markets that rank higher on the median wealth criterion compared to mean wealth, while the United States, Sweden and Germany rank lower.

Table 2: Market rankings by mean and median wealth per adult, 2022

Median wealth divides the wealth distribution into two equal groups where half the adults have wealth above the median and the other half below the median. Mean wealth is obtained by dividing the total aggregate wealth by the number of adults.

Mean wealth per adult (USD)				Median wealth per adult (USD)		
Rank	Market	2022	Change 2021–22	Market	2022	Change 2021–22
1	Switzerland	685,230	-13,450	Belgium	249,940	-7,860
2	United States	551,350	-27,700	Australia	247,450	-28,630
3	Hong Kong SAR	551,190	-2,170	Hong Kong SAR	202,410	-130
4	Australia	496,820	-57,660	New Zealand	193,060	-30,640
5	Denmark	409,950	-30,390	Denmark	186,040	-10,210
6	New Zealand	388,760	-67,420	Switzerland	167,350	-1,230
7	Norway	385,340	39,440	United Kingdom	151,820	-3,990
8	Singapore	382,960	22,590	Norway	143,890	6,860
9	Canada	369,580	-44,320	Canada	137,630	-15,320
10	Netherlands	358,230	-44,230	France	133,140	-7,080
11	Belgium	352,810	-13,940	Netherlands	112,450	-31,220
12	France	312,230	-12,270	Taiwan	108,250	-3,720
13	United Kingdom	302,780	-15,720	United States	107,740	14,460
14	Sweden	296,800	-69,110	Spain	107,510	170
15	Taiwan	273,790	-18,930	Italy	107,320	-7,100
16	Germany	256,180	-14,360	Japan	103,680	-13,460
17	Ireland	247,080	-11,290	Singapore	99,490	5,790
18	Austria	245,220	-1,480	Korea	92,720	-10,230
19	Israel	235,440	-24,610	Ireland	90,740	-3,650
20	Korea	230,760	-2,130	Qatar	90,260	3,740

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

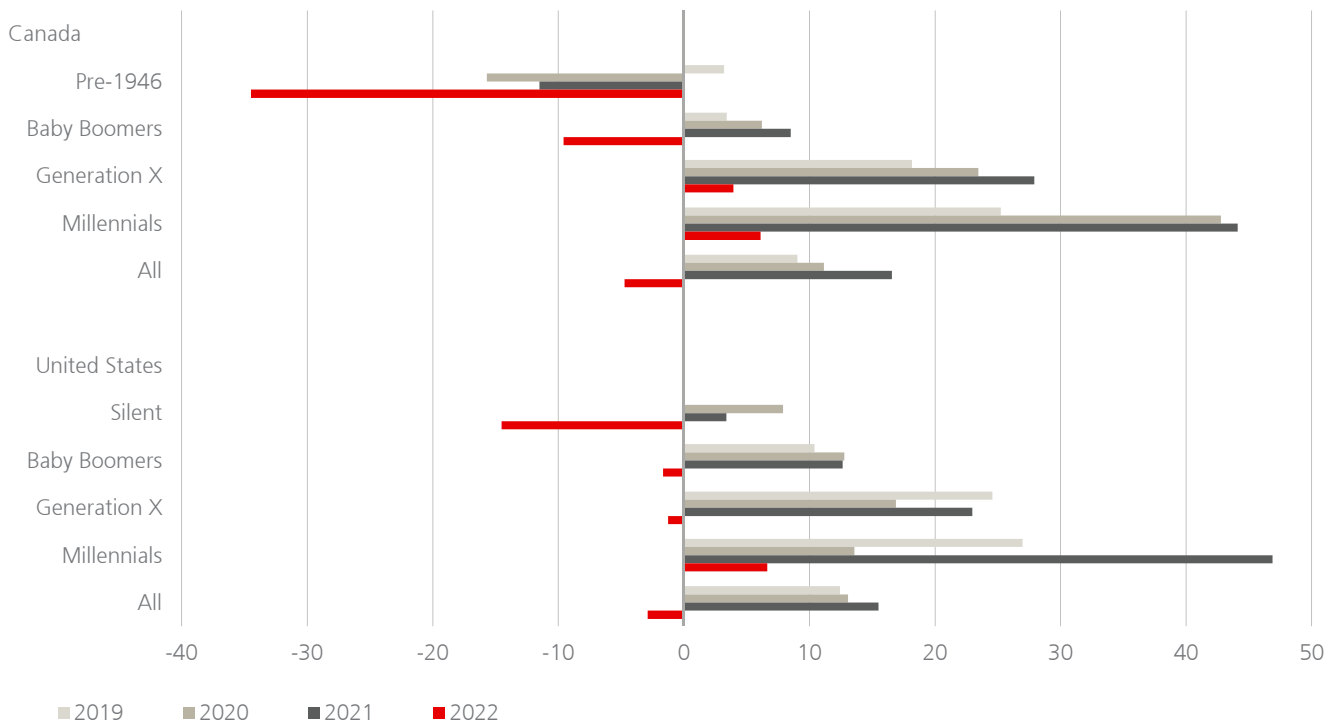
Wealth outcomes for population subgroups

The economic environment governing household wealth has come almost full circle since 2020. The contraction of macroeconomic activity at the start of the pandemic prompted interest rate reductions, which caused asset price inflation in 2021. Together with other inflationary pressures, this has led to interest rate rises, which have suppressed economic growth and reversed some of the earlier asset price rises. This rather rapid sequence of events has had consequences for all population subgroups, but not in exactly the same way. For example, changes in employment prospects and saving rates have been significant factors for young people and possibly other lower wealth groups in high-income countries. Asset sales and borrowing to cover emergency expenses were no doubt important for vulnerable groups during 2020 and 2021, especially in countries with weak pandemic relief support.

The impact across generations

A primary source of information on the changing wealth of population subgroups is the quarterly Distributional Financial Accounts (DFA) for the United States and Canada. These include a breakdown by generation. Figure 6 shows the average wealth growth for four generation cohorts: pre-1946, Baby Boomers (1946–1964), Generation X (1965–1980) and Millennials (post-1980). The data for 2019 provide a “typical” baseline outcome prior to the pandemic era. Each of the post-1946 generations shared in the wealth growth, which averaged 9% in Canada and 12% in the United States. This shared experience was also true for 2020 and 2021, but did not continue into 2022, when both countries suffered wealth reductions.

Figure 6: Percentage change in wealth by generation, Canada and the United States, 2019–22



Source: Federal Reserve Board, Distributional Financial Accounts; Statistics Canada, Distributions of household economic accounts for wealth of Canadian households

Generation X and Millennials recorded the strongest growth over 2019–21, averaging 23% and 37%, respectively, in Canada, and 21% and 29%, respectively, in the United States. These high growth rates reflect house price inflation applied to significant housing assets leveraged by mortgage debt. Generation X and Millennials also continued to do relatively well in 2022, but were not immune to the overall wealth reduction. In every year, and in both countries, the pre-1946 generation records the lowest wealth growth and/or highest wealth loss. It is tempting to think that inter-generational wealth transfers help explain the lower growth and partially account for the higher growth of younger generations. However, the methodology underlying the DFA seems to rule this out as it is based on revaluing wealth portfolios given the assets held at the time of the most recent survey.

The United Kingdom does not report DFA data, but generational studies conducted in 2020 and 2021 echo the results for Canada and the United States. The wealth experience of younger generations during the pandemic was good overall. Between February 2020 and May 2021, for example, the wealth of adults in their early thirties increased by 13%, while wealth rose 3% for those in their late fifties and 7% for those aged 80 or older. Similar distributional patterns are likely to have occurred in other high-income countries that had generous pandemic relief support, and which have experienced similar ebbs and flows of financial and non-financial assets over the past three years.

Overall wealth growth increased each year from 2019 to 2021, but turned negative in 2022

However, the generational impacts may have been different in low- and middle-income countries that could not afford generous pandemic relief payments. This category includes most of Africa and Latin America, in particular, which suffered the most severe health impacts of any region. Here the younger people who were more susceptible to job loss probably depleted their savings, incurred additional debt and experienced a decline in wealth.

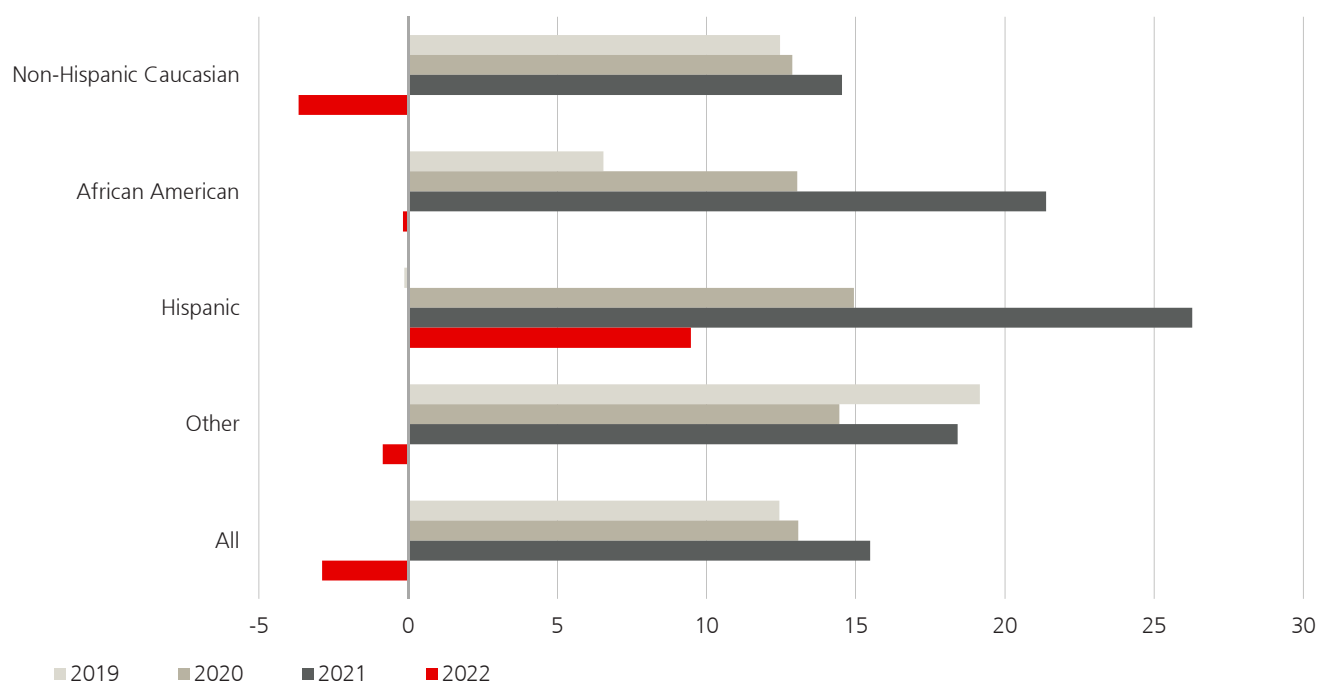
Wealth differences by race

Wealth disparities by race are often quite significant. For instance, the 2019 Survey of Consumer Finance in the United States found that the median wealth of African Americans was just 12.8% of non-Hispanic Caucasians' median wealth and the median wealth of Hispanics was only 19.2%.

The corresponding ratios for income were 58.4% for African Americans and 59.0% for Hispanics. DFA data for the United States (but not Canada) allow the growth rates of total wealth by race to be tracked through time.

Figure 7 provides a breakdown by year since 2019.

Figure 7: Percentage change in wealth by race, United States, 2019–22



Source: Federal Reserve Board, Distributional Financial Accounts

Overall wealth growth increased each year from 2019 to 2021, but turned negative in 2022. This pattern is almost exactly replicated for non-Hispanic Caucasians. It is also broadly similar for African Americans and the “Other” category, although both of these groups were left almost unscathed by the downturn in 2022. However, Hispanics show a different profile, recording no growth in 2019, but then overtaking all the other groups in 2020 and 2021. Even more striking is the 9.5% growth achieved in 2022 when the overall trend was down. This is a reflection of the greater prevalence of housing assets compared to financial assets for the Hispanic group.

The wealth of women

The DFA data do not offer a gender breakdown and no other direct evidence exists on the contemporaneous evolution of women’s wealth. However, numerous earlier studies on women’s wealth provide insights into likely recent trends. According to the 2018 Credit Suisse Global Wealth Report, the female-to-male wealth ratio in high-income OECD countries ranged from around 65% to 80% before the pandemic. Data for other regions are more scarce, but indicate a wide-ranging ratio, with lows of 25% in some countries. Asset composition varies significantly between genders, with women holding more non-financial assets and a smaller portion of their financial wealth in riskier assets like corporate shares. When applied to these portfolio differences, the

varying performance of different assets since 2019 suggests that the female-to-male wealth ratio changed little in 2020, but probably fell in 2021. However, the decline in the value of financial assets, especially equities, during 2022 is likely to have reversed any loss and restored the ratio to close to the pre-pandemic level.

Household wealth in times of emergency

Wealth is a key component of the economic system. It serves as a store of resources for future consumption, especially during retirement. It also promotes opportunities in the informal sector and supports entrepreneurial ventures, either directly or as loan collateral. But, most of all, wealth helps reduce vulnerability to unexpected events such as unemployment, ill health or natural disasters. These functions are important, even in countries with strong social safety nets and public healthcare arrangements. But they have special significance in countries that have rudimentary social insurance schemes and limited healthcare, as is the case in much of the developing world. This has been evident in the context of the medical and economic challenges of the past few years. Countries and individuals with lower wealth are more susceptible to any crisis, having fewer options to deal with any emergency. In essence, household wealth determines the resilience of both nations and individuals to various shocks.

Household wealth proved surprisingly resilient to the challenges facing the world during the initial phase of the pandemic. When the background environment improved in 2021, asset price increases and the resurgence of macroeconomic activity resulted in a record year for global wealth growth. However, this growth was accompanied by rising wealth inequality, which we discuss in greater detail in the next chapter. For this reason, those who experienced hardship during the pandemic may not have benefited from the overall wealth surge in 2020 and 2021. Additionally, the low-interest regime that supported asset price inflation also contributed to the commodity inflation that became more evident during 2022, causing further difficulties for wealth holders and non-wealth holders alike. This prompted interest rate rises, which have led to reductions in financial wealth, although the impact on non-financial wealth has been muted so far.

The low-interest regime that supported asset price inflation also contributed to the commodity inflation that became more evident during 2022

Chapter 2 reviews the way that wealth is distributed and how it changed during 2022. Chapter 3 provides estimates of household wealth evolution over the next five years based on gross domestic product (GDP) growth and exchange rate forecasts. While GDP is expected to grow in the coming years, wealth growth may be hindered by inflation and the effects of higher interest rates on investments and asset prices. Chapter 4 looks in more detail at selected groups of countries, comparing and contrasting their wealth experiences in recent times.

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, minus their debts. This corresponds to the balance sheet that a household might draw up, listing the items that are owned and their net value if sold. Private pension fund assets are included, 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).

Valuations refer to year-end values and are usually expressed in terms of US dollars using end-period exchange rates. However, to control for short-term fluctuations in exchange rates we sometimes use “smoothed exchange rates” which refer to 2021 USD exchange rates adjusted for the difference in the country’s inflation rate relative to the USA (this adjustment avoids extreme USD valuations being recorded for high inflation countries in the past.)

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 5.4 billion in 2022. The “Asia-Pacific” region excludes China and India, which are treated separately due to the size of their populations.

The Forbes annual global list of billionaires is used to improve the estimates of wealth holdings above USD 1 million. The Forbes data are pooled for all years since 2000 and well-established statistical techniques are then applied to estimate the intermediate numbers in the top tail. This produces plausible values for 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 upward. Further details are given in the Global Wealth Databook 2023.

Our estimates for past years are regularly updated using new or revised data from reliable sources. We also strive continuously to improve the methods used to estimate the level and distribution of household wealth. This year, we have absorbed fresh data from household balance sheets, wealth distribution surveys and other sources of data on household assets and debts.

The Global Wealth Databook 2023 provides details of the data sources and outlines the research methods underpinning our estimates. It also provides much additional data.



Global wealth distribution 2022

Anthony Shorrocks and James Davies

The rise in wealth inequality during the pandemic was reversed in 2022. The wealth share of the global top 1% fell to 44.5%, still slightly above the 2019 level. But other global inequality indicators returned to 2019 values. This reduction can be traced to the relative decline in financial wealth during 2022. Over the longer term, global wealth inequality has fallen this century due to the faster growth achieved in emerging markets. Global median wealth has risen in tandem at roughly twice the pace of mean wealth. The number of US dollar millionaires worldwide fell by 3.5 million during 2022 to total 59.4 million at year-end. This number includes 4.4 million “inflation millionaires” who would no longer qualify if the millionaire threshold were adjusted for inflation during 2022. The ultra-high-net-worth (UHNW) group with wealth above USD 50 million had 22,490 fewer members by our estimate, with North America accounting for 81% of this decline.

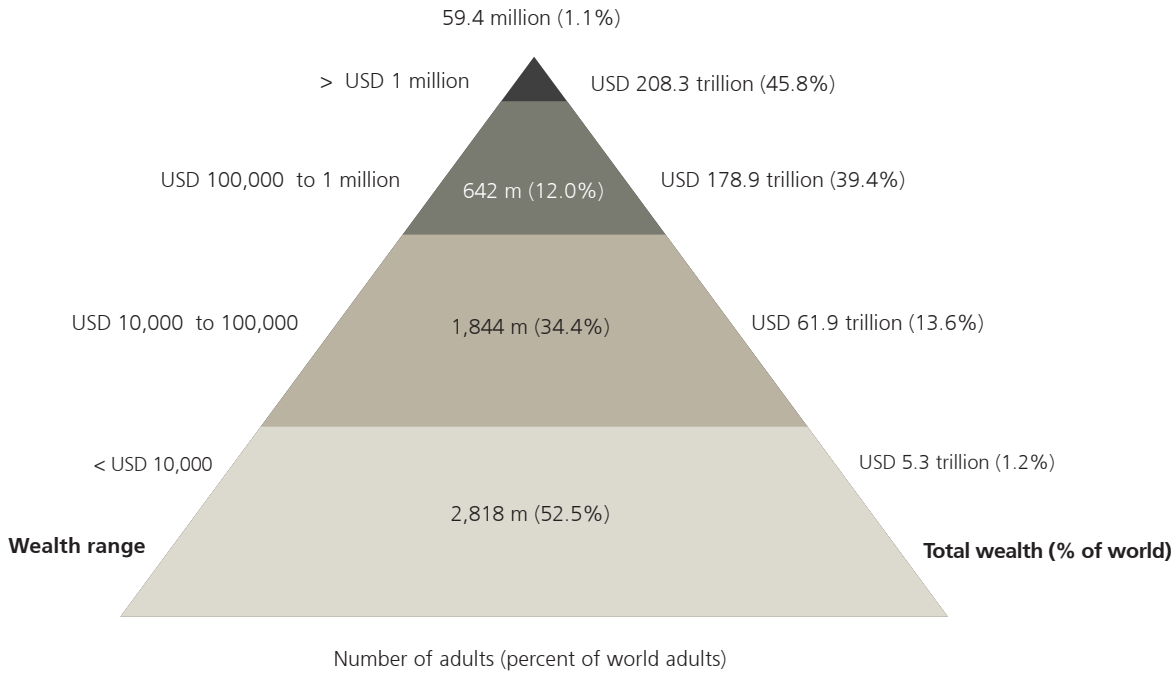
Distribution of wealth across individuals

Wide differences in average wealth levels across countries are reinforced by high wealth inequality within nations. While this section examines wealth distribution in individual countries, we also pay special attention to the way that household wealth is distributed across the entire adult population of the world. To achieve this end, we combine our earlier estimates of wealth per adult in countries with information on the pattern of wealth distribution within nations.

The wealth pyramid in **Figure 1** summarizes the distribution of wealth among adults worldwide. A large base of low-wealth holders underpins higher tiers occupied by progressively fewer adults. We estimate that 2.8 billion individuals – 53% of all adults in the world – had wealth below USD 10,000 in 2022. The next segment, covering those with wealth in the range of USD 10,000–100,000, has seen the biggest rise in numbers this century, more than trebling in size from 503 million in 2000 to 1.8 billion in mid-2022. This reflects the growing prosperity of emerging economies, especially China, and the expansion of the middle class in the developing world. The average wealth of this group is USD 33,573 or about 40% of the level of average wealth worldwide. Total assets of USD 61.9 trillion provide this segment with considerable economic leverage.

The upper-middle segment, with wealth ranging from USD 100,000 to USD 1 million, has also trebled in size this century from 208 million to 642 million people. Members of this group currently own net assets totaling USD 178.9 trillion or 39.4% of global wealth, which is over three times their percentage share of the adult population. The wealth middle class in developed nations typically belongs to this group. Above them, the top tier of high-net-worth (HNW) individuals (i.e. US dollar millionaires) remains relatively small in size, numbering 59.4 million or 1.1% of all adults. The number of global millionaires has been growing rapidly in recent years and exceeded 1% of adults for the first time in 2020, although the number fell by 3.5 million in 2022. In terms of wealth ownership, the HNW group is increasingly dominant. The aggregate wealth of HNWs has grown five-fold from USD 41.4 trillion in 2000 to USD 208.3 trillion in 2022, and their share of global wealth has risen from 35% to 46% over the same period.

Figure 1: The global wealth pyramid 2022



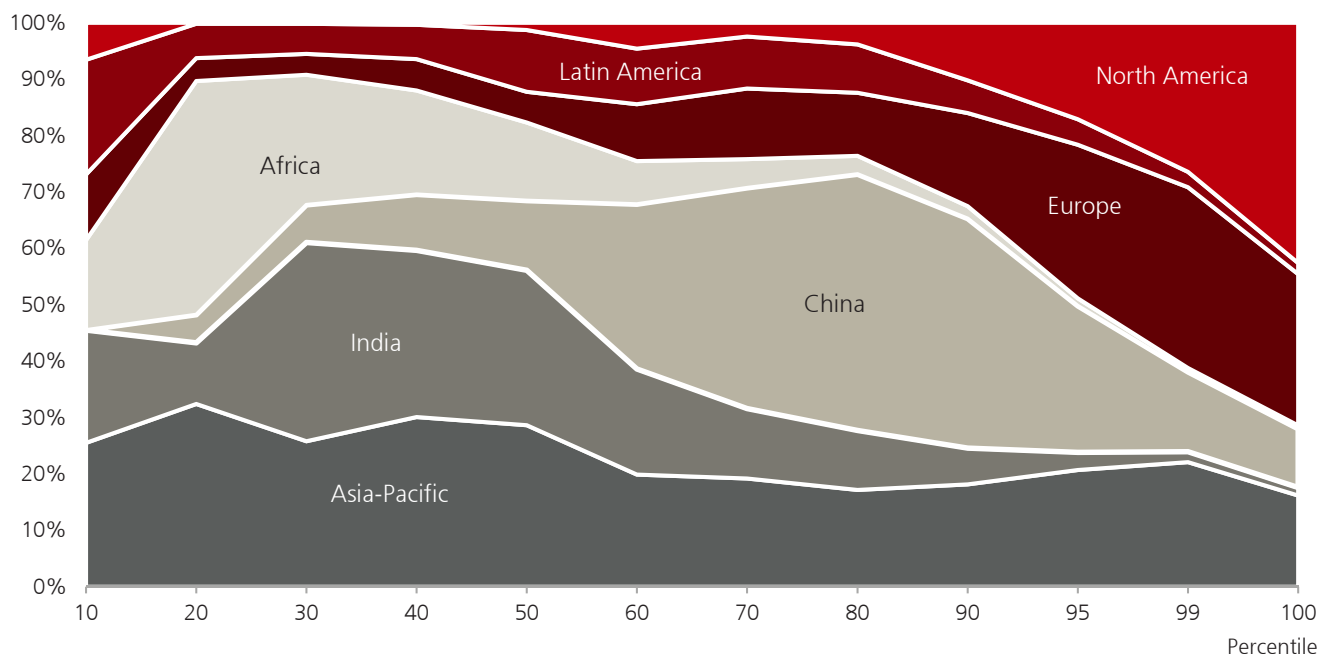
Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

The main feature of the two middle pyramid segments is the dominance of China, which accounts for 36% of the total membership

Membership of the layers of the wealth pyramid is quite distinctive in terms of residence and personal characteristics. The base tier has the most even distribution across regions and countries, but also the widest spread of personal circumstances. In advanced economies, about 30% of adults fall within this category and, for the majority of these individuals, membership is either transient – e.g. due to business losses or unemployment – or a lifecycle phase associated with youth or old age. In contrast, in many lower-income countries, more than 80% of the adult population fall within this wealth range, so that life membership of the base tier is often the norm.

The main feature of the two middle pyramid segments is the dominance of China, which accounts for 36% of the total membership, compared to 10% from India, 7% from Latin America and just 4% from Africa. Regional representation is skewed further still among millionaires, where 42% of all members reside in North America, 27% in Europe and 17% in Asia-Pacific (excluding China and India). Thus, in marked contrast to the base of the wealth pyramid (which is characterized by a wide variety of people from all countries and all stages of the lifecycle), HNW individuals are heavily concentrated in particular regions and countries, and tend to share similar lifestyles – participating in the same global markets for luxury goods, vacations and education opportunities for their children, for example, even when they reside in different continents. The wealth portfolios of these individuals are also likely to be more similar, with a focus on financial assets and particularly equities, bonds and other securities traded in international markets.

Figure 2: Regional composition of global wealth distribution in 2022



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Wealth distribution by region

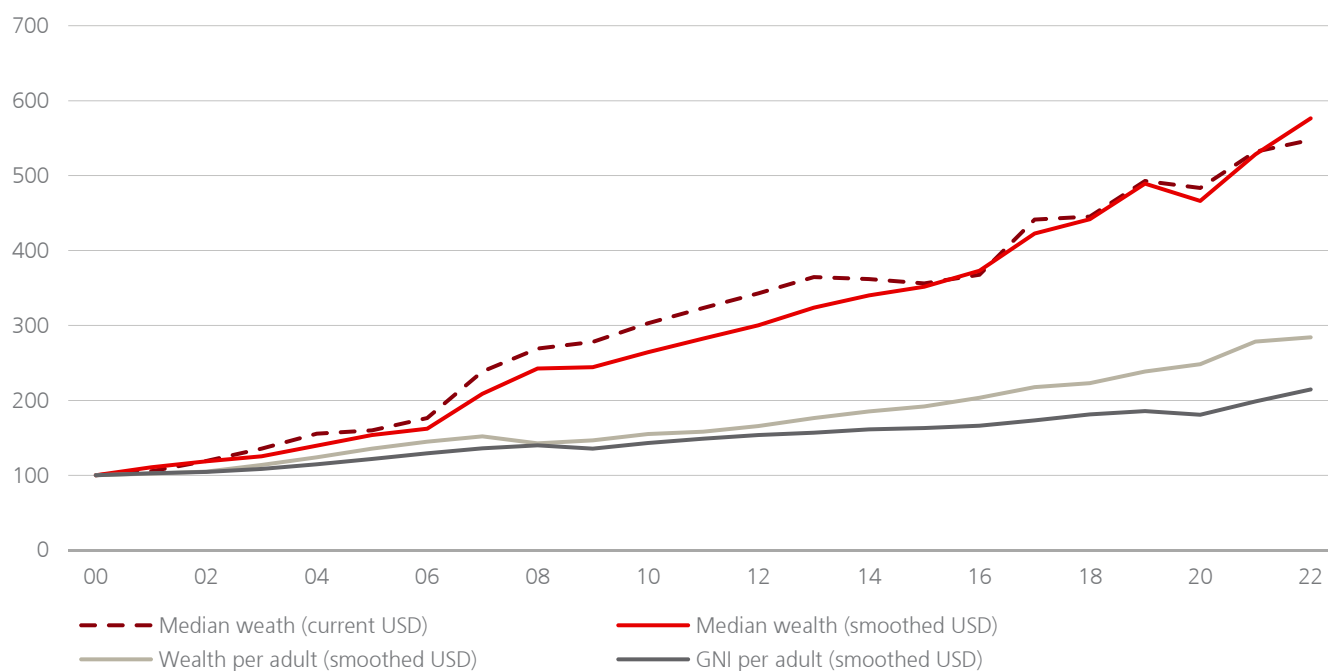
The regional pattern of wealth distribution can be explored further by assigning adults to their corresponding global wealth positions. Our calculations suggest, for example, that a person needed net assets of just USD 8,654 to be among the wealthiest half of world citizens at end-2022. However, USD 137,333 was required to be a member of the top 10% of global wealth holders, and USD 1,081,342 to belong to the top 1%. All members of the global top 1% are therefore USD millionaires, as has been the case since 2020. The minimum wealth requirement in 2021 was USD 1,152,602, so that the threshold for membership of this elite group has fallen this year even before inflation is taken into account.

Determining global wealth percentiles in this way enables the regional membership of each global decile (i.e. 10% slice) to be determined. **Figure 2** provides a visual representation for 2022. The chart confirms some of the features already noted such as the concentration of African and Indian citizens in the lower sections the wealth pyramid, the dominance of China in the middle tiers and the substantial over-representation of North America and Europe in the top percentile. Also evident is the sizable number of North American and European

residents in the bottom global wealth decile, reflecting the ease with which individuals – especially younger adults – acquire debt in advanced economies, often resulting in negative net wealth according to our definition of net worth. Note too that, while the bulk of Indian citizens are located in the bottom half of the global distribution, high wealth inequality and a huge population means that significant numbers of Indian citizens also occupy the top wealth echelons. This is less true for Africa.

The most striking feature of **Figure 2** is the dominance of China in the upper-middle section of the chart. At the start of the century, China was firmly centered in the middle, with the bulk of its citizens occupying global deciles 4–8. However, China’s exceptional rate of wealth growth has moved the country profile progressively rightward over time, displacing the countries and regions with less-vigorous growth records. As a result, China has squeezed out some members of the top decile previously residing in Europe (in particular) and North America (to a lesser degree). These ex-members of the top decile have simply been overtaken by their Chinese counterparts.

Figure 3: Global trends in median wealth, wealth per adult and gross national income (GNI) per adult 2000–22 (2000=100)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Trends in median wealth

Mean wealth per adult is a simple and convenient way of comparing wealth levels across nations and assessing developments over time. However, by definition, median wealth is a more accurate indicator of how the typical person is faring. This is particularly true of countries with a high level of wealth inequality since median wealth may be a relatively small fraction of mean wealth and gains and losses in aggregate wealth may bypass the “average citizen” entirely. For this reason, it is worth looking in more detail at median wealth comparisons across regions and countries, and at the way in which trends in median wealth over time differ from trends in mean wealth.

Figure 3 compares the trends in median wealth, mean wealth and GDP per adult for the world as a whole this century. The dashed line shows the trajectory of median wealth in current (nominal) US dollars. But since exchange rate fluctuations vis-à-vis the US dollar add volatility to the time series, it is better to plot the graphs using smoothed US dollars. On this basis, global median wealth per adult was just USD 1,590 in the year 2000. By 2022, it had risen to USD 9,167, making it a five-fold increase equivalent to average annual growth of 8.3%. This is far above the 4.9% annual growth rate achieved by mean wealth per adult, which in turn exceeds the 3.5% growth in income per adult. Note also that global median wealth has risen at a fairly even pace, with the single setback occurring in 2020, i.e. the first year of the pandemic. This contrasts with global wealth per adult, which took two years to recover from the setback in 2008.

To understand why global median wealth has outpaced mean wealth, it is best to think in terms of a global median group – e.g. wealth deciles 5 and 6 – rather than a single median adult. It is evident from **Figure 2** that the regional representation of this group differs from a random sample of global citizens. North American and European residents are relatively sparse in deciles 5 and 6, but China was heavily over-represented at the turn of the century. For this reason, growth of global median wealth was weighted toward the high growth achieved in China during the early years.

The regional composition of the median group changes over time as the more successful members move up the distribution and are replaced by those who are less fortunate. Nowadays, China is less dominant in the vicinity of global median wealth – India has taken its place in this respect. But the same principle applies. If the middle section of the global distribution tends to be populated by residents of countries (typically emerging market economies) where household wealth is growing faster than the world average, then global median wealth will grow faster than global mean wealth. Rapid wealth growth in emerging markets is also the reason why global wealth inequality has fallen this century via the reduction in between-country inequality. Thus, years when wealth inequality is falling are typically aligned with those in which median wealth is rising faster than mean wealth.

Table 1: Median wealth and wealth inequality 2000–22, by region

Region	Median (smoothed USD)							Median/mean wealth per adult (%)		Average annual growth rate (%) 2000–22				
	2000	2005	2010	2015	2020	2021	2022	2000	2022	GNI per adult	Median wealth per adult	Wealth per adult	Gini	Share top 1%
Africa	182	348	580	755	1,025	1,136	1,398	8.6	14.9	3.50	9.70	6.97	-0.08	-0.30
Asia-Pacific	894	1,565	2,170	3,444	4,456	5,059	5,673	3.2	8.5	2.97	8.76	4.06	-0.13	-0.26
China	3,155	7,279	11,678	16,053	24,606	28,537	30,696	46.7	36.0	9.90	10.90	12.21	0.80	1.92
Europe	7,178	11,348	14,553	16,312	23,683	26,428	30,509	10.5	16.1	3.56	6.80	4.71	-0.15	-0.27
India	1,153	1,383	1,912	2,405	3,299	3,656	4,107	31.3	22.8	5.92	5.94	7.49	0.46	0.89
Latin America	1,320	2,363	4,149	3,932	4,592	5,269	6,028	16.3	19.4	3.05	7.15	6.32	0.04	-0.73
North America	46,041	62,988	49,242	58,893	81,604	95,298	109,285	22.4	20.5	3.13	4.01	4.43	0.10	0.12
World	1,590	2,442	4,202	5,594	7,415	8,401	9,167	5.0	10.2	3.53	8.29	4.86	-0.18	-0.36

Note: The Gini coefficient is the most widely used measure of inequality. Its value typically lies in a range between 0 (complete equality) and 100%. Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

While median wealth has risen faster than mean wealth this century due to the regional composition factor, mean and median wealth usually rise and fall in tandem year-on-year. However, there are exceptions, as happened this year. Measured in terms of current US dollars, wealth per adult fell by 3.6% in 2022, but median wealth rose 3%. This divergence is not primarily due to regional composition issues, but instead results from portfolio composition factors. Wealth holders in the vicinity of the median typically hold a higher share of non-financial assets (especially housing wealth) and a lower share of financial assets than what is recorded in the overall household wealth portfolio. So median wealth tends to grow faster than mean wealth when non-financial assets outpace financial assets in value, as was the case in 2022. This general conclusion applies to individual countries as well as to regions and to the world as a whole.

Trends in median wealth by region

Table 1 provides more details of the relationship between median and mean wealth within each region, and its trend over time (all measured in smoothed US dollars). Global median wealth was just 5% of mean wealth at the turn of the century, but the ratio had risen to 10.2% by 2022. A similar low initial ratio and a similar gain over time (about five percentage points) is evident in the Asia-Pacific region (excluding China and India), where median wealth was USD 894 (3.2% of mean wealth) in 2000 and increased to USD 5,673 (8.5% of mean wealth) by 2022. This pattern is repeated in Africa, where median wealth rose from USD 182 (8.6% of mean wealth) in 2000 to USD 1,398 (14.9% of mean wealth) by 2022, and in Europe, where the median/mean wealth ratio rose from 10.5% to 16.1%. Convergence between median and mean wealth occurred in these regions because countries with lower levels of wealth per adult

performed better than average, causing wealth differentials to narrow. The combination of robust wealth growth and falling inequality resulted in median wealth rising over the 22-year period by a multiple of 4.3 in Europe, and by a multiple of more than five in Africa, in the Asia-Pacific region and in the world as a whole.

Rapid wealth growth in emerging markets is also the reason why global wealth inequality has fallen this century

Median wealth in Latin America started closer to mean wealth and showed less convergence (from 16.3% to 19.4%). The remaining regions – North America, China and India – all started this century with relatively high median/mean wealth ratios, reflecting dominance by a single country. China achieved the fastest median wealth growth of any region, with median wealth rising more than eight-fold from USD 3,155 in 2000 to USD 30,696 in 2022. However, wealth per adult increased more than ten-fold over the same period, so that median wealth fell from 46.7% of mean wealth to 36.0%. Median wealth growth has also lagged behind mean wealth growth in North America and India, so that median wealth has declined relative to mean wealth in both regions. The percentage reduction is about the same (roughly a quarter) in India and China, but much lower in North America after the rise in median wealth recorded in 2022.

Table 2: Median wealth and wealth inequality 2000–22, selected markets

Market	Median (smoothed USD)							Median/mean wealth per adult (%)		Average annual growth rate (%) 2000–22				
	2000	2005	2010	2015	2020	2021	2022	2000	2022	GNI per adult	Median wealth per adult	Wealth	Gini	Share top 1%
Australia	75,699	127,828	155,732	185,003	229,201	276,079	268,857	51.1	49.8	4.2	5.9	6.1	0.2	0.3
Belgium	92,158	117,106	148,746	179,080	247,234	257,793	263,962	54.9	70.8	2.9	4.9	3.7	-0.4	-1.6
Brazil	1,068	1,927	3,811	2,682	3,662	4,156	5,169	17.7	19.4	3.0	7.4	7.0	0.2	0.4
Canada	37,295	51,226	73,738	97,412	133,355	152,948	143,862	30.4	37.2	3.3	6.3	5.4	-0.2	-0.8
Mainland China	3,155	7,279	11,678	16,053	24,606	28,537	30,696	46.7	36.0	9.9	10.9	12.2	0.8	1.9
France	51,360	87,581	97,537	102,798	129,233	140,218	145,591	45.5	42.6	2.9	4.9	5.2	0.0	-0.9
Germany	16,250	17,767	35,632	42,019	60,316	63,830	71,277	15.5	26.1	3.3	7.0	4.5	-0.2	0.2
Hong Kong SAR	53,933	56,580	87,190	127,276	185,086	202,536	210,485	36.3	36.7	3.8	6.4	6.3	0.0	-0.7
India	1,153	1,383	1,912	2,405	3,299	3,656	4,107	31.3	22.8	5.9	5.9	7.5	0.5	0.9
Indonesia	1,379	1,948	1,918	2,785	4,583	4,713	5,377	24.1	27.6	5.2	6.4	5.7	-0.1	-0.5
Italy	83,133	107,526	110,925	101,125	110,443	114,412	117,379	60.0	48.5	2.1	1.6	2.6	0.5	0.2
Japan	55,387	73,479	87,712	101,356	109,765	117,136	124,258	45.4	48.0	2.5	3.7	3.5	0.0	-0.3
Korea	22,810	35,756	36,730	51,658	92,639	102,952	100,644	40.4	40.2	4.6	7.0	7.0	-0.1	0.2
Mexico	3,330	7,297	9,971	10,076	14,115	15,837	17,491	28.2	34.2	2.5	7.8	6.9	-0.1	-1.8
Netherlands	44,513	53,946	90,331	89,867	132,321	143,673	120,270	28.5	31.4	2.9	4.6	4.2	-0.2	-0.5
Russia	1,170	1,545	1,836	3,434	6,090	6,897	7,555	23.7	21.8	6.3	8.8	9.3	0.1	0.2
Spain	48,064	101,605	103,891	74,899	98,157	107,342	116,023	51.5	47.9	2.7	4.1	4.4	0.2	-0.3
Switzerland	51,949	62,692	81,588	102,098	143,805	168,585	173,923	17.6	24.4	2.4	5.6	4.1	-0.2	-0.7
Taiwan	56,441	59,302	57,095	85,721	103,827	111,969	117,557	46.4	39.5	2.1	3.4	4.1	0.3	0.3
United Kingdom	55,657	88,132	95,973	103,090	137,024	155,813	165,334	43.2	50.1	3.0	5.1	4.4	0.0	-0.3
United States	46,479	63,760	46,925	55,690	79,437	93,280	107,739	21.6	19.5	3.1	3.9	4.4	0.1	0.2

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

The link between a rising median/mean wealth ratio and declining inequality (and vice versa) is evident in **Table 1**. Each of the regions where median wealth growth has lagged growth of mean wealth – North America, China and India – has experienced growing inequality, measured by both the Gini coefficient and the share of the top 1%. This contrasts with the trend in Africa, Asia-Pacific and Europe, where a rising median/mean wealth ratio has been accompanied by declining inequality. Latin America is the exception because the inequality trend is ambiguous: the share of the top 1% has fallen this century, but the Gini coefficient has risen. The evidence for Latin America suggests that the trend in the median/mean wealth ratio is more aligned with the share of the top 1% than with the Gini coefficient.

Trends in median wealth for individual markets

Table 2 reports similar data for a selection of markets. The median/mean ratio is relatively high in many cases, exceeding 40% in ten of the 21 markets in the year 2000 and in eight markets in 2022. These are all markets where wealth inequality is relatively low by international standards. This century, median wealth has grown faster than mean wealth in ten of the markets listed in **Table 2** and, in each of these markets except Germany, the share of the top 1% of wealth holders has trended down since 2000. Growth of median wealth relative to mean wealth was particularly high in Belgium, Canada, Germany, the Netherlands and Switzerland, with Belgium being the most notable given that median wealth already exceeded 50% of mean wealth in 2000.

In contrast, mean wealth has grown faster than median wealth this century in 11 markets in **Table 2**. As expected, these are markets where inequality appears to have risen. Excluding France and Spain, all show a rising wealth share for the top 1%. Growth of median wealth lagged wealth per adult by one percentage point or more in Mainland China, Italy and Taiwan. For the United States and India, the gap is even greater (1.4 or 1.5 percentage points), suggesting that, in these two countries, much of the growth of household wealth this century has bypassed the lower and middle wealth tiers.

Much of the growth of household wealth this century has bypassed the lower and middle wealth tiers

Over shorter periods, changes in the median/mean ratio originate from another factor. As already noted, wealth holders in the neighborhood of the median hold a higher proportion of non-financial assets (especially housing) in their portfolios and therefore do better when non-financial assets grow faster than financial assets. This explains the broad pattern observed last year. The median/mean ratio grew in 14 of the 21 markets listed in **Table 2** and financial assets declined in importance in 11 of these 14. The outcome in China was also consistent with the general rule since the median/mean wealth ratio fell alongside a rise in the share of financial assets.

In summary, at both the regional and country level, median wealth differs greatly from mean wealth and the gap is very large for markets with high wealth inequality. Over time, median wealth tends to grow at a similar pace to mean wealth. But, if inequality is rising – as indicated, say, by a rising wealth share of the top 1% – then growth of median wealth is likely to lag that of mean wealth, and vice versa when inequality is trending down. For the world as a whole, median wealth has increased five-fold this century at roughly double

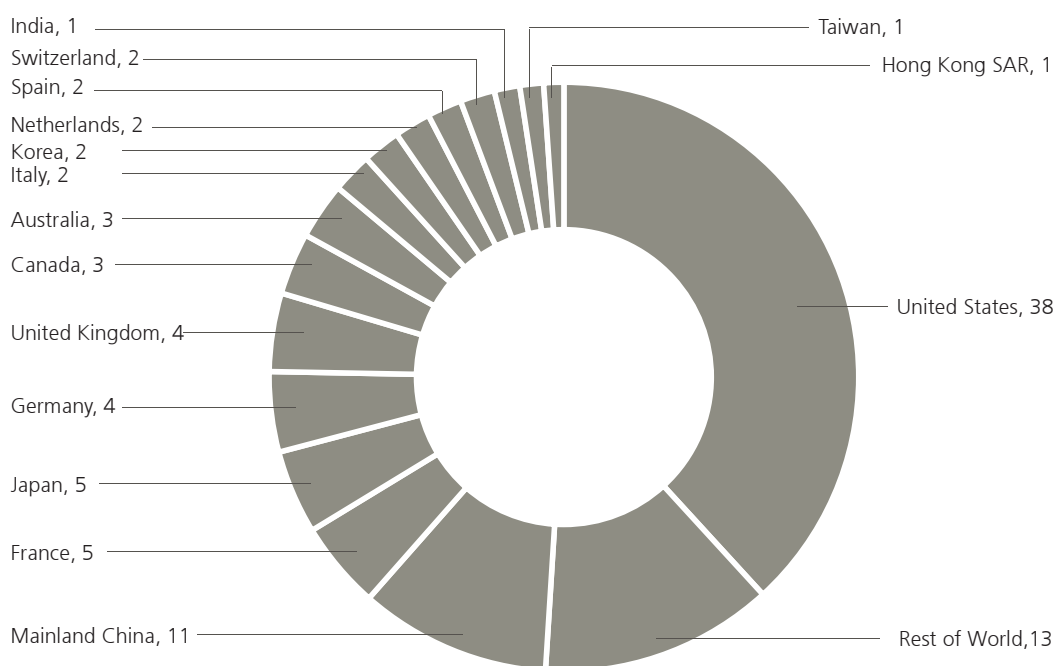
the pace of wealth per adult. This has happened because citizens in the vicinity of the global median have tended to reside in emerging economies, most notably China, where wealth growth has been the fastest. Over short time spans, a rise in the relative importance of non-financial wealth can cause median wealth to grow faster than mean wealth. This is less evident over longer periods because the growth rates of financial and non-financial wealth tend to converge in the long run.

For the world as a whole, median wealth has increased five-fold this century at roughly double the pace of wealth per adult

High-net-worth individuals by market

We now turn to a more detailed analysis of the upper echelons of wealth holders, beginning with the number of US dollar millionaires in individual markets. For any given market, the number depends on three factors: the size of the adult population, average wealth and wealth inequality. The United States scores highly on all three criteria and has by far the greatest number of millionaires at 22.7 million or 38.2% of the world total (see **Figure 4**). This is far ahead of China in second place, with 10.5% of all global millionaires. Millionaire numbers in Japan vied with the United States at the turn of this century, but Japan's position has steadily eroded since then. Japan was overtaken by China in 2014 and accounted for just 4.6% of millionaires in 2022, putting it for the first time in fourth place below France (4.8%) and challenged by Germany (4.4%) and the United Kingdom (4.3%). Next come Canada (3.4%) and Australia (3.1%), followed by Italy, Korea, the Netherlands, Spain and Switzerland, each hosting about 2% of global millionaires. India, Taiwan and Hong Kong SAR also account for more than 1% of the world's dollar millionaires, but that is no longer true of Sweden this year.

Figure 4: Number of US dollar millionaires (% of world total) by market, 2022



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Millionaire trends

Worldwide, we estimate that there were 59.4 million millionaires at the end of 2022 (**Table 3**). This is 3.5 million less than a year earlier due to the fall in average wealth and the shift away from financial assets. Large reductions were recorded for many countries, most notably the United States (down 1.8 million), Japan (–466,000), the United Kingdom (–439,000), Australia (–363,000), Canada (–299,000) and Germany (–253,000). The countries reporting fewer millionaires in 2022 usually reported higher numbers in 2021 and the gains in 2021 often exceeded the losses this year. But millionaire numbers in Japan, Germany and Italy fell during both years. Relatively small rises in millionaire numbers were recorded for a few countries in 2022, headed by Norway (+104,000), Iran (+104,000) and Brazil (+120,000), according to our estimates.

The impact of inflation on millionaire numbers

There are four times as many US dollar millionaires in the world as there were at the turn of the century. Several factors help account for this rise. Adult populations have been growing in most countries and real household wealth has increased by 150% since 2000. But inflation has also speeded up the process by progressively reducing the real threshold for membership of the dollar millionaire group. This erosion of the standard can perhaps be overlooked when prices are rising 1%–2% annually, but the impact is difficult to ignore when inflation is higher and more persistent.

Table 4 compares the number of millionaires reported earlier in **Figure 4** and **Table 3** with the number that would have been recorded if the millionaire threshold in 2022 had been set at the same real level as in 2021. The 6.1% inflation rate for household consumption in the United States raises the 2022 benchmark from USD 1 million to USD 1,061,044, so those below the new higher standard no longer qualify as millionaires. The impact varies across countries depending on the pattern of wealth holdings in the vicinity of USD 1 million. This is difficult to estimate with precision, but the results in **Table 4** are indicative of the range of values that can be expected.

For the world as a whole, there were 4,395,400 “inflation millionaires” – adults who qualified as millionaires for the purpose of **Figure 4**, but who would not have qualified if the real 2021 standard was applied instead. The distribution of inflation millionaires across regions is roughly in proportion to the total millionaire numbers, so that North America and Europe each have more than 1.4 million, Asia-Pacific (excluding China and India) more than 800,000 and China another half million. The remaining 180,000 are spread around Africa, India and Latin America. Among individual countries, these inflation millionaires reside mainly in the United States, China, Japan, France, the United Kingdom and Germany, each of which hosts more than 100,000.

Table 3: Change in the number of millionaires by market, 2022

Main gains Market	Adults (thousand) with wealth above USD 1 m			Main losses Market	Adults (thousand) with wealth above USD 1 m		
	2021	2022	Change		2021	2022	Change
Brazil	293	413	120	United States	24,480	22,710	-1,770
Iran	142	246	104	Japan	3,224	2,757	-466
Norway	247	352	104	United Kingdom	2,995	2,556	-439
Mexico	323	393	70	Australia	2,203	1,840	-363
Russia	351	408	56	Canada	2,331	2,032	-299
				Germany	2,880	2,627	-253
				Italy	1,457	1,335	-121
				Sweden	587	467	-120
				Taiwan	848	765	-83
				New Zealand	330	255	-75
World	62,899	59,391	-3,508	World	62,899	59,391	-3,508

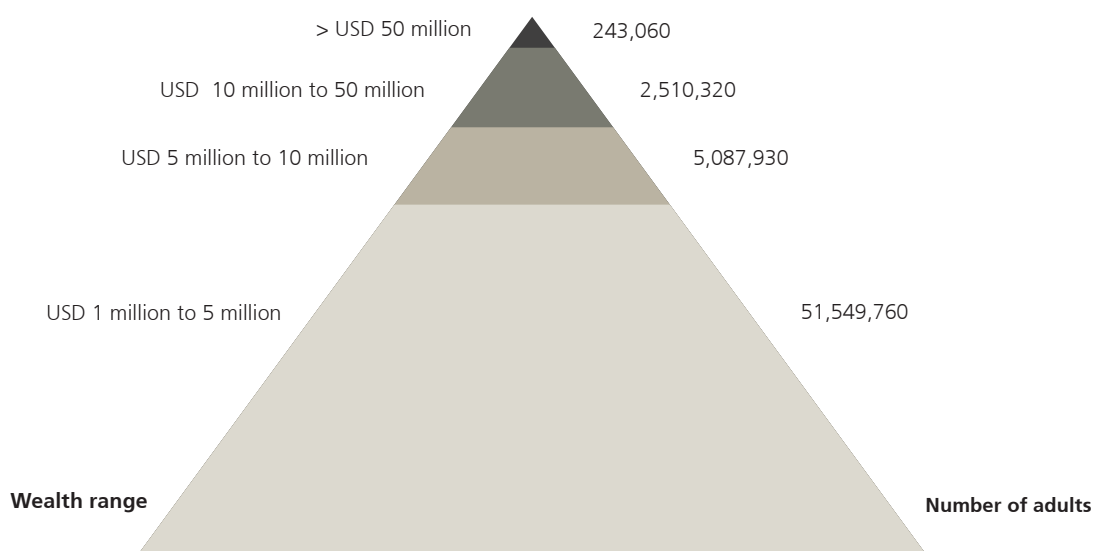
Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

Table 4: Impact of inflation on number of dollar millionaires in 2022, regions and selected markets

Market	Number of USD millionaires (thousands)				Market	Number of USD millionaires (thousands)			
	Nominal USD	Real 2021 USD	Difference	%		Nominal USD	Real 2021 USD	Difference	%
United States	22,710	21,449	1,260.3	5.5	Australia	1,840	487	48.3	9.0
Mainland China	6,231	5,733	497.5	8.0	Italy	1,335	430	37.4	8.0
France	2,821	2,559	261.9	9.3	Korea	1,254	383	30.8	7.5
Japan	2,757	2,485	271.7	9.9	Netherlands	1,175	380	27.7	6.8
Germany	2,627	2,412	213.9	8.1	Spain	1,135	358	35.5	9.0
United Kingdom	2,556	2,295	260.8	10.2	Denmark	366	333	32.8	9.0
Canada	2,032	1,854	177.8	8.7	Saudi Arabia	354	325	27.9	7.9
Australia	1,840	1,680	160.4	8.7	Singapore	332	307	25.9	7.8
Italy	1,335	1,218	117.5	8.8	Africa	356	329	27.0	7.6
Korea	1,254	1,140	113.6	9.1	Asia-Pacific	9,763	8,928	835.4	8.6
Netherlands	1,175	1,109	66.0	5.6	Mainland China	6,231	5,733	497.5	8.0
Spain	1,135	1,043	91.6	8.1	Europe	16,247	14,808	1,439.0	8.9
Switzerland	1,097	1,007	90.6	8.3	India	849	782	66.6	7.8
India	849	782	66.6	7.8	Latin America	1,168	1,076	91.5	7.8
Taiwan	765	700	64.4	8.4	North America	24,747	23,309	1,438.4	5.8
Hong Kong SAR	629	591	38.0	6.0	World	59,391	54,965	4,395.4	7.5

Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

Figure 5: The top of the wealth pyramid, 2022



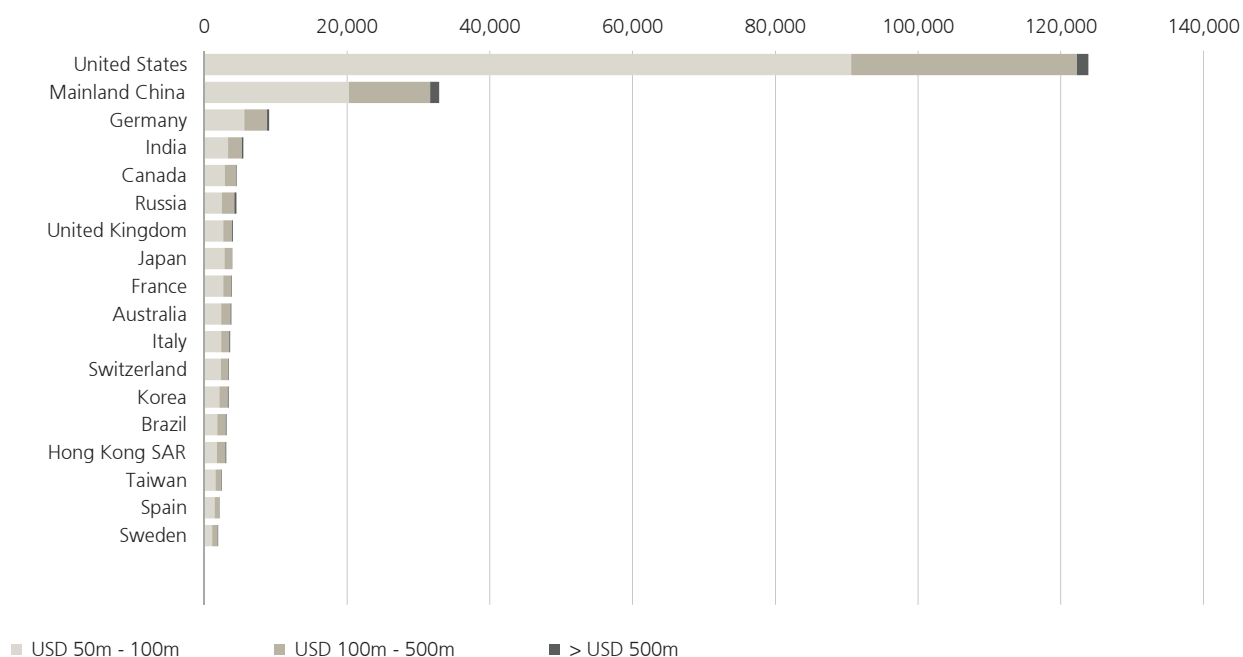
Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

For most regions and countries, bunching of adults in the neighborhood of USD 1 million means that raising the millionaire threshold by 6.1% translates into a slightly higher percentage loss of millionaire numbers. This is typically in the range of 7.5%–9%, although the United States, the Netherlands and Hong Kong SAR record lower values, while Japan and the United Kingdom are above this range.

In the context of **Table 3**, we reported 3.5 million fewer millionaires using the US dollar threshold unadjusted for inflation. Taking the inflation millionaires into account more than doubles this number, equating to a real loss of 7.9 million millionaires, or 12.6% in a single year. The losses recorded for individual countries in **Table 3** are all augmented, but never double in size, although the losses in Germany and Italy come close to doubling. Countries that record small gains in millionaire numbers when a nominal US dollar benchmark was used are likely to see these reversed when the real 2021 standard is applied. But the five countries listed on the left-hand side of **Table 3** that gained more than 50,000 millionaires all continue to show net gains with the inflation-adjusted standard.

The factors that determine changes in millionaire numbers tend to have a magnified impact on the number and wealth of those at the very top of the wealth distribution. The vast majority of the 59.4 million millionaires in 2022 have wealth between USD 1 million and USD 5 million: 51.5 million or 87% of the HNW group (see **Figure 5**). Another 5.1 million adults (8.6%) are now worth between USD 5 million and USD 10 million, and 2.8 million (4.6%) have wealth above USD 10 million. Of the latter, 2.5 million have assets in the USD 10–50 million range, leaving 243,060 ultra-high-net-worth (UHNW) individuals with net worth above USD 50 million at the end of 2022. This is 22,500 down on the 265,560 UHNW adults recorded at the end of 2021 and is traceable to the fall in share prices. This decline is unusual. Adults with wealth above USD 50 million are now four times as common as in 2008 and, despite the drop in 2022, UHNW numbers have risen by more than 60,000 in the past three years alone.

Figure 6: Ultra-high-net-worth individuals in 2022, top 20 markets



Source: James Davies, Rodrigo Lluberás and Anthony Shorrocks, Global Wealth Databook 2023

Ultra-high-net-worth individuals

A further breakdown of the UHNW group reveals 79,490 adults with wealth above USD 100 million at the end of 2022, of which 7,020 are worth more than USD 500 million.

The regional breakdown of the UHNW group as a whole is dominated by North America with 128,470 members (53%), while 40,090 (17%) live in Europe, 32,910 (14%) in Mainland China and 27,700 (11%) in Asia-Pacific countries, excluding China and India. Among individual countries, the United States leads by a considerable margin with 123,870 members, equivalent to 51% of the world total (see **Figure 6**). Mainland China is a clear second with 32,910 UHNW individuals, followed by Germany (9,100), India (5,480) and Canada (4,560). Russia (4,490), the United Kingdom (3,980), Japan (3,930), France (3,890) and Australia (3,780) make up the remaining top ten countries ranked by UHNW numbers.

North America accounted for 70% of the record rise of UHNW individuals in 2021 and was even more dominant in 2022, accounting for 18,290 (81%) of the 22,500 adults whose wealth fell below USD 50 million. Numbers also fell in Europe by 3,800 and in the Asia-Pacific region (excluding China and India) by 1,705. The small declines in China and Africa were offset by a small gain in India, while the number of UHNW adults rose by 1,280 in Latin America, according to our figures.

The United States shed the most UHNW members (17,260) in 2022. This was fewer than the number gained in 2021, so there was a net increase over the two years. Germany (-1,340), Canada (-1,040), Australia (-910) and Sweden (-900) also experienced considerable losses. UHNW numbers edged slightly upward in a number of countries, with India, Brazil and Russia recording the biggest increases, although wealth trends in Russia are difficult to determine at this time.

Wealth inequality

For most purposes, assessment of wealth inequality can be reduced to two simple questions: how far are top wealth groups ahead of the average citizen and how far below the average do the bottom groups lie? Discussion of the first of these questions is very often framed in terms of the share of wealth owned by the top 10%, the share of the top 1%, and so on. These statistics are insensitive to changes in wealth distribution in the bottom half of the distribution. The Gini coefficient is a more broad-based measure of inequality that captures changes at both ends of the wealth spectrum.

It is widely believed that wealth inequality rose during the COVID-19 pandemic for reasons that fit within the above framework. Lower-wealth holders are believed to have been damaged by the economic impact of the pandemic on employment and incomes, forcing them to draw down their savings and/or incur higher debt.

Table 5: United States wealth distribution by quarter, 2019–22

Period	Wealth share of percentiles					Wealth share of			
	0-50	51-90	91-99	91.1-99.9	Top 0.1	Bottom 50%	Wealth per adult	Top 1%	
Q4 2019	1.9	29.0	38.7	12.1	18.3	1.9	69.1	30.5	18.3
Q1 2020	2.0	30.0	38.7	11.8	17.6	2.0	68.1	29.3	17.6
Q2 2020	1.9	29.5	38.4	12.0	18.3	1.9	68.6	30.3	18.3
Q3 2020	1.9	29.3	38.2	12.1	18.6	1.9	68.8	30.7	18.6
Q4 2020	1.9	28.7	37.9	12.4	19.1	1.9	69.4	31.5	19.1
Q1 2021	2.0	28.5	37.6	12.6	19.3	2.0	69.5	31.9	19.3
Q2 2021	2.2	28.3	37.4	12.7	19.5	2.2	69.6	32.2	19.5
Q3 2021	2.4	28.2	37.3	12.8	19.3	2.4	69.4	32.1	19.3
Q4 2021	2.5	28.0	37.3	12.9	19.4	2.5	69.5	32.3	19.4
Q1 2022	2.5	28.5	37.0	12.8	19.2	2.5	69.0	32.0	19.2
Q2 2022	3.0	29.2	36.9	12.4	18.5	3.0	67.9	30.9	18.5
Q3 2022	3.1	29.2	37.1	12.4	18.3	3.1	67.7	30.7	18.3
Q4 2022	3.0	28.8	37.1	12.6	18.5	3.0	68.2	31.1	18.5

Source: Federal Reserve Board, Distributional Financial Accounts

In contrast, top wealth groups are less vulnerable to reductions in the overall level of economic activity and, more importantly, benefited greatly from the impact of lower interest rates on share prices. This would be expected to raise wealth inequality, measured either in terms of the top shares or in terms of the Gini coefficient.

Regarding the lower half of the wealth distribution, there is some evidence about the pandemic’s impact on subgroups such as women, minorities and younger generations. However, it will take years before survey data provide a clear picture of the distributional effects. In the meantime, the Distributional Financial Accounts (DFAs) published quarterly by the Federal Reserve board in the United States serve as the best source of information, at least for the United States. These data are not actual survey observations, but rather simulation outcomes obtained by adjusting the asset and debt values of households reported in the latest Survey of Consumer Finances (SCF) to match current official balance sheet totals. Nevertheless, they should be a reliable guide to the evolution of wealth distribution. Note that the DFAs include assets not covered in the SCF such as some forms of consumer durables and employer-based pensions. Since these additional assets are more evenly distributed, the DFAs report lower inequality levels than those given in the SCF.

The DFA data identify the wealth shares of the bottom 50%, the next 40% and the top 10%, with a further subdivision into the top 1% and the top 0.1%. These shares are revised each quarter to match the updated asset values in national accounts. **Table 5** shows that the collapse of share prices at the outset of the pandemic reduced the share of the top 1% of adults from 30.5% to 29.3% between December 2019 and March 2020. The share of this group then recovered and continued to grow throughout 2021, peaking in Q4 2021. The share of the top 0.1% follows a similar trajectory. The patterns over time are exactly the consequences expected from the share price movements observed during the past three years.

At first sight, the trend in the top 10% share appears to mimic that of the top 1%. But this neglects the fact that the top 1% account for almost half of the wealth of the top decile. While the share of the top 1% rose during 2020 and 2021, the share of the next 9% (i.e. percentiles 91–99) fell each quarter from Q4 2019 until Q2 2022. The share of percentiles 51–90 (i.e. deciles 6–9) also declined each quarter from Q1 2020 until Q4 2022. In contrast, the bottom half of wealth holders in the United States have not suffered over the same period. Their wealth share improved slightly in 2020 and has since increased by over 50%. Thus the DFA evidence suggests three phases of wealth redistribution in the pandemic and post-pandemic era: a clear shift toward inequality in 2020, a clear move toward equality in 2022, and an intermediate period in 2021 when wealth was redistributed away from percentiles 51–99 in favor of both the top 1% and the bottom 50%.

Table 6: Wealth inequality trends, 2000–22, selected markets

	Gini coefficient							Wealth share of top 1%						
	2000	2005	2010	2015	2020	2021	2022	2000	2005	2010	2015	2020	2021	2022
Australia	63.7	63.1	63.0	64.9	65.5	66.2	66.3	20.5	20.0	19.2	20.5	20.6	21.8	21.7
Brazil	84.5	82.7	82.1	88.7	88.9	89.2	88.4	44.2	45.0	40.2	48.7	49.5	49.3	48.4
Canada	74.9	73.3	71.7	71.8	71.8	72.6	72.3	29.1	25.9	22.4	23.3	23.6	25.0	24.3
Mainland China	59.5	63.8	70.0	71.2	70.5	70.1	70.7	20.7	24.2	31.5	31.7	30.8	30.5	31.1
France	69.7	67.0	69.8	69.9	70.0	70.2	70.3	25.5	21.0	21.0	22.3	21.9	22.3	21.2
Germany	81.2	82.7	77.4	79.2	77.9	78.8	76.9	29.1	30.4	25.7	32.1	29.2	31.7	30.0
India	74.6	80.9	82.1	83.3	82.3	82.3	82.6	33.2	41.9	41.4	42.3	40.5	40.6	41.0
Italy	60.4	59.4	63.1	66.9	66.4	67.2	67.8	22.0	18.2	17.4	22.6	21.9	23.3	23.1
Japan	64.5	63.1	62.5	63.6	64.4	64.7	64.8	20.4	18.8	16.7	18.2	18.1	18.7	18.8
Korea	69.7	70.1	74.7	72.4	67.7	68.2	67.9	21.3	21.8	26.0	26.9	23.4	24.0	23.1
Spain	65.5	62.2	61.4	69.5	69.1	69.1	68.3	24.1	18.7	18.5	24.1	22.7	23.1	22.4
Taiwan	64.7	67.8	72.6	70.5	70.7	70.7	70.5	24.3	23.6	29.8	26.9	27.3	26.6	26.4
United Kingdom	70.5	67.6	69.1	73.0	71.7	70.6	70.1	22.1	20.6	23.6	25.0	23.1	21.1	20.7
United States	80.6	81.1	84.1	84.9	85.0	85.0	83.0	32.9	32.8	33.4	34.8	35.3	35.1	34.2

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

It is surprising to discover that the bottom 50% of households raised their share of wealth when the pandemic was still at its peak. Further inspection of the DFA data clarifies the reasons. For the bottom 50% of households, the value of non-financial assets is more than double their net worth (and is offset by a similar level of debt). Thus even modest rises in non-financial asset values are leveraged into much greater proportionate rises in net worth. And non-financial assets (principally housing assets, but also including consumer durables) continued to grow at a healthy rate throughout 2021 and 2022. This explains why, contrary to expectation, the DFA evidence indicates that the pandemic and post-pandemic eras have not been detrimental to the relative position of the bottom half of wealth holders in the United States.

The quarterly DFAs published by Canada display similar trends to those shown in the United States. Outside of North America, there are no DFA sources to shed light on the relative performance of lower-wealth holders in recent years. However, there are other sources to help us determine what happened to wealth inequality in 2022 and to understand the trends in wealth inequality this century.

Wealth inequality within markets

Table 6 summarizes our estimates of the level and trend of wealth inequality this century for 14 markets. Wealth inequality is high in all markets and exceptionally high in some. As a rough guide, typical values are 30%–35% for the share of the top 1% and 60%–65% for the share of the top 10%. A Gini value of 70 is relatively low and a Gini above 80 is relatively high. All these values are much higher than the corresponding values for income inequality or other customary well-being indicators.

In the early years of this century, wealth inequality rose in the United States and in transition/market-liberalizing countries like China and India, both of which display a strong upward trend from 2000 to 2010. But these are the exceptions. Wealth inequality declined in most countries, reflecting a rise in the importance of non-financial assets. After the global financial crisis, rapid growth of financial assets caused wealth inequality to rise in most countries until 2015, when it began to level out. The trends shown by the top wealth shares and the Gini coefficient are broadly consistent in this respect. On balance, the 20-year period from 2000 to 2020 was one of rising inequality within countries. The wealth Gini in 2020 was above the 2000 level in ten of the 14 markets covered in **Table 6**, and the share of the top 1% also rose in ten of the markets, although not always the same ones. France, Germany, Korea and Spain show inequality rising by one of the criteria, but not both.

Even modest rises in non-financial asset values are leveraged into much greater proportionate rises in net worth

Small variations in inequality recorded year-on-year are not always a reliable guide to the direction of inequality change. But the evidence suggests that inequality edged up during the first year of the pandemic and again during 2021. Eleven of the countries listed in **Table 6** display a flat or rising wealth Gini between 2020 and 2021, and ten of the countries show an increase in the share of the top 1%. This shift toward higher inequality is unlikely to have been the direct result of the pandemic itself, but instead reflects the consequences of actions undertaken to mitigate its impact, particularly the lower interest rates that led to asset price inflation.

The results for 2022 reported in **Table 6** suggest that inequality edged downward in eight of the countries according to both inequality criteria and in a further three countries according to the share of the top 1%. As previously noted, share price declines were commonplace in 2022, causing financial wealth to fall. This is the likely source of reduced inequality, due to the greater weight given to financial assets among the wealthier groups. Interestingly, a shift away from financial assets toward non-financial assets, especially housing wealth, tends to favor those in the middle segments of wealth distribution relative to those at the very bottom, as well as those at the very top. Since the Gini coefficient is sensitive to such changes at the bottom, a shift toward non-financial wealth can simultaneously raise the Gini value and lower the top wealth shares, as happened in Australia, France and Italy in 2022. Tracing the source of the changes in wealth inequality to the shift away from financial assets also explains why China and India are the outliers in 2022: China experienced a minimal reduction in financial assets and India none at all.

Wealth inequality from a global perspective

Our dataset provides a unique opportunity to determine how wealth is distributed across all the world's citizens. According to our estimates, the bottom 50% of adults in the global wealth distribution together accounted for less than 1% of total global wealth at the end of 2022. In contrast, the richest decile (top 10% of adults) owns 81% of global wealth and the top percentile alone has nearly half (45%) of all household assets.

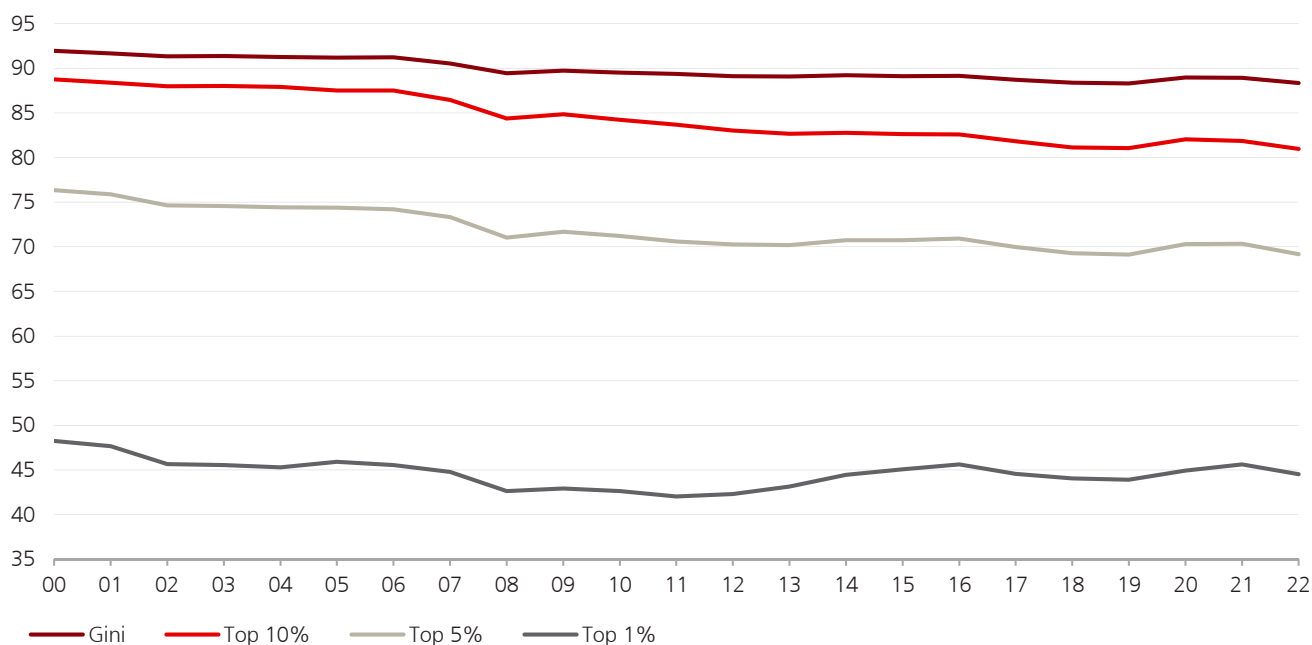
The trend over time in global wealth inequality is the outcome of two underlying factors. Global inequality rises or falls in response to changes in wealth inequality within countries – the so-called “within-country” component. But it is also affected by changes in the average wealth levels in countries relative to the global average – the “between-country” component. This century, the rise of household wealth in emerging markets, most notably China and India, has narrowed wealth differences between countries, so that the between-country component has declined quite rapidly. This has been the dominant factor governing the overall downward inequality trend evident in **Figure 7**.

Our estimates suggest that mean wealth in China in 2022 is already around 90% of the wealth per adult for the world as a whole

In the early years of this century, the decrease in the between-country component was reinforced by a decline in within-country inequality. This resulted in a pronounced drop in global wealth inequality. The share of the top 10% fell from 88.8% to 84.4% between 2000 and 2008, the share of the top 1% from 48.2% to 42.7%, and the Gini from 92.0 to 89.4. After the financial crisis, the different inequality measures followed different paths, reflecting the weight given to different parts of the distribution. The share of the top 10% and the Gini coefficient continued downward, recording 81.0% and 88.3, respectively, when the pandemic began in 2020. However, the wealth share of the global top 1% moved upward over this period to reach 43.9% at the end of 2019.

A distinct shift is evident in the inequality graph after 2019. Increasing inequality both within and between countries translated into a rise in global inequality in 2020, which levelled off in 2021 when macroeconomic growth was restored. The share of the top 1% was the exception, continuing its upward path through 2021. This ended in 2022, when the share of the top 1% declined, along with the other indicators displayed in **Figure 7**. Taking the three-year period 2020–22 as a whole, the effects virtually cancel out: the net change is insignificant for the Gini coefficient and the share of the top 10% and top 5%, while the global share of the top 1% has crept up a fraction from 43.9% to 44.5%.

Figure 7: Global wealth inequality trends, 2000–22



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

All in all, the secular downward trend in **Figure 7** reflects a decline in the between-country component due to catching up by emerging economies. The influence of this factor has waned in recent years as average wealth in China approaches mean global wealth worldwide and may change direction if wealth per adult in China overtakes the global mean, which could happen in the near future. Our estimates suggest that mean wealth in China in 2022 is already around 90% of the wealth per adult for the world as a whole (USD 75,731 versus USD 84,718).

Deviations from the long-term trend in **Figure 7** are mainly due to annual variations in exchange rates and asset prices. The impact of exchange rate movements is difficult to predict. But changes in the exchange rates of the Chinese renminbi, the Indian rupee and the euro are likely to have the biggest impact given their associated population weighting in the global calculations.

The impact of financial asset prices on inequality trends is easier to assess since – as already noted – financial assets are disproportionately owned by higher wealth groups. For this reason, wealth inequality tends to rise in line with the share of financial assets in the household portfolio, and vice versa. This link is particularly evident for the share of the top 1% as confirmed by **Figure 8**, which suggests that a one percentage point rise in the portfolio share of financial assets typically leads to about a one percentage point rise in the wealth share of the top 1%. The plot here refers to the world as a whole, but the pattern also applies to individual countries, although it is sometimes obscured by a variety of country-specific factors.

Figure 8: Annual change in global share of top 1% versus change in share of financial assets, 2000–22



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Summary

Wealth disparity is very pronounced. This century, wealth differences between countries have tended to narrow, causing worldwide wealth inequality to trend downward. Compression of wealth differentials is also the reason why, from a global perspective, median wealth has risen twice as fast as mean wealth since 2000. This outcome is not always repeated at the regional or country level: median wealth sometimes grows faster than mean wealth, but sometimes the reverse is true, as has been the case in China and India. Furthermore, the faster growth achieved by median wealth at the global level in the past may subside, or even stop, if wealth continues to grow in China at a fast pace and mean wealth in China overtakes the global average.

Year-on-year changes in wealth inequality and the median/mean wealth ratio are closely related to changes in asset prices, particularly the prices of financial assets. This occurs because wealthier individuals favor financial assets and is most evident when wealth inequality is assessed by the wealth share of the top 1% of adults.

The actions undertaken by governments and central banks in 2020 to offset the macroeconomic repercussions of the COVID-19 pandemic resulted in share price rises and increasing wealth inequality. Share prices rose at an even faster pace in 2021, but this was balanced by strong growth in non-financial assets, so that the overall impact on wealth inequality was broadly neutral. Since the end of 2021, many advanced nations have experienced significant reductions in financial wealth and this led to widespread falls in wealth inequality in 2022. For the world as a whole, these annual shifts have roughly cancelled out, leaving global wealth inequality back at the level prevailing when the pandemic began, which, for most inequality indicators, was the lowest level recorded this century.



Wealth outlook

Rodrigo Lluberás and Anthony Shorrocks

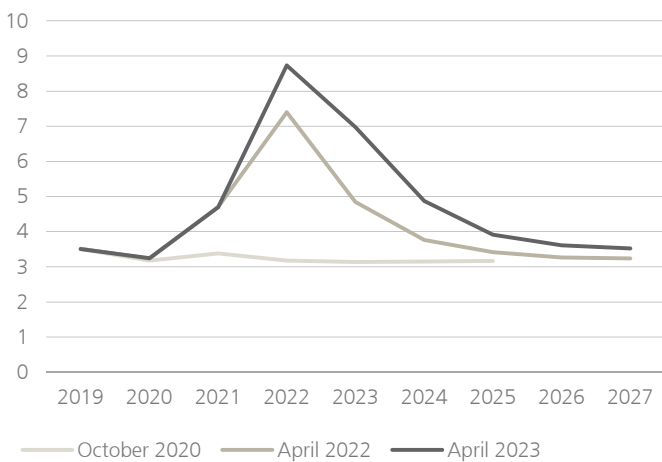
According to our projections, global wealth will rise by 38% over the next five years, reaching USD 629 trillion by 2027. Low- and middle-income countries are responsible for 56% of the growth, although they account for just 31% of current wealth. Growth by middle-income countries will be the primary driver of global trends. Wealth per adult looks set to increase by 30%, reaching USD 110,270 in 2027. We also expect the number of millionaires to grow markedly over the next five years to reach 86 million, while the number of UHNWIs will rise to 372,000.

The global picture

Forecasts for global economic activity and inflation have fluctuated greatly over the past few years. The prospects for GDP growth have now settled into a more stable pattern, albeit at slightly depressed rates. But the future trajectory of inflation remains uncertain. Fiscal and monetary policies undertaken in response to the COVID-19 pandemic, combined with the Russia-Ukraine war and other factors, have resulted in a rise in global inflation. And, while 2022 is expected to be

the peak year, predicted future levels have been subject to a sequence of upward revisions. **Figure 1** shows the International Monetary Fund (IMF) inflation forecasts in October 2020, April 2022 and April 2023. In October 2020, global inflation for 2023 was projected to be 3.2%. However, by April 2022, the inflation estimate for 2023 had risen to 4.9% and the latest estimate puts the figure at 7%. Furthermore, the surge in global inflation is now expected to persist for much longer than previously anticipated.

Figure 1: Global inflation forecasts, 2019–27 (%)



Source: IMF forecasts

The surge in global inflation is now expected to persist for much longer than previously anticipated

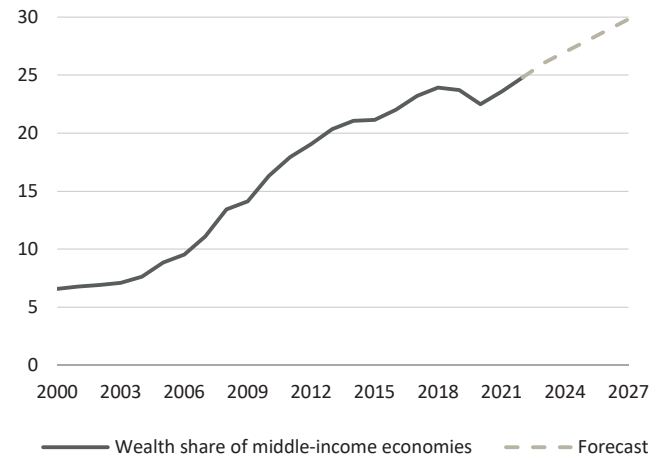
This persistent inflation has consequences for global GDP and global wealth. Global output is expected to return to the pre-pandemic trend, but would be USD 7.9 billion or 6% lower in 2027 than previously projected when expressed in current US dollars and lower still in real terms. Recovering from the setback in 2022, we believe that total global wealth will continue to grow at a pace similar to that recorded since 2000, averaging 6.7% per annum over the next five years. This would increase global household wealth by USD 174 trillion over the next five years, equivalent to an extra USD 25,500 per adult. But, if inflation persists at the rates currently envisaged, real growth of global wealth will average just 2.1% and real wealth per adult will grow by less than 1% per year.

Wealth prospects for middle-income countries

Middle-income countries – which we also refer to as “emerging economies” – have contributed greatly to global wealth growth since the beginning of this century. As a consequence, their share of world wealth has increased: between 2000 and 2022, the wealth share of emerging economies more than tripled from 7% to 25% (see **Figure 2**). Emerging economies recovered from the below-par performance during the pandemic and regained momentum in 2021 and 2022, which we expect to continue over the next five years, further narrowing the gap with the developed world.

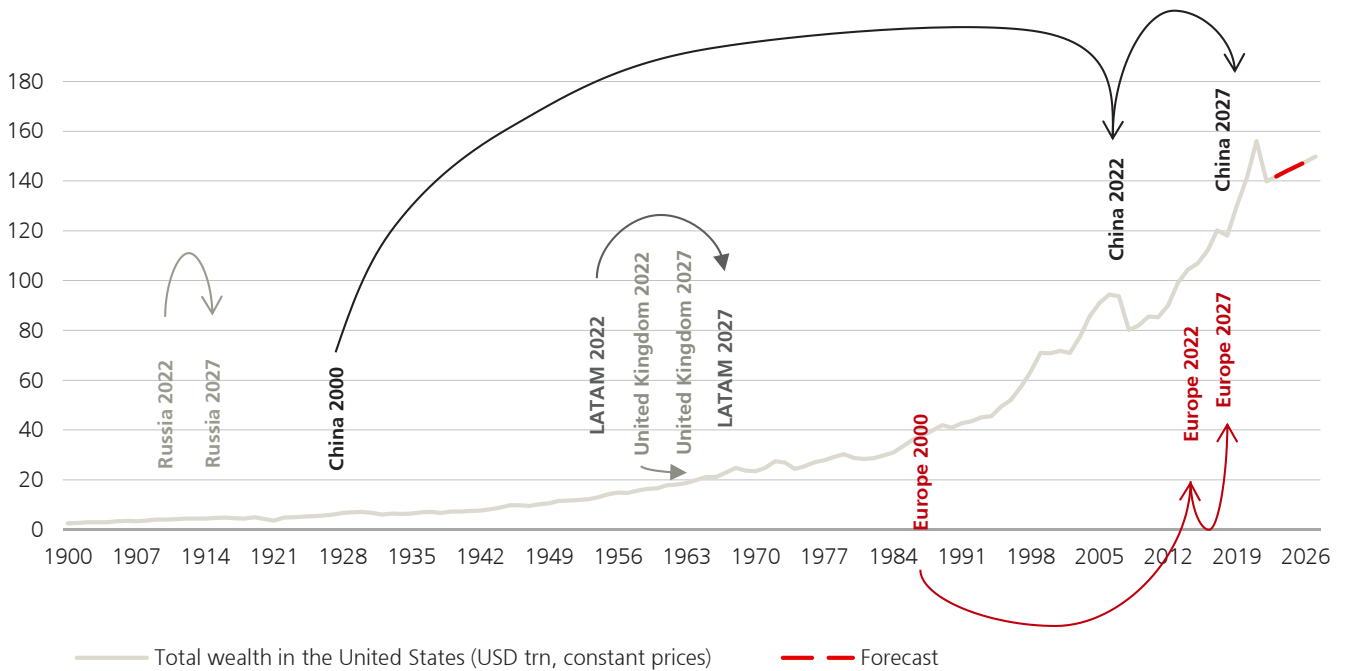
In the next five years, we project average annual wealth growth of 11.8% in low-income countries and 10.7% in middle-income countries. This is significantly above the annual wealth growth of 4.5% we estimate for high-income nations, leading us to forecast that middle-income countries will account for about 43% of wealth growth in the next five years and that their wealth share will climb to 30% by 2027.

Figure 2: Wealth in emerging economies, 2000–27 (%)



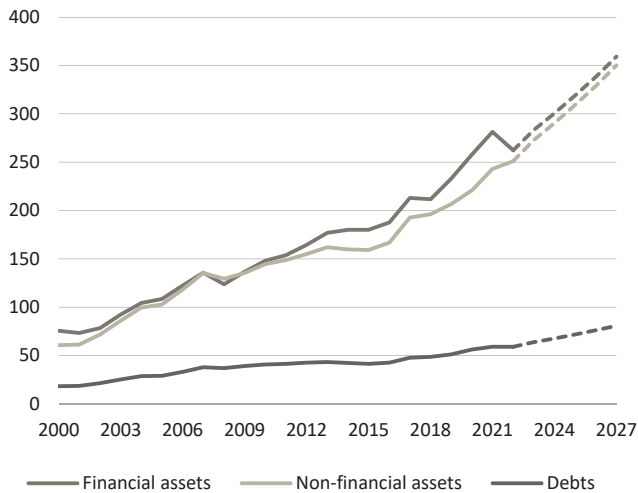
Source: Original estimates by authors

Figure 3: Total wealth in the United States, 1900–2027, and the relative position of selected economies (USD trillion, constant prices)



Source: Original estimates by authors

Figure 4: Evolution of wealth by component, 2000–27 (USD trillion, current prices)



Source: Original estimates by authors

Leapfrogging

The likely good performance of middle- and low-income economies leads us to expect a sizable improvement in individual countries over the next five years. **Figure 3** compares the total wealth of some of the largest economies today and five years from now with the wealth of the United States during the 20th century after adjusting for inflation. On average, household wealth in the United States grew 3.3% per annum in real terms between 1900 and 2022. The chart shows the position of Europe, Latin America, the United Kingdom, China and Russia relative to the United States from a historical perspective.

Europe's total wealth of USD 104 trillion in 2022 is comparable to the total wealth of the United States in 2013. We expect Europe's total wealth in 2027 to be similar to that of the United States in 2017, which is an increase equivalent to just four years in terms of the United States' history. China's progress between 2000 and 2022 is remarkable: the rise in wealth between 2000 and 2022 equates to United States wealth growth over the course of more than 80 years from 1925 onward. We expect wealth growth in China to slow, but to still be high enough to narrow the gap with the United States. By 2027, we estimate household wealth will reach USD 128 trillion in real 2022 US dollars, equivalent to the United States' level in 2019 and hence only eight years behind.

Household wealth grew rapidly in Russia between 2000 and 2020, averaging 13.0% per year. However, we expect the impact of the Russia-Ukraine war to reduce wealth growth to 4.6% between now and 2027 (although this projection is subject to a high degree of uncertainty). Russia's total wealth today is similar to that of the United States in 1912: we expect four US years of progress by 2027. Household wealth is also likely to grow more slowly in the United Kingdom due to the continuing impact of Brexit on the economy coupled with the slow recovery from the COVID-19 pandemic. Household wealth currently corresponds to that of the United States in 1959. It is expected to reach USD 20 trillion in 2027, representing an improvement of only four "US years."

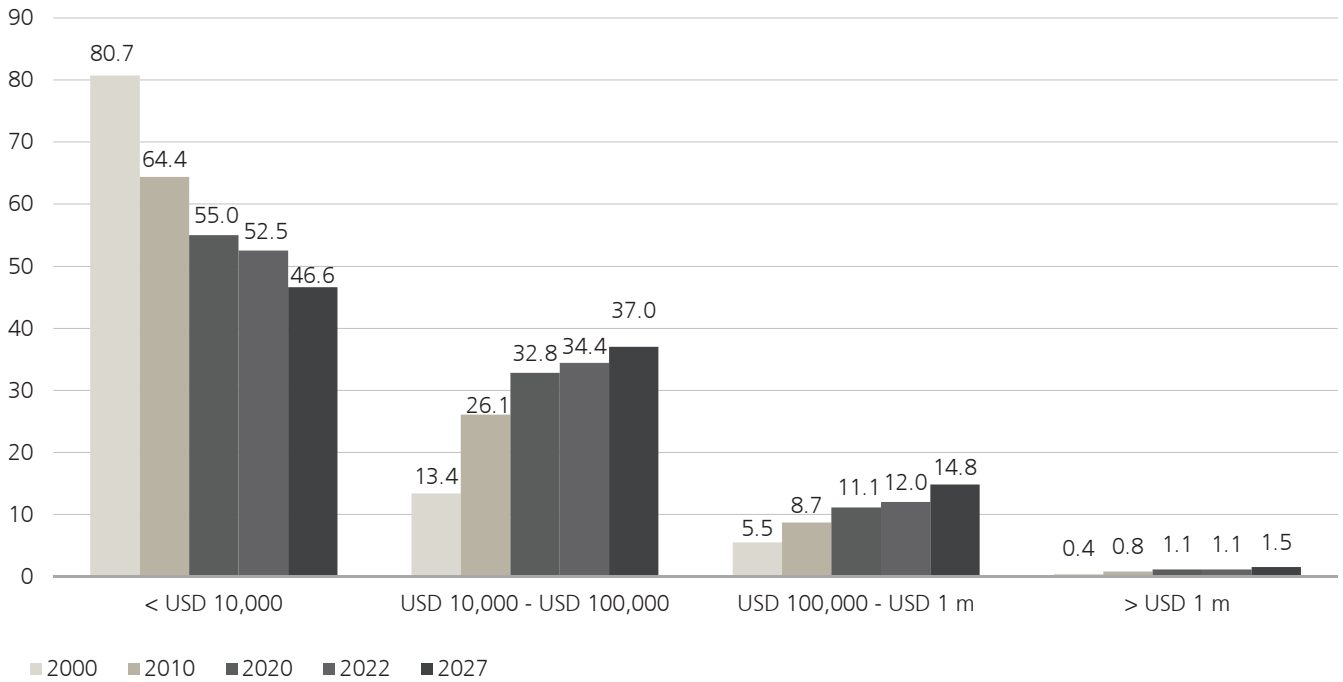
In the next five years, we project average annual wealth growth of 11.8% in low-income countries and 10.7% in middle-income countries

Wealth growth in Latin America recovered in 2022 following the economic slowdown during the pandemic. We expect the recovery to continue over the next five years, enabling total wealth in Latin America to rise to USD 9 trillion in real terms. This gain is equivalent to eight US years' growth starting in 1957.

The components of wealth

Over the course of this century, and particularly after the 2008 global financial crisis, financial wealth has grown at a faster rate than non-financial wealth (**Figure 4**). Financial assets outpaced non-financial wealth during the 2020–21 pandemic period, but non-financial assets narrowed the gap in 2022 when household financial assets declined in value (the only year this century it has happened, other than 2008). Our forecasts suggest that financial and non-financial wealth will continue to rise in tandem over the next five years. Household debt is also expected to grow roughly in line with financial and non-financial wealth, so that household debt remains at about 11% of gross assets. This is 2–3 percentage points below the level seen during the years from 2000 to 2012.

Figure 5: Percentage of adults by wealth segment, 2000–27



Source: Original estimates by authors

Financial wealth has grown at a faster rate than non-financial wealth

Wealth distribution in the 21st century

At the beginning of the century, 81% of global adults had wealth below USD 10,000. The proportion of adults in this bottom wealth stratum has been shrinking ever since. Our projections suggest that it will continue to fall from 53% in 2022 to 47% in 2027 (**Figure 5**). The share of adults in the global middle class (with net worth between USD 10,000 and USD 100,000) increased from 13% in the year 2000 to 34% in 2022. We expect 268 million adults to join this group by 2027, so that the number expands to almost 37% of global adults. In the strata above, we forecast the number of adults with wealth between USD 100,000 and USD 1 million to grow by 204 million adults between 2022 and 2027, and the aggregate wealth in this segment is projected to rise by about 36%.

Trends in millionaires and UHNWIs

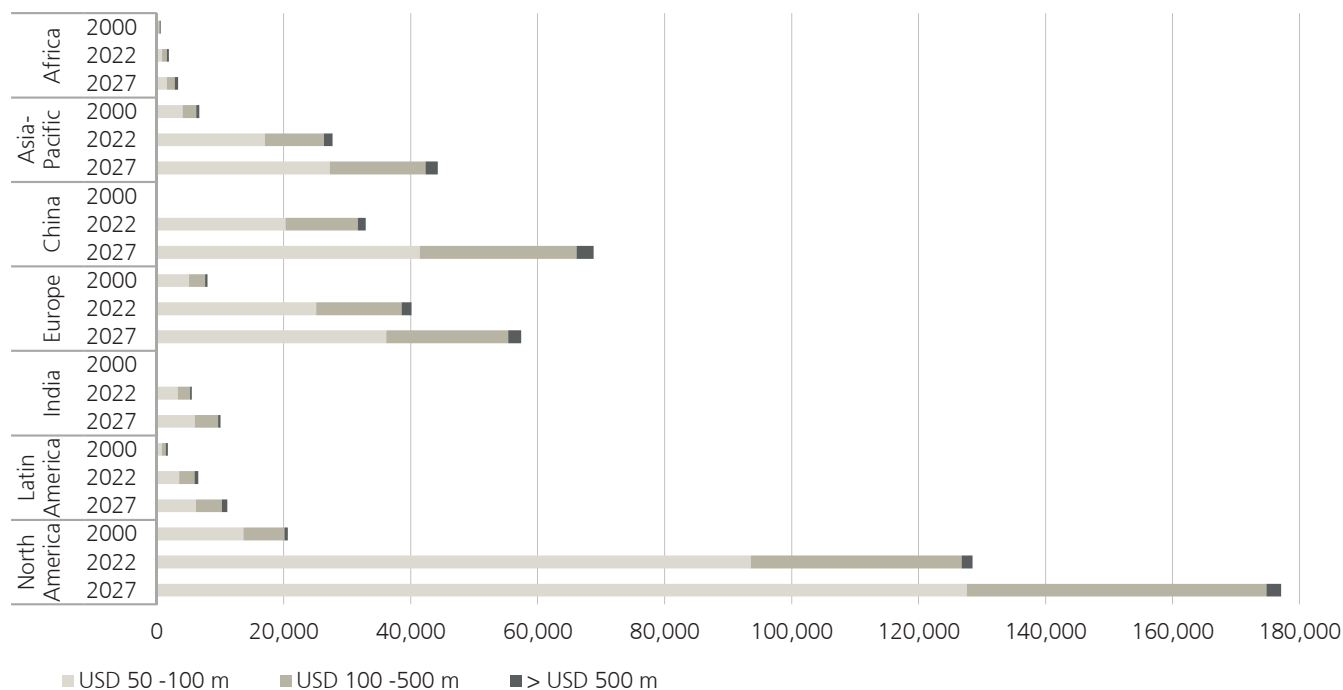
Faster wealth growth by low- and middle-income countries is reflected in the rising proportion of members in the top segment of the global wealth distribution. According to our estimates, the number of global millionaires will exceed 85 million in 2027, which is a rise of 26 million from today and 71 million from the beginning of the century (see **Table 1**). This rapid rise reflects in part the fact that higher inflation makes it easier to pass the million US dollar threshold. While millionaire membership in lower-income countries is still far below the levels in the United States, Europe or high-income Asia-Pacific countries, the numbers are expected to accelerate in the next five years.

Table 1: Number of millionaires in 2000, 2022 and 2027, regions and selected markets

	Number (thousand)			Change (%)		Number (thousand)			Change (%)
	2000	2022	2027	2022–27		2000	2022	2027	2022–27
United States	7,642	22,710	26,367	16	Taiwan	110	765	1,297	70
Mainland China	39	6,231	13,197	112	Hong Kong SAR	118	630	1,091	73
France	404	2,821	4,031	43	Belgium	107	536	746	39
Japan	2,472	2,757	3,872	40	Sweden	54	467	670	44
Germany	622	2,627	3,404	30	Brazil	33	413	788	91
United Kingdom	716	2,556	4,750	86	Russia	17	408	569	40
Canada	269	2,032	3,310	63	North America	7,913	24,748	29,689	20
Australia	113	1,840	2,811	53	Europe	3,326	16,263	23,196	43
Italy	427	1,335	1,665	25	Asia-Pacific	3,179	9,770	15,411	58
Korea	90	1,254	2,059	64	Mainland China	39	6,231	13,197	112
Netherlands	257	1,175	1,370	17	Latin America	169	1,170	2,206	89
Spain	172	1,135	1,414	25	India	37	849	1,436	69
Switzerland	195	1,099	1,531	39	Africa	32	361	768	113
India	37	849	1,436	69	World	14,695	59,391	85,904	45

Source: Original estimates by the authors

Figure 6: Ultra-high-net-worth individuals by region: 2000, 2022 and 2027



Source: Original estimates by authors

While the United States still lies far ahead of China at the top of the world millionaire table, the relative positions are likely to erode over time. We project a 112% increase (to 13.2 million) in the number of millionaires in Mainland China compared to a 16% rise in the United States. Millionaire numbers are also likely to increase rapidly in India – we envisage a rise of 69% to 1.4 million by 2027 – and in Latin America, where we forecast a rise of 89% to 2.2 million in five years' time. In percentage terms, Africa will likely perform even better, with millionaires numbering 768,000 in 2027, which is a rise of 113%.

We forecast the number of UHNWIs with wealth above USD 50 million to reach 372,000 by 2027. This represents a five-year gain of 129,000 and a rise of 334,000 since 2000 (**Figure 6**). More than half of all UHNWIs currently reside in North America, while countries in the APAC region (the broader Asia-Pacific including China and India) are home to more than 66,000. This already considerably exceeds the roughly 40,000 living in Europe and this difference in favor of APAC should increase further.

According to our estimates, the number of global millionaires will exceed 85 million in 2027, which is a rise of 26 million from today and 71 million from the beginning of the century

By 2027, we estimate that the APAC region will double its number of UHNWIs to reach a total of nearly 123,000, with 56% coming from China. By 2027, we foresee China having more UHNWIs (about 68,000) than the whole of Europe (57,000). While Latin America hosts 8% of global adults, it accounts for only 2% of UHNWIs worldwide and it is not projected to increase its share in the next five years.

Methodology

Our wealth forecasts are based on separate estimates of the three main wealth components for each market – financial assets, non-financial assets and household debt. Forward projections are based on GDP, inflation and exchange rate predictions reported in the IMF's latest World Economic Outlook database. This is supplemented with information on share prices and house prices, on the assumption that share prices and house prices relative to their longer-run trend values will remain at similar levels to those recorded in 2022.



Market experiences

James Davies, Rodrigo Lluberas and Daniel Waldenström

This section looks in more detail at household wealth developments for key groups of markets in an attempt to capture the range of experiences seen around the world. It reviews and compares household wealth evolution this century while paying special attention to the post-COVID experience in 2022.

The selection of markets is heavily constrained by the availability of reliable data. For the most part, we confine attention to markets that have official balance sheet data. Most of these markets have reported figures for the total financial wealth and debts of households at the end of 2022, and often total non-financial wealth as well. Typically, the same markets have share price and house price series covering most, or all, of 2022, which helps to fill any gaps.

Some markets do not meet our target standards. Brazil is one example. But it is difficult to review household wealth experiences in Latin America without reference to its largest economy. Even less is known about Nigeria. However, in the absence of an obvious alternative, we chose it to partner South Africa in order to give some idea of developments in Africa.

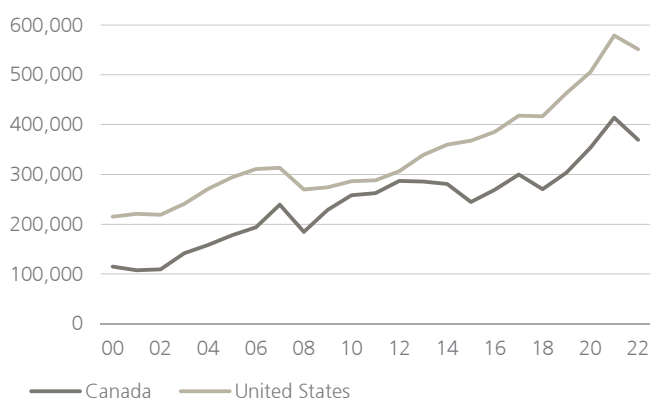
The paucity of data sources makes it difficult to review household wealth developments in the Middle East, North Africa (MENA) region. However, given the importance of the region, we have used the available information to provide wealth estimates for Saudi Arabia and the United Arab Emirates which may help in understanding how the level and distribution of household wealth has evolved since the year 2000.

COVID-19 caused a devastating year in health and economic terms in 2020. Recovery of both wealth and GDP was strong in 2021, but inflation became a concern in 2022, leading central banks to raise interest rates. The rise in interest rates led to a decline in the prices of many assets, particularly stocks and shares, so that, although GDP growth was generally strong in 2022, household wealth fell in many markets. Top wealth shares tended to fall due to the declining value of financial assets, and overall wealth inequality dipped.

COVID-19 relief spending led to higher government deficits and sharp increases in public debt in many markets in 2020 and 2021. Meanwhile, households built up excess savings due to both higher transfer payments and reduced opportunities for consumer spending. The public sector could be said to have bailed out the private sector. Reduced relief spending, growing tax revenues and the erosion of real public debt by inflation in 2022 led to falling ratios of public debt to GDP in many markets, thus reversing the trend. The altered balance of public versus private wealth seen during the pandemic began to be reversed.

Canada and the United States

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

In 2021, real GDP rose from the depressed levels of 2020, by 5.9% in the United States and by 5.0% in Canada. Growth continued in 2022 at 2.1% in the United States and 3.4% in Canada, and unemployment fell to historically low levels. The first quarter of 2023 brought lower GDP growth in the United States, at a 2.6% annual rate, and a standstill in Canada. In Canada, share prices rose 22.4% in 2021, but dropped 8.0% in 2022. Even more dramatically, while share prices rose 23.2% in the United States in 2021, they fell 21.1% in 2022. The main stock indexes in both countries rebounded after October 2022, rising 6.1% in Canada and 8.4% in the United States in the first four months of 2023.

During the COVID-19 pandemic, disposable income rose in both Canada and the United States, while consumer spending fell. The result was “excess savings,” which peaked at USD 2.1 trillion by August 2021 in the United States according to a recent study by the Federal Reserve Bank of San Francisco. Drawdown of this excess added USD 100 billion per month to spending in 2022 in the United States, contributing to GDP growth and slowing wealth accumulation. Similar trends held in Canada. The 2022 boom raised tax revenue and the growth of public debt slowed. In 2021, public debt stood at 112.1% and 132.6% of GDP in Canada and the United States, respectively. In 2022, these ratios fell to 106.6% and 121.7%. Wealth per adult was USD 114,618 in Canada in the year 2000 and USD 215,146 in the United States. It increased in both countries until 2006, but fell in 2008 with the onset of the global financial crisis. By 2010, wealth per adult had recovered to its pre-crisis value in Canada and, by 2013, also did so in the United States. At the end of 2022, it stood 43.1% above the 2010 level in Canada at USD 369,577 and, at USD 551,347, was 62.7% higher than in 2013 in the United States.

Table 1: Macroeconomic indicators 2022

	Canada	United States	
Population	39	336	million
Adult population	30	254	million
GDP	66,744	100,380	USD per adult
Mean wealth	369,577	551,347	USD per adult
Median wealth	137,633	107,739	USD per adult
Total wealth	11.3	139.9	trillion USD
US dollar millionaires	2,032	22,710	thousand
Top 10% of global wealth holders	15,237	110,219	thousand
Top 1% of global wealth holders	1,802	21,037	thousand
Wealth inequality	72.3	83.0	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

The composition of wealth growth contrasts in these countries. The United States housing market performed poorly after 2006, causing a 25% drop in non-financial wealth per adult from then until 2011. It was not until 2018 that non-financial assets regained their 2006 level. In Canada, there was no housing crisis and non-financial wealth continued to rise. On the other hand, financial assets rose faster in the United States than in Canada in almost every year from 2010 to 2021, reflecting the better performance of its stock markets.

Gross assets in the United States fell by 3.0% during 2022, a big change from 2021 when they rose by 14.6%. Debt increased by 5.5% in 2022, putting further downward pressure on household net worth, which dropped by 4.1% in 2022. The decline was driven by financial assets, which fell 9.1%, with corporate equities and mutual funds leading the way, falling 20.5%. Non-financial assets increased by 12.7%, largely due to a rise in real estate. Canada saw a larger drop in total assets than the United States, with declines of 8.4% and 9.9%, respectively. Unlike the United States, both financial and non-financial assets fell by 6.5% and 10.4%, respectively. Canadian mortgages have a much shorter average length of term, making house prices more sensitive to the rise in interest rates.

Canada and the United States differ in wealth inequality. At year-end 2022, the Gini coefficient for wealth was 72.3 in Canada, but 83.0 in the United States. In Canada, the Gini coefficient and the shares of the top 10% and 1% in wealth fell until 2012, after which they were trendless. In contrast, in the United States, all three of these measures have trended upward since the early 2000s. The difference in these trends is illustrated by the fact that our estimate of the wealth share of the top 1% rose from 32.9% in 2000 to 34.9% in 2022 in the United States, while falling from 29.1% to 24.3% in Canada. Part of the explanation is that, while stock prices rose faster than house prices in the United States from 2010 to 2021, thus raising the shares of top wealth groups, house prices rose faster than share prices in Canada over that period, lifting the wealth share of middle groups instead. Reflecting falling share prices, top wealth shares dropped slightly in both countries in 2022. The share of the top 1% fell from 35.1% in 2021 to 34.2% in the United States, and from 25.0% to 24.3% in Canada.

Figure 2: Composition of wealth per adult (USD)

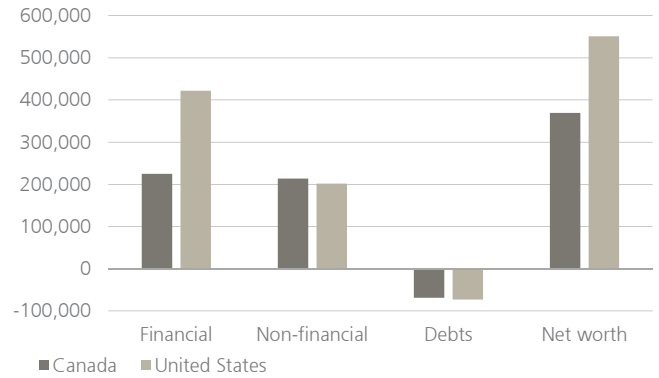


Figure 3: Share of financial assets (%)

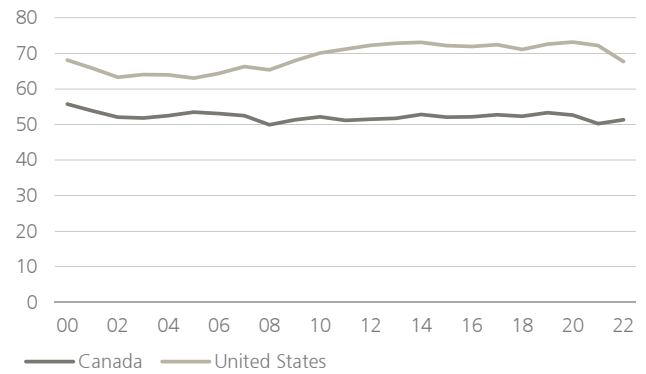
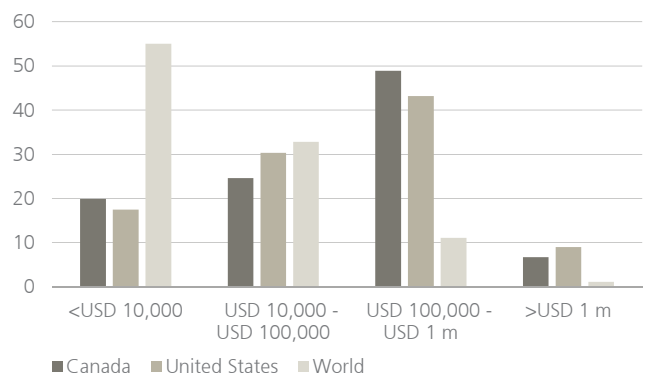


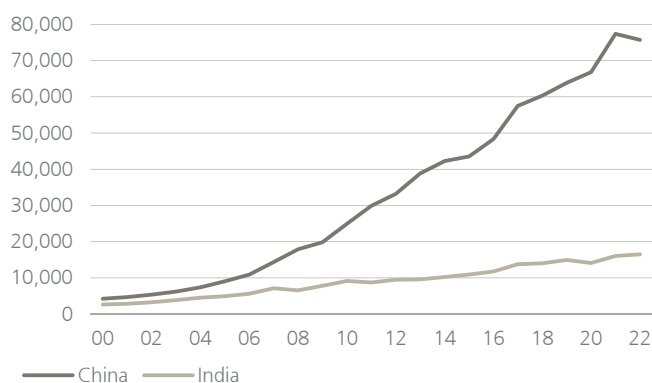
Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

China and India

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

In 2021 both China and India had strong growth, posting GDP increases of 8.4% and 9.1%, respectively. India continued with fairly high GDP growth in 2022 at a rate of 6.8%. However, China, faced with a COVID-19 resurgence, imposed renewed lockdowns and saw GDP growth slow to 3.0%. The stock market performance of the two countries contrasted even more. Share prices in India rose 31.0% in 2021, while those in China fell slightly by 2.2%. Performance was weaker in both countries in 2022, but, while India still had a small increase of 2.4% in share prices, China had a drop of 19.4%. The IMF still expects both countries to do well in 2023, with predicted GDP increases of 5.2% and 5.9% in China and India, respectively.

On average, wealth per adult in India has risen at an annual rate of 8.7% since the year 2000 and was USD 16,500 at the end of 2022. Growth has been even stronger in China, with wealth per adult having grown 14.0% per year to reach USD 75,731 at year-end 2022. For comparison, the average yearly increase of wealth per adult for the world as a whole since 2000 has been just 4.6% and the global mean was USD 84,718 at the end of 2022. Thus average wealth in China is now approaching the overall global level, while India remains well behind. Differences in the evolution of median wealth are even greater. Median wealth in India was 52% of the global figure in 2000, while China recorded 126%. By year-end 2022, median wealth in India had fallen to 43% of the world value, but median wealth in China had risen to 315%. The composition of asset growth has differed between these countries. Financial assets have grown faster than non-financial assets in China. They now make up 45.4% of gross assets, compared with 21.0% in India. Since 2000, financial assets per adult have risen at an average annual rate of 15.7% in China, well above what is in itself an impressive rate in India of 8.1%.

Table 1: Macroeconomic indicators 2022

	China	India	
Population	1,450	1,413	million
Adult population	1,116	931	million
GDP	15,624	3,561	USD per adult
Mean wealth	75,731	16,500	USD per adult
Median wealth	27,273	3,755	USD per adult
Total wealth	84.5	15.4	trillion USD
US dollar millionaires	6,231	849	thousand
Top 10% of global wealth holders	105,619	13,078	thousand
Top 1% of global wealth holders	5,583	763	thousand
Wealth inequality	70.9	82.5	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

The year 2022 was a challenging one in many ways for China, including wealth holdings. Total assets per adult fell for the first time since the year 2000 by 2.3%. Financial assets per adult dropped just 0.7%, but non-financial assets fell by 3.5%, partly reflecting difficulties in the housing market. Debt also fell slightly by 3.2% and net worth per adult dropped 2.2%. India fared better, with net worth per adult rising 2.8%, reflecting growth in total assets of 2.7% and only a small increase of 1.2% in debt (both per adult). Non-financial assets per adult rose 3.7%, while financial assets per adult fell 0.7%.

Our default is to convert wealth in local currency into US dollars at current exchange rates. Over short periods, it is good to also look at results using smoothed exchange rates, which recognize only the impact of different inflation rates across countries. In 2022, both China and India experienced exchange rate depreciation. However, when using smoothed exchange rates, we see a different picture. Rather than wealth per adult dropping 2.2% in China and rising just 2.8% in India, we see it increasing 10.1% in China and 12.5% in India.

Wealth inequality in China has risen considerably since the year 2000. The wealth Gini coefficient was 59.5 in 2000 and rose steadily until reaching 71.7 in 2016. The wealth share of the top 1% was 20.7% in 2000, 30.5% in 2021 and rose to 31.4% in 2022. Wealth inequality was already high in India in 2000, with a Gini of 74.6 and a top 1% share of 33.2%. In 2022, these levels had reached 82.5 and 40.4%, respectively, more or less unchanged from 2021.

Figure 2: Composition of wealth per adult (USD)

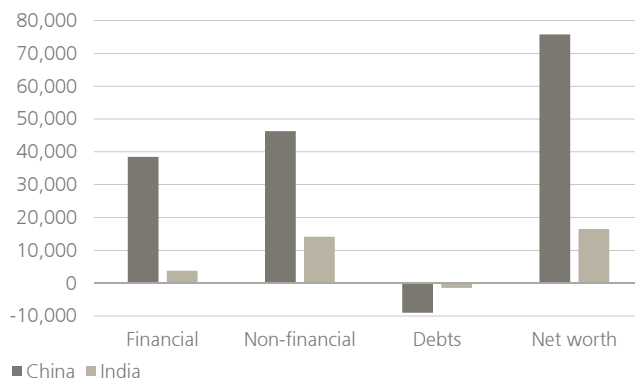


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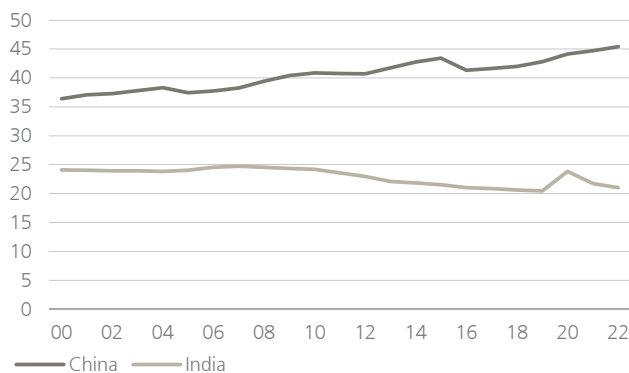
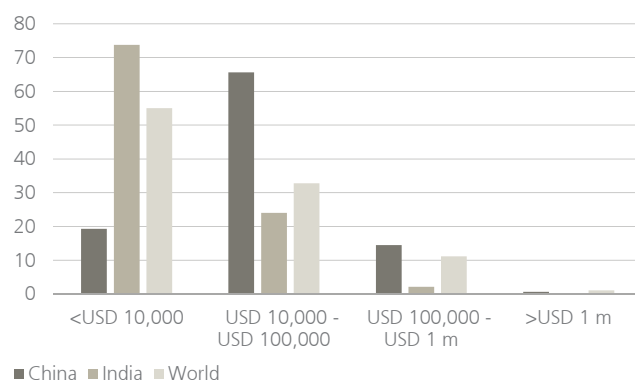


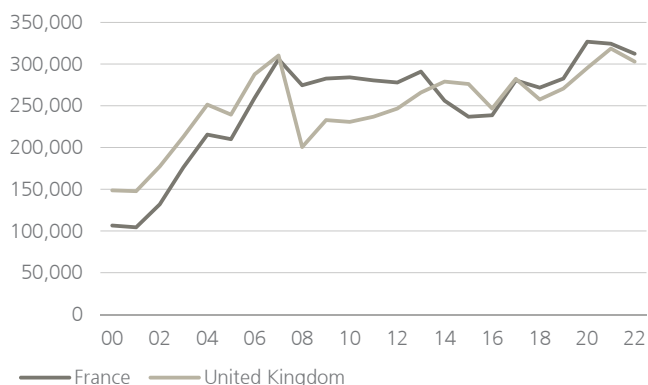
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France and the United Kingdom

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

France and the United Kingdom were both hit hard by recession in 2020, but GDP fell more in the United Kingdom – by 11.0% versus 7.9% in France. The United Kingdom therefore had more room for GDP growth in 2021 and 2022. Over those two years, GDP rose 11.9% in the United Kingdom and 9.6% in France. But, while GDP in France in 2022 had more than regained its pre-pandemic level, this was not true in the United Kingdom. The IMF predicts GDP growth in 2023 of 0.7% in France, but a drop of 0.3% in the United Kingdom.

As in 2021, consumer spending was boosted in France and the United Kingdom in 2022 as households continued to spend down excess savings that had accumulated during the COVID-19 pandemic. This helps to explain why house prices in both countries continued to increase in 2022, albeit at lower rates than in 2021. Share prices, in contrast, fell in 2022 in the wake of interest rate increases. The decline was 4.6% in the United Kingdom and 10.7% in France.

Wealth per adult stood at USD 106,643 in France in the year 2000 and rose to USD 312,235 at the end of 2022, with average annual growth of 5.0%. The United Kingdom started the century with greater wealth per adult, at USD 148,613, but by year-end 2022, with wealth per adult at USD 302,783, it had fallen behind France. The average annual growth rate of wealth per adult in US dollar terms was just 3.3% in the United Kingdom from the year 2000 to the end of 2022. The difference in the growth of wealth in these two countries partly reflects exchange rate movements. From 2000 to 2022, both the euro and pound sterling fell against the US dollar. However, the decline of the pound was greater than that of the euro. Using smoothed exchange rates, annual average growth of wealth per adult in the two countries was more similar than in US dollar terms. It was 5.2% in France and 4.4% in the United Kingdom.

Table 1: Macroeconomic indicators 2022

	France	United Kingdom	
Population	66	69	million
Adult population	50	53	million
GDP	55,986	56,945	USD per adult
Mean wealth	312,235	302,783	USD per adult
Median wealth	133,137	151,825	USD per adult
Total wealth	15.7	16	trillion USD
US dollar millionaires	2,821	2,556	thousand
Top 10% of global wealth holders	23,804	26,675	thousand
Top 1% of global wealth holders	2,483	2,227	thousand
Wealth inequality	70.3	70.2	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

The composition of wealth has changed over time in both France and the United Kingdom. Financial assets fell relative to non-financial assets up to the global financial crisis in 2008 and then trended upward. They made up 46.2% of gross wealth in France in 2000, but that ratio had fallen to 35.2% by 2007 as rising house prices boosted the share of real assets. Over the same period, the share of financial assets in gross wealth in the United Kingdom fell from 63.9% to 50.0%. Subsequently, the share of financial assets in France rose to 39.9% at the end of 2021, but dropped back to 37.7% at year-end 2022 due to falling share prices. Similarly, financial assets rose gradually as a percent of gross wealth after 2007 in the United Kingdom, reaching 53.4% at the end of 2021. However, this share fell considerably in 2022 to 47.7% at year-end.

In 2022, net worth per adult in France fell 3.8%, while gross assets per adult dropped 3.6%. The larger drop in net worth was due to debt falling at a lower rate than assets. Financial assets per adult fell 9.6%, swamping the small increase in real assets of 0.3%. In the United Kingdom, there was an even stronger contrast in the behavior of real and financial assets. The latter fell by 15.0%, while non-financial assets increased 6.7%. Gross assets fell 4.9%. With debt per adult falling at a similar rate, net worth also dropped 4.9%.

Wealth inequality trends have been similar in France and the United Kingdom. Inequality declined in both countries in the early 2000s, reflecting the fall in the share of financial assets, which are held disproportionately by high-net-worth individuals. Over the years 2000 to 2007, prior to the global financial crisis, the wealth Gini coefficient fell from 69.7 to 67.7 in France and from 70.5 to 66.7 in the United Kingdom. After the financial crisis of 2008, the trend was in the opposite direction. By 2021, the wealth Gini had risen slightly above its year-2000 level in both countries, standing at 70.2 in France and 70.6 in the United Kingdom. In 2022, the Gini was 70.3 in France, but dropped slightly in the United Kingdom to 70.2. In France, the wealth share of the top 1% fell from 25.5% in 2000 to 20.2% in 2007, but had risen only to 22.3% by 2021 before falling back to 21.1% in 2022. In the United Kingdom, this share fell from 22.1% in 2000 to 20.0% in 2007 and was 21.1% in 2021. Similar to France, there was a drop in 2022 to 20.6%.

Figure 2: Composition of wealth per adult (USD)

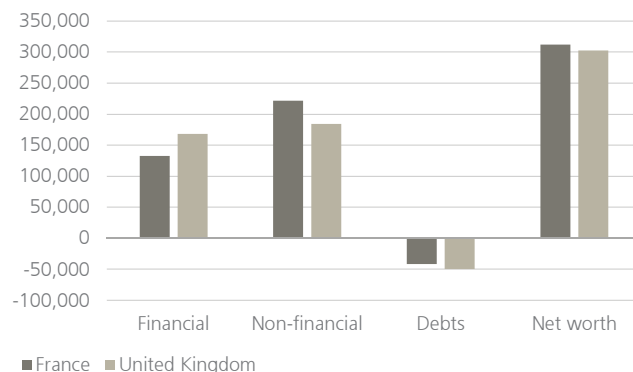


Figure 3: Share of financial assets (%)

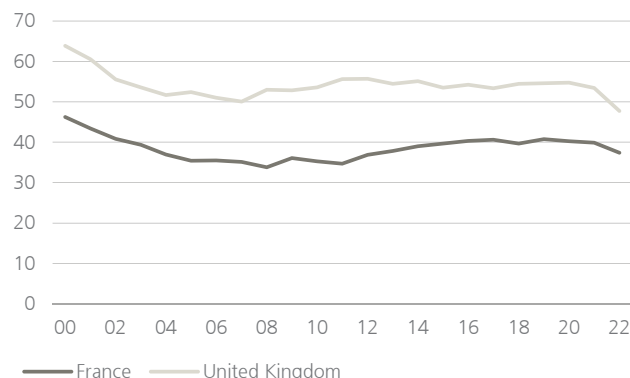
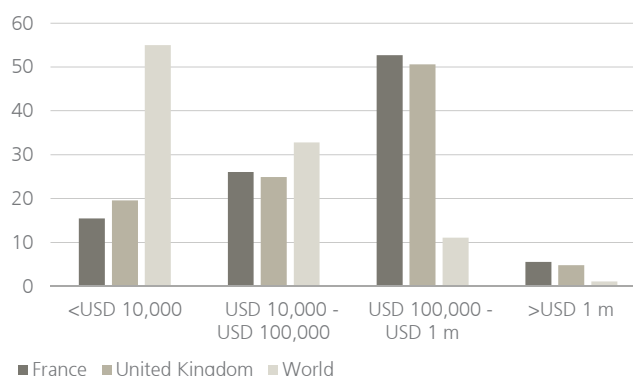


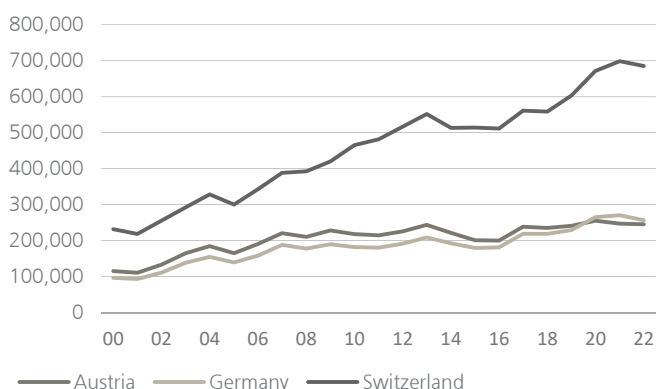
Figure 4: Wealth distribution relative to world (%)



Source Figures 2-4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Austria, Germany and Switzerland

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

In 2022, after averaging 3.8% in 2021, GDP growth in Austria, Germany and Switzerland was 5.0%, 1.8% and 2.1%, respectively, for an average of 3.0%. The performance over these two years raised GDP in all three countries above its 2019 (pre-pandemic) level by an average of 2.3 percentage points. For 2023, the IMF predicts slow growth by an average of 0.4%. As in most of western Europe, unemployment rose less in Austria, Germany and Switzerland than in North America. In 2022, the average across these countries was at its 2019 level of 3.4%. Real disposable income fell slightly during the pandemic and, in 2022, was 0.9% below the 2019 level on average in Austria and Germany (data not available for Switzerland). The savings behavior was more dramatic, with the average savings rate in 2020 and 2021 at 20.7% in Austria and Germany versus 16.2% in 2019. We expect the resulting buildup of “excess savings” to be drawn down, but although savings rates fell in 2022 at an average of 17.2% in Austria and Germany, they were still above the 2019 level.

Stock markets performed very strongly in 2021, with share prices rising on average 22.3% across the three countries. These increases were almost completely reversed in 2022, however, with declines of 18.0% in Austria, 19.0% in Switzerland and 22.1% in Germany. The outcomes improved in 2023, with the main stock indexes rising 4.2% in Austria, 5.9% in Switzerland and 13.6% in Germany in the first four months of the year.

Wealth per adult at the end of 2022 was USD 245,225 in Austria, USD 256,179 in Germany and USD 685,226 in Switzerland. From 2000 to 2022, it grew at an average annual rate of 3.5% in Austria, 4.6% in Germany and 5.1% in Switzerland, when measured in current US dollars.

Table 1: Macroeconomic indicators 2022

	Austria	Germany	Switzerland	
Population	9	84	9	million
Adult population	7	68	7	million
GDP	65,268	60,635	120,431	USD per adult
Mean wealth	245,225	256,179	685,226	USD per adult
Median wealth	68,492	66,735	167,353	USD per adult
Total wealth	1.8	17.4	4.8	trillion USD
US dollar millionaires	302	2,627	1,099	thousand
Top 10% of global wealth holders	2,907	25,356	3,624	thousand
Top 1% of global wealth holders	271	2,346	987	thousand
Wealth inequality	76.1	77.2	77.2	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Asset composition in these countries has changed slowly over the last two decades, with the relative importance of financial assets much the same in Austria and Germany, but trending downward in Switzerland. The gradualness of change reflects smaller fluctuations in asset prices than seen in some other major European economies such as France, Spain or the United Kingdom. On average, in Austria and Germany, financial assets made up 39.7% of gross assets in 2000, 42.0% in 2010 and 40.4% in 2022. The corresponding figures for Switzerland were 62.4%, 57.9% and 53.7% for the respective years.

When looking at recent year-on-year changes, it is best to use smoothed exchange rates as there were significant exchange rate changes for the euro in 2021 and 2022. On that basis, during 2021, net worth per adult rose 6.4% in Austria, 11.3% in Germany and 11.4% in Switzerland, reflecting the rebound from the lows of the pandemic period. Across the three countries, the average increase was 9.7%. Wealth per adult rose less in 2022 by an average of 3.3% – 6.7% in Austria, 1.1% in Germany and 1.9% in Switzerland. Gross assets per adult increased at a similar rate, again using smoothed exchange rates, averaging 9.1% in 2021 and 3.5% in 2022. Debt per adult grew slower than gross assets in 2021 at a rate of 5.6% and slightly slower than assets in 2022 at 4.6%. The relative importance of financial assets in household portfolios rose in Austria and Germany from a two-country average of 43.2% in 2021 to 40.4% in 2022, while falling in Switzerland from 55.8% to 53.7%.

Wealth inequality is moderate in the three countries, as indicated by 2022 wealth Gini coefficients of 76.1 in Austria and 77.2 in both Germany and Switzerland. All three countries have seen small decreases in overall wealth inequality since 2000, when the Gini coefficient was 78.1 in Austria, 81.2 in Germany and 81.0 in Switzerland. While the decline in Austria occurred gradually over the period from 2000 to 2015, the fall took place after 2008 in Germany and mostly after 2017 in Switzerland. The share of the top 1% has declined since 2000 from 27.0% to 25.8% in Austria and from 32.2% to 27.3% in Switzerland. In Germany, however, while it fell from 29.1% in 2000 to 27.2% in 2008, it has since risen back to 30.4%. The share of the bottom six deciles rose from 2.8% in 2000 to 6.6% in 2022.

Figure 2: Composition of wealth per adult (USD)

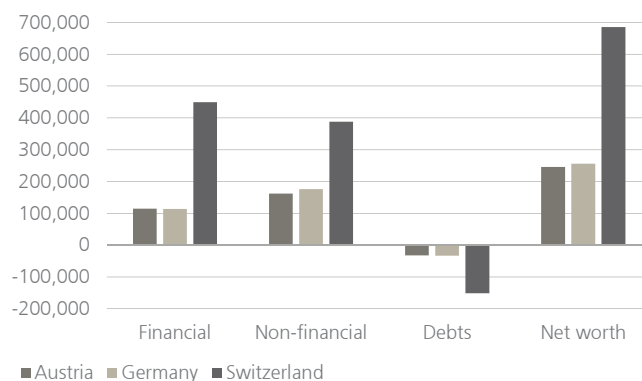


Figure 3: Share of financial assets (%)

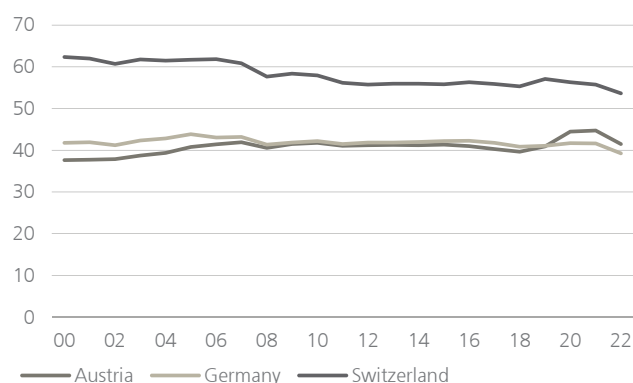
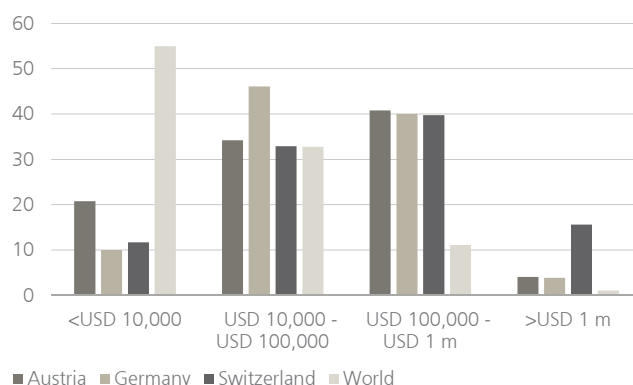


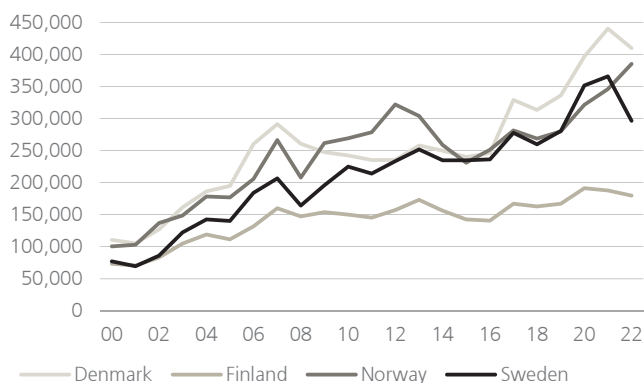
Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Denmark, Finland, Norway and Sweden

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

All four Nordic countries were in recession in 2020, with an average fall of 2.0% in GDP. Recovery in 2021 more than reversed the losses of 2020, with average GDP growth of 4.3%, followed by 2.7% in 2022. Over the years 2020–22, GDP as a whole rose on average by 5.2%, ranging from 2.6% in Finland to 5.8% and 5.9% in Sweden and Norway, respectively, and 6.5% in Denmark. Unemployment rose slightly during the COVID-19 pandemic from an average of 5.6% in 2019 (pre-pandemic) to 6.6% in 2020, but was back to around the 2019 level in 2022 at 5.5%. Overall, stock markets performed well in the region in 2021, rising by an average of 19.0%, but struggled in 2022 with a drop of 12.4%. The 2022 drop ranged from 2.1% in Norway to 26.5% in Sweden. Denmark and Finland saw declines of 5.6% and 15.4%, respectively.

In 2020 and 2021, households in the Nordic countries, like elsewhere, saw a rise in net worth, partly due to rising asset prices, but also due to the boost that pandemic relief payments and reduced spending opportunities gave to saving. Meanwhile, their governments experienced rising deficits and public debt. In 2022, there was a degree of rebalancing of public versus private wealth, as household wealth and public debt fell. In 2021, gross public debt averaged 47.0% of GDP across the four countries, but fell to 44.0% in 2022.

The composition of assets also differs markedly across the region. While, on average, financial assets are now 48.8% of gross assets, the share ranges from 30.1% in Norway and 40.0% in Finland to 62.1% in Sweden and 63.2% in Denmark. Portfolio composition has fluctuated over the last few years, with the average share of financial assets in gross assets in Denmark, Finland and Sweden rising from 55.6% in 2019 to 57.6% in 2021 before falling to 55.1% in 2022.

Table 1: Macroeconomic indicators 2022

	Denmark	Finland	Norway	Sweden	
Population	6	6	6	10	million
Adult population	5	4	4	8	million
GDP	87,815	64,860	130,181	72,116	USD per adult
Mean wealth	409,954	179,986	385,338	296,800	USD per adult
Median wealth	186,041	84,093	143,887	77,515	USD per adult
Total wealth	1.9	0.8	1.6	2.3	trillion USD
US dollar millionaires	366	93	352	467	thousand
Top 10% of global wealth holders	2,498	1,390	2,176	2,802	thousand
Top 1% of global wealth holders	323	82	273	418	thousand
Wealth inequality	73.6	72.4	76.9	87.4	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

In contrast, this share fell each year in Norway from 35.8% in 2019 to 30.1% in 2022. Debt fell in all four countries in relation to gross assets from an average of 22.2% in 2019 to 19.3% in 2021, but is still high by international standards, reflecting factors like relatively high student debt.

Wealth per adult rose in all four countries from 2019 to 2021 by an average of 11.4%, but fell 4.6% in 2022. The decline in 2022 was not uniform: Norway saw an increase in wealth per adult of 11.4%, but Finland, Denmark and Sweden saw drops of 4.2%, 6.9% and 18.9%, respectively. The large variation across the Nordic countries can be attributed to several factors, including higher increases in house prices in Norway and a larger stock market slump in Sweden in combination with a depreciating exchange rate. Average financial assets per adult fell 12.4%, non-financial assets rose 0.6% and debt fell 9.1% – with the direction of change the same in all four countries, except that non-financial assets per adult rose 14.6% in Norway, explaining its increase in total wealth per adult.

Income inequality is low in the Nordic countries, but wealth inequality is not. The generous public pensions and other forms of social insurance that make wealth accumulation less important mean that middle-class people often have low personal assets by international standards. As a consequence, the relative wealth of the top groups that own concentrations of shares or other business equity is greater than in many other advanced countries. On average, across these four countries, the Gini coefficient for wealth is now 77.6, which is slightly higher than the 76.1 recorded in 2000. The share of the top 1% has also increased from an average of 25.8% in the year 2000 to 27.9%. Sweden has the most wealth inequality in this group, with a current Gini coefficient of 87.4 and a top 1% wealth share of 35.8%. Finland and Denmark are at the other end of the spectrum, with Gini coefficients of 72.4 and 73.6, respectively, and top 1% wealth shares of 25.5% and 23.4%.

Figure 2: Composition of wealth per adult (USD)

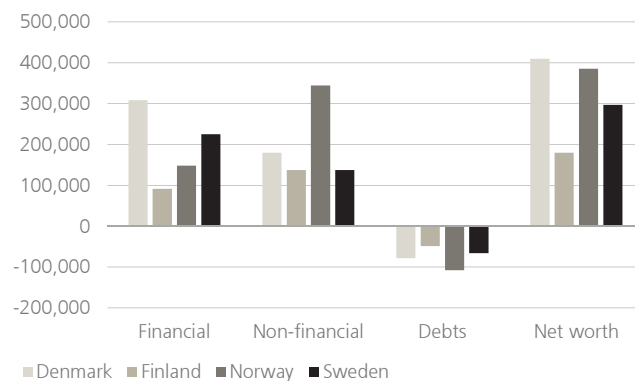


Figure 3: Share of financial assets (%)

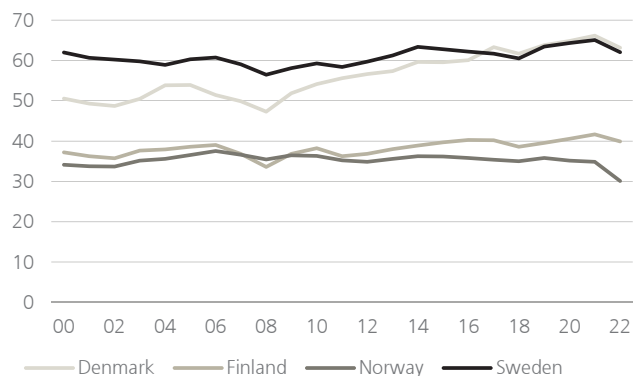
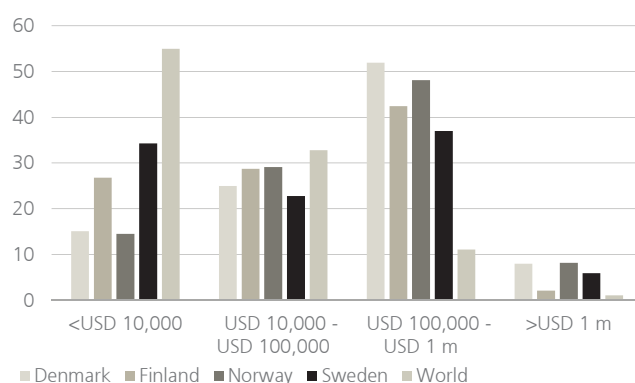


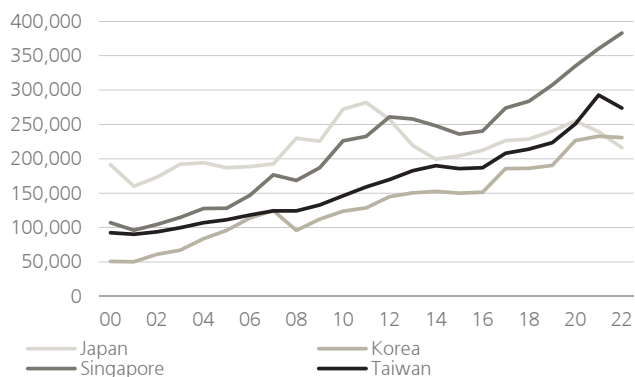
Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Japan, Korea, Singapore and Taiwan

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Japan, Korea, Singapore and Taiwan posted average GDP growth of 5.4% in 2021 and 2.5% in 2022, which are similar rates to other leading economies. Growth was slowest in Japan and highest in Singapore in both years. In 2022, the growth rate was 1.1% in Japan, 2.5% in Taiwan, 2.6% in Korea and 3.6% in Singapore. While growth moderated in 2022, unemployment rates fell in all four markets from an average of 6.5% in 2021 to 5.5% in 2022.

Private consumption in these four markets fell sharply in 2020 by an average of 6.4%, thus generating “excess savings.” Consumption picked up in 2021 and 2022, with average growth rates of 3.3% and 5.0%, respectively. As elsewhere, the rise in household saving during 2020 contrasted with government dissaving. General government gross debt jumped from an average of 109.8% in 2019 to 122.1%, changed little in 2021, and was still elevated in 2022 at 119.3%. The public debt level varied considerably from just 27.5% in Taiwan in 2022 to 54.3% in Korea, 134.2% in Singapore and 261.3% in Japan. Given that a country’s taxpayers are ultimately responsible for its public debt, these numbers may color one’s view of the comparative wealth of residents in these markets.

At the end of 2022, wealth per adult was USD 216,078 in Japan, USD 230,760 in Korea, USD 273,788 in Taiwan and USD 382,957 in Singapore. Since the year 2000, wealth per adult in US dollars has grown at an average annual rate of 4.7% in these markets. The fastest wealth growth has been seen in Singapore and Korea, with rates of 6.0% and 7.2%, respectively, followed by Taiwan at 5.1% and Japan at just 0.6%. Overall, growth has been skewed toward financial assets, which, on a per adult basis, rose at an average rate of 5.1% across the four markets, compared with 3.8% for non-financial assets. Debt per adult rose at an average annual rate of 3.7%.

Table 1: Macroeconomic indicators 2022

	Japan	Korea	Singapore	Taiwan	
Population	125	51	6	24	million
Adult population	105	43	5	20	million
GDP	39,638	39,594	90,086	38,464	USD per adult
Mean wealth	216,078	230,760	382,957	273,788	USD per adult
Median wealth	103,681	92,719	99,488	108,247	USD per adult
Total wealth	22.6	9.9	1.9	5.4	trillion USD
US dollar millionaires	2,757	1,254	332	765	thousand
Top 10% of global wealth holders	41,983	18,559	1,951	8,674	thousand
Top 1% of global wealth holders	2,409	1,106	299	680	thousand
Wealth inequality	65.0	67.9	78.8	69.8	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Financial assets accounted for over half of personal wealth in Japan, Singapore and Taiwan at the end of 2022, ranging from 56.3% of gross assets in Singapore to 69.1% in Taiwan. The situation differs in Korea, where non-financial assets contributed 66.5% of total household assets. Over the years, the importance of financial assets has risen in each of the markets. On average, they made up 48.1% of gross assets in the year 2000, but 54.7% in 2022. Household debt, on the other hand, has fallen slightly compared with assets. The ratio of debt to gross assets was 16.3% in the year 2000 and fell gradually to 12.7% by 2022.

During 2022, using current exchange rates (our default approach) net worth per adult rose in Japan and Singapore, by 0.6% and 6.3%, respectively, but fell 0.9% in Korea and 6.5% in Singapore. Using smoothed exchange rates, wealth per adult rose in all four markets by 5.0% on average. This growth results from a 1.7% rise in financial assets and an 8.9% increase in non-financial assets, tempered by a 4.0% increase in debt (all per adult). The low but positive growth of financial assets reflected weak stock market performance, with share prices declining by an average of 14.4%, offset by high savings rates. Share prices fell the most in Taiwan and Korea by 24.9% and 25.7%, respectively. Unsurprisingly, these two markets saw drops in financial assets per adult of 7.1% and 5.6%.

Wealth inequality is relatively low by international standards in Japan, Korea and Taiwan, as reflected in wealth Gini coefficients of 65.0, 67.9 and 69.8, respectively. The wealth shares of top groups are similarly low, with a top 1% share of 18.9% in Japan, 22.3% in Korea and 26.0% in Taiwan. This low level of wealth inequality partly reflects the comparatively low level of income inequality in these markets, but owes something as well to a pro-saving culture spread across all income levels. Relatively heavy inheritance taxes in Korea and Japan have also no doubt had an impact. Singapore has higher wealth inequality. Its wealth Gini, at 78.8, is much higher than in the other three markets, as is the wealth share of the top 1%, which was 34.1% at the end of 2022.

Figure 2: Composition of wealth per adult (USD)

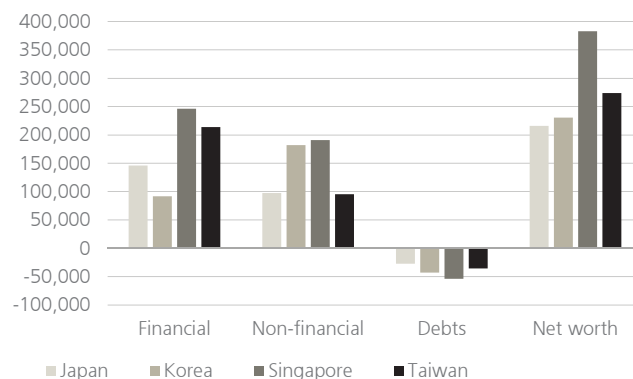


Figure 3: Share of financial assets (%)

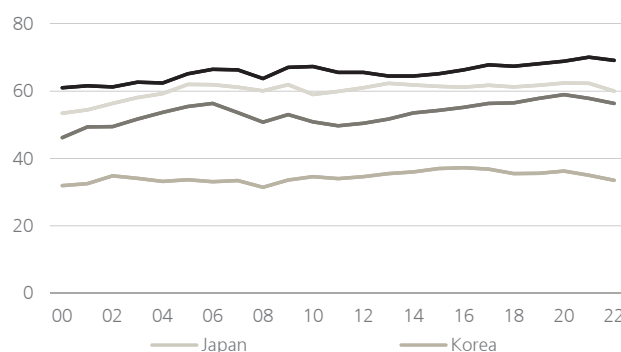
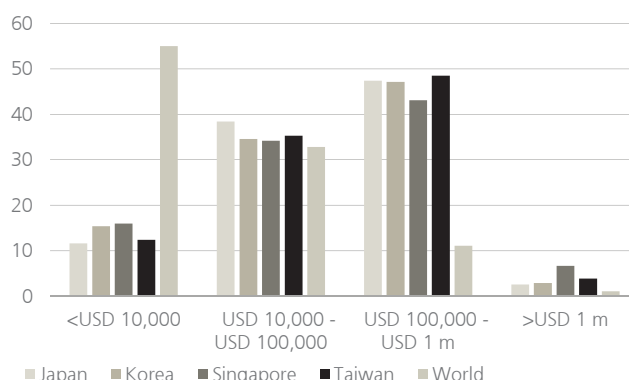


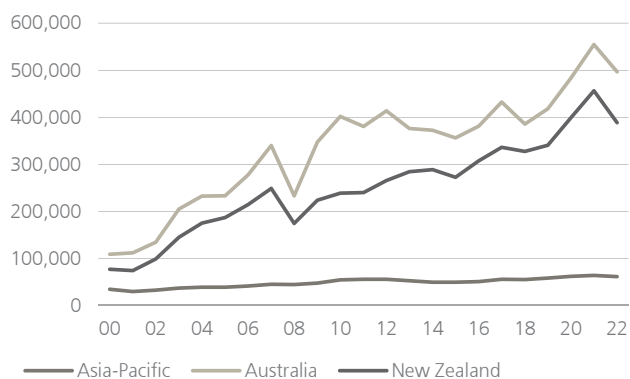
Figure 4: Wealth distribution relative to world (%)



Source Figures 2-4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Australia and New Zealand

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Compared with other advanced economies that were more affected by COVID-19, Australia and New Zealand experienced much less economic damage in the early stages of the pandemic in 2020. Despite having less ground to make up than many other advanced economies, they still had fairly high growth rates in the rebound years of 2021 and 2022. GDP rose 5.2% and 3.7% in those two years in Australia, versus 6.1% and 2.4% in New Zealand. In addition, unemployment growth fell in both countries from a peak of 6.5% in Australia in 2020 to 3.7% in 2022, and from 4.6% in New Zealand in 2020 to 3.3% in 2022. Recent conditions have been favorable for savings, but, as elsewhere, asset prices faced headwinds of higher interest rates, canceling the impact of strong saving on wealth accumulation.

Initially during the pandemic, disposable income rose and consumption declined, leading to a rise in the savings rate in Australia from 15.6% in 2019 (pre-pandemic) to 24.9% in 2020 and 24.9% in 2021 according to the OECD (data not available for New Zealand). Australia’s savings rate fell to 17.4% in 2022, but was still somewhat elevated. Households still have some degree of “excess savings,” which may exert a force toward higher consumption and reduced saving in the next few years. Again, as seen elsewhere, the rise in private saving went alongside a rise in public debt due to increased government spending and lagging tax revenues. Australia’s public debt rose from 46.8% of GDP in 2019 to 57.1% in 2020, and New Zealand’s rose from 31.8% to 43.3%. Debt relative to GDP fell slightly in 2022 in Australia to 55.7%, but continued rising in New Zealand, reaching 52.8%. In Australia, share prices rose 12.4% in 2021, but dropped 4.7% in 2022 against a background of rising interest rates. In New Zealand, share prices began to decline in 2021, with a 5.4% drop followed by a decline of 14.4% in 2022, resulting in a drop of 19.0% over the two years, which contrasts

Table 1: Macroeconomic indicators 2022

	Asia-Pacific	Australia	New Zealand	
Population	1,915	26	5	million
Adult population	1,275	20	4	million
GDP	14,470	89,417	66,036	USD per adult
Mean wealth	61,154	496,819	388,761	USD per adult
Median wealth	5,176	247,453	193,065	USD per adult
Total wealth	78	9.7	1.4	trillion USD
US dollar millionaires	9,770	1,840	255	thousand
Top 10% of global wealth holders	111,617	12,403	2,054	thousand
Top 1% of global wealth holders	8,677	1,632	237	thousand
Wealth inequality	88.1	66.3	69.9	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

sharply with a two-year increase of 7.1% in Australia. The main stock indexes rose in both countries beginning in November 2022 and going up 3.9% in Australia and 4.8% in New Zealand in the first four months of 2023.

Wealth per adult at the end of 2022 was USD 496,819 in Australia and USD 388,761 in New Zealand, down from USD 554,480 and USD 456,178 in 2021 in the two countries, respectively. Since the year 2000, the average growth rate of wealth per adult in current US dollars was 7.2% in Australia and 7.7% in New Zealand. Using smoothed exchange rates, wealth growth was slightly lower, averaging 6.1% per year in Australia and 6.0% in New Zealand.

The main aspects of wealth composition have changed little in Australia since 2000. The share of financial assets in gross assets was 39.5% in the year 2000 and 38.7% at the end of 2022. In contrast, a large change took place in New Zealand, with financial assets dropping from 65.5% of total assets in 2000 to 51.4% in 2022. The relative size of debt has been stable in both countries, with Australians somewhat more indebted than New Zealanders. Household debt in New Zealand equaled 11.0% of the total asset level in 2000 and 11.3% in 2022. In Australia, the corresponding numbers were 16.5% in 2000 and 16.7% in 2022.

Trends in wealth inequality have been different in Australia and New Zealand. Both countries had a small decline in inequality from 2000 to 2007, but took different paths after that. In 2007, the wealth Gini was 63.3 in Australia and the wealth share of the top 1% was only 19.7%, reflecting low wealth inequality by international standards. By 2022, the Gini had risen slightly to 66.3 and the share of the top 1% was up slightly to 21.8%. These small changes are in line with the more or less unchanged trend in the relative importance of financial assets, which is a leading driver of wealth inequality. In contrast to Australia, New Zealand has experienced a fall in wealth inequality since the global financial crisis in 2008. In 2022, its wealth Gini was down slightly to 69.9 from 71.4 in 2007. However, the share of the top 1% had fallen dramatically from 24.8% in 2007 to 20.1%. This drop in concentration at the top end is consistent with the observed change in asset composition, whereby New Zealand saw a drop in financial assets from 57.0% of total assets in 2007 to 51.4% in 2022.

Figure 2: Composition of wealth per adult (USD)



Figure 3: Share of financial assets (%)

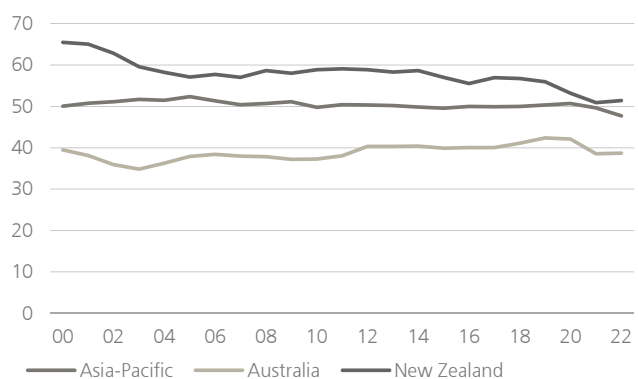
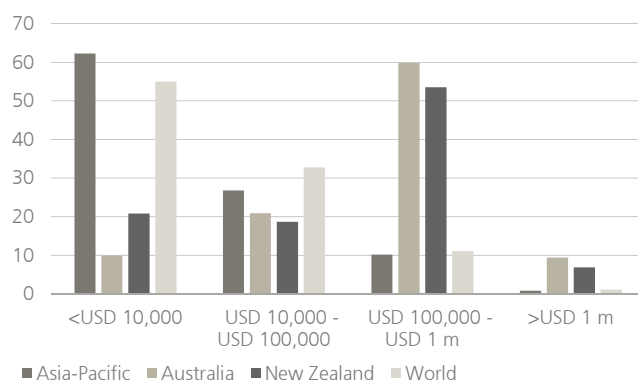


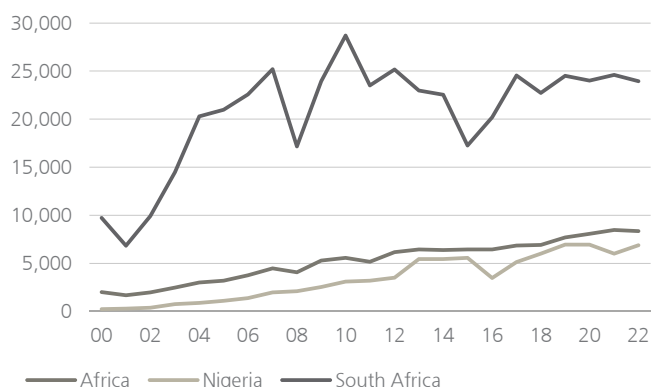
Figure 4: Wealth distribution relative to world (%)



Source Figures 2-4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Nigeria and South Africa

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

Nigeria and South Africa have the two largest economies in Africa, and also the greatest household wealth, except for Egypt. Both countries suffered during the pandemic, but the economic impacts were worse in South Africa, where GDP fell 6.4% in 2020 compared to a drop of 1.8% in Nigeria. On the rebound, Nigeria had GDP growth of 3.6% in 2021 and 3.3% in 2022, while South African GDP grew 4.9% in 2021 and 2.0% in 2022. An indication of the extent of difficulties in South Africa is given by the unemployment rate, which was already 28.7% in 2019, before the pandemic hit in the spring of 2020. The rate peaked at 34.1% in 2021 and dropped only slightly in 2022 to 33.5% (data not available for Nigeria).

Real private consumption fell by 1.0% in Nigeria in 2020, but increased by 0.9% in 2021. In contrast, consumption fell by 5.9% in South Africa in 2020 and rose 5.6% in 2021 and 2.6% in 2022. These countries apparently did not experience the rise in saving seen in many OECD countries since the consumption decreases in 2020 were mirrored by falling incomes. As elsewhere, public debt rose as a fraction of GDP during the pandemic – in Nigeria from 29.2% in 2019 to 36.5% in 2021, before continuing up to 38.0% in 2022. In South Africa, public debt rose from 56.2% of GDP in 2019 to 69.0% in both 2021 and 2022, before rising again to 71.0% in 2022.

Share prices increased in South Africa and Nigeria by 13.7% and 5.0%, respectively, in 2021. Those gains were partly reversed by small decreases in share prices in 2022 – drops of 1.8% and 3.5% in South Africa and Nigeria, respectively. Markets rose in both countries after October 2022. The main stock index in South Africa rose 5.2% in the first four months of 2023, while Nigeria saw a 2.2% increase.

Table 1: Macroeconomic indicators 2022

	Africa	Nigeria	South Africa	
Population	1,423	219	61	million
Adult population	708	102	39	million
GDP	3,899	4,432	10,100	USD per adult
Mean wealth	8,345	6,879	23,956	USD per adult
Median wealth	1,242	1,507	5,141	USD per adult
Total wealth	5.9	0.7	0.9	trillion USD
US dollar millionaires	361	39	85	thousand
Top 10% of global wealth holders	5,295	567	1,303	thousand
Top 1% of global wealth holders	319	34	75	thousand
Wealth inequality	87.1	86.5	88.8	Gini index

Source: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

Currently, the composition of assets in South Africa has changed relatively little since the year 2000, when financial assets were 68.1% of gross assets. Today, they make up 69.2% of the total. In Nigeria, the share of financial assets rose from 46.9% in 2000 to 72.1% by year-end 2022. Both countries saw a small decrease in the relative size of debt over these years. In South Africa, debt fell from 15.7% of total assets in 2000 to 15.0% in 2022, while Nigeria saw a drop from 6.2% to 4.8%. The level of household debt in South Africa is about the same as the average for advanced economies, whereas that in Nigeria is well below this level. This is not unusual for Africa, which has average household debt equal to 6.9% of total assets, or for developing countries in general.

In 2022, using current exchange rates, net worth per adult in US dollars fell 2.6% in South Africa, while it rose 14.5% in Nigeria, rebounding from a 13.3% decline in 2022. Using smoothed exchange rates, both countries' wealth per adult rose in 2022 – by 3.5% in South Africa and 16.0% in Nigeria. Financial assets in South Africa decreased very slightly from 69.3% of total assets in 2021 to 69.2% in 2022, while Nigeria saw a rise from 71.4% to 72.1%.

Wealth inequality has trended upward in Nigeria this century in line with the large increase in the relative importance of financial assets in household portfolios. It has also risen in South Africa since 2007, although it was relatively constant before that. At the end of 2022, the Gini coefficient for wealth was 86.5 in Nigeria and 88.8 in South Africa, up from 72.1 and 80.4, respectively, in 2000. The share of the top 1% reveals a similar story in Nigeria, increasing from 28.3% to 44.5% over these years. The share of the top 1% in South Africa rose slightly from 39.0% to 42.2%, while the share of low wealth groups declined more sharply. The share of the bottom 90% of wealth holders as a whole fell from 29.8% to 19.1%. The trend toward greater wealth inequality is not representative for Africa as a whole, which saw a small drop in the Gini coefficient from 88.6 in 2000 to 87.1 in 2022, and a fall in the share of the top 1% from 46.9% to 43.8%.

Figure 2: Composition of wealth per adult (USD)

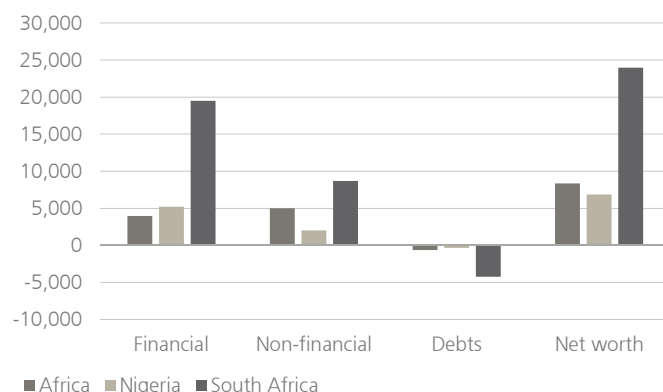


Figure 3: Share of financial assets (%)

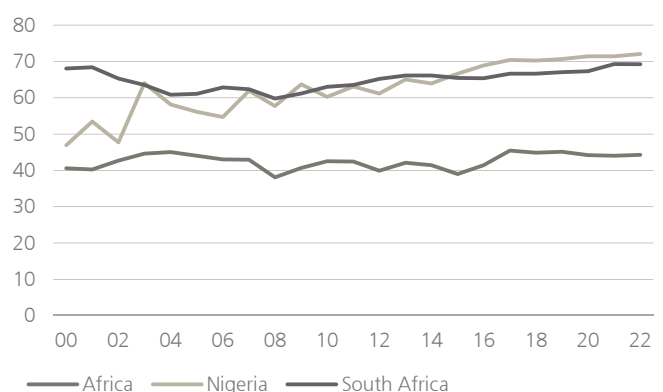
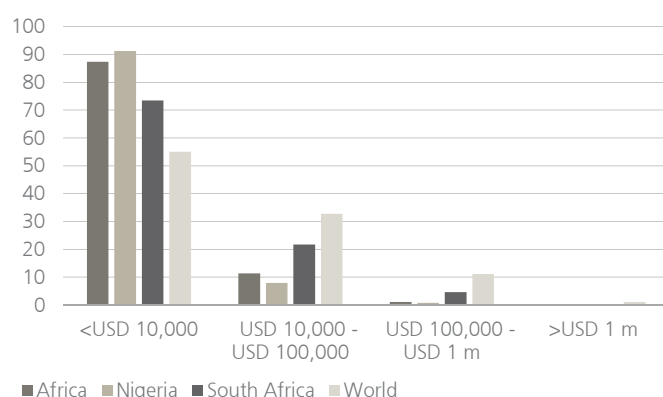


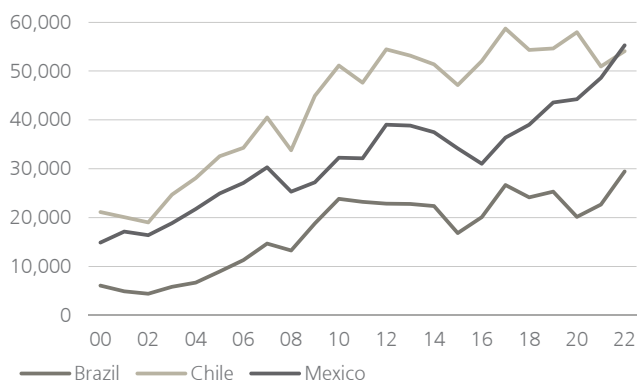
Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Brazil, Chile and Mexico

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Brazil and Mexico are Latin America’s largest economies and also the most populous countries in the region. Chile has a smaller but dynamic economy. All three countries suffered serious economic impacts due to the COVID-19 pandemic. In 2020, real GDP fell by 3.9% in Brazil, 6.1% in Chile and 8.2% in Mexico. Brazil and Chile saw growth rates in 2021 of 4.6% and 11.7%, respectively, more than offsetting the GDP decreases of 2020. For Mexico, however, 2021 GDP growth of 4.8% made up little more than half of the 2020 decline. Growth continued in all three countries in 2022 at rates of 2.9% in Brazil, 2.4% in Chile and 3.1% in Mexico. Unemployment rose significantly with the onset of the pandemic in each country from an average rate of 7.6% in 2019 to 9.7% in 2020. It remained high in 2021, especially in Brazil, but fell in 2022 to an average of 6.4%, reflecting a successful rebound from the pandemic.

In 2020, private consumption fell sharply in these countries. Despite falling household income, the drop in consumption in Mexico was sufficient to raise the gross household savings rate from 19.4% in 2019 to 24.7% in 2020 and 21.6% in 2021 (data not available for Brazil or Chile). These higher savings rates produced “excess savings” leading to heightened consumption in 2022, which rose on average by 4.4% across the three countries. As elsewhere, public debt rose during the pandemic. On average, across these countries, public debt rose from 56.5% of GDP in 2019 to 63.1% in 2020, but had fallen to 61.3% by 2022. While share prices in many other countries rose in 2021 and 2022, these three Latin American countries departed from that trend. Brazil and Chile saw share prices fall in 2021 by 17.0% and 5.6%, respectively, while Mexico saw an increase of 20.2%. In 2022, share prices fell slightly by 5.5% in Brazil and 5.4% Mexico, but Chile bucked the general trend with an increase of 5.6%.

Table 1: Macroeconomic indicators 2022

	Brazil	Chile	Mexico	
Population	216	19	132	million
Adult population	157	14	88	million
GDP	11,798	21,043	16,663	USD per adult
Mean wealth	29,452	54,082	55,274	USD per adult
Median wealth	5,702	19,544	18,920	USD per adult
Total wealth	4.6	0.8	4.9	trillion USD
US dollar millionaires	413	62	393	thousand
Top 10% of global wealth holders	5,520	988	7,171	thousand
Top 1% of global wealth holders	373	56	347	thousand
Wealth inequality	88.4	78.8	79.3	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

At the end of 2022, wealth per adult was USD 29,452 in Brazil, USD 54,082 in Mexico and USD 55,274 in Chile. The corresponding figure for Latin America as a whole was USD 32,760. Since 2000, wealth per adult has risen at an average annual rate of 4.4% in Chile, 6.1% in Mexico and 7.4% in Brazil. These figures are typical for Latin America, which had an average growth rate of 6.4% over this period.

Financial assets have become relatively more important in Chile since 2000, but less important in Brazil and Mexico. As a fraction of gross assets, they rose from 48.8% in 2000 in Chile to 57.0% in 2021, before dropping slightly to 55.1% in 2022. In Brazil, the share of financial assets was 55.6% in 2000, 44.9% in 2021 and 46.9% in 2022, while Mexico saw a drop from 41.6% in 2000 to 37.6% in 2021 and 32.8% in 2022. These trends imply, of course, that non-financial assets, principally houses, have fallen significantly in relative importance in Chile, but have risen in Brazil and Mexico. The ratio of household debt to gross assets is now around the same level as in 2000 in Mexico – at year-end 2022, the ratio was 5.3% versus 5.9% in the year 2000. In Brazil, it was 12.8% compared with 21.7% in 2000 and in Chile the trend was opposite, with the ratio of debt to gross assets growing from 8.6% in 2000 to 16.1% in 2022.

Wealth inequality is high in Latin America, especially in Brazil, where the wealth Gini coefficient was 88.4 in 2022, up from 84.5 in 2000, but down slightly from 89.2 in 2021 in keeping with the general trend around the world. The wealth share of the top 1% is now 48.3% versus 44.2% in 2000 and 49.3% in 2021. This century, wealth inequality has not changed greatly in Chile or Mexico. The wealth Gini coefficient in Chile stood at 80.3 in 2000, at 79.4 in 2021 and 78.8 in 2022. There was even less change in Mexico, where the figures were 80.6 and 80.4 in 2000 and 2021, respectively, before dropping slightly to 79.3 in 2022. However, the share of the top 1% has fallen in both Chile and Mexico since 2000 – from 39.6% to 32.8% in 2021 and 32.0% in Chile, and from 42.6% to 30.2% in 2021 and 28.3% in 2022 in Mexico. In these two countries, wealth inequality has risen among the bottom half of the population, while falling at the top. On average, for the two countries, the wealth share of the bottom 40% of adults fell from 1.8% in 2000 to -0.2% in 2021 and -0.1% in 2022, while the share of adults from the 40th to 90th percentiles rose from 27.3% in 2000 to 33.3% in 2021 and 34.6% in 2022.

Figure 2: Composition of wealth per adult (USD)

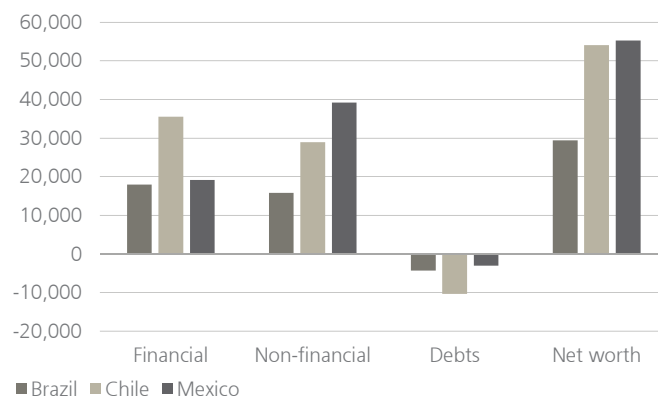


Figure 3: Share of financial assets (%)

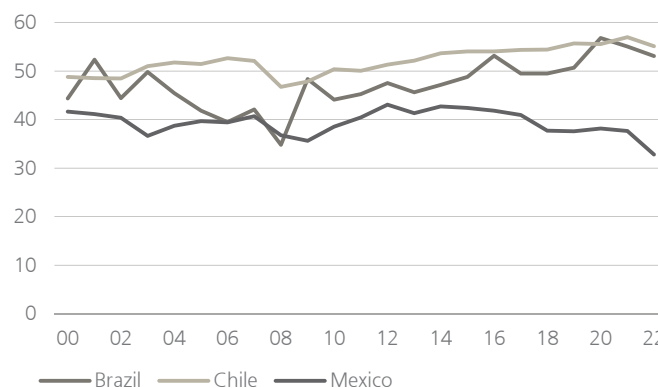
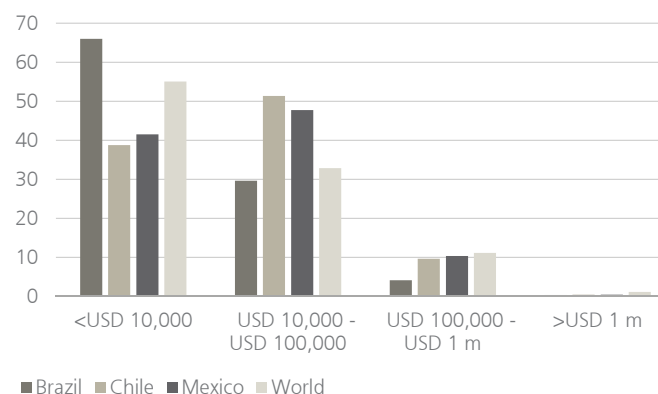


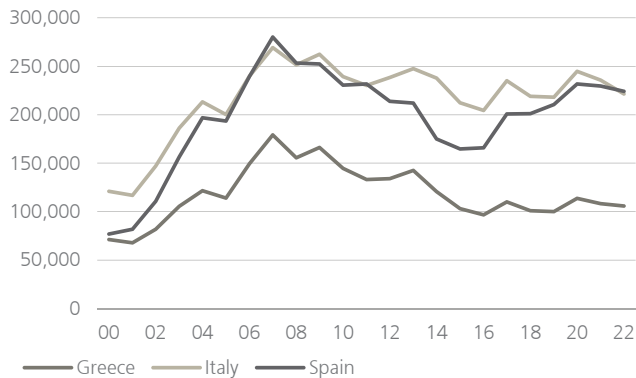
Figure 4: Wealth distribution relative to world (%)



Source Figures 2-4: James Davies, Rodrigo Lluberias and Anthony Shorrocks, Global Wealth Databook 2023

Greece, Italy and Spain

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Southern Europe was hit hard by COVID-19 after its arrival in early 2020. Real GDP fell in 2020 by an average rate of 9.8% in Greece, Italy and Spain, with only a small variation. Partial rebounds occurred in 2021 and 2022, with GDP growing in 2021 by 5.9%, 3.7% and 5.5% in Greece, Italy and Spain, respectively, and in 2022 by 8.4%, 7.0% and 5.5%. GDP had more than regained its 2019 level in 2022 in Greece and Italy, but was 1.3% below the 2019 level in Spain. The IMF predicts average GDP growth of 1.6% in these countries in 2023. Although unemployment is relatively high in this region, it changed little during the pandemic, with the average unemployment rate at 13.8% in both 2019 and 2020 across Greece, Italy and Spain. The year 2022 saw a drop from 13.1% in 2021 to 11.3%.

The pandemic initially had a positive effect on household saving in these countries, echoing trends in northern Europe and North America. In Italy, gross household savings jumped to 17.4% of GDP in 2020 from 10.0% in 2019. In Spain, the rise was from 8.3% to 15.0%. Greece went from dissaving at a rate of 3.8% to positive saving of 2.8%. In 2021, there was a small drop in the savings rates from an average of 11.7% in 2020 to 10.2%. Full data are not available for Greece in 2022, but Italy and Spain saw a sharp decline from an average savings rate of 14.4% in 2021 to 8.6%. This decline contributed slightly to the fall in the growth of household wealth in 2022 from an average rate of 4.9% in 2020 to 2.4% in 2022, measured in euros.

The rise in private saving during the pandemic was mirrored by an increase in public debt as in many other countries. The ratio of public debt to GDP rose in Greece, Italy and Spain by similar proportions from an average of 129.3% in 2019 to 162.6% in 2020, before falling to 156.3% in 2021 and

Table 1: Macroeconomic indicators 2022

	Greece	Italy	Spain	
Population	10	60	47	million
Adult population	8	50	38	million
GDP	26,349	40,776	37,444	USD per adult
Mean wealth	105,724	221,370	224,209	USD per adult
Median wealth	53,501	107,315	107,507	USD per adult
Total wealth	0.9	11	8.5	trillion USD
US dollar millionaires	79	1,335	1,135	thousand
Top 10% of global wealth holders	1,441	19,793	15,919	thousand
Top 1% of global wealth holders	71	1,182	1,018	thousand
Wealth inequality	68.1	67.8	68.3	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

144.9% in 2022. Although the proportional rise and fall was similar across the three countries, the level of public debt has varied, for example in 2022 from 112.6% of GDP in Spain to 144.7% in Italy and 177.4% in Greece.

In 2021, share prices in Greece, Italy and Spain rose by an average of 13.8%. In 2022, they fell by an average of 4.9%. Country experiences varied noticeably. Greece fared the best, with share prices rising in both years by a total of 16.7%, while Italy and Spain had much smaller two-year increases of 5.2% and 1.8%, respectively. As elsewhere, 2022 brought stronger performance, with the main stock indexes in Italy and Spain rising 14.3% and 12.9%, respectively, in the first four months of the year.

At the end of 2022, wealth per adult was USD 105,724 in Greece, USD 221,370 in Italy and USD 224,209 in Spain. Between 2000 and 2022, wealth per adult rose at an average annual rate of 1.8% in Greece, 2.8% in Italy and 5.0% in Spain, increasing the wealth gap between Greece and the others. In US dollars, wealth per adult fell in each country in 2022 by 2.3% in Greece, 6.1% in Italy and 2.4% in Spain. However, in euros, wealth per adult rose by 3.7% in both Greece and Spain, and declined only slightly in Italy by 0.3%.

The share of financial assets in gross wealth fell gradually from the year 2000 to 2008–10 in these countries. However, by 2022, overall wealth composition had returned in important respects to the year 2000 pattern. Financial assets averaged 37.6% of gross assets in 2000 and 36.3% in 2021, although there was a decline in 2022 to 35.3% due to poor stock market performance. The ratio of debt to gross assets rose in Greece and Italy from an average of 5.4% in 2000 to 10.0% in 2022, but fell in Spain from 11.3% to 8.7%. These debt ratios are moderate by international standards.

Wealth inequality is somewhat lower in these three countries than in major European countries to the north. Their average wealth Gini coefficient in 2022 was 68.1 and the share of the top 1% was 23.5%. The corresponding averages for France, Germany and the United Kingdom were 73.2 and 25.0%. Overall wealth inequality, as reflected in the Gini coefficient, rose in Italy and Spain from an average of 63.0 in the year 2000 to 68.1 in 2022. In contrast, the Gini fell slightly in Greece from 69.2 to 68.1 over the same interval. However, a common U-shaped path for both the Gini coefficient and the share of the top 1% can be seen in all three countries over the period from 2000 to 2022. Inequality fell from 2000 to the 2008–2010 period and then rose through to 2021. This pattern is matched, and to a large extent explained, by the U-shaped time path of financial assets as a percentage of gross wealth.

Figure 2: Composition of wealth per adult (USD)

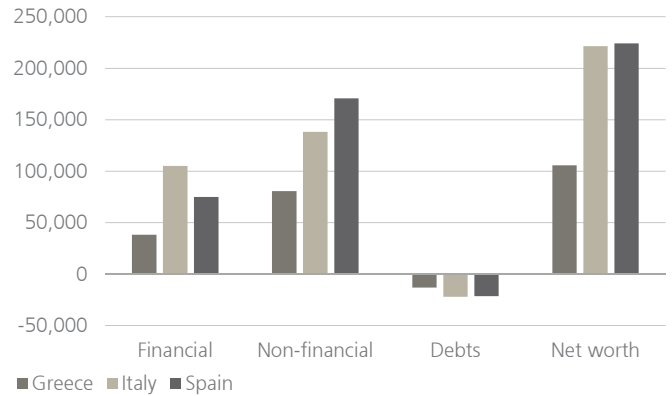


Figure 3: Share of financial assets (%)

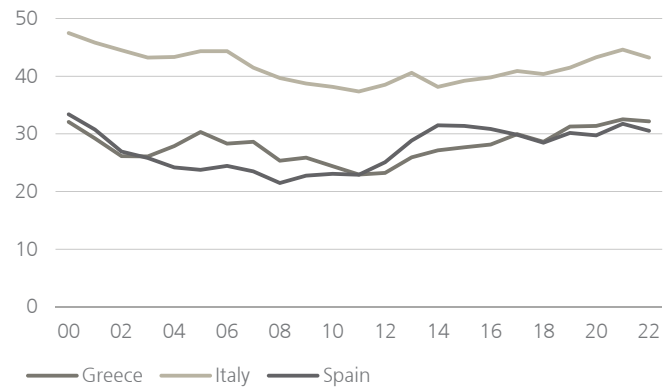
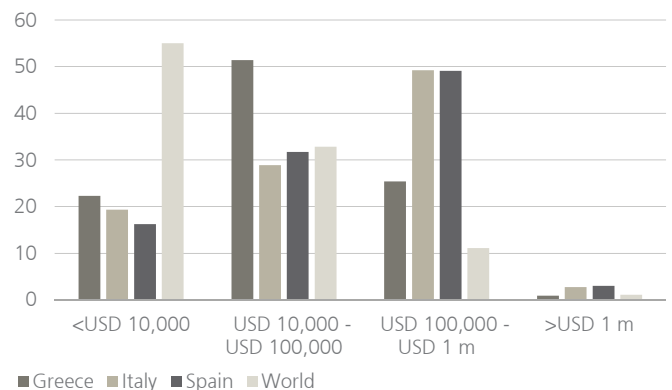


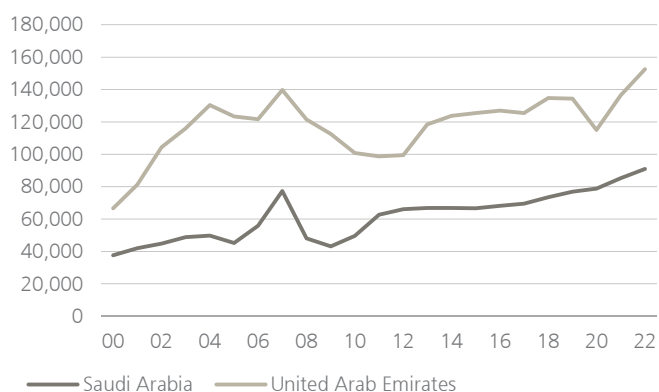
Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Saudi Arabia and the United Arab Emirates

Figure 1: Wealth per adult 2000–22 (USD)



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Both Saudi Arabia and the United Arab Emirates suffered economically at the beginning of the COVID-19 pandemic, in part due to a decrease in the price of oil. In 2020, real GDP fell 4.1% in Saudi Arabia and 4.8% in the United Arab Emirates. The rebound began in 2021 as GDP grew 3.9% in both countries and continued in 2022, with growth of 8.7% in Saudi Arabia and 7.4% in the United Arab Emirates. Slower growth is expected in 2023, as elsewhere, with the IMF predicting an average GDP rise of 3.3% in the two countries.

Real private consumption declined by 6.3% in Saudi Arabia in 2020, causing a small rise in saving, but rose by a total of 14.2% in 2021 and 2022, with the opposite effect (data not available for the United Arab Emirates). Government revenue fell in 2020, while public spending rose. As a consequence, public debt as a fraction of GDP rose from 21.6% in 2019 to 31.0% in 2020 in Saudi Arabia and from 26.8% to 41.1% in the United Arab Emirates. By 2022, these increases had largely been reversed, with gross government debt falling to 22.6% of GDP in Saudi Arabia and to 30.0% in the United Arab Emirates.

The only solid source of data on household wealth for any of the Gulf states is found in the household debt figures reported in the IMF's Global Debt Database. Our estimates of financial and non-financial wealth are derived from the relationship observed in other countries between household wealth and variables such as household consumption, share prices and house prices. At the end of 2022, we estimate that total household wealth amounted to USD 2.3 trillion in Saudi Arabia compared to USD 1.2 trillion in the United Arab Emirates. However, owing to Saudi Arabia's higher population, wealth per adult in the United Arab Emirates at the end of 2022 (USD 152,556) was 68% higher than that in

Table 1: Macroeconomic indicators 2022

	Saudi Arabia	United Arab Emirates	
Population	36	10	million
Adult population	25	8	million
GDP	42,666	60,929	USD per adult
Mean wealth	90,975	152,556	USD per adult
Median wealth	20,701	31,761	USD per adult
Total wealth	2.3	1.2	trillion USD
US dollar millionaires	354	221	thousand
Top 10% of global wealth holders	2,271	740	thousand
Top 1% of global wealth holders	317	203	thousand
Wealth inequality	86.7	86.9	Gini index

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023

Saudi Arabia (USD 90,975). The proportional difference has fallen over time. Earlier this century, wealth per adult in the United Arab Emirates was more than double that of Saudi Arabia.

According to our estimates, the share of financial assets in gross assets is similar in the two countries and remained relatively stable until 2022. At the end of 2021, we estimate that financial assets made up 59.5% of gross assets in Saudi Arabia and 58.8% in the United Arab Emirates. However, in 2022, these ratios fell to 56.7% in Saudi Arabia and 56.5% in the United Arab Emirates. Household debt is low by international standards. The ratio of household debt to gross assets in 2022 was 5.5% in Saudi Arabia and 7.8% in the United Arab Emirates, with little change since 2021.

Net worth per adult in Saudi Arabia rose 8.4% in USD terms in 2021 using current exchange rates and continued to rise in 2022 by 6.6%. Using smoothed exchange rates shows similar growth in 2021 at 8.6%, but higher growth in 2022 at 10.8%. In the United Arab Emirates, growth rates of wealth per adult were again similar in 2021 using current or smoothed exchange rates at 18.7% versus 20.6%, respectively. However, in 2022, measured growth differed depending on exchange rates – wealth per adult rose 11.7% in the United Arab Emirates in 2022 at current exchange rates, but by only 4.1% using smoothed rates.

In 2022, 45% of adults in Saudi Arabia had net worth less than USD 10,000, while the figure was 43% in the United Arab Emirates. Compared to the United Arab Emirates, Saudi Arabia had more adults with wealth between USD 10,000 and USD 100,000, and fewer with wealth above USD 100,000: 12% of adults versus 27% in the United Arab Emirates.

Overall wealth inequality is reflected in a 2022 Gini coefficient of 86.7 for Saudi Arabia and 86.9 for the United Arab Emirates. The share of the top 1% was 37.6% in Saudi Arabia and 44.6% in the United Arab Emirates. These values place both countries toward the top of the international inequality ranking. However, our estimates suggest that wealth inequality was even higher earlier this century. The reasons for this decline are unclear, given the lack of reliable source material. But the United Arab Emirates hosts a disproportionate number of wealthy expatriate entrepreneurs, some of whom relocated after the global financial crisis. In Saudi Arabia, nearly 400 wealthy people were detained and their business activities were subject to review, beginning in November 2017. The outcome included confiscation of some assets that likely impacted the wealth of these individuals. These events may also have encouraged other mobile entrepreneurs to change their country of residence.

Figure 2: Composition of wealth per adult (USD)

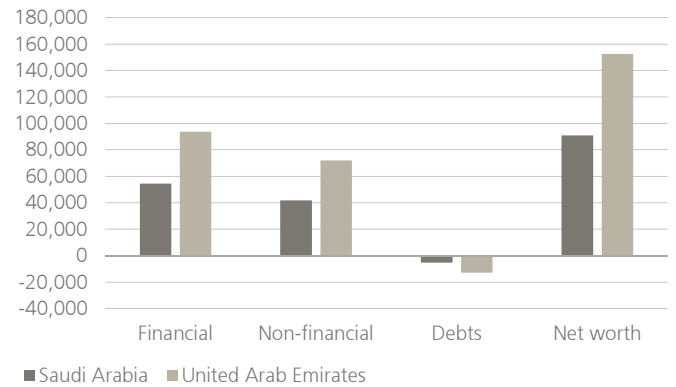


Figure 3: Share of financial assets (%)

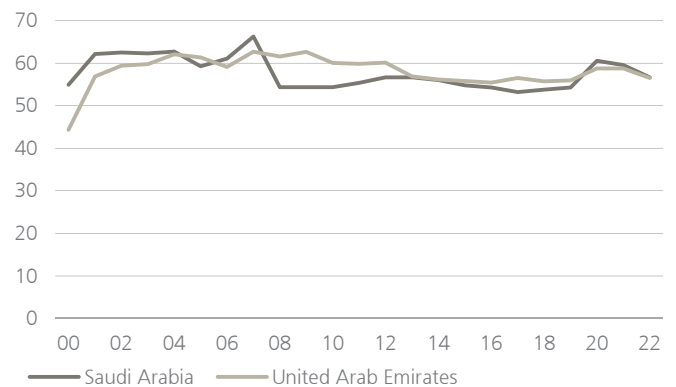
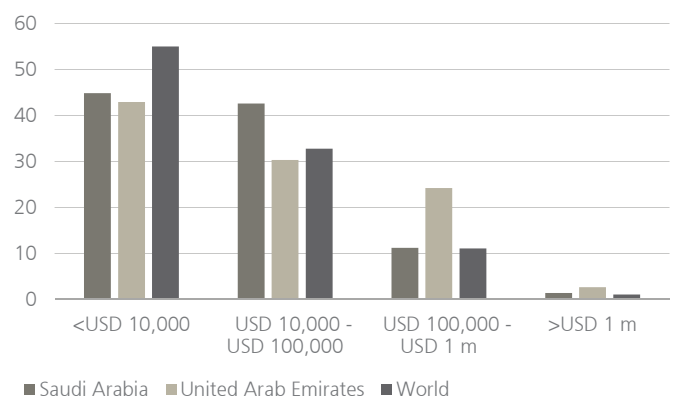


Figure 4: Wealth distribution relative to world (%)



Source Figures 2–4: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Global Wealth Databook 2023



About the authors

Professor Anthony Shorrocks is Director of Global Economic Perspectives Ltd and a Senior Research Fellow at the World Institute for Development Economics Research (UNU-WIDER) in Helsinki. 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. From 2001 to 2009, he was Director of UNU-WIDER in Helsinki. 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 Statistics 1975) and "The portfolio composition of asset holdings in the United Kingdom" (Economic Journal 1982). Joint publications with James Davies include "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), "The Level and Distribution of Global Household Wealth" (Economic Journal 2011), "Comparing Global Inequality of Income and Wealth," chapter 3 of Inequality in the Developing World (Oxford University Press, 2021) and "World Inequality" in the "Handbook of Labor, Human Resources and Population Economics" (Springer, Cham, 2022).

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