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Discussion paper

Global balance sheet 2022: Enter volatility

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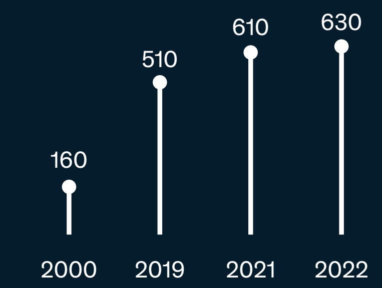

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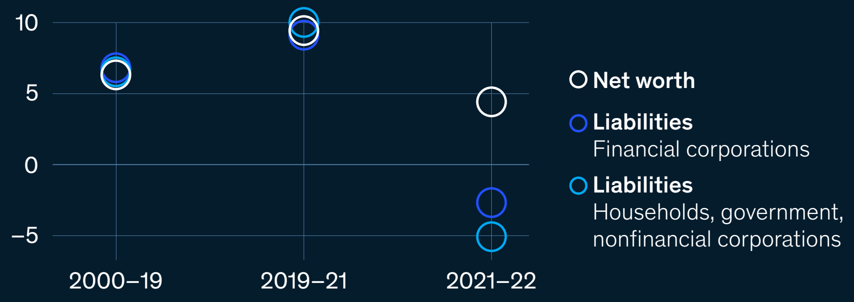

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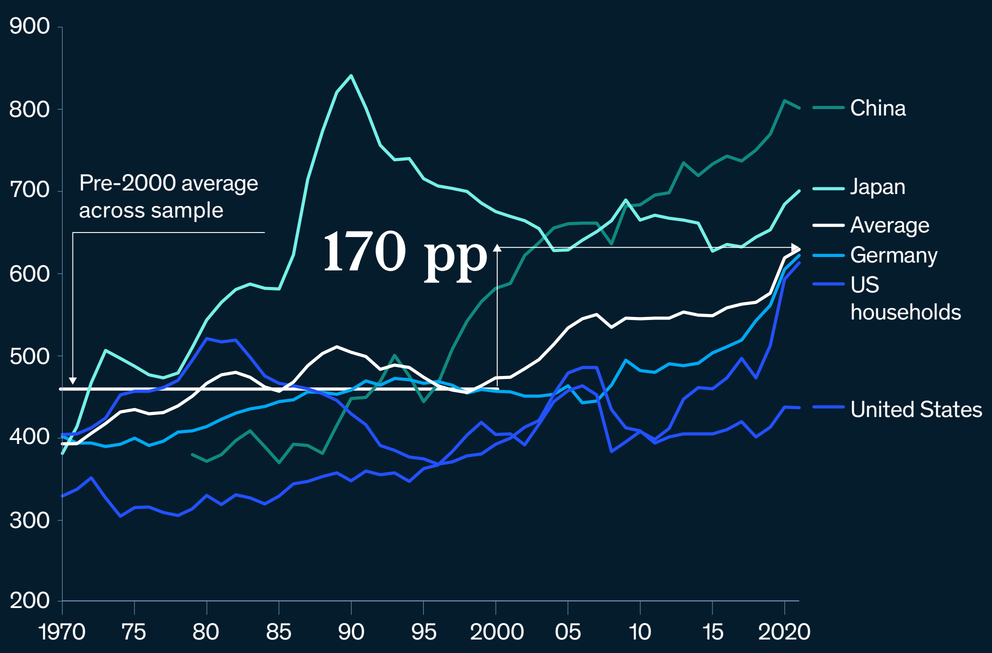

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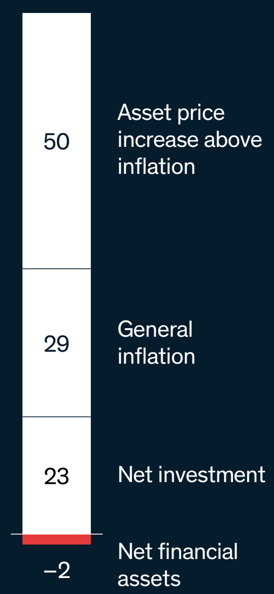

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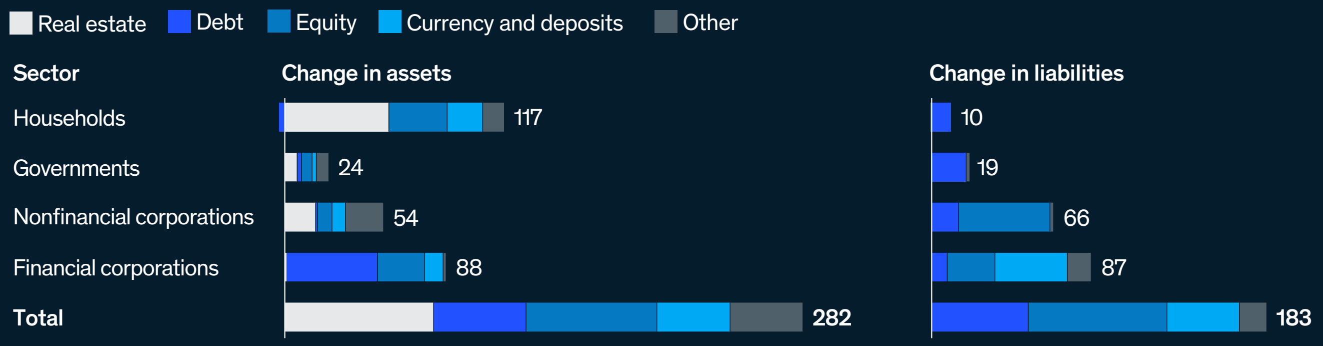

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In brief

Global balance sheet 2022: Enter volatility

The global balance sheet takes stock of the wealth and health of the global economy, looking at the assets and liabilities of households, corporations, governments, and financial institutions. For nearly three decades, the global balance sheet continuously grew faster than GDP, as described in MGI's 2021 report *The rise and rise of the global balance sheet*. This growth then accelerated sharply in the intense first two years of the COVID-19 pandemic. However, in 2022, early signs of a possible inflection point appeared, with greater volatility in the components of the global balance sheet and the first overall shrinkage in decades (Exhibit 1).

The global balance sheet expanded inexorably from 2000 to the end of 2021. Real assets and net worth; financial assets and liabilities held by households, governments, and nonfinancial corporations; and financial assets and liabilities held by financial corporations each grew from about four to more than five times GDP. Global net worth was $610 trillion at the end of 2021. Only about one-fifth of wealth growth came from savers channeling money into new investment, with asset price inflation on the back of low interest rates contributing close to 80 percent. Correspondingly, liabilities and debt in China, Europe, Japan, and the United States were higher relative to GDP at the end of 2021 than at the time of the 2008 global financial crisis. For every dollar of net investment, $1.90 of additional debt was created outside the financial sector.

In this period, across countries, real estate, debt, and US equities drove most of the growth. While there were large differences among the 30 countries covered in the magnitude, timing, and composition of growth in assets and liabilities, the direction of travel, the rapid expansion relative to GDP, and the strong role of real estate were near universal. Households particularly in Canada, Denmark, the Netherlands, Sweden, and the United States also experienced rapidly rising equity and pension wealth. Growth in debt relative to GDP was fastest in China, France, and Greece; relative to net investment, it was highest in Portugal, Italy, Greece, and the United Kingdom at factors of 4.1, 3.9, 3.8, and 3.8, respectively.

Growth in the global balance sheet accelerated during the pandemic. In 2020 and 2021, the intense first two years of the pandemic when governments launched large-scale support for economic activity, households globally added $100 trillion to global wealth "on paper" as asset prices soared and $39 trillion in new currency and deposits were minted. As a result, global wealth relative to GDP grew faster than in any other two-year period in the past nine decades. Debt and equity liabilities increased by about $50 trillion and $75 trillion, respectively, as governments and central banks stimulated economies. The creation of new debt accelerated to $3.40 for each $1.00 in net investment.

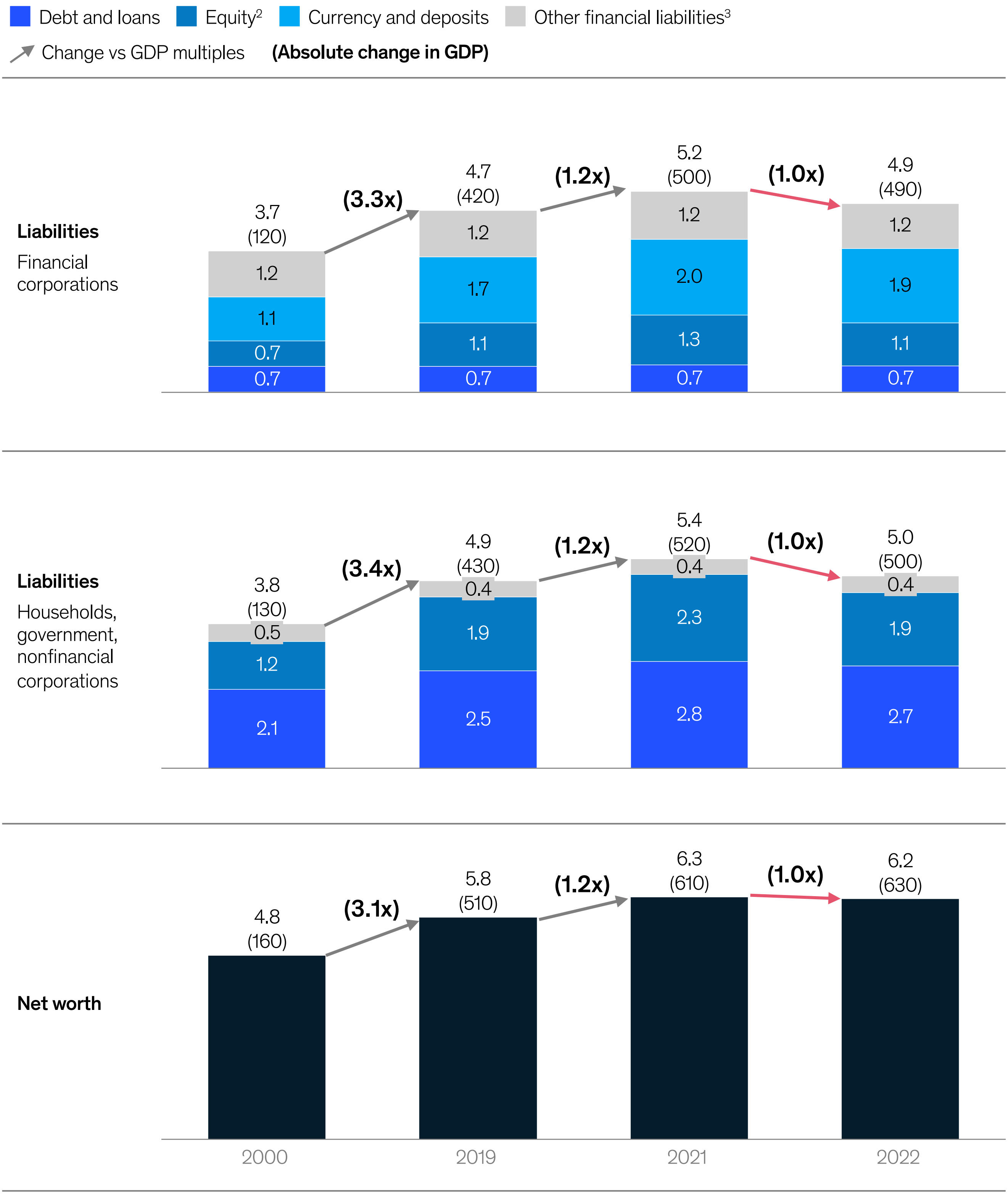
Is 2022 a pause or an inflection point in the rise of the global balance sheet? In the face of geopolitical and economic turbulence, by the third quarter of 2022, all three interlocking balance sheets shrank relative to GDP for the first time in decades. As inflation and interest rates rose, global equity and bond prices declined by about 30 and 20 percent in real terms, respectively. Real estate values grew more slowly than inflation and fell in nominal terms in several markets. Despite higher inflation, debt continued to grow slightly faster than GDP at par values (but declined in market values).

What is next for the health and wealth of economies? Public- and private-sector leaders and financial authorities should consider closely monitoring and managing the balance sheet to achieve positive economic outcomes. The forces of secular stagnation could mean that after a brief intermezzo in 2022 and part of 2023, the balance sheet will resume its rise, adding to wealth but also to concerns about balance sheet health. Alternatively, the world could step up efforts to boost productivity growth and reallocate capital to productive capital formation in order to grow out of a supersize balance sheet. If the world does not go down either of these two routes, an unwinding of the balance sheet via inflation—as in the 1970s—or via more sustained asset price corrections, deleveraging, and debt write-offs, as happened during the global financial crisis, may result.

Exhibit 1

After two decades of growth and rapid acceleration through the pandemic, the global balance sheet showed signs of volatility in 2022.

Evolution of the global balance sheet, consolidated data,[1] GDP multiples ($ trillion)



[1]Moved from unconsolidated financial data in 2020 report to consolidated, which reduced financial assets and liabilities by about $100 trillion each.
[2]Shares in publicly and privately held corporations.
[3]Includes monetary gold and special drawing rights (SDRs), derivatives and options, and pensions.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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The global balance sheet expanded inexorably in the Era of Markets

In 2021, the McKinsey Global Institute employed a core tool used by companies—the balance sheet—as a way to gauge the underlying prosperity, health, and resilience of the global economy. We built a global balance sheet that complements GDP and other economic flows as a way of measuring the world's wealth. This paper presents an update to the balance sheet through the pandemic (2020 and 2021) and the impact of war in Ukraine, inflation, and the interest rate shock in 2022. The balance sheet adds an important lens for assessing economic wealth and health (see Box 1, "The global balance sheet: Taking stock of economic health and wealth").

Box 1

The global balance sheet: Taking stock of economic health and wealth

A large balance sheet can be a sign of strength and wealth when it is underpinned by productive capital stock, but it can also expose fragilities when signs of asset price inflation and growing leverage are present (Exhibit 2). Notably, on the asset side, the balance sheet is a way to gauge overall wealth at the country and household levels, but also capital allocation and misallocation, and sources of wealth growth and whether they are sustainable or merely reflect asset price inflation. On the liability side, it provides a full account of debt and other financial liabilities at the economic sector level and supports analysis of stock and growth of liabilities in comparison with income growth, new capital formation, or asset price growth.

To construct a global balance sheet, MGI added up all real assets in the economy as well as all financial assets and liabilities, analogous to the way a corporation builds its balance sheet.[1] Included are all sectors—namely households, government, nonfinancial corporations (which include state-owned enterprises), and financial corporations (which include central banks). All assets and liabilities are valued at market prices.[2] Human and environmental capital, and contingent liabilities, such as pay-as-you-go pension schemes, are excluded.

At a functional level, the global balance sheet has three components that interlock: (1) the real economy balance sheet: real assets and net worth; (2) the financial balance sheet: financial assets and liabilities held by households, governments, and nonfinancial corporations; and (3) the financial-sector balance sheet: financial assets and liabilities held by financial corporations.

The real economy balance sheet has $620 trillion of real assets. About two-thirds of these are real estate (land and buildings), and one-third includes assets like machinery and equipment, infrastructure, natural resources, and intellectual property (IP). These are mirrored on the liability side as national or global net worth. Note that while for households, net worth includes both real assets such as property and financial assets like stocks and bonds, at the global or closed economy level, all financial assets are matched by corresponding liabilities so that net worth equates to the value of real assets (with a small deviation in MGI's analysis due to the position of the rest of the world).

The financial balance sheet of households, nonfinancial corporations, and governments has $520 trillion in financial assets, such as stocks, bonds, pension funds, and cash and deposits that facilitate ownership and risk transfer of real assets as well as time shifting of savings and consumption. These financial assets balance against corresponding liabilities since they represent eventual claims that owners, namely those holding the asset, have on them.

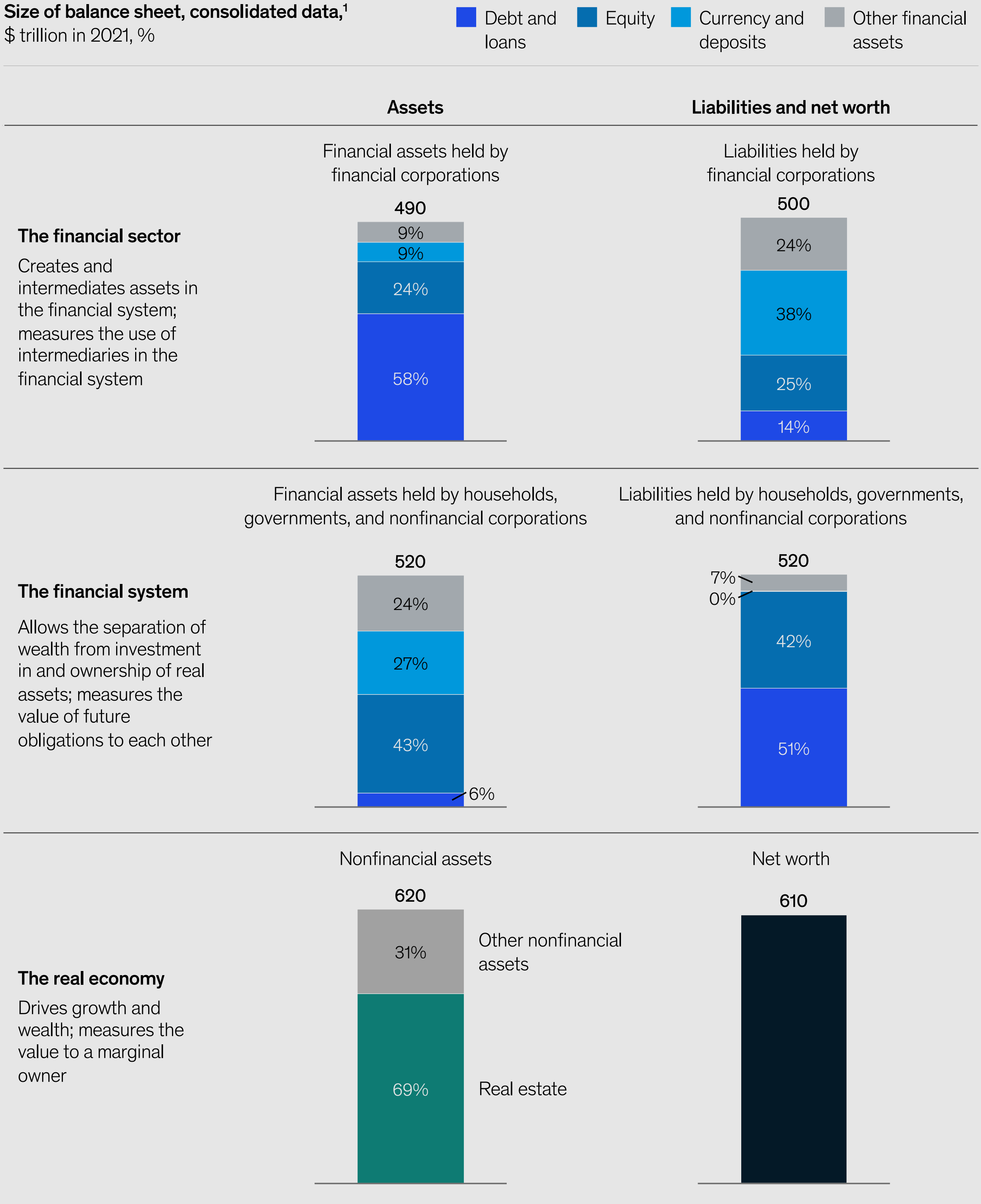
Finally, financial institutions create and intermediate those financial assets and liabilities—with transformation of risks, maturity, and size—and hold $490 trillion in financial assets and corresponding liabilities. On the asset side, the largest contributor to the balance sheet of financial institutions is debt, followed by equity, currency and deposits (at other financial institutions or at central banks), and other financial assets such as derivatives and financial reserves. Among liabilities for financial institutions are currency and deposits, equity, and pensions.

1 Countries included in the global balance sheet are Australia, Austria, Belgium, Canada, Central and Eastern Europe (including Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, and Slovenia), China, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, United Kingdom, and United States. The global average is an extrapolation derived from a weighted average of 30 countries (based on GDP) that account for 77 percent of global GDP.

2 As per the guidelines stipulated in *Valuation of debt securities at both market and nominal value,* IMF Committee on Balance of Payments Statistics, October 2020. Market values and par values have historically approximated each other and diverged in episodes of quick changes in interest rates over the past 20 years; see the Federal Reserve Bank of Dallas analysis "Market value of U.S. government debt."

Exhibit 2

The global balance sheet consists of three interlocking balance sheets of—coincidentally—~$500 trillion to $600 trillion each.



[1]Moved from unconsolidated financial data in 2020 report to consolidated, which reduced financial assets and liabilities by about $100 trillion each.
Note: The global average is an extrapolation derived from a weighted average of 30 countries based on GDP comprising 77% of global GDP.
Figures may not sum up due to rounding.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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Over the past couple of decades—a period that the McKinsey Global Institute (MGI) has dubbed the Era of Markets—the global balance sheet has risen inexorably.[3] Between 2000 and 2021, the market value of the three parts of the global balance sheet quadrupled, far outstripping growth in GDP.[4] Historically, net worth (real and financial assets minus liabilities) accounted for four times GDP, but it reached more than six times GDP at the end of this period.

Real assets and net worth rose to their highest levels relative to GDP since the two world wars, while liabilities and debt are now above the peaks reached around the global financial crisis. For every dollar of net investment, the financial system created $1.90 in additional debt.

Net worth expanded by 170 percentage points relative to GDP from pre-2000 averages, fueled by asset price inflation

In recent decades, the world has experienced a sustained period of rising asset prices. Globally, net worth is now 170 percentage points higher relative to GDP than the pre-2000 average, and by 2021 it had reached the highest level relative to GDP since before World War II (Exhibit 3).

Only 23 percent of growth in the value of assets and net worth reflected savings channeled into net new investment that added to the productive or real capital stock of the economy. What really drove net worth growth was inflation in asset prices that far exceeded growth in consumer prices. Declining interest rates were a core driver. Particularly in real estate, lower financing costs meant that buyers were willing to pay higher property prices relative to prevailing rents.

Real assets and net worth rose to their highest levels relative to GDP since the two world wars, while liabilities and debt are now above the peaks reached around the global financial crisis.

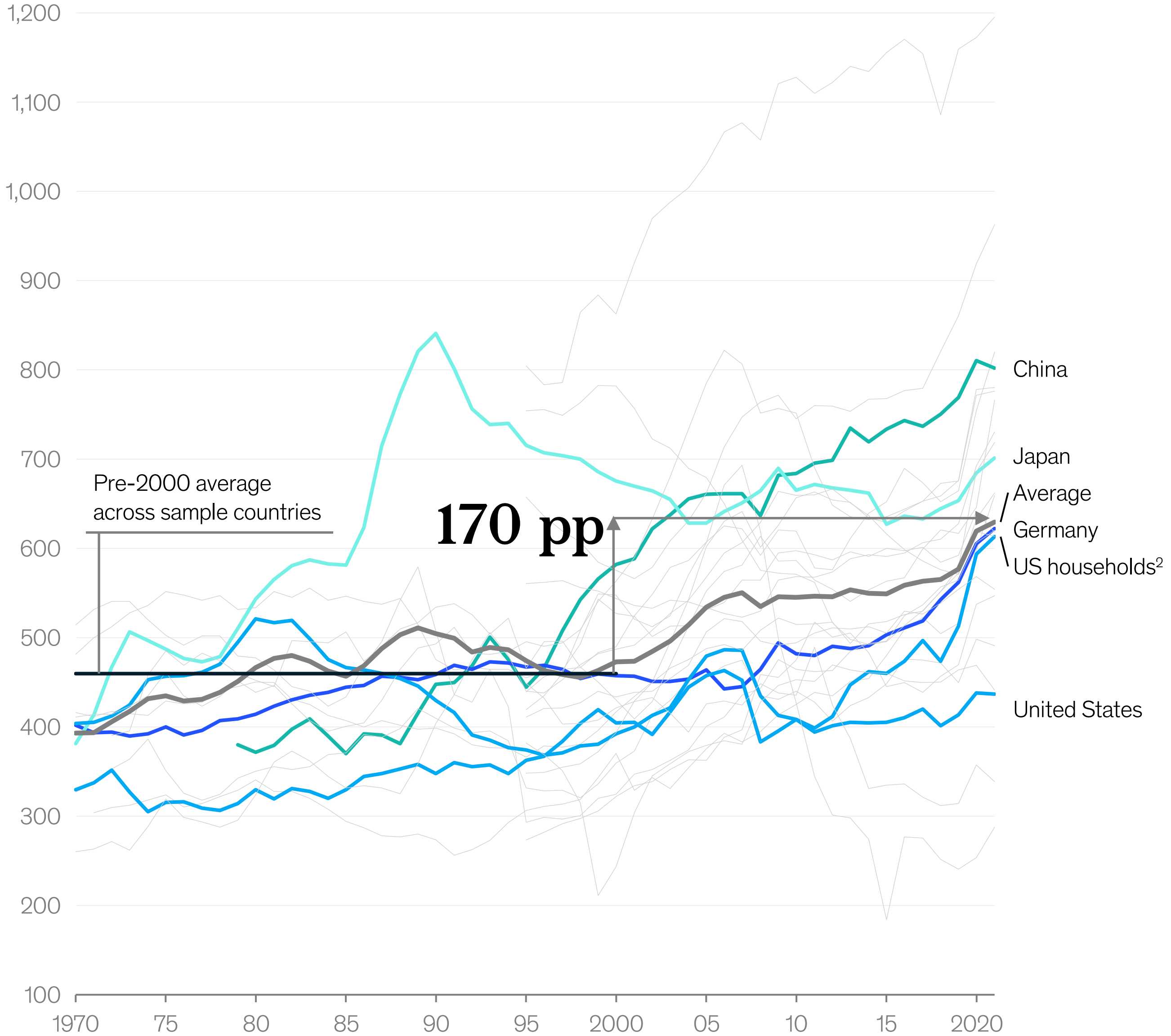
[3] *On the cusp of a new era?* McKinsey Global Institute, October 2022.
[4] *The rise and rise of the global balance sheet: How productively are we using our wealth?* McKinsey Global Institute, November 2021.

Exhibit 3

Assets and net worth rose 170 percentage points relative to GDP from pre-2000 averages, fueled by asset price inflation.

Country[1] **net worth at market prices relative to nominal GDP,** 1970–2021

Net worth/GDP, %



Components of net worth growth, 2000–21, %

[1]Countries are Australia, Austria, Belgium, Canada, Central and Eastern Europe (incl Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, and Slovenia) China, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, United Kingdom, and United States; the global average is an extrapolation derived from a weighted average of 30 countries based on GDP comprising 77% of global GDP.
[2]For the United States, household net worth and country net worth differ markedly due to high values of corporate equity relative to assets.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; World Inequality Database; McKinsey Global Institute analysis

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Net worth is now at levels relative to GDP last seen before the world wars in several economies

The high ratio of wealth to GDP witnessed today—up to eight times in some countries—was also observed prior to World War I. For 50 years before the start of that war, the average wealth-to-income ratio of some of the world's leading economies was relatively constant at levels comparable with, or higher than, today (Exhibit 4).[5]

During the turbulent first half of the 20th century, two world wars and the Spanish flu pandemic severely disrupted global economies, reducing wealth to 30 percent of its average value relative to GDP from what it had been just a couple of decades earlier in countries such as France and Germany. Physical capital was destroyed. In Germany, hyperinflation also devalued financial assets and liabilities. Rapid industrialization changed the social fabric and engines of growth, and agricultural land lost its place as the primary store of value.

After 1950, however, wealth-to-GDP ratios started growing again not only as the capital stock was built after the war but also as long-run asset prices recovered. More structurally, continued urban agglomeration, including the development of suburbs, as well as a shift to services contributed to real estate becoming a growing—and indeed primary—store of value.[6]

The global trajectory accelerated in many economies in the late 1990s and around the turn of the millennium on the back of the "great moderation" characterized by declining interest rates and rising asset prices. Rapid income growth in superstar cities, whose supply of real estate is inelastic but which experience insatiable increases in demand, has added to real estate price pressures.

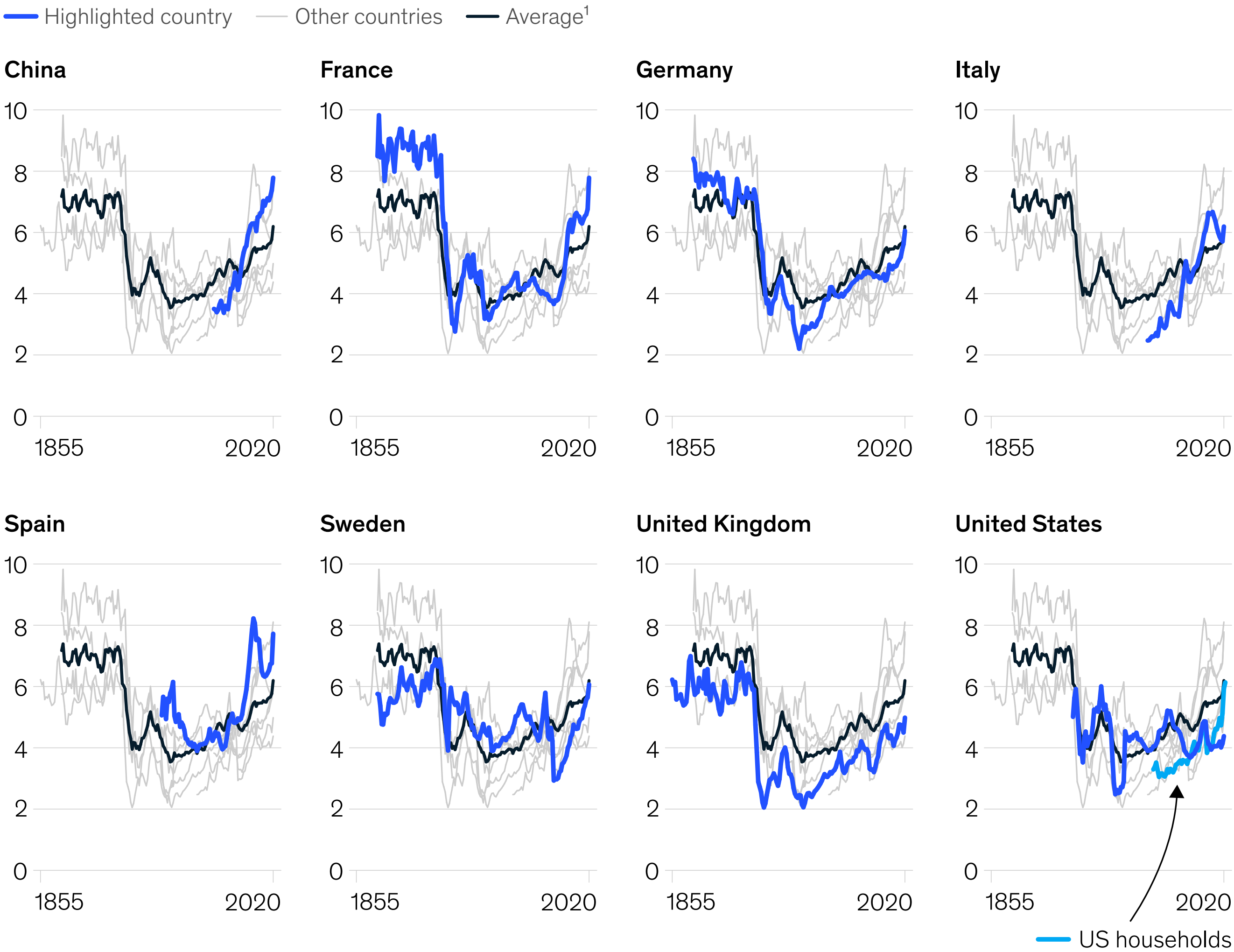
Continued urban agglomeration, including the development of suburbs, as well as a shift to services contributed to real estate becoming a growing—and indeed primary—store of value.

[5] In the pre–World War I period, we use income instead of GDP.
[6] Thomas Piketty, *Capital in the 21st century*, Belknap Press, 2014; and Daniel Waldenström, *Wealth and history: An update*, Centre for Economic Policy Research discussion paper DP16631, November 2021.

Exhibit 4

Net worth is now at levels relative to GDP not seen since before the two world wars in several economies.

Net worth at market prices relative to net national income, 1855–2020



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Across countries, real estate and US equities drove asset growth

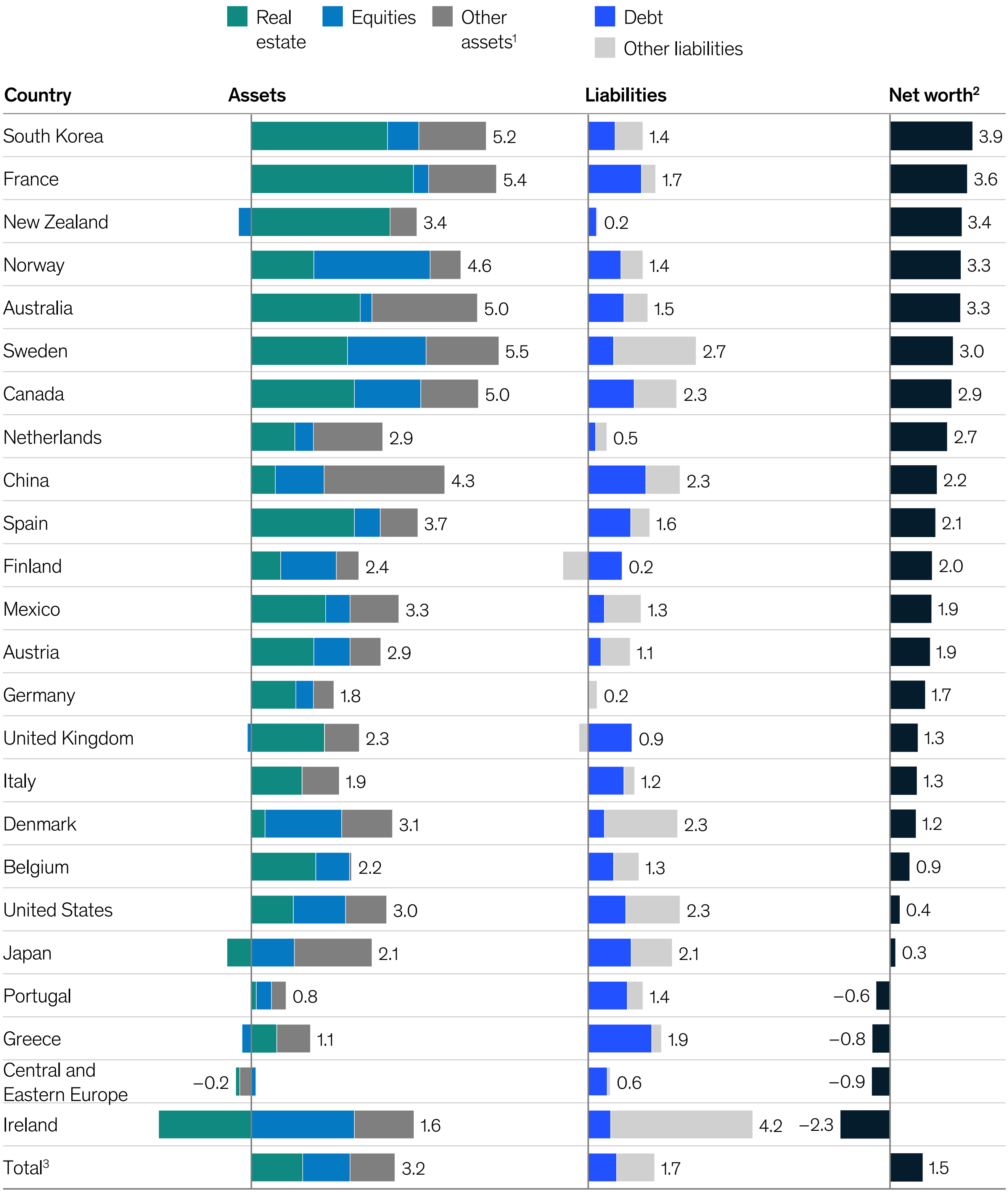
While the magnitude, exact timing, and composition of asset growth relative to GDP differed among countries, the direction of change and its underlying factors have been remarkably consistent across the globe in recent decades.

The vast majority of countries have experienced rapidly growing net worth on the back of rising real estate values. These show up, in particular, on household balance sheets, benefiting homeowners but hurting those who seek property. South Korea, France, and New Zealand top the list of total and real estate net worth growth (Exhibit 5). Resource exporters including Australia, Canada, and Norway are also near the top of the list. These economies have benefited from rising resource wealth and have witnessed those funds pouring into real estate markets, boosting valuations (see Box 2, “Australia leads in household net worth relative to GDP due to high land prices”).

Exhibit 5

Real estate grew relative to GDP almost universally, and so did debt and equity.

Country net worth growth, 2000–21, GDP multiple



[1]Includes other real and financial assets; other real assets include machinery and equipment, IP products, inventories and valuables, cultivated biological resources, mineral and energy reserves, other natural resources, and other intangibles; other financial assets include monetary gold and SDRs, insurance pensions, derivatives and options, other accounts receivable, and investment fund shares.
[2]Net worth equals real assets plus financial assets minus liabilities.
[3]Weighted average (relative to GDP) of countries in the sample.

Note: For the following economies, balance sheet data were not sufficiently available for the 2000–21 period: South Korea financial balance sheet 2008–21; New Zealand financial balance sheet 2007–20; Mexico 2003–21; Ireland 2001–21. All financial figures are consolidated, except where noted. Consolidated figures are shown for Canada, New Zealand, and the United States after partial consolidation adjustments were applied. Figures for China, Japan, Mexico, and South Korea are not consolidated.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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China has recorded some of the most rapid increases in real estate prices alongside its property boom. The country has experienced very significant GDP growth and a sizable expansion in other real assets, largely reflecting infrastructure, but also inventories of unfinished or unsold property.

Japan experienced its peak before the collapse of its famous bubble in 1991 and has not fully recovered since. Many European economies have also experienced a rapid rise. In the United States, national net worth declined materially relative to GDP in the 1980s during a rapid monetary tightening cycle and the savings and loan crisis before rapidly rising again in the run-up to the global financial crisis. US household wealth rose much faster than national net worth and kept rising, also after the global financial crisis. The reason is that, in contrast to national wealth, household wealth includes equity assets, which rose rapidly in price, but excludes rising public and foreign debt.

Only a limited number of countries experienced a contraction in net worth relative to GDP over the past two decades. Greece, Ireland, and Portugal all matched the global rise until the global financial crisis and subsequent eurozone crisis, which hit them hard. These crises turned previous real estate price increases into sharp declines, and large increases in public and foreign debt were needed to stabilize these economies. While Italy and Spain also experienced crises at this time, over the course of two decades their net worth still expanded relative to GDP.

In addition to property price growth, several economies, including Denmark, Finland, the Netherlands, and Norway, also experienced rapid expansion in their net international investment position. For Norway, this reflected its sovereign wealth fund. For Denmark and the Netherlands, it reflected their large pension systems, which each grew about 150 percentage points faster than GDP. In Finland, the government and households increased their ownership of foreign mutual funds and equities.

Looking at different sectors of the economy, countries including Japan, Mexico, the Netherlands, Spain, the United Kingdom, and the United States transferred large amounts of public wealth to households as they added public debt or privatized public assets.

Box 2

Australia leads in household net worth relative to GDP due to high land prices.

In household wealth, Australia topped the list in our sample at the end of 2021 at 7.1 times GDP—more than double the ratio in Finland, Norway, or Ireland—or about $396,000 (Exhibit 6). Note that these are average levels, and there is large inequality among households.

The value of land is the largest factor, ranging from well below one times GDP in countries like Finland and Mexico to almost four times GDP in Australia, Spain, and New Zealand. Canada, China, Denmark, Sweden, and the United States stand out for the largest value of household equity assets relative to GDP (where this includes nonlisted and owner-operator firms).[7] Pension assets are particularly large in Australia, Denmark, the Netherlands, the United Kingdom, and the United States, countries where pension funds have been established as attractive (or mandatory) savings vehicles. In Japan, which has had decades of monetary stimulus and near-zero interest rates, households stand out for their large holdings of currency and deposits.

[7] New Zealand excluded; data for financial assets available only until 2020.

Exhibit 6

Australia leads the world in household net worth relative to GDP due to high land prices.

Household sector balance sheets across countries, consolidated data, GDP multiple, 2021 snapshot

- Land
- Dwellings and buildings
- Other real assets[1]
- Equity assets
- Currency and deposits
- Insurance pensions
- Other financial assets[2]
- Debt
- Other financial liabilities[3]

Country	Real assets	Financial assets	Liabilities	Household net worth per capita, PPP, $ thousand	Net worth[4]
Australia	5.2	3.3	1.3	396	7.1
Spain	5.0	2.2	0.6	271	6.6
New Zealand	5.1	2.5	1.1	296	6.5
Canada	3.4	3.8	1.1	321	6.2
United States	2.7	4.6	1.1	425	6.1
Italy	3.7	2.8	0.5	278	6.1
China	3.4	3.3	0.7	116	6.0
France	4.1	2.6	0.8	303	6.0
Belgium	3.5	3.0	0.6	346	5.9
Netherlands	3.2	3.6	1.0	365	5.7
South Korea	4.3	2.4	1.1	264	5.6
Japan	2.3	3.8	0.7	233	5.4
Denmark[5]	2.1	4.3	1.1	344	5.3
United Kingdom	2.8	3.3	0.9	258	5.2
Portugal	3.8	2.2	0.8	186	5.2
Sweden	2.1	3.9	1.0	301	5.1
Austria	3.4	2.0	0.5	289	5.0
Germany	2.9	2.2	0.6	263	4.5
Greece	3.4	1.6	0.6	139	4.5
Mexico	2.2	1.3	0.2	75	3.8
Norway	2.5	1.5	1.1	236	3.0
Finland	2.1	1.7	0.8	164	3.0
Central and Eastern Europe	1.8	1.3	0.4	113	2.8
Ireland	1.5	1.2	0.3	255	2.4
Total[6]	3.1	3.5	0.8	117[7]	5.8

[1]Includes machinery and equipment, IP products, inventories, cultivated biological resources, mineral and energy reserves, other natural resources, and other intangibles.
[2]Includes other financial assets including monetary gold and SDRs, insurance pensions, derivatives and options, other accounts receivable, and investment fund shares.
[3]Same as other financial assets. [4]Net worth equals real assets plus financial assets minus liabilities. [5]Denmark land was adjusted based on OECD home price index, given land stock valuation reported in Denmark's national accounts undershoots home price growth in Denmark. [6]Weighted average (relative to GDP) of countries in the sample.
[7]Based on total world GDP, including countries inside and outside our sample.

Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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Debt and equity liabilities have expanded relative to GDP since 2000 and are now higher than before the global financial crisis

From 2000 to 2021, global corporate equity liabilities—including those of privately held firms—rose by 101 percentage points relative to GDP to more than two times GDP. US equities were a primary driver. Notably, China has an even larger ratio of equity liabilities to GDP.

Debt levels are also high by historical standards, exposing economies to the risks of higher debt service costs, deleveraging, and financial fragilities as interest rates rise. Since 2000, debt has grown by about $200 trillion globally, or by 74 percentage points relative to GDP (Exhibit 7).[8]

In the United States, debt relative to GDP has risen by about 95 percentage points since 2000—approximately $45 trillion of additional debt—and is now higher than at its peak before the global financial crisis. Government debt grew by about 0.7 times GDP during this period, particularly in response to the financial crisis and the pandemic. Household debt has fallen from its peak relative to GDP, but it is still higher than in the early 2000s before the run-up to the global financial crisis began. The same is true for financial corporations.

In Europe (our sample includes 16 member states of the European Union plus the United Kingdom), the trajectory and level of total debt have been broadly similar to those of the United States. However, at the sector level, nonfinancial corporations have amassed a higher level of debt than in the United States, while households have been less leveraged relative to GDP (Exhibit 8). In China, debt growth took off after the global financial crisis. Nonfinancial corporations, which include state-owned enterprises (outside the financial sector), led the charge, but households also took on debt during a long-running property boom. In Japan, following the 1989 crisis, private-sector debt declined relative to GDP while public debt increased rapidly in repeated attempts to stabilize and stimulate the economy.

While the direction of travel was universal, the amount of debt and broader financial liability growth relative to GDP varied widely (Exhibit 9). Growth in liabilities exceeded two times GDP in Canada, China, Denmark, Ireland, Japan, Sweden, and the United States.

Looking only at debt outside the financial sector relative to GDP, growth was fastest in Greece, China, and France at 1.6, 1.5, and 1.3 times GDP, respectively. The ratio of net new debt for each dollar of net new investment exceeded a factor of three in Greece, Italy, Portugal, and the United Kingdom.

Debt levels are also high by historical standards, exposing economies to the risks of higher debt service costs, deleveraging, and financial fragilities as interest rates rise.

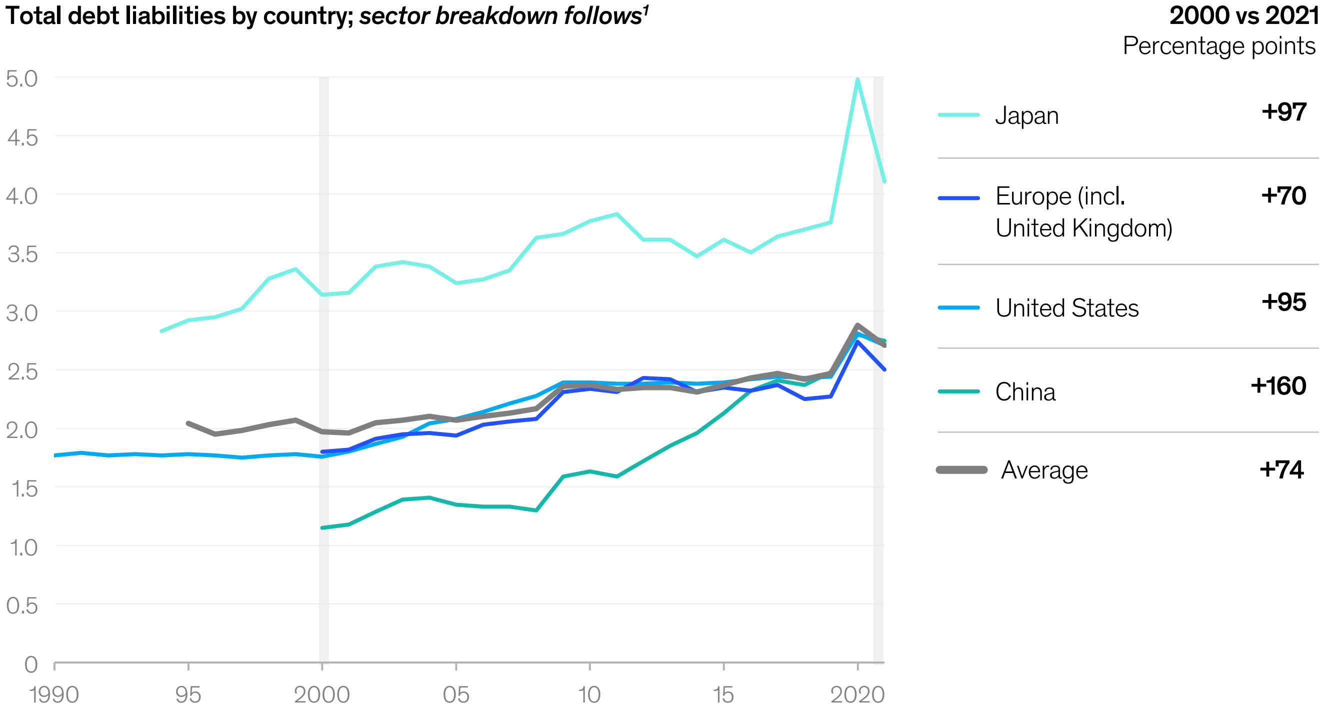
[8] A notable spike in 2020 partly reflected denominator effects as GDP contracted during the pandemic. These numbers exclude the debt liabilities of financial institutions—that is, the bonds they raise from other sectors—but not the debt securities they hold as assets; financial-sector debt is about 20 percent of total global debt at market value.

Exhibit 7

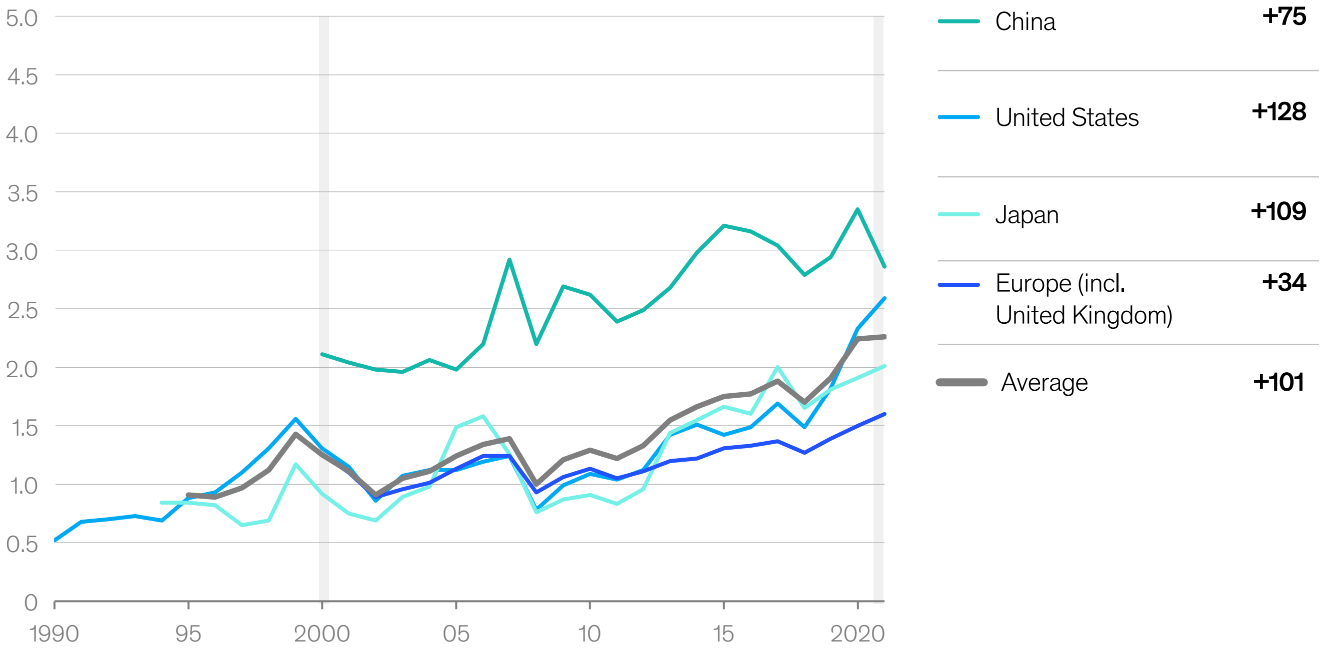
In 2021, liabilities and debt were higher relative to GDP than they were before the global financial crisis.

Nominal (par) values of debt liabilities relative to nominal GDP, 1990–2021

Total debt liabilities by country; *sector breakdown follows*[1]



Equity liabilities by country[1]
Nonfinancial corporations, including unlisted firms



[1]Debt liabilities; excludes financial corporations.
Note: The global average is an extrapolation derived from a weighted average of 30 countries based on GDP comprising 77% of global GDP.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; World Inequality Database; McKinsey Global Institute analysis

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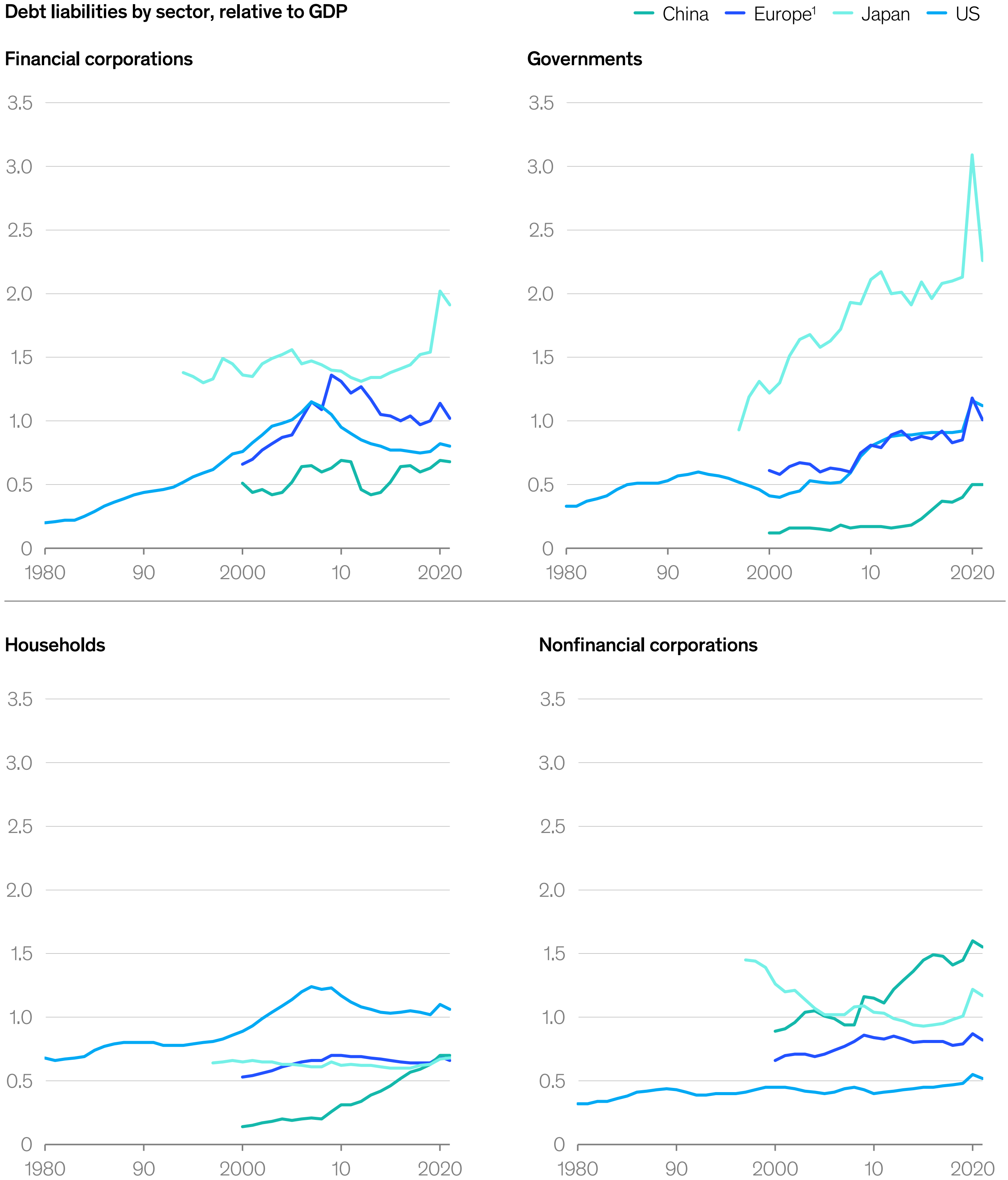
Exhibit 8

Debt grew from 2000 to 2021 across sectors in China, Europe, Japan, and the United States.

Nominal (par) values of debt liabilities relative to nominal GDP, 1980–2021

Debt liabilities by sector, relative to GDP



[1]Includes United Kingdom.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; World Inequality Database; McKinsey Global Institute analysis

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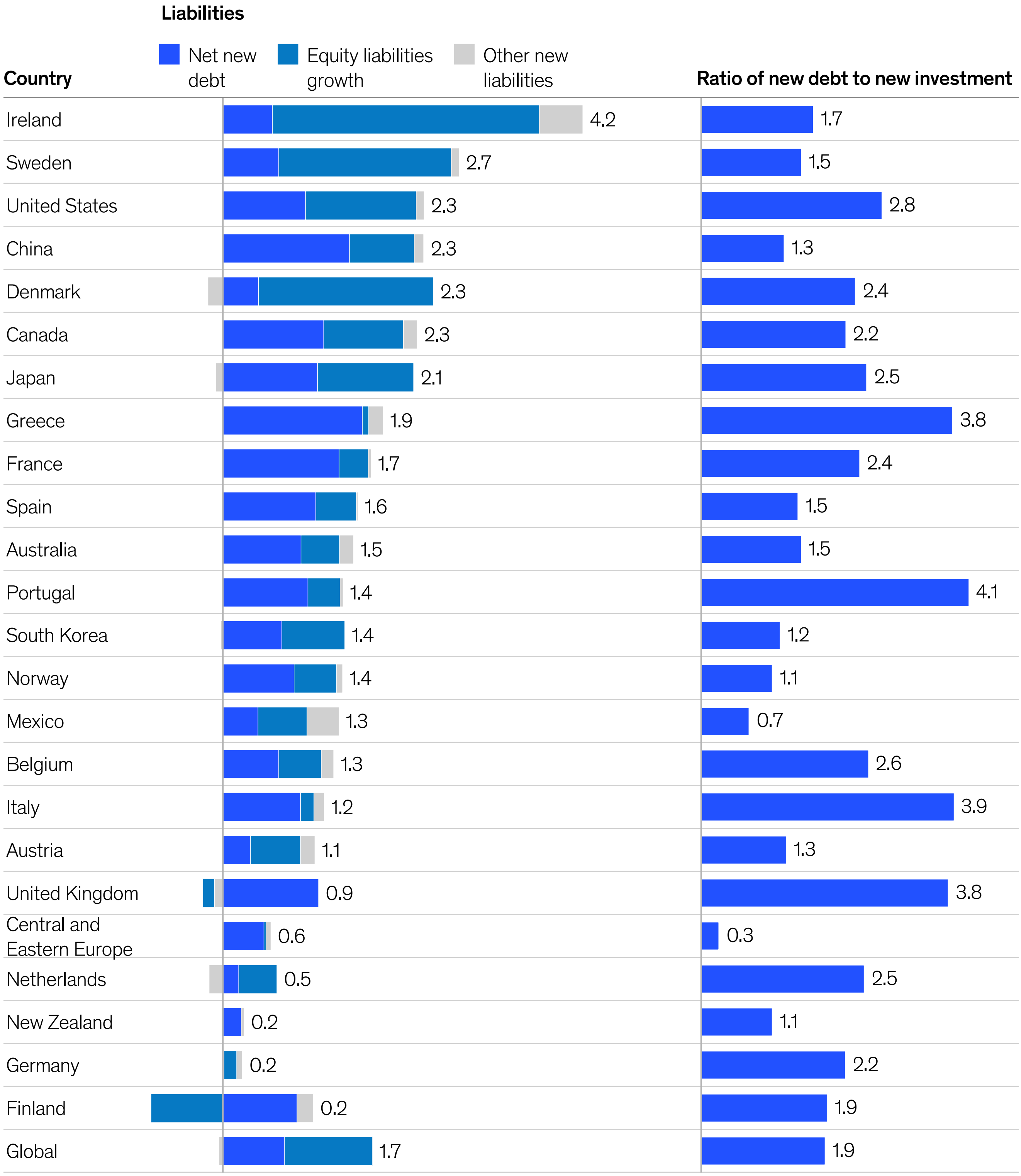
Exhibit 9

Growth in liabilities relative to GDP and net investment varies significantly among countries.

Change in multiples, 2000–21 (total economy excluding financial sector)



Note: The following countries had limited data availability in 2000 and therefore had shorter timelines: Mexico 2003–21, Ireland 2001–21; South Korea 2008–21, New Zealand 2007–20.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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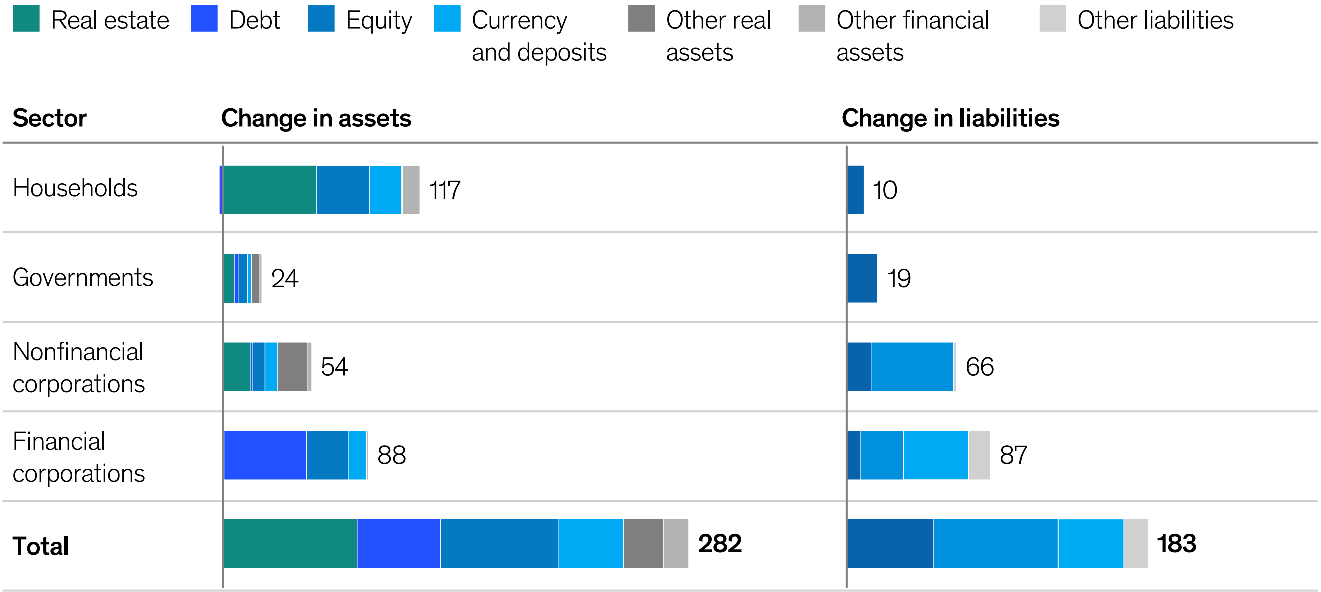
Growth in the global balance sheet accelerated during the pandemic

Growth in wealth and liabilities accelerated sharply in the intense first two years of the pandemic—between the end of 2019 and the end of 2021—as governments took large-scale action to support economic activity. Looking at real assets and net worth, the global economy added $100 trillion to global wealth "on paper" as asset prices soared (Exhibit 10). As a result, global wealth relative to GDP grew faster than in any other two-year period in the past 88 years. Meanwhile, debt and equity liabilities increased by about $50 trillion and $75 trillion, respectively, as governments and central banks stimulated economies. New debt creation accelerated to $3.40 per dollar in net investment, and $39 trillion in new currency and deposits were created.

Exhibit 10

During the pandemic, net worth growth accelerated, adding $100 trillion to global wealth 'on paper.'

Balance sheet expansion by sector, consolidated data, change in $ trillion, 2019–21



Note: Total change in sector net worth is calculated as sector change in assets minus sector change in liabilities; growth in financial corporations' cash assets is primarily due to deposit assets at central banks, which System of National Accounts standards do not consolidate against central banks' deposit liabilities.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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Asset price growth added $100 trillion to global wealth 'on paper'

During the first two years of the pandemic, in 2020 and 2021, the global balance sheet grew at 10 percent annually, compared with about 6 percent per year in the previous two decades.

Household net worth grew by about $110 trillion, despite the humanitarian catastrophe and widespread economic hardship caused by the pandemic. While this could be regarded as a positive, the distribution is highly unequal, and the sustainability of this expansion has already been put to the test in 2022.[9] Unprecedented fiscal and monetary stimulus contributed to accelerating growth in home prices, an equity market boom, and rising currency and deposit holdings—the mirror image of growing public debt and financial and central bank balance sheets. Household cash holdings grew by $19 trillion. House price indexes in major markets increased steadily during the first two years of the pandemic as mortgage rates reached new lows. The S&P 500 index rose by 16 percent in 2020 and 28 percent in 2021, amid rapid growth in valuations of digital economy firms as lockdowns shifted activities online.

Across the other sectors of the economy, governments increased debt by $19 trillion at market values in an attempt to stabilize household and corporate income and balance sheets with instruments such as furlough programs, cash transfers, lost revenue compensation, and loan guarantees. Prices of mineral reserves also increased.

[9] *The rise and rise of the global balance sheet: How productively are we using our wealth?* McKinsey Global Institute, November 2021.

Nonfinancial corporations raised $15 trillion in new debt to weather the pandemic amid favorable financing conditions. Equity valuations, which for corporations sit on the liability side of the balance sheet, rose rapidly. On the asset side, while some commercial property like office and retail suffered at the beginning of the pandemic, net asset value bounced back in some markets by the end of 2020 and continued increasing toward the end of 2021.[10] The value of inventory expanded by a total of $6.6 trillion. Companies invested in stockpiling as supply chains became less reliable—$4 trillion of this came from inventory growth among Chinese firms that included unfinished and unsold buildings.

Financial corporations added $40 trillion in currency and deposits during the two pandemic years alone. Central banks rapidly expanded their balance sheets, injecting money into economies as part of stabilization programs during the crisis. Commercial banks added to money creation by providing more loans and by crediting the recipients of those loans with newly created cash deposits in return for the new loan obligations.

Outside the financial sector, more than $3 of new debt was created for every $1 of net new investment in 2020 and 2021

The world has experienced increased financial deepening. From 2000 to 2021, net new debt grew at 1.9 times the rate of net investment, and total financial liabilities, including equity, at 3.8 times that rate—even before including the financial sector. In the first two years of the pandemic, for every dollar of net investment, liabilities grew by a staggering 7.3 times net new investment, of which $3.40 was net new debt outside the financial sector (Exhibit 11). Finance was seemingly used more for asset transactions at rising valuations than to fund new investment, although the exact links are difficult to parse.

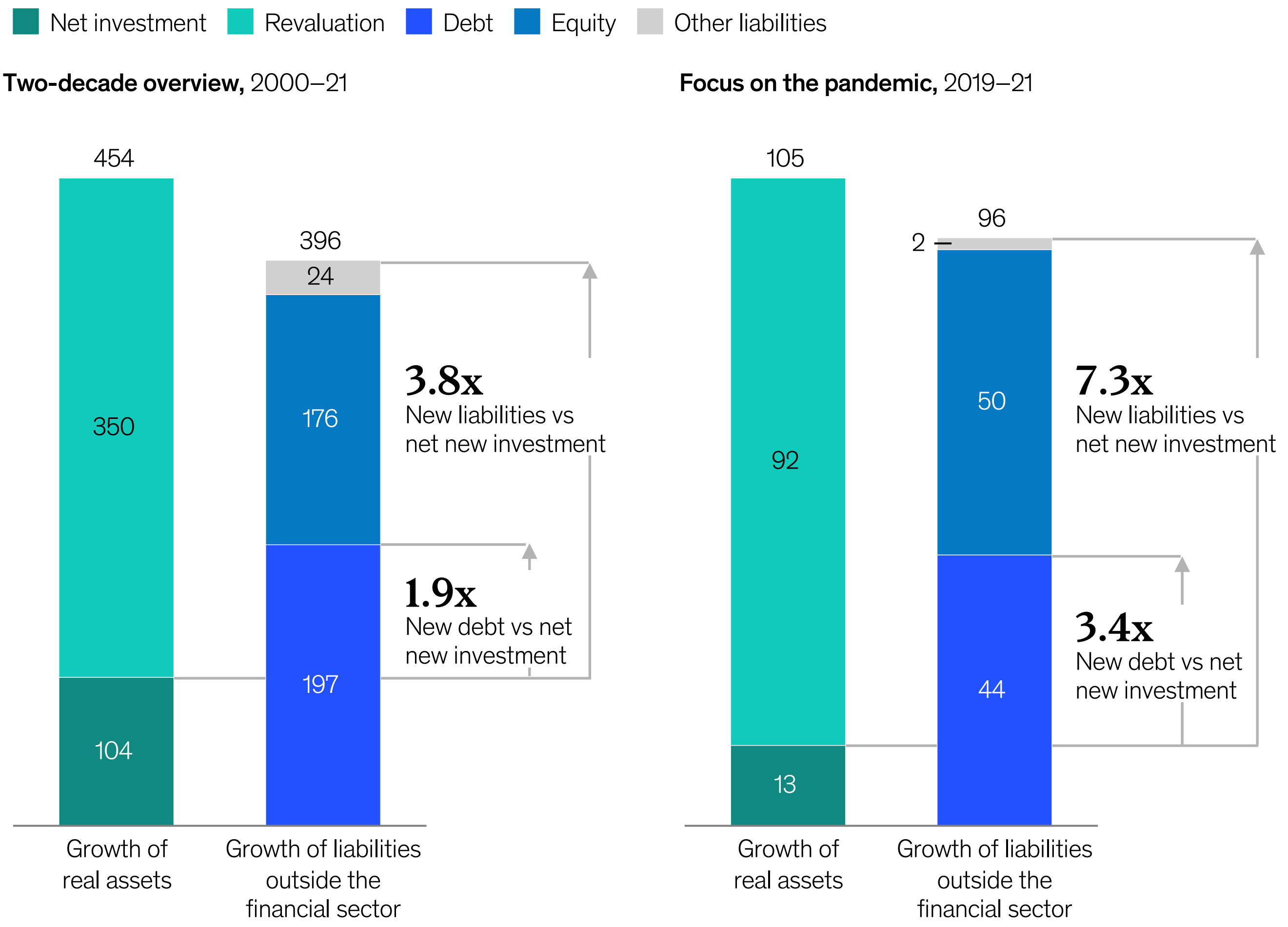
Real estate accelerated its rise relative to GDP, most notably in Australia, Austria, Canada, France, New Zealand, and Portugal.

[10] Analysis of US equity real-estate investment trusts; data from S&P NAV Monitor.

Exhibit 11

In 2020 and 2021—the first two years of the pandemic—more than $3 of new debt was created for every $1 of net investment.

Global growth and stocks of liabilities and real assets, excluding financial sector, consolidated, $ trillion



Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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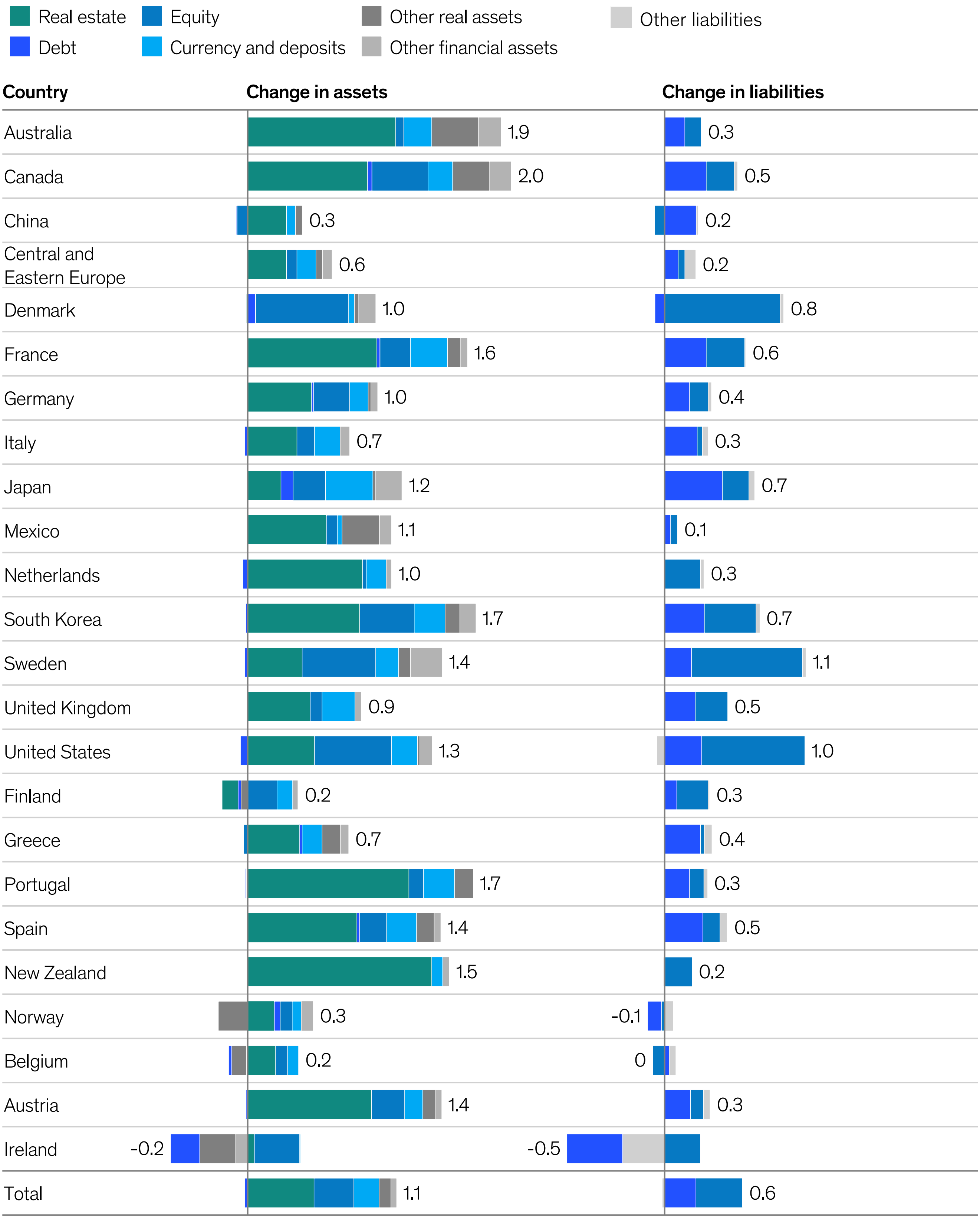
Balance sheet growth accelerated across countries

The broad pattern of accelerated balance sheet growth held true across countries (Exhibit 12). Real estate accelerated its rise relative to GDP, most notably in Australia, Austria, Canada, France, New Zealand, and Portugal. Equity assets (and corresponding liabilities) grew more than real estate in Denmark, Finland, Sweden, and the United States. Debt grew most rapidly in Canada, France, Greece, Japan, South Korea, Spain, and the United States.

Exhibit 12

Balance sheet growth accelerated across countries.

Balance sheet expansion by asset type and country, consolidated data, change in net worth/GDP; 2019–21; excludes financial assets and liabilities



Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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Is 2022 a pause or an inflection point in the rise of the global balance sheet?

Rising rates and inflation in the first three quarters of 2022 led to volatility and a pause in the multidecade rise of the global balance sheet. In the face of geopolitical and economic turbulence, notably rising inflation and interest rates and declining asset prices, over those quarters, all three interlocking global balance sheets shrank relative to GDP for the first time since the global financial crisis.

Several factors that drove sustained balance sheet expansion have turned (for now)

Significant changes in key macroeconomic indicators occurred in the first three quarters of 2022 (Exhibit 13). In the third quarter of 2022, global interest rates increased by three percentage points, which is the highest year-on-year increase in more than 40 years. Inflation also reached heights last seen in 1982, with an annual increase of 7 percent. Equities and debt also decreased sharply, as leading equity market indexes fell 30 percent in real terms, the second-greatest decrease since 1980, behind only the global financial crisis in 2008. Major bond indexes dropped 19 percent and ended the third quarter of 2022 notably lower than at any other point in the past two decades. Housing prices turned sharply, declining for the first time in ten years by one percentage point after an 8 percent increase in the previous year.

In the first three quarters of 2022, the global balance sheet declined for the first time since the global financial crisis

As the inflation and interest rate shock unfolded, investors became more wary of debt, real estate prices leveled off, and the valuation of equity and debt securities declined. By the third quarter of 2022, the global balance sheet had registered a decline of about $20 trillion in financial assets and liabilities outside the financial sector (Exhibit 14). Note that while the market value of (mostly government and corporate) debt declined by 8 percent (excluding financial corporations) as interest rates rose, at par values, debt on the global balance sheet kept expanding by 0.2 times GDP.

The balance sheet declined relative to GDP, due to decreases in equities, debt securities, and real estate (in some countries), versus a nominal growth in GDP driven by high inflation rates during 2022. The financial system and financial-sector balance sheets contracted by about 40 and 30 percentage points of GDP, respectively, during the first three quarters of 2022. Net worth fell by 10 percentage points of GDP.

As the inflation and interest rate shock unfolded, investors became more wary of debt, real estate prices leveled off, and the valuation of equity and debt securities declined.

Exhibit 13

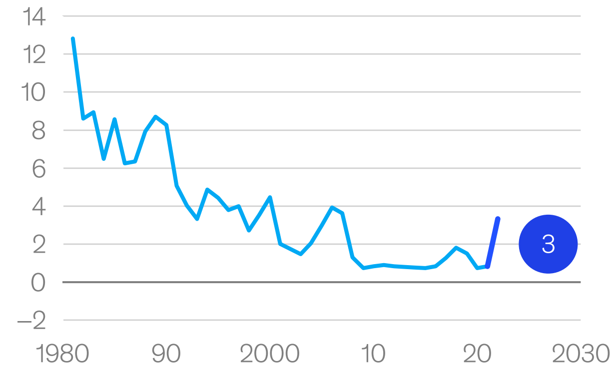
Inflection points were evident in 2022 on a range of key macroeconomic indicators.

Change in core macroeconomic indicators, 1980–Q3 2022

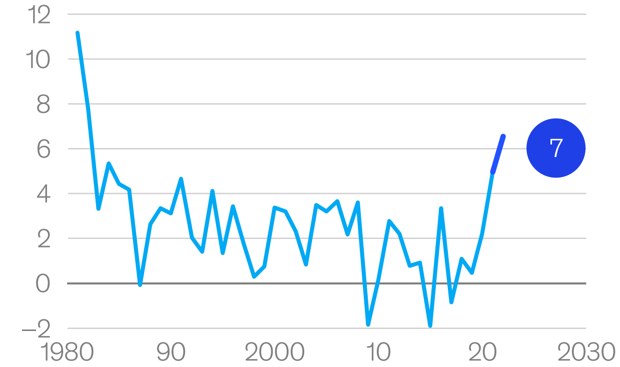
Change in 2022 relative to 2021

X Value at Q3 2022

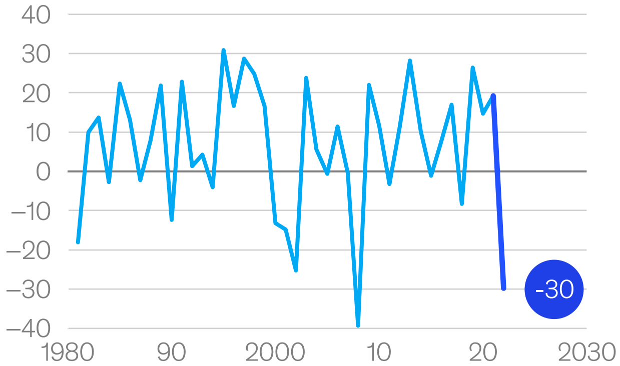
Global nominal interest rates, % average



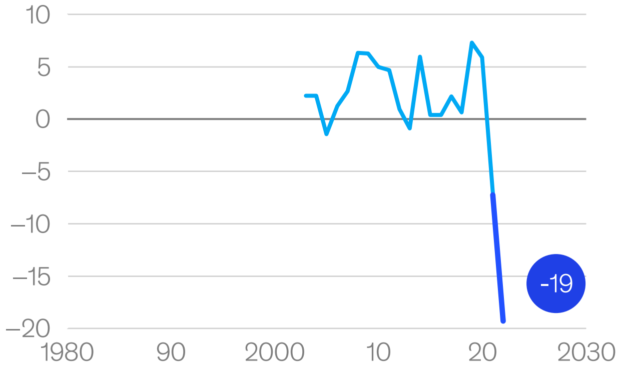
Global inflation, %, average



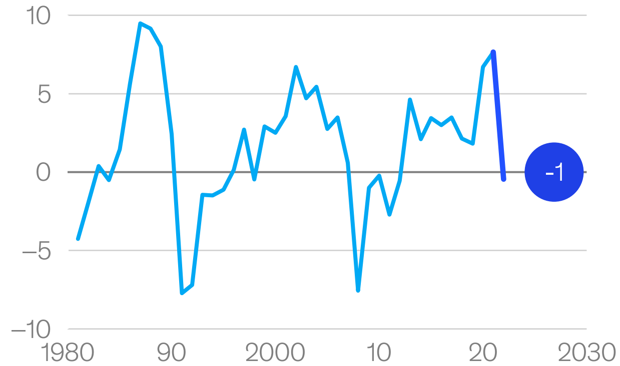
Equity,[1] YoY growth,[1] % (adjusted for inflation)



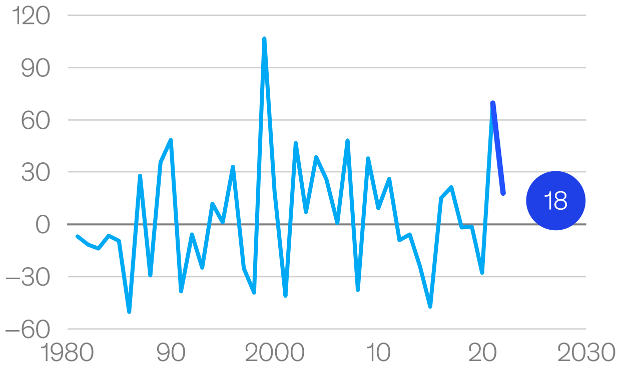
Bond prices,[2] YoY growth, %, average (adjusted for inflation)



Global real estate prices, YoY growth, %, average (adjusted by inflation)



Oil prices, YoY growth, %, average (adjusted by inflation)



[1]S&P 500 used for equity prices.
[2]Vanguard Total Bond Market Index (consisting of investment-grade US bonds) used for bond prices.
Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; Oxford Economics (OE) database; McKinsey Global Institute analysis

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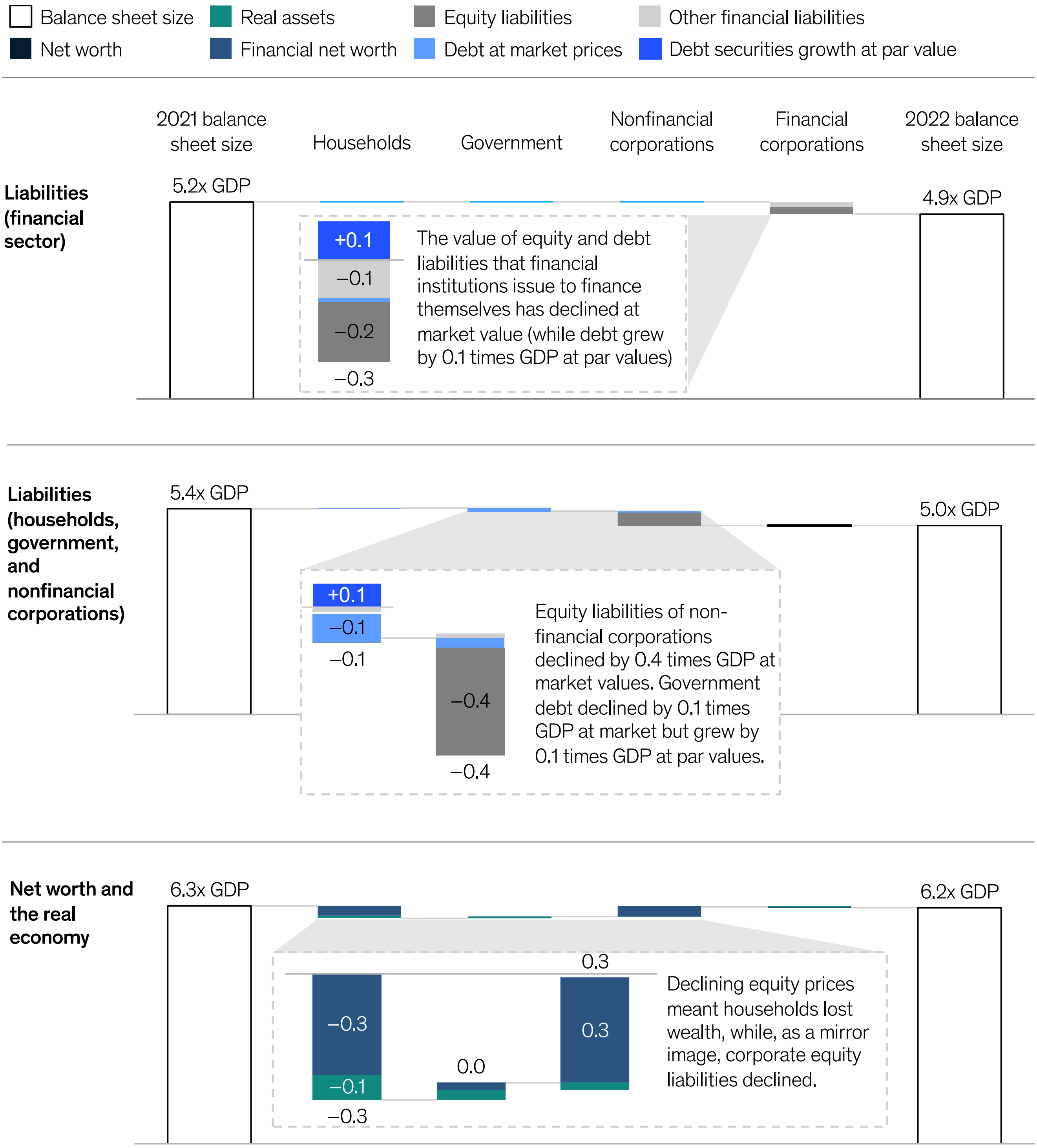
Exhibit 14

In the first three quarters of 2022, the global balance sheet declined for the first time since the global financial crisis.

Change in global balance sheet in the first three quarters of 2022, multiples of GDP



[1]Real estate was assumed to grow in line with Oxford Economics (OE) house prices index, plus net investments. [2]Change in equities linearly estimated based on the 2022E/2021 change in the OE share market prices index. [3]Change in investment fund shares is estimated similarly to equities, but with an assumption of volume growth in line with 2022E/2021 OE GDP growth estimate. Insurance pensions are estimated similarly to investment fund shares, but with an additional assumption of a 0.503 beta to equities based on global benchmarks. [4]Debt securities were assumed to grow in line with Q4 2021 to Q2 2022 trend vs GDP; for countries with missing 2022 debt securities data, average of decline trend in other countries vis-à-vis average GDP growth was applied as a proxy, except for the United States, where market value of federal debt to Q3 2022 was used for government; Vanguard Total Bond Market Index was used for US financial corporations. For China, bond securities were assumed to grow in line with China SP bond index.
Source: Oxford Economics (OE) database; MGI Global Balance Sheet database; McKinsey Global Banking Pools; Federal Reserve; McKinsey Global Institute analysis

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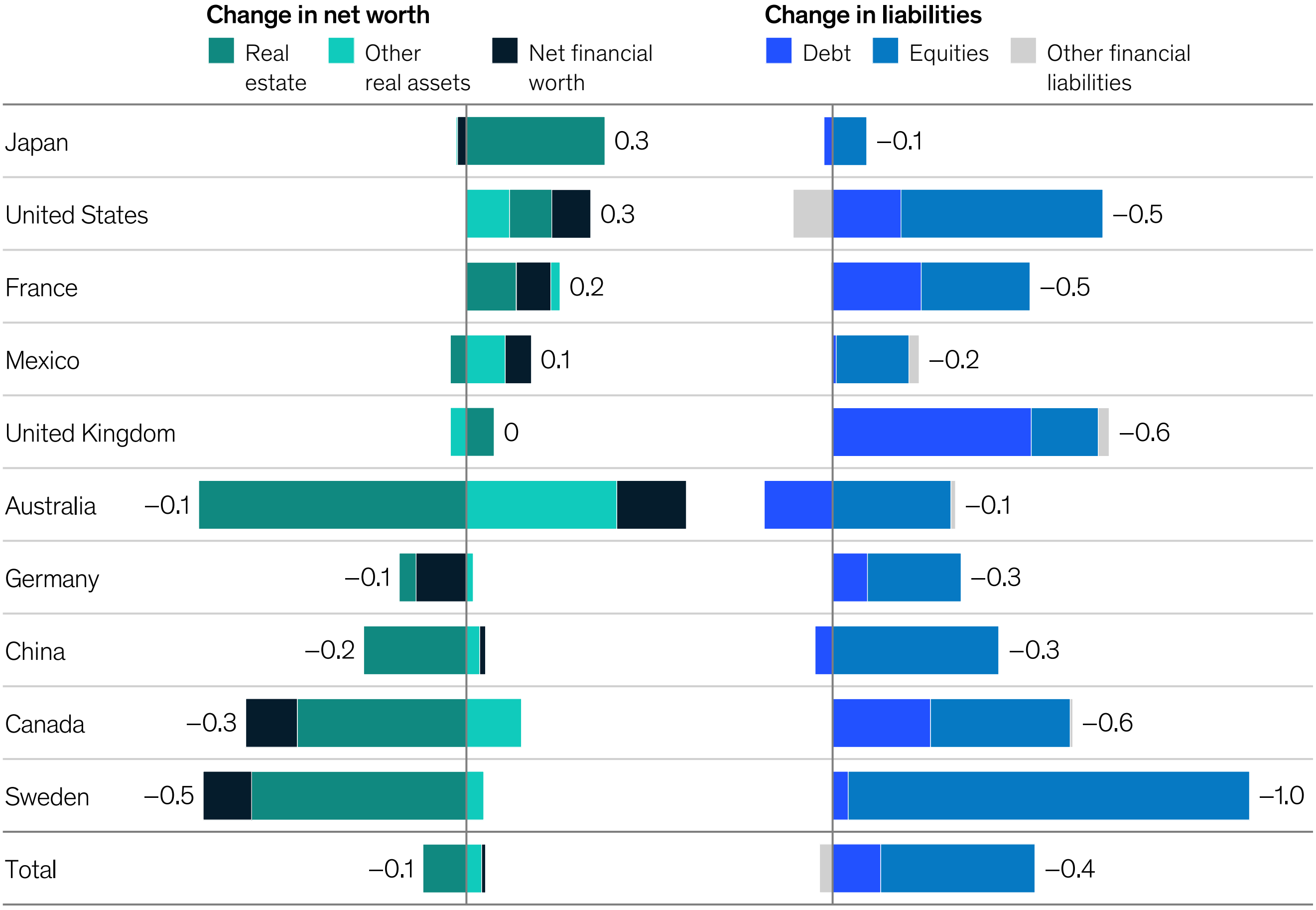
The balance sheet contracted in most countries; real assets and net worth in Australia and Sweden felt the most impact

While broad patterns in the global balance sheet were consistent in 2022, the magnitude of change differed across countries (Exhibit 15). Australia, Canada, and Sweden, where real estate markets had long been considered to be "overheated," experienced the largest declines in real estate worth relative to nominal GDP. By contrast, rising mineral prices contributed to positive change in net worth in Australia (alongside infrastructure and machinery) and Canada.

Exhibit 15

The financial balance sheet contracted relative to GDP in most of the countries in our sample.

Balance sheet expansion excluding financial sector, consolidated data, change in GDP multiple, 2021–22E



Source: OECD; Federal Reserve Board; CEIC; national statistics offices; World Bank; McKinsey Global Institute analysis

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What is next for economic health and wealth?

Scenarios, which will be fleshed out and fully analyzed in a new paper in 2023, suggest four different directions for the relation of the balance sheet to GDP and thus economic health and wealth in the period to 2030 (Exhibit 16).

Exhibit 16

Will the balance sheet resume its rise relative to GDP or start to unwind?

Below last 20 years' average ← In line → Above

Scenario	Trends: Real GDP growth	Interest rates	Inflation	What you need to believe	Impact on the balance sheet	Historical precedent
The rise resumes				Secular stagnation continues due to aging and inequality with low inflation and negative real rates	Resumption in debt and asset prices—and the global balance sheet—rising faster than GDP	Advanced economies 2012–20
Productivity acceleration				Technology and investment accelerate productivity growth and entail positive real interest rates	Debt and asset prices grow—as does the global balance sheet—but slower than accelerating GDP	US and Europe in the late 1990s and early 2000s
Inflationary way out				Persistent inflationary pressure from reconfiguration of energy systems, global supply chains, household balance sheets, and company pricing power while macro risks and political pressure limit central bank intervention	Debt and asset prices and the global balance sheet grow, but slower than inflation	Advanced economies in the 1970s
Asset price correction and deleveraging				Persistent inflationary pressure leads to strong monetary and fiscal tightening and long-run positive real interest rates	Asset prices correct further; deleveraging and debt write-offs are features along with risks to macroeconomic stability	Japan during the 1990s, advanced economies in 2009–14, Greece in the 2010s

Source: McKinsey Global Institute analysis

The following pathways are possible with potential for different economies to take differing paths:

1. **The rise resumes.** In this scenario, inflation proves to be transitory and global saving and aging effects return real interest rates, inflation, and real GDP growth to very low levels; secular stagnation continues. In this scenario, a savings glut is stymied by a lack of attractive investment opportunities and is therefore channeled into existing assets, boosting the values of equity and real estate. Low interest rates encourage further growth in debt. Wealth keeps growing "on paper," and so do leverage and balance sheet risk, as we have experienced in recent decades.

2. **Productivity acceleration.** In this scenario, the world economy experiences a persistent acceleration in productivity growth and a reallocation of funds to productive investment. In this scenario, the benefits of rapid digitization and technological advances would, at last, show in GDP growth; energy system reconfiguration would not only lead to greener and more secure but also, eventually, cheaper energy; and policy changes would help unleash investment in areas like future mobility and affordable housing. Macro-prudential policy helps contain further debt and asset price growth, and global GDP growth outpaces balance sheet growth. Such productivity acceleration was visible in the United States in the late 1990s, although the balance sheet was much smaller then.

3. **Inflationary way out.** In this scenario, inflationary pressures become entrenched, as high energy prices continue to cascade through the economy; labor market shortages persist, not least due to demographic shifts; expectations become unanchored; and the velocity of money grows. Wages grow faster than productivity, and corporate pricing power allows companies to pass cost increases on to consumers. Central banks would intervene with higher rates, but not enough to get inflation back below 2 percent, as they face financial stability risks, distributional issues, and weak growth. This leads to a decline in the ratio of the global balance sheet to GDP as high inflation leads to fast nominal GDP growth while monetary tightening limits asset price growth and debt formation. This scenario would have some parallels with the 1970s stagflation era.

4. **Asset price correction and deleveraging.** In this scenario, central banks battle high inflation with sharply higher interest rates. Highly leveraged sectors—starting with the public sector—tighten belts and attempt to reduce debt burdens, muting growth. Asset prices contract given high interest rates, rising risk premiums and a dampened growth outlook. Where debt service costs become too large and assets are underwater (that is, their value is lower than the debt held against them), defaults and write-offs or even a financial crisis potentially unfold. This scenario could unfold somewhat in combination with the inflationary way out. It would be somewhat similar to what happened during the tightening cycle in the United States in the 1980s (although the balance sheet was much smaller then) or after the global financial crisis of 2008.

Significant variation in scenarios and pathways should be expected for different economic regions that have dissimilar starting points, trajectories, and macroeconomic parameters. For instance, the United States has particularly large balance sheet positions in equity and public debt, and a macroeconomic environment of high inflation and rapid central bank tightening. The eurozone has relatively high public debt and real estate values, coupled with high inflation and, so far, less central bank tightening than in the United States. China has a large balance sheet in real estate and property debt.

The different scenarios that may unfold over the next ten years will have different implications for households, governments, and corporations. Will net worth continue to grow faster than GDP, continuing the expansion in the balance sheet observed over the past 20 years, or will productivity catch-up bridge the gap and power growth in the real economy? Many questions remain to be resolved.

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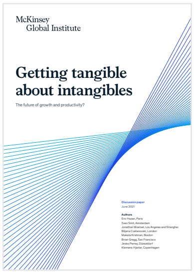

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