GLOBAL PUBLIC INVESTOR 2023

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Under pressure

Reserve managers battle losses, stagflation and geopolitics

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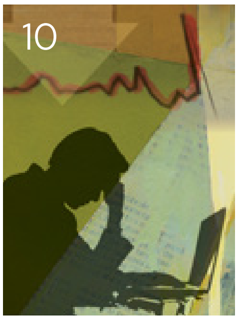

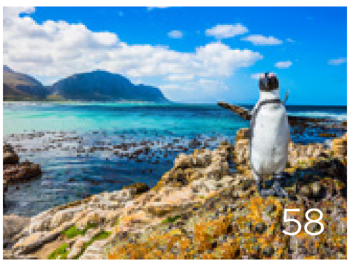

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ABOUT OMFIF

With a presence in London, Washington and New York, OMFIF is an independent forum for central banking, economic policy and public investment – a neutral platform for best practice in worldwide public-private sector exchanges.

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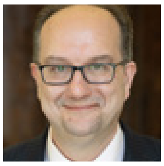
Ten tough years

The tasks of the world's reserve managers are not getting any easier



Clive Horwood, Managing Editor and Deputy Chief Executive Officer, OMFIF

IN 2014, OMFIF launched the first edition of *Global Public Investor*. It was a landmark moment for our company, but also for the world of official institutions at the heart of OMFIF's network.

The aim of the GPI was to recognise the unique challenges that central banks, sovereign funds and pension funds faced as public sector asset owners and guardians of national wealth. But it also recognised their importance and influence in global financial markets as some of the world's biggest funds and the need to consider them as generators of returns for their state stakeholders.

As OMFIF's chairman David Marsh wrote in that inaugural edition: 'Global public investors play a seminal role in global savings and investment. A central question is how GPIs can help channel large international pools of long-term capital into investments offering appropriate financial returns and an answer to societal challenges. The power of these public sector investors is incontestable. But so too are the risks that these major institutions face.'

2023 marks the 10th edition of GPI and those opportunities, challenges and risks from 2014 remain largely the same. Foreign exchange assets held by reserve managers in 2014 were around $12tn. In our latest analysis, they stand at $15tn.

That represents a compound annual growth rate of just 2.3%. This reflects a number of factors over the past decade. Primary among them was the challenge these naturally cautious investors faced in generating returns in a sustained period of low or negative interest rates and quantitative easing. It also reflects losses sustained in mark-to-market fixed income portfolios over the past year, as inflation and interest rates rose: our 2023 analysis shows total foreign exchange reserves falling by 5%, equating to losses of almost $725bn, since late 2021. And it reflects the rise of sovereign funds, especially in the fast-growing economies of Asia and the Middle East, with excess assets being transferred into institutions that can usually invest more broadly than their counterparts in central banks.

The GPI report has evolved considerably in recent years. The differing approaches and challenges that central banks face compared to sovereign and pension funds led us to split the GPI in 2022. This edition looks specifically at reserve managers while *Global Public Pensions*, which will be published later in the year, focuses on public funds.

Though we maintain the analysis of reserve managers' international reserves, the core of the GPI today is the survey of central banks on their asset allocation strategies and operating challenges. This year a record number of central banks took part in the survey.

On the following pages, and thanks to the trust and support of those central banks, this report offers a unique window on the approach that reserve managers are taking to navigate volatile and difficult markets. It reveals their concerns about how stagflation and geopolitical risks are impacting their investment strategies. It details their views on the evolution on the currency composition of their portfolios with interesting implications for the role of the euro and the renminbi as reserve assets. It highlights how they recognise the need to improve their use of data and technology, and build their investments in sustainable assets, as well as the factors holding them back.

Our thanks go to all the central banks that have helped us to put this report together, to our partners and to you for reading this important piece of work. •

'This report offers a unique window on the approach that reserve managers are taking to navigate volatile and difficult markets.'

Under pressure

Reserve managers battle losses, stagflation and geopolitics

OMFIF's Global Public Investor 2023 report goes further than ever before to unpack reserve managers' economic views, investment plans and internal operations. This edition features insights from a survey of 75 central banks with international reserves of close to $5tn.

In the 10 years of the publication, the role of reserve managers has never been so challenging. They are navigating difficult economic and market conditions amid high inflation, weakening global growth and financial stability concerns. Geopolitical considerations are becoming increasingly important too. Western sanctions on Russian foreign assets may call into question central banks' control over their international reserves. Tensions between the US and China are adding to the uncertainty over the future of the global monetary system.

In the meantime, many reserve managers are facing pressure to incorporate sustainability into their investment practices. And as financial markets become more complex, it is increasingly important to improve their collection and management of data.

This report explores the pressing considerations and intentions of reserve managers through these challenging times. Our analysis is split across six chapters.

Macroeconomic environment highlights that reserve managers have little confidence that inflation will come under control while fears over a global economic slowdown are mounting. Meanwhile, geopolitical tensions are the biggest worry in the medium to long term.

Asset allocation uncovers that reserve managers are becoming more risk averse after the vast majority experienced portfolio losses last year. Traditional reserve assets – government bonds and gold – are most in demand while there is little appetite to invest in riskier or alternative assets.

Currency composition reveals that central banks expect the dollar to continue dominating global reserves in the next decade, though its influence will wane slightly. The renminbi and euro stand to benefit from central banks' diversification strategies over the medium term.

ESG shows that sustainability is becoming more important to reserve managers, though integration is relatively limited in emerging markets. Data hurdles remain the biggest obstacle to further ESG adoption.

Operating models and data unveils that reserve managers are struggling to acquire the right talent and many are using external managers to improve their capabilities. Improving internal data capacity is also a key focus.

Regional spotlights and databank highlights that global reserves have dropped by 3% in the past year, with broad-based falls across regions. •

Key numbers

75
survey respondents with $4.9tn in international reserves

85%
consider inflation as one of the top three economic factors affecting reserve management in the next 12-24 months

38%
expect a global economic recession in the next 12 months

64%
anticipate it will take over a year to recover their portfolio losses from 2022

58%
consider retention and training a key operating challenge

13%
share of reserves managed externally

35%
expect to increase their allocation to conventional government bonds in the next two years

63%
invest in gold for purposes of diversification and 35% to protect against geopolitical risk

13%
will increase their allocation to renminbi in the next two years, and 39% over the next 10 years

54%
On average, respondents expect the dollar's share of global reserves will fall to 54% in the next decade, from just below 60% now

21%
anticipate increasing their allocation to the euro in the near term

42%
plan to increase holdings of green bonds in the next 12-24 months

72%
cite insufficient data as the key barrier to further ESG adoption

Key quotes from survey respondents

'Given the challenges central banks are facing with the trade-off between inflation, growth and potential crises, it will take time for inflation to fall within the acceptable target range.'

'As the Fed cuts rates in 2024, we expect mark-to-market losses on portfolios which have suffered from duration risk to start subsiding.'

'A potential US recession or at least slowdown over the 12-24 months period will require being underweight in equities.'

'The recent banking issues that had been unfolding would lead to a reposition of the portfolio towards less risky assets.'

'We consider geopolitical tensions and climate change as the two most important non-financial factors of the decade which potentially could have an enormous negative impact on financial markets.'

'With the reversal of the monetary policy of the European Central Bank and positive returns in the euro, many central banks are increasing their share of reserves to the euro.'

'We think that, although the US dollar will remain as the main reserve currency, its importance is going to diminish gradually with the rise of alternative reserve currencies such as renminbi.'

'De-dollarisation is already visible, but the process takes time.'

'We believe that the renminbi's role as a reserve currency will increase over the next 10 years as China continues liberalising its capital account.'

'Activities targeted at sustainable development lie within governments' responsibilities and go beyond the standard mandate of the central bank.'

'Unified definitions, taxonomy and reporting standards would make the sustainable market more transparent.'

'The operational challenges of reserve management are related to the need for capacity building and access to effective analytical tools.'

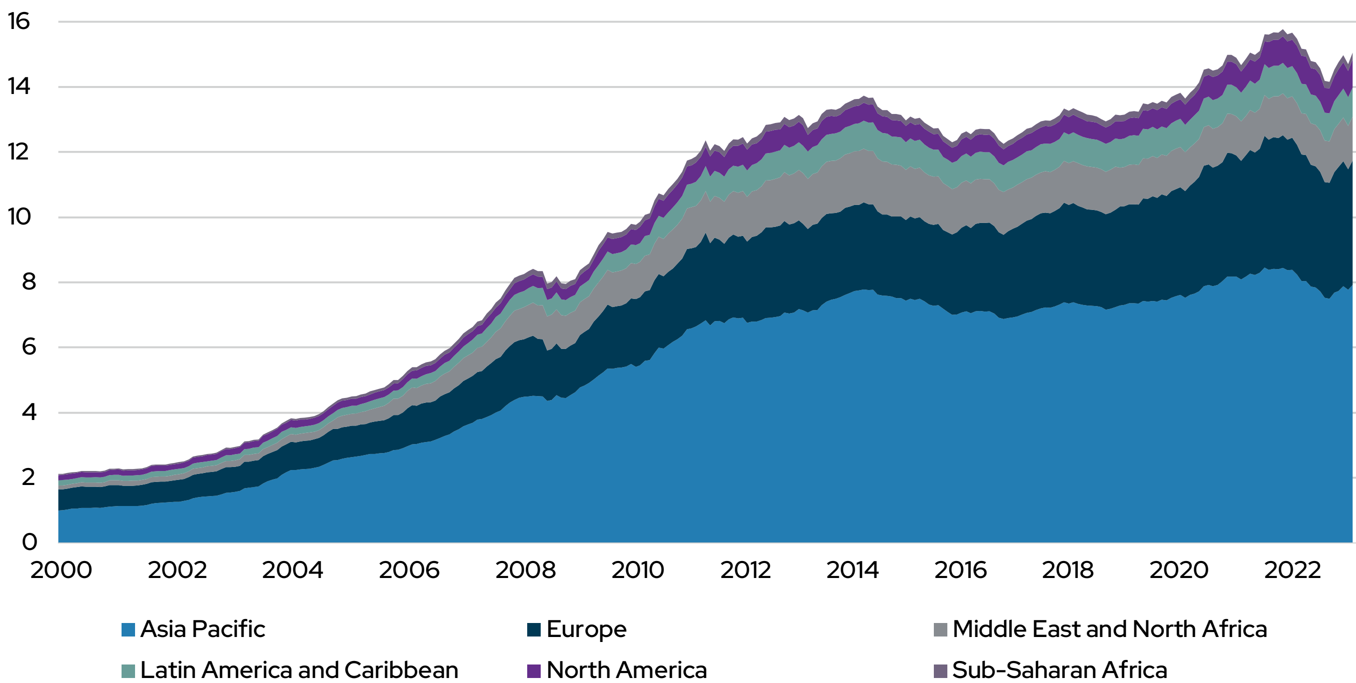
1. Losses mean less ability to intervene

THE LATEST data show total international reserves stand at $15.0tn, down from their peak of $15.8tn in late 2021. This is mainly due to valuation effects and, in some cases, foreign exchange intervention. International reserves fell across almost all regions last year, the main exception being the Middle East and North Africa which benefitted from the windfall of higher commodity prices.

Difficult macroeconomic and market conditions have left 10% of central bank respondents with insufficient reserves, all of them in Asia Pacific and sub-Saharan Africa. Reserve managers are now unwilling, or unable, to intervene. A significant portion (39%) would deploy less than 5% of reserves in the face of further market volatility. The emphasis appears to be on rebuilding rather than deploying reserves.

International reserves dip across most regions

Total international reserve assets, $tn



Source: *International Monetary Fund, World Gold Council, Refinitiv, OMFIF analysis*

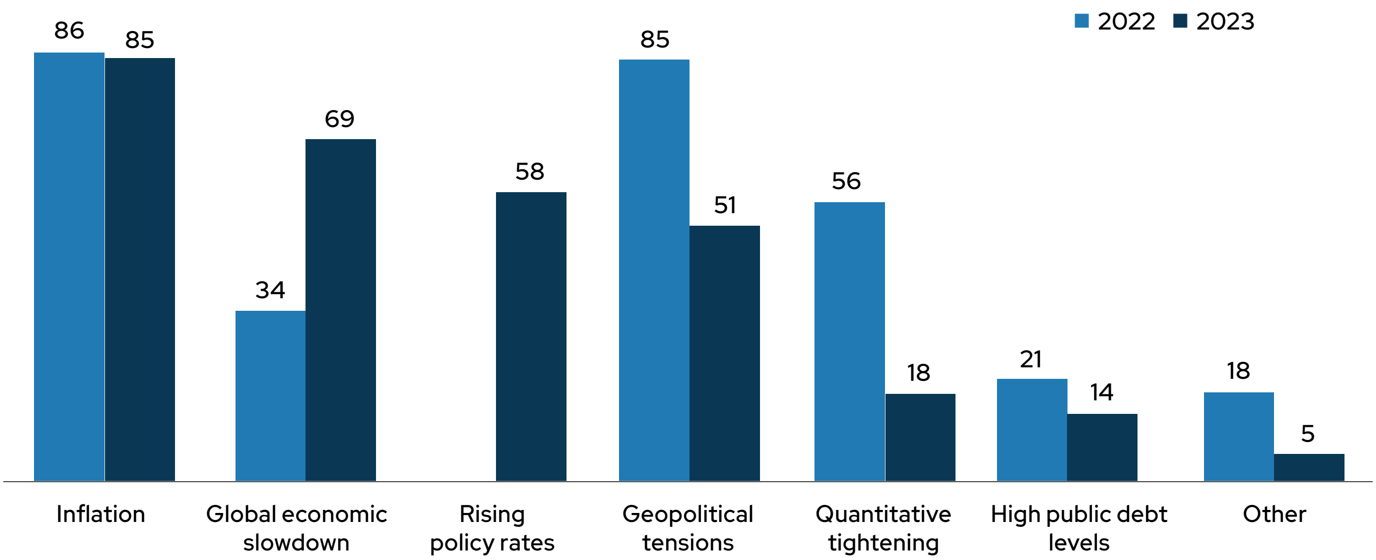
2. Stagflation risk overtakes inflation concerns

RESERVE managers have little confidence that their colleagues on monetary policy committees will get inflation under control. Inflation is one of the three biggest near-term economic concerns for 85% of respondents – broadly unchanged from a year ago. And not a single respondent expects inflation to fall to target in major economies in the next 12-24 months.

It's not simply inflation but stagflation that's the key concern this year. Almost 70% count a global economic slowdown among their top three concerns – over twice the share from 2022. Those concerns are more acute among emerging market respondents. Moreover, 38% expect a global economic recession in the next 12 months. Accordingly, reserve managers are pessimistic about the propescts for a soft landing.

Stagflation concerns growing

What are the three most important economic challenges affecting your investment approach over the next 12-24 months? Share of respondents, %



Source: *OMFIF GPI survey 2022-23*
**Note: Rising policy rates not included as an option in 2022.*

3. Geopolitics becomes a longer-term concern

WHEN OMFIF ran the GPI survey last year, shortly after Russia's invasion of Ukraine, 85% of respondents listed geopolitics among their top three concerns affecting reserve management in the next 12-24 months. That share has dropped to 51% this year. But geopolitics is the biggest concern over the medium to long term.

Geopolitical tensions were considered the number one factor affecting reserve management in the next five to 10 years and 83% listed it in their top three concerns. Several survey participants mentioned US-China tensions and the possible fragmentation of trade and capital flows as sources of concern. These will probably have a major bearing on their dollar and renminbi holdings in the years to come.

Geopolitics the primary longer-term concern

What are the most important economic factors affecting your investment approach over the five to 10 years? Share of respondents, %

	MOST IMPORTANT	SECOND-MOST IMPORTANT	THIRD-MOST IMPORTANT
Geopolitical tensions	36	30	17
Inflation	28	30	14
Climate change	10	12	30
Low equilibrium interest rates	20	13	9
Technological change	3	10	19
Demographic trends	-	4	9
Other	3	-	1

Source: *OMFIF GPI survey 2023*

4. Long road to recover investment losses

IN OUR sample, 80% of reserve managers experienced portfolio losses in 2022. And they don't expect them to be recovered quickly. Almost 40% expect it will take one to two years to recoup the losses from 2022, while nearly a quarter think it will take two to five years.

This pessimism is linked to the expectation of challenging economic conditions. It is also a reflection of reserve managers' more cautious investment approach. Capital preservation is the primary investment objective for 69% of respondents, up from 61% in 2022. And only 14% are actively looking to take on more risk in the coming months. Most reserve managers are looking to minimise further losses rather than bolster returns.

No quick recovery from 2022 investment losses

How long do you anticipate that it will take to recover any portfolio losses from 2022?
Share of respondents, %

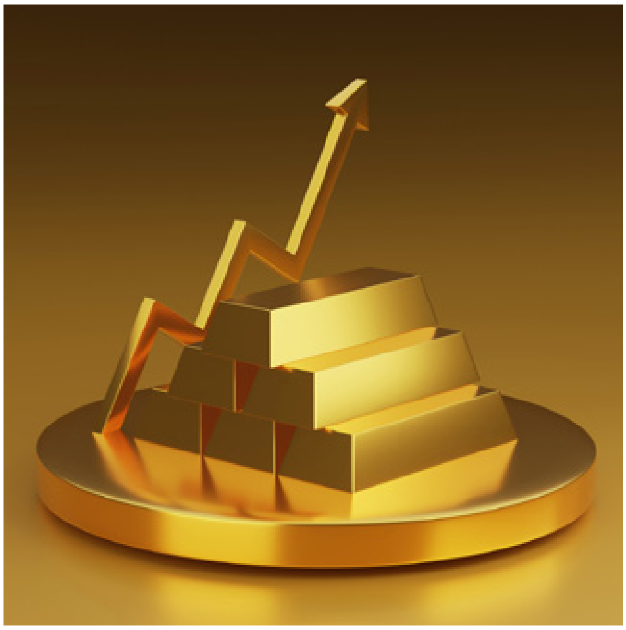
0-12 months	17%
1-2 years	39%
2-5 years	24%
5+ years	0%
No portfolio losses in 2022	20%

Source: *OMFIF GPI survey 2023*

5. Bonds and gold benefit from risk-off approach

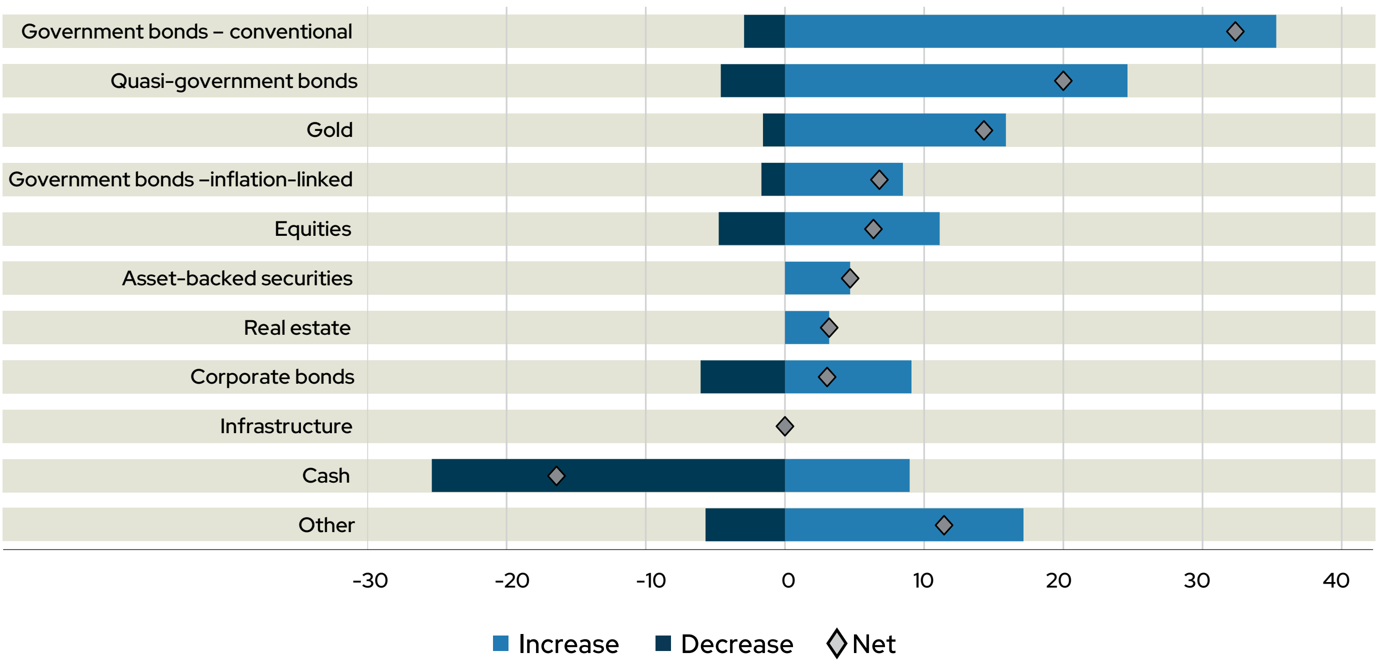
TRADITIONAL reserve assets are seeing renewed demand. A net 32% of respondents plan to increase their allocation to conventional government bonds and 20% to quasi-government bonds in the next two years. Higher yields seem to be drawing reserve managers into fixed income. It's also a reflection of an intended flight to safer assets, consistent with the finding that gold is the asset with the third-highest net demand.

Moreover, appetite for riskier assets is waning. In net terms, less than 7% of respondents now expect to add to equity and corporate bond allocations in the coming years, compared to 20% to 25% of respondents in 2021 and over 10% in 2022. There is also little demand for alternative assets.



Traditional reserve assets most in demand

Over the next 12-24 months, do you expect to increase, reduce or maintain your allocation to the following asset classes? Share of respondents, %



***Source:** OMFIF GPI survey 2023*

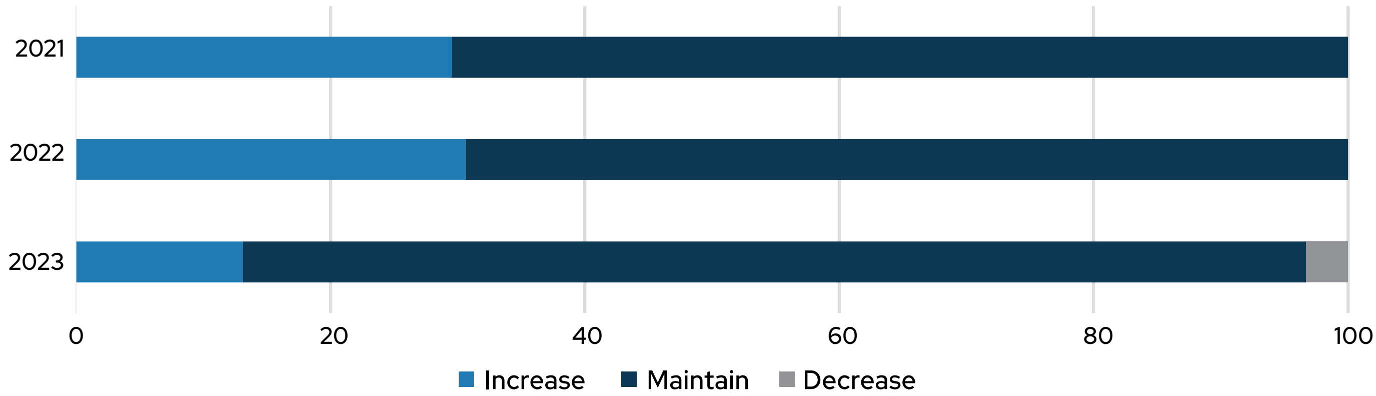
6. Renminbi rise will evolve gradually

IN THE NEAR term, most reserve managers plan to take a cautious approach to China. The share of respondents looking to increase renminbi holdings over the next two years more than halved to 13%, from over 30% in 2021 and 2022. The majority cited market transparency and geopolitics as the main barriers to investment.

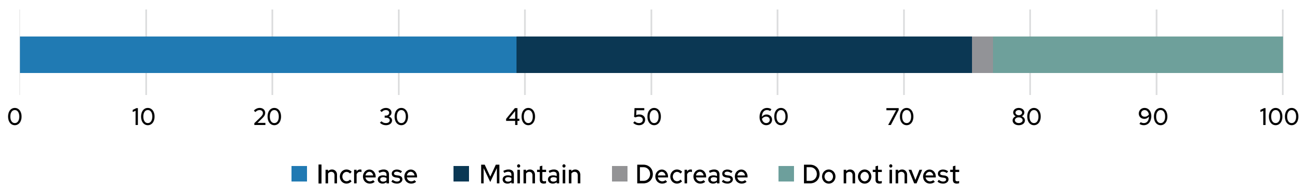
But there is serious demand for the currency further down the road. Close to 40% of central banks plan to increase their holdings of renminbi over the next 10 years – higher demand than for any other currency. Respondents stated diversification and China's growing role in the global economy as the main motivation to invest in the renminbi. The rise of the renminbi in reserves is probable, but it will be gradual.

Short-term caution, long-term rise in renminbi

Over the next **12-24 months**, are you planning to increase, reduce or maintain your exposure to the renminbi? Share of respondents, %



Over the next **10 years**, are you planning to increase, reduce, or maintain your exposure to the renminbi? %



Source: *OMFIF GPI survey 2021-23*

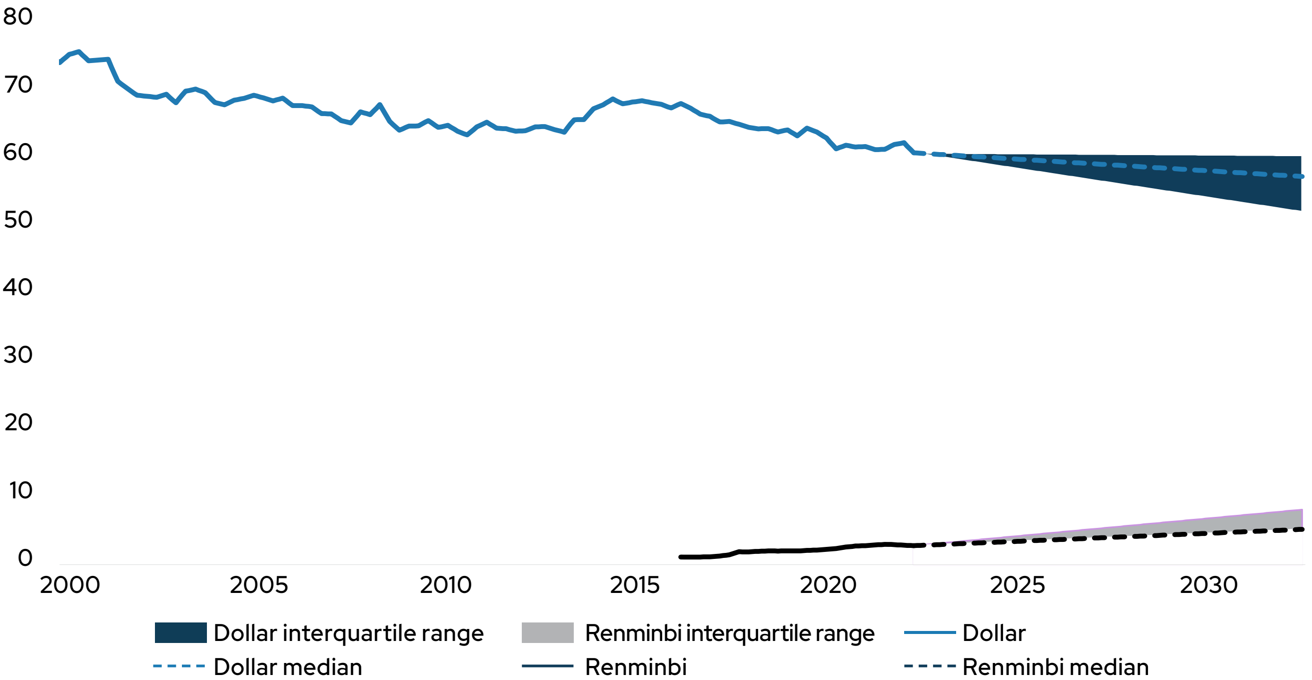
7. Dollar will stay dominant but influence to wane

A NET 6% of respondents expect to reduce their dollar holdings over the next 10 years. But this shift will be in line with the slow, decades-long trend of de-dollarisation. On average, respondents anticipate a decrease in the dollar's share of total reserves to 54% in the next decade, from just under 60% now.

The renminbi will benefit, but will not be the only beneficiary. On average, respondents expect it will reach 6% of global reserves in 10 years' time, from just under 3% now. Overall, central banks overwhelmingly predict the dollar to remain dominant and that the renminbi is unlikely to gain significant traction as a reserve asset anytime soon.

Slow and steady de-dollarisation and the rise of the renminbi

Historical and predicted shares of global reserves, %



Source: *OMFIF GPI 2023 survey, International Monetary Fund*
Note: Figures for renminbi first available in 2016. Interquartile range based on survey respondents' estimate of share of global reserves in 2033.

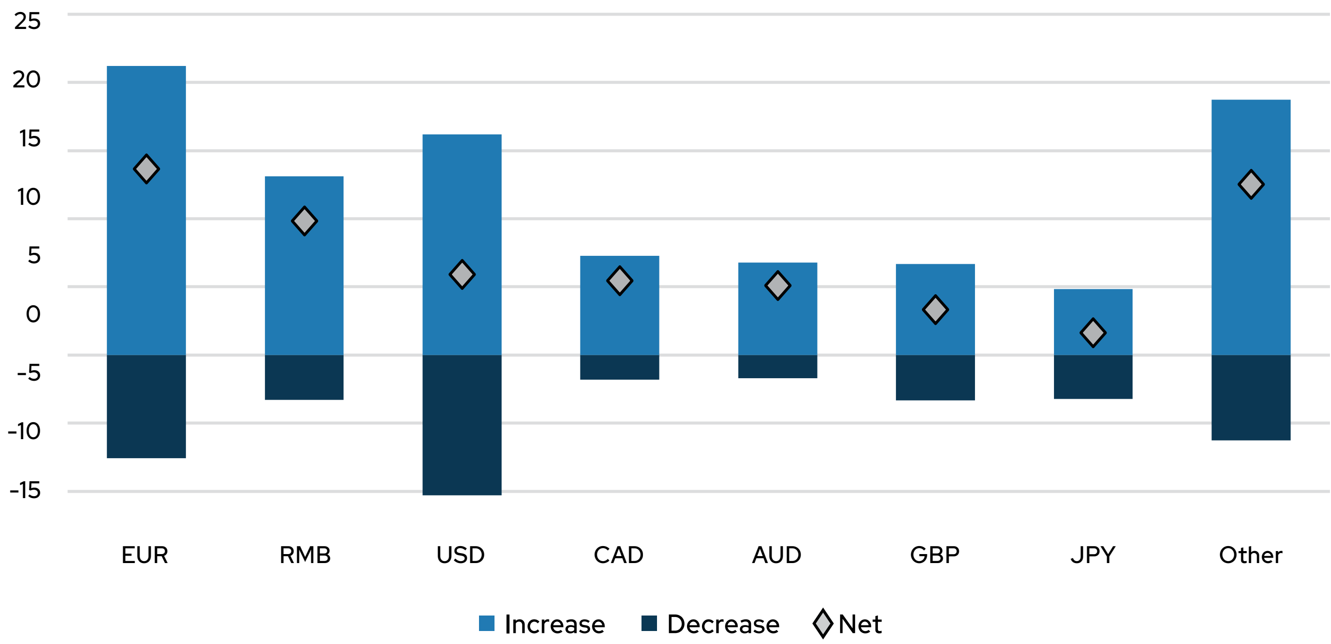
8. Euro is likely to benefit from diversification

THE EURO is gaining interest among reserve managers. A net 14% of central banks are planning to increase their euro holdings over the next two years, compared to a net zero saying they would do so in 2021 and 2022. No other currency has higher net demand in the near term.

It seems that rising interest rates in Europe are making fixed income assets there more attractive. Moreover, a net 9% of central banks expect to increase their euro holdings over the next 10 years, suggesting the currency may play a key role in diversification strategies away from the dollar in the medium to long run.

Euro most in demand over the next two years

Over the next 12-24 months, are you planning to increase, reduce or maintain your exposure to the following currencies? Share of respondents, %



Source: *OMFIF GPI survey 2023*

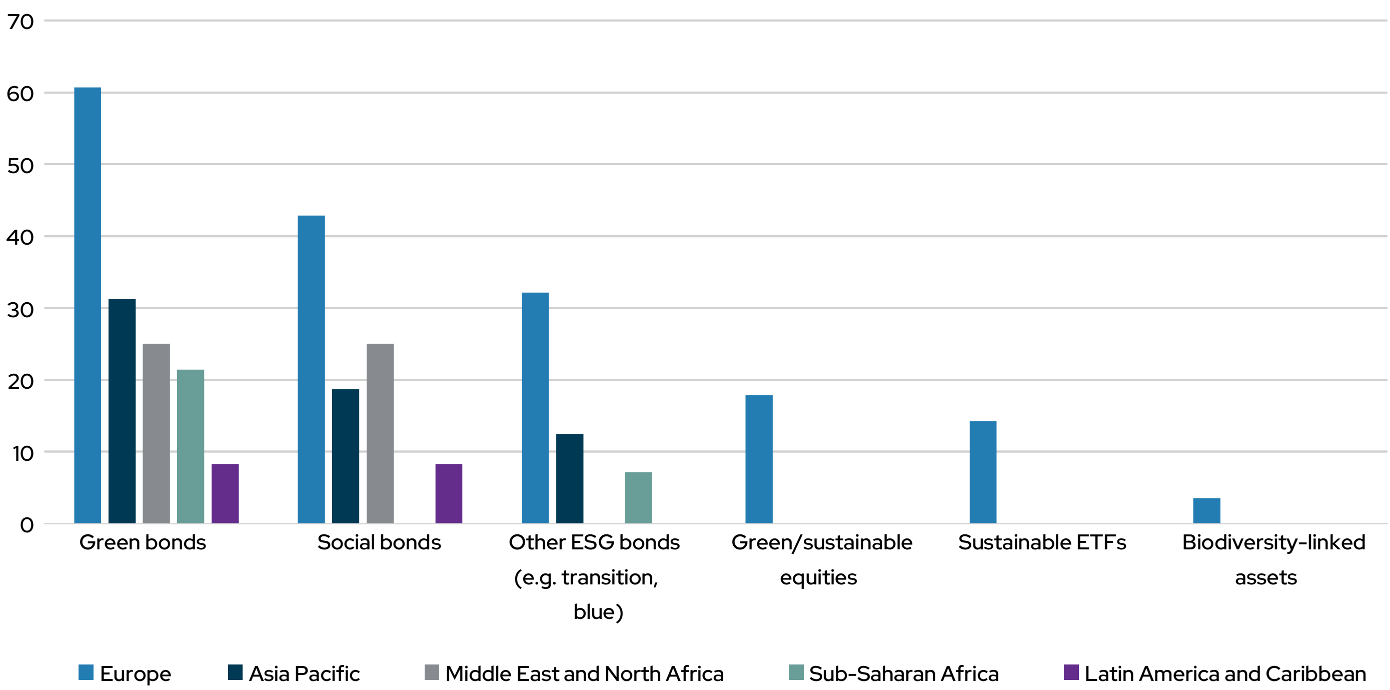
9. Europe still leading on ESG investing

GREEN BONDS are the most held sustainable asset class – primarily by reserve managers in advanced economies – and this trend is set to continue. Currently 59% of respondents hold green bonds and, in the next 12-24 months, over 40% plan to increase their allocation compared to less than 30% for other sustainable assets.

Future demand for green bonds is present across all major regions. That includes the Middle East and North Africa where no respondent currently invests in any sustainable asset class. The strongest appetite is among European central banks and 61% stated they will add to green bond holdings. European respondents also show relatively high demand for other sustainable assets such as social bonds and other ESG bonds.

Europe shows strongest demand for sustainable assets

Share of respondents who expect to increase allocation to sustainable asset classes by region, %.



Source: *OMFIF GPI survey 2023*

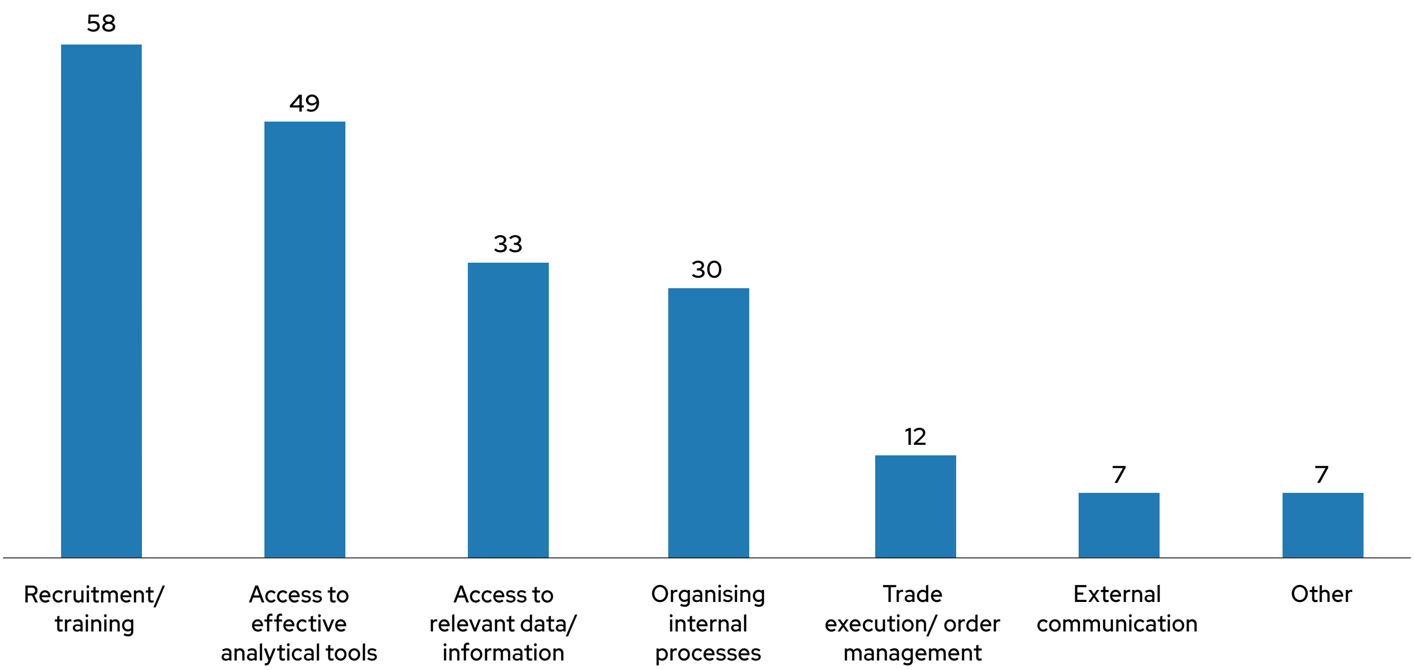
10. Retention and training a core concern

RESERVE managers are struggling to find the right people with the necessary skills to perform an increasingly onerous job. The most commonly reported operational challenge is recruitment and training, selected by 58% of survey respondents. Accessing effective analytical tools and access to relevant data or information are the next biggest operating concerns.

Many central banks are turning to external managers to address gaps in their internal capacity. Three-quarters (74%) of respondents reported using external managers, with an average of 13% of reserves being managed externally. This share has remained consistent over the past several years. Over two-thirds (68%) reported using external managers for knowledge transfer and 50% use them to access complex asset classes – which increasingly entails sustainable assets.

People and technology top list of operating challenges

What are your main operating challenges? Share of respondents, %



Source: *OMFIF GPI survey 2023*

Stagflation fears loom large

With persistently high inflation, heightened risk of recession and prolonged geopolitical tensions, central bank reserve managers face another challenging year

Key findings

1. Reserve managers have little confidence that inflation will come under control. Half of survey respondents listed it as their primary concern in the next two years and none expects inflation to fall within 2% targets in major economies in this time.

2. Respondents selecting a global slowdown among their top three concerns more than doubled to 69% this year, and almost 40% expect a global recession in the next 12 months.

3. Geopolitical tensions are a long-term concern. Over one-third identified this as the biggest risk factor over the next five to 10 years, and 83% put it in their top three.

4. Central banks are unwilling or, in some cases, unable to significantly draw down their foreign exchange reserves in the face of market volatility.

WHEN OMFIF conducted the GPI survey a year ago, shortly after Russia's invasion of Ukraine and the surge in commodity prices, unsurprisingly inflation was mentioned as the biggest concern for reserve managers. Over 85% listed inflation in their top three concerns. A year later, although there are signs inflation has peaked, reserve managers are just as worried about price pressures.

This year, inflation remains the biggest challenge for reserve managers. Half of survey respondents listed it as their primary macroeconomic concern in the next two years. This is particularly the case for reserve managers in advanced economies. It was noted by 65% as their biggest concern, compared to 43% of respondents in emerging economies. Overall, 85% include it in their top three economic concerns – more than any other economic factor (Figure 1.1). This suggests that high inflation is not just a lingering issue for monetary policy committees but also reserve management teams at central banks.

Related to this, it appears that reserve managers have little confidence that price pressures will abate anytime soon. Not a single survey respondent expects that inflation in major economies will drop within 2% targets over the next two years. Most expect it to hover between 2% to 4% while almost half (48%) think that it will be between 4% and 6% (Figure 1.2). As one respondent in Asia Pacific stated, 'Given the challenges central banks are facing with the trade-off between inflation, growth and potential crises, it will take time for inflation to fall within the acceptable target range.'

38%
of survey respondents believe there will be a global economic recession in the next 12 months

Growing fears of global recession

While inflation was the main concern last year, this year it is stagflation. More than two-thirds of respondents (69%) counted economic slowdown among their top three concerns – over twice the share in 2022, when it was noted by a third (34%) of respondents (Figure 1.3). These fears disproportionately come from emerging markets. While none of the reserve managers in advanced economies listed global economic slowdown as their primary concern, it was chosen by 28% of those in emerging economies.

Many reserve managers have expressed doubts over the ability of central banks to engineer a soft landing. As many as 38% expect there to be a global

1.1. Inflation remains the most pressing challenge

What are the most important economic challenges affecting your investment approach over the next 12-24 months?
Share of respondents, %

	MOST IMPORTANT	SECOND-MOST IMPORTANT	THIRD-MOST IMPORTANT
Inflation	50	22	14
Global economic slowdown	18	31	20
Rising policy rates	24	24	9
Geopolitical tensions	7	14	31
Quantitative tightening	-	5	12
High public debt levels	1	3	9
Other	-	1	4

Source: *OMFIF GPI survey 2023*

1.2. Inflation to stay well above target

What do you expect that the rate of inflation in most major economies will be over the next 12-24 months?

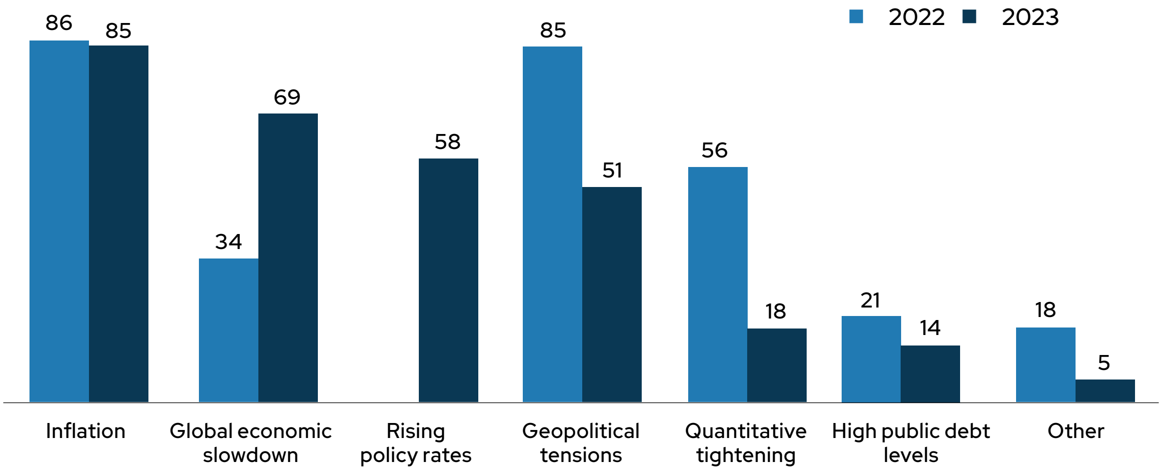
EXPECTED INFLATION RATE (%)	SHARE OF RESPONDENTS (%)
Below 0	-
0-2	-
2-4	51
4-6	48
Above 6	1

Source: *OMFIF GPI survey 2023*

'Given the challenges central banks are facing with the trade-off between inflation, growth and potential crises, it will take time for inflation to fall within the acceptable target range.'
Central bank reserve manager from Asia Pacific

1.3. Growing fears of a global slowdown

What are the most important economic challenges affecting your investment approach over the next 12-24 months? Share of respondents, %



Source: *OMFIF GPI survey 2022-23*
**Note: Rising policy rates not included in 2022*

economic recession in the next 12 months. As one respondent explained, 'We believe that bringing back inflation to the target level in the next 12 months will require a recession.'

Financial stability concerns, in the context of multiple bank failures in the US and Europe, are adding to recession fears. As one respondent put it, 'Global economic growth is projected to slow down... Whether there will be a recession will depend on adverse impact on economic activity relating to events such as the banking sector crisis.' This uncertainty was echoed by a handful of other respondents.

The effects are somewhat circular, as the slowdown in economic activity could also have negative consequences for financial stability. One respondent observed that, 'Global economic slowdown (also under the scenario of persistent or recurrent inflation) may significantly deteriorate credit conditions and threaten the stability of the financial system.'

Financial risks were also voiced as a concern by a handful of reserve managers. 'The third-most important risk factor is global financial stability, which may directly affect the investment approach and counterparty lists of central banks,' said one respondent. Liquidity scarcity and market volatility – even in major markets – associated with the shaky banking sector were the primary factors mentioned with regard to financial stability risks.

Geopolitics moves from short-term to long-term risk

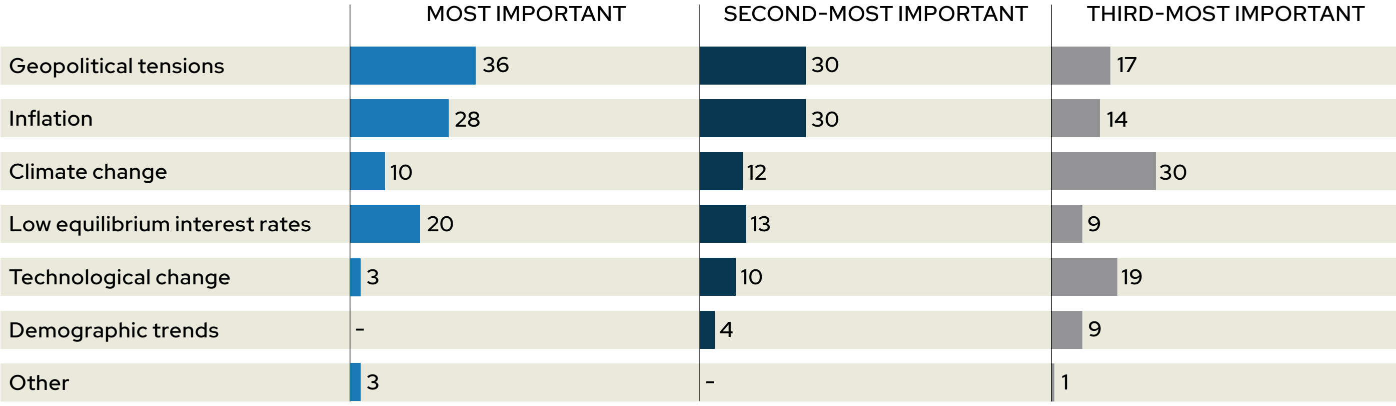
Geopolitics is fading as a near-term concern compared to stagflation. Fewer respondents (51%) listed geopolitics among their top three concerns affecting reserve management in the next two ➤

'We believe that bringing back inflation to the target level in the next 12 months will require a recession.'

Central bank reserve manager from sub-Saharan Africa

1.4. Geopolitics a longer-term concern

What are the most important economic factors affecting your investment approach over the five to 10 years? Share of respondents, %



Source: *OMFIF GPI survey 2023*

years compared to 85% in 2022, when the survey was run shortly after Russia's invasion of Ukraine. But it is the biggest factor affecting reserve management over the medium to long term. For more than a third (36%), geopolitical tensions is their number one longer-term factor affecting reserve management and 83% listed it in their top three (Figure 1.4).

Competition between the US and China is concerning many reserve managers. One respondent expressed fears that 'the geopolitical tensions between the US and China and China's attempt to de-dollarise the global economy' could have a major impact on asset prices and, therefore, reserve management strategies.

In terms of how geopolitical tensions impact reserve management operations, survey comments reveal concern about fragmentation of trade and capital flows. 'The escalation of geopolitical tensions could have far-reaching consequences with further disruption of supply chains, deterioration of macroeconomic conditions as well as risk-off market sentiment, capital outflows from certain (mainly emerging) markets and increased volatility,' noted one respondent.

Inflation is also posing a long-term risk for reserve managers: 72% report it as a top-three concern over the long term, reinforcing the point that there is little confidence it will be reined in soon. One respondent is particularly wary of a premature shift to monetary easing in this regard: 'We are of the view that, despite the Fed hiking rates to curb inflation, the rate hikes would at some point have to be reversed through loose monetary policy and quantitative easing which again results in inflationary pressures.'

Climate change and low equilibrium interest rates are also important challenges for reserve managers over the long term. Over half (52%) list climate change as a top-three long-term risk factor, compared to 42% of respondents who pointed to low equilibrium interest rates. In the face of difficult macro conditions, though, concerns around climate change have taken a back seat relative to other medium- to long-term challenges (see Chapter 4).

Reluctance to draw down reserves

Against this backdrop of stagflation fears and uncertainty over geopolitics, reserves may come under pressure again this year. Global reserves declined by 6.5% last year, falling to $14.8tn by the end of 2022 from $15.8tn the year before. This was linked to the broad-based sell-off in asset prices, valuation effects weighing on non-dollar holdings and, in some cases, intervention measures to bolster currencies against a strong dollar.

18%

Central banks reporting a 'less than adequate' level of reserves saw their reserves drop by 18% on average compared to last year.

'The escalation of geopolitical tensions could have far-reaching consequences with further disruption of supply chains, deterioration of macroeconomic conditions as well as risk-off market sentiment, capital outflows from certain markets and increased volatility.'

Central bank reserve manager from Europe

This pressure on reserves has left some countries in fragile positions. The majority (80%) of survey respondents reported their level of reserves as 'adequate'. However, 10% reported having 'less than adequate' reserves. These institutions, which are all in Asia Pacific or sub-Saharan Africa, saw their reserves drop by an average of 18% compared to last year.

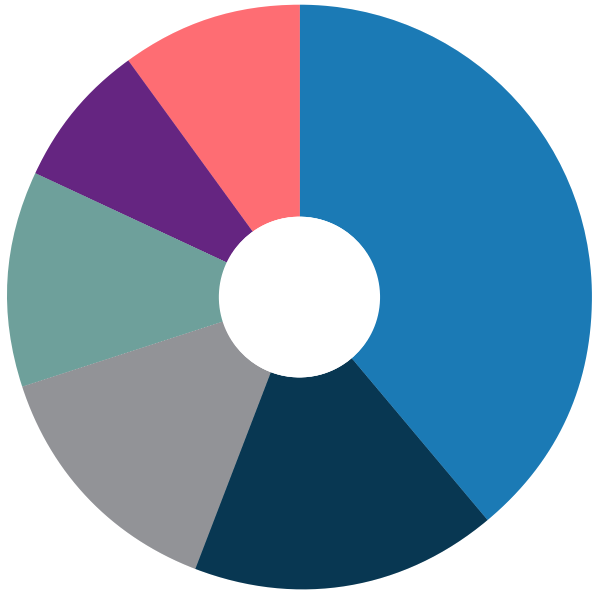
As a result, central banks are unwilling or, in some cases, unable to draw down from their reserves. Of survey respondents, 39% stated that they are unwilling to deploy more than 5% of reserves in the face of further market volatility. There was variation, though, with 10% willing to deploy over 30% of their reserves (Figure 1.5). In any case, it's clear that many reserve managers are looking to rebuild their reserves rather than draw them down.

This is consistent with the point that 35% of reserve managers now see drawing down foreign exchange reserves as the most effective safety net in times of crisis, down from 47% last year. Swap lines are perceived as the most effective element of the global financial safety net, with 37% listing this as their top choice after they became available from the Federal Reserve and European Central Bank following recent financial stability concerns (Figure 1.6). As one survey respondent noted, 'During a period of stress, usually [a] dollar shortage is the main issue, which the Fed can alleviate with the swap lines.'

A few reserve managers (13%) reported International Monetary Fund facilities as the most effective element of the global financial safety net during a period of stress. These institutions are primarily located in Latin America and sub-Saharan Africa, two regions which saw the steepest fall in reserves last year, meaning they can no longer rely on further draw down of their own foreign exchange reserves and may need to turn to the IMF for bailouts.

1.5. Reserve managers wary of drawing down reserves

What is the maximum share of reserves you would be willing to deploy in the event of further market volatility (e.g. a repeat of 2022 conditions)? Share of respondents, %

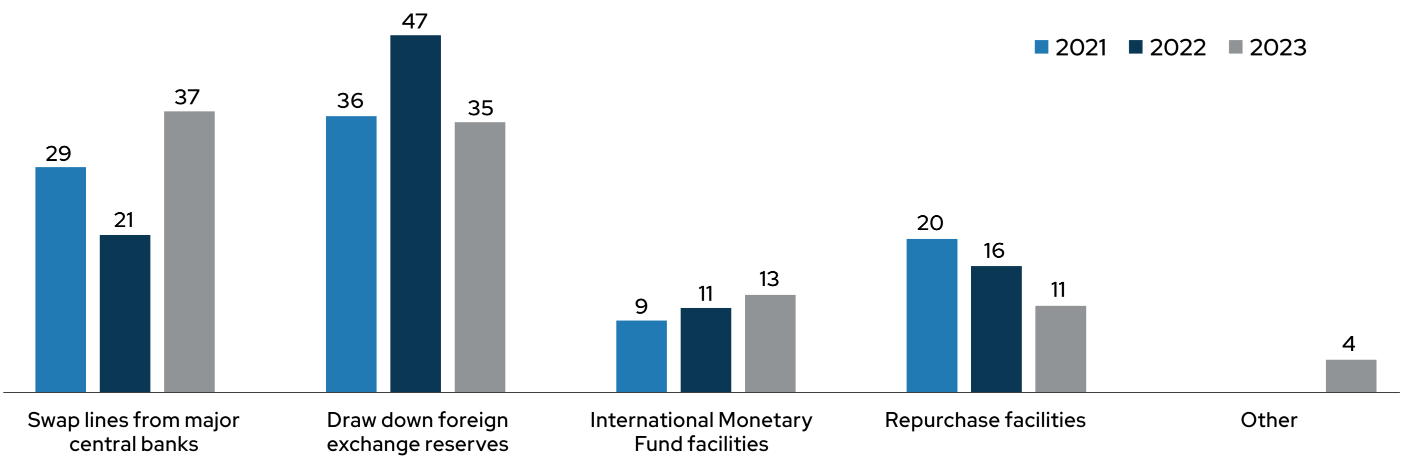


0%-5%	39%
6%-10%	17%
11%-15%	14%
16%-20%	12%
21%-30%	8%
31%+	10%

Source: *OMFIF GPI survey 2023*

1.6. Fewer central banks see effectiveness of drawing down reserves

Which of the following elements of the global financial safety net do you think is the most effective during a period of stress? Share of respondents, %



Source: *OMFIF GPI survey 2021-23*

Search for safety

Reserve managers seek higher yields and safety in government bonds. Gold will be the main asset to provide diversification ahead of risky or alternative assets

Key findings

1. More than three-quarters (80%) of reserve managers experienced portfolio losses in 2022 and most are cautious about the outlook for financial markets. Almost 40% expect it will take one to two years to recoup their losses, while nearly a quarter think it will take two to five years.

2. Demand is strongest for traditional reserve assets. A net 32% of reserve managers will increase their allocation to conventional government bonds and 20% to quasi-government bonds in the next two years as they seek higher yields and safer assets.

3. A net 14% of respondents will increase their allocation to gold. This is mostly for diversification purposes, while over a third will invest in gold to protect against geopolitical risk.

4. Appetite for riskier assets is waning. The share that expects to add to equity or corporate bond allocations has halved to less than 10% this year. And there is little interest in alternative or digital assets. ➤


CK DOWNS, M.D.
R. DUDLEY
R. DUMPSON
ghborhoods
Affairs

RESERVE managers are relatively conservative, with fixed income and cash products dominating their portfolios. In our sample, on average, respondents invest 40% in government bonds, 11% in quasi-government bonds and 16% in cash. In an environment of rising interest rates, the value of these assets was hit hard and 80% of respondents experienced portfolio losses in 2022. The question is how they will respond.

In many cases, reserve managers are approaching turbulent macroeconomic and market conditions with increased caution. The vast majority will maintain or reduce risk in their portfolios, while only 14% of respondents will take on more risk in the coming years. One survey respondent from sub-Saharan Africa noted, 'The recent turmoil in the banking sector following the collapse of banks in the US and crisis of confidence in Credit Suisse calls for being more conservative in managing reserves.' Consistent with this trend towards consolidation, capital preservation was selected as the primary investment objective by 69% of respondents, up from 61% in 2022 (Figure 2.1).

With the search for returns taking a backseat and market conditions remaining choppy, reserve managers aren't expecting major investment gains in the near term. Almost 40% expect it will take one to two years to recoup the losses from 2022, while nearly a quarter think it will take two to five years (Figure 2.2). In line with this, one participant highlighted that, 'Historically, on average it has taken under two and a half years to recover market losses when severe declines occurred during the worst bear markets.'

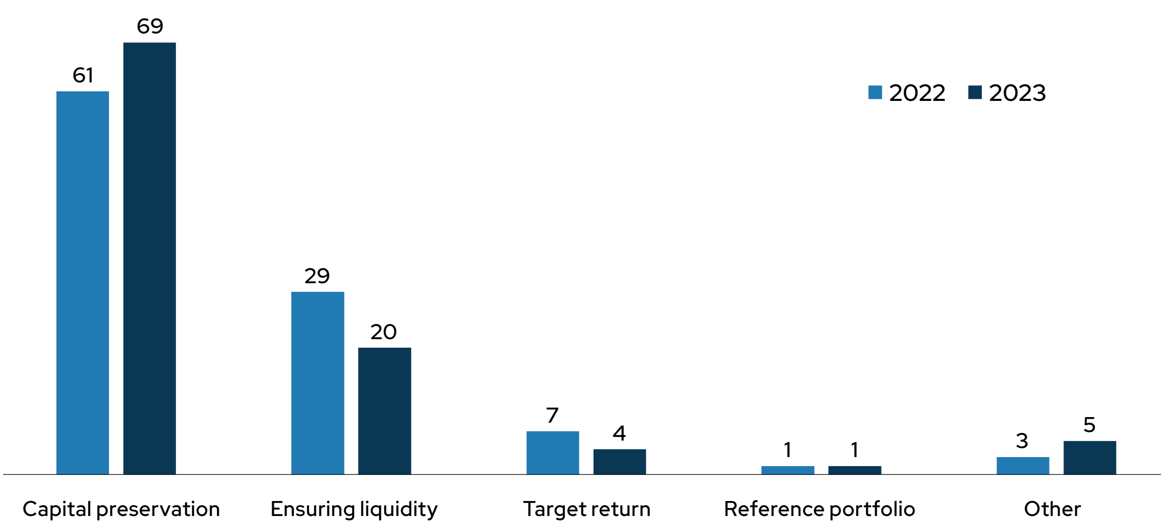
There is some tentative optimism that the worst of the market turmoil is over. A survey participant said, 'We believe that the financial market is heading to stability.' Some suggested that an unwinding of

'The recent turmoil in the banking sector following the collapse of banks in the US and crisis of confidence on Credit Suisse calls for being more conservative in managing reserves.'

A survey respondent from sub-Saharan Africa

2.1. Preservation over liquidity or returns

What is your most important investment objective? Share of respondents, %



Source: *OMFIF GPI survey 2022-23*

2.2. No quick fix for investment losses

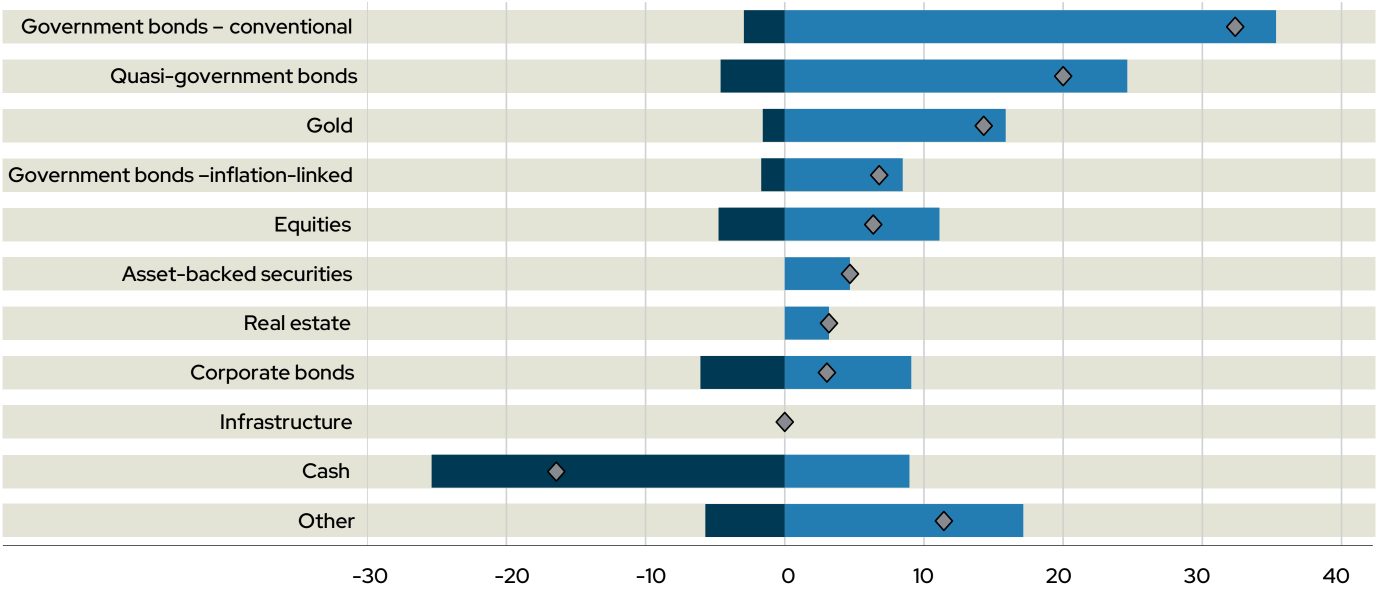
How long do you anticipate that it will take to recover any portfolio losses from 2022? Share of respondents, %

0-12 months	17%
1-2 years	39%
2-5 years	24%
5+ years	0%
No portfolio losses in 2022	20%

Source: *OMFIF GPI survey 2023*
Note: No respondent selected 5+ years.

2.3. Traditional reserve assets in demand

Over the next 12-24 months, do you expect to increase, reduce or maintain your allocation to the following asset classes? Share of respondents, %



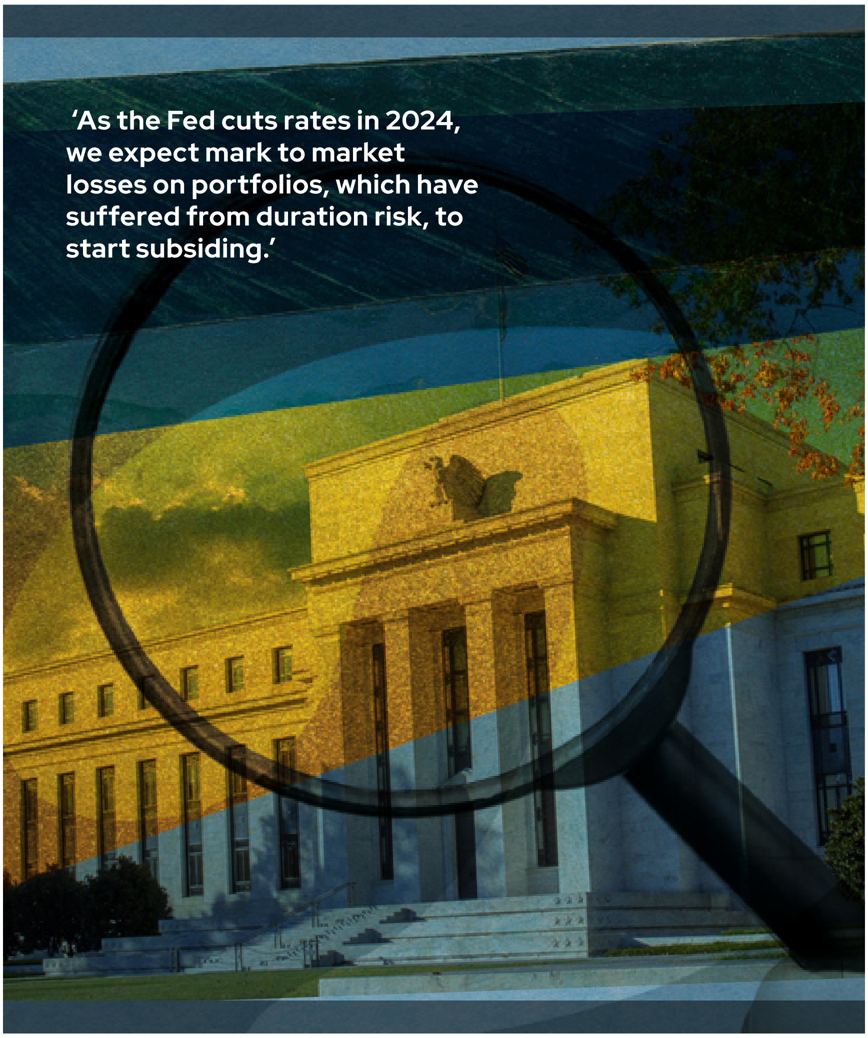
Source: *OMFIF GPI survey 2023*

central bank policy tightening will prop up fixed income asset prices. Another stated, 'As the Fed cuts rates in 2024, we expect mark to market losses on portfolios, which have suffered from duration risk, to start subsiding.' That echoes the view of a respondent who observed that 'unrealised losses are expected to trend downwards as interest rates normalise'.

The lure of traditional assets

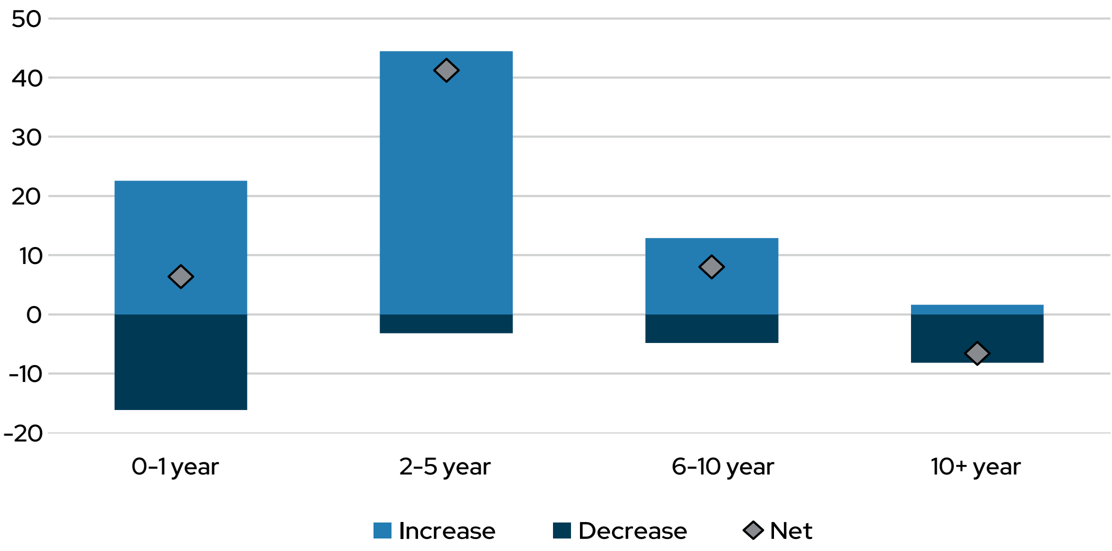
Central banks' cautious approach is reflected in their intention to increase holdings of traditional reserve assets. A net 32% of respondents will increase their allocation to conventional government bonds and 20% to quasi-government bonds in the next two years. Net demand for other assets is lower, though the only clear downscaling will be in cash holdings, with a net decrease expected by 16% of respondents (Figure 2.3). Fears of persistently high inflation are presumably linked to reserve managers' desire to move away from cash.

Pessimism over the long-term inflation outlook may be linked to reserve managers' intention to move away from longer-dated government bonds. A net 7% expect to decrease government bond holdings at maturities over 10 years. In contrast, a net 41% of respondents anticipate adding to holdings at two- to ➤



2.4. Greater demand for shorter maturity bonds

In the next 12-24 months do you expect to increase, reduce or maintain your allocation to government bonds/bills in these categories? Share of respondents, %



Source: *OMFIF GPI survey 2023*

five-year maturities (Figure 2.4).

The lure of higher yields seems to be drawing reserve managers towards the shorter end of the curve. One respondent stated, 'Given the inversion of the US yield curve, the [central bank] has a preference for investments in short-dated US Treasuries/money market instruments.' Preference for shorter-dated bonds is also consistent with some reserve managers' expectations that the peak in policy rates is near and monetary easing may soon be on the cards.

Safety first

As well as the return of higher yields on government bonds, demand for these assets reflects a flight to safety. It's notable that 40% of central banks anticipating a global recession in the next 12 months expect to add to government bond holdings, compared to 25% of those who are less pessimistic about the global outlook. One respondent mentioned that, 'The recent banking issues that had been unfolding would lead to a reposition of the portfolio towards less risky assets, with a preference for bonds issued by sovereigns, supranationals and statutory boards.'

This risk-off sentiment is consistent with reserve managers' preference for the highest-rated government bonds. A net 27% of respondents signalled they will add to the AAA-AA rated government bonds, compared to a net zero for lower-rated investment grade and sub-investment grade debt.

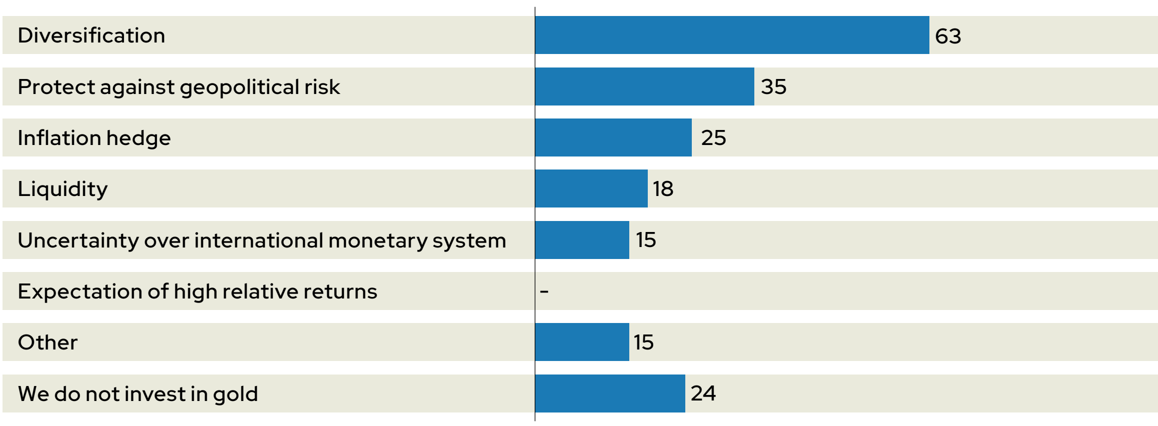
Moreover, there is continued demand for gold as a safe haven. Data from the World Gold Council show that central bank net purchases of the precious metal hit the highest on record in 2022 at 1,136 tonnes. And central banks aren't done yet. A net 14% of respondents expect to add to gold holdings

27%

A net 27% of respondents signalled they will add to the AAA-AA rated government bonds, compared to a net zero for lower-rated investment grade and sub-investment grade debt

2.5. Gold provides diversification and protection from geopolitics

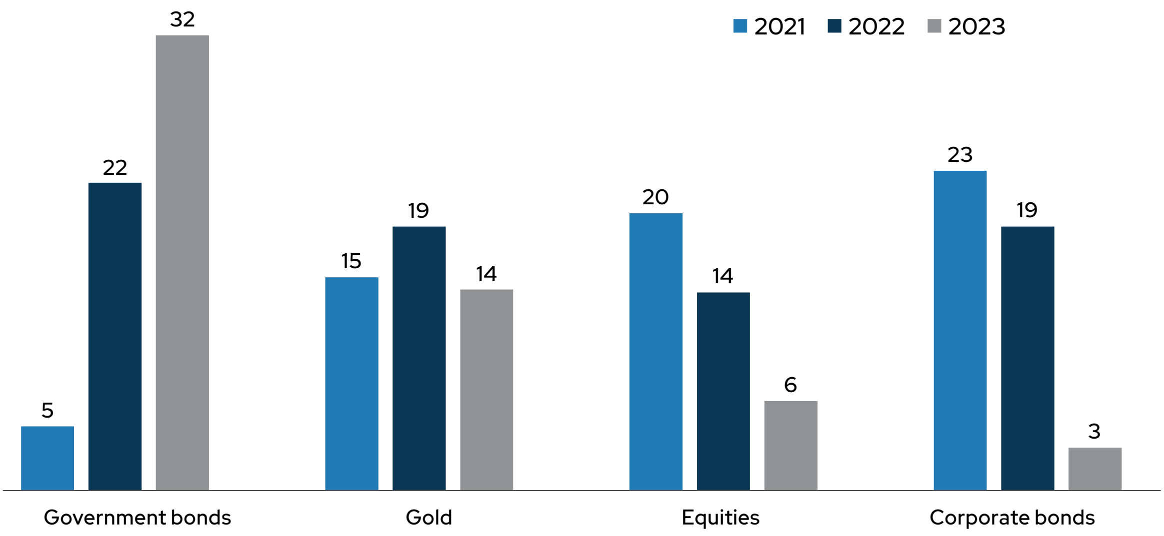
Why do you invest in gold? Share of responses, %



Source: *OMFIF GPI survey 2023*

2.6. Waning demand for riskier assets

Net expected increase in allocation towards the following assets over the next 12-24 months. Share of respondents, %



Source: *OMFIF GPI survey 2021-23*

in the coming years, with the majority coming from emerging markets. This is mostly driven by the need to diversify, but over one-third (35%) mentioned investing in gold to protect against geopolitical risks (Figure 2.5). That's more than those who cite investing in gold due to its properties as an inflation hedge (25%).

The flipside of the expected flight to safety is that there is waning appetite for riskier asset classes. While anticipated demand for government bonds is much stronger this year than was indicated in our 2021 or 2022 surveys, the opposite is true for equities and corporate bonds. On net, less than 7% of respondents now expect to add to equity and corporate bond allocations in the coming years, compared to 20% to 25% of respondents in 2021 and over 10% in 2022 (Figure 2.6). One respondent observed that, 'A potential US recession or at least slowdown over the 12-24 month period will also require being underweight in equities.'

Low appetite for new assets

The vast majority of reserve managers has little desire to diversify towards new or alternative assets. Only 10% of reserve managers surveyed invest in real estate and just 2% in infrastructure. Despite their properties as inflation hedges, less than 5% of respondents expect to increase their exposure to real estate and none expects to increase infrastructure allocations in the next 12-24 months (Figure 2.3). That's in stark contrast to other public investors. In OMFIF's survey of global public pension and sovereign funds conducted in the second half of 2022, over 40% of respondents expected to increase exposure to these alternative assets.

It's a similar story when considering regional allocations. Less than 2.5% of reserve managers' assets, on average, are based in Africa, the Middle East or Latin America. And yet only a net 8% will increase allocations to Africa and 3% to the Middle East in the next few years, while a net 3% will reduce their allocation to Latin America. Accordingly, exposure to these emerging market regions will remain limited.

Finally, almost all reserve managers remain hesitant over digital assets. In our survey sample, not a single central bank invests in digital assets and only 4% are even considering it. One respondent stated: 'We do not invest in assets that are not tied to a series of measurable cash flows or backed by a real asset.'

As a result, many reserve managers have little interest in diversifying towards riskier or new asset classes amid heightened economic and geopolitical risks. In the near future, they would prefer to increase their exposure to government bonds and, to a lesser extent, gold. •

Embracing equities as a hedge to fixed income

Jan Schmidt, executive director, risk management at the Czech National Bank, spoke with OMFIF's Taylor Pearce about the bank's diversification strategies, high exposure to equities and his views on the renminbi as an alternative to the euro and dollar

Taylor Pearce: The Czech National Bank's reserves are highly diversified across 34 portfolios. What was your experience diversifying your asset allocation over the past several years?

Jan Schmidt: There is a large number of portfolios which are dedicated to diversification as we have nine currencies currently. We can diversify the tactical approach to the management of the portfolio and diversify the managers themselves.

What initiates the diversification? In some cases, it's a modelled analytical background. That was behind the equity portfolio as a diversifier to fixed income. Sometimes events drive diversification. Both are natural, but one kind of diversification is in our control. Others with external factors are not.

For instance, we saw credit risk after the 2008 financial crisis which led us to diversify from fixed income into equities. We had several downgrades of very important countries like the US and France. The downgrade of the US led us to diversify into Canadian and Australian dollars and the downgrade of France led us to diversify away from the euro into the Swedish krona.

Otherwise, we hired several external managers, which is a kind of diversification. We have four mandates, but the strategies are different. Two portfolios are more active, the other two are purely passive. The same could apply for anything else, even services – we also diversify the custodians.

Operationally, it is very difficult to manage so many portfolios. There are a lot of new things to do in new markets, new systems, new settlements. But also there is a limit to diversification. For everything above a certain limit, it is basically impossible to measure the diversification effects – nine currencies means that there are plenty of correlations between the bilateral currency pairs, and the same applies for assets.

TP: You mentioned that the CNB has significant exposure to equities. What is the reasoning behind that and what was your experience with equity exposure?

JS: Yes, the equity exposure is relatively large – 20% is a large exposure compared to our peers. Originally, the reason was to decrease the risk and keep the performance of the expected return more or less the same. For instance, this 10% equity exposure which we started with delivered the same expected return, while the value at risk would decrease, because of the low or negative correlations.

Over time, and taking into account external factors like bond yields dropping to zero or below zero, it increased the importance of equities as a source of returns. Between 2013-17 reserves increased by almost four times and we started thinking about equities as a source of return at the price of high risk. So, we gradually increased the portion of equities from 10% up to 20% of the reserves.

TP: Has the CNB's experience of negative equity changed your strategic allocation to equity?

JS: Obviously negative equity is an important question internally. Externally, I think that the central bank can run its duties with negative equity or losses. We do everything we can to minimise the losses and, if they are on our balance sheets, to compensate them. The results are always designed to cover the losses from expected future returns.

Even if we had a positive return every year and were able to pay dividends to our government, we would still diversify into equities because we found that it is a natural hedge to fixed income and government bonds. That's what I always say: the bonds are to be repaid by the government, so the government needs to be receiving taxes and the taxes usually come from corporates. So, the corporates must survive and deliver profits. This motivates us to own equities rather than government bonds to a small extent.

If the laws on negative equity didn't exist, then maybe we wouldn't be so aggressive in increasing the portion of equities in our reserves. With positive returns for the central bank, maybe this process would be slower. Maybe the pressure on the performance of our assets would be lower. But I don't feel the pressure is material – we create it for ourselves. Of the losses we make, 99% are made in accounting when the reserves are valuated into domestic currency. Because the currency appreciates over time, it leads to negative performance. Regardless of what's happening, the reserves are measured in a foreign currency.

TP: Last year, the CNB suffered losses. How have you adjusted your tolerance and are you taking on more risk to plug this gap?

JS: Yes, monetary policy has its costs. In our case, the cost is basically the current interest rate of 7% on our liabilities, which is too high for a developed country like Czechia. So, we believe that it will be not long-standing with us. The other fact is that the assets, which are primarily euros and dollars, will never have such high yields. That's something we have to consider as an external factor. This is motivation for searching for a higher return. On the other hand, the central bank lives on coupons and dividends. So, as long as the yields on bonds are high, the coupons are high and the performance of the reserves in the long run is high.

We could either believe that our own yields on our interest rates and liabilities will go lower, or the European Central Bank and Federal Reserve will increase the yields. The solution is not to increase the equities to 50%. But in the long run, the interest rate differential shouldn't be that high.

TP: Around 50% of your foreign exchange reserves are held in the euro, 20% to 25% in the dollar and a sizeable amount in renminbi in addition to six others. What were the causes of this diversification? Where do you see the dollar versus the renminbi as a reserve currency in the coming years?

JS: We have an economy which is very closely linked to western Europe. So that's why the euro is the intervention currency and why we have so many euros, which is the opposite to the global benchmark where the dollar is dominant. We also have Swedish krona, Canadian dollars and Australian dollars.

During our quantitative easing, we were looking for further currency diversification. We started thinking about China, because it is a large economy and the country was running quite well in terms of credits and stability. It was also aiming to internationalise the renminbi. So, we agreed to buy or use part of the reserves and diversify into some kind of Asian emerging market. Because other markets are so small, we ended up in China with more than $2bn invested in a Chinese portfolio. The country is big, the market is big and the International Monetary Fund included renminbi into the special drawing rights basket, which basically proved that it could be a good candidate for a reserve currency.

In the future, I don't know. Some of the processes have slowed down a bit. I don't hear that much now about China opening its market, which was the case several years ago. Also, while the nominal yields in China were higher over the last decades, today the US nominal yields are higher. And the geopolitical situation is changing. That's why, when you ask what would be a good candidate for diversification, I'm not sure about China today. The West would perhaps have to wait until China is clearer about its foreign policy.

TP: Are there any other currencies that you think will gain from this diversification away from the dollar?

JS: It's always a question of the size of the market compared to the size of the reserves. We saw it in Australia, we saw it in Canada – those markets are large, but once the reserves are too high, the weight of the portfolio in these currencies couldn't be the same as euros or dollars. There are smaller markets like Sweden, Denmark, Norway – I would say those are good candidates. But it will be better to have a basket of these currencies rather than a single exposure.

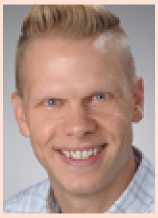
Emerging markets? I don't know. Everyone can remember Brics. And what exists today? China, maybe? The rest is out of question at the moment for reserve managers.

Then we have the large economies like Japan and the UK. Japan basically has no interest rate and the interventions are much larger than in any other reserve currency economy. They intervene on fixed income, they intervene on the stock exchange. So I'm not sure whether this could be called a 'free' market. And I'm not talking about the currency itself, because it's driven primarily by the interventions. Then there's the monetary policy in Japan. So that's why I question Japan, despite the fact that the economy is large enough to qualify for a reserves currency.

The UK is fine, but slightly lost its position after Brexit. It will hopefully get it back but there are still some risks. Otherwise, it would be like Japan: big enough, both market economies, but the stability is in question.

'When you ask what would be a good candidate for diversification, I'm not sure about China today.'

Geoeconomics will loom large in reserve manager decisions



While increased use of financial sanctions has generated political risk in the international currency system, it does not jeopardise dollar supremacy, argues Daniel McDowell, associate professor of political science, Maxwell School of Citizenship and Public Affairs, Syracuse University.

THE turn of the 21st century brought a fundamental reordering of how economic battles are waged. After 9/11, the US Treasury recognised that global dollar dominance gave Washington control over the critical plumbing of global finance. A new breed of financial sanctions emerged which could precisely cut individual targets – terrorists, foreign government officials, state institutions, firms – off from the dollar system. 'Smart' financial sanctions revolutionised economic warfare.

American presidents responded to the new tool with enthusiasm, deploying sanctions with increasing frequency over the past two decades. In 2000, just four countries were targeted under a US financial sanctions programme. By 2020, this had risen to 21, meaning roughly one in 10 sovereign states was facing some level of pressure from a financial sanctions programme. In several cases, foreign central banks were targeted. In Libya, Venezuela, Iran and most recently Russia, official money managers found their dollar reserves frozen as a result of sanctions. These acts have implications for official portfolio decisions.

In *'Bucking the Buck: US Financial Sanctions and the International Backlash Against the Dollar',* I argue that Washington's growing use of the dollar as a tool of economic coercion has generated political risk in the international currency system. Political risk, in this context, is the potential for a political act to raise the expected cost of using the dollar as a store of value or medium of exchange.

The US's penchant for financial sanctions does not jeopardise dollar supremacy. The currency retains undeniable economic and political advantages over all rivals. US Treasury bonds will remain the fundamental component of most central bank portfolios for the foreseeable future. However, monetary authorities in states with adversarial relations with the US are exploring ways to hedge against the risk of asset freezes. That will intensify in the near term in the wake of the most recent sanctions against the Central Bank of Russia.

Monetary gold is a key beneficiary in the current environment. After two decades of declining popularity as a reserve asset in the 1990s and 2000s, gold has experienced a revival since 2010. Some of this relates to economic considerations. The metal is a popular hedge against dollar weakness. However, gold's rising appeal has much to do with its emergent role as a hedge against sanctions risk.

Bullion held in a national vault cannot be seized by Washington short of a military invasion. Central banks in states that are targets of US sanctions as well as those that are at higher risk of facing sanctions purchased more gold on an annual basis between 2008-20 compared to unsanctioned states. Notably, central bank demand for gold in 2022 – following severe sanctions targeting Russia for its invasion of Ukraine – was the highest on record, with China as a major buyer.

Yet, there are limits to how much gold central banks will want to hold. Targeted and at-risk states are likely to make additional efforts to 'sanction-proof' their portfolios. Shifting the geographic distribution of reserve assets, including dollar reserves, out of the US is one such tactic. Russia did this in 2018 following a major tranche of US financial sanctions, cutting its share of reserves custodied at US institutions to about 5% that year, down from around 30%. Brad Setser, senior fellow at the Council on Foreign Relations, has pointed out that China has most likely moved some of its US Treasury holdings to places like Belgium in an effort to escape US legal jurisdiction and improve resilience to future sanctions.

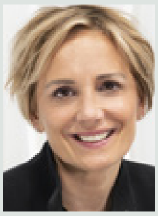
Finally, among sanctioned and at-risk countries, there may be some marginal movement of official foreign exchange reserves into the renminbi. Beijing's willingness to deepen its economic relationship with Russia signals to other states that the world's second-largest economy can serve as an economic and financial lifeline to blacklisted economies. Though renminbi reserves are of limited usefulness, lacking full convertibility, they can be freely used in current account transactions with China.

As the shadow of geoeconomics looms ever larger over the world economy, expect political considerations to shape reserve manager decisions in new and meaningful ways even as the dollar's fundamental position atop the global currency hierarchy remains stable.

'Gold's rising appeal has much to do with its emergent role as a hedge against sanctions risk.'

Amundi
ASSET MANAGEMENT

Factoring in climate change



Investors need to consider the implications of the green transition on portfolios and long-term growth, writes Monica Defend, head of Amundi Institute, Amundi.

THERE IS global consensus on the need to combat climate change, but uncoordinated government responses to energy price spikes highlight challenges in transitioning to a greener economy. Investors must integrate climate change considerations into asset allocation by assessing risks and returns of various asset classes.

In the near term, the energy transition may cause inflation due to higher carbon and commodity prices, but these pressures are not expected to persist. In the medium to long-term, shifting away from fossil fuels, technological changes and initially lower productivity could dampen domestic demand and result in subdued economic growth. Central banks are likely to be cautious about reducing their balance sheets but may use short-term interest rates aggressively to counteract inflationary swings.

Emerging and frontier economies will be most affected by new legislation aimed at decarbonising energy supply. Developed economies can cope by diversifying their exports. Investment plans should accompany the phasing-out of fossil fuels in countries and sectors with a strong legacy.

Investors should consider the implications of a shift towards a net-zero world driven by new policies, technology and changing consumer preferences. Equity returns are expected to be lower over the next decade compared to the previous one in the era of urgent yet less coordinated transition.

Government bond yields are approaching their long-term trend, reviving the role of bonds as a portfolio risk diversifier. However, higher volatility is anticipated due to greater uncertainty and a weaker economic outlook. Investment-grade credit is likely to benefit from higher government bond valuations. Emerging market bonds may face challenges due to potentially higher default rates. Real and alternative assets, as well as commodities, will play a crucial role in building inflation-resilient portfolios.

Central banks actively integrate climate considerations into their objectives, operations, balance sheets and asset allocation. The Network for Greening the Financial System exemplifies their commitment to sharing best practices and managing climate and environment-related risks. Initiatives and regulatory evolutions aim to mitigate climate-related risks affecting the economy, central bank balance sheets and financial system stability.

In terms of reserve management, most central banks have shorter liabilities compared to other investors. While the impact of the climate transition on asset class expected returns will become significant in the coming years, for now, this trend particularly affects institutions with medium- to long-term investments. Surveys indicate that most central banks are already active in environmental, social and governance investing, implementing various strategies from negative screening to impact investing.

Central banks are expected to play a proactive role in the future climate transition, aiming to combat inflation while supporting the transition. Rising carbon prices could trigger inflation episodes, and central banks will need to incorporate climate issues into stress tests, collateral policies and balance sheets to support green investments. Short-term interest rate management will continue to be a key tool in combatting inflationary swings. Central banks could stay dovish on balance sheets but hawkish on short-term rates.

These developments will have multiple investment implications. First, yield curves should be flatter over the long run, assuming policy-makers adjust interest rates to control inflation in the short term while trying to keep long-term rates at historically low levels.

Second, sectors closely linked to the green transition will benefit from central bank support and policies aimed at achieving net-zero objectives, creating a 'green' dividend, particularly on the investment and credit fronts and in terms of yields adjusted for default risk. The green bond market has already experienced impacts from these policies, with a slightly negative green bond premium overall, which is expected to diminish further.

'Sectors closely linked to the green transition will benefit from central bank support and policies aimed at achieving net-zero objectives, creating a 'green' dividend, particularly on the investment and credit fronts and in terms of yields adjusted for default risk.'

US dollar dominance: a slow, steady decline

Diversification efforts towards the euro and renminbi will reduce the dollar's global share of reserves, even as it remains the dominant reserve currency

Key findings

1. The dollar is the only currency in which survey respondents plan to reduce their holdings over the next 10 years. Yet most expect the dollar's share of global reserves to remain above 50%.

2. Respondents are more cautious of Chinese investment. The share looking to increase renminbi holdings in the next two years more than halved to 13% this year, from over 30% in 2022. Market transparency and geopolitics are cited as the main deterrents.

3. Almost 40% of central banks still expect to add to their renminbi holdings in the next 10 years, though the shift will be small. Most expect the currency's share in global reserves will only increase to around 6% by 2033.

4. The euro is likely to benefit from reserve managers' diversification plans. The anticipated shift towards the euro is higher than any other currency over the next two years, and 17% expect to add to euro allocations over a 10-year period.

THE dollar is clearly the dominant reserve currency. On average, among the 75 central banks surveyed, the dollar makes up 59% of reserves, up from 56% in 2021 and 57% in 2022. This is likely to be a result of the flight towards safety following of Russia's war in Ukraine and the global inflation scare. Valuation effects from the broad-based strengthening of the dollar in 2022 plays a role too.

The share of euro holdings in reserves has edged down to 23%, from 27%, while the share has been broadly steady at under 3% for other currencies – including the Chinese renminbi (Figure 3.1). Accordingly, the picture from reserve management data collected by OMFIF over the last few years does not point to a trend of de-dollarisation.

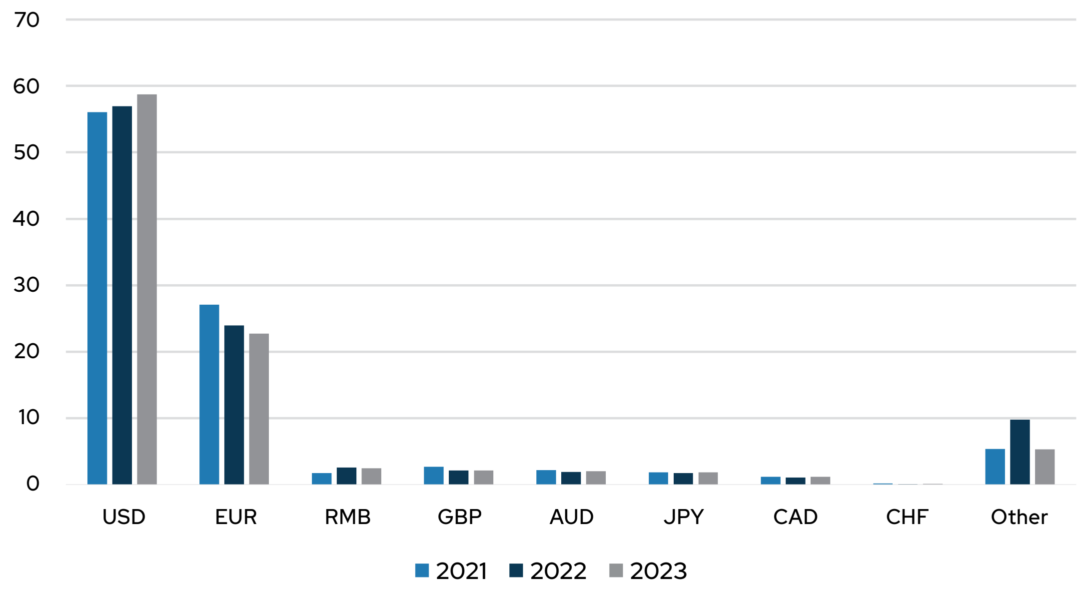
The dominance of the dollar is underscored by its status as the main reserve currency across almost all regions. The dollar makes up 93% of reserves in Latin America and over 60% in both sub-Saharan Africa and Asia Pacific. The main exception is in Europe where 48% of reserve assets are in euros – driven by non-euro area central banks. Even so, the dollar comprises of 37% of reserves held by European central banks. Meanwhile, the renminbi has yet to gain substantial traction in any region – its share in reserves is highest in sub-Saharan Africa at merely 5% (Figure 3.2).

6%

A net 6% of central bank reserve managers plan to decrease dollar holdings over the next 10 years

3.1. Dollar continues to dominate reserves

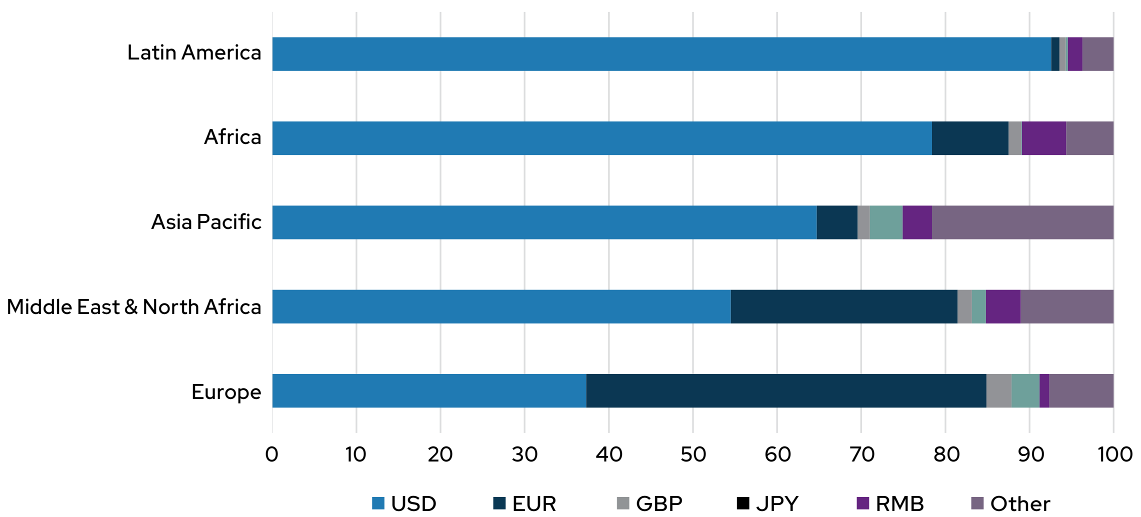
What percentage of your total portfolio is invested in the following currencies? Share of respondents, %



Source: *OMFIF GPI survey 2021-23*

3.2. Dollar reigns across most regions

What percentage of your total portfolio is invested in the following currencies? Share of respondents, %



Source: *OMFIF GPI 2023 survey*

In the near term, there is waning appetite to add to dollar holdings. Last year, over 20% of reserves managers expected to increase their exposure to the dollar in the next 12-24 months, likely due to a flight to safety spurred in part by Russia's war on Ukraine. While reserve managers' asset allocation intentions signal a further flight to safety this year, 16% now plan to increase USD holdings in the next one to two years, while as many as 10% expect to reduce allocation to the dollar in this time.

Longer-term central bank expectations clearly signal plans to diversify away from the dollar. A net 6% of central bank reserve managers plan to decrease dollar holdings over the next 10 years. Such movement away from the dollar is particularly pronounced among Latin American and European central banks, where 25% and 14% of respondents respectively indicate a shift away from the dollar. There are no regions in which central banks signalled net planned movement towards the dollar over the next 10 years, suggesting the currency's dominance is likely to wane across the world.

That said, reserves managers anticipate that the shift away from the dollar will be gradual and in line with the slow, decades-long trend of de-dollarisation. Data from the International Monetary Fund show the dollar has fallen from a share of around 60% of global reserves in 2023 from over 70% in 2000. Looking ahead, while no survey respondents expect this share to increase, on average they anticipate only a slight decrease in the dollar's share of global reserves to 53% of the total over the next 10 years. On average, Latin American and Asia Pacific expect a slightly steeper decline to around 50% in this time.

Diversification away from the currency will probably remain a consistent and slow-moving phenomenon. As one European central bank commented, 'De-dollarisation is already visible, but the process takes time [and] the dollar will remain the dominant reserve currency for the time being.'

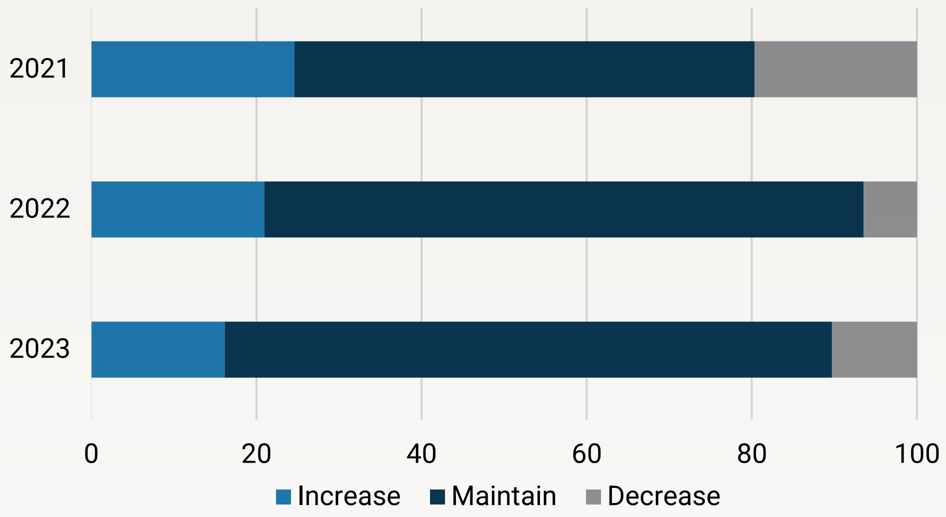
The rise of the renminbi

Which currencies will benefit from diversification strategies? The renminbi is one obvious candidate given the growth of Chinese economic power and the swiftness with which Chinese financial markets have developed. However, reserve managers expect that the shift towards the renminbi will be gradual.

In the near term, there is much more caution on Chinese investment. Over last three years, the growth of the renminbi seems to have been partly stymied by concerns over deglobalisation and geopolitical conflict, which may have been brought into sharper focus from the Russia-Ukraine war. The impacts of such dynamics can partly explain the slowed growth in renminbi holdings – the share of respondents looking to increase holdings over the next two years more than halved to 13%, from ➤

3.3. Near-term dollar demand continues to hold up

Over the next 12-24 months, are you planning to increase, reduce or maintain your exposure to the dollar? Share of respondents, %



Source: *OMFIF GPI 2021-23 survey*

'De-dollarisation is already visible, but the process takes time [and] the dollar will remain the dominant reserve currency for the time being.'

A central bank from Europe

Reserve managers cite market transparency as the dominant barrier to investment in China, noted by 75% of respondents. This factor was shortly followed by geopolitics (63%) and regulatory environment (59%)

over 30% in 2021 and 2022 (Figure 3.4). For the first time, some respondents - albeit just 3% - anticipate a decline in their renminbi reserves.

Reserve managers cite market transparency as the biggest barrier to investment in China, noted by 75% of respondents. This factor was shortly followed by geopolitics (63%) and regulatory environment (59%).

Yet these factors do not appear to be deterring many reserve managers from shifting towards the renminbi over the longer term. Close to 40% of central banks plan to increase their holdings of renminbi over the next 10-years higher demand than for any other currency (Figure 3.5). Such planned movement is particularly pronounced in regions with high exposure to China's economy—over 60% of Asia Pacific and Sub-Saharan African central banks plan to increase renminbi holdings, compared with a quarter of European central banks.

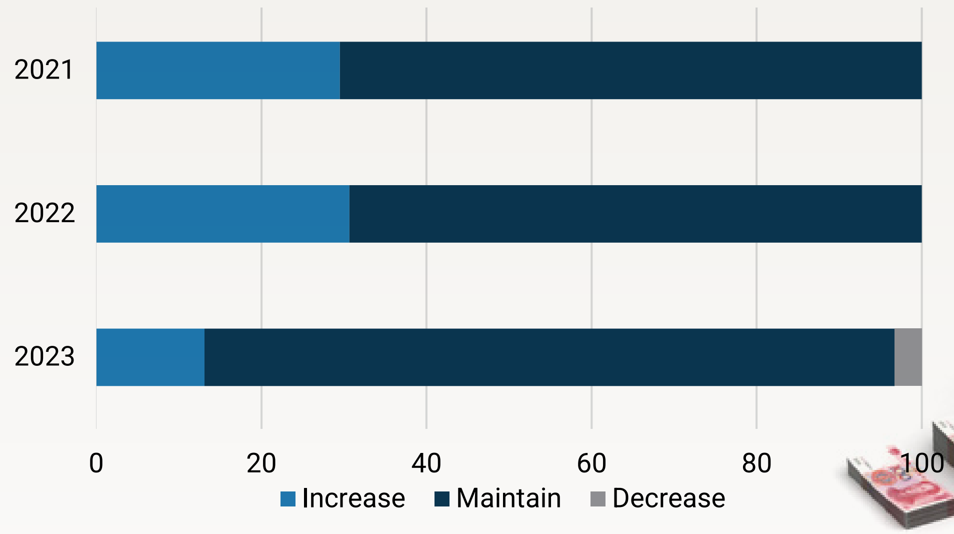
The key reasons for increased investment in Chinese assets by central banks are diversification (71% of respondents) and China's growing importance within the global economy (57%). This is reflected in reserve managers' comments in this year's survey, including perceptions that China will liberalise its financial markets.

One European central bank commented that, 'We believe that renminbi's role as a reserve currency will increase over the next 10 years as it continues liberalising its capital account.' Another central bank remarked that, 'due to recent and current geopolitical tensions we believe the dollar will continue to lose its share in global reserves and simultaneously with China's gradually increasing financial and political role and geographic location, renminbi will gain.'

As with the trend of de-dollarisation, the rise of the renminbi is expected to be gradual. The renminbi's share of global reserves has grown from just over 1% in 2016 to a little over 2% in 2023 ➤

3.4. Short-term caution on renminbi holdings

Over the next 12-24 months, are you planning to increase, reduce or maintain your exposure to the renminbi? Share of respondents, %

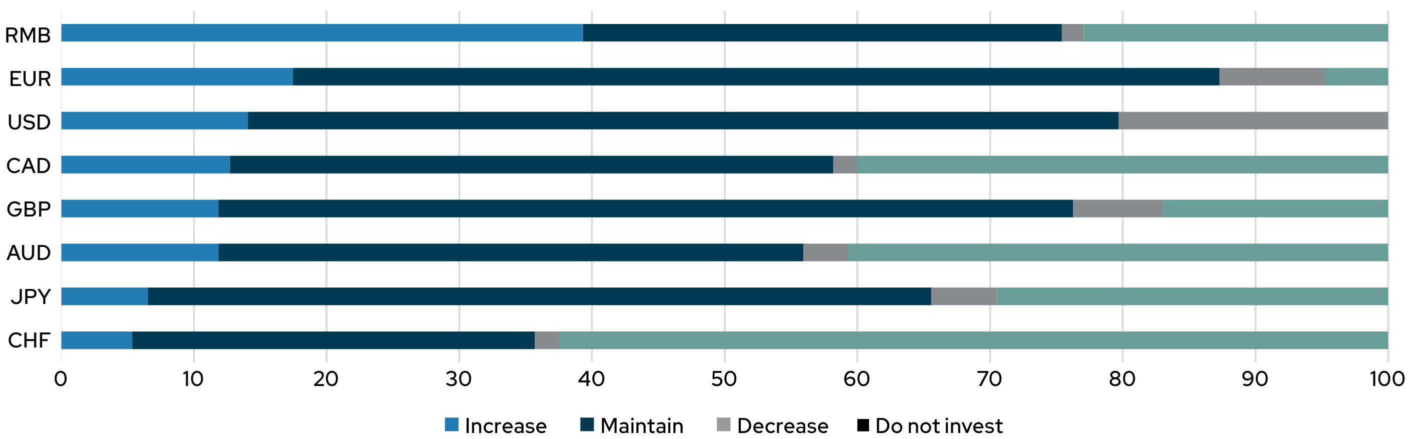


Over last three years, the growth of the renminbi seems to have been at least partly stymied by concerns over deglobalisation and geopolitical conflict

Source: *OMFIF GPI 2021-23 survey*

3.5. Renminbi key to long-term diversification

Over the next 10 years, do you anticipate increasing, reducing or maintaining your exposure to the following currencies? Share of respondents, %



Source: *OMFIF GPI 2023 survey*

Dollar dominance is here to stay

Its role may decline slightly, but there is no alternative for the foreseeable future, writes Mark Sobel, US chair, OMFIF.

THE dollar will remain the world's dominant currency for the foreseeable future, but that doesn't mean its role might not decline gradually.

A range of measures – dollar in international claims, liabilities, securities – and foreign exchange reserves all suggest the dollar accounts for 60% of global finance. Regarding foreign exchange reserves, the dollar's roughly 60% share is the same as in the mid-1990s. The euro makes up around 20%, while sterling and yen are 5% each and the renminbi is under 3%. The Australian and Canadian dollars have small shares. Gold purchases have risen.

Some commentators suggest the international monetary system is heading towards multipolarity, away from dollar dominance. But the meaning of 'multipolar' isn't clear. If the dollar accounted for 49% and the renminbi and euro 20% each, would the system be multipolar or would the dollar still be dominant? Maybe both are true.

Dollar dominance reflects the size of the US economy, the depth, liquidity and openness of its capital markets, convertibility and decent property protections. US macro policy, hardly stellar, is often less ugly than others. US banks dominate globally and worldwide financial networks use them. Inertia reigns – if it ain't broke, why fix it?

The euro area has many of these properties but the euro's role hasn't grown because there is a limited market for euro assets, as distinct from bunds or French Treasury bonds. The Next Generation EU fund is a beginning, but it's likely to remain largely a one-off, especially given German attitudes. Capital markets union is at best a work in progress.

China has capital controls and is more control orientated than in past years. The renminbi isn't convertible. At best, China will only hesitantly liberalise, fearing rapid opening would launch a wave of capital outflow.

China seeks to build its cross-border interbank payments system, but that system remains extremely small in global comparisons. There isn't a deep foreign exchange market for renminbi and other bilateral currency pairs, save the dollar. Nor is it clear whether an investor would still use renminbi as a store of value if they received it in settlement. Oil priced other than in dollars has been bandied about for decades, but the Saudi riyal is still pegged to the dollar.

A digital renminbi won't change the picture. Its main rationale is to take back the payments system from Alipay and Tencent. Nor would it make China an open system. The renminbi's global role is likely to rise in coming years, especially on the back of increased China-Russia trade to circumvent sanctions, but not significantly.

Western steps to block Russian central bank and oligarch assets have surely caught the attention of Chinese and Middle Eastern officials and funds. It will make them reflect, instill caution and could diminish willingness to hold dollars and euros. Still, US and European capital markets are too big to avoid.

To the extent the US (and allies) avoids overuse of sanctions, deploys them multilaterally rather than unilaterally and steers clear of secondary sanctions, the use of sanctions will be less concerning to the rest of the world.

The dollar's dominant systemic role is a net benefit to the US, but hardly an exorbitant privilege. Lower interest costs, seignorage and US agents being shielded from foreign exchange risks are pluses. But that dominance is associated with persistent trade deficits, currency overvaluation and some adverse impacts on US jobs and growth.

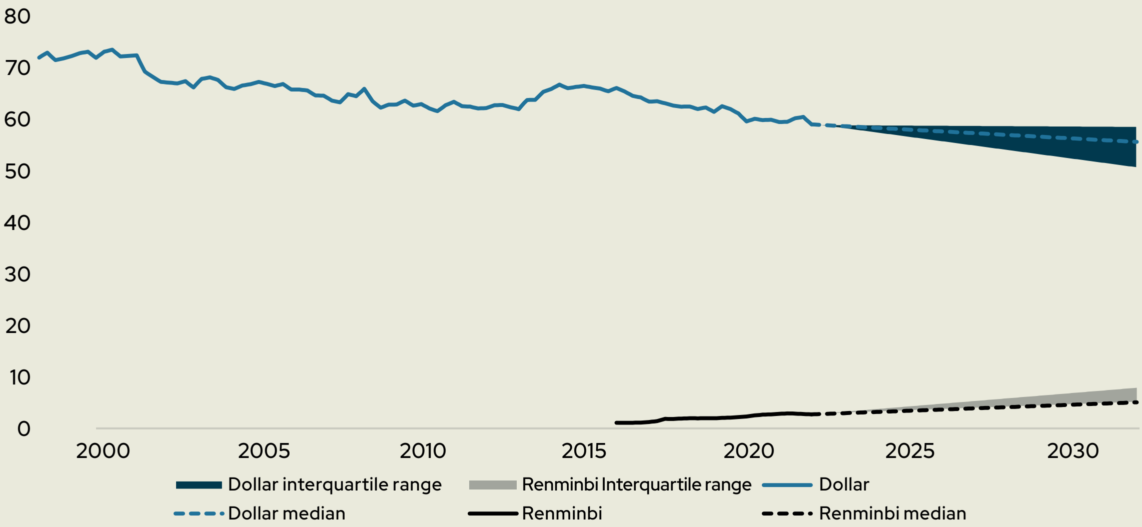
If the US abuses financial sanctions, closes itself off, runs bad macro policies and undermines trust in America, the US will shoot itself in the foot. The dollar's role – a messenger of US failings in this scenario – could decline at an accelerated pace.

In contrast, if the US runs sound policies and others open up, boosts domestic demand and pursues responsible policies, dollar dominance would most likely gradually decline, but the global and US economies might benefit.

'The meaning of 'multipolar' isn't clear. If the dollar accounted for 49% and the renminbi and euro 20% each, would the system be multipolar or would the dollar still be dominant? Maybe both are true.'

3.6. Slow and steady de-dollarisation and the rise of the renminbi

Historical and predicted shares of global reserves, % of global reserves



Source: *OMFIF GPI 2023 survey, International Monetary Fund.*
Note: Figures for renminbi first available in 2016. Interquartile range based on survey respondents' estimate of share of global reserves in 2033

(Figure 3.6). Almost all surveyed central banks expected this share to grow over the next 10 years. On average, they anticipate it will grow to around 6% of global reserves in this time, which is broadly in line with the historical trend. The highest estimate is still 12% of all foreign currency holdings, suggesting no central bank expects the renminbi to gain significant traction as a reserve asset anytime soon.

The euro may benefit from diversification

Given the political and market transparency limitations central bankers cite to Chinese financial assets, other currencies may be more attractive. In particular, the euro appears to be gaining renewed interest among reserve managers.

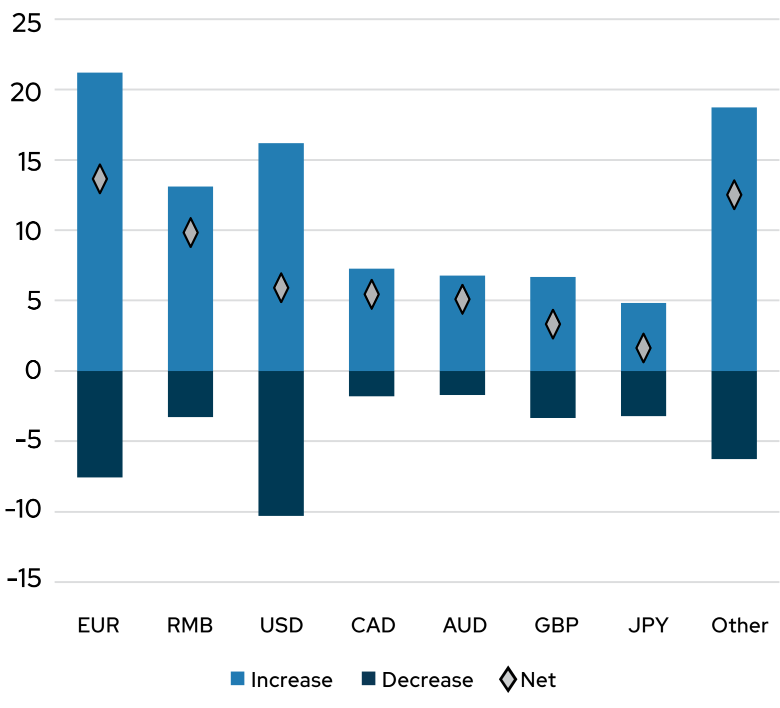
Despite limited movement over the last three years, a net 14% of central banks are planning to increase their euro holdings over the next two years (Figure 3.7). That's higher net demand than for any other currency in this period, and it marks a substantive increase from the zero net planned movement over signalled in our 2021 and 2022 surveys.

Part of this growth may stem from rising real interest rates in Europe, which has helped make European bonds more attractive. As one sub-Saharan African central bank commented, 'with the reversal of the monetary policy of the ECB and positive returns in the euro, many central banks are increasing their share of reserves to the euro.' Some of this movement towards the euro may represent reduced pessimism on the economic outlook, as the euro area seemed to avert recession and stabilise much of its economy despite the war in Ukraine.

A shift towards the euro among central banks appears likely over the longer term. A net 9% of central banks will increase their euro holdings over the next 10 years. This suggests it's not just near-term economic factors which are drawing many reserve managers towards the currency. Rather, these survey results suggest that the euro may play a key role in future currency diversification strategies away from the dollar in the medium to long run.

3.7. Euro most in demand over the next two years

Over the next 12-24 months, are you planning to increase, reduce or maintain your exposure to the following currencies? Share of respondents, %



Source: *OMFIF GPI 2023 survey*

Why the contenders are (still) pretenders

Despite the US' political problems, the dollar will remain dominant because there is simply no other alternative for now, writes Mark Copelovitch, professor of political science and public affairs, University of Wisconsin – Madison.

DESPITE near-constant predictions of its looming and imminent demise, the dollar remains king for many reasons. These include the size of the US economy, historical inertia and the deeply embedded hierarchical network structure of the international monetary system.

The US has its share of economic and political problems, and other currencies such as the Chinese renminbi are beginning to play a larger role in global finance. Yet dollar hegemony rests on far deeper and more durable foundations than the sceptics realise. Chief among these are the unparalleled deep, liquid private financial markets of the US, and its willingness to act as the lender of last resort in global financial crises.

Beyond its structural advantages, the dollar remains dominant because none of the supposed competitors are remotely close to meeting the criteria necessary to replace it. Despite America's problems that have raised uncertainty about US political and economic hegemony – the increasing extremism of the Republican party and President Donald Trump threatening to withdraw from Nato – the dollar remains unchallenged as the centerpiece of the international monetary system.

To see why this is the case, one need only look at the possible alternatives. First, the euro – the number two international currency by a wide margin – is a currency without a government. The European Union is the world's largest economy, but the euro area is neither a fiscal nor a political union, and this makes it difficult to persuade others that they can really rely on the euro in hard times. The euro was set up to minimise its role as a safe haven during crises. The euro area's 'no bailout clause' guarantees limited transfers from surplus to deficit countries with the monetary union during times of stress. This serves the internal political purposes of the euro area's most powerful countries (most of all Germany), but it does not serve the external purpose of making the euro a viable option as the dominant global reserve currency. Until the euro area and its member states finally resolve the festering structural problems within the monetary union, the euro will remain a distant second to the dollar at the global level.

Second, the renminbi is not even close to rivalling the euro or Japanese yen, let alone challenging the dollar's monetary hegemony. China lacks deep and liquid private financial markets, does not allow free flows of capital and President Xi Jinping's government has shown no sign that it will accept the political economy trade-offs necessary for the renminbi to lead in the international monetary system. Moreover, as an authoritarian regime, China lacks the credibility and transparency to play the role of the international lender of last resort. The day may come when the renminbi challenges dollar hegemony, or at least becomes a major player as one of the big three global reserve currencies. But that remains many years, if not decades, away.

Finally, despite the evangelism of their aficionados, cryptocurrencies such as bitcoin simply cannot fill the role played by the government-based reserve currencies that dominate global finance. Cryptocurrencies perform none of the three functions of money (medium of exchange, unit of account, store of value) domestically, let alone at the international level. Instead, they are merely speculative assets, without the political backing or foundations they would need to become reserve currencies, especially during episodes of financial instability. The world economy cannot function with a monetary standard that is not backed by sovereign political power, and which cannot be rapidly increased in supply to provide global liquidity in times of financial crises.

Until and unless the EU becomes a true fiscal and political union — or until China becomes an accountable liberal government, develops its private financial markets and finally accepts the free movement of capital flows – the dollar will remain dominant in global finance. The international monetary system, for better or worse, will continue to be backed by American dollars for years to come.

'Until the euro area and its member states finally resolve the festering structural problems within the monetary union, the euro will remain a distant second to the dollar at the global level.'

Slow progress

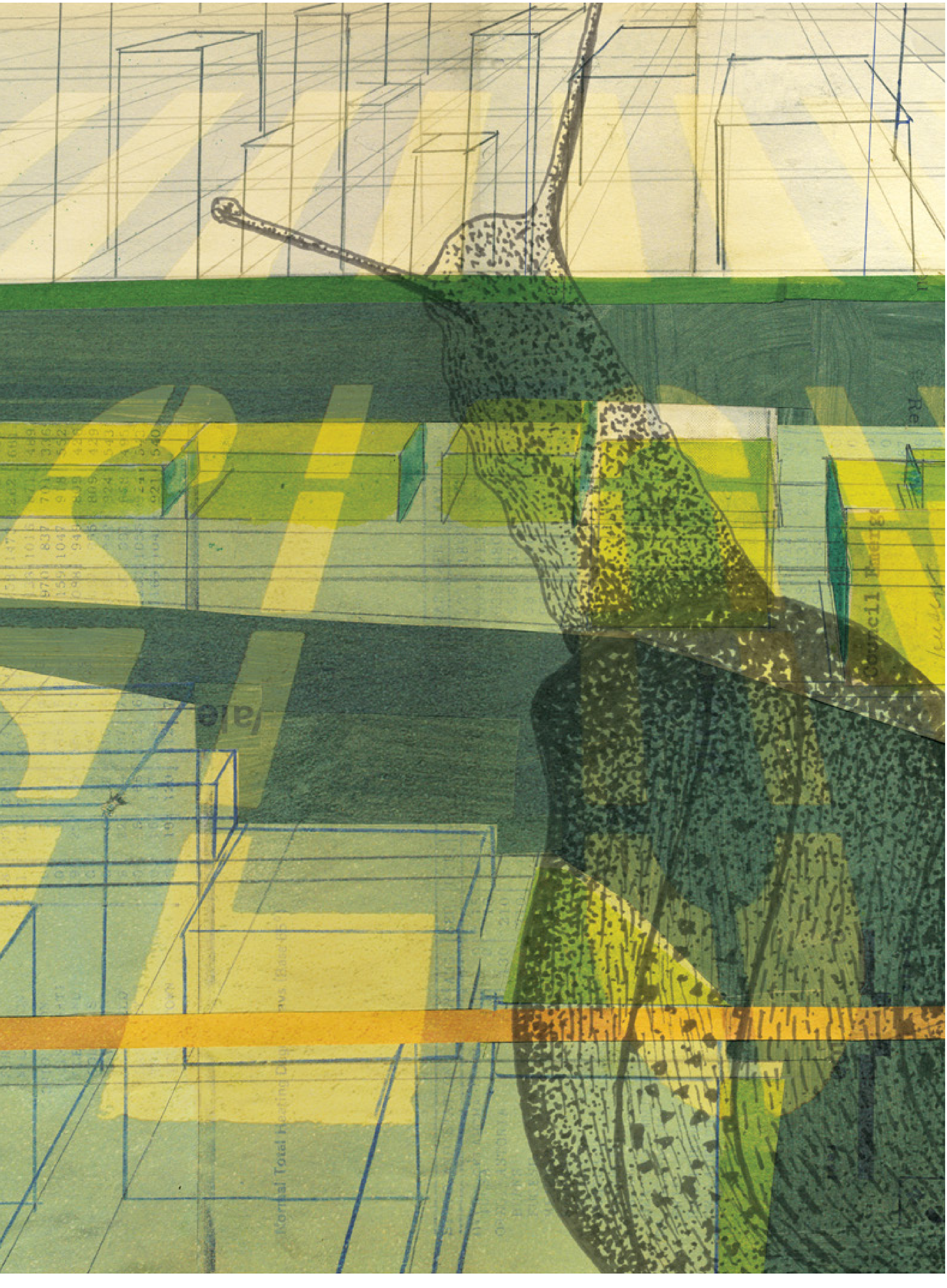
Reserve managers are implementing a more diverse range of environmental, social and governance criteria and will invest more in sustainable assets, with progress primarily driven by advanced economies

Key findings

1. Reserve managers are implementing a more diverse set of ESG criteria than last year. Actions are concentrated in advanced economies, with more than 80% implementing ESG measures compared to half of emerging market central banks.

2. Green bonds will continue to dominate ESG portfolios with 40% of respondents set to increase allocations to the asset in the next two years.

3. Insufficient data is the main barrier to ESG implementation, reported by over 70% of respondents.



CENTRAL bank reserve managers are implementing a broader range of ESG criteria than ever before. Globally, investing in sustainable financial assets remains the most popular approach, increasing to 57% of respondents from 49% in 2022. There has also been a notable increase in the adoption of other criteria such as negative screening, internal integration and impact investing (Figure 4.1). This shift indicates a growing recognition of the importance of ESG when making investment decisions.

ESG implementation is highest among central banks in advanced economies. In our survey sample, 80% of advanced economy central banks implement some form of ESG criteria, compared to half in emerging markets. The discrepancy between advanced and emerging market economies also aligns with the divergent concerns regarding climate change in investment approaches. When asked about economic factors that will impact investment approaches in the long run, 52% of central banks in our survey classify climate change as one of their top three factors (see Chapter 1).

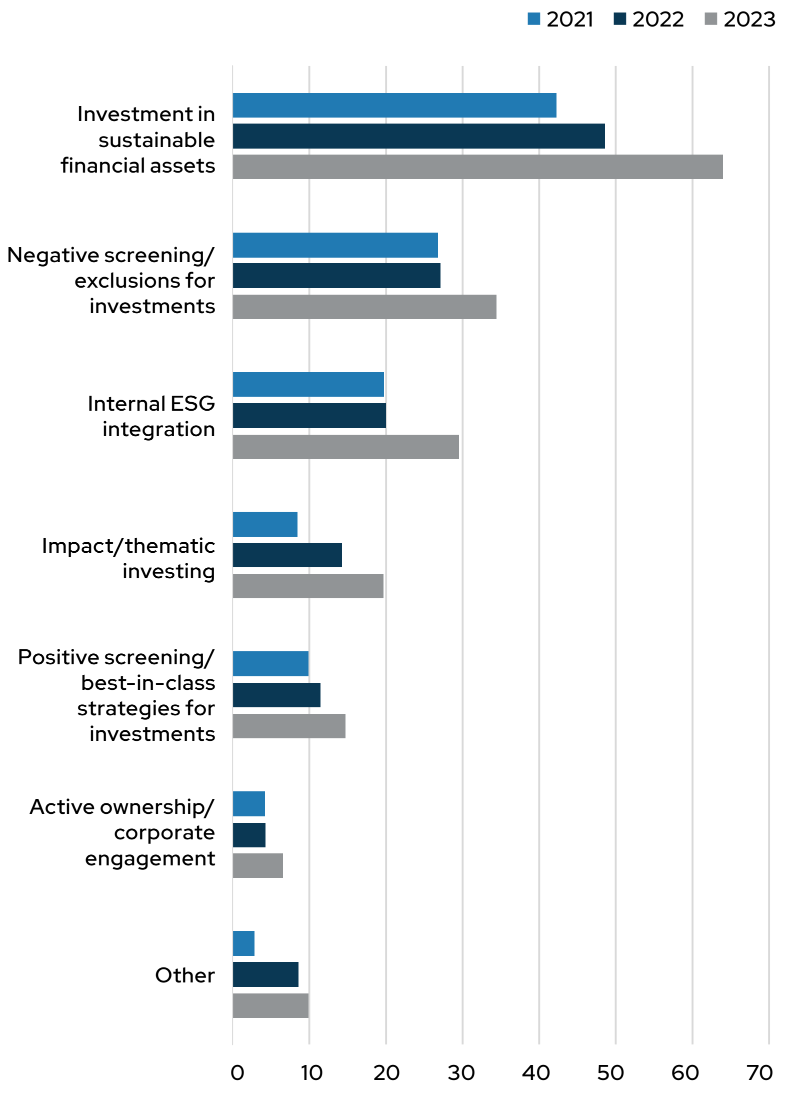
Advanced economies have shown a higher level of concern regarding climate change, with 73% of respondents in these economies ranking it among their top three priorities. In contrast, only 43% of respondents from emerging market economies regarded climate change as a top-three concern. Our survey results show that reserve managers who consider climate change to be a key concern are more likely to implement ESG criteria and invest in sustainable assets.

Broader sustainable asset holdings

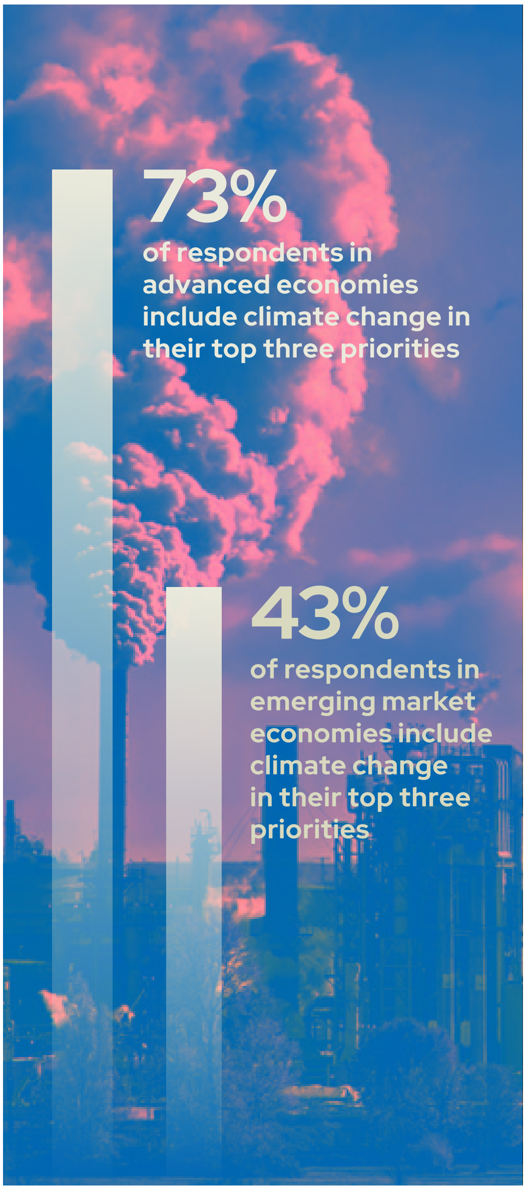
Central banks have diversified their investment portfolios, as indicated by the increased allocations to social bonds, sustainable equities and sustainable

4.1. More reserve managers implementing ESG

In which of the following ways do you implement ESG criteria?
Share of respondents, %

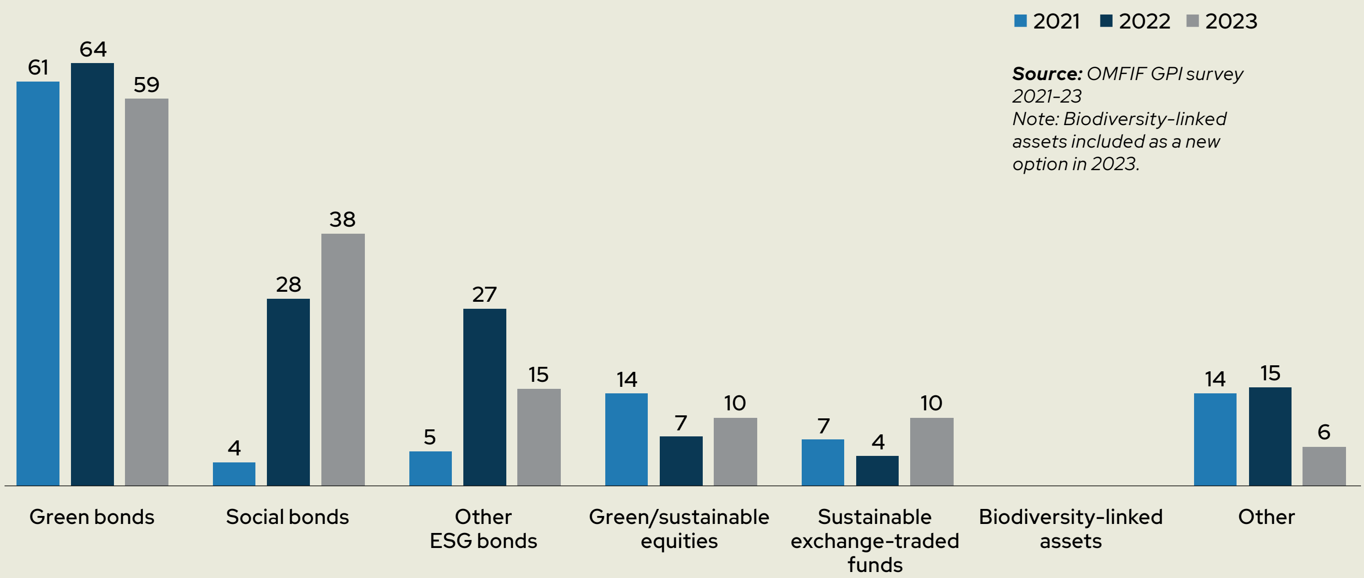


Source: *OMFIF GPI survey 2021-23*



4.2. Central banks investing in more diverse sustainable financial assets

Which sustainable assets do you invest in? Share of respondents, %



Source: *OMFIF GPI survey 2021-23*
Note: Biodiversity-linked assets included as a new option in 2023.

exchange-traded funds (Figure 4.2).

Green bonds remain the most popular choice for central banks, despite a slight decrease in the share of respondents investing in them, to 59% from 64% in 2022. This mainly reflects differences in survey samples, rather than reserve managers divesting from green bonds. Social bonds rank as the second-most common option with 38% of respondents investing in this asset class, up from 28% in 2022. Although there has been an overall increase in investment, more than one-third (38%) of central banks do not invest in sustainable assets.

It is notable that less than half of reserve managers in emerging economies invest in sustainable assets, compared to 91% of those in advanced economies (Figure 4.3). This may be due to the high barriers to accessing ESG assets, particularly on the data front, as well as the resource constraints facing some central banks.

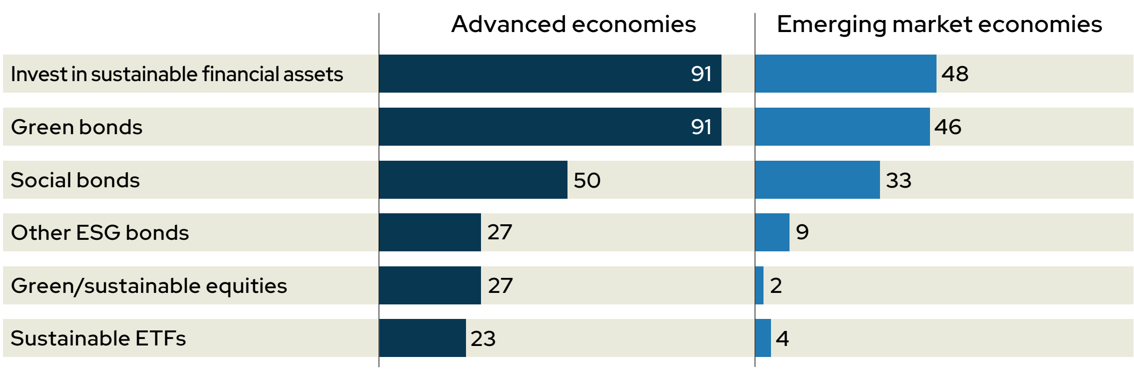
Looking ahead, green bonds are expected to remain the most common sustainable asset class, with 42% of respondents planning to increase their allocation in the next 12-24 months. There is an intention to increase allocations to other asset classes as well, with only one central bank indicating a decrease in allocation to social bonds during the same period.

Within advanced economies, European central banks are leading the investment in sustainable asset classes. This trend is expected to continue as 61% of reserve managers in Europe said they intend to increase investment in green bonds. Central banks in Europe also comprise the highest share of respondents planning to increase their investment in other sustainable asset classes (Figure 4.4). Some central banks in the region, such as the National Bank of Belgium, have integrated sustainability as an explicit part of their reserve management strategy➤

‘Looking ahead, green bonds are expected to remain the most common sustainable asset class, with 42% of respondents planning to increase their allocation in the next 12-24 months.’

4.3. Emerging markets lag in allocations to sustainable financial assets

Share of respondents that invest in sustainable financial assets, %



Source: *OMFIF GPI survey 2023*

(see page 47 for more details). However, ESG concerns are still not a priority for many monetary authorities. Another European reserve manager said that 'activities targeted at sustainable development lay within government's responsibilities and go beyond the standard mandate of the central bank'.

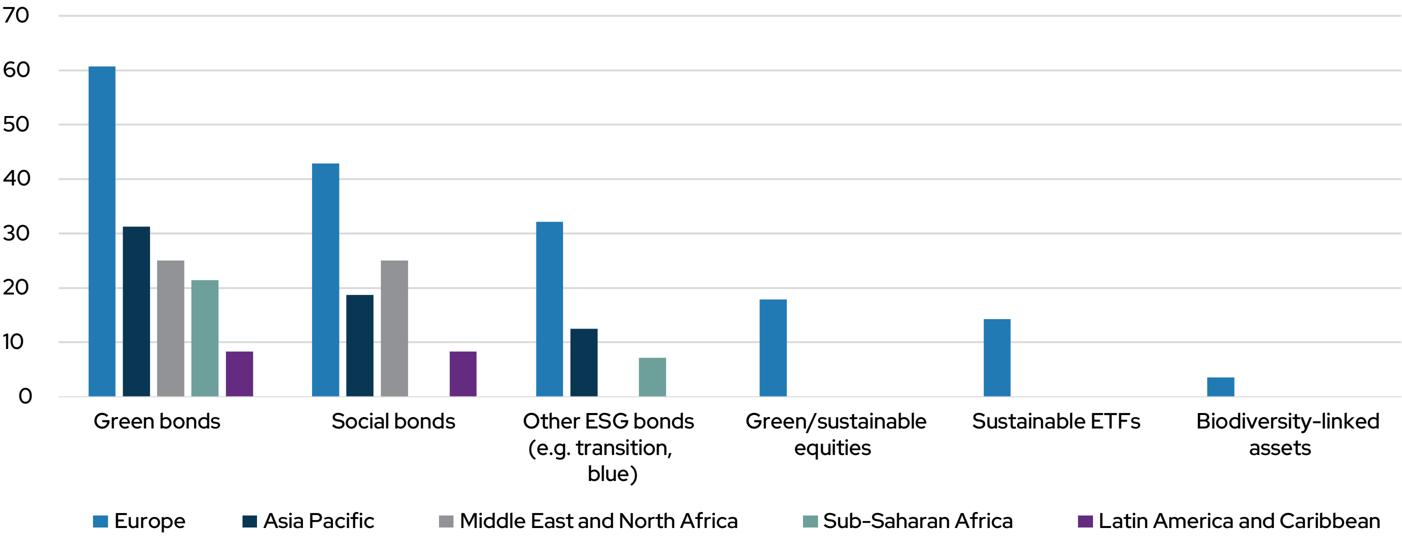
Central banks in other regions intend to increase allocations to sustainable assets, but to a lesser extent and for fewer asset classes. Reserve managers in all regions responded with the intention to increase allocation to green bonds. This is especially encouraging in the case of the Middle East and North Africa as none of the banks in the region that responded to the survey currently invest in any sustainable classes. For the trend towards sustainable investing to continue, it will be necessary for central banks – particularly those in emerging markets – to address the barriers they face when investing in sustainable financial assets.

Data challenges persist

While the implementation of ESG criteria is increasing across categories, insufficient data remains a significant barrier to ESG adoption. According to the survey, 72% of respondents identified insufficient data as the biggest hurdle to ESG investment, ➤

4.4. Demand for ESG assets highest in Europe

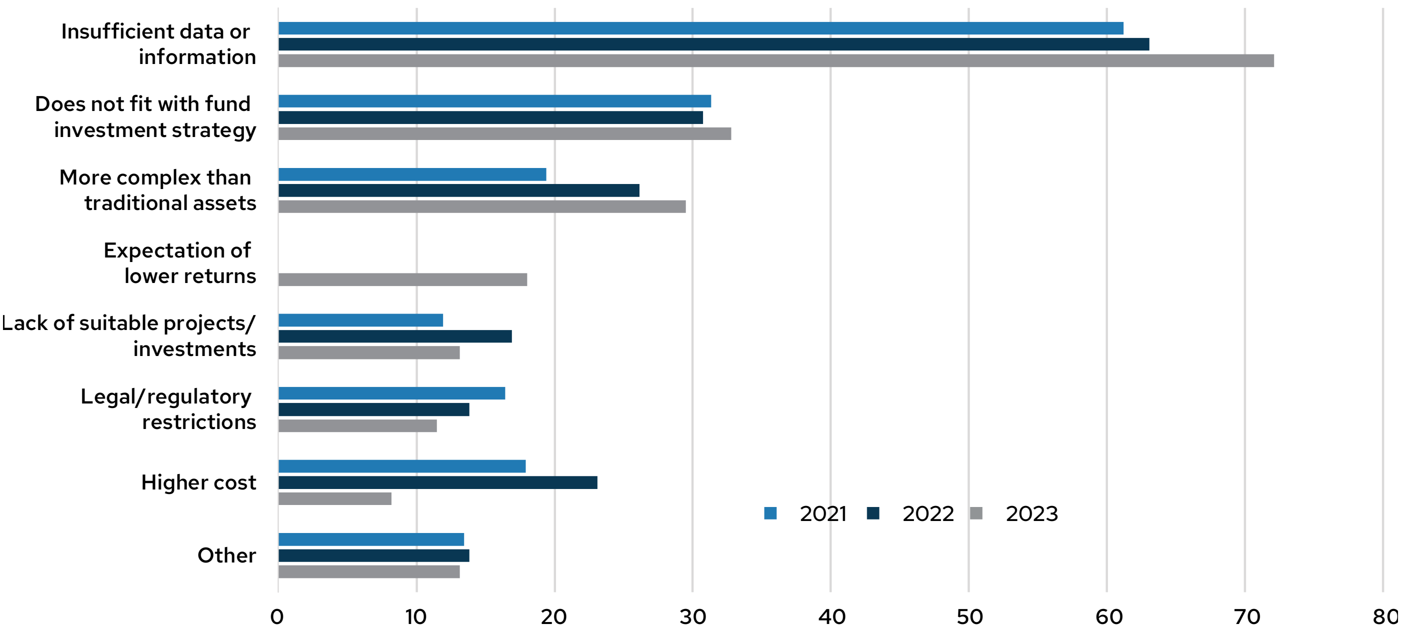
Share of respondents expecting to increase allocation to the following assets in the next 12-24 months, %



Source: *OMFIF GPI survey 2023*

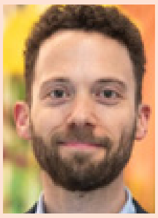
4.5. Data is still the key barrier for ESG adoption

What are the main barriers to ESG adoption/further integration in your portfolio? Share of respondents, %



Source: *OMFIF GPI survey 2021-23*
Note: Expectation of lower returns was included as a new option in 2023.

Committing to sustainable and responsible investing



Through the integration of sustainable and responsible investment principles, central banks can support the green transition while addressing sustainability-related risks, writes Michiel De Smet, sustainable investment expert, National Bank of Belgium.

THE benefit of integrating sustainable and responsible investment principles into reserve management is twofold: we can support the transition to a sustainable and inclusive net-zero economy, while helping to address the impact of environmental, social and governance-related risks on our own investments. Investing in thematic assets and disclosing climate-related risks are two examples of how to do so.

SRI principles are increasingly guiding the National Bank of Belgium's activities. For its non-monetary policy portfolios, the bank recognises sustainability as a fourth objective of its strategic asset allocation policy, alongside liquidity, safety and return. In line with its journey so far, in early 2023, the bank took two important steps to support the transition to a sustainable and inclusive net-zero economy by publishing its Sustainable and Responsible Investment Charter and first climate-related disclosures.

The charter lays out a high-level framework for the inclusion of SRI in the management of the bank's reserves. It is based on a double materiality perspective, meaning it is concerned with both how sustainability issues affect companies in which the bank invests and the impact of these companies on society and the environment. The charter incorporates international insights and experience, such as guidance by the Network for Greening the Financial System and global standards for green or social bonds.

The SRI Charter consists of five pillars, which will guide the gradual integration of sustainability into the bank's reserve management (see below). While all five pillars play a role in a comprehensive SRI strategy, ranging from climate-related targets to human rights-based exclusions, I will focus here on two of them: financing and disclosing.

In 2021, the bank created a dollar-denominated portfolio which is invested solely in thematic bonds. To ensure that the proceeds from issuing these bonds are allocated to further the transition, the bank selects securities aligned with international standards and guidelines (such as those provided by the International Capital Market Association and the Climate Bonds Initiative), as verified by a second party.

Purchasing these types of securities also supports the United Nations' sustainable development goals, which is often laid out explicitly in the bond framework. At the end of 2022, the bank had around 10% of its aggregate portfolio invested in thematic assets (amounting to around €2bn), and it aims to continue growing this share. In the future, other relevant frameworks, such as the European Union taxonomy, can be considered.

Adequate disclosure is equally important when it comes to furthering the transition to a net-zero economy. As is the case with financial information, transparency on sustainability-related risks helps investors and other stakeholders take informed decisions. Sustainability disclosure initiatives, such as the EU Corporate Sustainability Reporting Directive and the International Sustainability Standards Board, are increasingly driving voluntary and mandatory transparency.

In 2023, the NBB published its first annual disclosures on climate-related risks to inform the public of the impact of such risks on its own portfolio management. The report provides information on the greenhouse gas emissions related to the bank's non-monetary policy portfolios. The disclosures are coordinated within the Eurosystem, with the methodology based on the recommendations of the Task Force on Climate-related Financial Disclosures.

The SRI Charter reflects the bank's commitment to the transition to a sustainable and inclusive net-zero economy but should be read in context. Successful implementation of the objectives will depend on the global economy's transition progress. For example, achievement of the bank's net-zero target will depend on whether and to what extent governments are able to meet the targets defined in the 2015 Paris agreement, as the bulk of the bank's portfolio is currently invested in sovereign bonds due to the nature of central banking activities. With that in mind, the NBB remains committed to the integration of SRI principles.

The five pillars of the bank's SRI Charter

marking an increase from 63% the previous year. Insufficient data is a prevalent challenge for both advanced and emerging economies, and is an obstacle across all asset classes, rather than being specific to any individual category.

The share of respondents citing high costs, legal restrictions or a lack of projects as barriers to ESG investment has decreased over the years. Only 9% of respondents mentioned high costs as a barrier, compared to 23% in 2022. This suggests that cost-related challenges are becoming less of a concern.

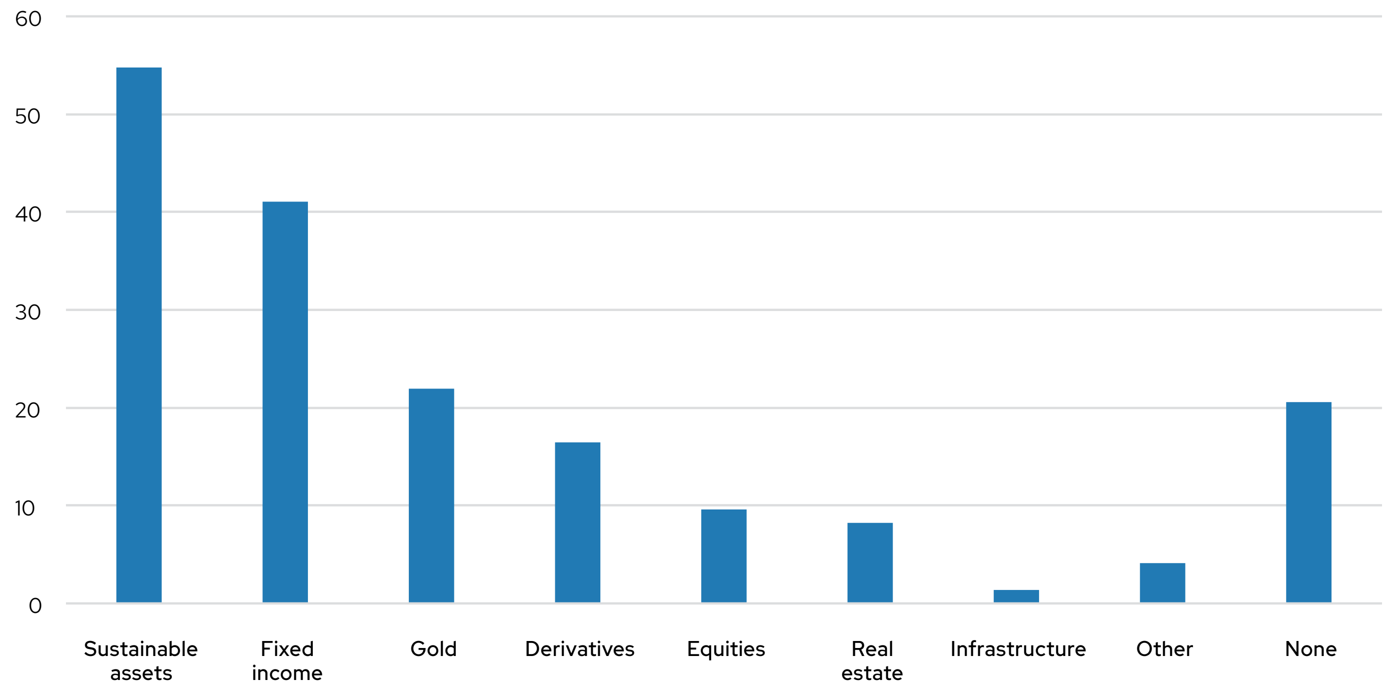
However, the lack of suitable investment options is a more pressing issue for central banks in emerging markets. While there is interest in ESG, the limited knowledge of viable investment opportunities, compounded by data challenges, hampers adoption. This sentiment was echoed by one central bank, which noted 'current availability and quality of data are not yet sufficient to base investment decisions on them'.

The survey also revealed that 55% of respondents chose sustainable assets as the category in which they would prefer to see improvements in data access and analysis (Figure 4.6). This underscores the importance of enhancing data availability and quality specifically for sustainable assets as central banks seek to make more informed and effective investment decisions.

Addressing the challenges related to data availability and quality will facilitate the wider adoption of ESG practices, particularly in emerging markets. It will provide central banks with the necessary information to identify suitable investment opportunities, align their investment strategies with sustainability goals and contribute to a more sustainable global financial system.

4.6. Sustainable assets are a key area for improvement

Which assets would you like to see improvement in data access and analysis?
Share of respondents, %



Source: *OMFIF GPI survey 2023*

Putting an end to 'black and white' thinking

Marcus Pratsch, head of sustainable bonds and finance, and Frank Scheidig, global head of senior executive banking at DZ BANK, explain why transition finance is critical to the success of the global sustainability agenda.

THE global real economy is undergoing a fundamental transition process. Massive investments are needed to make business models, production methods and processes fit for the future and ready to take advantage of the opportunities offered by sustainable development. To successfully implement the global sustainability agenda, it is necessary to put an end to the classic 'black and white' thinking.

We cannot achieve a decarbonised and more sustainable world by focusing exclusively on economic activities that are already 'dark green'. We can have a much greater positive impact by helping to make 'brown' business models and industries 'light brown' or 'light green', rather than painting already 'dark green' activities one shade greener.

Critical factors: speed, instruments, collaboration

Without fast and deep emission reductions in all sectors, limiting global warming to 1.5 degrees Celsius is not achievable. Effective action requires concerted and sufficient investment, knowing that the costs of inaction will be far higher.

The good news is that we have all the tools and the knowledge required to limit warming. However, we need to speed up. This also means that market instruments must be expanded and applied more broadly and equitably to support immediate emissions reductions and encourage innovation.

Transition bonds are a relatively new fixed-income instrument designed to enable issuers from less sustainable sectors like gas, chemicals or aviation finance a gradual shift to a more sustainable business model. Proceeds from the issuance of transition bonds could be used to finance transformation technologies, for example.

Many investors also see target-linked structures as a suitable instrument for transition financing. Unlike use-of-proceeds transition bonds, they focus on the transformation of the issuer as a whole. Target-linked bonds are forward-looking and performance-orientated financial instruments through which issuers explicitly commit to future improvements in sustainability criteria within a predefined timeframe. Development is measured using key performance indicators and evaluated against sustainability performance targets. The financing costs of target-linked bonds are linked to the (non-) achievement of these sustainability targets. If the issuer fails to meet the targets, financing becomes more expensive.

Everyone has a role in the transition process

For the financial sector, banks need to become reliable partners for transition candidates who express their credible transformation ambitions through the sustainable fixed-income market.

In line with the new credo, 'transform instead of divest', the transition of the real economy is also finding its way into the investment strategies of more investors. In the past, most sustainable investors focused on strategies such as exclusions or best-in-class approaches. Those companies that did not fit into the grid were sold.

Today, investors are increasingly interested in the transition potential of the real economy. Identifying the 'sustainable corporates of tomorrow' is becoming more and more important. Through engagement, investors encourage companies to be more transparent in their disclosure of environmental, social and governance factors, better manage material sustainability risks and follow a proper and credible transformation path. As long as they stay on this path, they remain invested or even increase their investment. The option to divest always remains – but only as a last resort.

Finally, there are increasing demands on central banks to take on new responsibilities for supporting the transition to a low-carbon economy as they are in a powerful position to accelerate transition financing both via monetary policy and financial regulation. Financial stability is a key element of their mandate, and climate-related risks pose systemic risks to the financial system through physical, liability and transition risks. And let's not forget: when it comes to reserve management, transition financing presents huge investment opportunities for central banks in their role as investors.

'We can have a much greater positive impact by helping to make 'brown' business models and industries 'light brown' or 'light green', rather than painting already 'dark green' activities one shade greener.'

Bolstering internal capacity

The biggest operating challenge for reserve managers is recruitment and training. Many are using external managers to overcome this

Key findings

1. The most commonly reported operational challenge among central bank reserve managers is recruitment and training, selected by 58% of survey respondents.

2. To bolster their capacity, 74% of reserve managers use external managers. This is primarily for knowledge transfer (68%) as well as accessing complex assets classes (50%).

3. Respondents are struggling to incorporate ESG into their internal investment practices. Most (55%) would like improved data and analysis for this quickly evolving asset class, and 26% use external managers to access sustainable assets.

4. Improving internal data management systems is the top data priority for reserve managers (74%). In contrast, portfolio visibility and obtaining new data are relatively minor concerns. ➤


Ventriculus tertius
Massa intermedia
Tela chorioidea ventriculi tertii
Corpus pineale
Foramen interventriculare (Monroi)
Columna fornicis
Fissura transversa cerebri
Septum pellucidum
Aquaeductus cerebri (Sylvii)
Lamini rostralis
Lamina quadrigemina
Velum medullare anterius
Vent. quart.
Commissura anterior
Lamina terminalis
Vermis
Chiasma opticum
Infundibulum
Hypophysis
Tuber cinereum
Arbor vitae
Corpus mamillare
Corpus medull. cerebelli
Pons (Varoli)
Medulla oblongata
Fig. 107.—Median Sagittal Section through the Brain. (After Toldt.)

IN an OMFIF report published in March 2023, 'Central banks in the digital age: bringing data into focus', we found that central banks are rapidly expanding their data capabilities and analytical tools. This has led to challenges around data management and governance. However, reserve managers have more pressing internal concerns.

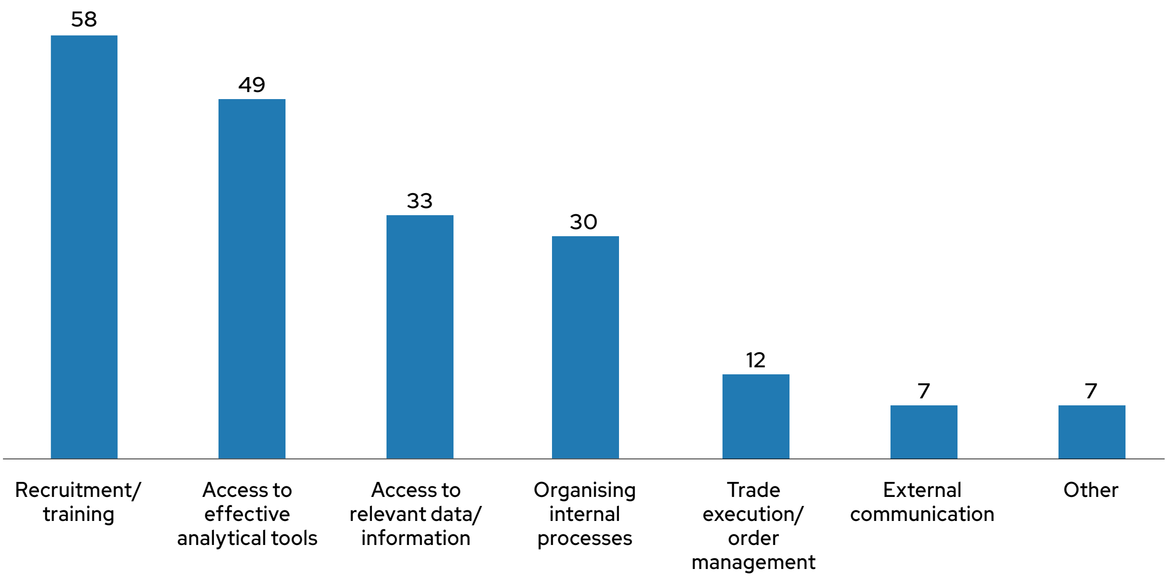
The most commonly reported operational challenge was recruitment and training, selected by 58% of survey respondents (Figure 5.1). There are growing demands for reserve managers to navigate the uncertain macroeconomic environment, consider sustainability and, often, integrate a wider variety of data into their investment practices. Finding the right people and equipping them with the necessary skills appears to be increasingly difficult. Beyond recruitment, 'personnel retention' was listed as a challenge by several respondents. Accessing effective analytical tools (49%) and access to relevant data or information (33%) are the next biggest operating concerns.

Recruitment and training challenges are a bigger concern for emerging market central banks, reported by 63% compared to 48% in advanced economies. That's especially the case in Latin America and sub-Saharan Africa, where around 70% of institutions reported struggling with this factor, compared to 58% of respondents from Europe, 50% from the Middle East and North Africa and 40% from Asia Pacific (Figure 5.2). Meanwhile, 71% of sub-Saharan African institutions reported problems with access to effective analytical tools, with 60% of institutions from Asia Pacific reporting

'Recruitment and training challenges are a bigger concern for emerging market central banks, reported by 63% compared to 48% in advanced economies.'

5.1. Struggles with recruitment and training

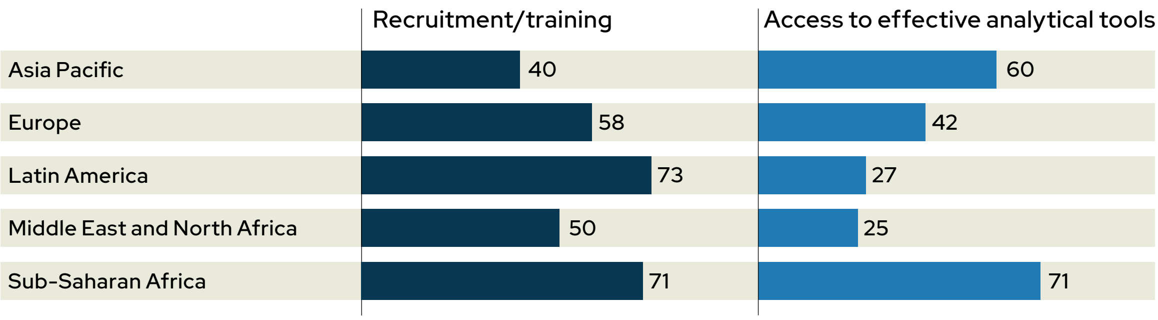
What are your main operating challenges? Share of respondents, %



Source: *OMFIF GPI survey 2023*

5.2. Variation in operating challenges by income level

What are your main operating challenges? Share of respondents by region, %



Source: *OMFIF GPI survey 2023*

the same, compared to 42% from Europe, 27% from Latin America and just 25% from the MENA region.

External managers are plugging the gap

With reserve managers struggling to find the right people with the necessary skills, many are turning to external managers. Three-quarters (74%) report using external managers, with an average 13% of reserves being managed externally. This share has remained consistent over the past several years.

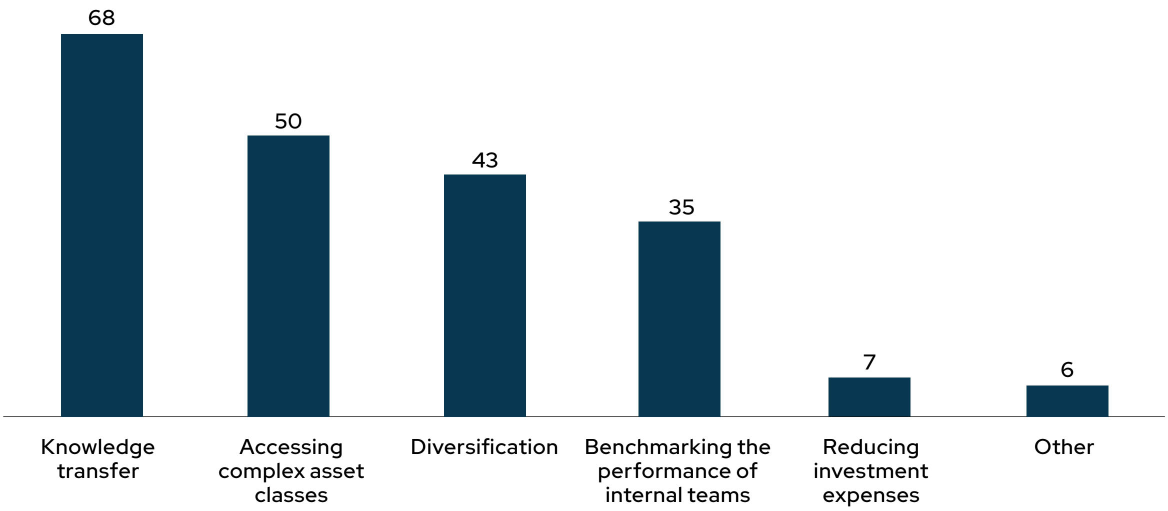
Knowledge transfer and accessing complex assets are the primary reasons why central banks turn to external managers (Figure 5.3). Over two-thirds (68%) report using external managers for knowledge transfer and half (50%) use external managers to access complex asset classes. One respondent noted that external managers are used due to a 'lack of internal resources and knowledge' and another stated their institution uses external managers for 'capacity building [and] training programmes'. This suggests external managers are being used to help plug the gap in internal capacity.

Among asset classes, external managers are mostly used for government bonds (59%). This is particularly the case in emerging markets, where it was selected by 74% of respondents. A significant portion of reserve managers also use external managers for non-traditional reserve assets. After government bonds, the most common asset classes managed externally are corporate bonds (35%), asset-backed securities (32%) and sustainable assets (25%) (Figure 5.4). This is consistent with the finding that many reserve ➤

25%
The share of reserves managers using external managers to manage sustainable assets increased to 25% this year from 17% in 2022

5.3. Central banks using external managers for knowledge transfer

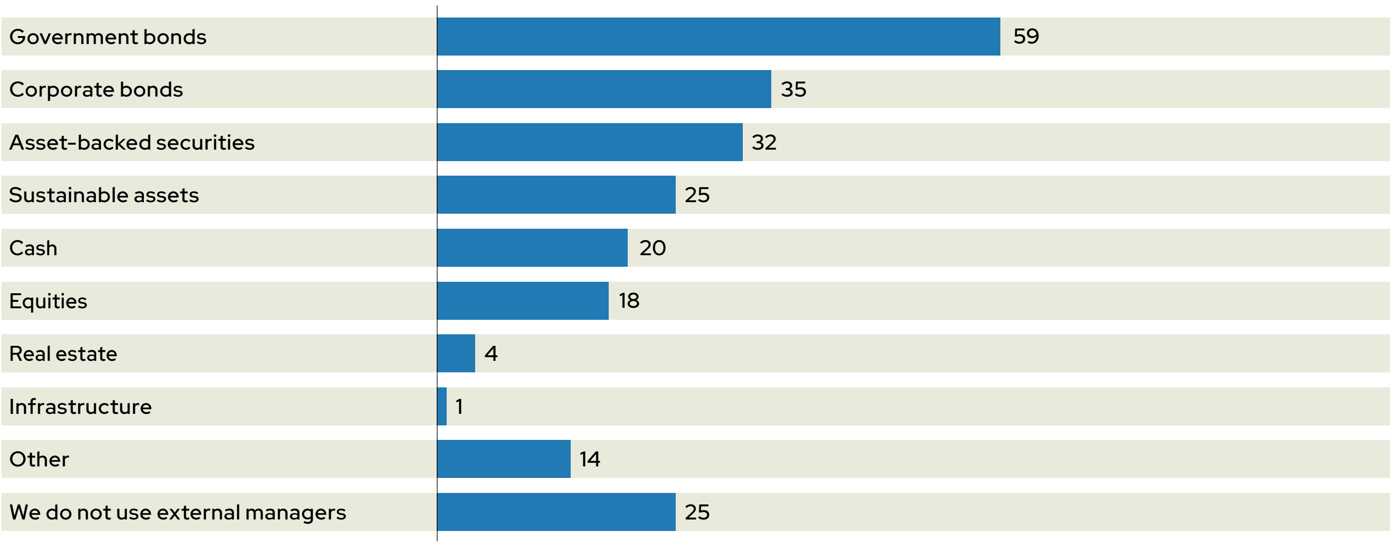
For which of the following reasons do you employ external managers? Share of respondents, %



Source: *OMFIF GPI survey 2023*

5.4. External managers used across wide range of asset classes

Which assets do you use external managers for? Share of respondents, %



Source: *OMFIF GPI survey 2023*

managers are looking for help to access complex asset classes.

Difficulty in integrating ESG

Reserve managers seem to have difficulties in integrating ESG into their internal investment practices, and some are looking externally for assistance. The share using external managers to manage sustainable assets increased to 25% this year from 17% in 2022. This is especially the case for central banks in advanced economies. Sustainable assets (48%) are the most common asset class for which external managers are used by this group.

This trend looks set to continue: Though they have not yet invested, several respondents listed ESG assets as an area they are looking to explore. One noted 'We are in the process of exploring ESG [via external managers] as an alternative investment vehicle.'

Sustainable assets are by far the most common answer among reserve managers (55%) when asked which asset class they would like to see improvements in data access and analysis. One survey respondent commented that better ESG data are needed 'in order to evaluate [ESG assets] and initiate internal procedures to start investing in sustainable assets.' This is also in line with the finding in Chapter 4 that 72% of reserve managers see insufficient data as the biggest barrier to further ESG adoption.

Various comments from the survey substantiate this finding. One reserve manager stated that 'Unified definitions, taxonomy and reporting standards would make the sustainable market more transparent.' Another noted that, 'We see quite some room for improvement in data access and analysis of sustainable assets, which we also find understandable in light of the current stage of development and the nature of the data.' This suggests that, though progress on ESG data is slow, the barriers are widely recognised, and increased regulatory clarity on ESG assets would be a welcome development.

Improving data capabilities

Finally, data appears to be an increasingly important consideration for reserve managers. Only 13% stated that it is not a focus over the next 12-24 months. Instead, the majority of survey respondents reported that they are looking to build or improve internal data management systems in the next two years (74%). This is a bigger priority for reserve managers than integrating data sources (40%) or obtaining new or better data sources (28%), suggesting data access is less of an issue than knowing how to manage it (Figure 5.5).

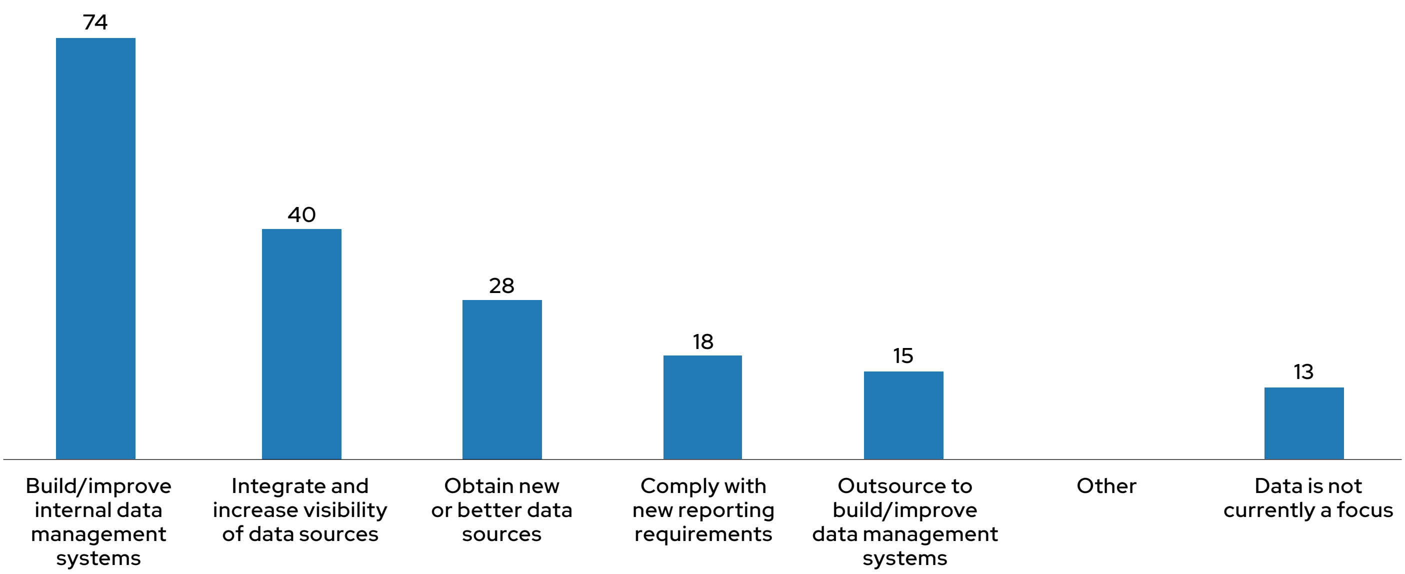
Portfolio visibility and the integration of unstructured data sources do not seem to be posing major challenges to reserve managers. Most institutions (79%) need 24 hours or less to obtain a total portfolio view, and 37% stated that they have near-real time visibility over their total portfolio. In addition, when asked about their satisfaction with the integration of unconventional or unstructured data sources, most reported being neither satisfied or dissatisfied (32%).

Instead, it appears there is greater focus on upgrading broader technological infrastructure at central banks. Respondents' comments reveal that several institutions are undergoing transformative IT or data projects. As one noted, 'The [central bank] is currently engaged in an IT transformation project which is expected to improve internal processes.' Another stated that 'With the adoption of a new portfolio management system, internal processes are continuously being improved to align them with the functionalities of the system.' As central banks expand their data and analytical capabilities, more institutions are likely to undergo technological transformations in the coming years. •

'The bank is currently engaged in an IT transformation project which is expected to improve internal processes.'
Central bank reserve manager from sub-Saharan Africa

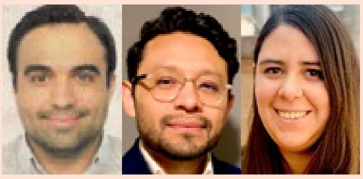
5.5. Central banks looking to build or improve internal data management systems

What are your data priorities in the next 12-24 months? Share of respondents, %



Source: *OMFIF GPI survey 2023*

Revolutionising the approach to asset management



By creating an external asset management programme, the Banco de México diversified its portfolios and added value, write Joaquín Tapia Macías, director of international operations, Wilfrido Jurado Pedroza, manager of investment strategy, and Valeria Beléndez Gonzalez, deputy manager of short-term investment strategy, Banco de México.

SINCE its inception in 2001, the Banco de México's external asset management programme has brought about significant changes to the bank's approach to assets by investing in new financial markets and encouraging knowledge transfer. The programme represents an integral part of our reserve management strategy and plays a crucial role in meeting the bank's needs through partnerships with external professional managers. As a result, the processes to select and evaluate such managers objectively have evolved to ensure the bank's aims are fulfilled.

The programme began with the objective to build up the credibility of Banco de México's investment decisions by comparing the performance of internal staff and external managers. Another goal of the programme was to enhance the performance of the investment portfolio as external managers are expected to outperform the benchmark portfolios. The bank also aimed to benefit from knowledge and technology transfer from external managers who provided insights on investment decisions, offered training to staff and advised on technology.

As the size of the bank's foreign exchange reserve portfolio expanded from 2007-15, the asset management programme was (and continues to be) a source of relevant ideas for diversification in terms of new asset classes and investment strategies, whether in fixed income, currencies, commodities or derivatives.

Afterwards, the programme was used to gain exposure to asset classes such as mortgage-backed securities and corporate debt, which are operationally complex and require significant human and capital investment. The incorporation of these asset classes as part of the bank's investable universe has further strengthened the diversification process.

In view of the limits on foreign exchange reserve portfolios, such as the restriction on investing in securities with a higher risk profile, the bank decided to expand the programme by adding a non-benchmark mandate. Its rationale was to provide more flexibility and to increase the benefits of diversification, preserving capital regardless of the prevailing stage of the business cycle and enhancing the returns of the reserve portfolio.

The results have yielded valuable insights that have positively influenced the overall investment process and further diversified the portfolio. Since its establishment, the non-benchmark mandate has contributed to the creation of portfolios exhibiting low or even negative correlation with the bank's internal investments. It has effectively fulfilled the objective of enhancing the entire reserve investment strategy.

The selection and evaluation processes are rigorous. This has ensured that all the objectives of the programme are met satisfactorily. Banco de México considers qualitative and quantitative factors to assess each manager's investment capabilities. A selection of institutions prepares a proposal outlining their experience in managing central bank portfolios, investment style, opinions on strategies, training plans and technology transfer. After their proposals are reviewed, shortlisted asset managers are given the opportunity to further elaborate on their strengths and present their management fees proposal to senior officials at the bank.

External managers selected through this process are continually evaluated to assess their performance and service quality. Based on the results of the evaluation, the size of the managed portfolio of each asset manager can be modified or the mandate could be terminated. Banco de México's evaluation procedure is a result of a comprehensive analysis of diverse methodologies and experience, which also includes dialogue with other central banks and institutional investors.

Not surprisingly, there is no one-size-fits-all methodology among central banks. Nonetheless, the vast majority of central banks considers certain factors to be important, including relative net return to the benchmark (net of fees), risk-adjusted returns, knowledge transfer, coherence between investment style and investment decisions, ability of managers to explain their risk assessment and investment decisions and compliance of investment guidelines.

The success of the external asset management programme hinges on having continuous evaluations and making sure it is aligned with the bank's objectives. We expect the programme to continue evolving with our asset management process, adapting in ways that seize its added value, not only for returns, but also in terms of portfolio diversification and knowledge and technology transfer.

Capturing the promise of the digital age

Public institutional investors are turning to new datasets, governance strategies and technologies to fulfil their responsibilities, writes Stefan Gmuer, global head of official institutions and international head of asset owners and insurance companies, State Street Corporation.

A flood of new data, asset classes and requirements have created a storm of data systems overload. How can the world's public investors, many facing tight budgets along with strict oversight and regulations, capture the benefits of the digital age?

It is important to recognise that technology does not stand still and neither do risks to financial stability and the global economy. Consider the impact on financial markets of the Covid-19 pandemic, more frequent and severe climate events and the extreme volatility of digital financial assets. Public investors face a moving target when it comes to new data and the technology and platforms required to support it. Add to that regional differences and country-specific regulations and it soon becomes clear that there is no 'one size fits all' to capture the promise of the digital age.

Maximising potential

There are key considerations that can help managers use data to its maximum potential. First, there is the quantity and quality of data and the access to it. One of the biggest challenges facing central banks is how to simplify data. With more data available than ever before, central banks struggle with ingestion, integration and accessing 'golden source' data in a format that can be used for analysis.

Traditional technology platforms were built with a focus on storing rather than consuming data, so legacy platforms often add to these complexities. Unstructured data and streaming data present further complexity in extracting actionable insights for making investment policy and risk decisions. Fragmented and siloed data also pose a challenge for aggregating and reconciling data from multiple sources, hindering timely decision-making and increasing costs.

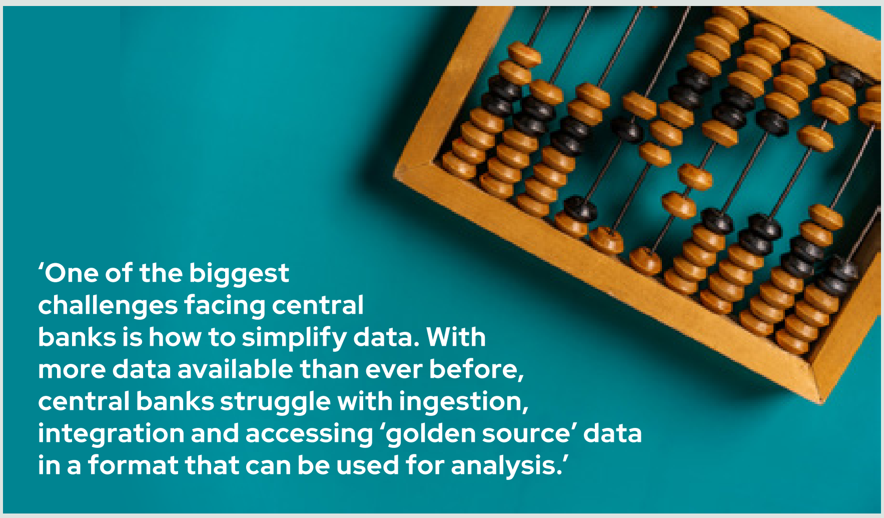
During research for the joint OMFIF and State Street report, 'Central banks in the digital age: bringing data into focus', we found that many central banks have been operating without a data governance framework. Each department gathers the data it needs in the format that suits that individual department. Over time, this multiplier effect creates an expanse of different systems for managing data, widespread duplication of effort, conflicting or unverified data and serious inefficiencies in data governance.

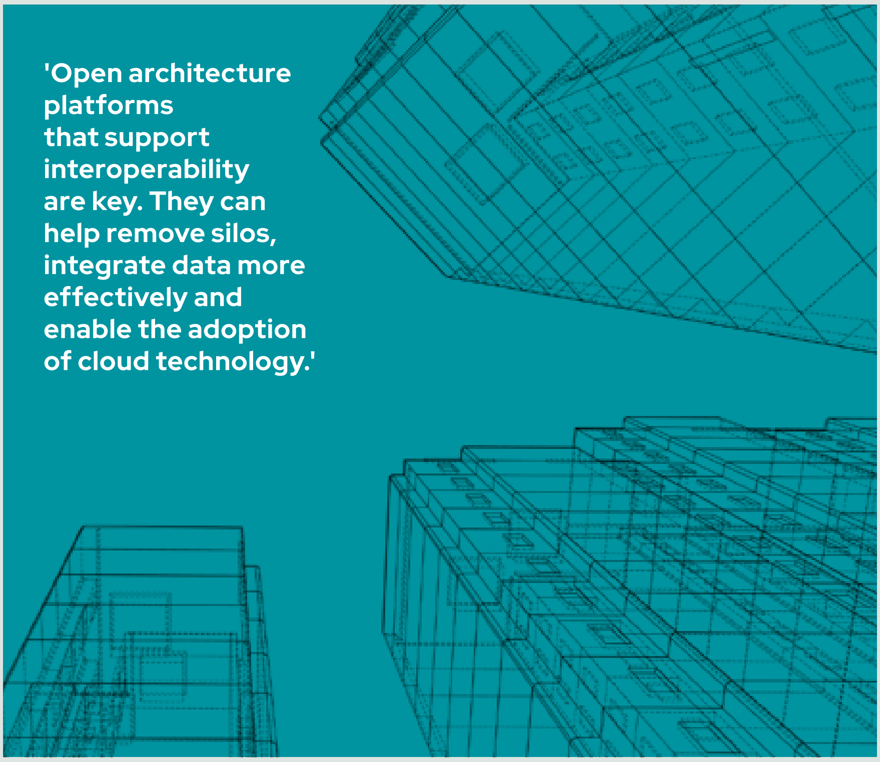
Finding the right infrastructure

Our research also revealed that central banks were beginning to tackle this problem with a variety of approaches. One central bank official interviewed for the report discussed how they were improving data sharing and collaboration with a data-sharing initiative. Having better visibility across their data has allowed them to make linkages that were not apparent in the past.

However, without the infrastructure to facilitate easy data flow from department to department, it is likely that some teams within this central bank will be working with incomplete statistical pictures. Unless there are rigorous controls to ensure there is a single golden copy, the collection of multiple versions can lead to analysis based on imperfect information.

This brings us to open architecture.





Consolidating data environments and effectively streamlining business processes promotes collaboration and increased transparency within an organisation. Open architecture platforms that support interoperability are key. They can help remove silos, integrate data more effectively and enable the adoption of cloud technology.

While the implementation of a suitable platform is foundational, the real enabler for bringing these pieces together is data services. Once an institutional investor has brought the data together, normalised it and enriched it, they can extract maximum value from that data.

Think about this process in the context of reserve management. An enterprise data management platform enables the connectivity that is required to draw data from various sources in a seamless manner, and then the services layer helps to validate, curate and create a master version of the data. Ultimately, that is the key to being able to get real-time position data and visibility of risk at a firm-wide level to support investment decisions.

Embracing the cloud

Every enterprise data management model will ultimately have some component of cloud. We have observed software vendors moving rapidly from on-premises storage to cloud-based technology. While the benefits of the cloud are well understood – flexibility, transparency, scalability and resiliency – issues around data sovereignty and security remain.

In the case of central banks, our research showed that some are moving to a middle ground when it comes to the cloud. They are willing or able to allow some of their less sensitive data to be stored on the cloud, but are prohibited from full cloud migration because of the need to protect sensitive data. Hybrid clouds are a mix of public cloud hosted on a multi-tenant infrastructure and private cloud hosted in on-premises infrastructure. This approach offers the efficiency benefits of the cloud without compromising on the security standards of storing sensitive data.

We found from our research that a number of central banks are planning to make their first steps towards the hybrid approach in 2024 and have already begun choosing components of their future operating model, which natively transfer into a public cloud environment when they are ready to migrate.

Another central bank official interviewed for the report said that they were considering a model where data is stored in the cloud in an encrypted form. In this case, the data could be stored and shared efficiently for analysis, but the key for the encryption would be held by a third party. So, if the cloud provider was ordered to release data, it would only be able to release encrypted data, ensuring that sensitive information remains private and protected.

For central banks in the European Union, the situation is a little more complex. An EU committee is in the process of developing its own policy and guidelines around cloud deployment, which is expected to be released in 2024.

While the adoption of cloud is not without its challenges, we are optimistic that cloud technology will evolve rapidly and deliver significant benefits to central bankers and other global public investors in time.

It is critical that public investors derive the same benefits and efficiencies as private investors from new technology and data systems while maintaining security and privacy. Fostering a more collaborative data culture and mindset across the enterprise is a prerequisite. But to fully modernise their approach to data, public investors must consider how to ensure there is a golden copy of data, employ effective data management services and create operating model interoperability. Bringing these three elements together will put public investors on the path to realising the promise of the digital age.

6.

Databank

A closer look at the management trends in each region, featuring survey highlights and rankings of international reserve assets.

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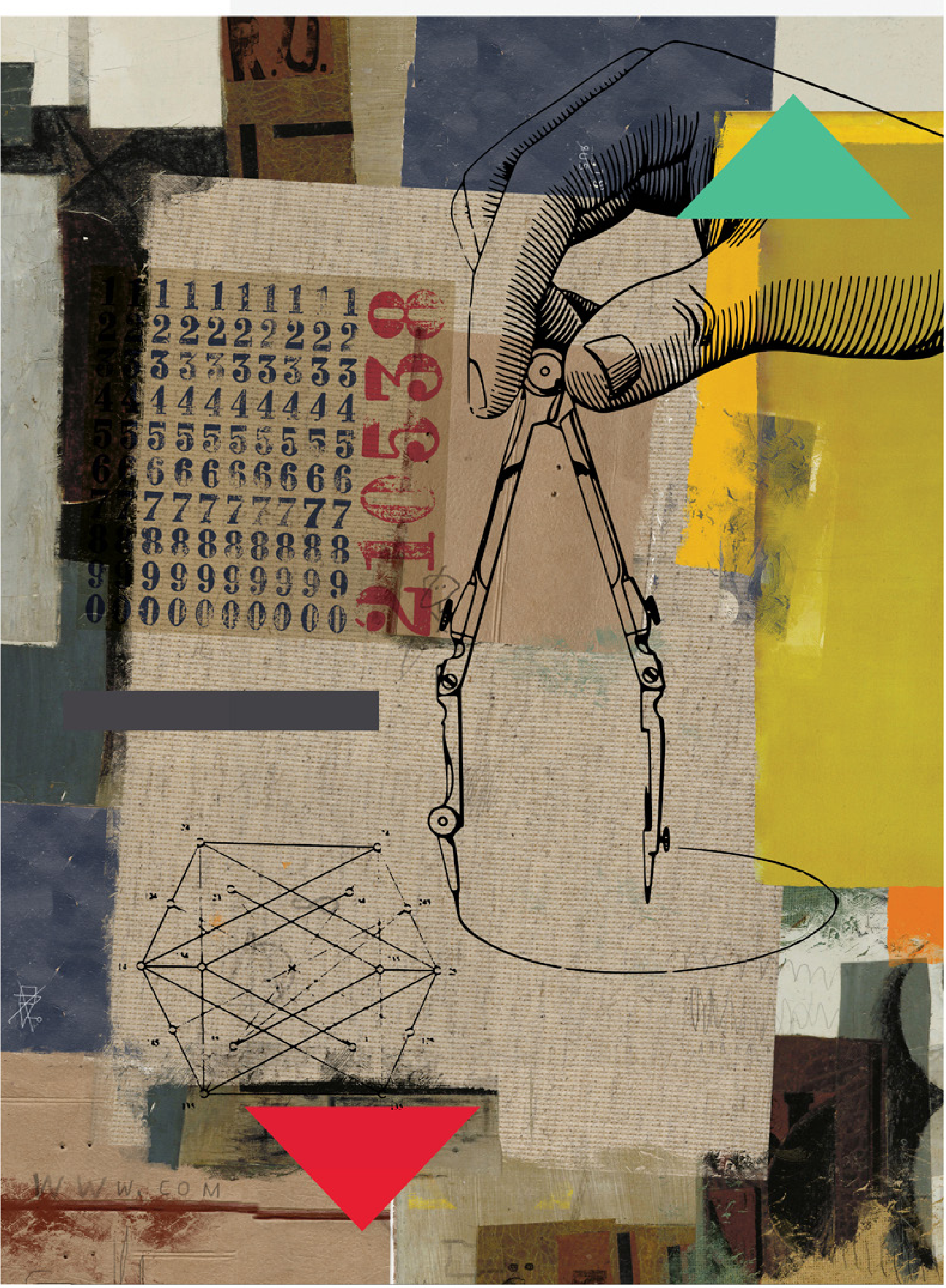
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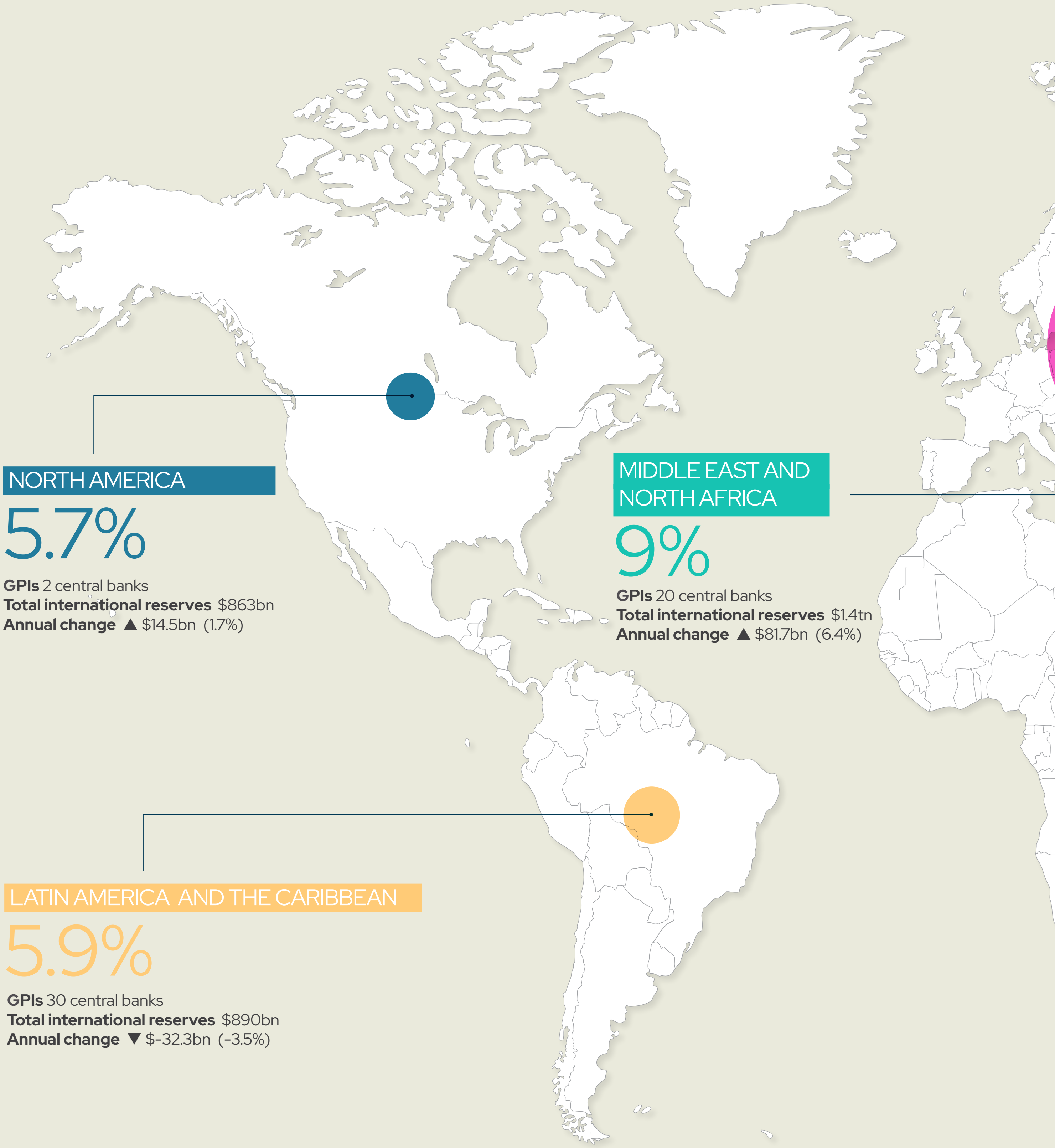
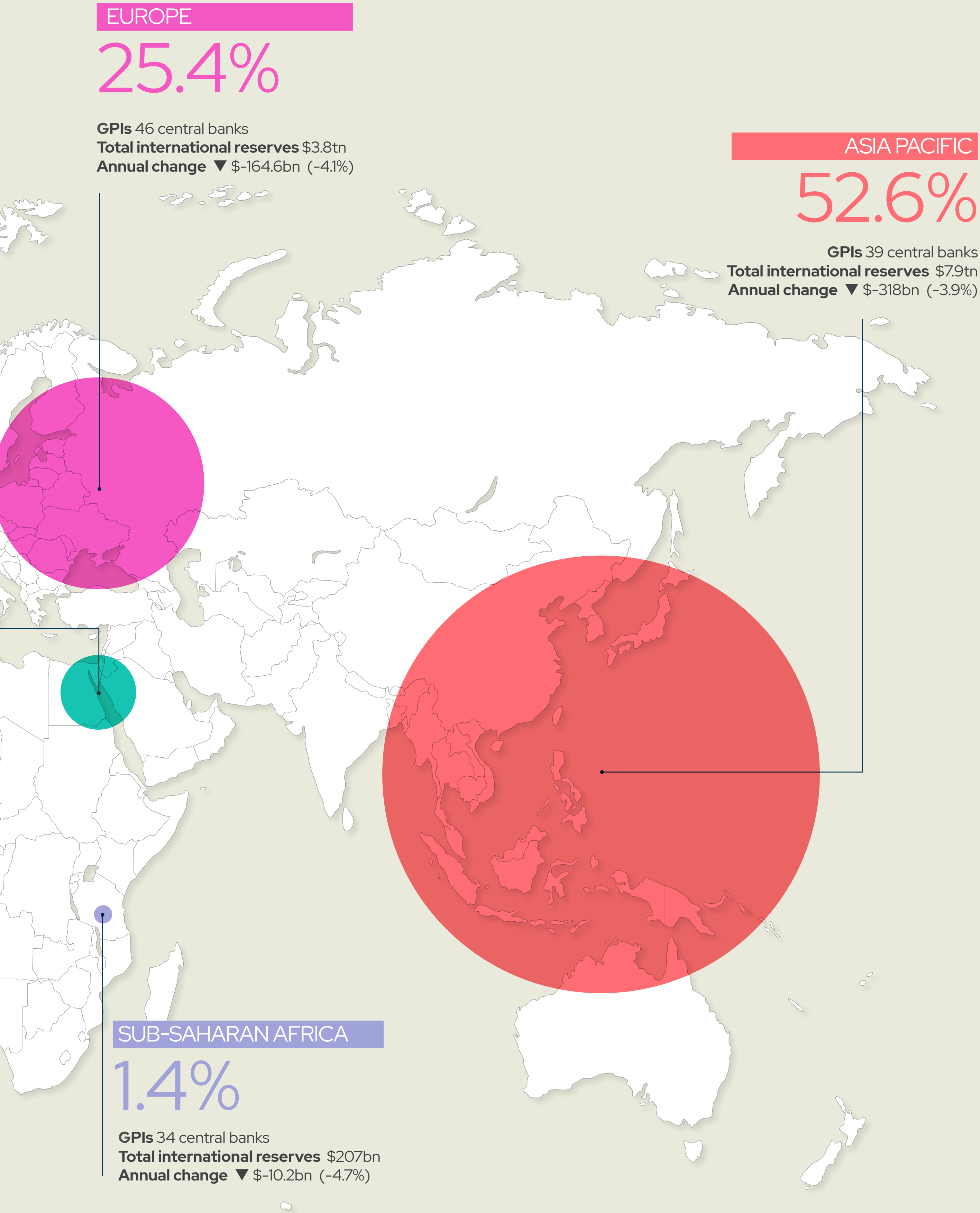
GLOBAL DISTRIBUTION OF INTERNATIONAL RESERVE ASSETS

Total GPIs	Total international reserves ($tn)	Annual change ($bn)	Annual change (%)
171	15.0	-428.8	-2.8




EUROPE
25.4%
GPIs 46 central banks
Total international reserves $3.8tn
Annual change ▼ $-164.6bn (-4.1%)
ASIA PACIFIC
52.6%
GPIs 39 central banks
Total international reserves $7.9tn
Annual change ▼ $-318bn (-3.9%)
SUB-SAHARAN AFRICA
1.4%
GPIs 34 central banks
Total international reserves $207bn
Annual change ▼ $-10.2bn (-4.7%)

Regional highlights

27%
see inflation as their principal short-term investment challenge, compared to 56% of respondents in other regions.

80%
would deploy more than 10% of foreign exchange reserves under a rerun of last year's market conditions.

20%
are looking to increase their gold holdings in the next 12-24 months – the most of any region.

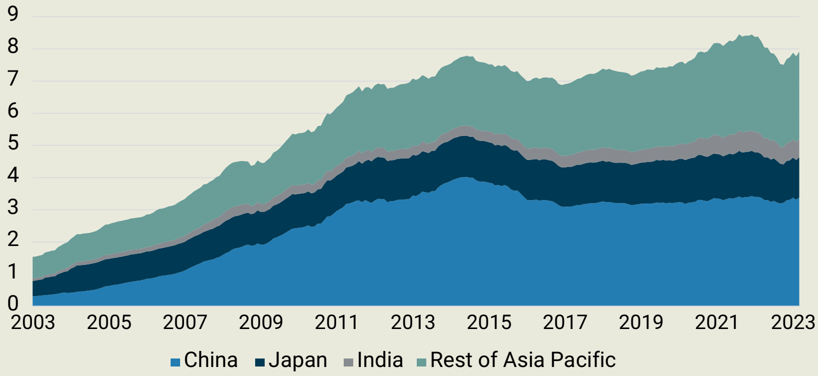
67%
anticipate higher renminbi exposure in the next 10 years.

47%
are using negative screening and exclusions as part of their ESG implementation – the most of any region.

38%
note a lack of suitable projects as a barrier to further ESG integration, against 13% in other regions.

87%
are prioritising improvements to internal data management systems in the next 12-24 months.

1. Asian reserves growth has stalled in the past decade
Regional international reserves, $tn

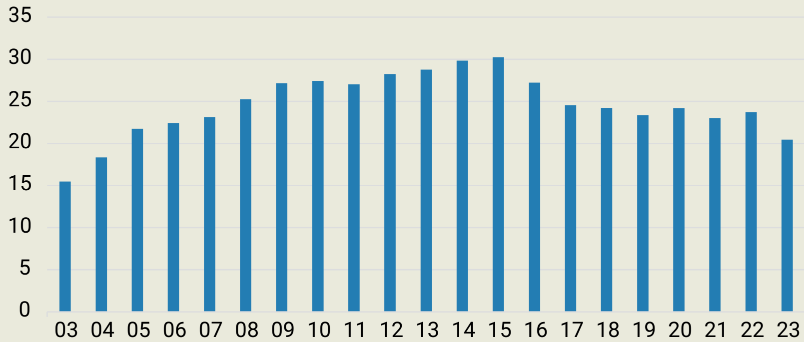


Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

2. Share of global reserves falling
Share of total global reserves, %

Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

3. Lowest reserves-to-GDP ratio since 2004
Regional international reserves, % of GDP



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

Top 10 central banks by international reserves

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	1	▶ 0	People's Bank of China	China	3,379	6	0
2	2	▶ 0	Bank of Japan	Japan	1,257	-99	-7
3	6	▼ -1	Reserve Bank of India	India	578	-29	-5
4	7	▶ 0	Central Bank of the Republic of China	Taiwan	565	11	2
5	9	▼ -1	Hong Kong Monetary Authority	Hong Kong	431	-51	-11
6	10	▼ -1	Bank of Korea	South Korea	425	-32	-7
7	13	▼ -2	Monetary Authority of Singapore	Singapore	312	-67	-18
8	16	▼ -1	Bank of Thailand	Thailand	225	-17	-7
9	22	▶ 0	Bank Indonesia	Indonesia	145	6	4
10	25	▼ -1	Bank Negara Malaysia	Malaysia	115	0	0

Changes in international reserves

Top five annual risers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	112	▲ 11	National Bank of the Republic of Tajikistan	Tajikistan	3.6	1.1	46
2	163	▲ 4	Faletupe Tutotonu o Samoa	Samoa	0.3	0.1	24
3	78	▲ 7	The Central Bank of the Republic of Azerbaijan	Azerbaijan	10.3	1.3	15
4	50	▲ 7	National Bank of Kazakhstan	Kazakhstan	36.2	3.1	9
5	147	▲ 5	Banco Central de Timor-Leste	Timor-Leste	0.8	0.1	7

Top five annual fallers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	81	▼ -12	State Bank of Pakistan	Pakistan	9.4	-7.9	-46
2	59	▼ -14	Bangladesh Bank	Bangladesh	32.2	-11.9	-27
3	108	▼ -7	Autoriti Monetari Brunei Darussalam	Brunei	4.0	-0.9	-19
4	32	▼ -7	State Bank of Vietnam	Vietnam	88.2	-20.6	-19
5	13	▼ -2	Monetary Authority of Singapore	Singapore	312.2	-67.5	-18

EUROPE

Top ranked: Switzerland

Regional highlights

75%
consider inflation to be the main factor affecting their short-term investment approach.

89%
feature geopolitics among the key factors affecting their investment strategies over five to 10 years.

30%
select liquidity as their primary investment objective – the most of any region.

35%
predict that it will take at least two years to recoup their portfolio losses from 2022.

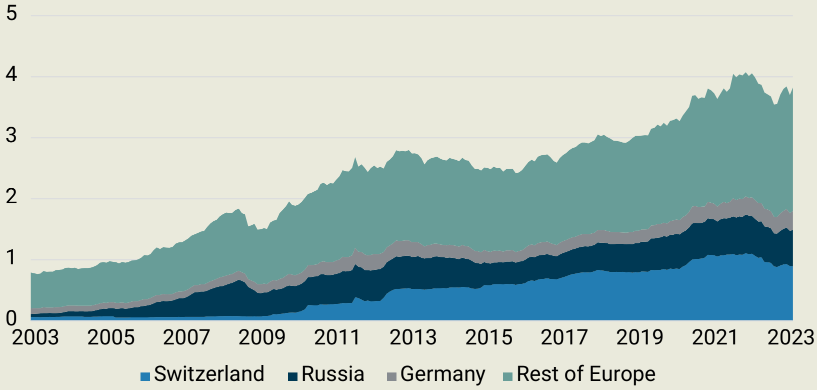
22%
of respondents expect to increase their exposure to equities in the next 12–24 months.

81%
invest in green bonds and 61% plan to increase their allocation – the highest shares across any region.

64%
want to see improvements in data access for sustainable assets.

1. Swiss reserves dip but still over 20% of regional total

Regional international reserves, $tn



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

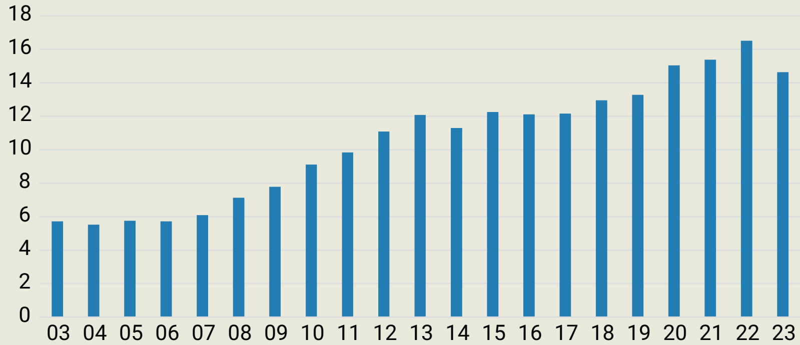
2. Share of money global reserves steady

Share of total global reserves, %

Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

3. Sharp drop in reserves-to-GDP

Regional international reserves, % of GDP



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

Top 10 central banks by international reserves

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	3	▶ 0	Swiss National Bank	Switzerland	894	-171	-16
2	5	▲ 1	Central Bank of the Russian Federation	Russia	594	-13	-2
3	12	▲ 1	Deutsche Bundesbank	Germany	313	5	2
4	14	▲ 2	Banca d'Italia	Italy	239	4	2
5	15	▼ -1	Banque de France	France	232	-20	-8
6	19	▶ 0	Bank of England	UK	173	-17	-9
7	20	▲ 1	Narodowy Bank Polski	Poland	170	12	8
8	23	▼ -3	Czech National Bank	Czechia	141	-33	-19
9	24	▲ 4	Türkiye Cumhuriyet Merkez Bankası	Turkey	117	16	15
10	29	▲ 2	Danmarks Nationalbank	Denmark	101	21	26

Changes in international reserves

Top five annual risers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	61	▲ 12	National Bank of Serbia	Serbia	23.3	7.4	46
2	102	▲ 9	Banca Naţională a Moldovei	Moldova	4.7	1.2	36
3	109	▲ 6	Central Bank of Armenia	Armenia	3.7	0.8	27
4	38	▲ 3	Banca Naţională a României	Romania	64.5	13.5	26
5	29	▲ 2	Danmarks Nationalbank	Denmark	101.2	20.6	26

Top five annual fallers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	114	▼ -54	Croatian National Bank	Croatia	3.4	-23.4	-87
2	155	▼ -5	Banca Centrale della Repubblica di San Marino	San Marino	0.6	-0.1	-19
3	23	▼ -3	Czech National Bank	Czechia	141.1	-32.5	-19
4	3	▶ 0	Swiss National Bank	Switzerland	893.9	-170.9	-16
5	96	▼ -1	Central Bank of Iceland	Iceland	5.9	-0.9	-14

Note: Croatia's international reserves were reclassified after accession to the eurozone in January 2023

LATIN AMERICA AND THE CARIBBEAN

Top ranked: Brazil

Regional highlights

50%

view low equilibrium interest rates as the most important economic factor affecting their long-term strategies.

55%

expect to recoup portfolio losses experienced last year within 12 months, compared to 9% across the remaining regions.

18%

of respondents expect to increase their allocation of euro- and renminbi-denominated government bonds.

93%

of portfolio assets are denominated in US dollars – the most of any region.

89%

are discouraged from additional investment in Chinese assets due to a lack of market transparency.

25%

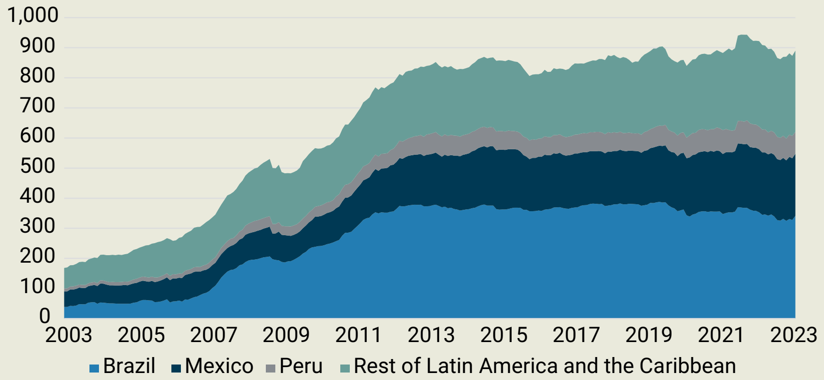
cite legal and regulatory restrictions as a barrier to ESG integration, more than twice the global average.

73%

experience operational challenges in recruitment and training – the highest of any region.

1. Little regional reserve growth in the past decade

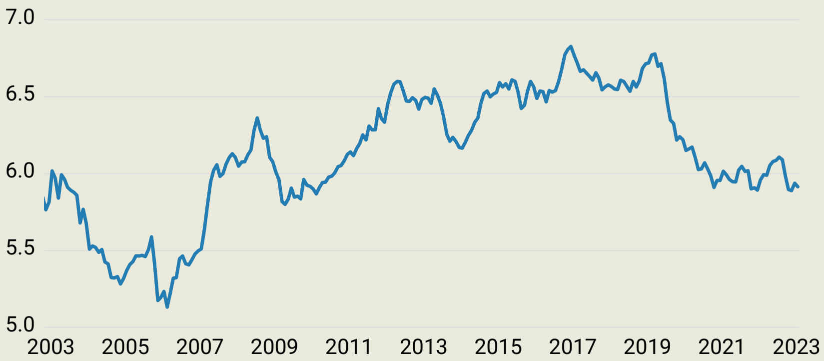
Regional international reserves, $bn



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

2. Remaining at 6% of global reserves

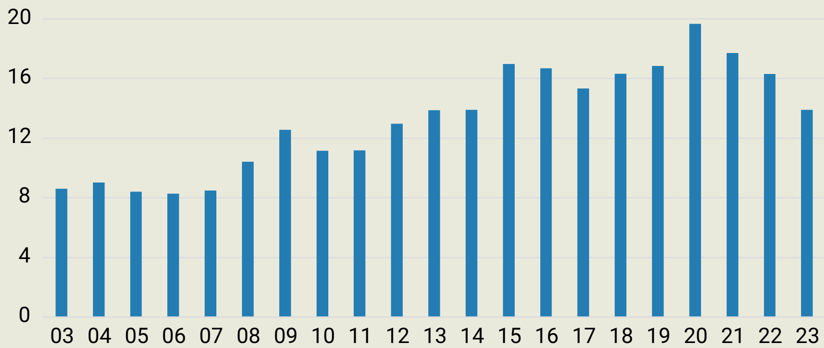
Share of total global reserves, %



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

3. Reserves-to-GDP continues to decline

Regional international reserves, % of GDP



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

Top 10 central banks by international reserves

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	11	▲ 1	Banco Central do Brasil	Brazil	341	-12	-3
2	17	▶ 0	Banco de México	Mexico	206	-3	-2
3	35	▼ -1	Banco Central de Reserva del Perú	Peru	73	-3	-3
4	41	▼ -2	Banco de la República Colombia	Colombia	57	0	0
5	48	▼ -6	Banco Central de Chile	Chile	39	-9	-19
6	49	▼ -3	Banco Central de la República Argentina	Argentina	39	-4	-9
7	63	▲ 1	Banco de Guatemala	Guatemala	20	0	-2
8	70	▲ 5	Banco Central de la República Dominicana	Dominican Republic	16	1	10
9	72	▼ -2	Banco Central del Uruguay	Uruguay	16	-1	-7
10	79	▼ -1	Banco Central de Venezuela	Venezuela	10	-1	-11

Changes in international reserves

Top five annual risers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	142	▲ 3	Centrale Bank van Suriname	Suriname	1.2	0.3	32
2	83	▲ 11	Banco Central de Costa Rica	Costa Rica	9.1	2.1	29
3	160	▲ 2	Central Bank of Belize	Belize	0.5	0.1	21
4	148	▲ 10	Bank of Guyana	Guyana	0.8	0.1	20
5	70	▲ 5	Banco Central de la República Dominicana	Dominican Republic	16.1	1.4	10

Top five annual fallers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	111	▼ -8	Banco Central de Bolivia	Bolivia	3.6	-1.0	-21
2	48	▼ -6	Banco Central de Chile	Chile	39.3	-9.0	-19
3	118	▼ -5	Banco Central de Reserva de El Salvador	El Salvador	2.7	-0.5	-15
4	86	▼ -4	Banco Central del Ecuador	Ecuador	8.2	-1.0	-11
5	79	▼ -1	Banco Central de Venezuela	Venezuela	9.6	-1.2	-11

MIDDLE EAST AND NORTH AFRICA

Top ranked: Saudi Arabia

Regional highlights

7.7%
of portfolio assets is allocated to equities, compared to a global average of 2.2%.

5.7%
of reserve assets are held in cash, compared to the global average of 16%.

55%
of international reserves are denominated in US dollars, and 27% in euros.

7%
of international reserves are, on average, managed by external managers.

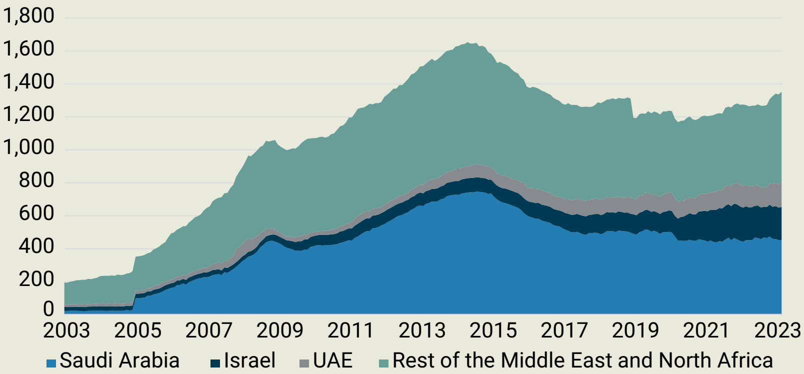
0.5%
of global reserve assets are invested in the Middle East.

10.2%
growth in reserves for oil-exporters over the past year, compared with -3.1% for other countries in the region.

33%
of regional reserves come from Saudi Arabia, compared to 44% 10 years ago.

1. MENA reserves rise despite fall in other regions

Regional international reserves, $bn



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

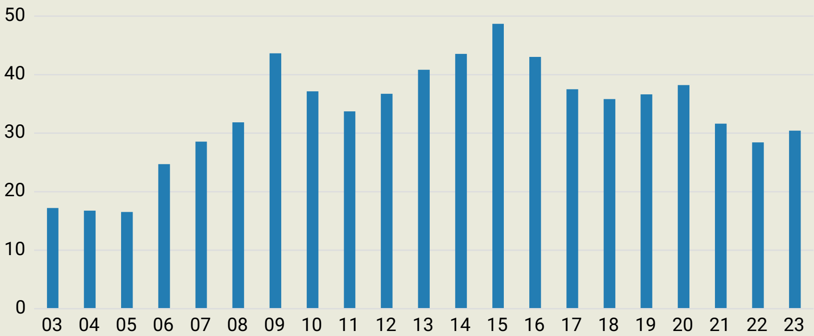
2. Small uptick in share of global reserves last year

Share of total global reserves, %

Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

3. Highest reserves-to-GDP ratio of any region

Regional international reserves, % of GDP



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

Highest riser: Iraq

Top 10 central banks by international reserves

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	8	▲ 2	Saudi Central Bank	Saudi Arabia	453	1	0
2	18	▶ 0	Bank of Israel	Israel	200	-6	-3
3	21	▲ 2	Central Bank of the United Arab Emirates	UAE	150	21	16
4	27	▲ 8	Central Bank of Iraq	Iraq	103	35	52
5	33	▶ 0	Central Bank of Libya	Libya	87	7	9
6	37	▲ 6	Banque d'Algérie	Algeria	67	21	44
7	43	▲ 1	Central Bank of Kuwait	Kuwait	50	4	10
8	44	▲ 3	Qatar Central Bank	Qatar	49	7	16
9	54	▲ 2	Bank Al-Maghrib	Morocco	35	1	3
10	57	▼ -2	Banque du Liban	Lebanon	33	-2	-5

Changes in international reserves

Top five annual risers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	27	▲ 8	Central Bank of Iraq	Iraq	102.8	35.2	52
2	37	▲ 6	Banque d'Algérie	Algeria	66.9	20.6	44
3	144	▲ 5	Palestine Monetary Authority	Palestine	1.2	0.3	36
4	98	▲ 9	Central Bank of Bahrain	Bahrain	5.2	1.1	26
5	21	▲ 2	Central Bank of the United Arab Emirates	UAE	150.4	21.0	16

Top five annual fallers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	68	▼ -1	Central Bank of Oman	Oman	16.8	-2.0	-11
2	62	▶ 0	The Central Bank of the Islamic Republic of Iran	Iran	23.2	-2.3	-9
3	58	▼ -5	Central Bank of Egypt	Egypt	32.5	-2.9	-8
4	89	▲ 1	Banque Centrale de Tunisie	Tunisia	7.7	-0.5	-7
5	64	▲ 1	Central Bank of Jordan	Jordan	19.4	-1.3	-6

SUB-SAHARAN AFRICA

Top ranked: South Africa

Regional highlights

57%

consider geopolitical tensions to be the most important factor affecting their investment approach in the next five to 10 years.

29%

assess their current level of foreign exchange reserves to be less than adequate.

46%

expect to increase their exposure to both conventional and quasi-government bonds in the next 12–24 months.

36%

plan to increase their allocation of dollar-denominated government bonds.

5.2%

of reserve assets are denominated in renminbi – higher than any other region.

83%

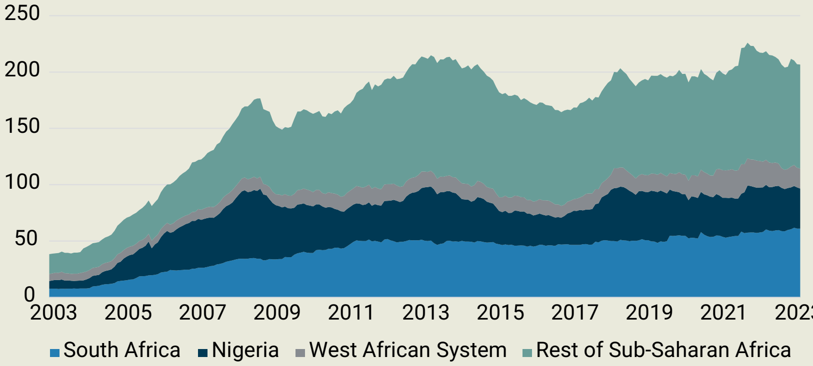
select insufficient data and information as an obstacle to ESG integration.

54%

note compliance with new reporting requirements as an operating challenge – three times the global average.

1. Regional reserves fall despite rise in South Africa

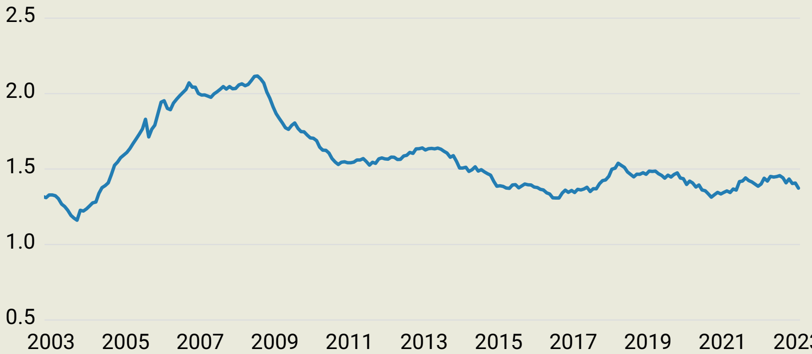
Regional international reserves, $bn



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

2. Below 1.5% of global reserve assets

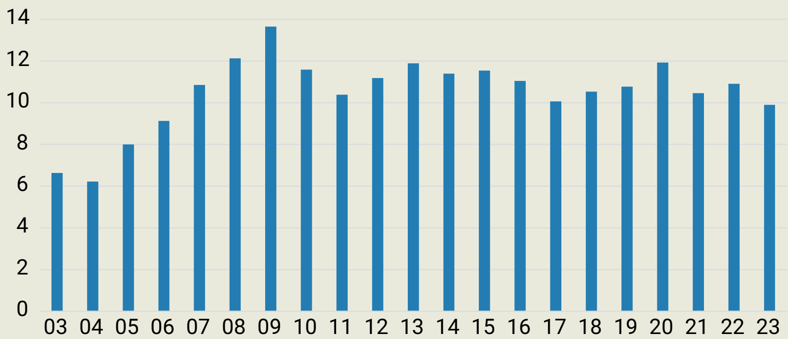
Share of total global reserves, %



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources

3. Reserves edge below 10% of GDP

Regional international reserves, % of GDP



Source: International Monetary Fund, World Gold Council, Refinitiv, National sources


Highest riser: Democratic Republic of the Congo

Top 10 central banks by international reserves

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	40	▼ -2	South African Reserve Bank	South Africa	61	3	5
2	52	▼ -2	Central Bank of Nigeria	Nigeria	36	-4	-10
3	67	▼ -4	Banque Centrale des Etats de l'Afrique de l'Ouest	West African System	18	-5	-22
4	71	▲ 8	Banque des États de l'Afrique Centrale	Central African System	16	6	58
5	74	▶ 0	Banco Nacional de Angola	Angola	14	-1	-6
6	91	▼ -2	Central Bank of Kenya	Kenya	7	-1	-17
7	93	▼ -1	Bank of Mauritius	Mauritius	7	-1	-18
8	94	▼ -8	Bank of Ghana	Ghana	6	-3	-29
9	99	▼ -1	Bank of Tanzania	Tanzania	5	-1	-10
10	106	▲ 13	Banque Centrale du Congo	Democratic Republic of the Congo	4	2	62

Changes in international reserves

Top five annual risers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	106	▲ 13	Banque Centrale du Congo	Democratic Republic of the Congo	4.4	1.7	62
2	71	▲ 8	Banque des États de l'Afrique Centrale	Central African System	15.9	5.8	58
3	149	▲ 4	Banco de Cabo Verde	Cape Verde	0.8	0.0	6
4	40	▼ -2	South African Reserve Bank	South Africa	61.0	2.9	5
5	117	▶ 0	Bank of Zambia	Zambia	2.9	0.1	3

Top five annual fallers, %

Regional ranking	GPI rank 2023	Change on 2022	Institution	Country	International reserves, $bn	Annual change, $bn	Annual change, %
1	94	▼ -8	Bank of Ghana	Ghana	6.2	-2.6	-29
2	143	▼ -7	National Bank of Ethiopia	Ethiopia	1.2	-0.5	-30
3	169	▶ 0	Banque de la République du Burundi	Burundi	0.1	-0.1	-44
4	170	▼ -4	Bank of South Sudan	South Sudan	0.1	-0.2	-67
5	168	▼ -17	Reserve Bank of Zimbabwe	Zimbabwe	0.2	-0.6	-78

TOP 10 CENTRAL BANKS

GPI rank and annual change			Institution	Country	Region	International reserves, $bn	Annual change, $bn	Annual change, %
1	▶	0	People's Bank of China	China	AP	3,379	6	0
2	▶	0	Bank of Japan	Japan	AP	1,257	-99	-7
3	▶	0	Swiss National Bank	Switzerland	EU	894	-171	-16
4	▶	0	US Monetary Authorities	US	NA	754	9	1
5	▲	1	Central Bank of the Russian Federation	Russia	EU	594	-13	-2
6	▼	-1	Reserve Bank of India	India	AP	578	-29	-5
7	▶	0	Central Bank of the Republic of China	Taiwan	AP	565	11	2
8	▲	2	Saudi Central Bank	Saudi Arabia	MN	453	1	0
9	▼	-1	Hong Kong Monetary Authority	Hong Kong	AP	431	-51	-11
10	▼	-1	Bank of Korea	South Korea	AP	425	-32	-7

Top 10 by increase in reserve assets, $bn

Rank	GPI rank and annual change			Institution	Country	Region	International reserves, $bn	Annual change, $bn	Annual change, %
1	27	▲	8	Central Bank of Iraq	Iraq	MN	103	35	52
2	21	▲	2	Central Bank of the United Arab Emirates	UAE	MN	150	21	16
3	29	▲	2	Danmarks Nationalbank	Denmark	EU	101	21	26
4	37	▲	6	Banque d'Algérie	Algeria	MN	67	21	44
5	24	▲	4	Türkiye Cumhuriyet Merkez Bankası	Turkey	EU	117	16	15
6	38	▲	3	Banca Naţională a României	Romania	EU	65	14	26
7	20	▲	1	Narodowy Bank Polski	Poland	EU	170	12	8
8	7	▶	0	Central Bank of the Republic of China	Taiwan	AP	565	11	2
9	4	▶	0	US Monetary Authorities	US	NA	754	9	1
10	61	▲	12	National Bank of Serbia	Serbia	EU	23	7	46

Top 10 by decrease in reserve assets, $bn

Rank	GPI rank and annual change			Institution	Country	Region	International reserves, $bn	Annual change, $bn	Annual change, %
1	3	▶	0	Swiss National Bank	Switzerland	EU	894	-171	-16
2	2	▶	0	Bank of Japan	Japan	AP	1,257	-99	-7
3	13	▼	-2	Monetary Authority of Singapore	Singapore	AP	312	-67	-18
4	9	▼	-1	Hong Kong Monetary Authority	Hong Kong	AP	431	-51	-11
5	23	▼	-3	Czech National Bank	Czechia	EU	141	-33	-19
6	10	▼	-1	Bank of Korea	South Korea	AP	425	-32	-7
7	6	▼	-1	Reserve Bank of India	India	AP	578	-29	-5
8	114	▼	-54	Croatian National Bank	Croatia	EU	3	-23	-87
9	32	▼	-7	State Bank of Vietnam	Vietnam	AP	88	-21	-19
10	15	▼	-1	Banque de France	France	EU	232	-20	-8

CENTRAL BANKS RANKED BY RESERVE ASSETS

GPI rank	Change on 2022	Institution	Country	Region	International reserves, $bn	Annual change, %	5-year trend
1	▶ 0	People's Bank of China[1]	China	AP	3,379	0	
2	▶ 0	Bank of Japan[2]	Japan	AP	1,257	-7	
3	▶ 0	Swiss National Bank	Switzerland	EU	894	-16	
4	▶ 0	US Monetary Authorities[3]	US	NA	754	1	
5	▲ 1	Central Bank of the Russian Federation	Russia	EU	594	-2	
6	▼ -1	Reserve Bank of India	India	AP	578	-5	
7	▶ 0	Central Bank of the Republic of China	Taiwan	AP	565	2	
8	▲ 2	Saudi Central Bank	Saudi Arabia	MN	453	0	
9	▼ -1	Hong Kong Monetary Authority	Hong Kong	AP	431	-11	
10	▼ -1	Bank of Korea	South Korea	AP	425	-7	
11	▲ 1	Banco Central do Brasil	Brazil	LA	341	-3	
12	▲ 1	Deutsche Bundesbank	Germany	EU	313	2	
13	▼ -2	Monetary Authority of Singapore	Singapore	AP	312	-18	
14	▲ 2	Banca d'Italia	Italy	EU	239	2	
15	▼ -1	Banque de France	France	EU	232	-8	
16	▼ -1	Bank of Thailand	Thailand	AP	225	-7	
17	▶ 0	Banco de México	Mexico	LA	206	-2	
18	▶ 0	Bank of Israel	Israel	MN	200	-3	
19	▶ 0	Bank of England[4]	UK	EU	173	-9	
20	▲ 1	Narodowy Bank Polski	Poland	EU	170	8	
21	▲ 2	Central Bank of the United Arab Emirates	UAE	MN	150	16	
22	▶ 0	Bank Indonesia	Indonesia	AP	145	4	
23	▼ -3	Czech National Bank	Czechia	EU	141	-19	
24	▲ 4	Türkiye Cumhuriyet Merkez Bankası	Turkey	EU	117	15	
25	▼ -1	Bank Negara Malaysia	Malaysia	AP	115	0	
26	▲ 1	Bank of Canada	Canada	NA	110	6	
27	▲ 8	Central Bank of Iraq	Iraq	MN	103	52	
28	▼ -2	Bangko Sentral ng Pilipinas	Philippines	AP	102	-5	
29	▲ 2	Danmarks Nationalbank	Denmark	EU	101	26	
30	▼ -1	Banco de España	Spain	EU	97.9	6	
31	▼ -1	European Central Bank	Eurosystem	EU	90.8	4	
32	▼ -7	State Bank of Vietnam	Vietnam	AP	88.2	-19	
33	▶ 0	Central Bank of Libya	Libya	MN	86.7	9	
34	▼ -2	Norges Bank	Norway	EU	79.0	-2	
35	▼ -1	Banco Central de Reserva del Perú	Peru	LA	72.8	-3	

GPI rank	Change on 2022	Institution	Country	Region	International reserves, $bn	Annual change, %	5-year trend
36	▶ 0	De Nederlandsche Bank	Netherlands	EU	67.6	2	
37	▲ 6	Banque d'Algérie	Algeria	MN	66.9	44	
38	▲ 3	Banca Naţională a României	Romania	EU	64.5	26	
39	▼ -2	Sveriges Riksbank	Sweden	EU	63.3	6	
40	▼ -2	South African Reserve Bank	South Africa	AF	61.0	5	
41	▼ -2	Banco de la República Colombia	Colombia	LA	57.4	0	
42	▼ -2	Reserve Bank of Australia	Australia	AP	56.6	1	
43	▲ 1	Central Bank of Kuwait	Kuwait	MN	50.0	10	
44	▲ 3	Qatar Central Bank	Qatar	MN	48.8	16	
45	▲ 4	Magyar Nemzeti Bank	Hungary	EU	43.3	5	
46	▲ 2	National Bank of Belgium	Belgium	EU	42.8	2	
47	▲ 4	Bulgarian National Bank	Bulgaria	EU	41.5	13	
48	▼ -6	Banco Central de Chile	Chile	LA	39.3	-19	
49	▼ -3	Banco Central de la República Argentina	Argentina	LA	39.0	-9	
50	▲ 7	National Bank of Kazakhstan	Kazakhstan	AP	36.2	9	
51	▲ 1	Oesterreichische Nationalbank	Austria	EU	35.6	1	
52	▼ -2	Central Bank of Nigeria	Nigeria	AF	35.6	-10	
53	▲ 1	Central Bank of the Republic of Uzbekistan	Uzbekistan	AP	35.4	1	
54	▲ 2	Bank Al-Maghrib	Morocco	MN	35.3	3	
55	▲ 3	Banco de Portugal	Portugal	EU	34.7	10	
56	▲ 3	National Bank of Ukraine	Ukraine	EU	34.6	23	
57	▼ -2	Banque du Liban	Lebanon	MN	33.1	-5	
58	▼ -5	Central Bank of Egypt	Egypt	MN	32.5	-8	
59	▼ -14	Bangladesh Bank	Bangladesh	AP	32.2	-27	
60	▲ 1	Monetary Authority of Macao	Macao	AP	26.6	0	
61	▲ 12	National Bank of Serbia	Serbia	EU	23.3	46	
62	▶ 0	The Central Bank of the Islamic Republic of Iran	Iran	MN	23.2	-9	
63	▲ 1	Banco de Guatemala	Guatemala	LA	20.3	-2	
64	▲ 1	Central Bank of Jordan	Jordan	MN	19.4	-6	
65	▲ 3	Central Bank of Syria	Syria	MN	18.2	-1	
66	▶ 0	National Bank of Cambodia	Cambodia	AP	18.0	-12	
67	▼ -4	Banque Centrale des Etats de l'Afrique de l'Ouest	West African System	AF	17.8	-22	
68	▼ -1	Central Bank of Oman	Oman	MN	16.8	-11	
69	▲ 2	Bank of Finland	Finland	EU	16.7	0	
70	▲ 5	Banco Central de la República Dominicana	Dominican Republic	LA	16.1	10	
71	▲ 8	Banque des États de l'Afrique Centrale	Central African System	AF	15.9	58	
72	▼ -2	Banco Central del Uruguay	Uruguay	LA	15.6	-7	
73	▼ -1	Reserve Bank of New Zealand	New Zealand	AP	14.8	-9	
74	▶ 0	Banco Nacional de Angola	Angola	AF	14.3	-6	

GPI rank	Change on 2022	Institution	Country	Region	International reserves, $bn	Annual change, %	5-year trend
75	▲ 2	Central Bank of Ireland	Ireland	EU	13.3	3	
76	▶ 0	Bank of Greece	Greece	EU	13.3	-8	
77	▲ 3	National Bank of Slovakia	Slovakia	EU	10.4	6	
78	▲ 7	The Central Bank of the Republic of Azerbaijan	Azerbaijan	AP	10.3	15	
79	▼ -1	Banco Central de Venezuela	Venezuela	LA	9.6	-11	
80	▲ 1	Da Afghanistan Bank	Afghanistan	AP	9.5	-1	
81	▼ -12	State Bank of Pakistan	Pakistan	AP	9.4	-46	
82	▲ 1	Banco Central del Paraguay	Paraguay	LA	9.4	2	
83	▲ 11	Banco Central de Costa Rica	Costa Rica	LA	9.1	29	
84	▲ 3	Nepal Rastra Bank	Nepal	AP	8.6	0	
85	▼ -1	Central Bank of Bosnia and Herzegovina	Bosnia and Herzegovina	EU	8.5	-7	
86	▼ -4	Banco Central del Ecuador	Ecuador	LA	8.2	-11	
87	▲ 4	Central Bank of Myanmar	Myanmar	AP	8.1	0	
88	▶ 0	Banco Central de Honduras	Honduras	LA	8.1	-5	
89	▲ 1	Banque Centrale de Tunisie	Tunisia	MN	7.7	-7	
90	▲ 3	National Bank of the Republic of Belarus	Belarus	EU	7.5	-1	
91	▼ -2	Central Bank of Kenya	Kenya	AF	7.0	-17	
92	▲ 4	Central Bank of Trinidad and Tobago	Trinidad and Tobago	LA	6.8	2	
93	▼ -1	Bank of Mauritius	Mauritius	AF	6.7	-18	
94	▼ -8	Bank of Ghana	Ghana	AF	6.2	-29	
95	▲ 2	Bank of Lithuania	Lithuania	EU	6.2	4	
96	▼ -1	Central Bank of Iceland	Iceland	EU	5.9	-14	
97	▲ 2	Bank of Albania	Albania	EU	5.5	0	
98	▲ 9	Central Bank of Bahrain	Bahrain	MN	5.2	26	
99	▼ -1	Bank of Tanzania	Tanzania	AF	5.0	-10	
100	▲ 8	National Bank of Georgia	Georgia	EU	5.0	24	
101	▲ 4	Bank of Jamaica	Jamaica	LA	4.7	8	
102	▲ 9	Banca Naţională a Moldovei	Moldova	EU	4.7	36	
103	▼ -3	Bank of Latvia	Latvia	EU	4.6	-12	
104	▲ 5	National Bank of the Republic of Macedonia	North Macedonia	EU	4.5	24	
105	▲ 1	Banco Central de Nicaragua	Nicaragua	LA	4.5	7	
106	▲ 13	Banque Centrale du Congo	Democratic Republic of the Congo	AF	4.4	62	
107	▼ -5	Bank of Botswana	Botswana	AF	4.2	-9	
108	▼ -7	Autoriti Monetari Brunei Darussalam	Brunei	AP	4.0	-19	
109	▲ 6	Central Bank of Armenia	Armenia	EU	3.7	27	
110	▼ -6	Bank of Uganda	Uganda	AF	3.6	-19	
111	▼ -8	Banco Central de Bolivia	Bolivia	LA	3.6	-21	
112	▲ 11	National Bank of the Republic of Tajikistan	Tajikistan	AP	3.6	46	
113	▼ -1	Bank of Mongolia	Mongolia	AP	3.4	4	

GPI rank	Change on 2022	Institution	Country	Region	International reserves, $bn	Annual change, %	5-year trend
114	▼ -54	Croatian National Bank	Croatia	EU	3.4	-87	
115	▼ -5	Banco de Moçambique	Mozambique	AF	3.1	-14	
116	▶ 0	Banque Centrale du Luxembourg	Luxembourg	EU	3.0	1	
117	▶ 0	Bank of Zambia	Zambia	AF	2.9	3	
118	▼ -5	Banco Central de Reserva de El Salvador	El Salvador	LA	2.7	-15	
119	▼ -5	Central Bank of The Bahamas	Bahamas	LA	2.7	-11	
120	▲ 2	Banque de la République d'Haïti	Haiti	LA	2.6	-1	
121	▼ -3	Bank of Namibia	Namibia	AF	2.6	-9	
122	▼ -2	National Bank of the Kyrgyz Republic	Kyrgyzstan	AP	2.5	-8	
123	▼ -2	Bank of Estonia	Estonia	EU	2.5	-9	
124	▲ 1	Bank of Slovenia	Slovenia	EU	2.4	2	
125	▼ -1	Bank of Papua New Guinea	Papua New Guinea	AP	2.3	0	
126	▲ 1	Banque Centrale de la République de Guinée	Guinea	AF	2.2	-2	
127	▼ -1	Banky Foiben'i Madagasikara	Madagascar	AF	2.1	-6	
128	▲ 1	Eastern Caribbean Central Bank	Eastern Caribbean System	LA	2.0	-3	
129	▲ 3	Central Bank of Montenegro	Montenegro	EU	1.9	4	
130	▼ -2	Bank of Sudan	Sudan	AF	1.9	-9	
131	▼ -1	Banque Centrale de Mauritanie	Mauritania	AF	1.9	-6	
132	▲ 5	Central Bank of Cyprus	Cyprus	EU	1.8	10	
133	▼ -2	Central Bank of Sri Lanka	Sri Lanka	AP	1.8	-7	
134	▲ 4	Central Bank of Barbados	Barbados	LA	1.7	6	
135	▼ -2	Centrale Bank van Curaçao en Sint Maarten	Curaçao	LA	1.7	-3	
136	▼ -1	National Bank of Rwanda	Rwanda	AF	1.6	-4	
137	▼ -3	Centrale Bank van Aruba	Aruba	LA	1.6	-9	
138	▲ 1	Reserve Bank of Fiji	Fiji	AP	1.5	1	
139	▲ 3	Central Bank of the Republic of Kosovo	Kosovo	EU	1.4	9	
140	▲ 1	Bank Ċentrali ta' Malta	Malta	EU	1.2	-11	
141	▼ -1	Bank of the Lao PDR	Laos	AP	1.2	-15	
142	▲ 3	Centrale Bank van Suriname	Suriname	LA	1.2	32	
143	▼ -7	National Bank of Ethiopia	Ethiopia	AF	1.2	-30	
144	▲ 5	Palestine Monetary Authority	Palestine	MN	1.2	36	
145	▼ -2	Central Bank of Yemen	Yemen	MN	1.04	-1	
146	▼ -2	Royal Monetary Authority of Bhutan	Bhutan	AP	0.91	-4	
147	▲ 5	Banco Central de Timor-Leste	Timor-Leste	AP	0.83	7	
148	▲ 10	Bank of Guyana	Guyana	LA	0.81	20	
149	▲ 4	Banco de Cabo Verde	Cape Verde	AF	0.77	6	
150	▼ -2	Maldives Monetary Authority	Maldives	AP	0.76	-12	
151	▲ 4	Central Bank of Liberia	Liberia	AF	0.69	0	
152	▲ 4	Central Bank of Seychelles	Seychelles	AF	0.68	-1	

GPI rank	Change on 2022	Institution	Country	Region	International reserves, $bn	Annual change, %	5-year trend
153	▲ 1	Central Bank of Solomon Islands	Solomon Islands	AP	0.66	-7	
154	▼ -7	Banka e Kholo ea Lesotho	Lesotho	AF	0.65	-25	
155	▼ -5	Banca Centrale della Repubblica di San Marino	San Marino	EU	0.64	-19	
156	▲ 1	Reserve Bank blong Vanuatu	Vanuatu	AP	0.64	-7	
157	▼ -11	Bank of Sierra Leone	Sierra Leone	AF	0.62	-29	
158	▲ 2	Banque Centrale de Djibouti	Djibouti	MN	0.59	1	
159	▶ 0	Central Bank of The Gambia	The Gambia	AF	0.57	-10	
160	▲ 2	Central Bank of Belize	Belize	LA	0.50	21	
161	▶ 0	Central Bank of Eswatini	Eswatini	AF	0.43	-10	
162	▲ 1	National Reserve Bank of Tonga	Tonga	AP	0.38	-1	
163	▲ 4	Faletupe Tutotonu o Samoa	Samoa	AP	0.35	24	
164	▶ 0	Reserve Bank of Malawi	Malawi	AF	0.34	-10	
165	▶ 0	Banque Centrale des Comores	Comoros	AF	0.28	-7	
166	▲ 2	Bermuda Monetary Authority	Bermuda	LA	0.26	0	
167	▲ 3	Cayman Islands Monetary Authority	Cayman Islands	LA	0.22	0	
168	▼ -17	Reserve Bank of Zimbabwe	Zimbabwe	AF	0.17	-78	
169	▶ 0	Banque de la République du Burundi	Burundi	AF	0.14	-44	
170	▼ -4	Bank of South Sudan	South Sudan	AF	0.09	-67	
171	▶ 0	Central Bank of São Tomé and Príncipe	São Tomé and Príncipe	AF	0.05	-28	

NOTES ON GPI 2023 SURVEY

OMFIF adopts a regional classification: Sub-Saharan Africa (AF), Asia Pacific (AP), Europe (EU), Latin America and the Caribbean (LA), Middle East and North Africa (MN) and North America (NA).

Survey data collection was conducted between March-May 2023, with invitations targeted across central bank departments including reserve management, financial markets and economic research.

The survey results include responses from 75 central banks across all jurisdictions. Based on regional classifications, these included: 28 EU, 16 AP, 14 AF, 12 LA, 4 MN, and 1 NA.

NOTES ON RANKINGS AND INTERNATIONAL RESERVES DATA

The ranking table includes 171 central banks.

International reserves data are primarily based on the International Monetary Fund International Financial Statistics database. Where such data are available, OMFIF uses reliable sources from national central banks, other international organisations and the financial industry.

Central bank reserves include foreign exchange, gold, IMF position and special drawing right holdings. Gold valuations are given by the IMF. This does not always match central banks' own valuations of their gold holdings.

Most data are taken as of March 2023. In cases where this is not possible, the latest available data are taken. Where figures are not recorded in dollars, conversion rates between the reporting currency and dollars of the month in which the latest observation was published are used.

Figures for the annual change in assets are calculated using year-on-year figures between March 2022 and March 2023. Where these data are unavailable, annual changes from the latest reported data are registered.

OMFIF recognises that not all states are universally recognised as enjoying full political independence or sovereignty. Where data are available, central banks and monetary authorities in overseas territories, dependencies or other non-self-governing territories are included. Several central banks from countries not recognised by at least one United Nations member, such as South Korea and Israel, are also included.

Some national institutions are grouped to reduce double counting and eliminate doubts about sectoral overlaps. These are noted in footnotes to the rankings:

1. Includes reserves managed by China’s State Administration of Foreign Exchange and other associated institutions
2. Includes assets held by the Japanese Ministry of Finance
3. Includes assets held by the Federal Reserve, Exchange Stabilization Fund and US Treasury
4. Official reserve assets held by the UK Treasury under the Exchange Equalisation Account.

Important note

Figures for previous years may not correspond directly to those published in earlier editions of the GPI. This reflects revisions to and comparisons between 2022 data and previous years' figures, as well as changes to the rankings' overall scope, data collection and country groupings.

Throughout the publication ‘dollar’ refers to US dollars.