Invesco Global Sovereign Asset Management Study 2020

This study is not intended for members of the public or retail investors. Full audience information is available inside the front cover.

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Welcome

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Welcome to Invesco's eighth annual study of sovereign investors. Since the publication of the first report in 2013, the study has evolved to cover 139 institutions, including interviews with chief investment officers, portfolio strategists and heads of asset classes at 83 sovereign funds, and 56 central banks. Together, these investors represent US $19 trillion (as of March 2020).

The five themes in the report look to both build on the work of previous years, and highlight new trends and themes that have emerged over the past year. Fieldwork was carried out in the first quarter of 2020 as the implications of the Covid-19 pandemic were unfolding. Consequently, the response to the immediate shock and dramatic market movements dominated the focus for many respondents.

Many were well prepared however, with a drop in valuations and plenty of dry powder making the crisis a good buying opportunity, as discussed in Theme 1. Infrastructure was a focus for some, especially in electricity generation and communications.

Theme 1

"We had a lot of dry powder ready for the end of the cycle; there appeared to be so many opportunities it was difficult to act fast enough."

Investment sovereign, EMEA

Theme 2

"We are successful at recruiting talented entry-level staff. However, at a more senior level the market for local talent is thinner and we are then competing worldwide against similar organisations."

Liability sovereign, APAC

Theme 2 explores People and Talent, a theme we examined in 2015. As some funds look to internalise specific investment capabilities, significant gaps are beginning to appear between existing and required capability. ESG poses a particular challenge, as do the challenges of investing in certain markets, especially those in Asia.

The market turmoil generated in the wake of Covid-19 cast significant light on gold. The 2019 report highlighted the increasing attractiveness of gold to central banks, while this year's report looks more closely at the asset class. Both sovereign and central bank investors are considering increasing allocations, suggesting a resurgence in popularity in the face of significant burgeoning government debt levels, and fears of a potential return of inflation.

Central bank portfolios have changed significantly since the last crisis of 2007-2008. Theme 4 finds many bankers responding to the crisis by seeking safety and liquidity in the US$, reversing the trend towards currency diversification seen over the past few years. In contrast to the last crisis, however, many central bankers remain committed to risk assets and expect to continue with diversified strategic allocations. ETFs have taken on a greater role in diversification strategies, especially at a time when banks are looking to build investment capability.

In our fifth theme we return to the ongoing focus on ESG, this time honing in on institutional efforts to mitigate the effects of climate change. For investors in North America and Europe, decarbonisation is top of the list, while investors in Asia and the Middle East are especially preoccupied with mitigating the direct effects of extreme weather on the portfolio. Carbon modelling, direct investment and climate targets are emerging as central strategies for dealing with climate change, yet a lack of a single taxonomy makes unified action difficult.

We hope this report gives you an interesting and informative insight into the world of sovereign investors. If you would like to discuss these findings or have any questions, please do get in touch. For more content on this year's themes, please visit igsams.invesco.com.

Theme 3

"Physical gold doesn't answer our needs in terms of liquidity and making sure our government can meet its obligations at all times, as transaction costs are higher for physical assets. Therefore we might consider using ETFs."

Central bank, Latin American

Theme 4

"We think we can reduce portfolio risk by introducing a small equity allocation; we are trying to take a long-term view and not worry about short-term fluctuations."

Central bank, EMEA

Theme 5

"Even with a global pandemic, addressing climate change remains a priority. Rising greenhouse gas emissions are the most dangerous threat to our planet and portfolio."

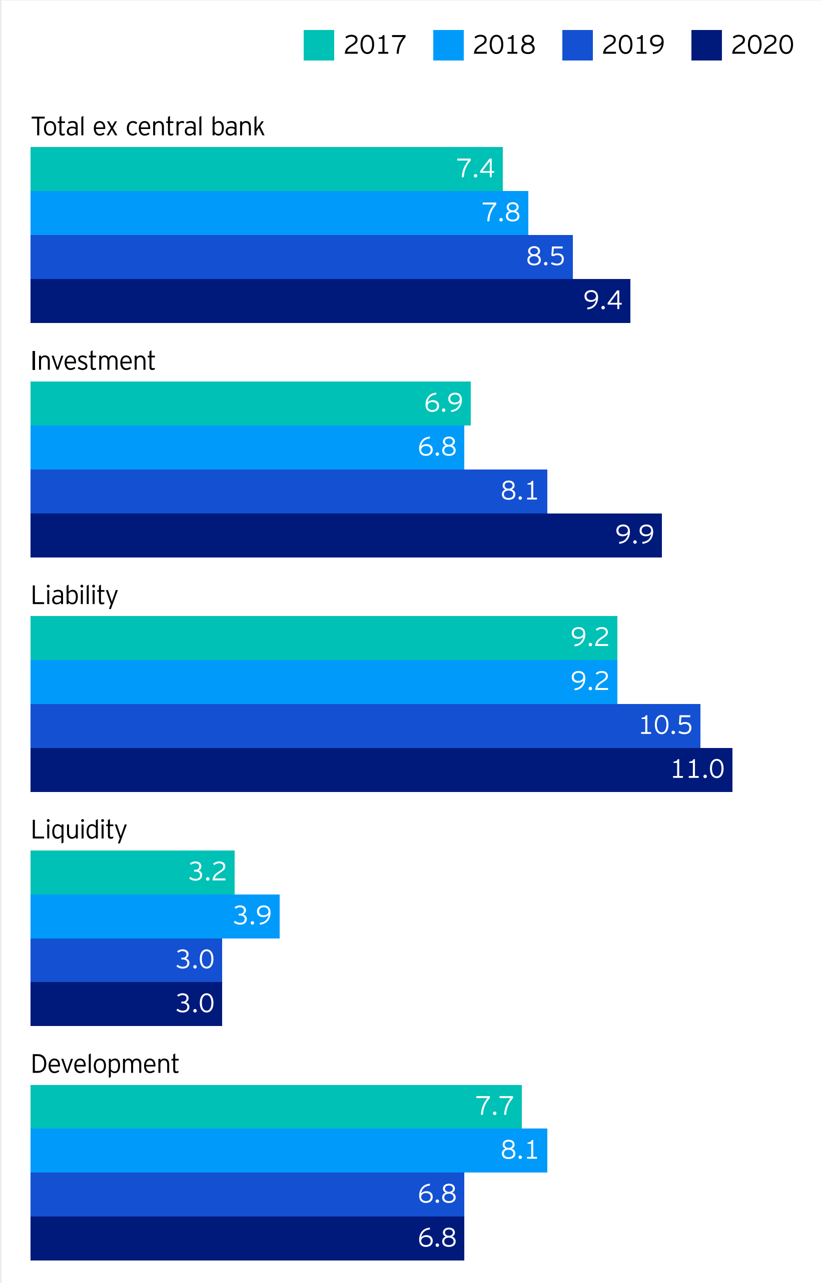
Investment sovereign, North America

Key metrics

Time horizons

Investment time horizons among sovereign investors have continued to extend over the past year, rising to 9.4 years from 8.5 years in last year's study. This has been driven by investment and liability sovereigns and corresponds with rising allocations to illiquid, long-dated assets in private markets. Time horizons for liquidity and development sovereigns have held steady at 3.0 years and 6.8 years respectively.

Figure A
Time horizon of investment objectives (years)



What is the time horizon of your investment objective?

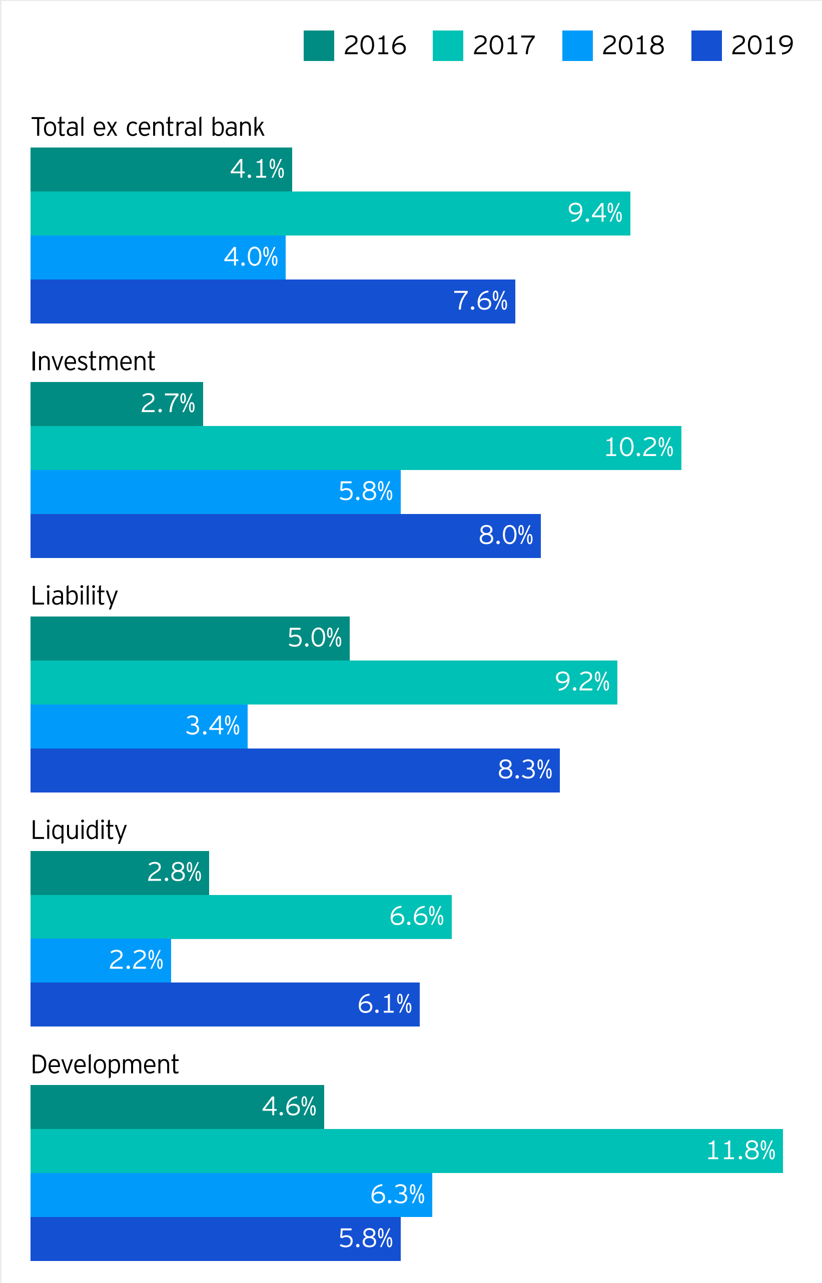
Sample size: 2017 = 57, 2018 = 64
2019 = 65, 2020 = 58

Performance

In contrast to the difficult conditions brought about by Covid-19 in 2020, 2019 proved to be a positive year for performance. Sovereign investors achieved an average return of 7.6% thanks to strong equity markets and rising bond prices. This was almost twice the average 2018 sovereign return of 4% that was highlighted in our 2018 Study.

Liability sovereigns performed best in 2019 with returns of 8.3%, thanks in part to their greater exposure to listed markets, which also helped investment sovereigns (returns of 8.0%) and liquidity sovereigns (returns of 6.1%). With their greater emphasis on private over listed markets, development sovereigns delivered slightly more muted performance.

Figure B
One-year actual returns (%)



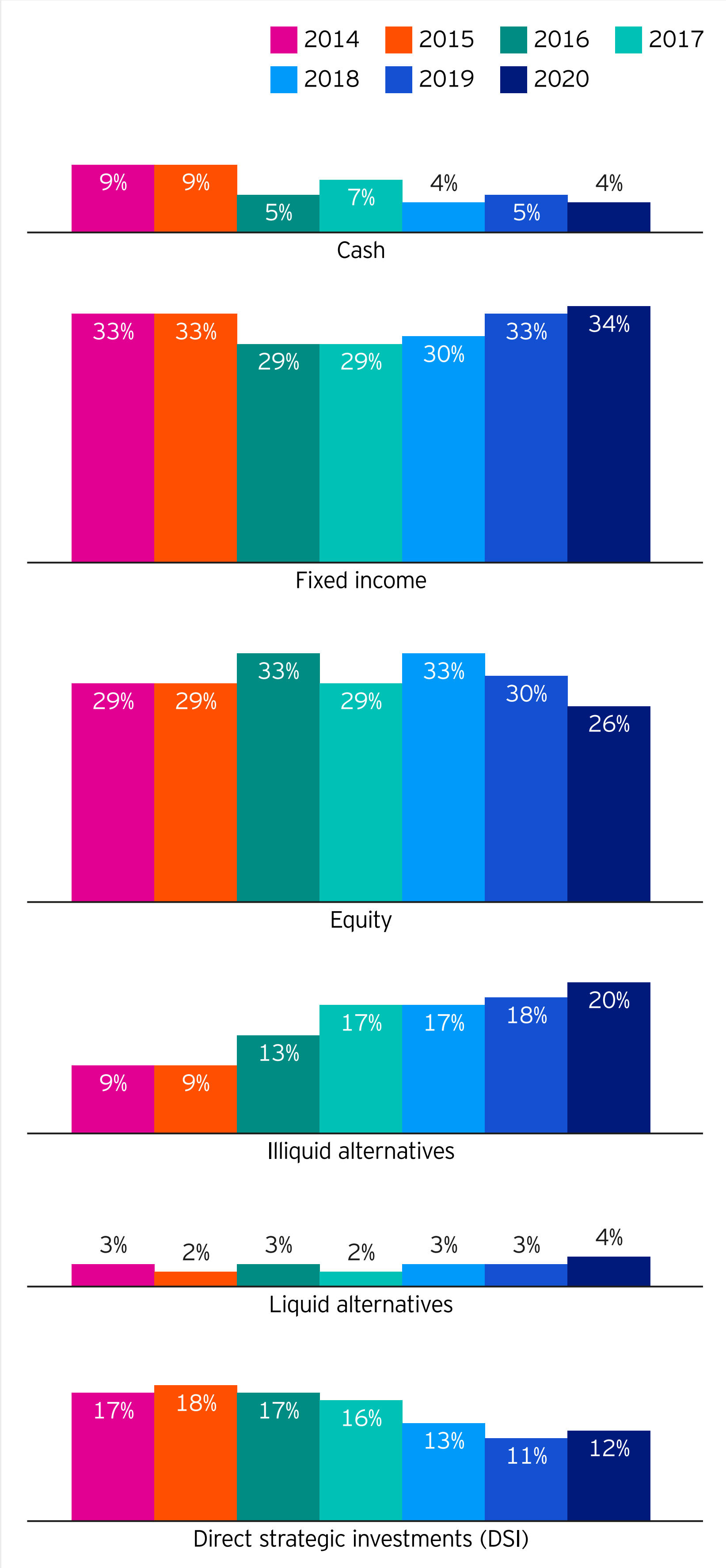
What has been your fund's actual percentage annualised return (at 31 December 2018) over the past one year period? (%)

Sample size: 2016 = 49
2017 = 52, 2018 = 55
2019 = 71

Asset allocation

Allocations to fixed income increased in 2020, to stand at 34%. Meanwhile, allocations to equities fell from 30% to 26% due in part to end-of-cycle concerns that led to decreasing strategic allocations. Sovereign investors now have an average of 24% allocated to alternative investments (excluding direct strategic investments) with allocations continuing a five-year-long upward march. Within alternative allocations, private equity and real estate continue to be the largest sub-sectors, although infrastructure and hedge funds / absolute return funds registered the largest year-on-year increases.

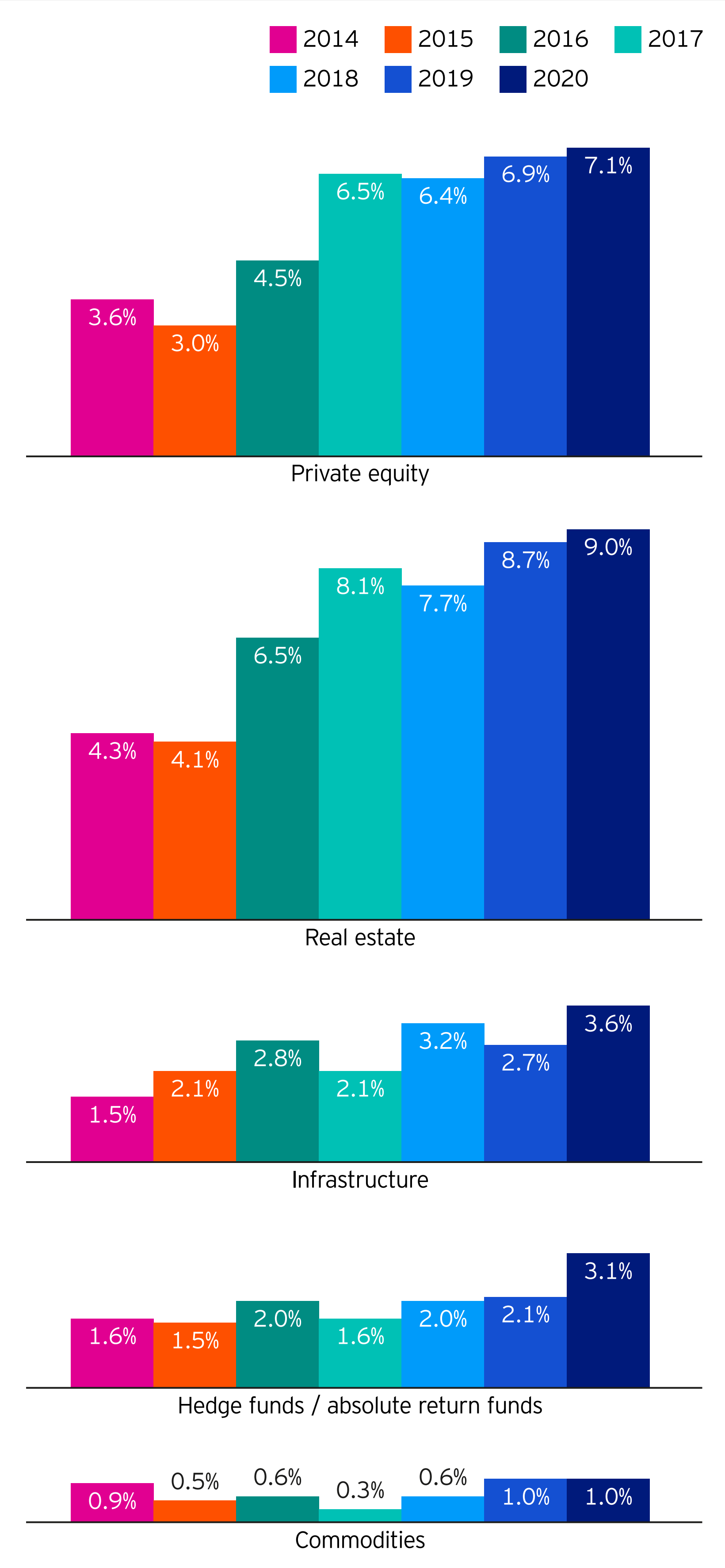
Figure C
Asset allocation trends (% AUM)



What is your current asset allocation?

Sample size: 2014 = 48, 2015 = 44, 2016 = 57
2017 = 62, 2018 = 63, 2019 = 53, 2020 = 78

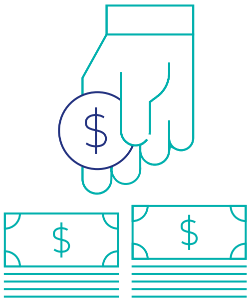
Figure D
Alternative investment asset allocation trends (% AUM)



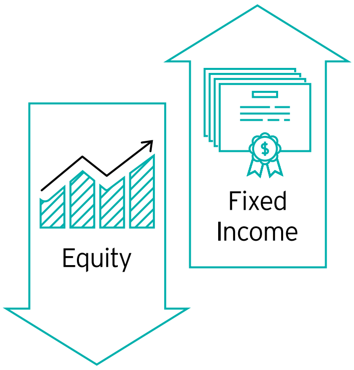
What is your current asset allocation?

Sample size: 2014 = 48, 2015 = 44, 2016 = 57
2017 = 62, 2018 = 63, 2019 = 53, 2020 = 78

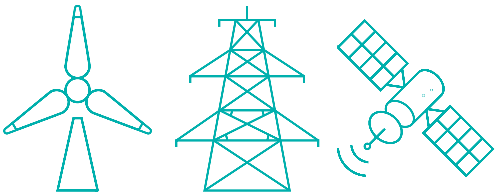
Sovereigns look through crisis for opportunities



For those sovereigns with dry powder, the market collapse in early 2020 was an unprecedented buying opportunity. As custodians of long-term capital, most also benefit from the lack of an imperative to sell to meet withdrawals.



Even before Covid-19 wreaked havoc on markets, sovereigns' average equity allocations at the end of 2019 were at their lowest level since 2013. Over the next 12 months, sovereigns plan to continue allocating to fixed income – particularly alternatives – and illiquid assets in private markets.



In infrastructure, sovereigns are targeting electricity generation and transmission, and communications sectors. Electricity projects that help countries transition away from fossil fuels are seen as a way of meeting ESG objectives.

Some commodity-based sovereigns are braced for calls on capital from governments. However, most have large cash reserves and should be in a strong position to accommodate this without major asset allocation adjustments or forced asset sales.

Sovereigns with dry powder reported being presented with unparalleled buying opportunities as the Covid-19 pandemic caused asset prices to plummet.

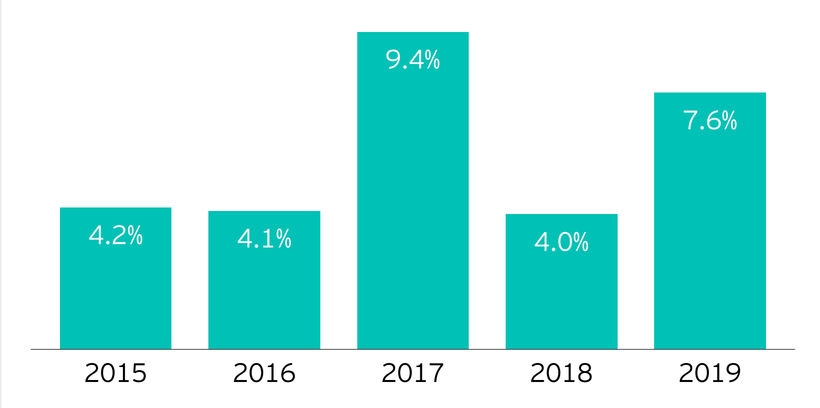
Indeed, a number interviewed in this year's study are already benefitting from strict rebalancing rules that necessitate purchases when allocations fall below set thresholds.

The pandemic has created opportunities for those able to move quickly, as one EMEA-based sovereign explained: "We had a lot of dry powder ready for the end of the cycle; there appeared to be so many opportunities it was difficult to act fast enough. Our internal team had trigger mechanisms in place to snap up AAA-rated bonds when they hit certain prices, and these have already seen gains as bond prices have recovered from their lows."

Having the courage, conviction and mandate to buy into market routs can have a significant impact on long-term performance. Many of the best-performing sovereigns of the past ten years are those that ploughed into equity markets after the global financial crisis (GFC) of 2008. As custodians of long-term capital, sovereigns were keen to stress that they can move with certainty and confidence into market weakness, with many benefitting not only from their longer-term objectives but from the lack of an imperative to sell to meet withdrawals.

In 2019, sovereigns registered their second highest average performance of the previous five years, with two-thirds outperforming their targets (**Figures 1.1** and **1.2**). However, even before the Covid-19 outbreak, late-cycle fears meant that most respondents were cautious. As a result, average equity allocations at the end of 2019 had been cut to their lowest levels since 2013, down by 7 percentage points compared to

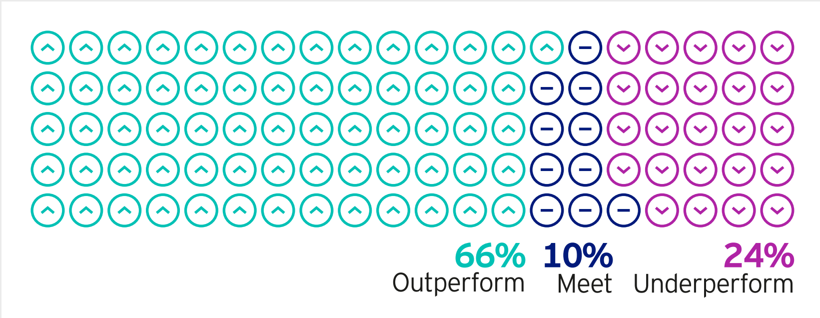
Figure 1.1
Annual returns (average %, sovereigns)



What has been your fund's percentage annualised return (at 31 December 2019) over the past one year?

Sample size: 2015 = 49, 2016 = 49, 2017 = 52, 2018 = 55, 2019 = 71

Figure 1.2
Performance against targets in 2019 (% citations, sovereigns)

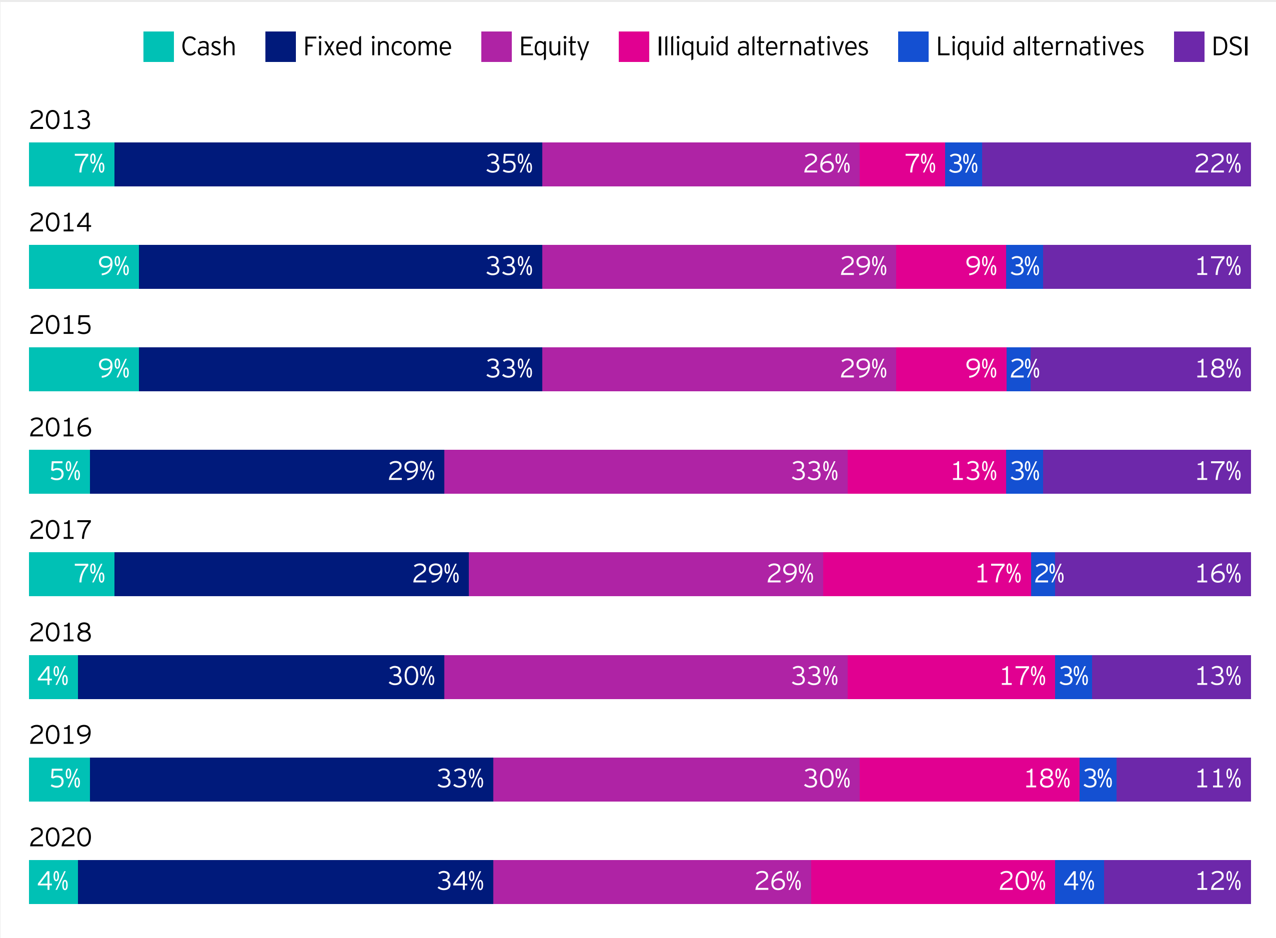


Did you outperform, meet or underperform your target return in 2019?

Sample size: 59

As one EMEA-based sovereign explained: "We had a lot of dry powder ready for the end of the cycle; there appeared to be so many opportunities it was difficult to act fast enough. Our internal team had trigger mechanisms in place to snap up AAA-rated bonds when they hit certain prices, and these have already seen gains as bond prices have recovered from their lows."

Figure 1.3
Asset allocation by year (average %, sovereigns)



What is the current allocation for the following assets?

Sample size: 2013 = 33, 2014 = 48, 2015 = 44, 2016 = 57 2017 = 62, 2018 = 63, 2019 = 53, 2020 = 78

the same time two years ago. Over the same period there had been an increase in fixed income allocations, up by 4 percentage points, and illiquid alternatives up by 3 percentage points (**Figure 1.3**).

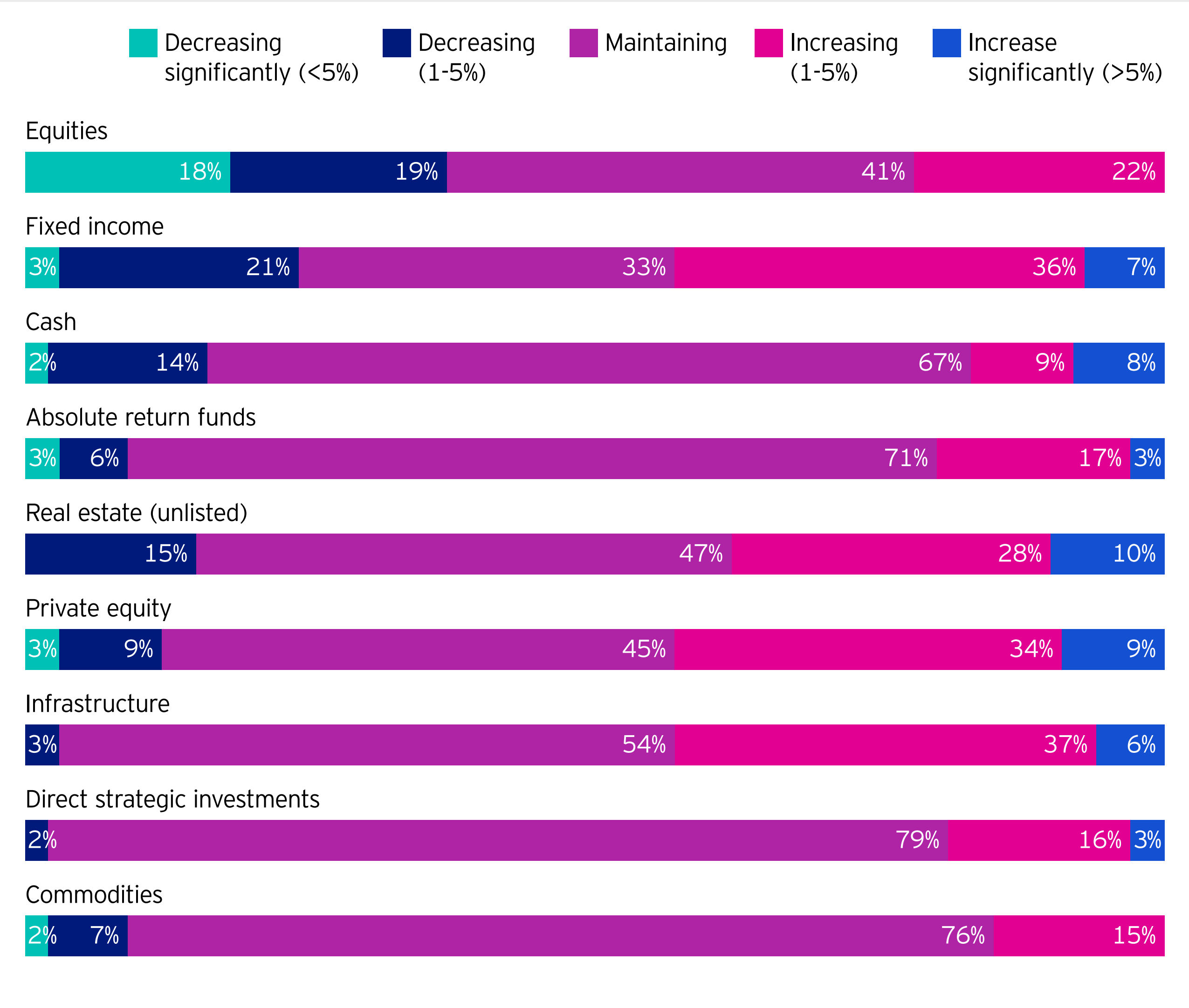
Despite dramatic revaluations across numerous asset classes, that caution remains. While several noted that there had been opportunities to purchase quality companies at lower prices, spring's market rebound has done little to curtail the overall trend to lower equity allocations at the time interviews were conducted. As one North American liability sovereign explained: "We thought equity prices looked stretched before the pandemic, given the stage of the cycle, and even now they are not that far from all-time highs, despite a global economic shutdown and a massive surge in unemployment."

Fixed income and illiquid alternatives retain their appeal

Overall, 43% of sovereigns are planning to increase allocations to fixed income over the next year (with 24% decreasing) while only 22% plan to increase equity allocations (compared to 37% decreasing). At the same time, illiquid alternatives continue to attract inflows, with 43% planning to increase allocations to both private equity (PE) and infrastructure, and 38% planning to increase allocations to real estate (**Figure 1.4**).

However, government interventions, including rate cuts and a new round of global quantitative easing, forced down yields and had a positive impact on many fixed income portfolios. This has been aided by a significant rally in riskier parts of the fixed income market, including high-yield bonds and leveraged loans, which had initially seen some of the sharpest selloffs.

Figure 1.4
Asset allocation intentions for next 12 months (% citations, sovereigns)



For each asset class, do you intend on increasing/maintaining/decreasing your SAA over the next 12 months?

Sample size: 68

Figure 1.5
Allocation to alternative credit (average %, sovereigns)

4.5%
2018 study

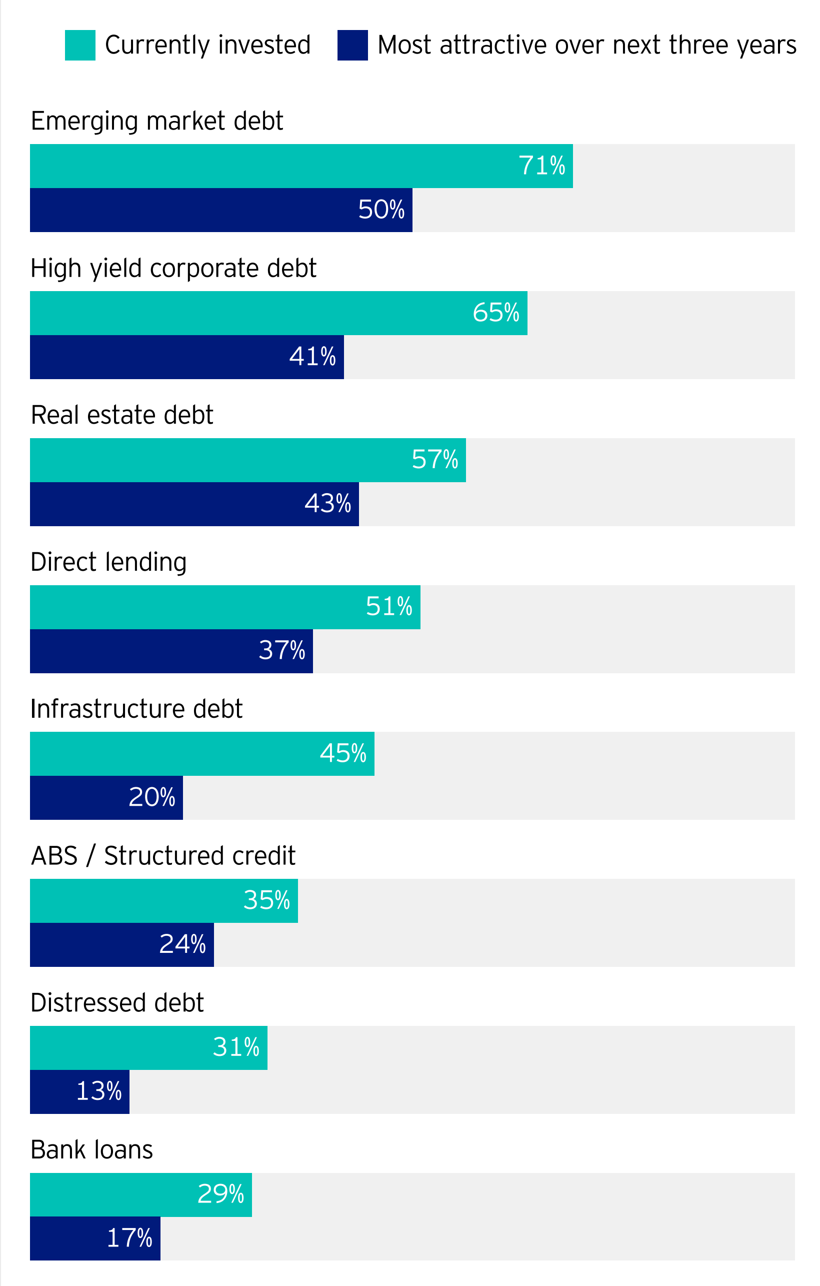
5.3%
2020 study

6.5%
Three years' time

What is your current allocation to alternative credit (as a percentage of your overall portfolio)? What do you expect it to be in three years' time?

Sample size: 38

Figure 1.6
Preferred types of alternative credit (% citations, sovereigns)



Which of the following types of alternative credit are you invested in? Which do you see as most attractive for future investments over the next three years?

Sample size: 51

Sovereigns continue to express appetite for expanding their alternative fixed income allocations, the growth of which has contributed to the rising position of fixed income within portfolios. As of the end of 2019, alternative fixed income accounted for an average of 5.3% of portfolios. This is up from 4.5% at the end of 2017 and is set to rise further to reach 6.5% over the next three years (**Figure 1.5**). Emerging markets debt currently has the widest appeal, followed by high-yield corporate debt and real estate debt (**Figure 1.6**).

With listed asset prices having already regained ground and the global outlook still so uncertain, sovereigns emphasised that it was in unlisted markets such as infrastructure and real estate where many of the most significant opportunities were likely to be found. It's here that their size and long investment horizons can deliver the most significant competitive advantage. This includes taking on assets from other large investors who may be forced to sell to meet redemptions, creating opportunities in the secondary market.

Fixed income's traditional position as a defensive anchor was initially tested by the crisis, with even US Government debt caught up in a broad-based selloff as investors rushed into cash.

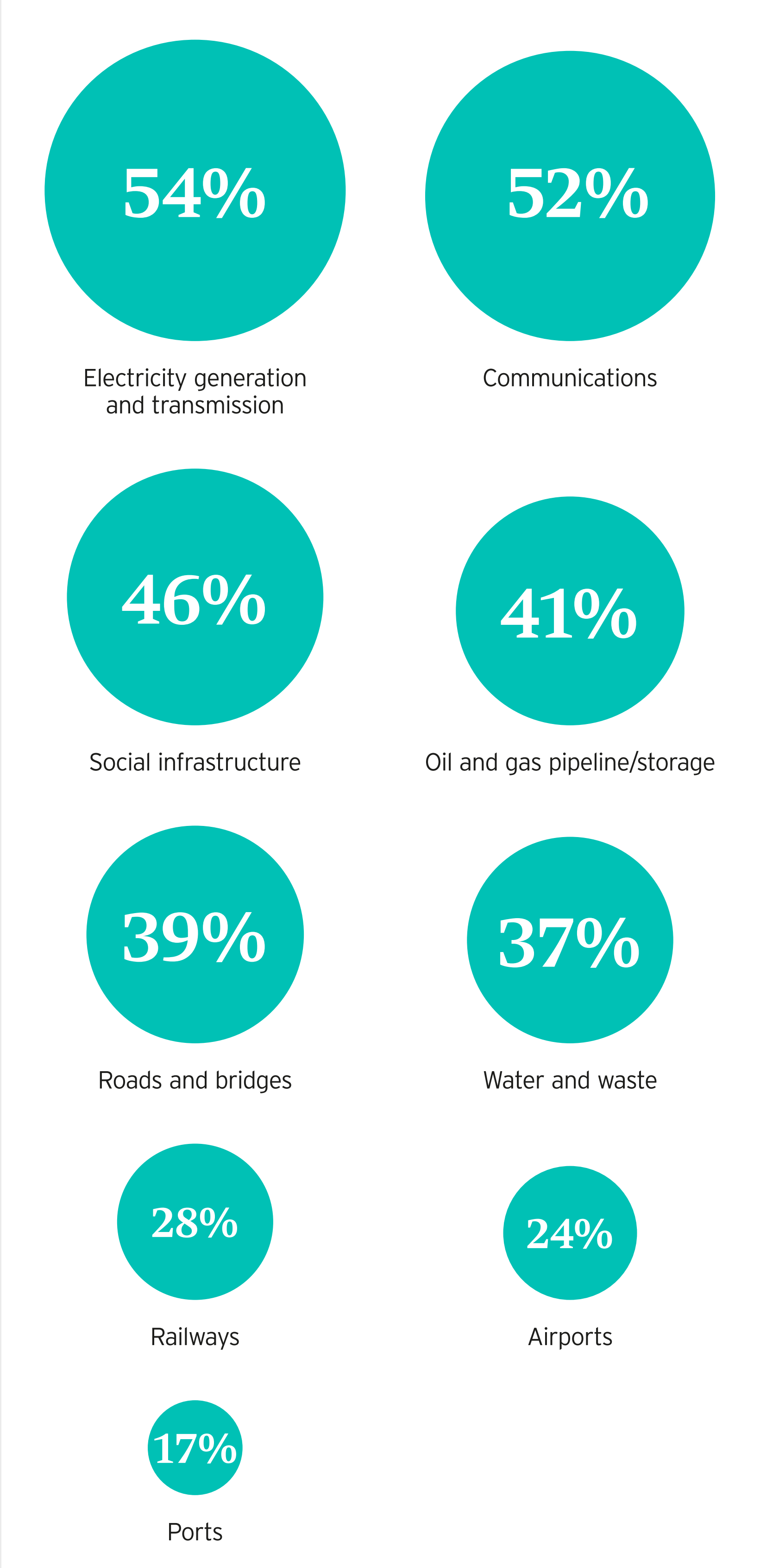
Covid-19 accelerates existing infrastructure trends and creates distressed opportunities

Within the infrastructure asset class, sovereigns report the highest level of interest in electricity generation and transmission (54%) and communications (52%) (**Figure 1.7**). Electricity projects that help countries transition away from fossil fuels were seen as particularly desirable and a way of fulfilling ESG goals. "However," noted an EMEA-based liability sovereign, "I don't think there's a single pension fund that doesn't also have this theme, so it can be a challenge to source the right investments."

Meanwhile, communication assets have moved up the list of targets in tandem with the global rollout of 5G mobile networks.

Sovereigns revealed a general preference for infrastructure assets that operate within highly regulated natural monopolies, as one EMEA-based liability sovereign explained: "We choose based on characteristics rather than sectors – we like to invest in projects that are government-run and clearly regulated." An APAC-based liquidity sovereign added: "We are seeking mature assets with stable income and are willing to trade away some liquidity for that." The Covid-19 pandemic had brought many of these qualities to the fore and several sovereigns expressed an appetite to look towards distressed sectors.

Figure 1.7
Priority areas for infrastructure investments (% citations, sovereigns)



For infrastructure investments, in which areas are you prioritising future allocations?

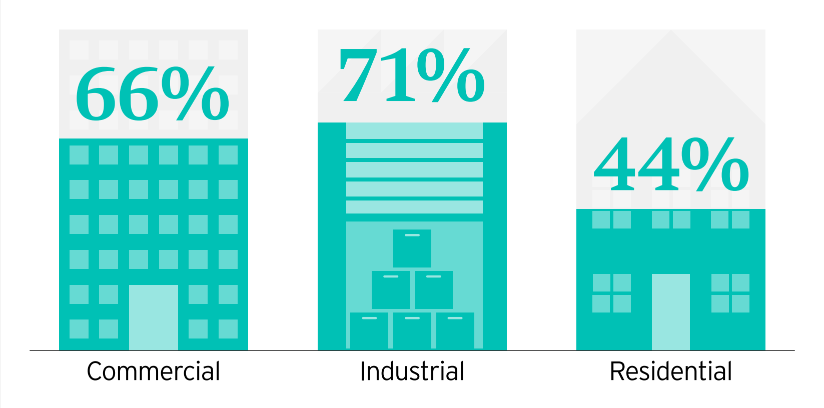
Sample size: 46

Valuations in infrastructure have long been considered 'full' due to the supply of capital chasing relatively few deals. However, sovereigns saw the current situation as an opportunity to take advantage of selling in sub-sectors that have exposure to economic growth and could be available at attractive valuations for the first time in years, e.g. airports, where operators may be looking for an injection of capital at very favourable terms for investors. In less affected areas, such as toll roads, the damage to revenues caused by the pandemic were seen as having only a limited impact on cash flow projections over the entire lifespan of a project. The immediate impact on demand for such assets, however, was seen as much greater, particularly given the likely prevalence of forced sellers.

A similar sense of opportunism was evident in discussions related to real estate (**Figure 1.8**), with sovereigns expecting significant opportunities to emerge over the next year in areas such as travel and leisure. These sectors, at the epicentre of the current crisis, were seen as eventually returning to their previously strong upwards trajectory in line with the expansion of the middle classes in emerging economies and the rising discretionary spending on 'experiences' in developed economies.

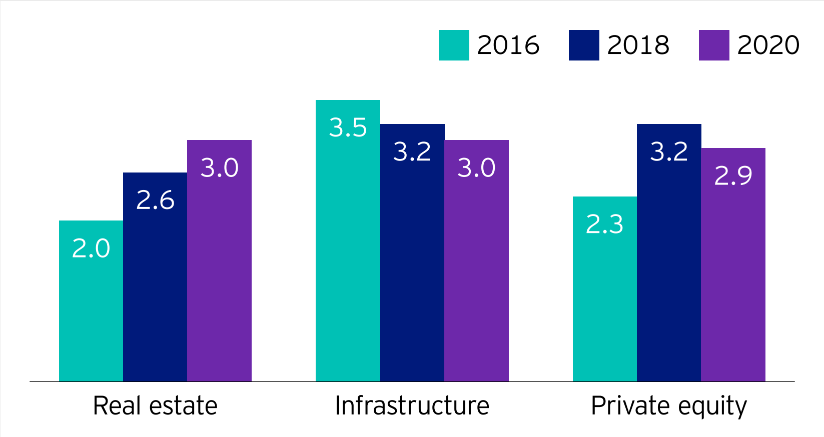
With average deployment times of three years across private market asset classes (**Figure 1.9**), the ability to identify and transact on these kinds of opportunistic investments is far from universal. Since 2018, deployment times have increased within real estate (from 2.6 to 3 years), while falling slightly in infrastructure and private equity. This is often attributed to real estate's particular sensitivity to market cycles and the challenge of finding attractive opportunities towards the end of the cycle, when prices are peaking.

Figure 1.8
Priority areas for real estate investments (% citations, sovereigns)



For real estate investments, in which area are you prioritising future allocations? Sample size: 41

Figure 1.9
Deployment times (average years, sovereigns)



How long do you think it will take to reach your target weights in the following categories? Sample size: 47

Sovereigns regularly highlighted that the level of competition for private market assets has been increasing steadily, in line with average allocations among large institutional investors. Those funds that have well-established internal teams and can generate their own deal flow are likely to be in the best position to act, with capacity constraints around execution being a significant drag on others. The advantage of well-resourced internal teams – a topic explored in greater depth in Theme 2 – is further amplified by the fact that direct investment is the preferred route into unlisted assets, which is generally regarded as needing considerable in-house expertise.

Commodity funds brace for withdrawals

While funds are looking at the possible opportunities arising from the current crisis, some are having to play a significant role in helping to mitigate its impact. A collapse in the price of many commodities, including oil, has coincided with an increase in government spending and a rush to announce emergency budgets to fight the pandemic and address its economic consequences. While public announcements of withdrawals are rare, with the occasional notable exception, oil-based funds may face significant outflows over the course of the next 12 months, as government budgets built around oil funding take a hit. "We might well suffer severe withdrawals from the fund as a result of the current situation – many of the criteria have already been met," said a development sovereign based in Latin America.

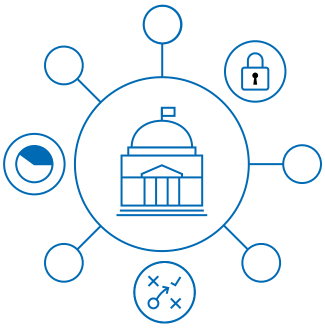
Since the global financial crisis, most commodity-based sovereigns have built up large cash reserves to facilitate such requests for emergency funding, while also making significant organisational improvements for the management of liquidity. These include greater recognition of liquidity objectives, more sophisticated risk management models to understand the implications of withdrawals for investment strategy and asset allocation, improved reporting on liquidity metrics, and the development of plans for how best to liquidate assets.

Because of this, most should be in a strong position to accommodate these requests without major asset allocation adjustments or forced asset sales. Sovereigns noted that they would look first to cash and money market instruments, followed by highly liquid government securities to fund any requests. However, if the crisis drags on and/or lower oil prices persist, funds also acknowledged that they could be faced with a sustained period of outflows that could see them confronted by much harder decisions and a requirement to sell down other assets, with passive equity allocations the next asset class in line. Such a scenario has the potential to lead to portfolio imbalances and would have significant repercussions for how these sovereigns model the assumptions underpinning both their investment horizons and strategic asset allocations.

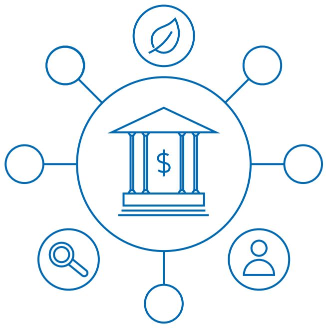
"We might well suffer severe withdrawals from the fund as a result of the current situation – many of the criteria have already been met," said a development sovereign based in Latin America.

Theme 2

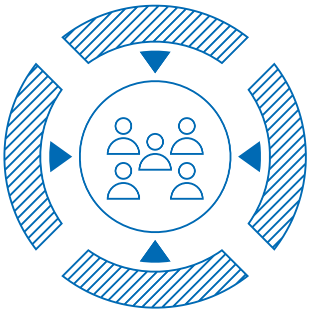
A battle for talent on two fronts



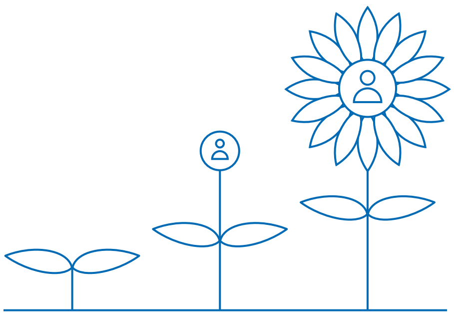
Sovereigns are experiencing the greatest capability gaps in the areas of private assets, investment strategy and asset allocation.



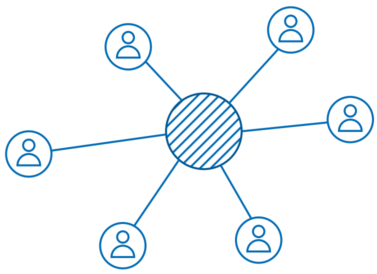
Central banks see their widest capability gaps within ESG, transparency and fund manager selection.



The internalisation of investment teams, driven by the need for greater control rather than cost, is leading to particular challenges sourcing appropriate talent, particularly in emerging markets.



These problems are being addressed through a greater emphasis on internal development and retention, plus pooling resources through co-investments and platform deals.



A significant minority still plan to engage more external support, with sovereigns in Asia seeking a significant number of external mandates in equities, fixed income and infrastructure, and those in emerging markets seeking mandates across private markets.

Recruiting, retaining and developing talent are key priorities for sovereigns and central banks, with both listing it as the most important attribute for the success of their organisation.

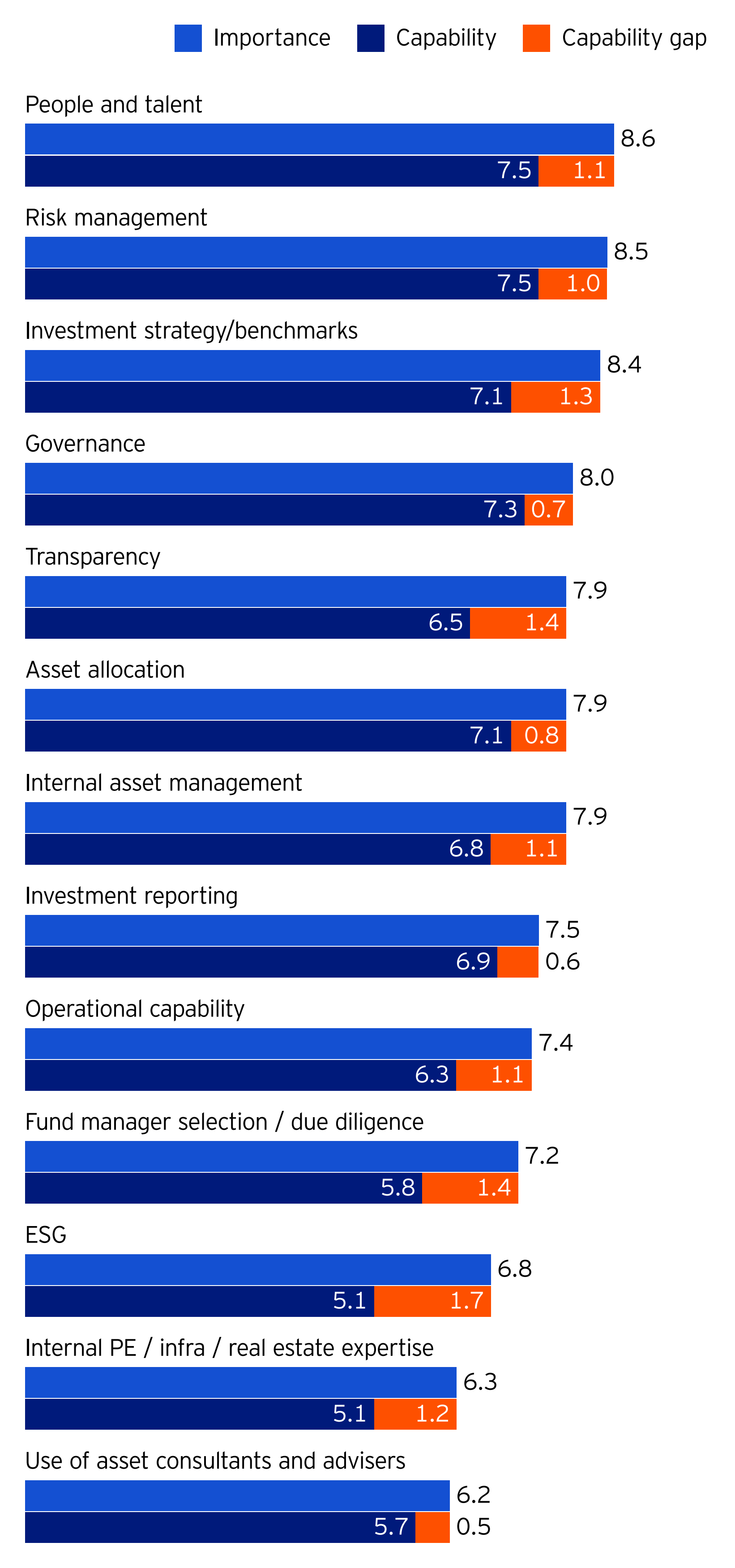
However, both sovereigns and central banks also identified a wide range of capability gaps and a need to enhance and develop their human capital to address current shortcomings (**Figures 2.1** and **2.2**).

Figure 2.1
Sovereign capability gaps (average rating /10, sovereigns)

Please assess the following on a score of 1-10 (where 10 = very important) based on A) Importance to your organisation B) Capability in these area (where 10 = very capable)

Sample size: 58

Figure 2.2
Central bank capability gaps (average rating /10, central banks)



Please assess the following on a score of 1-10 (where 10 = very important) based on A) Importance to your organisation B) Capability in these area (where 10 = very capable)

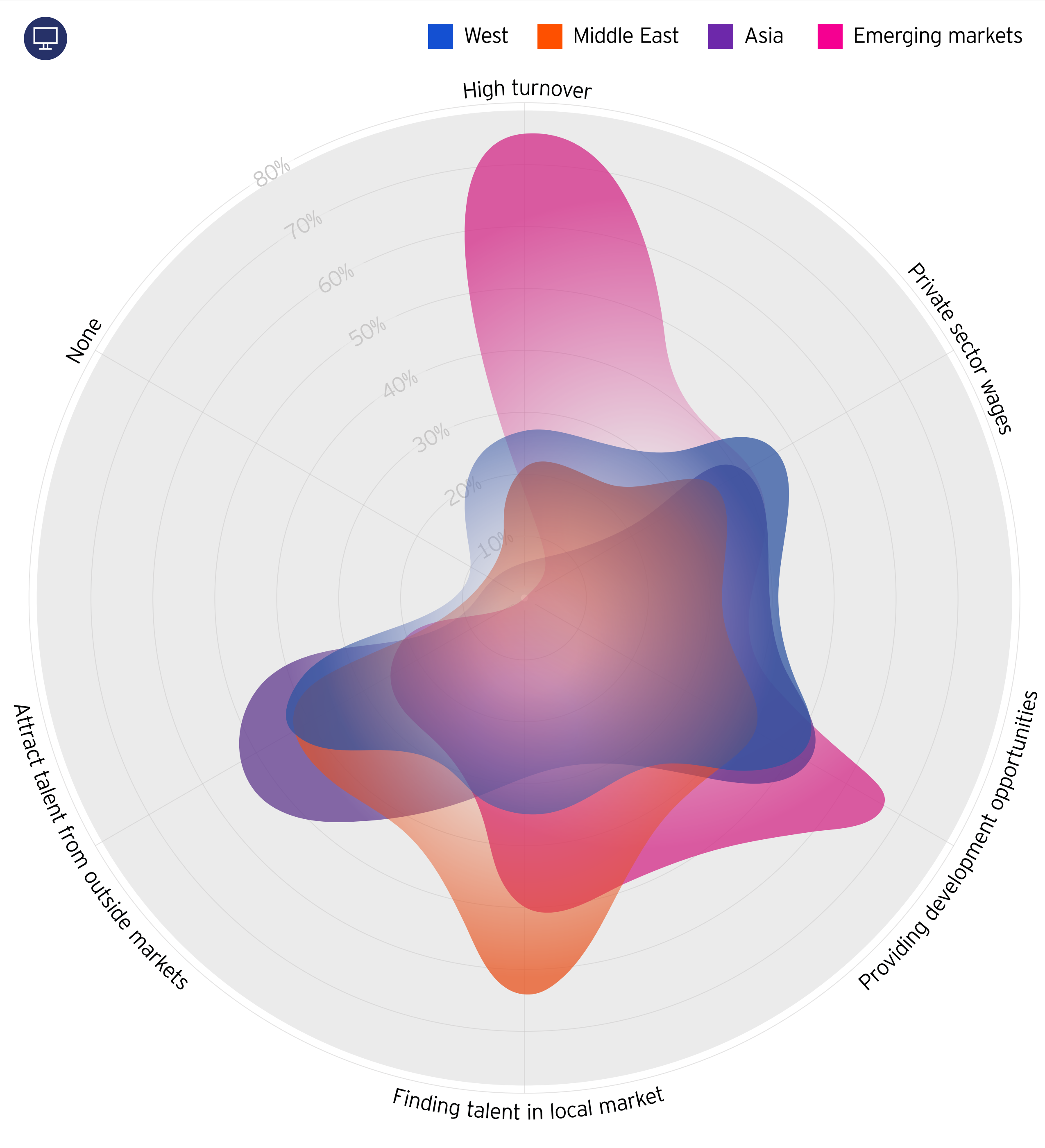
Sample size: 33

Narrowing these gaps is challenging. Finding and keeping talent is a universal problem, one not limited to sovereigns and central banks: other large asset owners pursuing internalisation objectives face similar issues. For official institutions, this problem is particularly noticeable in emerging markets, where high turnover and small talent pools hinder recruitment and retention. However, even outside of emerging markets, similar challenges often persist, with sourcing suitable talent in the local market, as well as attracting the best talent from abroad, being commonly cited obstacles, along with competing with private sector wages (**Figure 2.3**).

In this year's interviews, investors often pointed to the cost of assembling high-quality teams, especially in new capability areas where they have a limited track record. This often means higher compensation than the institution is accustomed to, requiring formal approval, which can cause delays or be unsuccessful entirely.

Figure 2.3

Key people and talent challenges (% citations)



Which aspects of people and development do you find most challenging?

Sample size: 92

Capability gaps reflect battle for talent on two fronts

A battle for talent has broken out in areas of high demand, such as private markets and investment strategy, where sovereigns have the biggest 'capability gaps' (**Figure 2.1**). "The main challenge is to build up our private market expertise outside of our domestic market," explained a North America-based liability sovereign. "The competition for talent is very heavy and we do not always have the brand, so it takes some time to develop and weighs on resources."

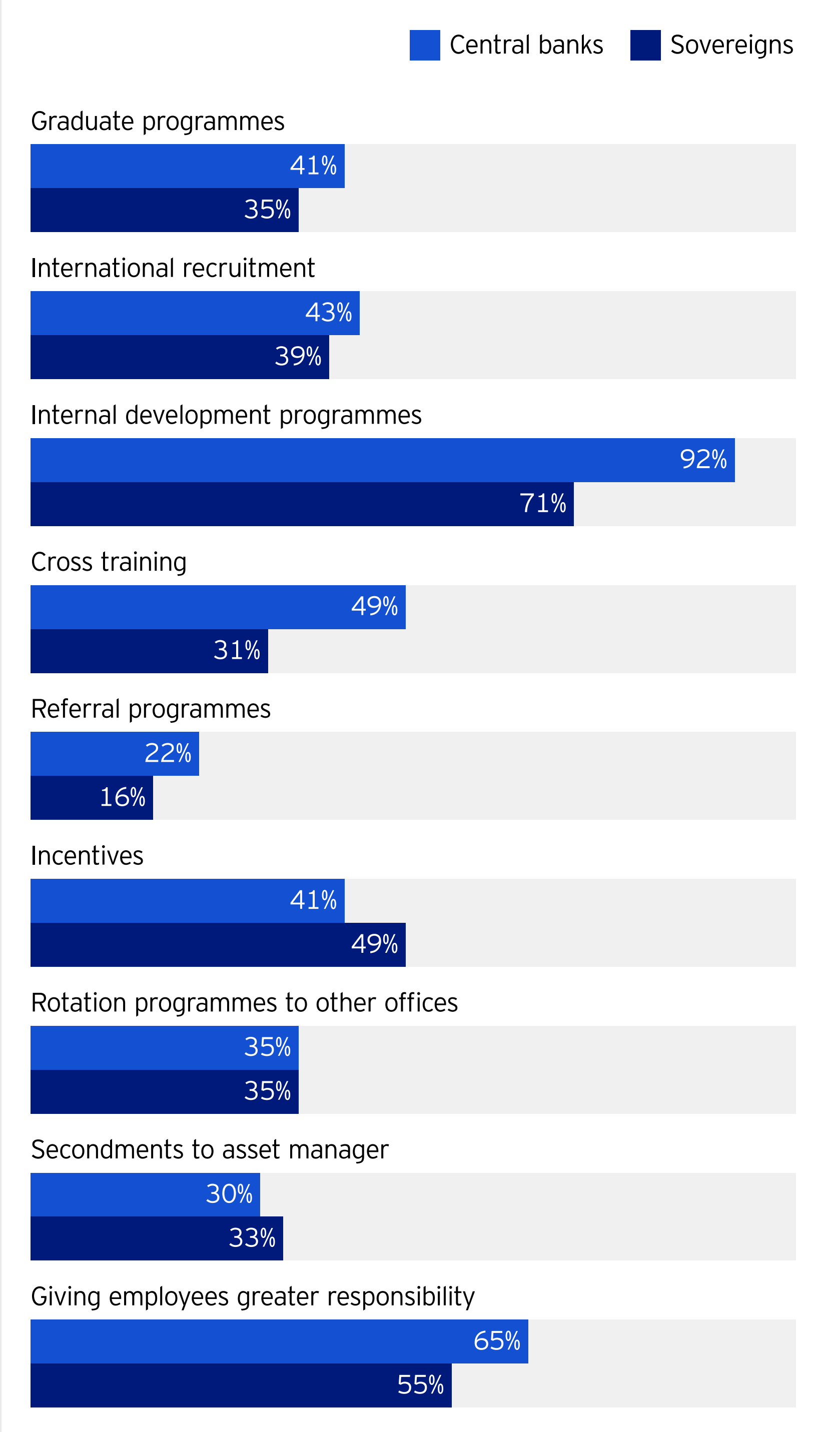
ESG is another area where demand outstrips supply, with central banks particularly noting a discrepancy (**Figure 2.2**). While the overall importance assigned to ESG within central banks is lower than some other areas, the size of the capability gap reflects the speed at which banks are having to adopt ESG considerations, with importance only likely to grow as stakeholders place increasing demands on central banks to be setting an example in respect of their ESG credentials.

Central banks also recognise asset manager selection as a significant capability gap, reflecting a drive into new asset classes, commonly via external mandates. Compared with sovereigns, central banks are often outsourcing these investments for the first time and must close the capability gap in their selection and monitoring process. "Our hiring is motivated by the use of new asset classes, including emerging markets debt, covered bonds and mortgage backed securities," said one EMEA-based central bank respondent. "We are making use of external managers but also want to build up our internal expertise."

From acquisition to development: keeping the talent

These challenges have spurred a focus on policies to improve existing talent. Some 92% of central banks and 71% of sovereigns have implemented internal development programmes, while the majority of both have also focused on giving employees greater responsibility (**Figure 2.4**). Respondents identified the need to do more to retain skilled employees targeted by the private sector. "There is a point mid-career where many people leave – we are trying to address this by giving employees more responsibility," noted one Latin America-based central bank.

Figure 2.4
Policies to address people and talent challenges (% citations)

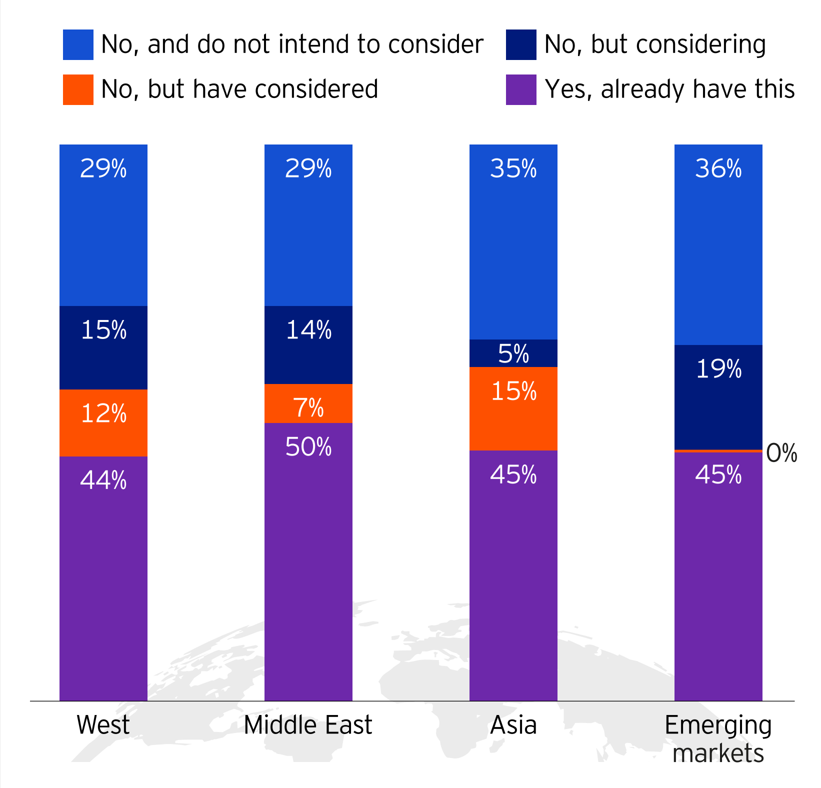


Which, if any, of the following policies has your organisation introduced to overcome your challenges?

Sample size: 88

"There is a point mid-career where many people leave – we are trying to address this by giving employees more responsibility," noted one Latin America-based central bank.

Figure 2.5
Adoption of diversity and inclusion plans (% citations)



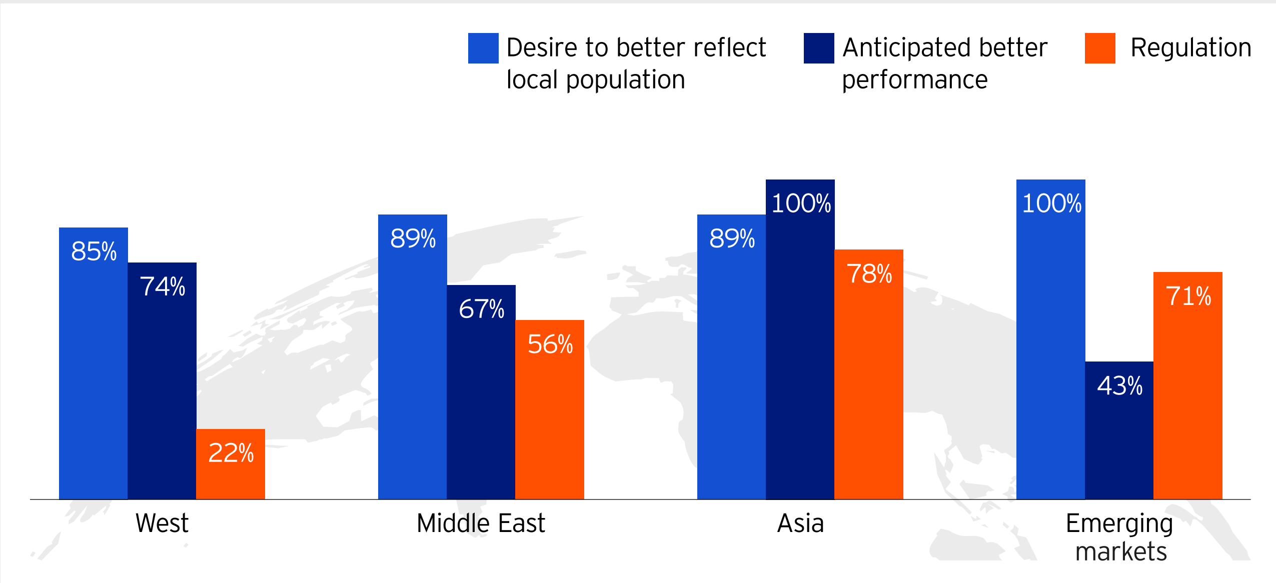
Do you have objectives around diversity and inclusion initiatives within your organisation?

Sample size: 97

Increasing the talent pool is another avenue for improving internal capability. About half of respondents operate diversity and inclusion (D&I) programmes, hoping that a more diverse and inclusive workplace will deliver better performance (**Figures 2.5** and **2.6**). Typical of this trend, one APAC sovereign said they had spent a considerable amount of time on this area, as "a more diverse talent pool will optimise the organisation to achieve our objectives. It's a start, and we're realistic about what's achievable and on what timeline. Making changes will take some time but we're committed."

It was also noted that some policies in this area, such as those requiring a preference for recruiting local nationals, could make the challenge of finding the right talent even harder. For example, funds may have a mandate to hire from the local population as part of their role in building knowledge and expertise in local markets. However, in markets where talent is in short supply these employees are often then recruited by the private sector or other government agencies, exacerbating the challenges related to retention.

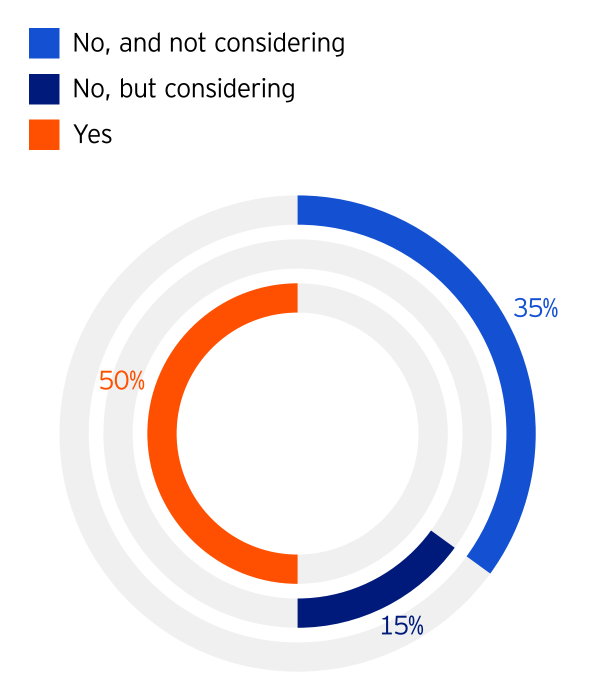
Figure 2.6
Motivation for D&I initiatives (% citations, D&I respondents)



What is the motivation for your D&I framework?

Sample size: 52

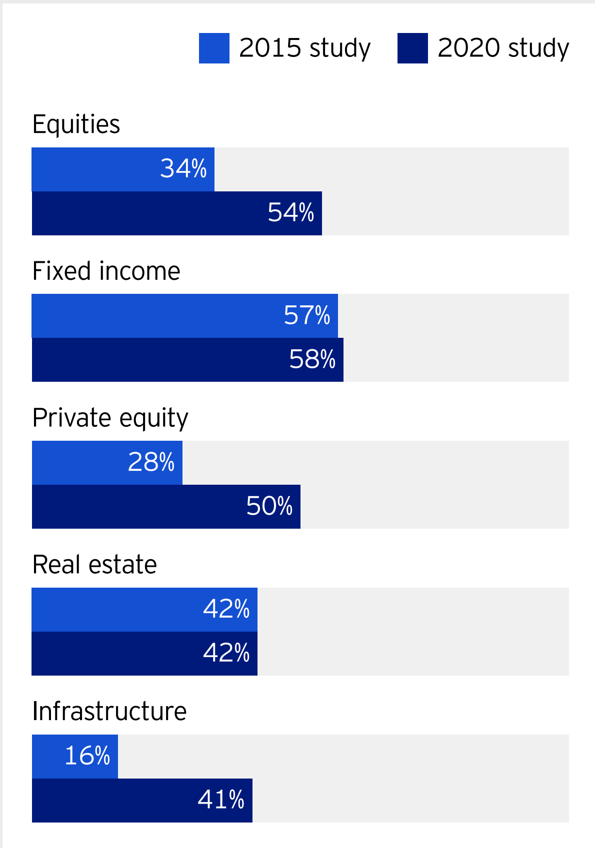
Figure 2.7
Have internalised investments over past three years (% citations, sovereigns)



Have you internalised any investment during the past three years?

Sample size: 60

Figure 2.8
Proportion of asset class managed internally (average %, sovereigns)



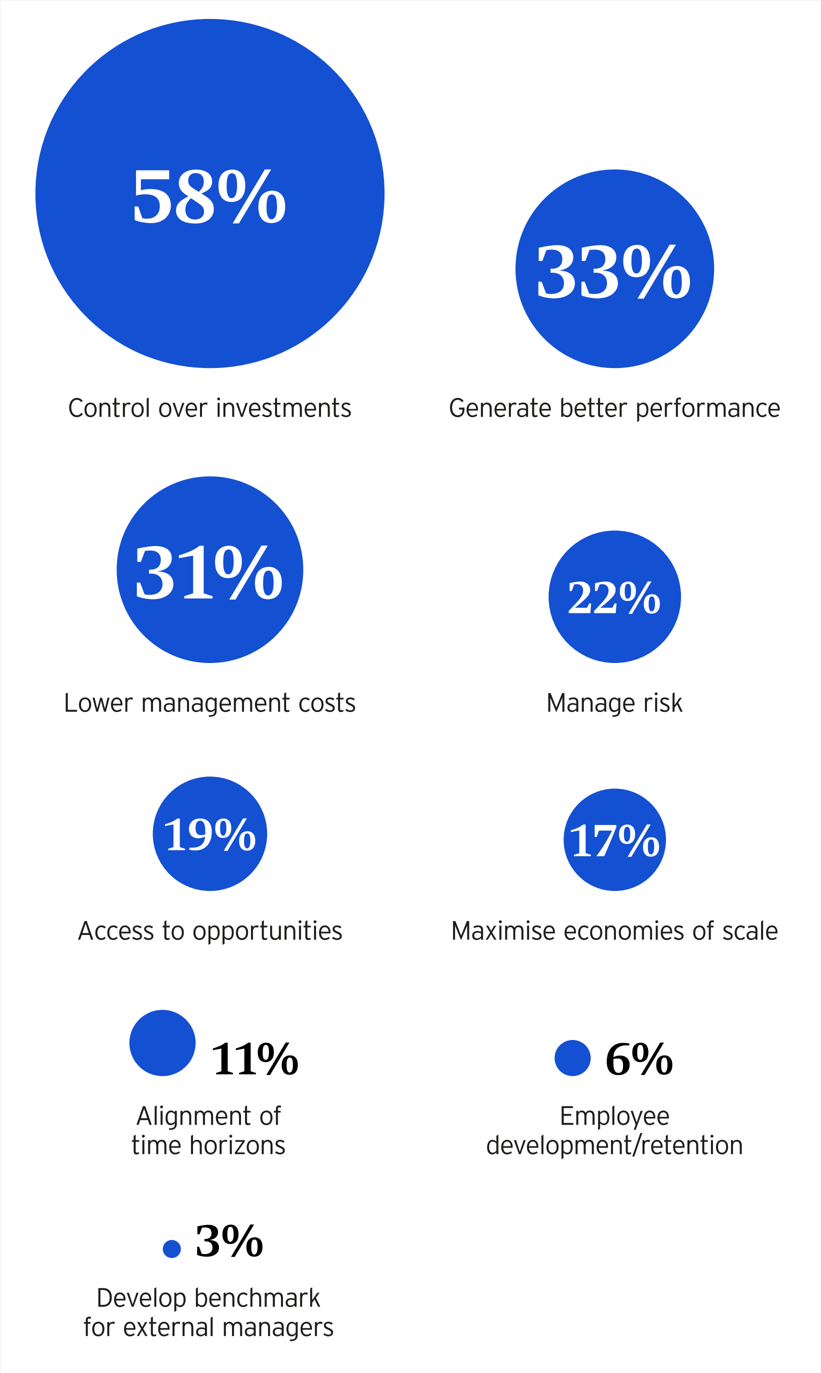
What proportion of the following asset classes do you manage internally?

Sample size: 2015 = 33
2020 = 36

Internalisation drives demand for talent among sovereigns

The internalisation of investment capability was regularly cited by sovereigns as a reason for the recruitment and retention of talented teams becoming even more crucial. Half have invested in internal investment capability over the past three years (**Figure 2.7**), with a focus on equities, private equity and infrastructure (**Figure 2.8**).

Figure 2.9
Main benefits of internalisation (% citations, sovereigns)



If yes/considering: what do you believe to be the main benefits of the internalising asset management capability?

Sample size: 36

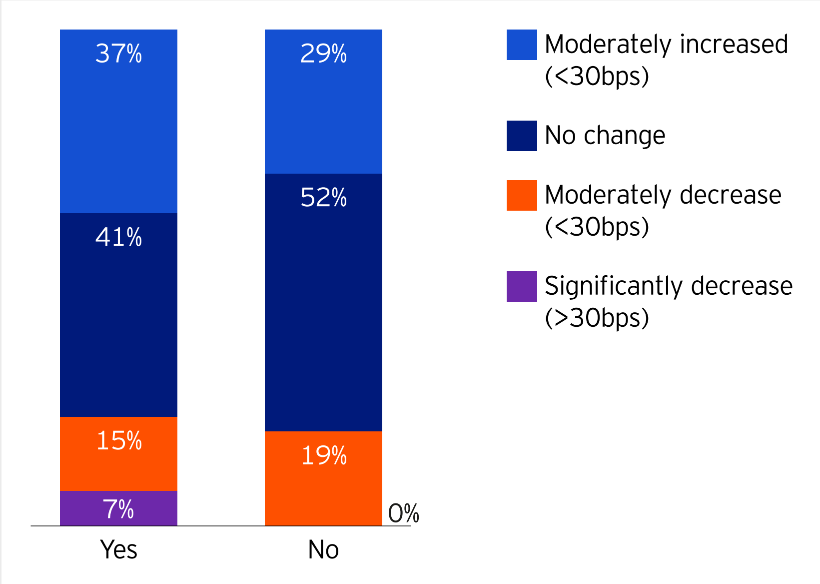
Equities is often the second asset class internalised (after fixed income) and more than 50% of equity allocations are now managed internally, up from 34% in our 2015 study. The reasons for this vary by organisation, but one commonly cited factor was the dominant role of beta in driving returns since the global financial crisis, which is often seen as being more efficiently targeted via internal teams due to the relative simplicity of tracking market indices.

Internalisation has also happened rapidly in private equity (up to 50% from 28% in 2015) and infrastructure (up to 41% from 16%). The size of these changes should be treated with some caution due to a degree of movement in the sovereign sample between the 2015 and 2020 studies. That said, it's an accurate reflection of the direction of travel, with sovereigns seeing benefits in terms of both access and deal flow from bringing these asset classes in-house and the creation of satellite offices in important local markets where many deals take place. In contrast, there has been limited further internalisation within fixed income, which can be part-explained by rising allocations to alternative credit that are often managed via specialist external managers.

Control rather than cost is the driving force behind sovereigns' internalisation, as the increasing need to tailor portfolios to reflect specific objectives and philosophies is seen as harder to achieve via external mandates (**Figure 2.9**). "For us it is becoming increasingly important to know exactly what we own and to be able to stand up and explain why," said an EMEA-based liability sovereign.

Internalisation has stoked a battle for talent, and 37% of sovereigns that have internalised investment capability over the past three years have seen their expense ratio increase, while only 22% have seen costs come down (**Figure 2.10**). Sovereigns that have seen their expense ratio increase over the last three years are likely to be those that have internalised a big slice of their private equity, infrastructure and real estate allocations – areas where competition is often fiercest (**Figure 2.11**).

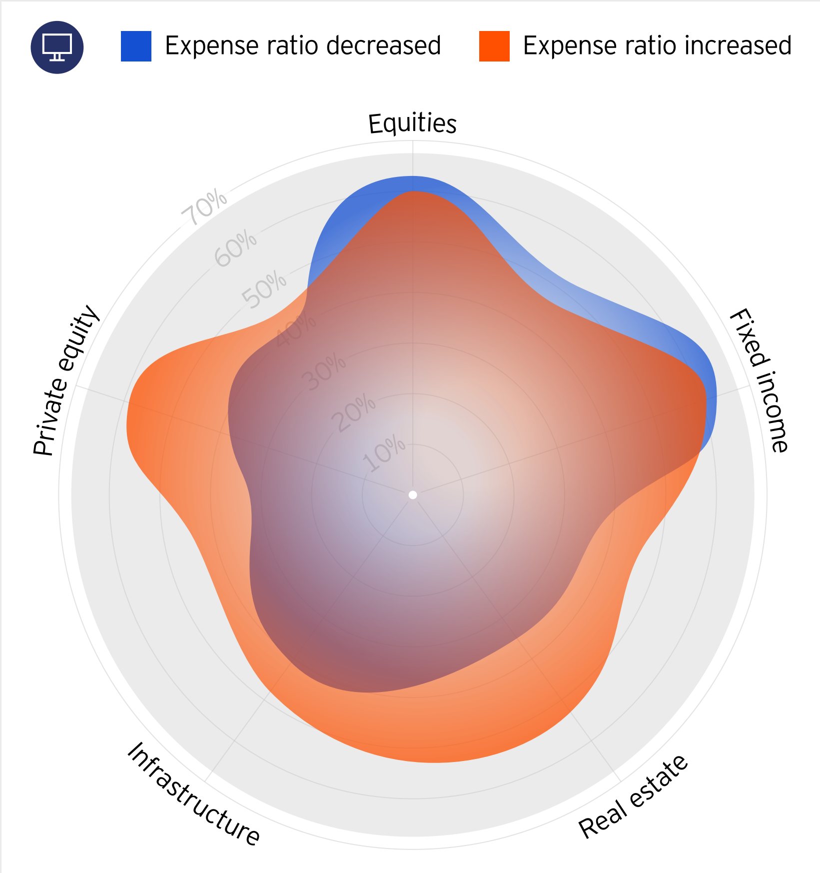
Figure 2.10
Change in expense ratio in past three years (% citations, sovereigns)



[Have internalised investments in past three years] How has your total expense ratio changed over the last three years?

Sample size: 52

Figure 2.11
Proportion of asset class internalised (% citations, sovereigns)



How has your total expense ratio changed over the last three years?
What proportion of the following asset classes do you manage internally?

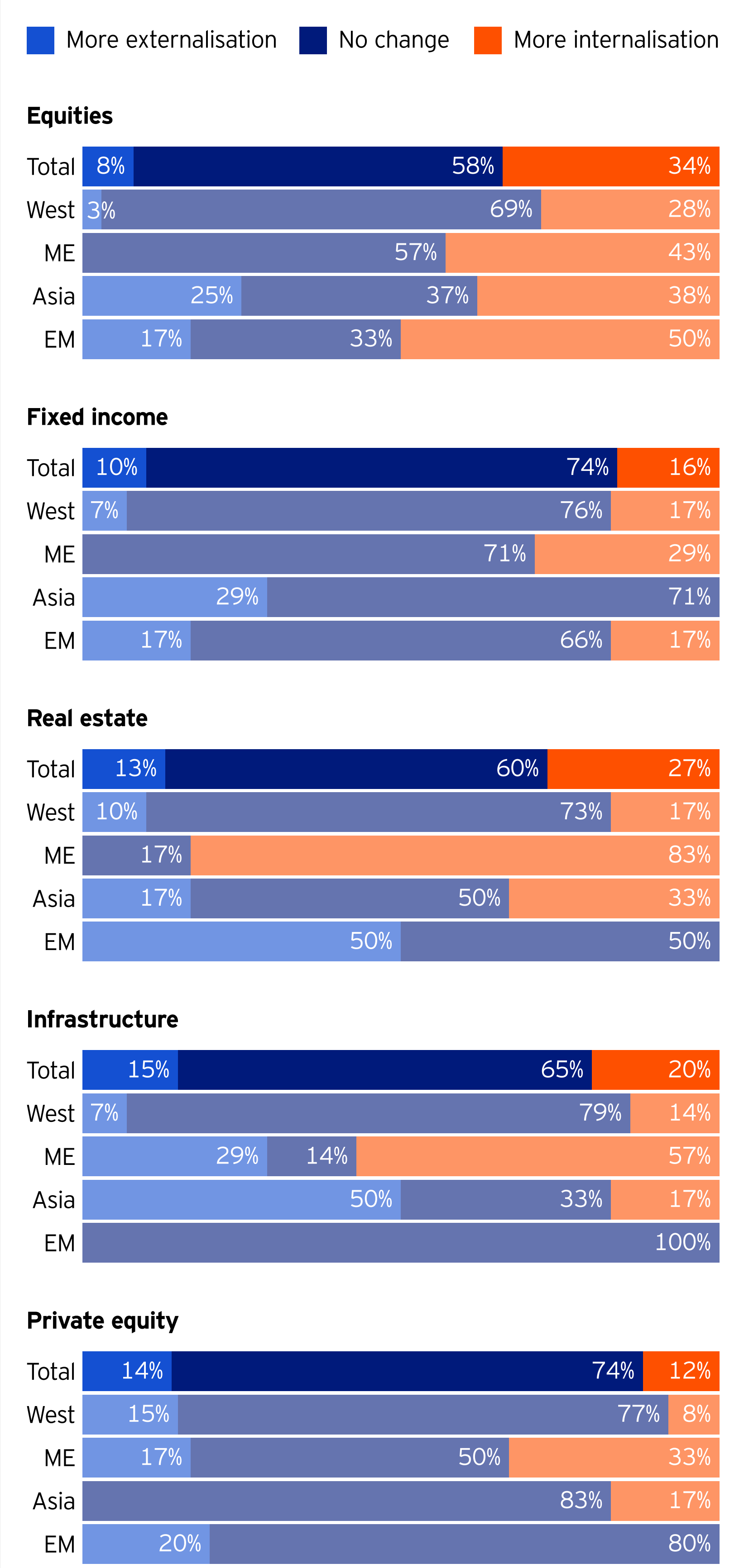
Sample size: 36

Increased use of external management still on the agenda for many

Despite a well-established trend towards internalisation over the past five years, sovereign plans for the next three reveal this masks a more complex picture, with a significant minority planning to engage more external management across all asset classes (**Figure 2.12**). This includes sovereigns reversing previous moves towards internalisation, with some noting that the anticipated benefits had been harder to realise than expected, leaving them unable to justify an increase in associated costs.

There are also notable regional variations. Over the next three years Asian organisations are most likely to be seeking external expertise in equities, fixed income and infrastructure, while in the West there is only limited movement in either direction (**Figure 2.12**). In the Middle East, there is still expected to be a strong trend towards internalisation for equities, fixed income and real estate. However, a significant minority are looking for external managers to play a greater role in infrastructure and private equity. Meanwhile, in emerging markets, where many sovereigns are more recently established and have more limited internal resources, there is a move towards internalisation for equities but a trend towards externalisation for private markets assets such as real estate and private equity.

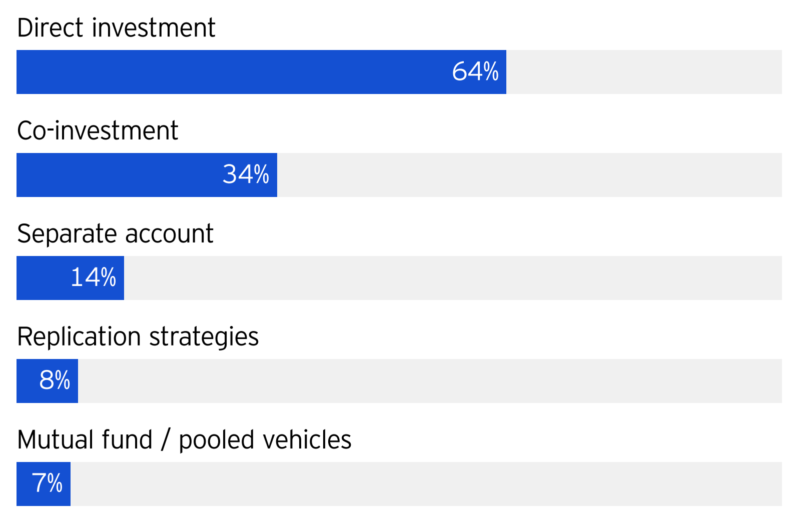
Figure 2.12
Plans for externalisation vs internalisation over next three years (% citations, sovereigns)



Over the next three years how do you expect this to change for each asset class? Sample size: 50

Sharing the burden through co-investments and platform deals

Figure 2.13
Preferred structure for unlisted investments (% citations, sovereigns)



For you unlisted investments, do you have a preference for structure?

Sample size: 59

Even when sovereigns have built a strong internal team, many admit that the complexity of executing on multiple private market deals can put a significant burden on those teams. They are often small, due in part to the challenges of finding the right talent. This can put a limitation on the number of investments, as any deal must be of sufficient scale to merit devoting internal resources. An EMEA-based liability sovereign elaborated: "The investment team is maybe 25 and the illiquid team is four. We really have to be selective in terms of investment opportunities. In our 'impact' team we see some very exciting opportunities, but many are too small to invest in."

Co-investments are considered an attractive way of sharing resources and reducing this burden (**Figure 2.13**). Sovereigns pointed to the compounding benefits of doing co-investments, with the first deals often tricky due to differences in organisational culture and established procedures. Over time, however, this led to a powerful network of collaborators, with many working with a small group of partners across multiple deals.

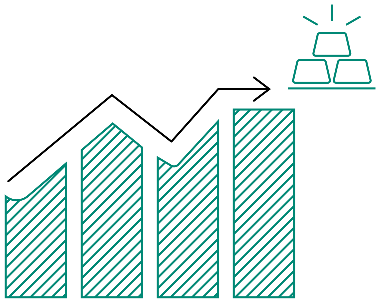
Respondents noted that because each sovereign may have specialised expertise in particular industries and geographies, such a network was very effective at creating deal flow and access to attractive opportunities. "We prefer to go in through our own teams to have more control but sometimes we don't have expertise, so gain access via a mandate. Co-investments also give you more of a direct benefit, allowing you to leverage the insights of the partners you work with," explained an APAC-based liability sovereign.

Investors are looking at other ways to gain more control over their unlisted investments without putting an unacceptable burden on internal teams. We found appetite among sovereigns for pooled platform deals that give them a say over the assets being targeted but with less need for direct involvement in each deal. This was articulated by a Europe-based liability sovereign: "Traditionally we invest via fund of funds but these are less appealing due to the fee structures and lack of control. We are looking to do more via platform deals set up to target investments in infrastructure across themes that we like."

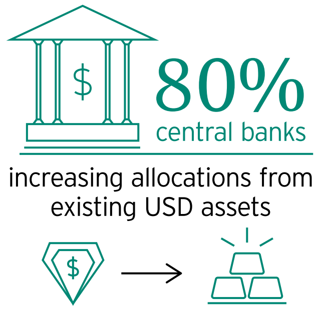
Similar sentiments were common among medium-sized sovereigns, who need to be making large enough deals to make a dent in their allocation targets but who often struggle to get invited to the top table of sovereigns doing the largest co-investments. These approaches offer sovereigns some of the advantages that are otherwise only available to those that have recognised a capability gap and have made the investment required to identify, recruit and retain the talent to deliver.

"We prefer to go in through our own teams to have more control but sometimes we don't have expertise, so gain access via a mandate. Co-investments also give you more of a direct benefit, allowing you to leverage the insights of the partners you work with," explains an APAC-based liability sovereign.

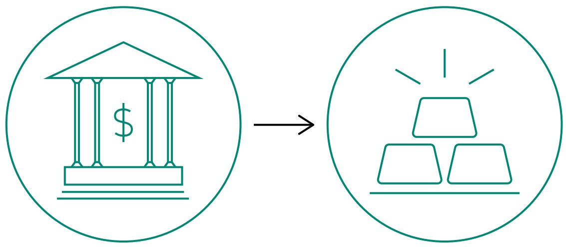
Gold: a glimmer of hope amid market turmoil



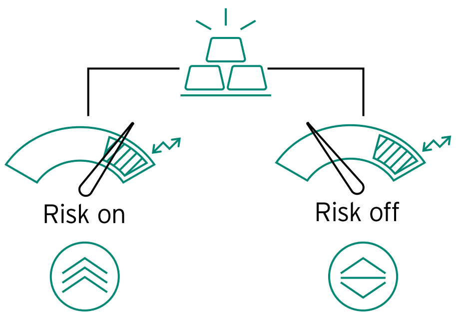
Ongoing market turmoil has seen a continuation of gold's popularity, with allocations rising as Covid-19 reveals an asset class that may be staking a claim for a new role within institutional portfolios.



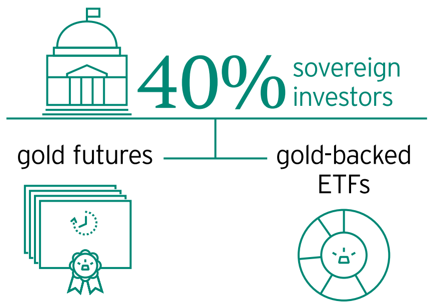
80% of central banks choosing to increase gold allocations are doing so from existing US$ assets, as central banks look to diversify away from the dollar without sacrificing liquidity and convertibility. This trend was especially prominent among emerging market banks.



Central banks are particularly attracted by gold's potential as a replacement for negative-yielding debt, its low correlation to other central bank assets, and liquidity.



For sovereigns, gold is seen as a potential inflation and tail hedge for the portfolio, with positive correlations in risk-on scenarios, but barely correlated / negatively correlated during a risk-off scenario.

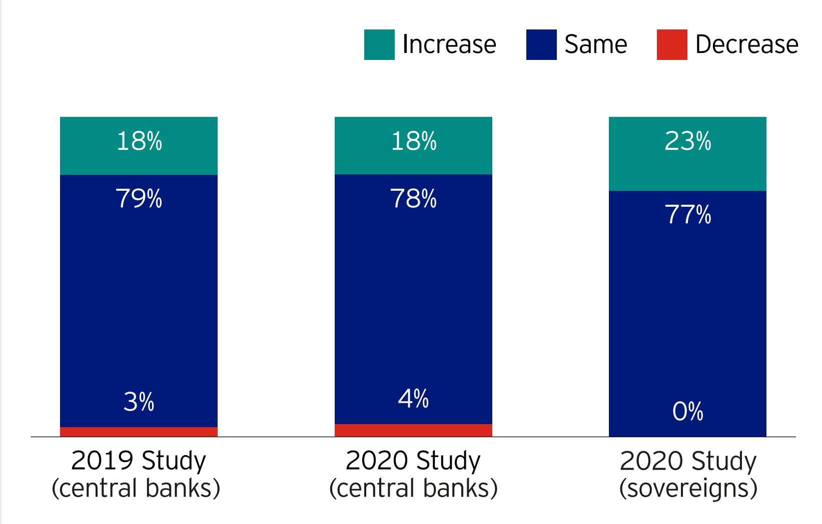


While central banks are predominantly investing in physical gold, 40% of sovereign investors are investing via futures and gold ETFs, principally due to the ease of trading, an approach potentially attractive to some central banks.

This year's study sees significant interest in gold from both central banks and sovereigns: an interesting development, given that gold was typically viewed as a traditional central bank asset dating back to the gold standard.

This is a continuation of the trend we identified last year, where a number of central banks had either increased their gold allocations or were looking to do so over the coming year: specifically, roughly a fifth were considering increasing allocations (**Figure 3.1**). However, last year storage costs were cited as an obstacle, especially given the preference by some central banks to store gold in their own vaults.

Figure 3.1
Planned change in gold allocations over next 12 months (% citations)



How are these allocations likely to change over the coming year? Do you envisage making changes to your gold allocation in the next 12 months?

Sample size: 2019 = 34
2020 = 58

Investors expect the trend towards increasing allocations to continue in 2020 – despite high prices – as Covid-19 reveals an asset class that might well be staking a claim for a new role within sovereign and central bank portfolios. As investors scrambled for cash in March, gold was a popular source of liquidity, resulting in a short-lived dip in price yet recovering quickly to previous levels within just a couple of weeks. Importantly, the market had remained relatively liquid (**Figure 3.2**).

Figure 3.2
Gold price (USD)

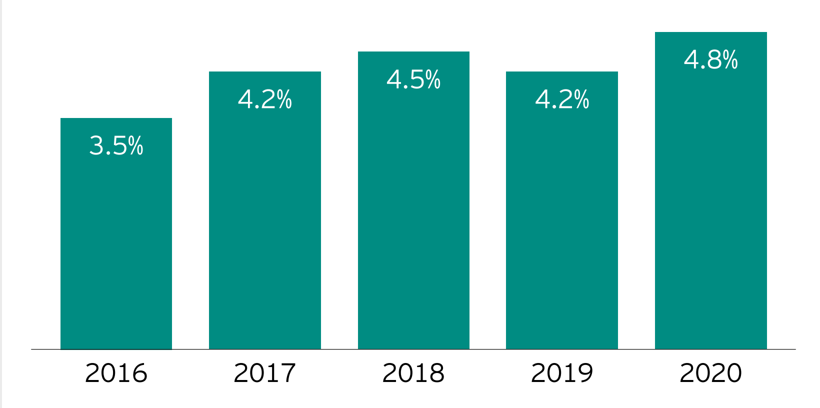
Gold Price: London Price and NY Futures (Price, Rebased) as at 31st May 2020.

Central banks: uncertain times reflect well on a traditional reserve asset

Average allocations to gold increased very slightly through 2019, consistent with the intention expressed by some managers in last year's survey (**Figure 3.3**). Furthermore, a similar proportion (18%) expect to continue increasing allocations, meaning that allocations are likely to continue rising, at least over the longer term.

80% of central banks choosing to increase allocations are doing so from existing USD assets – significantly more than those from (negatively yielding) EUR or GBP allocations (**Figure 3.4**). This is an important point, because it highlights the dilemma faced by a number of central banks: how to diversify away from the USD without sacrificing liquidity and convertibility – for many, gold has been a convenient solution. This trend was especially prominent among EM central banks, where almost 90% were drawing on USD allocations to add to gold reserves.

Figure 3.3
Average allocation to gold (average %, central banks)



For the total reserves portfolio, please indicate the % allocation across asset classes.

Sample size: 36

Figure 3.4
Sources of funding for banks increasing allocation to gold (% citations, central banks)

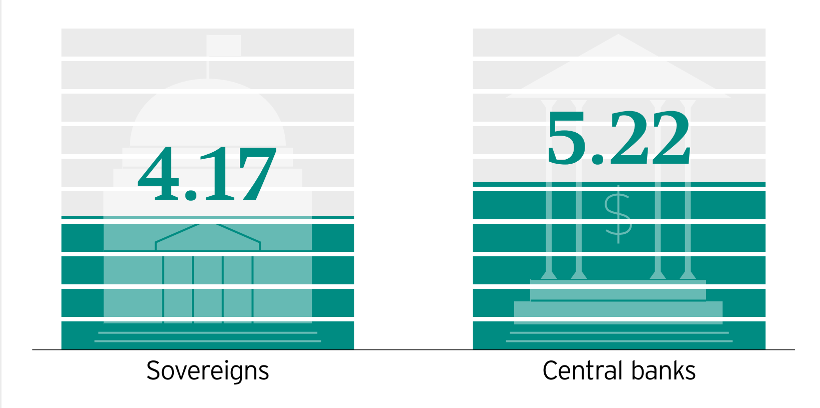
[Central banks increasing only] Which currency would fund this increase?

Sample size: 10

While it is unlikely that gold will replace debt as the principal component of a reserves portfolio, managers do not dismiss its role out of hand. They rate the potential of the asset class as an alternative to fixed income at 5.22 on average (out of 10) – the equivalent figure for sovereigns was 4.17 (**Figure 3.5**). Banks are particularly attracted by gold's potential as a replacement for negative yielding debt (48%), and diversification due to its low correlations to other central bank assets (44%). A large and robust market structure and high trading volumes give confidence in ongoing liquidity (**Figures 3.6** and **3.7**).

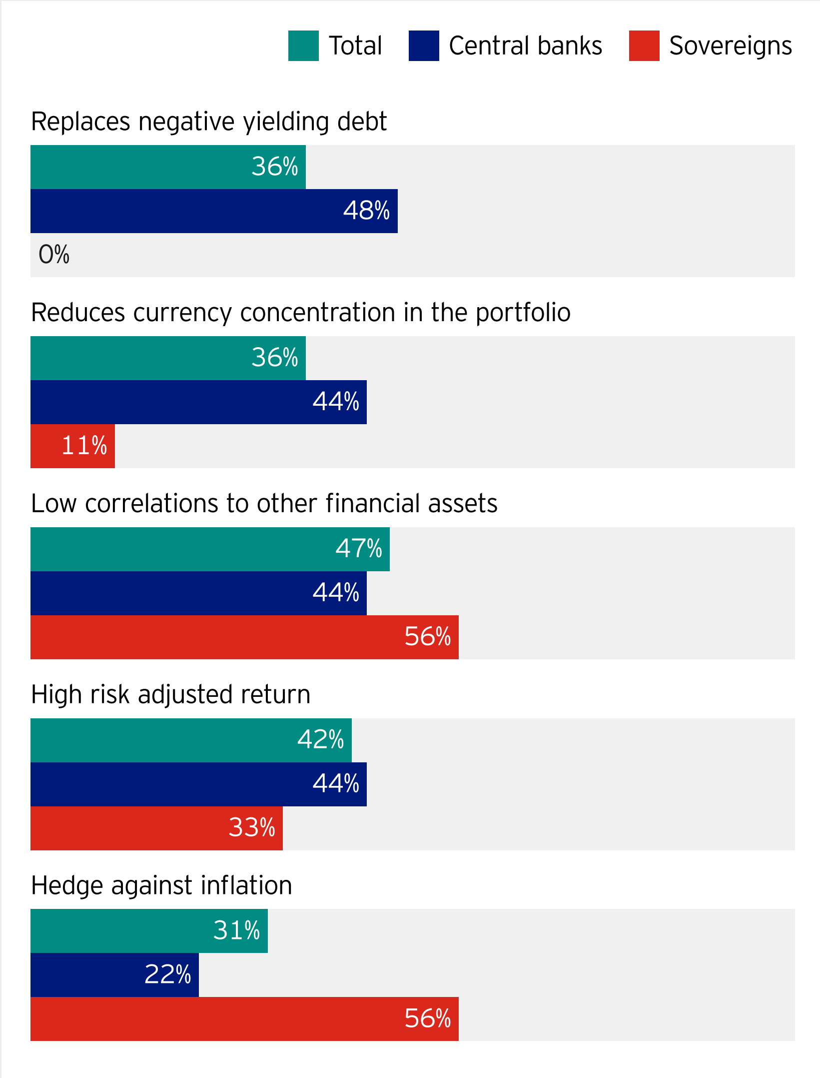
A high proportion of central banks maintain a gold allocation stored in their own vaults, which is rarely traded due to organisational and political difficulties (as observed last year, gold is frequently difficult to sell without incurring some political or public attention). In the words of one EMEA bank: "We maintain a stable allocation as it is a very sensitive political issue. If we wanted to make any changes, it would be a very political process within the bank."

Figure 3.5
Rating of gold as an alternative to fixed income (average rating /10, gold investors)



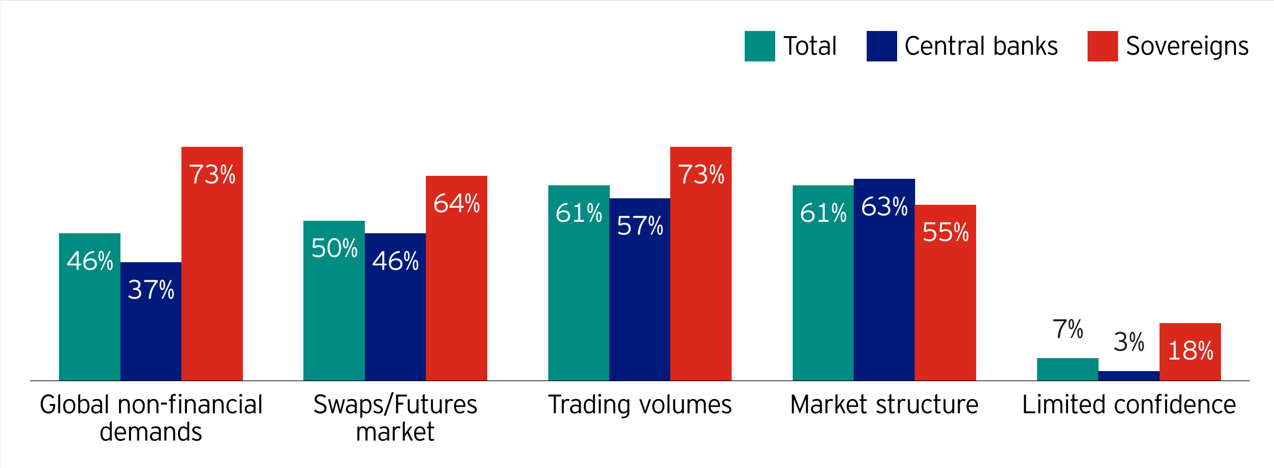
To what extent do you see gold as an alternative to fixed income investments? Sample size: 48

Figure 3.6
Attractions of gold (% citations, gold investors increasing allocations)



[If increase] Why is this the case? Sample size: 36

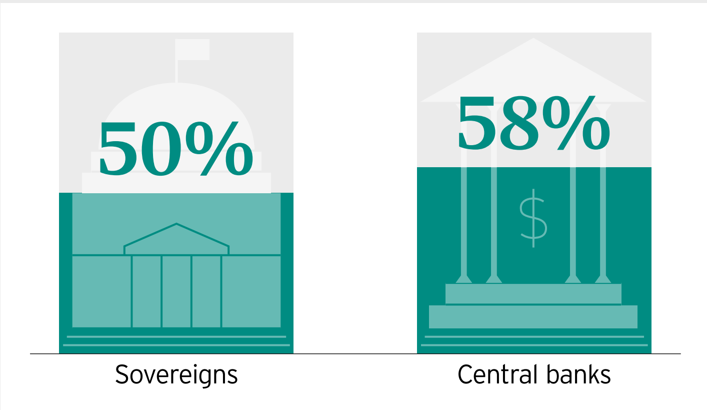
Figure 3.7
Drivers of confidence in gold's liquidity (% citations, gold investors)



What gives you confidence in gold's liquidity?

Sample size: 46

Figure 3.8
Investors using gold swaps (% citations, gold investors)



Have you engaged in gold deposits or swaps to generate a return or for security purposes?

Sample size: 48

The use of gold swaps has allowed some central banks to deploy gold for short term liquidity, as well as earning a return. According to one Latin American central bank: "Given our liquidity challenges, gold swaps offer us an ideal way to access dollar liquidity and make a return without taking on excessive risk." A significant number (58% of banks, including 70% of developed market banks) employ gold swaps. While returns are not necessarily high, such swaps are relatively liquid and offer potentially better rates than some government bonds. (**Figure 3.8**).

According to one Latin American central bank: "Given our liquidity challenges, gold swaps offer us an ideal way to access dollar liquidity and make a return without taking on excessive risk."

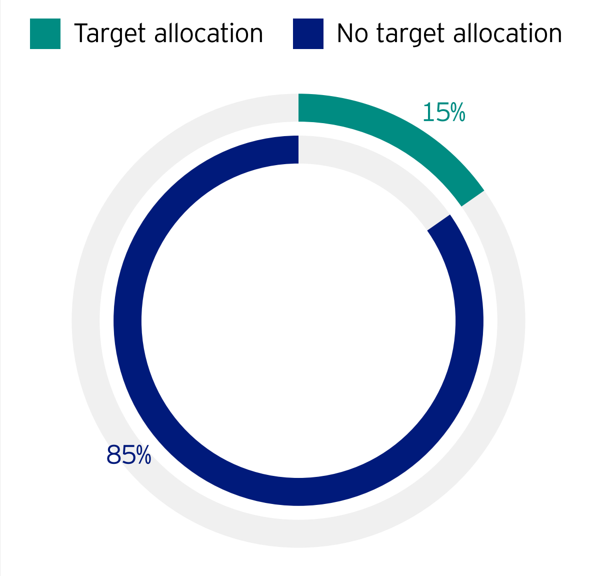
Sovereigns: gold has been an attractive asset class for generating uncorrelated returns

While central banks often approach gold with a pre-existing allocation, the starting position for sovereigns is rarely the same. For many sovereigns, the decision to make allocations to gold often entails adding both investment capability and potential complexity to a portfolio.

Some 15% of sovereigns have made a strategic allocation to gold, and just over a fifth of these are looking to add further to that allocation. This suggests that gold is beginning to take on a role not only as a traditional reserve asset, but also as an asset with a role in an institutional portfolio (**Figure 3.9**).

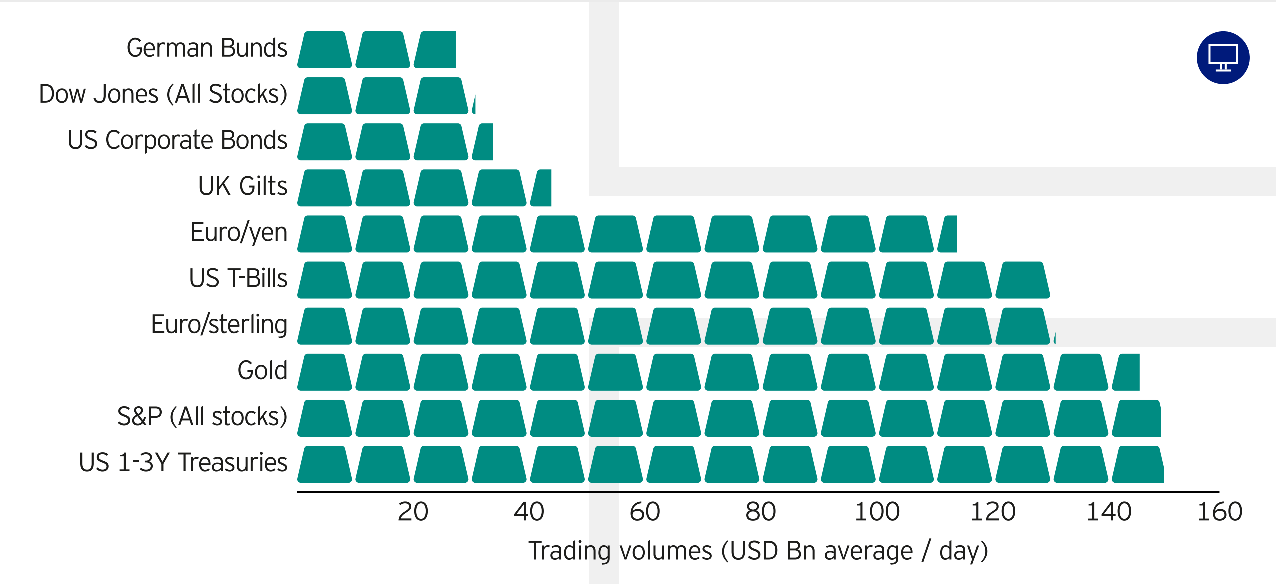
For sovereigns, gold is a powerful inflation and tail hedge, while also demonstrating positive correlations in risk-on scenarios, but is barely correlated / negatively correlated during a risk-off scenario. It's also a highly liquid asset, with significant global non-financial demand (jewellery, technology, etc.) all but guaranteeing robust future demand. The gold price is powered by both pro and counter cyclical drivers, making it a reliable store of value in times of crisis.

Figure 3.9
Investors with a strategic allocation to gold (% citations, sovereigns)



Does gold have a target allocation within the SAA? Sample size: 55

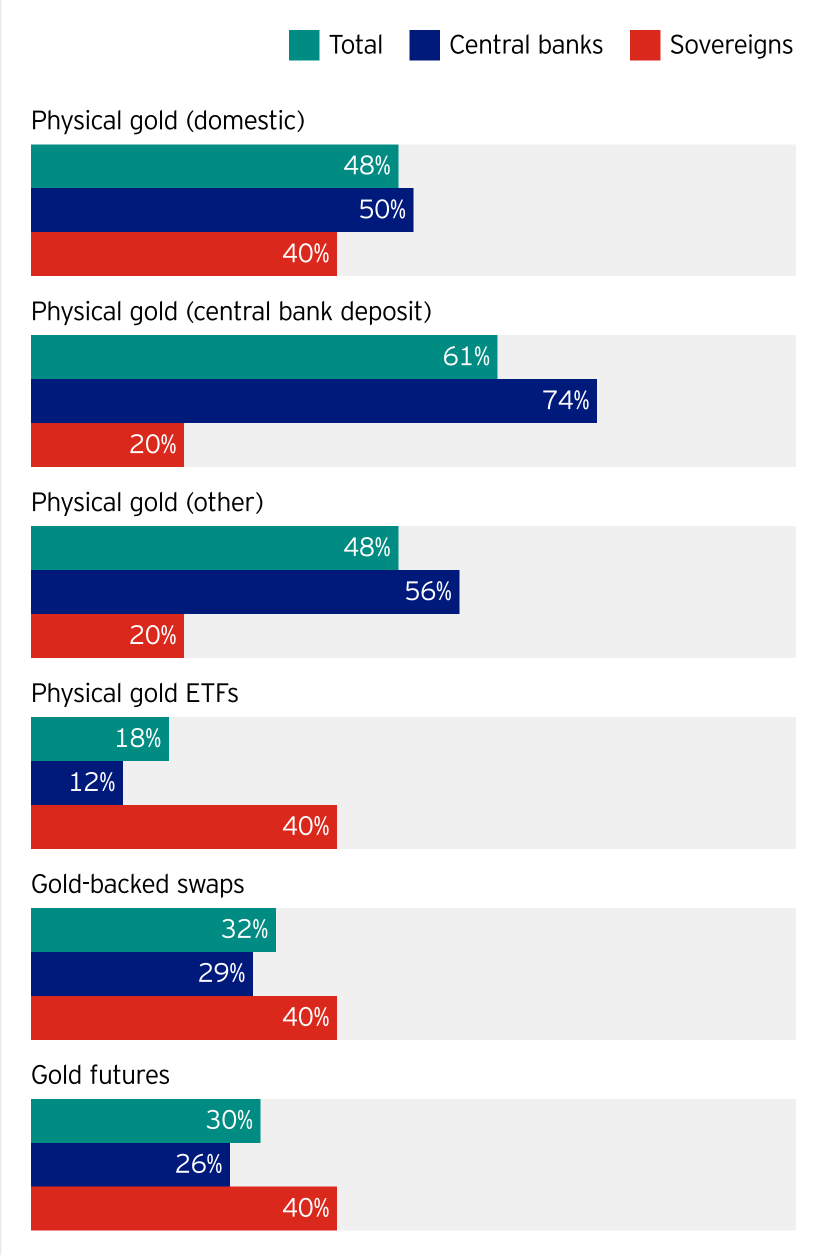
Figure 3.10
Gold trading volumes



Source: https://www.gold.org/goldhub/data/trading-volumes, as at 31st December 2019.

Gold's highly liquid nature, as measured by estimated average daily trading volume, can be especially attractive to sovereigns. Gold trading volumes are estimated to be roughly equivalent to those for S&P 500 securities and approaching 1-3 year Treasuries (**Figure 3.10**). The global financial crisis presented examples of ways in which gold can be a store of liquidity in a crisis. As liquidity dried up towards the end of 2008, the Gold Overnight Financing Rate (the rate paid forwards to those lending gold) fell below Agency Repo, LIBOR and GC repo rates, meaning that it was cheaper to obtain cash via a gold swap than via the usual channels.

Figure 3.11
Mode of investment in gold (% citations, gold investors)



With respect to implementation which of the following do you use? Sample size: 44

Sovereigns investing in gold have several options, reflecting the development of the asset class. While physical gold is still used by some, the majority tend to make use of more flexible approaches. For example, futures are used by 40% of sovereign gold investors, with respondents pointing to the flexibility and returns that can be achieved through skilful trading.

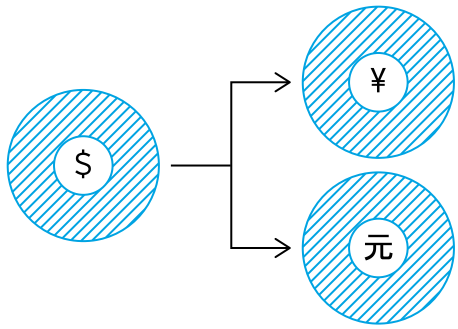
Meanwhile, 40% of sovereign investors gain exposure through gold-backed ETFs, principally due to the ease of trading without the risk of having to take delivery or finance the rolling forward of a futures contract. These vehicles have grown significantly in recent years – 80% over the past year alone[1] – and given the relative liquidity of their physical underpinning are less likely to suffer from mispricing, although Covid-19 lockdowns did interfere with the delivery of physical bars in some instances.

Central banks that employ ETFs for credit and equity exposure may also consider investing also in gold ETFs (**Figure 3.11**). One central bank commented: "Physical gold doesn't answer our needs in terms of liquidity and making sure our government can meet its obligations at all times as transaction costs are higher for physical assets – therefore we might consider using ETFs." For banks looking to increase exposure without adding significantly to domestic holdings, or taking on the credit risk of a bullion bank, ETFs are likely to be increasingly attractive. Furthermore, given the potential political challenges around buying and selling physical gold, ETFs could offer a more politically acceptable means to invest tactically in the asset class.

The development of these alternative modes of investment, and the growth of the market as a whole, is likely to lead to continued growth in allocations. Of those investors without an existing allocation, over a quarter of banks and a fifth of sovereigns are exploring adding gold to the portfolio, underscoring the increasing importance of a traditionally staid asset class.

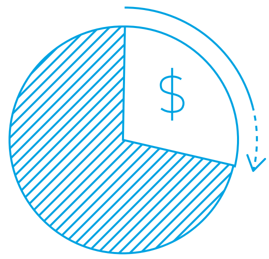
1 https://www.gold.org/goldhub/data/global-gold-backed-etf-holdings-and-flows?utm_source=google&utm_medium=cpc&utm_campaign=rwm-etf-flows-apr-20&utm_content=434584315400&utm_term=%2Bgold%20%2Band%20clid=EAIaIQobChMIl cSmgL6r6QIVB7DtCh0fKQGIEAAYASAAEgJIlvD_BwE

Central banks: testing resolve in risk assets

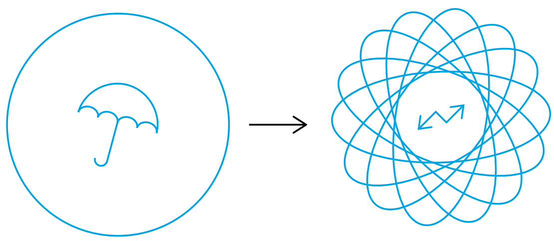


Reserves portfolios are diversifying across currencies. Rising US debt and political uncertainty is driving greater consideration by bankers of alternatives to the US dollar, with the yen and the renminbi especially favoured.

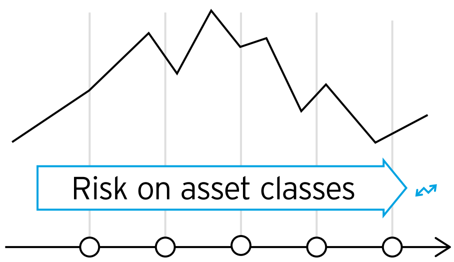
1/3
bankers are increasing allocations to US$



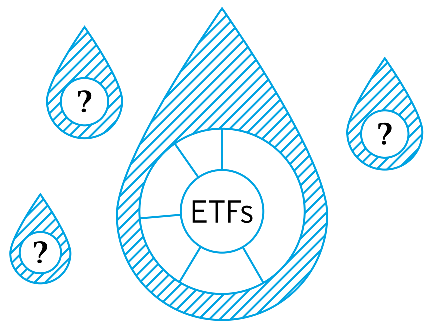
Despite this, the Covid-19 crisis has prompted a flight to US dollar perceived safety: one third of bankers intend to increase dollar reserves, reversing a longer-term trend. Reports of the dollar's demise as the world reserve currency may therefore have been greatly exaggerated.



In tandem with reserve currency diversification, there has been a transformation of the pre-2008 largely risk-free portfolios into more dynamic allocations with exposure to risk-bearing assets, particularly for central banks with ample reserves.



Continued interest in equities and other 'risk-on' asset classes suggests that bankers are sticking with long-term strategic allocations, unlike the dumping that occurred in 2008.



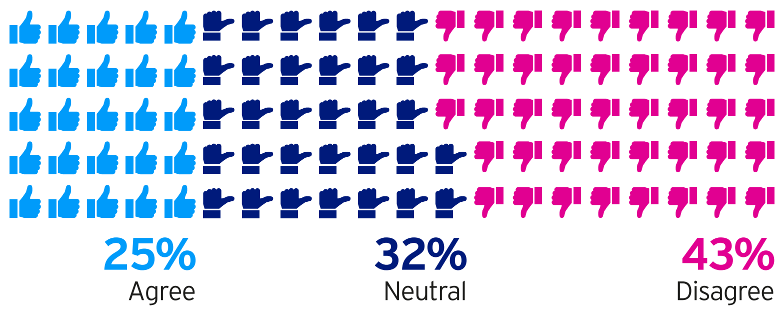
While ETFs are increasingly favoured, Covid-19 has highlighted trading issues for equity and credit ETFs. Price and liquidity were the most significant challenges cited by respondents, with liquidity being a particular risk for developed market banks.

The past ten years have seen periods of rapid and significant change for central bank reserve management.

Reserves have grown significantly in size, and also in importance, placing bankers in a spotlight that few were used to. Foreign reserves in particular have gained importance within the global economy.

Since the inclusion of central banks in 2015, the Invesco Global Sovereign Asset Management Study has examined two major developments:

Figure 4.1
Belief that US$'s position as world reserve currency will weaken (% citations, central banks)



The position of the US$ as the world reserve currency will be weaker in five years

Sample size: 53

1. Currency diversification

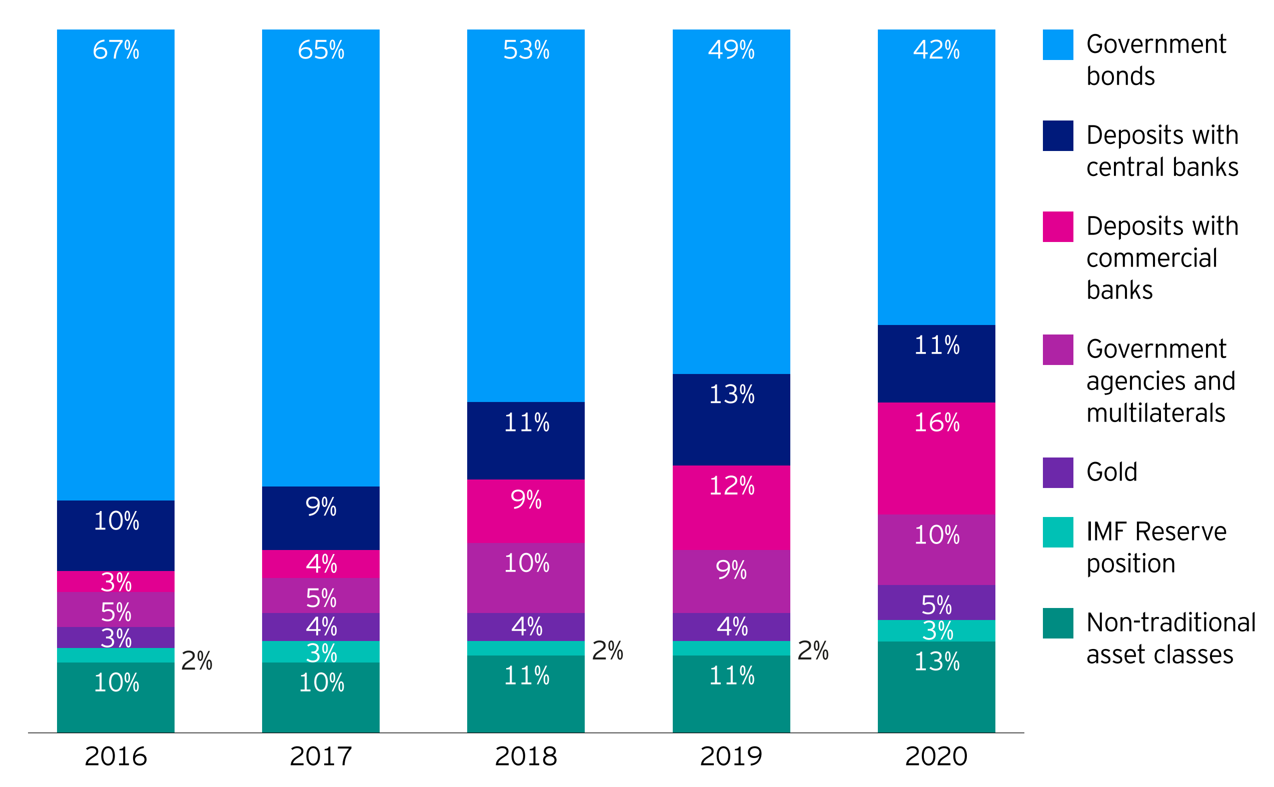
Reserves portfolios have been undergoing a gradual process of diversification, moving away from US dollar-dominated portfolios to invest across a great number of currencies. This process reflects not only the changing world economy, but also fundamental beliefs held by managers.

Allocations to the US dollar have fallen gradually but steadily: in 2016 those allocations stood at 65% of allocated reserves, but represent only 61% of allocated reserves in 2020. Instead, the long-term move has been towards alternative currencies, especially the yen (traditionally a defensive haven) and the renminbi (introduced as part of the International Monetary Fund (IMF) basket of currencies in 2016) as well as a smattering of other currencies.

This reflects the long-term view of a significant minority of bankers: 25% believe the position of the US dollar will weaken in the medium term; only 43% disagreed with the statement. Rising government debt and political uncertainty is driving greater consideration of alternatives to the greenback among bankers.

Rising government debt and political uncertainty is driving greater consideration of alternatives to the greenback among bankers.

Figure 4.2
Central bank allocations (average %, central banks)[2]



For the total reserves portfolio, please indicate the % allocation across asset classes

Sample size: 2020 = 36

2. Asset class diversification/adaptation

Linked to this has been a steady process of adaptation – transforming the predominantly risk-free portfolios of pre-2008 into more dynamic allocations with exposure to risk-bearing assets. In 2016, government or agency bonds represented an average of 72% of a bank's portfolio. Today, such bonds represent 52% of the average portfolio (**Figure 4.2**).

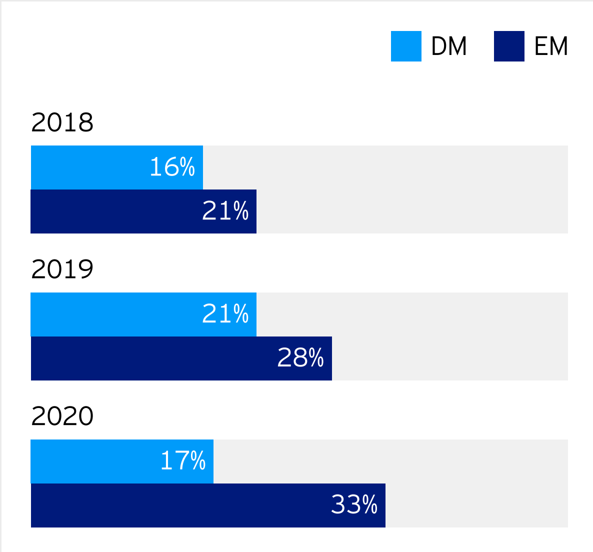
The reduction of allocations to government bonds has moved central bank reserves portfolios towards a barbell approach, focusing on the lower and higher risk ends of the spectrum. Allocations to deposits (**Figure 4.3**) – particularly with commercial banks – have grown alongside allocations to risk-bearing assets, including corporate bonds, mortgage backed securities (MBS) and equities.

High asset prices and political/economic challenges in some of the largest emerging markets (accentuated by Covid-19) have only accelerated this process, as banks have moved to sell highly priced assets and store liquidity where possible. The rush to cash-out of emerging economies has put many banks in a potentially difficult position: they have been called upon to defend currencies, cover currency shortages or make transfers to governments.

The arrival of Covid-19 has collided with these longer-term developments and will test commitment to them.

This report identifies three key areas in which Covid-19 will call into question the developments of the past few years.

Figure 4.3
Allocations to deposits (average %, central banks)



For the total reserves portfolio, please indicate the % allocation across asset classes [Deposits]

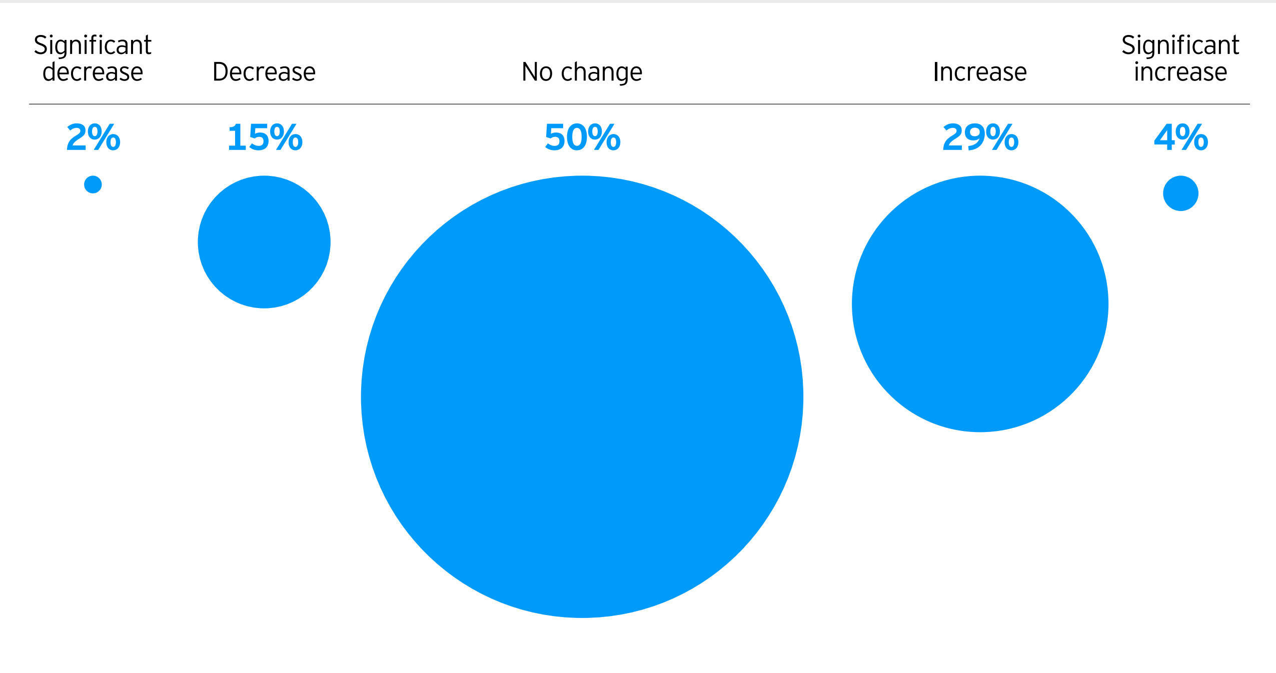
Sample size: 2020 = 36

2 'Non-traditional asset classes' includes (among others) equities, corporate debt, EM debt and commercial MBS

Question 1: Diversification – time to pause for breath?

Despite a long-term trend towards more diversified portfolios, as the scope and impact of the Covid-19 crisis became clearer, many central bankers initiated a flight back to the perceived safety of the US dollar. One-third of bankers intend to increase dollar reserves, reversing the longer-term trend (**Figure 4.4**).

Figure 4.4
Expected change to US$ allocations (% citations, central banks)



How do you expect the allocation of these reserves to change over the next year?

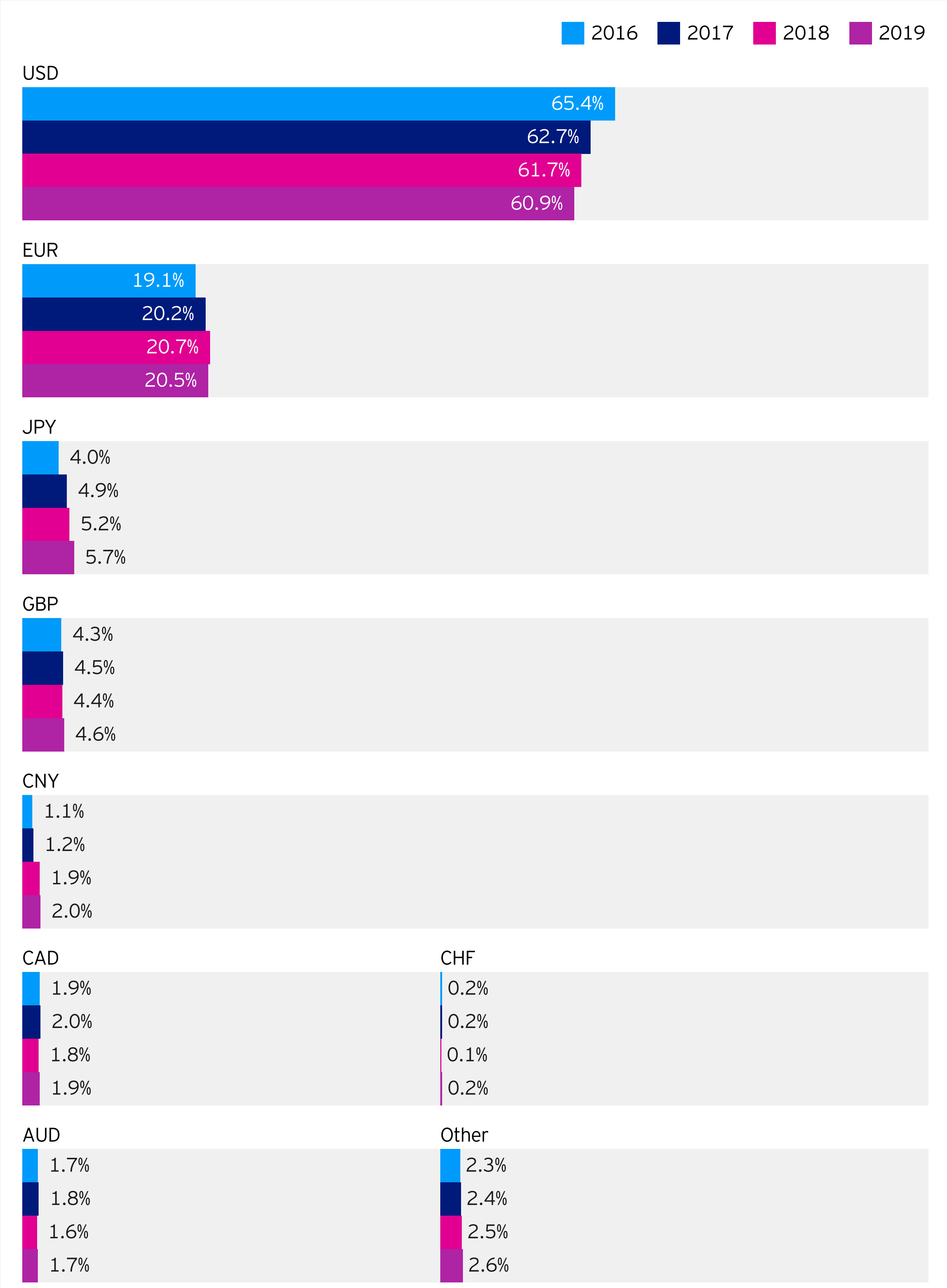
Sample size: 52

This apparent contradiction highlights the dilemma facing reserves managers. While they see strategic advantages in diversifying the currency mix, in a significant shock the US dollar remains the most liquid and the most resilient. If a shock is a true test of reality, it would appear that discussion of the US dollar's demise as the world reserve currency has been greatly exaggerated, at least for now.

Perhaps the most obvious beneficiary of the diversification process has been the Chinese renminbi (CNY). Since 2016, allocations have doubled from 1% to 2% of allocations, representing a global increase of US $127 billion (**Figure 4.5**). This is a trend that is very likely to continue, at least in the long run. Most banks report allocations have reached half their strategic objective (62% for those with renminbi allocations already, although central banks in advanced economies are typically some way behind this).

Figure 4.5

Foreign reserve currency allocations (% total qualifying reserves)

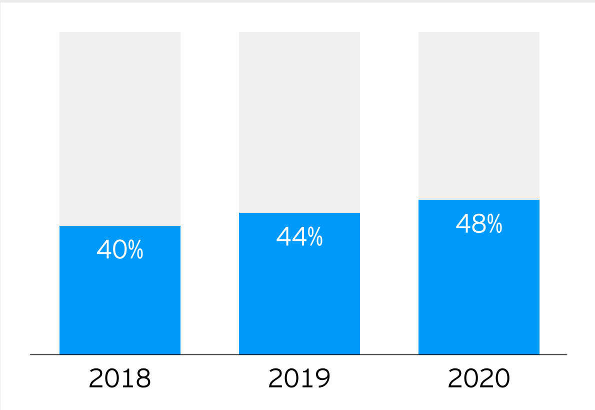


Source: IMF COFERS, as at 31st March 2020.

However, with the approach of a global pandemic, the pace and enthusiasm for adoption slowed. While the number of banks holding renminbi rose very slightly (**Figure 4.6**), allocations remained relatively flat – typically small allocations with the Bank of International Settlements (BIS) rather than onshore purchases of government debt. Against the backdrop of a shock, the limited convertibility of the renminbi was a major concern, particularly among central banks from advanced economies (**Figure 4.8**). This adds to the well-documented operational challenges discussed last year. As a result, some banks have decided to pause the process of investing in renminbi assets as they deal with more pressing concerns in the portfolio. Over a longer horizon however, 30% of banks still reported an intention to increase allocations at some point, after markets have calmed.

Given the strategic importance of the renminbi, and the inclusion of the currency in the IMF basket, it seems unlikely that banks will abandon the efforts that have already been made to incorporate the currency into reserves portfolios. However, continued reservations and the decision by some to pivot back to the US dollar in the face of a potential shock suggest that this incorporation will take a lot longer than some might have expected.

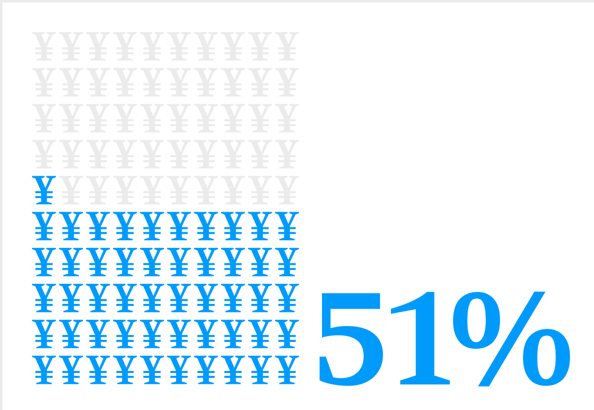
Figure 4.6
Central banks holding renminbi
(% citations, central banks)



Which of the following currencies do you hold in reserves?

Sample size: 2018 = 56, 2019 = 44, 2020 = 55

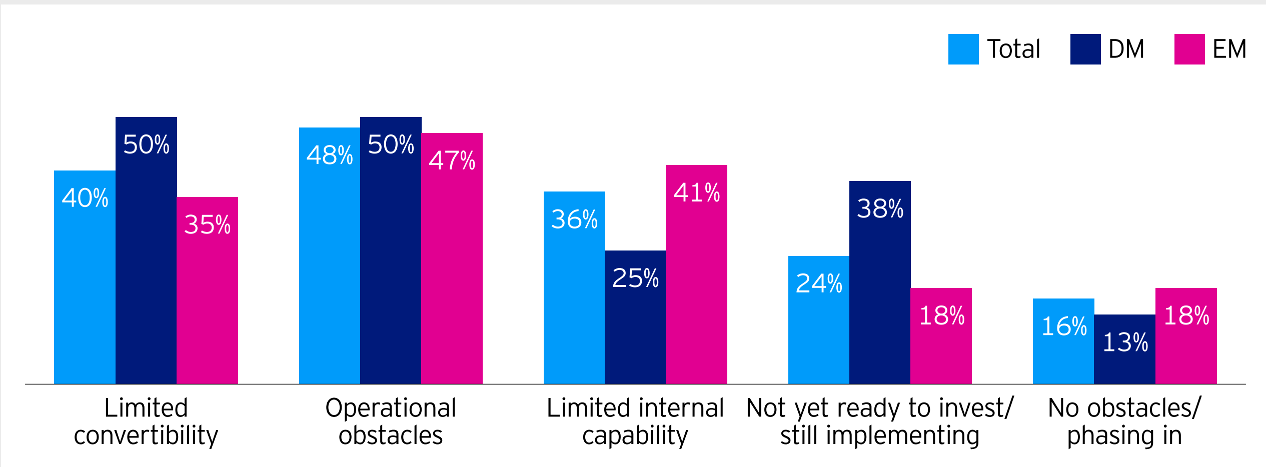
Figure 4.7
Long-term target renminbi allocation
(average %, central bank renminbi investors)



What is your long term (5 year) optimal allocation to renminbi? What is your current allocation to the renminbi?

Sample size: 37

Figure 4.8
Obstacles to renminbi adoption (% citations, central bank renminbi investors)



What are the obstacles to this process?

Sample size: 25

Question 2: Equities – time to invest?

Equities has been a subject of discussion for some time. A number of high-profile banks have introduced sizable allocations to the asset class within foreign reserve portfolios, with one high-profile bank integrating equities as early as 2012.[3]

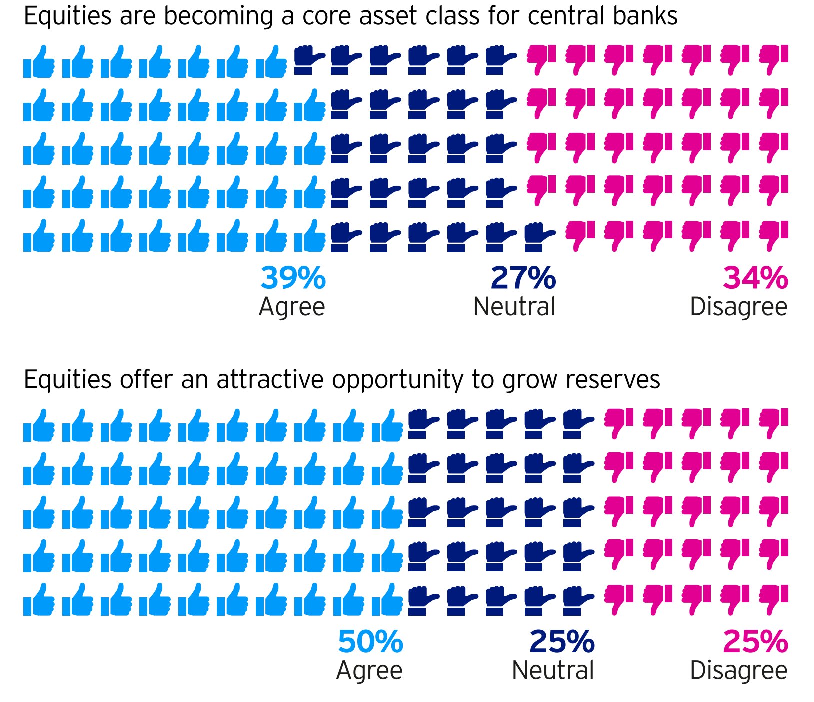
Equities are increasingly becoming more accepted as a reserve asset. Some 39% of bankers see equities becoming a core asset class, especially in Europe. Meanwhile, almost half see the asset class as an opportunity to increase reserves through higher investment returns over time. Given the increasing importance of the investment return objective discussed in the 2018 edition of this study, and the responsibility of some banks to contribute to government finances, equities are likely to be an attractive means to this end (**Figure 4.9**).

There is no single clear driver for adoption, although some consensus on the liquidity, return and diversification benefits of equities is evident (**Figure 4.10**). The risk profile is more divisive but not significantly – many still saw the risk posed by a small allocation as acceptable within a broader diversified portfolio. This is an important point: equities add significant volatility to a portfolio on a scale that would not have been tolerable 20 years ago. However, portfolios have grown considerably since then and many have budget for additional risk.

There are two likely implications of this shift towards equities. On the one hand, banks are beginning to ascribe more importance to portfolio returns, granting greater significance to what was traditionally the least important of central bank investment objectives. On the other hand, banks see equity liquidity comparing favourably with that of some higher-risk fixed income assets, and as a result are comfortable taking on additional volatility.

Figure 4.9

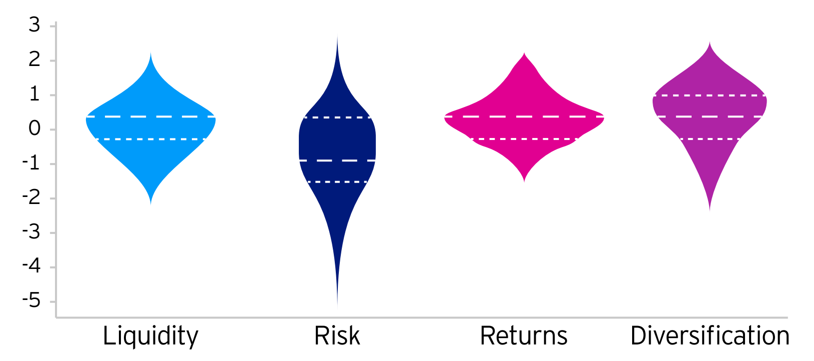
Attitudes to equities (% citations, central banks)



Do you agree or disagree with the following statements? Sample size: 52

Figure 4.10

Relative attractiveness of equity characteristics (average standardised score /10, central banks)



Please rate the attractiveness of developed economy equity characteristics, on a scale of 1-10, with 10 being very attractive Sample size: 37

Sample size: 37

Width of the plot signifies density of standardised scores (wider = more responses for given score), lines indicate quartiles and median. The short-dashed lines represent the first and third quartiles, the long-dashed line represents the median. A quartile and median can overlap if many similar answers were given

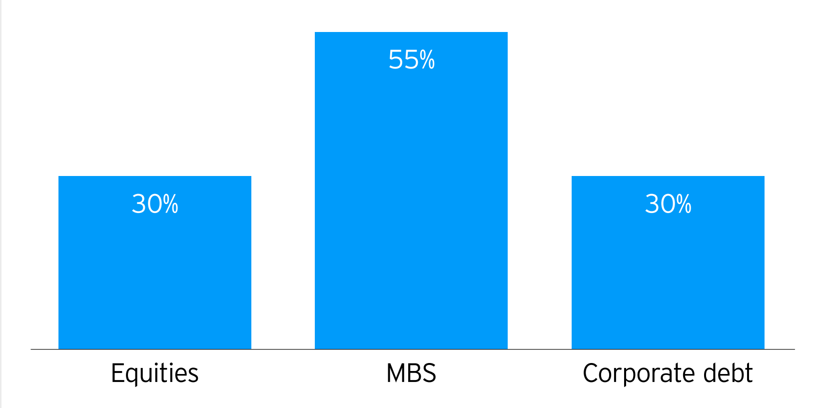
[3] https://www.centralbanking.com/central-banks/reserves/4130061/bank-of-israel-increases-level-and-risk-of-equities-investment

As a result of these portfolio contributions, almost a third of banks that have added an asset class in the past five years have chosen to add equities to the portfolio (**Figure 4.11**). Moreover, despite the sharp price rally in the run-up to Covid-19, banks were overwhelmingly choosing to remain invested, or increase allocations. Only 20% were looking to cut or rebalance equity allocations, despite indications that valuations were very high and uncertainty around the economic outlook. (**Figure 4.12**).

Unlike the GFC, which was a crisis emanating from within the financial system and caused some central banks to divest entire classes of risk assets, Covid-19 can be framed as an exogenous shock. There was less evidence of central bank intent to divest of risk assets or sectors as happened in 2008.

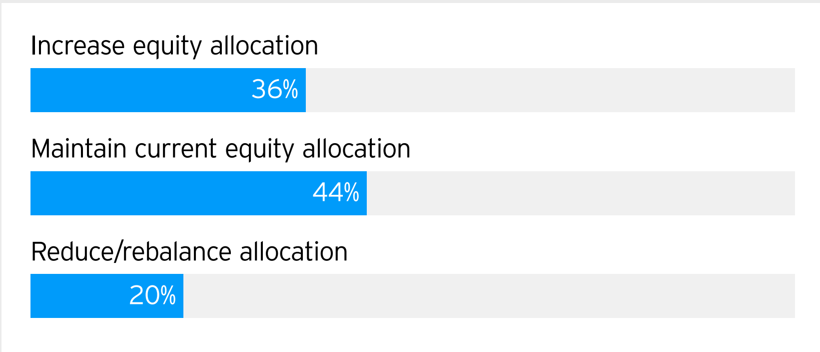
Despite evident concerns over market volatility, it is nevertheless likely that banks will stay the course when it comes to equities, and indeed that more banks may consider the asset class over the medium term. The fact that 61% of reserve managers, including 80% of DM managers and 55% of EM managers, believe that more central banks will consider equities points to a secure future for the asset class in foreign reserve portfolios with sufficient risk appetite (**Figure 4.13**).

Figure 4.11
Asset classes added in past five years (% citations, central banks)



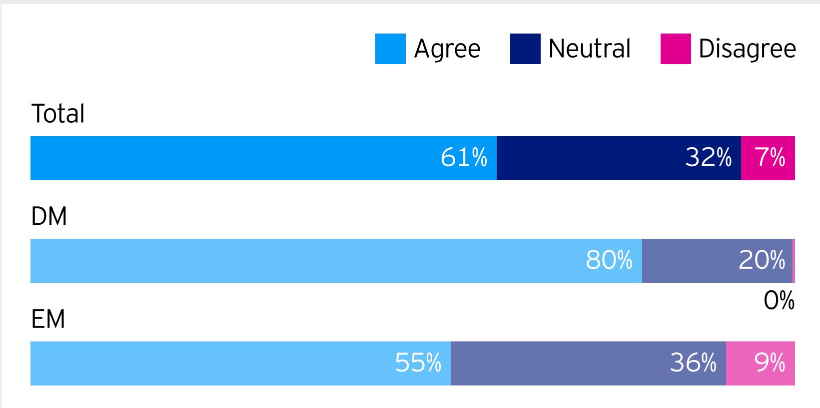
What new asset classes have you introduced in the last five years? Sample size: 20

Figure 4.12
Future intentions for equity allocations (% citations, central bank equity investors)



Given high equity returns, which of the following do you expect to do over the next three years? Sample size: 25

Figure 4.13
Belief that more central banks will consider equities (% citations, central banks)



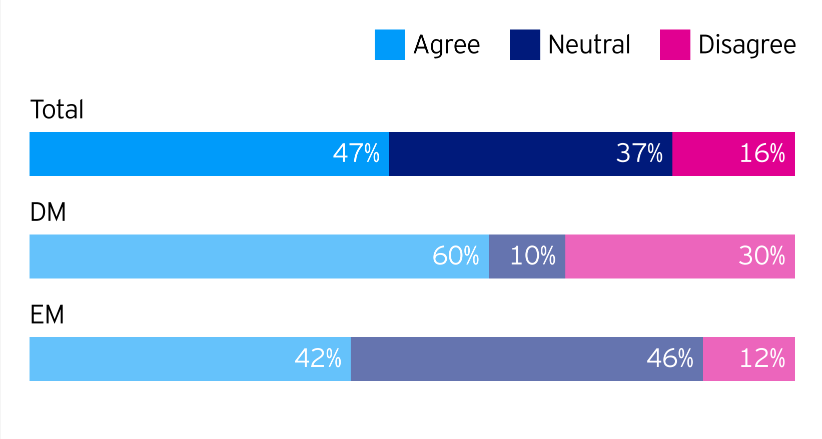
More central banks will consider investing in equities in the future Sample size: 44

Question 3: ETFs – as liquid as meets the eye?

If there was one vehicle that could be associated with the diversification of central bank reserves, then it would be the ETF. Exchange traded funds have been the entry vehicle of choice for central banks making allocations to new asset classes – used by almost a third of banks (**Figure 4.14**).

ETFs have had an especially prominent role in implementing equity allocations (**Figure 4.16**) – 69% of banks that have incorporated equities have used the vehicle, and almost half see ETFs as the most attractive entry vehicle for the asset class (**Figure 4.15**).

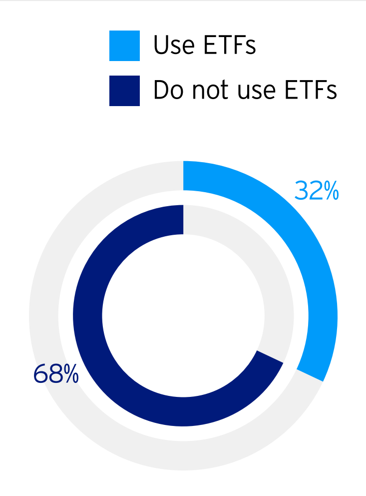
Figure 4.15
Belief that ETFs are most attractive method of equity implementation (% citations, central banks)



ETFs are the most attractive method of implementation for CB equity allocations

Sample size: 44

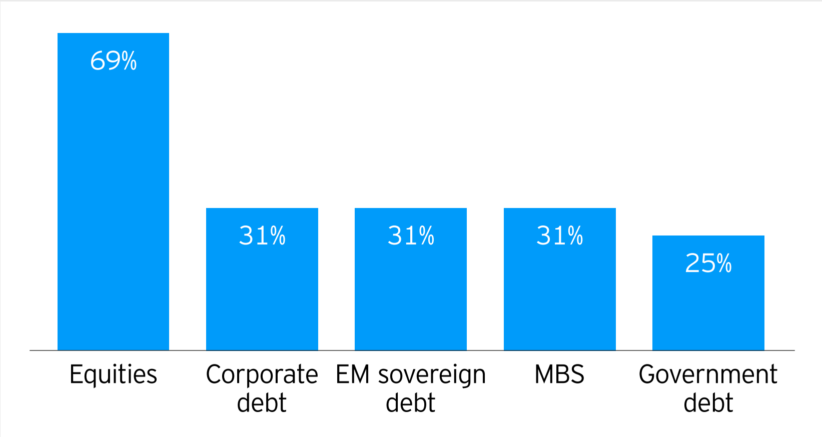
Figure 4.14
ETF use (% citations, central banks)



Do you use ETFs?

Sample size: 50

Figure 4.16
Asset classes where ETFs are employed (% citations, central banks)



[If yes] In which asset classes do you use ETFs?

Sample size: 16

If there was one vehicle that could be associated with the growth and development of central bank reserves, then it would be the ETF.

ETFs are attractive for central banks for a number of reasons (**Figure 4.17**). They:

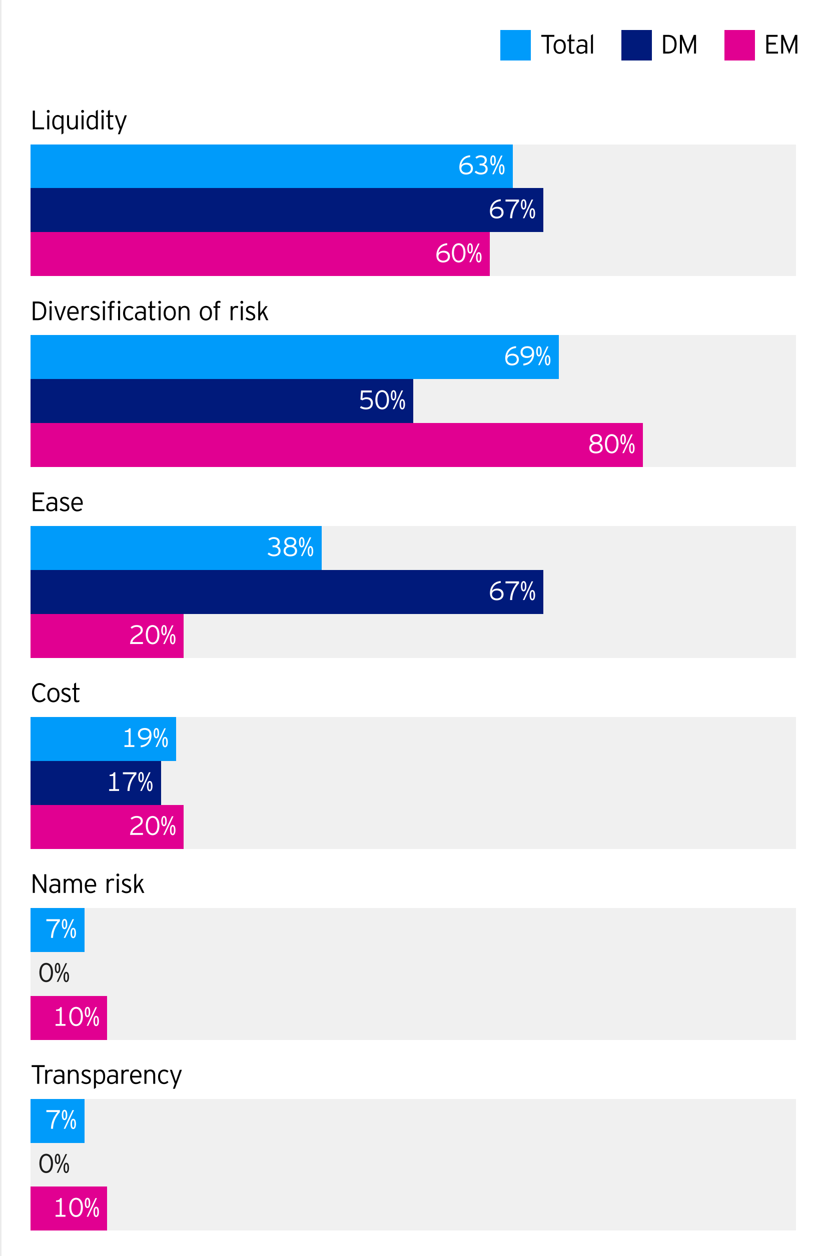
- are highly liquid in many cases, and can be traded throughout the day if required, making rebalancing and entry/exit very easy;
- facilitate the building of diversified exposures even when allocations are small – something that would not be so straightforward if a bank needed to own the underlying securities;
- are relatively easy to use – trading like other securities on an exchange;
- can be a cheaper way of building exposure in some asset classes;
- can help banks manage 'name risk' associated with holding securities issued by particular companies – this is especially prominent in corporate bond and equity investing.

These benefits are not exclusive to equity ETFs – around a third have also used ETFs to gain exposure to fixed income securities, including MBS (31%), investment grade corporate debt (31%) and EM sovereign debt (31%), a figure that is roughly consistent across EM and DM banks.

ETFs have been fundamental to the process of adaptation of reserves portfolios, allowing central banks to begin adding risk assets and diversify away from the risk-free assets that have been their traditional domain.

However, the market volatility triggered by responses to Covid-19 has cast attention on some of the challenges of ETFs – challenges that were already front of mind for many central banks. Chief among these was that of liquidity, or more precisely how ETFs might manage in an environment where the liquidity of the underlying assets was significantly impaired.

Figure 4.17
Reasons behind equity ETF use (% citations, central banks)

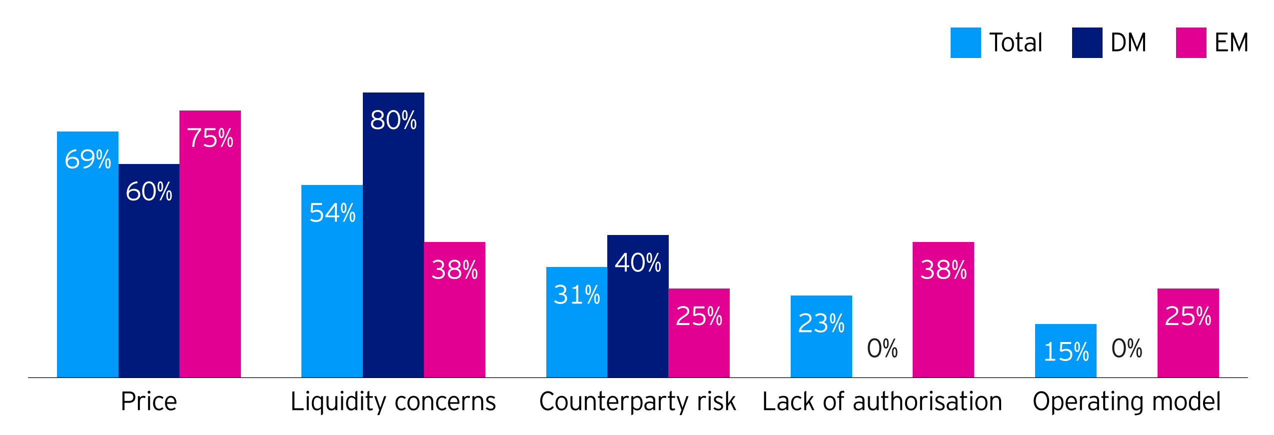


Why do you use ETFs for equities?

Sample size: 16

Chief among these was that of liquidity, or more precisely how ETFs might manage in an environment where the liquidity of the underlying assets was significantly impaired.

Figure 4.18
Obstacles to ETF use (% citations, central banks)



[If yes] Have you encountered any obstacles to ETF use?

Sample size: 13

Some 54% of banks (80% of DM banks and 38% of EM banks) saw concerns around liquidity as a major obstacle to ETF use (**Figure 4.18**). Most ETFs had not previously been tested through a market shock, and indeed for a short period some ETFs traded at a discount to NAV as the arbitrage structures that support ETF price adjustment ground to a halt. However, ETFs broadly weathered the storm, bringing much needed liquidity and price discovery at a time when the markets for these assets were under stress, and market maker inventories were low.

Price is also an obstacle to some central banks, reflecting that investment through ETFs can represent an increase in cost relative to trading the underlying securities directly. For EM banks in particular, the potential added expense involved was an obstacle – three-quarters cited pricing as a disadvantage (only 60% of DM banks). For some, this is likely to be a function of the outsourcing of execution: trading in ETFs might surrender some tax or trading efficiencies that would apply to trading the underlying securities.

The experience of 2020 will likely underscore the continued role of ETFs in the diversified portfolios being constructed today. ETFs endured the crisis and were invaluable in providing liquidity in a difficult market environment. Furthermore, given the strategic decision to diversify and incorporate additional asset classes, ETFs are the easiest way to achieve these objectives. Without an obvious alternative, it is likely that ETFs are here to stay.

Conclusion: Where to from here?

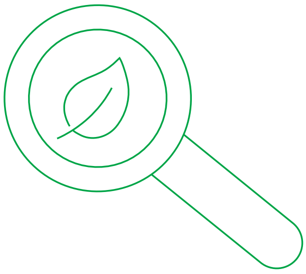
The Covid-19 crisis emerged at an important time for central banks, intersecting with a longer-term story of diversification and adaptation of central bank foreign reserves. However, the evidence is that bankers are staying the course.

While some diversification plans might be paused, these are long-term strategic commitments to which the evidence suggests banks are still committed. Equities are still prominent, and although some might have paused in the face of the operational and market challenges around Covid-19, the increasing long-term importance of equities as a reserve asset seems to have been unaffected.

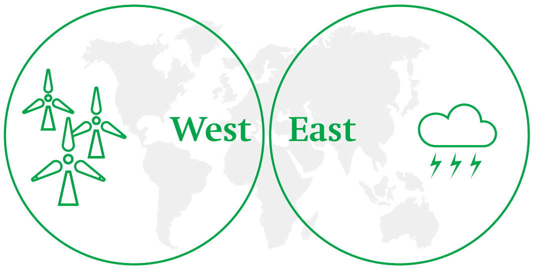
Finally, ETFs are likely to remain central to the implementation of these portfolios. These vehicles have underpinned the diversification of reserves and are likely to continue to do so, given the practical and reputational advantages that they are able to provide.

While it's likely too soon to tell, it seems that compared to 2008 things are different this time, suggesting the durable nature of the new model central bank reserve. Few central banks saw their longer-term strategic initiatives threatened or undermined by the initial experience of Covid-19. While allocations were likely to change in the short term according to need, there were few indications that banks were looking to revert to risk-free portfolios. Instead, many banks cited careful preparations – boosting of short-term liquidity through bank deposits and cash reserves – as a companion to these measures. The question, therefore, is not whether there will be a repeat of 2008, but whether the experience of Covid-19 will encourage more banks to run more diversified and flexible portfolios.

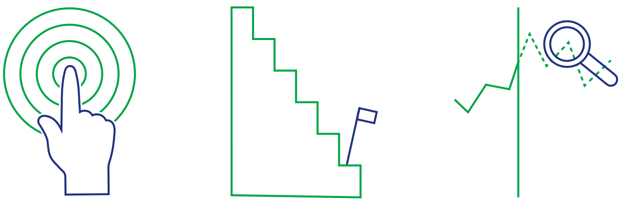
Rising of climate change: commitment and opportunity



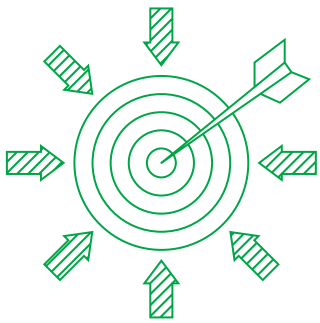
Once seen as a distant consideration, concerns about the immediate impact of climate change are prompting greater investor focus.



Decarbonisation efforts are the priority for investors in the West, particularly those with high exposures to fossil fuel-dependent sectors, while Asian and Middle East respondents are troubled by the potential portfolio impact of extreme weather.



Firm commitments and ambitious targets are uniting around three strategies: direct investing, carbon reduction goals and climate modelling.



The absence of coordinated regulatory action continues to hamper efforts, with investors complaining of a lack of consistent taxonomies, definitions and regulations.

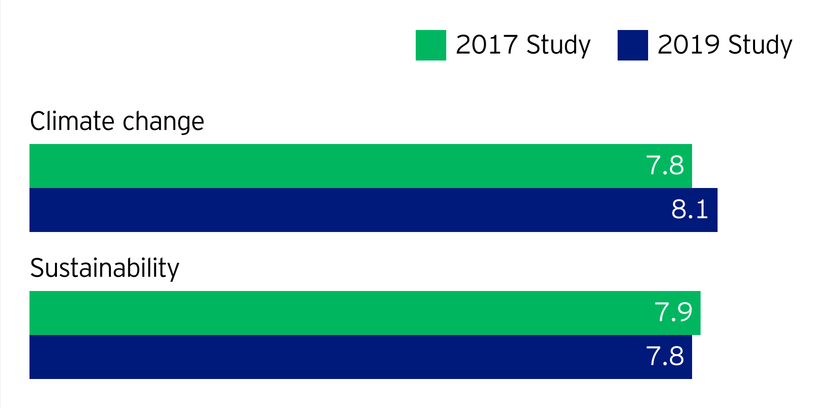
Climate change focus ramps up

An ever-increasing proportion of central banks and sovereigns see climate change as a priority, marshalling wide-ranging action (**Figure 5.1**). In our 2017 and 2019 studies we highlighted climate change as a central focus for investors' ESG plans, with the overwhelming majority of respondents seeing climate change as being impacted by human activity (**Figure 5.2**). This is increasingly being translated into investment strategies.

Among respondents there is an overwhelming belief that climate change risks are imminent. Today, 83% of all investors interviewed believe that immediate action is required (**Figure 5.3**). The increased likelihood of climate change impacts, such as rising sea levels, melting ice caps and irregular seasonal temperatures, has accelerated investors' efforts. As one North American investment sovereign underscored: "This can't be a tomorrow issue. Even with a global pandemic, addressing climate change remains a priority. Rising greenhouse gas emissions are the most dangerous threat to our planet and portfolio."

This is posing questions beyond asset allocation frameworks, impacting how capital markets, and finance more broadly, are structured at a fundamental level. "We must reform our financial institutions and decision-making process to deal with climate risks," said one Asian central bank. "Over the past few years the impact on our country has been among the worst, and we must do more to address climate change."

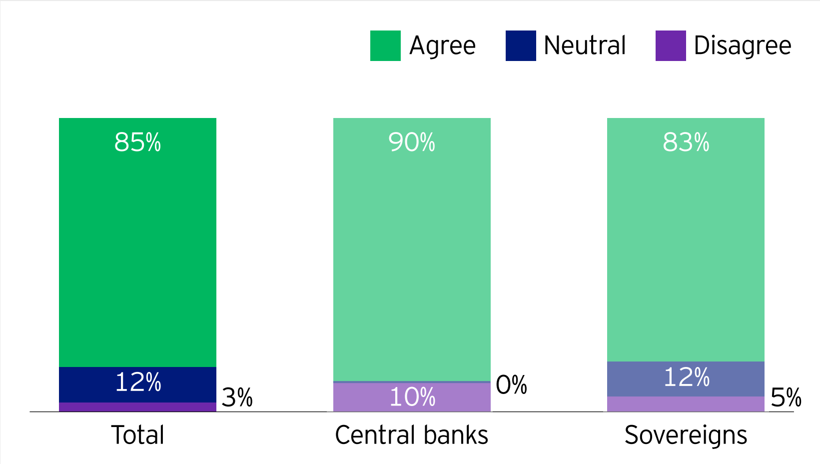
Figure 5.1
Historical priority of climate change (average score of importance /10)



How do you rate these factors in your ESG plan/policy?

Sample size: 2017 = 23
2019 = 39

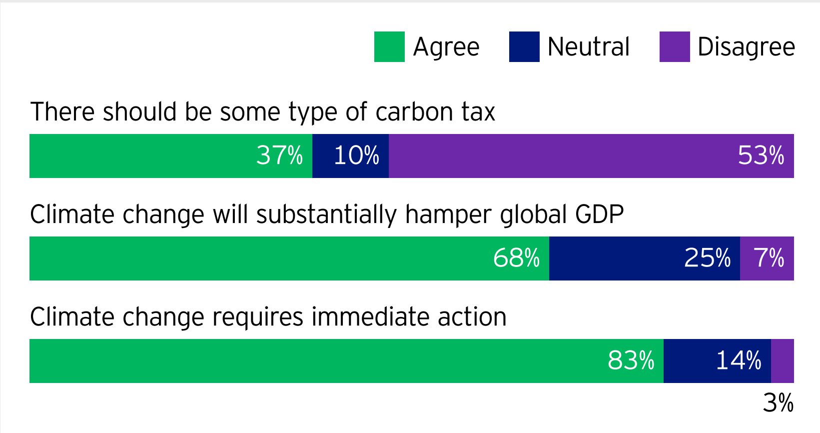
Figure 5.2
Belief that human activities have an impact on climate change (% citations)



To what extent do you agree with the following statements: Climate change has been influenced by human activities?

Sample size: 115

Figure 5.3
Attitudes towards climate change (% citations)



To what extent do you agree with the following statements?

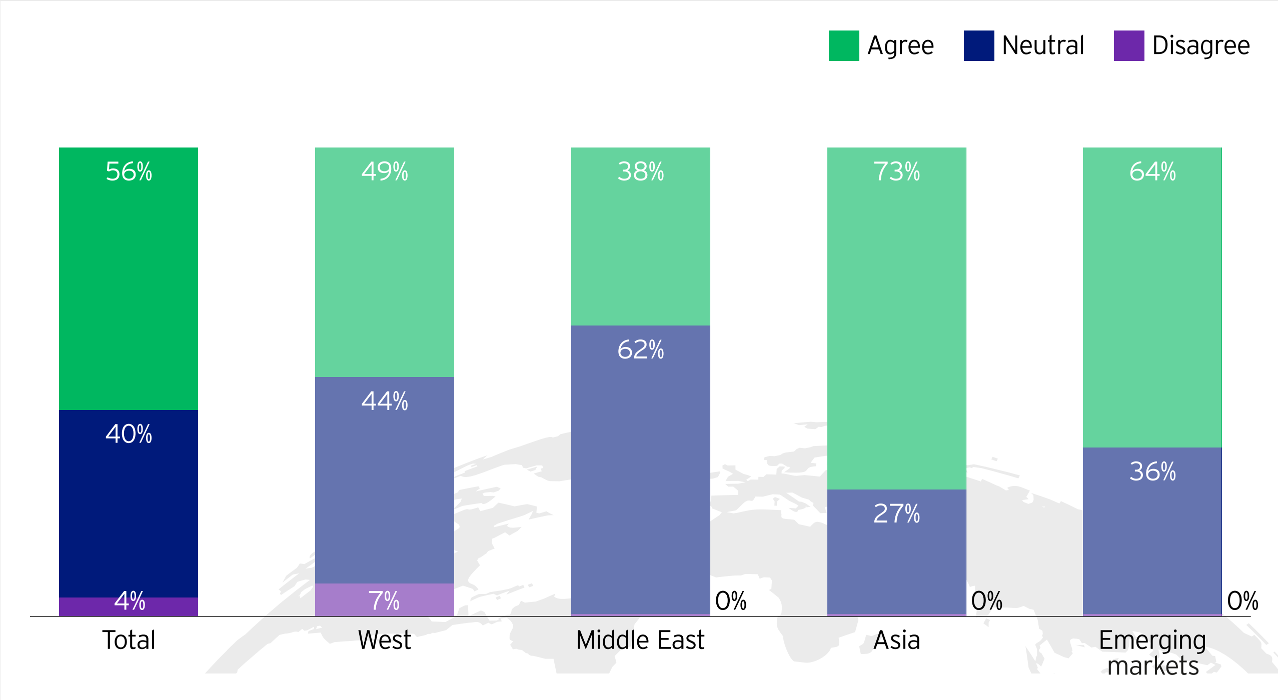
Sample size: 114

Climate considerations highlight regional institutional challenges

Those that think they have an obligation to consider climate change in their portfolio are also the most likely to believe that their own region is disproportionately at risk from its impacts (**Figures 5.4** and **5.5**). Some 73% of Asian respondents believe investors have an obligation to consider climate change, and 64% of emerging market respondents have the same belief, with many recognising its local impact (**Figure 5.4**). One emerging market central bank stated: "Public institutions need to look at climate change as they have the resources to do so in our region, and it is what we owe to our citizens."

Western investors feel less inclined to act, with less than half believing that they had an obligation to consider climate change in their portfolio (**Figure 5.4**). This result is driven by sovereigns based in North America, where many have key investments in high-carbon sectors and experience less stakeholder pressure to evolve their plan to be more climate friendly.

Figure 5.4
Belief that institutional investors have an obligation to consider climate change in their portfolio (% citations)

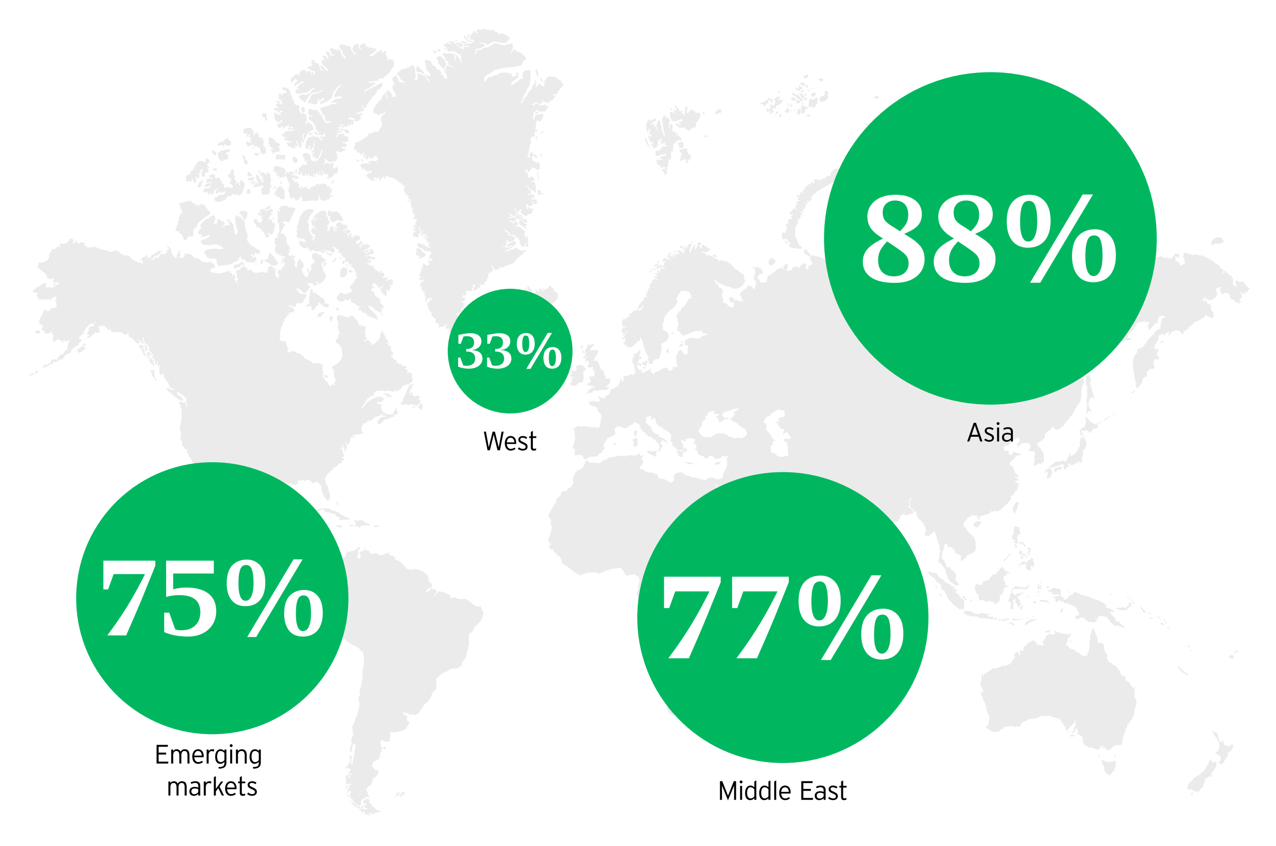


To what extent do you agree with the following statements: Institutional investors have an obligation to consider climate change in their portfolio?

Sample size: 114

One emerging market central bank stated: "Public institutions need to look at climate change as they have the resources to do so in our region, and it is what we owe to our citizens."

Figure 5.5
Belief that own region is at disproportionately high risk from climate change (% citations)



Is your region disproportionally more at risk from the threats of climate change than the rest of the world?

Sample size: 103

Not only does the sector allocation of these investors impede action, so too can the function of their allocations, as one sovereign in North America explained: "Inflation-protected assets don't have a natural place in a low-carbon mandate, and protections from sustainable infrastructure are not equitable." Many investors purchase oil, energy and commodities as insulation against inflation, and point out that if they shift to a low-carbon portfolio, they may be stripped of these protections.

These differences are linked to how likely investors feel they are to experience the consequences of climate change. Asian and Emerging Market (EM) investors are twice as likely to believe their region faces a disproportionate risk than their Western peers (**Figure 5.5**). "70% of our country is surrounded by water," said one Asian development sovereign. "We will be the first to be impacted by rising sea levels. Other neighbouring markets with large agriculture sectors will suffer from droughts."

One notable exception is the Middle East. While roughly three-quarters of respondents believed their region was at high risk from climate threats, less than 40% felt they were obligated to act. Investors highlighted their concerns around climate-based risks such as changes in oil demand, rising temperatures and water supply constraints. Many organisations in this region stressed that they were beginning to give these issues more attention through organisational-level commitments and membership of international bodies, such as the One Planet Initiative. However, many noted that they were currently playing catch-up and that these commitments were taking time to feed down into the investment process.

Rising climate risks may equal sinking portfolio performance

Investors are beginning to consider climate risks as important investment risks. As a result, respondents have zoned in on the ones that pose a threat to their portfolio's health. Among the many potential impacts linked to climate change, the leading worry among investors is the impact of natural disasters – not least for Western respondents – although somewhat surprisingly, less so for their EM peers (**Figure 5.6**).

Respondents also worried how their current portfolio would fare as the world transitions to a low-carbon economy. As one European central bank explained: "Our sovereign funds have exposure to metal and mining, integrated oil and gas, as well as oil exploration. Some of these will be less in demand or completely replaced by low-carbon competitors. Even though they consider ethical and sustainable factors, it will be a challenge for them to generate the performance they did ten years ago."

Other risks feature more prominently, however, and vary by region:

Middle East respondents are the most concerned with stranded assets, particularly in relation to how a move away from carbon-based fuels might impact future inflows. "Our rebalancing in 2019 reflects a forecast oil price of $46 a barrel," an ME development sovereign emphasised. "A sharp drop in oil prices considerably weakens our outlook for funding."

Figure 5.6
Importance of different climate change risks (average rating /5)

	West	Middle East	Asia	EM
Transition risks	3.7	3.5	3.7	3.3
Depleting fossil fuel stocks	3.1	3.9	3.5	4.4
Energy security pressure	3.2	3.8	3.9	3.9
Geopolitical issues	3.4	4.0	4.4	4.0
Rise of natural disasters	4.1	4.3	4.5	4.0
Stranded assets	3.6	4.1	3.7	3.7

3.0 3.5 4.0 4.5

What are the biggest risks stemming from climate change? Score 1-5 where 5 = very big risk

Sample size: 83

Asian and emerging market investors are particularly alarmed by rising trade issues that they believe will stem from climate change. These regions are reliant on a healthy level of open trade to support their agriculture export sectors, which may be impacted from abnormal temperatures. One EM central bank noted: "Changes in food supplies and resources are a big risk for us. The US-China trade war really hurt. Experiencing a similar event [but from climate change] like that would be very problematic." One Latin American investor noted that transition to a low-carbon economy "will come with new demands, and trade agreements with those considerations may not be beneficial to us in the short run."

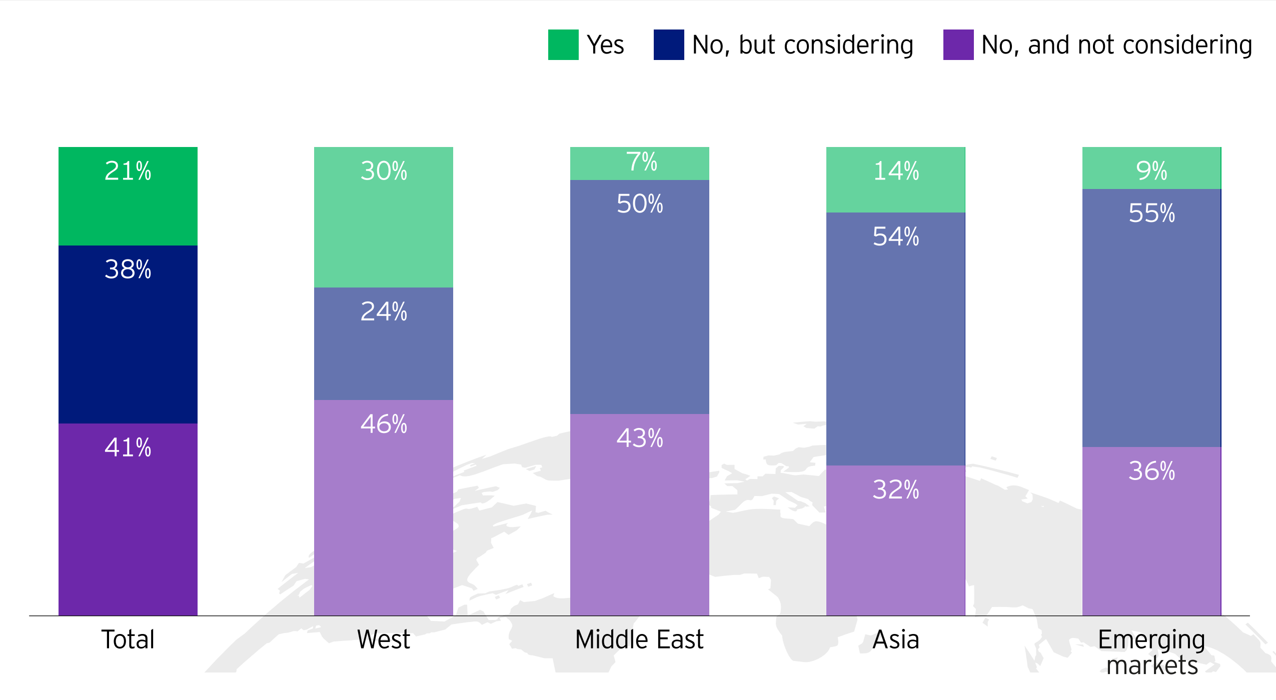
For Western investors, transition risks are the second most prominent, following natural disasters. As noted, many still have large exposures to local oil and gas investments. Diminishing valuations of these energy assets have hurt these portfolios over the past few years. "Here, we have an obligation to invest in assets such as minerals, coal, plastics and natural gas. Our stakeholders and beneficiaries would not approve otherwise," a North American liability sovereign explained. Another North American sovereign noted: "Transition risks in the labour market will also have a negative impact."

As one European central bank explained: "Our sovereign funds have exposure to metal and mining, integrated oil and gas, as well as oil exploration. Some of these will be less in demand or completely replaced by low-carbon competitors."

Three main approaches to climate investing

Investors' efforts around climate-proofing their portfolio entail tracking their carbon exposure, attempting to set realistic carbon standards, and finding assets that can fulfil a fund's desired climate-related objectives. With that in mind, investors are utilising three main tactics to consider climate change risks.

Figure 5.7
Attempt to capture carbon footprint of portfolio (% citations)



Do you attempt to capture the carbon footprint of your portfolio?

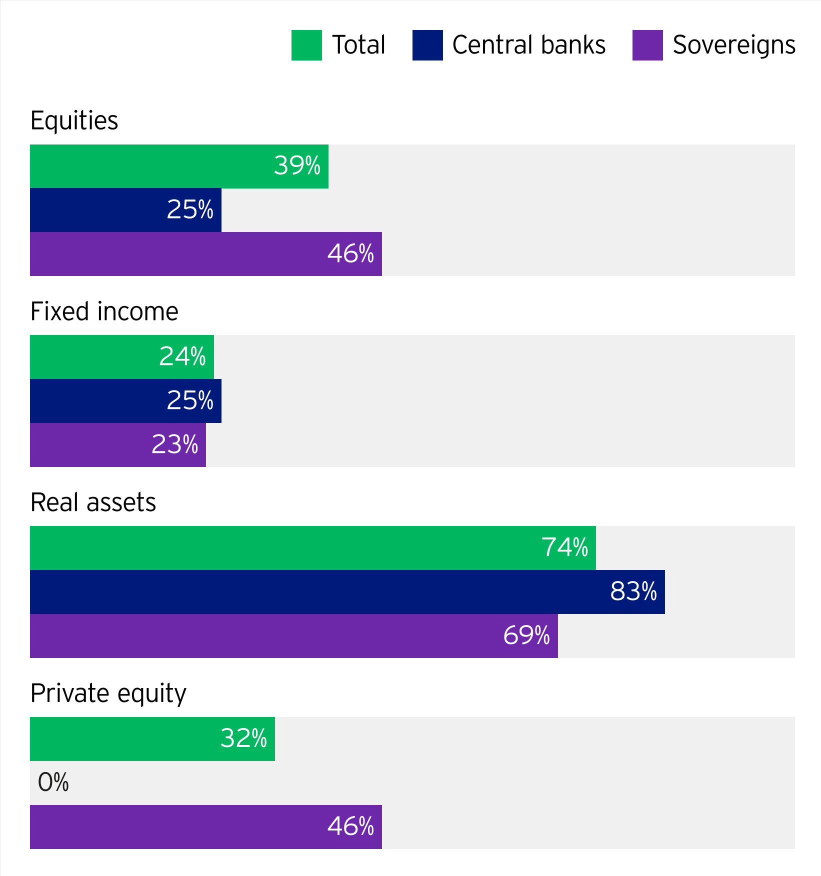
Sample size: 110

Climate risk models

Models and software showing portfolio carbon exposure are currently seeing an uptick in adoption – 21% of investors currently make use of these tools but 38% are considering their introduction (**Figure 5.7**). These analytical tools help capture the carbon exposure of potential investments, as well as potential portfolio risks from climate shocks. This method is most commonly used by those just beginning to consider climate-based risks. "Having a carbon tracking model is the first rung on the ladder of climate investing," noted a North American central bank. Another EM development sovereign agreed: "We spoke with our consultants about first using their climate shock models to see the different scenarios where our portfolio is vulnerable. That's how we'll start."

The West has been more prominent in using this method, partly because several leading consultants have built climate models for their clients in this region. As one North American liquidity sovereign noted: "We've leaned heavily on external partners to shape our climate change policy. These models give us a sense of where our portfolio stands today, where we'd ideally like to be, and how we get there in a reasonable time."

Figure 5.8
Focus of targeted climate change investments (% citations)



In relation to climate change investment, in what asset classes do you adopt the following portfolio construction / security selection methods? [Targeted investments]

Sample size: 38

"It's [real estate] the easiest asset class to funnel your sustainability objective through. There's more room for greenwashing in the others," said one North American sovereign investor.

Direct investing

An active minority of climate-conscious investors, known to consider environmental impacts on investing before the rise of ESG, are investing in thematic opportunities, particularly in clean technology. For the small number (38 respondents) who actively own climate-friendly assets, most preferred real assets (**Figure 5.8**). "It's the easiest asset class to funnel your sustainability objective through. There's more room for greenwashing in the others," said one North American sovereign investor.

Their goal with these investments is to find new winners in the transition to a low-carbon economy. One European development sovereign fund explained: "We've invested in renewable energy for the past ten years. Across various sectors such as energy and transport, we aim to get a commercial return while reducing the country's carbon footprint." Another objective is purchasing companies with a high carbon footprint and restructuring their operations to be more sustainable.

Carbon reduction efforts

Another approach seen in every market besides the Middle East is establishing carbon targets. A small group of investors has set timelines and metrics aimed at decreasing their portfolios' carbon footprint, with some as ambitious as halving their greenhouse gas emissions by 2030. In contrast, the most basic plans look to simply report their fund's carbon exposure on an annual basis. The most ambitious funds, found in Europe and Asia, aim to be carbon neutral. That would mean completely offsetting their carbon emissions through diluting exposure to high carbon positions, while balancing out their portfolio with cleaner assets and carbon reduction investments.

Some carbon downsizing efforts will also take into consideration their internal carbon footprint and report on their internal use of electricity, water, paper and air miles. "Understanding our carbon exposure is the soundest way to create a low-carbon portfolio. That should be the first step," said one Asian investment sovereign fund.

Obstacles towards greater adoption

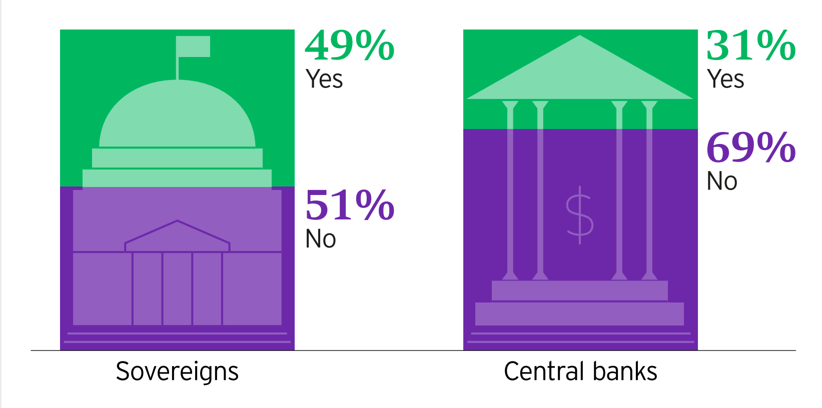
Capital market climate change regulations are increasing, led by Europe. Its adoption of the EU Sustainable Finance Disclosures and the EU Climate Benchmarks and Benchmarks' ESG Disclosures regulations are two notable developments. While this regulatory activity either mandates or encourages disclosures by corporations, it often lacks clear implementable guidelines for investors. There is still a long way to go for most in terms of incorporating climate change into investment goals. More than two-thirds of central banks do not integrate this into their portfolios. Even among sovereigns, only half do so (**Figure 5.9**).

Central banks

Central banks are addressing this. A recent call to action from former Governor of the Bank of England Mark Carney and current ECB President Christine Lagarde flagged this as a major issue. Additionally, the launch of the Network for Greening the Financial System has created a body to synchronise action in the central banking community. Launched in late 2017, membership is gradually increasing and is highest in emerging markets and Asia (**Figure 5.10**).

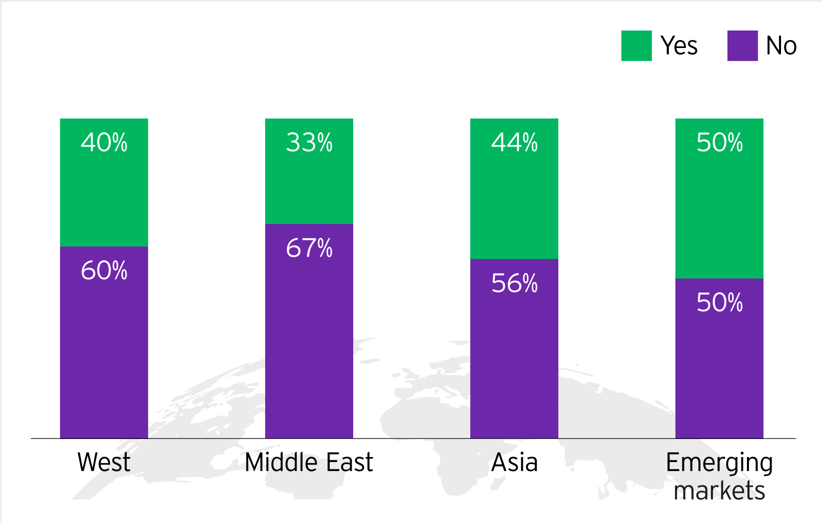
While this regulatory activity either mandates or encourages disclosures by corporations, it often lacks clear implementable guidelines for investors.

Figure 5.9
Climate change incorporated within portfolio (% citations)



Do you incorporate climate change in your portfolio? Sample size: 119

Figure 5.10
Membership of Network for Greening Financial System (% citations, central banks)

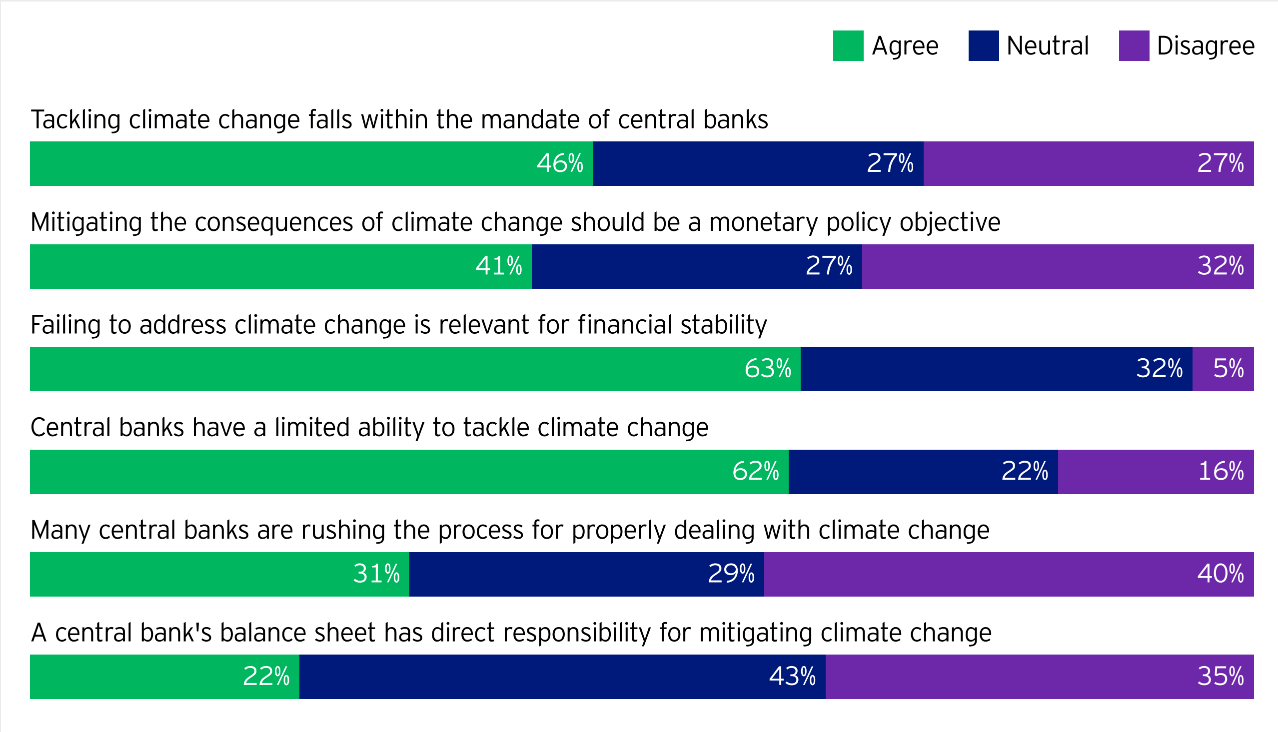


Are you a part of the Network for Greening the Financial Network? Sample size: 40

As one central bank in Latin America explained: "We really are not at liberty to even discuss this issue. [Climate change] must be examined first by those that oversee our bank's guidelines. There is a lot of debate over whether we can effectively mitigate climate change risks, but we don't have that ability right now."

Figure 5.11

Central bank attitudes towards climate change (% citations, central banks)



To what extent do you agree with the following statements?

Sample size: 56

To increase engagement among central banks, mandates and policies must be restructured to consider climate change risk (**Figure 5.11**). Several banks are constitutionally prohibited from considering this issue. As one central bank in Latin America explained: "We really are not at liberty to even discuss this issue. [Climate change] must be examined first by those that oversee our bank's guidelines. There is a lot of debate over whether we can effectively mitigate climate change risks, but we don't have that ability right now."

Those that can address the issue can tilt the playing field by creating a regulatory framework that advantages certain 'green' instruments, such as allowing for additional purchasing of green bonds. "We see an opportunity with green bonds, but current restrictions around investment options stop us from considering these assets," noted one EM central bank.

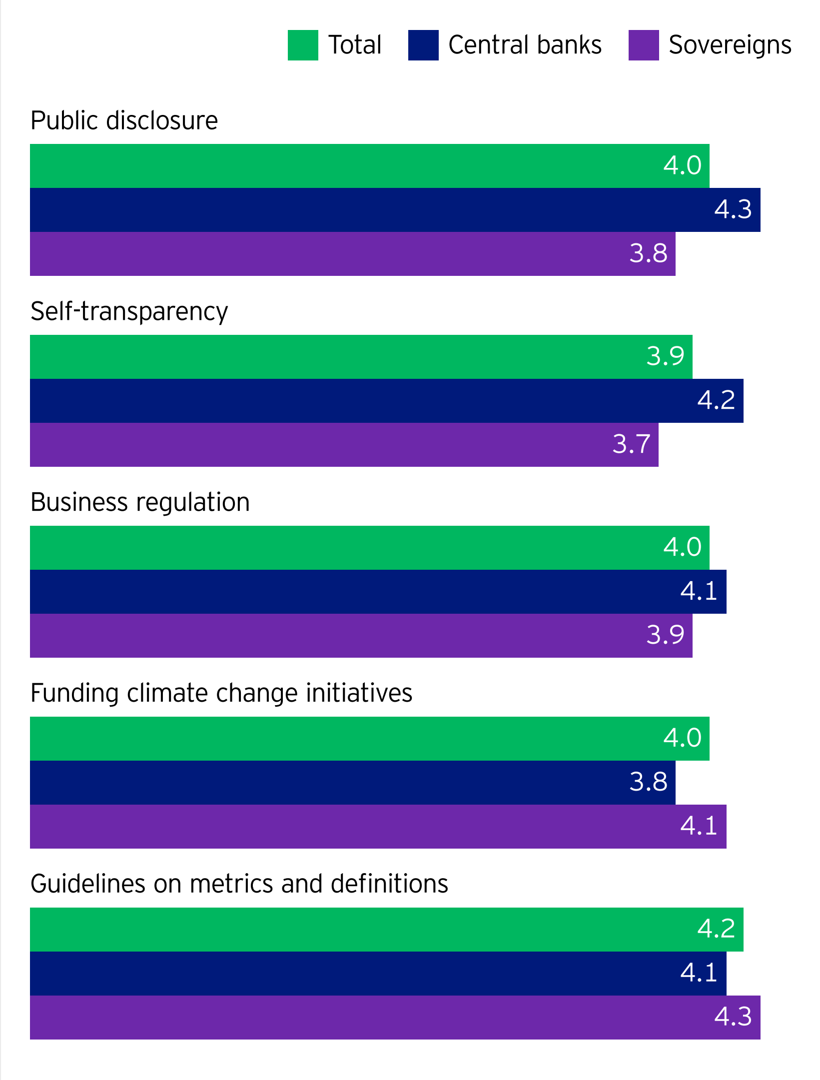
Sovereigns

Clearer government guidelines will facilitate sovereigns' climate change policy. Many respondents reported that they had been slow in adopting policies because of a lack of a clear framework. "I'm not sure what is the right way to think about climate change as an investor. Terminology is often contradictory or confusing. Data and benchmarking still seem inadequate," said one Asian development sovereign. Investors need public officials to clarify definitions, outline methods of adoption and set parameters around the ideal limits of carbon emissions in their portfolio. Just as important, they want to understand the necessary metrics to use and the governing body that will oversee these potential regulations (**Figure 5.12**).

"There is a lack of collective effort," according to one development sovereign in the West. "Climate policy has been uncoordinated and ineffective. Cohesive action from government can help smaller plans develop a climate change investment strategy without worrying that it will be cumbersome."

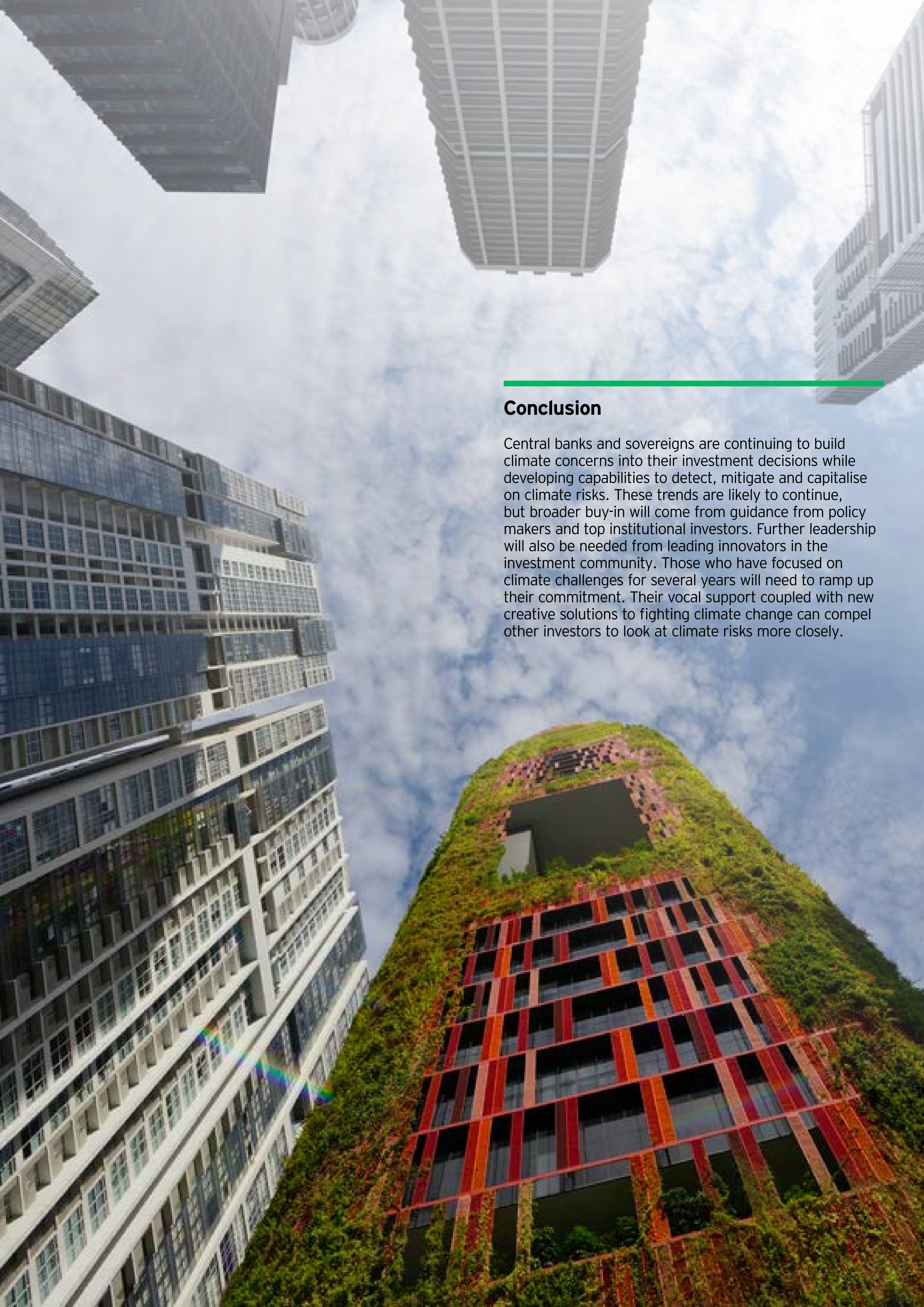
Another Asian investment sovereign noted: "For an institutional investor looking at how to form climate policy, guidelines are crucial. What is needed is to pair the work done in the finance community with local action. Developments such as the EU taxonomy and the Bank of England's work on climate change should be a model for public officials who are serious about climate change."

Figure 5.12
Preferred climate change priorities for government (average rating /5)



Where can government best focus to increase focus on climate change in asset ownership? (Please rate 1 to 5, where 5 = very important)

Sample size: 83



Conclusion

Central banks and sovereigns are continuing to build climate concerns into their investment decisions while developing capabilities to detect, mitigate and capitalise on climate risks. These trends are likely to continue, but broader buy-in will come from guidance from policy makers and top institutional investors. Further leadership will also be needed from leading innovators in the investment community. Those who have focused on climate challenges for several years will need to ramp up their commitment. Their vocal support coupled with new creative solutions to fighting climate change can compel other investors to look at climate risks more closely.

Appendix

Sample and methodology

The fieldwork for this study was conducted by NMG between January and March 2020. Invesco chose to engage a specialist independent firm to ensure high quality objective results. Key components of the methodology include:

- A focus on the key decision makers within sovereign wealth funds and central banks, conducting interviews using experienced consultants and offering market insights rather than financial incentives
- In-depth, face-to-face interviews (typically one hour) using a structured questionnaire to ensure quantitative as well as qualitative analytics were collected
- Analysis capturing investment preferences as well as actual investment allocations, with a bias towards actual allocations over stated preferences
- Results interpreted by NMG's team with relevant consulting experience in the global asset management sector

In 2020, we conducted interviews with 139 funds: 83 sovereign investors and 56 central banks. The 2020 sovereign sample is split into three core segmentation parameters (sovereign investor profile, region and size of assets under management). The 2020 central bank sample is broken down by region.

Figure 6.1
Sovereign investor sample, by segment

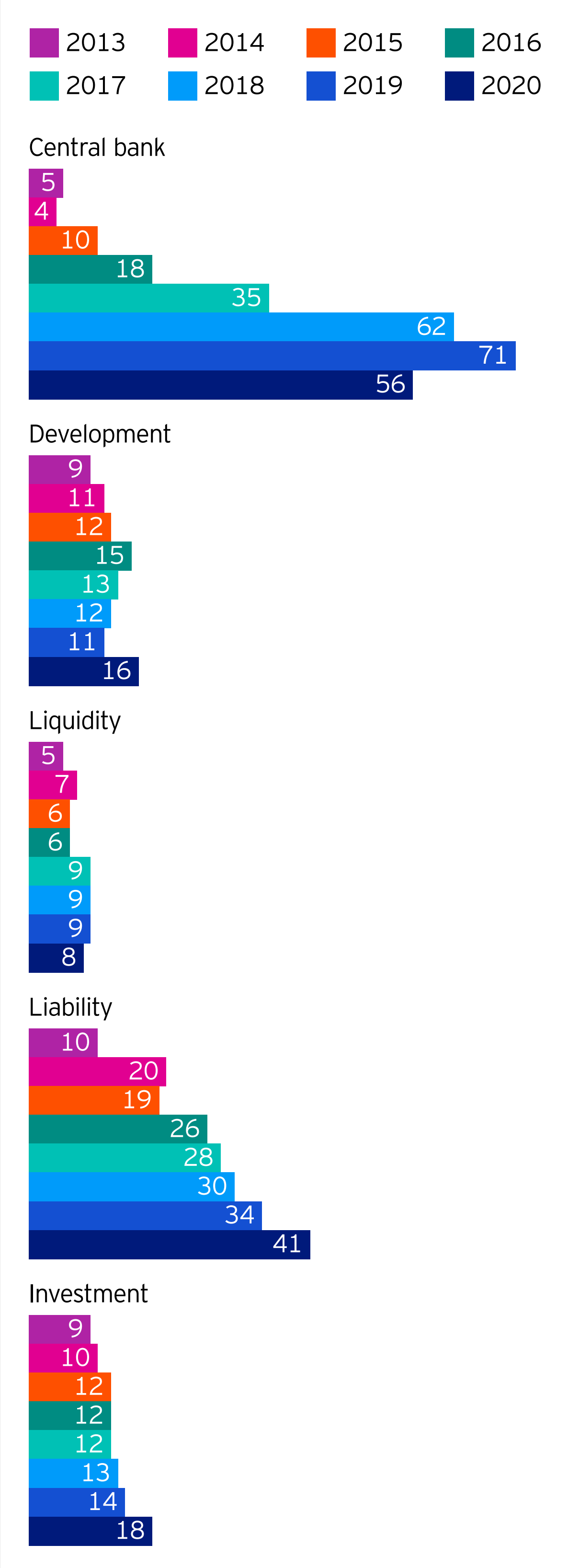


Figure 6.2
Sovereign investor sample, by region

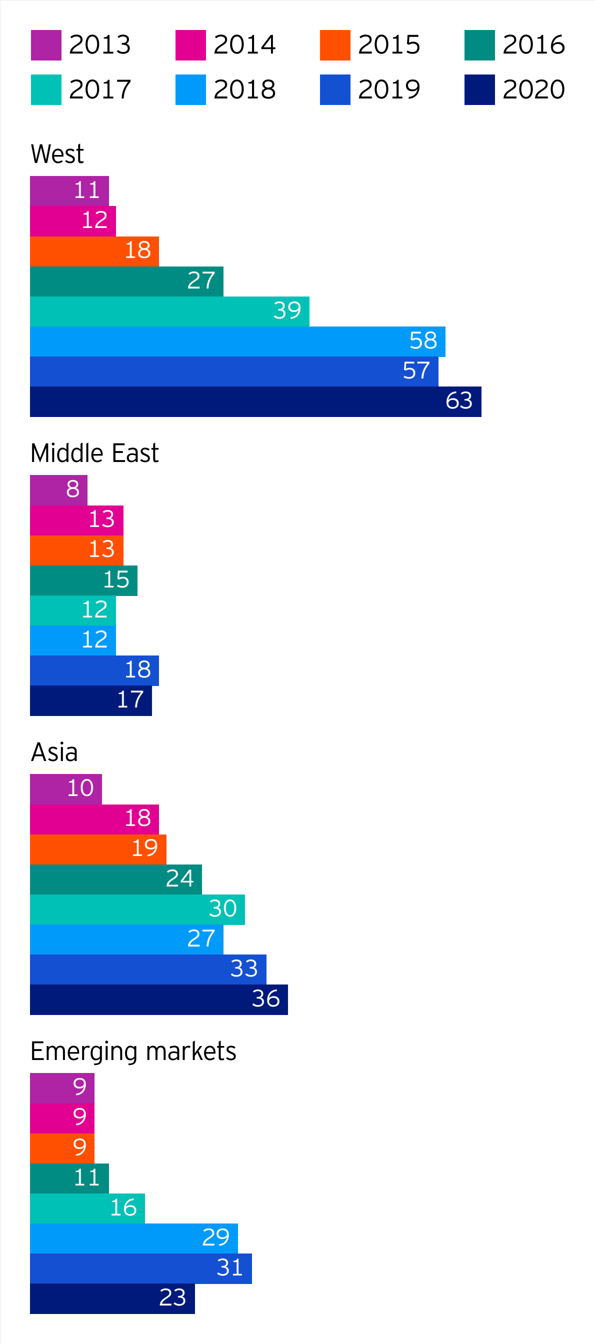


Figure 6.3
Sovereign investor sample, by assets under management

Defining sovereign investors

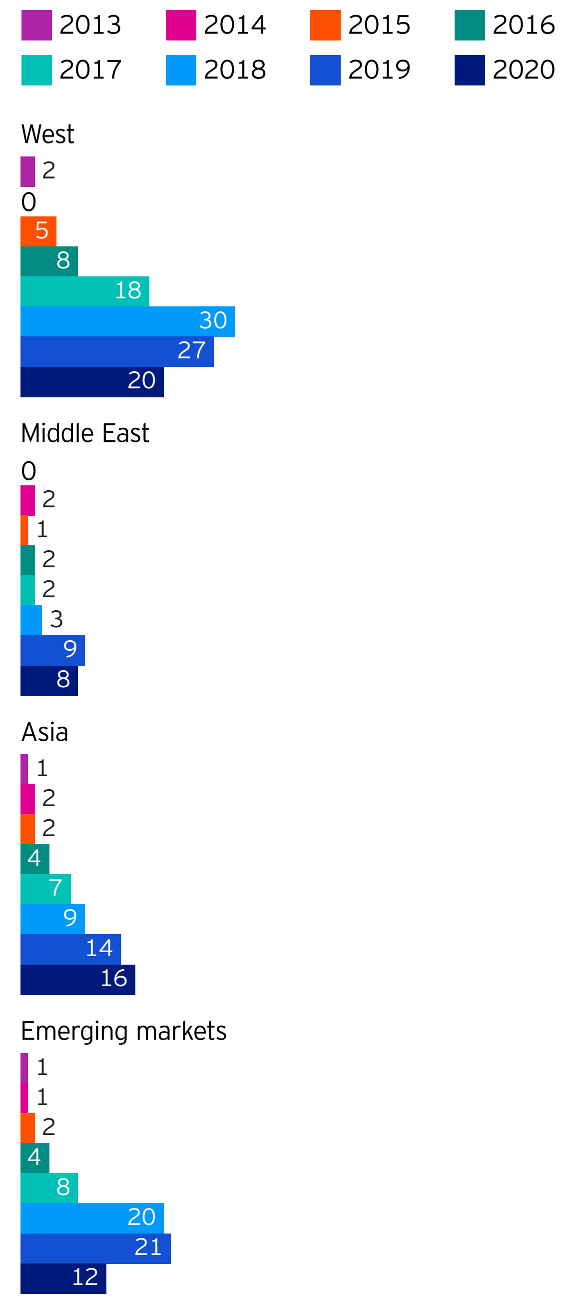
There are distinct segments of sovereign investors, determined in the first instance by their objectives. This framework is outlined below.

Investment sovereigns
Investment sovereigns have no specific liabilities that they are intended to fund. This typically means this segment invests with a particularly long time horizon and high tolerance for illiquid and alternative asset classes. Long investment return objectives tend to be high, reflecting an ability to capture additional return premia.

Liability sovereigns
Liability sovereigns, by contrast, are intended to fund specific liabilities. Liability sovereigns are sub-segmented into those that are already funding liabilities (current liability sovereigns) vs those where the liability funding requirement is still in the future (partial liability sovereigns). Liability sovereigns generally look to match their portfolio with the duration of the liabilities they are funding. Those where funding requirements are still well into the future resemble investment sovereigns in their approach; those with significant current funding requirements tend to still have a diverse long-term portfolio, but will be more liquid and higher yielding.

Liquidity sovereigns
Liquidity sovereigns operate so they can act as a buffer in the event of economic shocks. They are most commonly located in emerging markets that are prone to exchange rate volatility and/or in resource-based economies that are highly exposed to fluctuations in commodity prices. Because of the priority placed on being able to deploy capital predictably and at short notice, liquidity sovereigns invest with a much shorter time horizon and with a focus on liquidity ahead of returns.

Figure 6.4
Central bank sample by region



Development sovereigns
Development sovereigns are only partial portfolio investors. Their principle objective is to promote domestic economic growth rather than achieve an optimal risk/return portfolio trade-off. This is pursued by investing in strategic stakes in companies that make a significant contribution to the local economy to promote expansion and growth in employment. They pursue portfolio strategies with their other assets that are usually influenced by the size and characteristics of their strategic stakes.

Central banks
Central banks have a range of domestic roles in their economy – banking to government, issuance of currency, setting of short term interest rates, managing money supply, and oversight of the banking system. Central banks also have a range of external facing roles, including managing foreign exchange rate policy and operations, including payments for imports / receipts for exports and government overseas borrowings. Central banks hold substantial reserves to support those functions and ensure they are seen as credible. Those reserves have traditionally been invested with a priority on capital preservation and liquidity.

Figure 6.5
Sovereign profile segmentation

Primary objective	Capital presentation and liquidity	Investment and liquidity	Investment and liability funding	Investment and development	Investment only
Global sovereign segment	Central banks	Liquidity sovereigns	Liability sovereigns	Development sovereigns	Investment sovereigns

Time horizon and illiquidity tolerance →

For illustrative purposes only

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