Institute create

Pension survey | December 2022

Pension funds: reorienting asset allocation in an inflation-fuelled world

Marketing material for the exclusive attention of professional clients, investment services providers and any other professional of the financial industry.

Confidence must be earned

Amundi ASSET MANAGEMENT

Author: Prof. Amin Rajan

First published in 2022 by:
CREATE-Research
Grosvenor Lodge
72 Grosvenor Road
Tunbridge Wells, TN1 2AZ
United Kingdom

Telephone: +44 1892 784 846

Email: amin.rajan@create-research.co.uk

© CREATE Limited, 2022

All rights reserved. This report may not be lent, hired out or otherwise disposed of by way of trade in any form, binding or cover other than that in which it is published, without prior consent of the author.

Foreword

Pension plans are facing a perfect storm.

Central banks have been raising interest rates rapidly in response to rampant price pressures but higher inflation will likely persist in the new regime. Such monetary policy tightening will cool down economic growth and, in some cases, trigger economic recession.

It is also making investors far more sensitive to the sustainability of public finances, in a world flooded by debt. Unsurprisingly, financial markets have become very volatile, including traditional safe assets.

This could not have come at a worse time for pension plans given ageing demographics have been driving those with defined-benefit schemes into a so-called endgame, which requires them to show regulators how they will discharge their maturing pension obligations as ever more plan members retire.

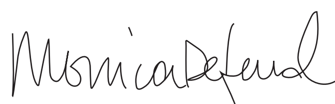
Today, the key question for pension funds is how to redesign their portfolios in a world of structurally higher inflation, less accommodative central bank policy and higher geopolitical uncertainty.

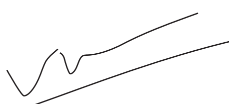
This survey highlights their views on the challenges that they face and how they plan to reorient their portfolios in pursuit of capital growth, inflation protection and capital preservation.

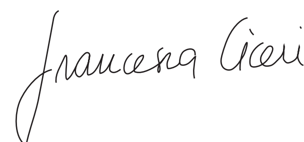
After the great repricing that occurred in 2022, bonds offer better value, and their role as a generator of income has been partially restored. Equities and real assets have come to the fore, as has dynamic asset allocation. The latter seeks to capitalise on bargains thrown up by volatile markets, as they revert to 'fair value' after a long period of being disconnected from their fundamentals.

The emergence of China as a global player and the return of regional dynamics add to international diversification opportunities. Interest in thematic and ESG investing is confirmed, as is the need to complement active and passive investing to achieve cost-efficient portfolios.

Amundi is grateful to Amin Rajan for helping to uncover independently how pension plans globally are responding to epochal events that are reshaping the global economy. The report provides relevant insights on how we can help pension funds protect and enhance the livelihoods of millions of their members as they advance into their golden years.







Monica Defend

Head of Amundi Institute

Vincent Mortier

Group Chief
Investment Officer
Amundi Asset Management

Francesca Ciceri

Head of Institutional
Clients Coverage
Amundi Asset Management

Acknowledgements

"In economics, things take longer to happen than you think they will, and they happen faster than you thought they could."

Rudiger Dornbusch
A German economist
(1942–2002)

This sombre reminder has found resonance in the current debate on the causes of the recent surge in inflation worldwide, whether the central banks' policy response will cure the problem and what the end game will be. The debate has major implications for pension plans, as inflation affects both sides of their balance sheet.

This became painfully evident with the sudden rout in the UK gilts market in September 2022. It exposed the vulnerability of pension systems to unexpected policy errors that can whipsaw markets and hit pension finances.

This survey seeks to present pension plans' views on what is now the hottest topic in economic policy circles. It is the latest in the annual Amundi–CREATE series, which started in 2014, and presents a detailed assessment of how pension plans worldwide are reconfiguring their asset allocation in the face of hugely consequential events in global capital markets.

My foremost thanks go to 152 pension plans for participating in the survey. Their practical insights shed light on the challenges they face in meeting their long-term liabilities in light of this global crisis.

Over the years, many of these participants have helped to highlight how the pension landscape has been changing, thereby contributing to create an impartial research platform that is widely used in all pension markets.

I would also like to thank Amundi Asset Management for sponsoring the publication of this report. Their arms-length involvement has helped to canvass a wide spectrum of views in the pension community so as to deliver an impartial assessment of current trends and their future evolution.

My grateful thanks also go to IPE for helping to conduct the survey, and especially to its editor Liam Kennedy for his wise counsel and unstinting encouragement throughout the history of this series.

Last but not least, I would like to thank four colleagues at CREATE-Research: Anna Godden for desk research, Lisa Terrett for project management, Naz Rajan for data analysis and Dr Elizabeth Goodhew for editorial support.

If, after all the help I have received, there are errors and omissions, I am solely responsible.

Amin Rajan

Project Leader
CREATE-Research

Contents

Foreword I

Acknowledgements II

1 Executive Summary 1

The unknowns overwhelmed by the unknowables 2
Survey highlights 3
Four key findings 4
Theme 1 Current monetary regime under threat from big upheavals 7
Theme 2 Unpredictability is the defining feature of inflation drivers 8
Theme 3 Cheap money policies have sown the seeds of higher inflation 9
Theme 4 The recent reset in asset valuations is not fully complete 10
Theme 5 The spectre of stagflation haunts investors 11
Theme 6 A return to fundamentals will favour thematic funds 12
Theme 7 ESG funds are temporarily under pressure 13
Theme 8 Passive and active funds will complement each other 14

2 Investing in an inflationary era: What are the perils and promises? **15**

Overview 16
Key findings 16
Rising asset class correlation is a game changer 17
Extreme pragmatism will guide asset allocation 19
Approach to inflation protection will be heavily nuanced 21
The mathematics of yield has shifted in favour of bonds 23
The yin and yang of the Chinese investment landscape 25

3 Rise of thematic funds: What are the opportunities and challenges? **27**

Overview 28
Key findings 28
Thematic funds used for future-proofing portfolios 29
Megatrend themes are reinforcing the core–satellite model 31
The Ukraine war has slowed progress in ESG investing 33

4 Rise of passive funds: How are they playing a role in dynamic investing? **35**

Overview 36
Key findings 36
Passive funds are proving their worth in the bear market 37
Active and passive funds are now complementary 39

1 Executive Summary

The unknowns overwhelmed by the unknowables

After a prolonged era of cheap money and double-digit returns, the sharp spike in inflation to its 40-year high in 2022 was a game changer.

That the Goldilocks scenario of moderate growth and low inflation has been rudely interrupted of late is not in doubt; nor, for that matter, is central banks' resolve to tame the current inflationary spiral. In the rich world, they are now walking a perilous tight rope, after virtually abolishing risk pricing in capital markets over the last 12 years. The scope for policy mis-steps now is enormous as central banks seek to pull off the highly desirable 'soft landing' that minimises both inflation and recession risks at the same time.

For pension plans, with their long planning horizons and multi-decade liabilities, there are too many open-ended and unknowable risks. The immediate one is whether central banks are actually able to arrest the current inflationary spiral and ensure that inflation expectations remain anchored to their policy targets. Another question is how central banks would react if inflation started to come down but then persisted well above policy rates as unemployment started to rise.

"Central banks cannot predict what the future holds. They are as much in the dark as we are."

An interview quote

Research method

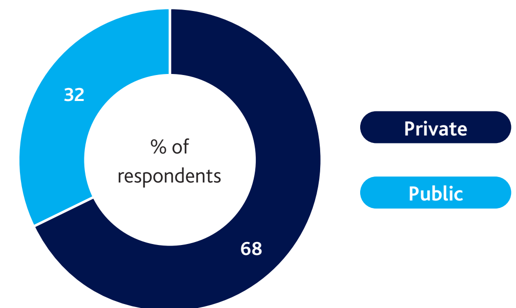
Hence, our 2022 Amundi–CREATE institutional survey seeks to shed light on how pension plans are responding, as their portfolios have been hit by the market impact of the latest surge in inflation in key Western economies. Taking a three-year forward view, the survey aims to obtain their assessment of four issues:

- which scenarios are likely in response to the recent surge in inflation?
- how are pension investors changing their asset allocation?
- why is theme investing likely to become a key pillar of investing?
- will the balance between active and passive funds become more even?

The survey is based on 152 respondents from 17 pension markets, collectively managing €1.98 trillion of assets. Their background details are given in charts below. The survey was followed up by structured interviews with senior decision makers in 30 participating organisations. The survey provided the breadth of information and the interviews the depth of insight. Both were conducted between June and October 2022.

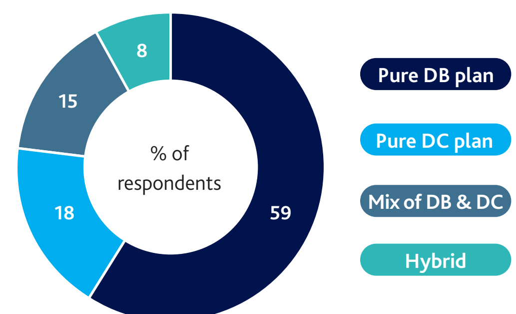
The rest of this section gives the survey highlights, four key findings and eight associated themes that underpin them.

Which sector does your pension plan cover?



Source: Amundi Asset Management / CREATE-Research Survey 2022

What is the nature of your plan?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Survey highlights

(% of survey respondents)

Future scenarios

74%

Expect a regime shift from deflation to inflation

63%

Expect rising inflation as central banks were too slow to react in 2021

50%

Expect a 1970s-style stagflation foreshadowing an 'anti-Goldilocks' economy

59%

Expect inflation to have a negative effect on pension funding ratios

Asset allocation

59%

Expect asset returns to be significantly lower than in the last decade

70%

Expect global equities to provide the best total returns

49%

Expect real estate to be ideal for inflation protection

44%

Expect US government bonds to be an ideal hedging asset

Thematic investing

46%

Expect a thematic premium in the post-pandemic period

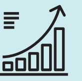
66%

Expect rising interest in ESG as the main driver of thematic investing

52%

Think it is too early to say how their thematic funds have performed since the pandemic

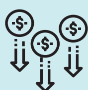
60%



Expect to increase allocations over the next three years

Active-passive investing

86%

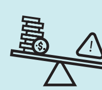


Like passives on account of their low cost in a low nominal return environment

58%

Prefer passives in liquidity management to meet cash flow needs

68%



Think passives rely on yesterday's winners and overinflate valuations

52%

See actives and passives as complementing each other in a diversified portfolio

Four key findings

1. Stagflation is the key scenario

Both Covid-19 and the Russian invasion of Ukraine have accelerated shifts that have been reshaping global capitalism in the last decade. From an investor perspective, the key shifts are: from deflation to inflation, from low interest rates to high interest rates, from globalism to nationalism, and from freer markets to governmental intervention.

Indeed, governments in the West will be obliged to continue running big deficits in public finances to fund the post-pandemic reconstruction and energy security. That will require low rates to keep the debt manageable and higher inflation to vaporise it. Key central banks are left to perform a nigh on impossible balancing act: tackling surging inflation and supporting national policies. The terminal Federal funds rate in the US needs to rise steeply into the required 5-6 per cent range.

"Transformational shifts follow a nonlinear pattern, often causing big market impacts over extended periods."

An interview quote

If not, inflation expectations will become de-anchored, as the cost of living crisis in the West continues to intensify. There are already signs of a self-fuelling wage–price spiral in Europe.

The challenge is immense because the recent revival of inflation is believed to be structural, not cyclical. In part, it also reflects deep-seated supply side vulnerabilities that were metastasising under the surface in a prolonged era of ultra-loose monetary policies.

The key vulnerability relates to the shift in the manufacturing centre of gravity from the West to the East over the past four decades in pursuit of cost efficiency. The recent reversal towards 'reshoring' is vital but also expensive.

Thus, 50% of survey participants subscribe to a stagflation scenario for the post-pandemic global economy: too hot in terms of inflation and too cold in terms of growth.

Themes 1, 2, 3 and 5 provide more details.

2. Rising asset class correlation is a game changer

Only 11% of survey participants believe that the impact of inflation on their investment portfolio will be positive, while 59% say it will be negative. As for asset returns, 59% believe that they will be a lot lower than in the last decade.

Major sell-offs in stocks and bonds have moved in lockstep in 2022 – as they did during the Great Stagflation between 1978 and 1982. Bonds' role as ballast in pension portfolios has been weakening lately. It was only strong when central banks could influence inflation expectations. Now, a positive correlation is likely to persist over extended periods.

Hence, asset allocation is being reoriented towards the following: real assets in private markets in search of inflation protection; dynamic investing in an agnostic search for decent returns; regional dispersion, as key markets become desynchronised; value investing, as central bank support melts away and asset prices revert to fundamentals; and passive funds, as cost becomes vital in a low nominal return era.

In the process, asset allocation now has three buckets, each with its own distinct goal (Figure 1.0). The first goal seeks decent returns via high-quality equities that are seen as the portfolio's key growth engine. The second goal is inflation protection via assets that are seen as having a built-in mechanism to keep up or keep ahead of inflation. The third goal is capital conservation via bonds that serve to hedge risky assets.

However, future-proofing a pension portfolio is proving ultra-challenging due to rising correlation and limited issuance of inflation-protection assets and their illiquidity features. Worse still, sovereign bonds are no longer a safe haven, in light of the extreme volatility in the UK gilts market in September 2022. It showed how policy mis-steps can cause havoc in today's febrile environment.

On the upside, however, tighter monetary policy will have a silver lining for pension portfolios.

First, higher rates will reduce the present value of future pension liabilities and reduce pressure on funding ratios from choppy markets.

Second, higher rates will make markets more rational and value-oriented. The long winter for value investing is coming to an end.

Third, higher rates will intensify the search for better returns as periodic market ructions create bargains in underpriced distressed assets; especially in fixed income where wild swings echo those of the 1970s, creating many 'fallen angels', as spreads widen.

Figure 1.0 **Over the next three years, which of the following asset classes will be most suited to delivering your investment goals?**

Return-seeking assets	% of respondents	Inflation-protection assets	% of respondents	Hedging assets	% of respondents
Global equities	70	High-quality equities	62	US government bonds	44
US equities	58	Real estate	49	European government bonds	40
European equities	47	Infrastructure	49	Chinese government bonds	36
Chinese equities	40	Inflation SWAPS	46	IG corporate bonds in China	32
EM equities (excl. China)	22	Private debt	44	IG corporate bonds in the US	29

Source: Amundi Asset Management / CREATE-Research Survey 2022

Fourth, higher rates will enhance the appeal of inflation protection assets in private markets – such as infrastructure, real estate and private debt – if policymakers become more tolerant of inflation than they publicly acknowledge.

Theme 4 provides more details.

3. A return to fundamentals will favour thematic investing

Current stock market valuations are deemed high despite corrections in 2022. Each rally is seen as eating its own tail while central banks continue their hawkish rate hike blitz to regain credibility. There are no soft options for future-proofing pension portfolios, only hard choices.

"Real assets in private markets remain ideal for inflation protection and diversification, despite some of their own challenges."

An interview quote

In this surreal environment, our survey participants have intensified their search for a thematic premium from predictable sources of value creation: 46% of survey participants believe that this premium now exists to a large extent and a further 35% say that it does to some extent.

In the post-pandemic era, the spotlight has turned on megatrends that are driving disruptive innovations, reshaping business models and moulding public and corporate policies. These changes are unfolding at a nonlinear pace. As a result, 60% expect to increase their allocations and 4% to decrease it.

Climate action remains the predominant theme, as it envisages the rechannelling of capital on an unprecedented scale, although it has faced headwinds in 2022. Other key themes include healthcare, ageing societies and the rise of China as an economic superpower.

So far, allocations have remained small because the toolkit of thematic investing is emerging gradually. The key constraint is the absence of a widely recognised classification system that is essential for activities such as portfolio construction, manager selection and peer benchmarking. Another constraint is the relatively limited universe of 'pure play' companies that seek to capitalise on key growth points in the global economy. These constraints are expected to ease as interest in thematic investing intensifies.

Themes 6 and 7 provide more details.

4. Active and passive funds will complement each other in diversified pension portfolios

Passive funds enjoyed strong tailwinds from central banks' quantitative easing after the 2008 Global Financial Crisis. It effectively put a floor under asset prices and dampened volatility. Active funds struggled as asset prices unmoored from their fundamentals.

"The active approach makes sense in today's volatile, unpredictable, inefficient markets."

An interview quote

In the turbulent environment since the market falls at the start of the pandemic in March 2020, passives have retained their attraction on account of their low cost and performance predictability. They are also seen as an effective tool of dynamic investing and liquidity management.

However, as passives have advanced into the centre of the core–satellite model that focuses on highly efficient markets, they are also increasingly seen as complementing actives which cover inefficient markets where information edge is key.

The revival of interest in actives is also based on the view that some of the design weaknesses of passives are likely to become much more obvious as central banks drain liquidity and spark periodic bouts of volatility. Indeed, the cross-sectional dispersion in the stock indices of key markets has been getting bigger, opening up opportunities for stock pickers.

By buying bulk, passives are ignoring the merits and demerits of the component companies. This applies especially to cap-weighted indices where size is the sole criterion of inclusion. Conventional value drivers such as earnings growth, innovation and CAPEX are ignored.

The post-pandemic economy favours companies on the 'right' side of change. There will be new opportunities for actives to prove their worth, as central banks lose their potency in artificially propping up market prices and suppressing their volatility.

Theme 8 provides more details.

Theme 1 Current monetary regime under threat from big upheavals

Key governments will continue running big deficits, requiring the continuation of financial repression.

The tremors from two seismic events – the pandemic and the war in Ukraine – will reshape global capitalism in the years to come. Various shifts are already evident, according to our survey (Figure 1.1). Some focus on capital markets, others on systemic forces that affect markets as well as wider society.

On the capital markets side, 74% of respondents believe that it is 'likely' that deflation will give way to inflation. This is duly reflected in the shift from low interest rates to high interest rates (62%), and also from a bull market to a bear market, with 'dead cat bounces' implying episodic rallies in prices (51%).

On the societal side, the identified shifts involve going from globalism to nationalism (58%), from freer markets to more governmental intervention (49%), from central bank independence to governmental subordination (34%), and from rising inequalities to mandated redistribution of income/wealth (32%). Seismic events have killed the belief that markets can fix everything.

Hence, our survey respondents see the current crisis as an inflection point where the recent past is a poor guide to the future. The emerging economic order already displays three key features.

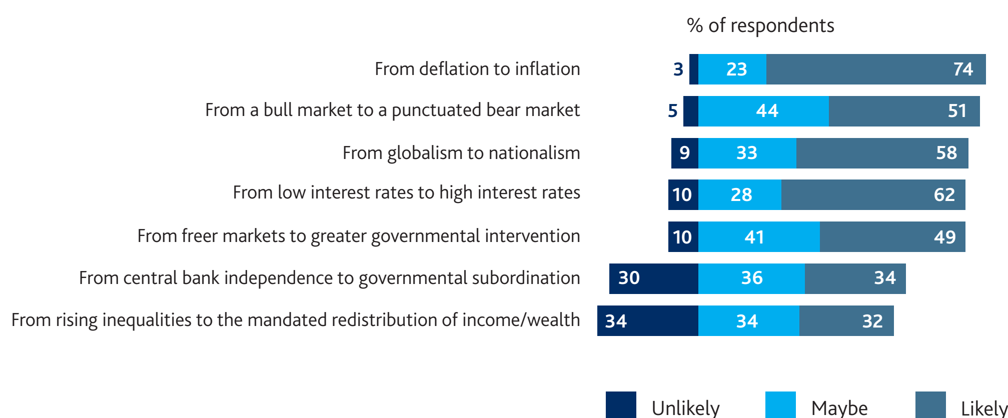
First, the globalisation of the past 40 years is being diluted by 'reshoring': producing more stuff at home or trading with friendly nations to ensure national security and avoid supply chain disruptions. Global trade is giving way to self-reliance.

Second, the resulting 'cost of living crisis' requires governments to play a much greater role in ensuring self-sufficiency and also tackling the economic inequalities that have long built up as the side effect of globalisation.

Finally, governments in all the key economies are also committing huge investments to their net zero climate goals. This much is evident from the two landmark supply-side initiatives in the US last summer: the Inflation Reduction Act to tackle climate change and the CHIPS and Science Act to pour billions into private sector investments.

As a result, key governments will continue running big deficits, requiring the continuation of financial repression: low rates to keep debt manageable and higher inflation to vaporise it. Thus, central banks will be required to perform a near-impossible balancing act: fighting inflation and supporting national policies. Such trade-offs will vary across the globe, causing desynchronisation between economic regions.

Figure 1.1 **How likely is it that the Covid-19 crisis and the Russian invasion of Ukraine are causing the following regime shifts in the global economy?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"For governments, fighting inflation is one of many priorities that require low rates and debt monetisation."

"The marriage of convenience between the East and the West is unravelling because of the Russian invasion."

Theme 2 Unpredictability is the defining feature of inflation drivers

It is fanciful to think that modern economies can just snap back like a rubber band, with no lasting scars from the pandemic or the Ukraine invasion.

The immediate drivers of the current inflation are not hard to discern, according to our survey. But there is profound uncertainty around their relative impacts and, especially, their unknowable 'second order' effects.

On the supply side, two drivers have been at work, both beyond the reach of central banks (Figure 1.2): supply chain bottlenecks triggered by nationwide lockdowns in major economies (cited by 82% of respondents); and the Russian invasion of Ukraine (72%). The recent roughly tenfold surge in European gas prices dwarfs the twin oil price shocks of 1973–74 and 1979–80.

On the demand side, unsurprisingly, the massive policy stimulus to stave off a 1929-style depression in response to Covid-19 is a major factor (58%). Trillions of dollars of deficit spending financed by money printing has constrained central banks' freedom to tame inflation. It has also rekindled a wage–price spiral which, so far, is more evident in low-paid jobs where skill shortages have been most acute (58%).

The result is a gradual unmooring of inflation expectations due to the delayed response from central banks, especially the US Federal Reserve, and the 12–18 month time lag in the impacts of their aggressive belated rate cuts in 2022 (63%). Further policy mis-steps are likely, as the Fed is now a victim of its own flawed forward guidance.

One reason for the delay is the recent mission creep in central banks' remit requiring trade-offs (48%). Faced with mega challenges, like energy transition and economic inequalities, governments now eye central banks' huge balance sheets to achieve socially worthwhile goals, requiring lower-for-even-longer rates. Another reason for the delay is the need to vaporise the global debt mountain via inflation (56%). Debt has grown threefold in this century and now stands at US$300 trillion, equivalent to 350% of global GDP, according to the Institute of International Finance.

However, the current bout of inflation could be temporary if its sole cause is supply bottlenecks that could dissipate over time, and/or if it reflects one-off changes in relative prices, as consumers have switched from services to goods during the pandemic. But nobody can be sure. It is fanciful to think that modern economies can just snap back like a rubber band, with no lasting scars from the pandemic or the Ukraine invasion.

Figure 1.2 **What are the key drivers of growing inflationary pressures in the global economy currently?**

Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"The Fed should have applied the brakes as soon as the White House hit the accelerator. It deliberately allowed inflation to run hot."

"Europe's inflation has a lot to do with its energy dependency on Russia."

Theme 3 Cheap money policies have sown the seeds of higher inflation

The role of equity markets has morphed from a source of raising investment capital for growing companies to a vehicle for cash distribution and balance sheet management.

The speed and ferocity of the Global Financial Crisis of 2008 brought the world economy to its knees. To get it back on its feet, central banks embarked on a prolonged era of cheap money. The trick worked. But on that and other similar past occasions, central banks artificially stretched out economic recoveries while three sets of problems had long been metastasising under the surface. They are now augmenting the inflationary pressures unleashed by the pandemic and the war in Ukraine.

The first set relates to supply side vulnerabilities, as the manufacturing centre of gravity shifted from West to East, after globalisation began in earnest by incorporating China's vast workforce into world markets. Driven by cost efficiencies, offshoring caused a shake-out of jobs and factory closures in the West. Now, the reversal of this process under the mantra of reshoring is likely to prove expensive: former production capacity cannot be revived as if it were simply mothballed. Two other aspects of globalisation are now adding a further twist to the current inflationary spiral (Figure 1.3): overreliance on Russia for energy and raw materials (72%); and overreliance on global supply chains at the expense of home producers (66%). Supply shocks are causing costly trade-offs for monetary policy in the West.

The second set of problems relates to anaemic productivity growth in the West this century: underinvestment in physical capital in 'old' industrial sectors despite their weight in every modern economy (55%); underinvestment in education and training for the skills of tomorrow, as artificial intelligence becomes the new heartland technology in every sector (48%); and overinvestment in the glamorous tech sector with few job opportunities for workers displaced by globalisation (52%). This sector has benefited massively from low discount rates that have magnified the net present value of its future earnings.

The third set of problems relates to the over financialisation of capital markets, decoupling them from the real economy (50%). The role of equity markets has morphed from a source of raising capital for growing companies to a vehicle for cash distribution and balance sheet management. The scale of corporate buy-backs on both sides of the Atlantic reflects this problem. It also reflects an unwillingness to invest in the business to create jobs and prosperity, while the real economy is mired in secular stagnation (48%). Real returns on total financial assets have been higher than GDP growth, as central banks worried more about price inflation than asset inflation.

Figure 1.3 Which structural weaknesses, exposed by the pandemic and the invasion of Ukraine, are creating inflationary pressures?

Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Central banks have artificially extended economic recoveries and created damaging bubbles."

"We've seen shifts towards financial capital at the expense of physical tangible capital."

Theme 4 The recent reset in asset valuations is not fully complete

With every big slide since the start of the 'Greenspan put' in 1987, policymakers' efforts to reboot markets were welcomed with open arms. But this was only possible when low inflation was a constant.

The days when investors could expect double-digit returns from a prolonged bubble are over, as inflation has roared back to life. The low rates and high equity returns of the post-2008 era were only possible while inflation was silent.

When asked about their assessment of the current acceleration in inflation, 46% agree that it marks a big departure, 17% disagree and 37% say maybe. Conversely, 20% agree that it is only a temporary blip, 44% disagree and 36% say maybe (Figure 1.4).

For both camps, the question isn't whether inflation will decline from its recent high of 8 percent on the current policy path. It is whether it will come down to an acceptable level. Historically, high inflation has tended to be self-limiting because it creates dynamics that can slow future inflation, as real incomes and consumption decline and the immediate cause of the spike fades.

But history also shows that once inflation is this high, it is also prone to rise further and become more volatile, unless central banks resort to Paul Volcker's 'shock and awe' playbook of the 1980s, which triggered two recessions. That would mean the Fed's current funds rate doubling into the 5–6% range and exceeding inflation. The risks of a hard landing are rising, as are those of a tumble in corporate earnings.

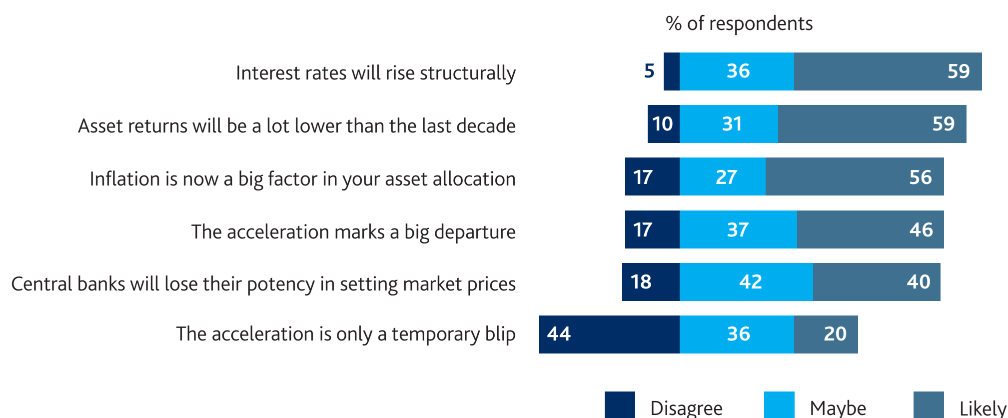
Hence, rates will rise structurally over extended periods: 59% agree and only 5% disagree. This is because central banks' ability to monetise government debt will be somewhat curtailed, relying on capital markets to bridge the gap.

Another implication is that asset returns will be a lot lower than the last decade: 59% agree and 10% disagree. Stock market valuations remain above the levels reached during the Covid-led sell-off in 2020 and the Global Financial Crisis of 2008. Each rally will eat its own tail while the rate hike blitz continues, alongside the deeply ingrained belief that the Fed will always intervene if markets tumble.

With every big slide since the start of the 'Greenspan put' in 1987, policymakers' efforts to reboot markets were welcomed with open arms. But this was only possible when low inflation was a constant. That is now a Herculean task. Hence, central banks will lose their potency in influencing market prices: 40% agree and 18% disagree, with 42% saying maybe.

As a result, inflation is now a big factor in asset allocation: 56% agree and 17% disagree. Hitherto, many pension portfolios were constructed during and for the disinflationary environment of the past 40 years. They have to be recalibrated for a new inflationary era.

Figure 1.4 **What is your pension plan's overall assessment of the current acceleration in inflation in key economies?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Assessing what constitutes fair value for asset classes is our biggest challenge, after a prolonged period of frothy markets."

"Strategic competition between China and the US is unlikely to ease the current stress in global supply chains."

Theme 5 The spectre of stagflation haunts investors

How inflation expectations work is a mystery. They are anchored right up until they are not.

When asked to identify the outlook of the post-pandemic global economy, three reference scenarios emerged in our survey, with the usual shades of grey in between (Figure 1.5, left chart).

The 'roaring twenties' scenario – reminiscent of the big economic bounce after the Spanish flu pandemic of the 1910s – is cited by 12%. In it, price pressures from the supply bottlenecks ease notably alongside robust growth, driven by productivity gains from innovations that also keep inflation low.

The 'secular stagnation' scenario, in which price pressures from the supply side ease alongside falls in aggregate demand from rate rises, is cited by 38%. It envisages a return to the pre-pandemic era: low growth, low physical investment, low inflation, rampant inequalities and stagnant wages. It assumes that the Fed will do enough without breaking the global economy.

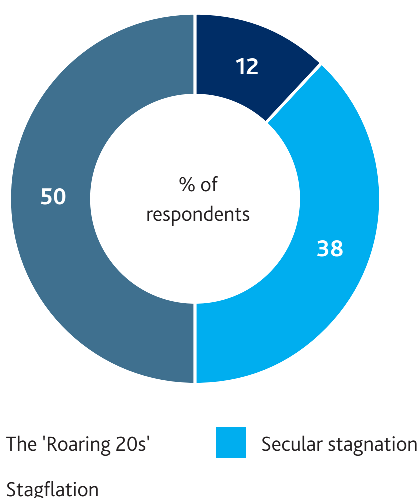
The stagflation scenario – foreseeing an 'anti-Goldilocks' economy that is too hot in terms of inflation and too cold in terms of growth – is cited by 50%. It assumes that, with their bloated balance sheets, central banks will find it hard to do 'whatever it takes'. Inflation expectations may thus become de-anchored, as workers intensify wage demands and companies strive to maintain their profit margins.

Interregional differences are likely: China and other Asian 'tigers' may experience the first scenario due to their favourable growth outlook; the US will likely experience the second scenario due to its energy self-sufficiency and hawkish policy stance; and Europe may experience the third due to its energy dependency on Russia. Aspects of secular stagnation and stagflation are likely in all regions from time to time as they tackle inflation. Much depends upon four known unknowns: when the current supply bottlenecks will ease; how aggregate demand will respond to policy tightening by central banks in 2022; whether central banks will wimp out if a deep recession occurs; and, crucially, whether a wage–price spiral will develop. How inflation expectations work remains a mystery. They are anchored right up until they're not.

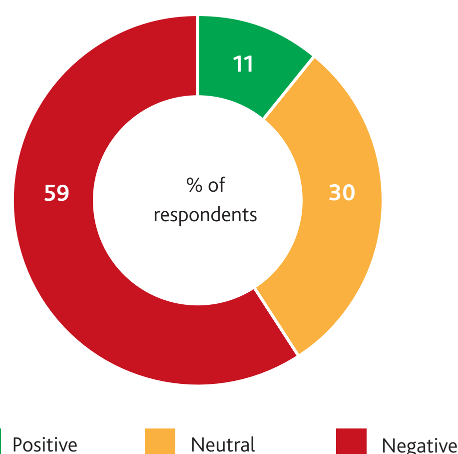
Be that as it may, 11% say that the net impact of inflation on their portfolio will be positive and 59% say it will be negative (Figure 1.5, right chart).

Figure 1.5

Looking to the next three years, which scenario does your pension plan think is most likely for the global economy?



What net impact will rising inflation have on your pension plan's funding ratios?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"In the past 60 years, the Fed has only managed to slow the US economy significantly without causing a recession on three occasions."

"Anyone thinking they'll make over 6% returns is either going to have to take excessive risks or perform well above the average."

Theme 6 A return to fundamentals will favour thematic funds

As a global recession looms on the horizon, the search for predictable sources of value creation has multiplied, after the initial push from Covid-19. The spotlight is on sectors that are being reshaped by life-changing megatrends that are driving disruptive innovations, transforming business models and reshaping public and corporate policies.

Some of these megatrends are driving public policies on post-pandemic reconstruction as well as promoting progress on particular ESG issues. Some are driven by the onshoring of the supply chain and related innovations that can outpace inflation.

Climate action will remain far and away the most dominant theme.

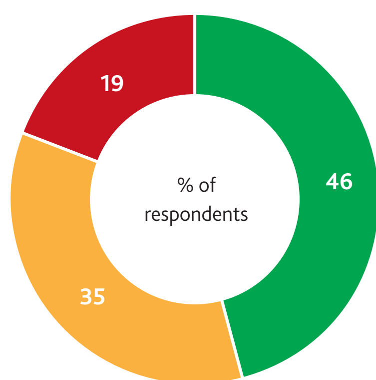
At least two in every five survey participants have invested in one or more of four themes: thematic ESG trends like clean energy technology, inflation, healthcare/health tech and the rise of China as an economic superpower. Climate action will remain far and away the dominant theme. The current approach relies on the traditional core–satellite model, where the core follows strategic asset allocation and the satellites cover, among others, thematic funds that ignore classic regional and sectoral lines. Some also tend to adopt multiple themes and perform tactical switches to harvest alpha opportunities.

As for the size of the current thematic universe, it is a matter of definition. It is small, if it is defined by the purity of exposure to a chosen theme. The reason is that there is a shortage of pure play thematic firms in private and public markets. This much is clear from Figure 3.0 in Section 3: 59% of survey participants have no exposure in their portfolios, 39% have exposure of under 5%, with 2% above 5%. As we shall see in Theme 7, most of the exposure of ESG-based thematic funds is a lot higher: by their very nature, they include non-pure play as well as pure play firms.

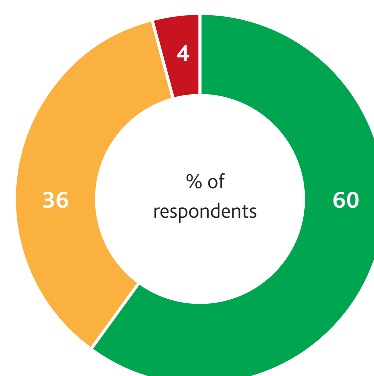
Given the relative novelty of thematic investing in the pension landscape and their longer time horizons, it is too soon to assess performance, according to survey participants. For now, though, it is clear that 46% of survey participants believe that, in the post-pandemic period, there will be a thematic premium to a large extent, and a further 35% believe there will be one to some extent (Figure 1.6, left chart). As a result, 60% expect to increase their allocations over the next three years (Figure 1.6, right chart).

Figure 1.6

In the post-pandemic period, to what extent will there be a thematic premium that overrides market cycles?



How will your pension plan's allocation to thematic investing change over the next three years?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Thematic investing requires patient capital willing to ride out periodic market bumps."

"Lack of widely accepted peer and fund benchmarks is a big challenge in selecting thematic managers."

Theme 7 ESG funds are temporarily under pressure

COP26 last year attracted pledges ensuring that 87% of global emissions are now covered by net zero targets.

The Ukraine war has unleashed a larger geopolitical dynamic that has nothing to do with ESG funds *per se*, but has nevertheless hit them as markets turned ultra-volatile in 2022. Data from the Bank of America shows that ESG funds have been trailing in 2022 after outperforming over the past 10 years. This is because, by design, most ESG funds are underweight in the energy and defence sectors – those that have surged most in the wake of the war.

Indeed, the war has laid bare two thorny design issues for investors. The first is whether it is ethical to invest in weapons firms whose products end up in the hands of Ukranians trying to defend themselves. This has exposed the inherent tensions between the E, S and G pillars. The second issue is the reliability of ESG ratings from disparate data providers, given the notable differences in their proprietary methodologies, weighting systems and measurement tools. A green portfolio has not translated to a green planet.

In the political arena, too, ESG has invoked a backlash, especially in the US where the Supreme Court's ruling last summer curtailed the Environmental Agency's ability to impose controls on the power plant sector, the second largest greenhouse gas emitter. To make matters worse, some 19 states have declared their disapproval of ESG.

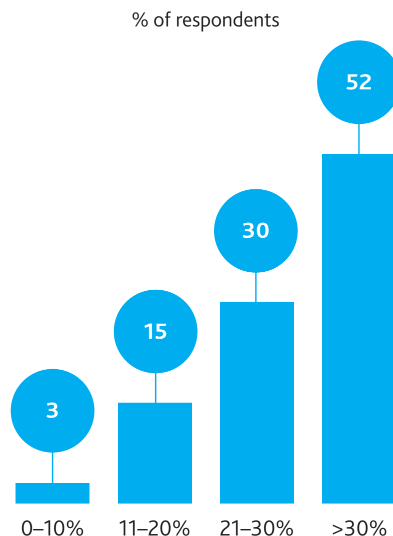
On the upside, however, COP26 and COP27 attracted new pledges ensuring that 87% of global emissions are now covered by net zero targets. On the corporate side, new disclosure rules in America, Europe and China are expected to ease the net zero path, as will a flurry of new lawsuits made possible by new laws in all pension jurisdictions.

Relying on an eclectic mix of exclusionary screening, ESG integration, impact investing and stewardship, 82% of our survey participants already have allocations in excess of 20% (Figure 1.7, left chart) and 64% expect allocations to increase over the next three years (Figure 1.7, right chart).

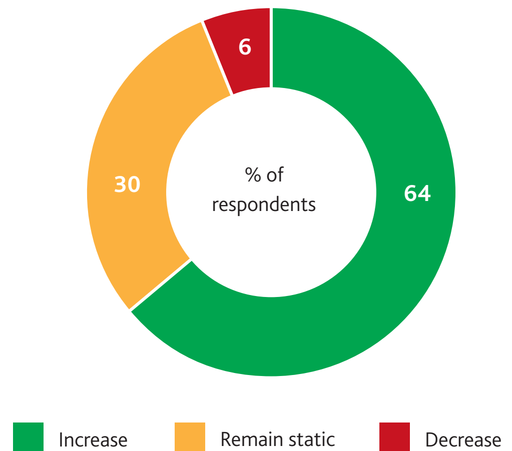
For them, ESG investing has been ambitious in scope and ambiguous in definition. With performance faltering lately, its approach is under review. ESG 2.0 is likely to be shaped by a raft of 868 policy tools that are now in place worldwide, according to the UN Principles of Responsible Investment database.

Figure 1.7

What is the approximate percentage of your pension plan's portfolio allocated to ESG funds?



How is the share of ESG funds in your plan's portfolio likely to change over the next three years?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Guidelines on how to assess what is 'good' and 'bad' are rare, as are their definitions."

"ESG is undergoing a big makeover and will emerge more client centric and robust."

Theme 8 Passive and active funds will complement each other

In the key markets, the prices of components in passive indices are showing rising cross-sectional dispersion that favours active stock picking.

Passives have retained their popularity in the turbulent markets of 2022. Contrary to the widespread prior belief that they were just a bull market luxury, three inherent attributes have come to the fore: first, their lower cost and performance predictability, as markets now move towards a low nominal return environment; second, their role as an effective liquidity and hedging tool that meets cashflow needs, as periodic volatility throws up bargains; and third, their role as international diversifiers, as key capital markets are desynchronised.

Currently, only 8% of survey participants are not invested in passives. The rest have varying shares: 38% have a share between 1% and 25%, and the remaining 54% have shares in excess of 25% (Figure 1.8, left chart). Taking a forward view, 29% expect to increase their share, 16% expect to decrease it, and the remaining 55% expect the share to remain static (Figure 1.8, right chart).

As of yet, there is little evidence that the rise of passives has hampered markets' price discovery role. However, as they have advanced into the core portfolios of pension plans, some of their inherent downsides have become more obvious. To start with, passives are relying on yesterday's winners and overinflate the price of their component companies, such that valuable companies continue to remain so, irrespective of their future prospects. With prices and trading volumes of the component companies moving in tandem, diversification benefits are being eroded.

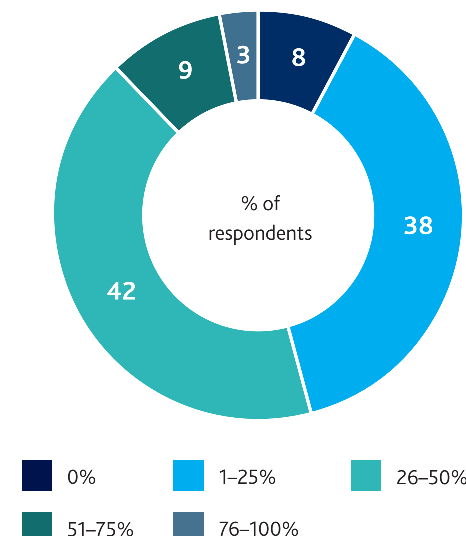
Furthermore, the rise of passives has resulted in the overfinancialisation of markets where momentum trading has been overriding investing, resulting in higher trade velocity and a constant search for 'hot' products.

Finally, given their relentless rise under easy money policies in the wake of the 2008 Global Financial Crisis, the vast scalability of passives is causing a growing concentration of voting powers among mega indexers. The big are getting bigger. Their motives may differ from those of their underlying investors.

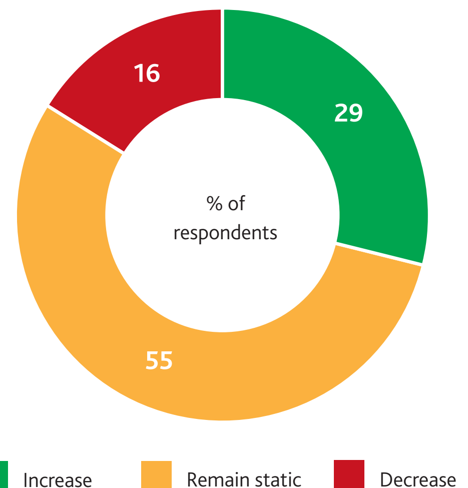
Given these downsides, and as central bank support shifts down a gear, market prices are increasingly likely to reconnect with their fair value via mean reversion. Indeed, in the key markets, the prices of components in passive indices are already showing rising cross-sectional dispersion that favours active stock picking. Growth in passives is expected to slow down. Actives and passives will likely complement each other in a diversified portfolio.

Figure 1.8

What is the approximate percentage share of passive funds in your pension plan's total portfolio currently?



How is the share of all passive funds in your plan's total portfolio likely to change over the next three years?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Passive investors know that free lunches are rare and often have an expiry date."

"A growing concentration of voting power among big indexers is unhealthy."

2 Investing in an inflationary era

What are the perils and promises?

Overview

As we saw in Theme 4 in Section 1, 56% of our survey participants see inflation as a big factor in asset allocation. This is because 46% agree that its acceleration in 2022 marked a big departure and a further 37% say that this may indeed be the case.

As a result, 59% believe that the impact of inflation on their portfolio will be negative while 11% think it will be positive, as shown in Theme 5 in Section 1. This is because super easy monetary policies have profoundly distorted asset prices since 2009. This is set to reverse. Markets are likely to be more rational and value oriented – albeit after a bumpy transition of stresses and strains, as central banks' support for markets melts away.

Against this backdrop, this section highlights how the asset allocation of pension plans is being reconfigured.

Allocations to inflation-protection assets will be constrained by one or more of three factors: their illiquidity, their limited issuance and how much 'dry powder' they hold.

Key findings

a. Shifts from rising correlation

The correlation between asset classes is expected to rise and persist over extended periods, if post-1960s history is any guide. It will drive five shifts in asset allocation:

- The first shift will favour inflation protection assets, mostly in private markets, that seek to stay ahead of or keep up with inflation.
- The second shift will intensify the agnostic search for better returns as episodic market ructions create distressed asset bargains.
- The third shift will see more regional diversification, as key markets become desynchronised due to differences in inflation outlooks.
- The fourth shift will see the continuing rise of passive funds, but their pace will likely slow, as their downsides become more obvious.
- The final shift will see the revival of value investing, as periods of high inflation and rising rates have historically favoured it.

b. Main changes in asset allocation

Assets that deliver well in one area don't necessarily do so in others. Hence, asset allocation will fall into three buckets that pursue three distinct aims:

- The first bucket will seek decent returns. It will favour global equities, US equities, European equities and Chinese equities.
- The second bucket will seek inflation protection. It will target high-quality equities, real estate, private debt, infrastructure, commodities and private equity.
- The third bucket will seek capital conservation via hedging assets such as US, European and Chinese government bonds.

Rising rates have recently helped pension plans to unlock their equity gains and rotate into fixed income. But the debacle in the UK gilt market in September 2022 has questioned the whole notion of safe havens while markets remain so fearful.

Allocations to inflation-protection assets will be constrained by one or more of three factors: their illiquidity, their limited issuance and how much 'dry powder' they hold.

Finally, allocations to Chinese assets are likely to rise, albeit from a very low base. Whilst growth dynamics are favourable, concerns remain about China's debt-addicted growth model, political interference in capital markets and human rights record.

Rising asset class correlation is a game changer

Not only did correlations rise in down markets, they also decreased disproportionately in up markets. The implied asymmetry has wreaked havoc on asset allocation.

In 2021, the funding ratios of pension plans worldwide rose in response to falling liabilities due to rising rates and stellar returns from booming equity markets. In 2022, they are braced for the biggest one-year fall since the 2008 Global Financial Crisis, because major stock and Treasury sell-offs have moved in lockstep.

Equally notable, this co-movement is similar to that during the Great Stagflation between 1978 and 1982. Bonds' role as ballast in multi-asset class portfolios has been weakening. This role was strong when central banks had a big influence on inflation expectations. As we saw in Theme 2 in Section 1, this is no longer the case. As a result, 58% anticipate correlation will rise, while 23% expect it to fall (Figure 2.0, left chart).

It is also feared that the positive correlation could persist over extended periods, as it did from the mid-1960s until the turn of the century. During that period, rising correlation was triggered when the expected inflation in consumer prices deviated significantly from the targeted rate set by central banks.

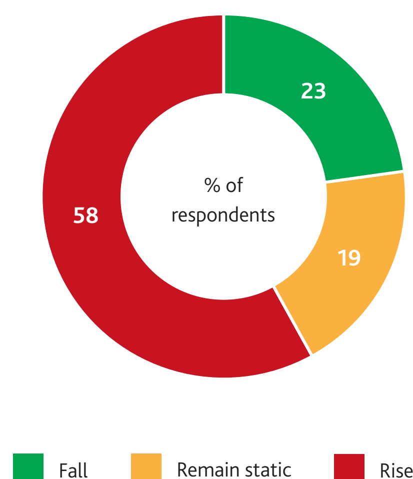
Worse still, not only have correlations risen in down markets, they have also decreased disproportionately in up markets. The implied asymmetry wreaked havoc on asset allocation. In down markets, diversification failed when it was needed most. In up markets, diversification acted as a drag on returns.

Either way, rising correlation is now the biggest challenge for asset allocators brought up in the prolonged era of convictionless trades, as central banks ratcheted up their cheap money policies (see Insights on the next page). Hence, with the gathering inflationary clouds, pension portfolios are being reconfigured via five shifts that seek to sidestep the winners of the last cycle (Figure 2.0, right chart).

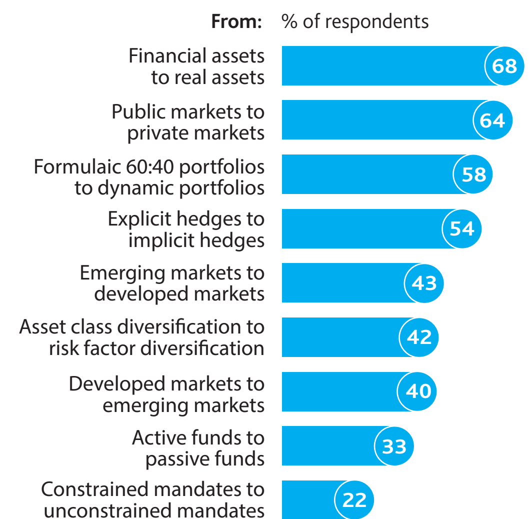
The first and most important shift has been towards inflation-protection assets, with a built-in mechanism that enables their returns to keep up with or keep ahead of inflation. This is clear from three data points: 68% of survey participants are increasing allocations to real assets such as real estate, infrastructure and

Figure 2.0

What will happen to the correlation between equities and bonds as inflation rises?



How has your pension plan's asset allocation shifted as inflationary pressures have increased?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Tighter monetary policy will make markets more rational and value oriented."

"Riskier assets do not translate into higher returns while markets have been in la la land."

The long winter for value investing is coming to an end.

private debt; 64% are advancing further into private markets, as a corollary; and 54% expect to shift from explicit inflation hedges, based on swaps, to ones implicit in real assets. As we shall see later, however, real assets come with their own challenges.

The second shift has been towards an agnostic search for better returns, as periodic market ructions create opportunities for buying underpriced distressed assets. Portfolio flexibility and dry powder will drive dynamic investing at the expense of the formulaic approach such as the traditional 60:40 equity–bond mix, according to 58%.

The third shift envisages greater regional dispersion of growth and inflation outcomes, due to the geographical disconnect between markets, as shown by two data points. Some pension plans expect to increase their weighting to developed markets (43%), while some expect to increase their weighting to emerging markets (40%). Indeed, the performance of these two blocs has been deviating since 2015, becoming even more pronounced since the onset of the pandemic.

The fourth shift, albeit a moderate one, will favour passive funds, as costs become a bigger factor in fund performance in a low-return era (33%).

The final shift implies that the long winter for value investing is coming to an end. With high correlations between equities and bonds, diversification based on risk factors will gain traction (42%). Notably, as market prices transition towards fundamentals, there will be a revival of value investing – the practice of picking underpriced stocks with true potential.

Periods of high inflation and rising rates throughout the last century favoured value stocks, as investors paid extra attention to their intrinsic worth. In the post-pandemic world, investors are embracing companies that produce tangible things with secular tailwinds – like the copper and nickel used in electric vehicles.

Besides, rising rates will hit the present value of the future income of growth companies. This is already evident from the declining fortunes of some 'moonshot' tech stocks in 2022. They are losing the star quality that was so evident during the big pandemic sell-off.

Interview quotes

"It may no longer be possible to rely on traditional beta exposures alone to secure good returns."

"With a balance sheet of nearly US$9 trillion, the Fed has pretty much been the market."

Insights

Capital markets can no longer rely on central banks to prop them up

After the end of the Bretton Woods exchange rate system in 1973, the Fed was no longer obliged to maintain a fixed rate between gold and the dollar. Thus, it was free to extend business cycles by issuing fiat money at will. The resulting decrease in the number of recessions that followed meant that the US economy was unable to weed out 'zombie' companies that could barely pay the interest on their borrowing. The misallocation of capital, low productivity, rising inequality and the hollowing out of the manufacturing base became all too evident over time as the Fed also put more emphasis on price rises in the real economy than on asset inflation in the finance sector.

Asset prices increasingly became addicted to central bank largesse. Markets were moved more by the utterances of central bankers than by fundamentals in the real economy. Much of the wealth creation that occurred during the longest bull market in history was illusory. Monetary policy could not heal the secular stagnation in the real economy.

Now, having prioritised fighting raging inflation it saw as temporary through hawkish rate hikes, the Fed also risks huge reputational damage, having enticed investors of all shades up the risk curve ever since 1987 when the 'Greenspan put' first started.

Prior to the big correction in June 2022, markets had reached nosebleed levels. Historically, credit booms have always ended in tears. The current one will be no different, as rate hikes in 2022 will tip the US economy into recession. Investors are on their own now.

A US pension plan

Extreme pragmatism will guide asset allocation

The capital asset pricing model assumption of a linear relationship between risk and returns is wrong. Cheap money policies obscured it by lifting all boats.

When it comes to asset choices, our survey participants now find themselves in a bind. There is nothing normal about the geopolitical disruptive shock following the Russian invasion of Ukraine. Hence, it is one thing to talk about a return to business fundamentals in the face of radical uncertainty, but quite another to do it when markets have long thrived on a very free form of risk-taking due to easy money policies. Hence, pragmatism will define asset allocation. It will be influenced more by the bigger picture than by monthly data (see Insights on next page), and will be guided by four principles.

First, asset allocation should pursue three aims: seek returns, provide inflation protection and conserve capital, duly recognising that assets that deliver well in one area don't do so in other areas. For example, equities do well in the long term, but they come with volatility in returns and dividends.

Second, it would be unwise to be valuation agnostic and mechanistically buy the 'dips'. Capital markets will be exposed to big ructions periodically, as rising rates hit market liquidity and investor sentiment. Current valuations are untenable if inflation stays high. The central bank cavalry is unlikely to come to the rescue.

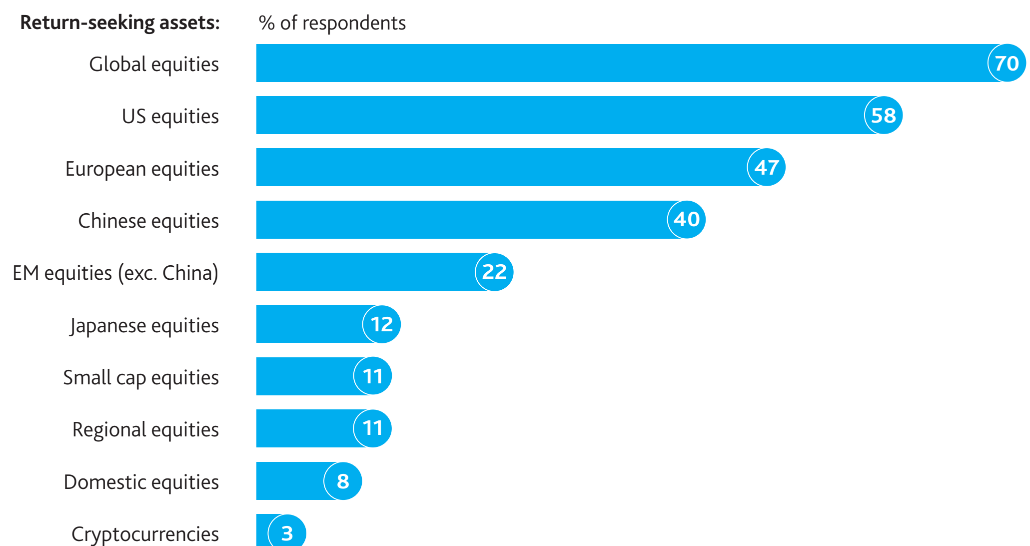
Third, the capital asset pricing model assumption of a linear relationship between risk and returns is wrong. Cheap money policies obscured it by lifting all boats. Notably, low-beta stocks have long outperformed their high beta peers on a risk-adjusted basis.

Finally, despite recent market corrections, all asset classes remain expensive. Relative value will guide asset choices. Inflation, interest rates and the US dollar need to peak in 2022 to prevent outsized market corrections.

Given these considerations, we focus here on the first of the three aims – return seeking – leaving the other two aims for the next two subsections.

On a three-year forward view, the gravitational pull in return-seeking assets will favour four equity classes (Figure 2.1). The first is global equities (cited by 70%). They are expected to remain a fertile ground for stock pickers looking for less debt, strong pricing power, strong brands, a high return

Figure 2.1 Over the next three years, which asset classes will be most suited to delivering decent returns for your pension portfolio?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Equities do badly in a recession. But they are the best of a bad bunch for now."

"We no longer buy and hold the fastest growth companies without regard to profits."

on equity and free cash flow. The excess cash can be used to survive higher interest rates, reinvest in business, carry out corporate acquisitions, perform share buy-backs or give high dividends.

The second class is US equities (58%). They are viewed as less vulnerable, due to the relative energy self-sufficiency of the US economy.

Historically, equities have provided a good inflation hedge, so long as inflation does not persist above 5%.

The third is European equities (47%). These are seen as potentially offering good returns in traditional sectors such as financials, healthcare and mining.

The fourth is Chinese equities (40%). These are seen as potentially offering good returns in new-economy sectors such as e-commerce and technology.

In contrast, Japanese equities are unlikely to be favoured, as the nation has yet to reach the escape velocity that would cut it loose from its deeply entrenched deflationary mindset.

Similarly, not all emerging markets are created equal. The emphasis is on winning by avoiding losers. It is unlikely there will be much appetite for them outside Brazil, China, India, South Korea and Taiwan, or, for that matter, countries that are a strong commodity play. The Ukraine war is inflicting a double blow on most emerging economies: spiralling oil and grain prices causing civil unrest, as witnessed in Sri Lanka last summer; and credit tightening in the developed world, leading to a massive flight of capital, as happened during the 2013 'taper tantrum'.

Overall, despite their inherent risks, equities will remain the growth engine of pension portfolios. Historically, they have provided a good hedge, so long as inflation does not persist above 5%. Furthermore, at a time when the longevity risk is rising, they provide an unlimited upside to tackle it, while bonds only offer a coupon. Finally, the dividend pay-out of quality companies could enhance portfolio returns.

They gain more by losing less and outperform the market over a full cycle. The long-term attraction of quality equities has become all the more obvious with violent price swings in the supposedly safe UK gilts market last September.

Interview quotes

"Dividends have accounted for 40% of stock market returns since 1930 and 54% in periods of high inflation."

"BRICS has been a clever marketing tool but a dumb investment strategy."

Insights

Investors focus on the big picture rather than on monthly data that are too 'noisy'

The big market rally in July 2022 was driven by the belief that July inflation data in the US marked a turning point and the Fed would start cutting rates early in 2023. Alas, this blind faith was shattered by August inflation data. This is hardly surprising. We are truly on a voyage into the unknown where mega forces now drive asset choices more than monthly data.

Rate hikes operate with long time lags, so things can only get worse before they get better. Such lags are especially variable now because of the amount of zombie debt that has built up in the system and mounting geopolitical risks. The next recession may be deeper than most commentators expect. The current rate-hiking cycle is likely to extend well into 2023 if inflation targets are to be met.

Besides, capital markets remain overvalued despite their correction last September. For example, the S&P 500 index is now where it was in 2019 before the pandemic. But CPI inflation in the US was 2% then as opposed to 8% now. So far, tech and cyclical stocks have seen big declines. We expect other sectors to follow as rate rises begin to bite.

Finally, we don't rule out the possibility that central bankers will wimp out if rate hikes cause a deep recession and a debt trap where borrowers borrow more to service their debt. As they strive to tackle inflation, policy errors are inevitable, if history is any guide.

A Swedish plan

Approach to inflation protection will be heavily nuanced

The global issuance of inflation protection assets is limited.

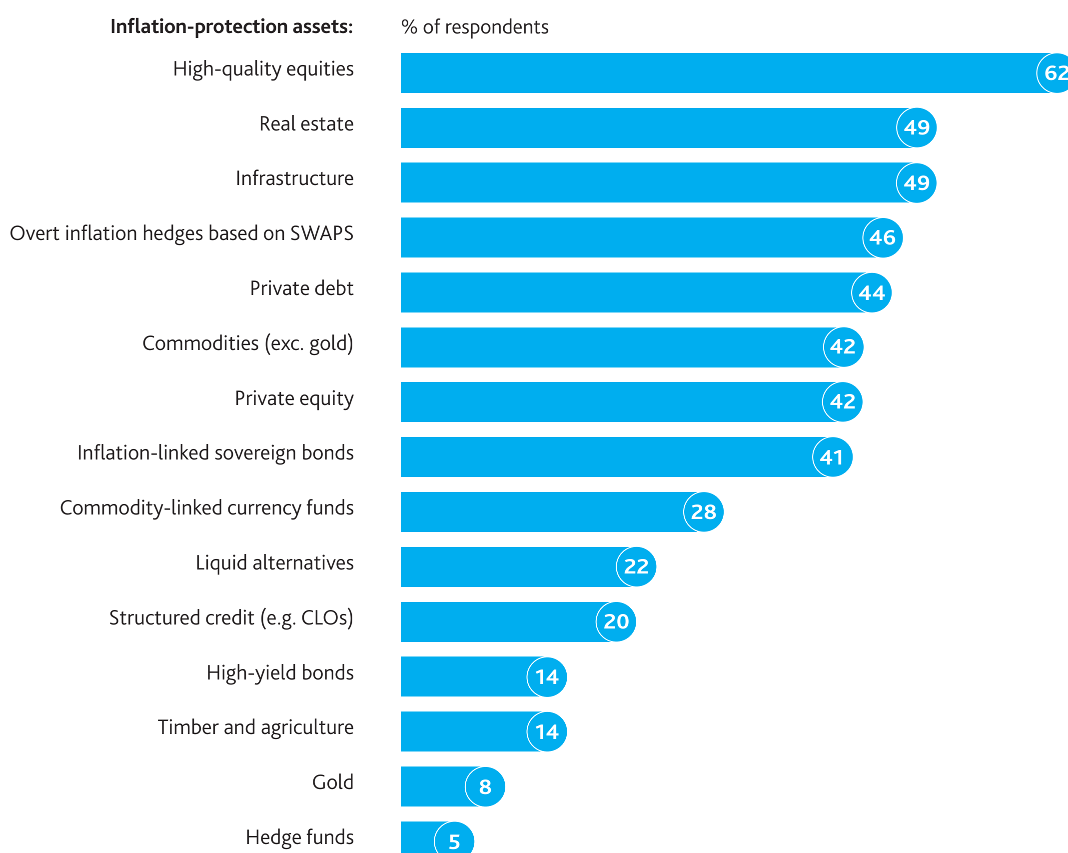
For the foreseeable future, inflation protection assets in illiquid private markets – such as infrastructure, real estate and private debt – hold special appeal if policymakers become more tolerant of inflation than they are publicly acknowledging. But all that glistens is not gold. These assets are just as vulnerable to a big correction if central banks are forced to raise rates above inflation and cause a deep recession where all asset prices could well go down in lockstep.

Additionally, regulation has moderated entry into illiquid assets that offer inflation protection, as shown by the 2022 global survey from the Thinking Ahead Institute. In defined contribution (DC) plans, holding 54% of pension assets in seven top pension markets, the daily liquidity required by regulation has confined the significant use of illiquid assets to Australia and Canada. Similarly, in defined benefit (DB) plans, holding 46% of assets, the legal need to hold bonds in the run-off phase has also constrained their use, especially in the top two DB markets, the UK and the US (see Insights on next page).

Finally, the global issuance of inflation-protection assets is limited. The global DB universe of US$26 trillion in 2021 far exceeds the total size of illiquid assets, put at US$8.9 trillion, according to data provider Preqin. Hence, the pivot towards protection assets will be somewhat constrained and rely on three broad asset clusters (Figure 2.2).

The first covers asset classes that implicitly hedge inflation in both public and private markets. They include: high-quality equities, with good pricing power, free cash flows and real-time price discovery (62%); real estate (49%) and

Figure 2.2 **Over the next three years, which asset classes will be most suited to deliver inflation protection for your pension portfolio?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"DB liabilities in the UK amount to £1.7 trillion, but the total issuance of 'linkers' only covers a quarter of them, making them expensive."

"Lack of price discovery in private markets is a real challenge to risk management and mark-to-market accounting."

Excess demand in the recent era of low yield has created covenant-lite deals and mounting dry powder.

infrastructure (49%), with their inflation-linked income; private debt (44%), with its floating rate structures; and private equity (42%), with its strong focus on growth sectors like digitalisation, green energy and healthcare.

In real estate and infrastructure, the emphasis will be on 'core' and 'core plus' assets. In private debt, it will be in senior secured instruments. Further incursions into these areas, however, are likely to be gradual and require tighter covenants. Excess demand in the recent era of low yield has created covenant-lite deals and mounting dry powder. For example, US$364 billion of global assets in private debt was held as dry powder in 2021, as this asset class doubled in size to US$1.25 trillion globally in four years, according to data provider Preqin. In infrastructure, where investment horizons typically go beyond 10 years, regulatory predictability is a key factor.

Moving on to the second cluster, it seeks to hedge inflation overtly. It includes inflation-linked sovereign bonds (41%) that are also central to insurance buyout by DB plans seeking liability-matching assets (see Insights). But the issuance of such bonds is vastly lower than total DB plan liabilities. In the US, total DB assets amounted to US$12.25 trillion in 2021, as shown by the Thinking Ahead Institute; yet, the entire universe of Treasury Inflation Protection Assets was US$1.8 trillion in June 2022, as shown by data from the US Treasury.

Two other favoured devices in this cluster will be inflation hedges based on: 'swaps' (46%) that have become expensive lately; and commodities (42%), whose prices drive headline inflation and provide ballast against market volatility, due to their low correlation with equities and bonds. But they are not the holy grail, if deep recession hits demand. Thus, there is interest in commodity-backed currencies (28%), like the Canadian dollar and Brazilian real.

The final cluster targeting inflation protection covers three distinct asset classes. One is liquid alternatives (22%) with hedge fund type elements: macro, unconstrained, long–short, total return focus with greater transparency, minimum investment levels as well as leverage limits. The other two asset classes are structured credit, like leveraged loans and collateral loan obligations (20%) with a strong focus on senior tranche, and high-yield bonds (14%), providing floating rate structures. The numbers in each case are relatively small in view of their high governance costs and high exposure to recession.

Interview quotes

"High-quality equities are a good inflation hedge, so long as inflation does not rise too far above 5%."

"The global issuance of inflation protection is limited as indicated by the amount of dry powder waiting to be deployed."

Insights

Illiquidity premia are unsuited to DB pension plans advancing into their end game

The positive mix of a big market rally in 2020–21 and rising rates has improved our funding ratio just as our liabilities are maturing due to ageing demographics. We are now closer to our End Game goal – insurance buyout. This has meant going underweight in long horizon illiquid assets like real estate, infrastructure and private debt, which potentially offer inflation protection. It is hard to exit them early without incurring a severe discount and high transaction costs.

Most insurers do not accept these assets in buyout transactions. Instead, they prefer liquid assets whose cash flow matches our liabilities, especially the 'linkers'. So, we took advantage of the dislocation in bond markets in 2021 by unlocking our equity gains and rotating into such bonds. We continued by de-risking the inflation and interest rate risks with swaps.

However, these best laid plans went haywire, as shown by the subsequent rout in the gilts market in September 2022. The exceptional spike in gilt yields forced us to sell a portion of our equities to preserve cash collateral for the interest rate and inflation swaps.

Never in our wildest dreams did we anticipate this scenario.

De-risking, as prescribed by regulators, is fine. But when there are policy mis-steps – like the September mini-budget from our government – markets can be very erratic and turn us into forced sellers at the worst possible time. This episode provides a salutary lesson that there are no safe havens and leverage is fine, but it comes with a health warning.

A UK pension plan

The mathematics of yield has shifted in favour of bonds

Interest in bonds is unlikely to diminish despite rising rates.

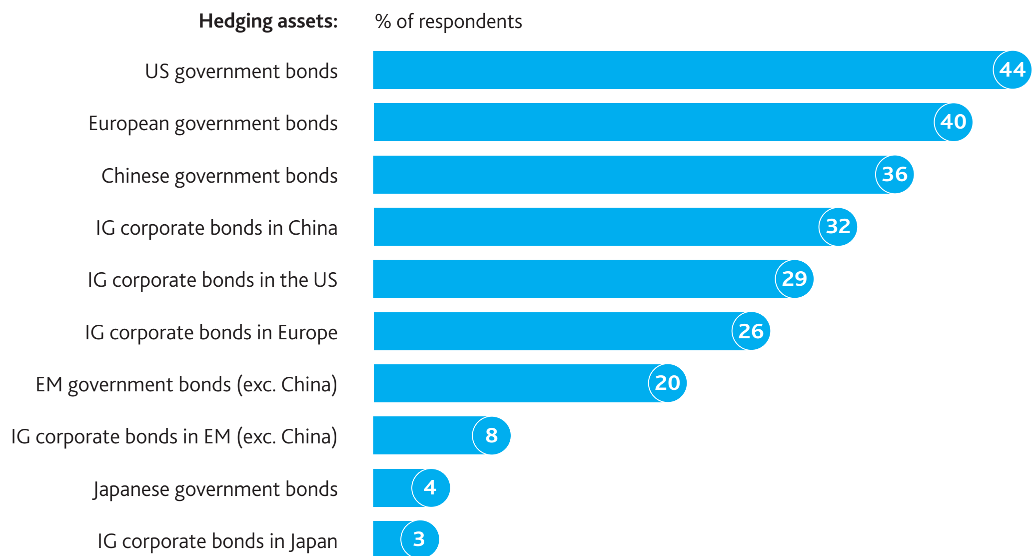
The global bond market rout in H1 2022 signalled the end of an era in response to the lethal mix of rate hikes and the huge withdrawal of liquidity from quantitative tightening – nearly US$220 billion per month in bond sales in the US alone. The mix risks a recession. But the mix will also tackle inflation and help yield-hungry investors while the Fed funds rate is expected to peak in the 5–6% range. Bond vigilantes are back.

There are also two other gravitational forces at work – ageing demographics and financial regulation – that have long been creating an insatiable demand for sovereign bonds by DB pension plans worldwide. Ageing demographics have been forcing them to de-risk their portfolios via assets with cash flow features that mimic pension payouts as they advance into their end game.

As a result, regulators on both sides of the Atlantic have been mandating the use of top-quality bonds, as evidenced by the 2006 Pension Protection Act in the US. Liability driven investing has duly taken off in this century. This interest has intensified with the global bond market rout in H1 2022, as many DB plans began to strategically unlock their equity gains, accumulated over the past 12 years, and rotate into bonds at yields not seen in decades. If anything, such de-risking will be augmented by periodic opportunism, as rising rates will create distressed debt that can deliver good returns as it 'rolls down the yield curve' before reaching maturity. Interest in bonds is unlikely to diminish despite rising rates. In the process, sovereign bonds are likely to be favoured more than commercial paper, with some regional variability (Figure 2.3). While some plans have suffered from extreme spikes in the UK gilt market lately, higher yields in quality bonds are likely to improve pension funding levels and bring plans closer to an insurance buy-in or buy-out.

US government bonds top the list (cited by 44%). Their safe haven status in times of geopolitical upheaval is one factor. The other is the belief that rate hikes are likely to be more successful there, given the demand-pull nature of its inflation, in contrast with Europe, where cost-push factors are more pronounced, given its energy reliance on Russia.

Figure 2.3 **Over the next three years, which types of bonds will be most suited to hedging various risks in your pension portfolio?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"In their role as capital buffers, bonds have benefited from the end of the Gold Standard."

"Bond markets are likely to throw up good buying opportunities with 'fallen angels'."

Overall, bond markets will start to function normally as market forces play a bigger role in rate setting.

The interest in European government bonds (40%) will centre on green bonds that will feature strongly in the €750 billion post-pandemic recovery package agreed in May 2020.

The interest in Chinese government bonds (36%) will be influenced by their post-2009 record of favourable risk-adjusted returns, their low correlation to G7 sovereign bonds and incentives since 2016 designed to attract foreign investors into the onshore bond market.

Finally, interest in emerging market bonds (excluding China) will remain subdued (20%) and mostly favour commodity producers. The key reason is the longer duration of their current, higher hard currency debt, compared with previous rate-hiking cycles. There are other headwinds too: the economic slowdown in China, supply-chain disruptions and rising energy costs.

As with sovereign bonds, so with IG corporate bonds: driving forces will be similar. With their shorter duration, their direct sensitivity to rising rates is relatively low. The impact of rising rates on demand is more likely to come indirectly via recession. Overall, demand is likely to remain subdued until the recessionary outlook is clearer. It is likely to focus on China (32%), the US (29%) and Europe (26%).

Overall, bond markets will start to function normally as market forces play a bigger role in rate setting (see Insights).

Markets will also be more erratic in the event of policy mis-steps, as shown by an extreme sudden 25% fall in the UK gilts market in September 2022, when the government unveiled a large package of unfunded surprise tax cuts to be financed by fresh borrowing.

It provoked the sharpest yield rise on long-term gilts since 1957, and forced the mass sell-off of quality assets by DB plans to meet collateral demands in their liability-driven investing programmes, designed to shield portfolios from inflation and interest rate risks.

To stave off an imminent crash, the Bank of England made an abrupt U-turn by unleashing a £65 billion gilt buying spree, to avoid a self-fuelling downward spiral in gilt prices.

Ironically, this was just after announcing its quantitative tightening plan, removing US$100 billion of liquidity annually from its quantitative easing portfolio of US$1.04 trillion.

Interview quotes

"Central bankers are no longer navigators, they are passengers like the rest of us."

"Japanese assets are least attractive currently, while its economy remains mired in deflation."

Insights

Markets are now frontrunning policymakers in setting rates

With their asset purchases of some US$20 trillion since the financial crisis in 2008, key central banks became the largest holders of bonds. This put them in the driving seat in rate setting across the yield curve. Markets just followed suit. Now, roles have reversed, as these banks fell behind the curve in fighting inflation. The Merrill Lynch Option Volatility Estimate jumped some 40% in the autumn of 2022.

Our central bank – the Reserve Bank of Australia – was forced to drop its yield curve control policy even before it was officially launched. It believed the recent surge in inflation was a blip. However, alone among its peers, it described its own forecasting as embarrassing and its forward guidance – keeping rates low until 2024 – as misleading. An independent review is now in progress. Even in the US, the Fed's attempts to cushion financial markets are reaching the point of diminishing returns.

Ditching forward guidance and relying on data on a month-by-month basis is a clear indication of how ineffective central banks' forecasting models are in predicting major turning points in our economies. The 'average inflation' policy was necessarily backward looking and could not anticipate the scale of havoc caused by the pandemic and the Ukraine invasion.

On the flip side, the growing role of markets means that prices are less distorted and driven more by their intrinsic worth. As spreads widen and downgrade IG bonds, there will be many 'fallen angels'.

An Australian superannuation fund

The yin and yang of the Chinese investment landscape

Despite China's status as an economic superpower, allocations to Chinese assets remain low for the three broad asset classes, including alternatives like private equity, real estate and infrastructure (Figure 2.4). Around 60% of our survey participants now have zero allocations. For those who are invested, their average allocation is around 7% on an asset-weighted basis. A large part of equity allocations is in offshore H-shares in Hong Kong. Even though China accounts for around 34% of the MSCI EM Index, the share of mainland A-shares in the index is only 5%.

Pension investors remain unconvinced about the 'China story'.

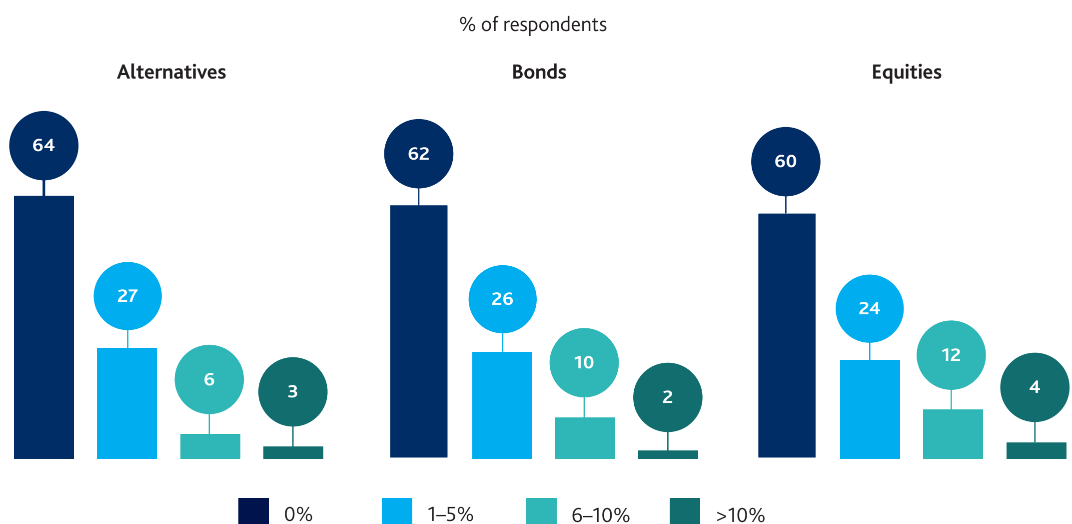
Pension investors remain unconvinced about the 'China story'. They acknowledge that China's spectacular growth has lifted some 500 million citizens out of poverty. But they think that success is now the key factor behind the worsening geopolitical antagonism between America and China, and the general economic decoupling between China and the West. This is further indicated by the recent US ban on the sale of advanced computer chips to China in a bid to contain Beijing's technological and military ambitions.

Apart from that, the recent freefall in China's US$55 trillion real estate market and the highly publicised political crackdown across the tech sector – knocking trillions of dollars off its largest companies – have unnerved all investors, foreign and domestic alike.

The more immediate reason for negativity is the debt-laden financial system. The Chinese high-yield property bond market has had a wild ride in 2022, with a large part of the sector trading at distressed levels after a series of high-profile defaults. While the government wants to see the internationalisation of the renminbi, the pace has been slow. With the debt–GDP ratio at 284% in 2021, the required liberalisation of the capital account may start a debt–currency crisis. The laundry list of concerns cited by our survey participants does not stop there.

The policy shift – under the 'Common Prosperity' agenda described below – towards technologies considered central to competition with the West, has seen the state vastly expanding its role in the country's burgeoning IPO pipeline. This has raised concerns that the government is moulding China's capital markets into an assembly line that channels private funds towards the policy goals of the Communist Party to

Figure 2.4 What proportions of your total portfolios are likely to be allocated to Chinese assets over the next three years?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"China remains a wild card; it has a lot going for it and a lot against it."

"Investing in China will be influenced by geopolitics as much as business fundamentals."

Chinese assets and currency are no longer emerging.

the detriment of other shareholders. There are also major concerns about the country's human rights record and its flagrant breaches of international protocols on intellectual property and financial accounting.

Yet, China's rising global prominence across all spheres means it can no longer be ignored by global investors as a good diversifier, given the low correlation of its assets to developed markets.

However, one event in 2021 captured investor attention: the Sixth Plenum of the Communist Party of China. It passed a historic resolution to pursue 'Common Prosperity'. It aims to reduce income inequalities and promote people-centred progress around its fast-emerging middle class. Among others, it envisages supply-side reforms that will promote a further opening up of its markets and national independence in science and technology so as to advance into high value-added manufacturing. The aim is to double its GDP by 2035, while ensuring that credit keeps pace with nominal GDP.

In fact, Chinese assets and currency are no longer emerging. The population is becoming more wealthy, more urban and more environmentally conscious. With continuing direct foreign investment, the renminbi is fast emerging as a reserve currency used in trade and financial portfolios. Thus, China now offers good opportunities to foreign investors in its financial markets with US$35 trillion of assets. It also wants Shanghai to become a global financial hub attracting funds into 'new-economy' stocks linked to consumption and innovation. This explains its recent acceptance of the US ruling on access to audit files on Chinese companies.

Large pension plans from countries as diverse as Australia, Canada, France Germany, Sweden, the Netherlands, the UK and the US have been early movers in Chinese assets. They have the governance structures and skill sets necessary for investing in China – where high-conviction active investing has taken precedence over passive funds (see Insights). They also believe that China is no longer an 'emerging market' and deserves a distinct category in its own right in the MSCI All Country Index.

Going forward, much would depend on how the 'Common Prosperity' agenda is implemented on the ground and how it will affect geopolitical rivalry between China and the US.

Interview quotes

"If you want to be part of a truly historic transformation, China is the place."

"Is the 'Common Prosperity' initiative just another grandiose exercise in socialism?"

Insights

China will continue to have a warped transition

We started investing in China at the dawn of its super growth cycle in the early 2000s.

Since then, contradictions have been obvious, as the nation has transitioned to the second biggest economy in the world. Its growth dynamics over the past 40 years have been unparalleled in human history. But it has also created severe problems: economic inequalities, environmental pollution and an unbalanced growth model driven by mounting debt, exports, housing and infrastructure spending.

Real estate worth US$55 trillion has come into being thanks to a huge credit binge. The bankruptcy of the property giant Evergrande was no surprise. Yet, we continue to remain long on China.

First, the new ambitious 'Common Prosperity' agenda is set to give a better balance to the economic model by promoting fast-growing industries such as artificial intelligence, healthcare and green technologies, while addressing economic inequalities. The government has been keen to decisively tackle problems as and when they have arisen in the past.

Its legitimacy rests solely on its economic competence.

Yes, human rights abuses in China's Xinjiang province remain a big concern: we avoid companies directly or indirectly connected with them.

Second, the agenda provides opportunities for a high-conviction investor like us, with a long term horizon and enough capital to acquire strategic stakes in many companies at the vanguard of the current transition. This strategy has delivered good risk-adjusted returns in the past. Our current allocation will rise to double digits over the next three years.

A Canadian pension plan

3 Rise of thematic funds

What are the opportunities and challenges?

Overview

As we saw in Theme 6 in Section 1, 46% of our survey participants expect a thematic premium in the post-pandemic world to a large extent, and a further 35% expect it to some extent. As a result, 60% expect to increase their allocations.

Against this background, this section highlights the role of thematic funds as a more predictable source of value creation, as markets are reverting to fundamentals with central banks withdrawing market liquidity. It looks at five aspects:

- key drivers of thematic premium
- current allocations in portfolios
- themes favoured
- current challenges
- current investment approaches.

Key findings

The war in Ukraine has created severe trade-offs for ESG investing.

a. Drivers

There are five key drivers:

- rising interest in ESG issues
- post-pandemic reconstruction
- onshoring of supply chains
- innovations that can outpace inflation
- regulatory pressure to embrace ESG.

b. Allocations

Current levels are low although there has been very rapid growth since the pandemic. The reasons are:

- a shortage of pure play companies at the vanguard of thematic investing
- such companies tend to be in more illiquid market segments
- such companies require high conviction and longer time horizons.

c. Themes currently favoured

Six themes are currently favoured:

- ESG trends
- inflation
- clean technology
- healthcare/health tech
- the rise of China
- ageing societies.

d. Key challenges

In thematic investing, there are four key challenges:

- the lack of a widely accepted classification system
- a shortage of pure play thematic companies
- difficulty in forecasting long-term trends
- lack of acceptable benchmarks that can be used in manager selection.

In ESG investing, there are four current challenges:

- severe trade-offs in ESG investing due to the war in Ukraine
- differences in scores from different data providers
- no ex-post reporting that can be used to assess manager ESG performance
- recent political backlash in the US against ESG investing.

e. Current approaches

The current favoured approaches are as follows:

- a blend of ETFs, active equities, venture capital funds and private debt within the traditional core–satellite model
- active funds that combine multiple themes, with periodic switches between themes to capitalise on the prevailing alpha opportunities.

Thematic funds used for future-proofing portfolios

With deteriorating fundamentals now defining the global economy, the search for predictable sources of value creation has intensified.

Covid-19 has thrown up new investment themes, like digitalisation, healthcare and life sciences, and thematic funds have taken off. In the past two years, assets in equity-based funds worldwide have tripled from US$255 billion to US$806 billion, according to Morningstar. This compares with US$71 billion in 2011.

Initial interest was sparked by a study by Hendrik Bessembinder in the *Journal of Financial Economics* in 2018. It showed that the top 4.3% of listed stocks accounted for all the value creation from US equity investment above US Treasury rates between 1926 and 2016.

With deteriorating fundamentals now defining the global economy, the search for predictable sources of value creation has intensified. The spotlight has fallen on sectors that are being reshaped by life-changing megatrends that are driving disruptive innovation, transforming business models and reshaping public and corporate policies.

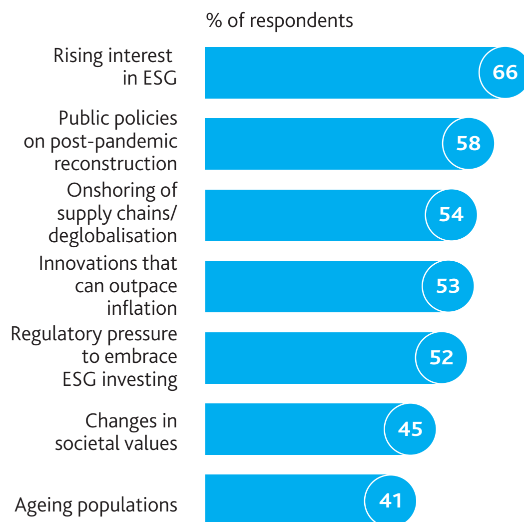
Disruptions come when new solutions are developed for long unmet needs and/or new competitors are attracted to sectors with high profit pools and attractive returns. Selected themes have a multi-year return profile and favour intangible assets that make them relatively immune to business cycles. They are also eschewing the star culture of beating the markets in preference to long-term value creation. They are not just a basket of repackaged growth stocks, as their critics contend. Indeed, they are an appealing way forward, as excess liquidity is being drained away by central banks. They provide an innovative approach, breaking from traditional silos defined by countries, industries, factors or regions.

Currently, a number of factors are likely to drive the thematic premium (Figure 3.0, left chart). Structural in nature, the factors are interrelated, as they seek to reshape the future.

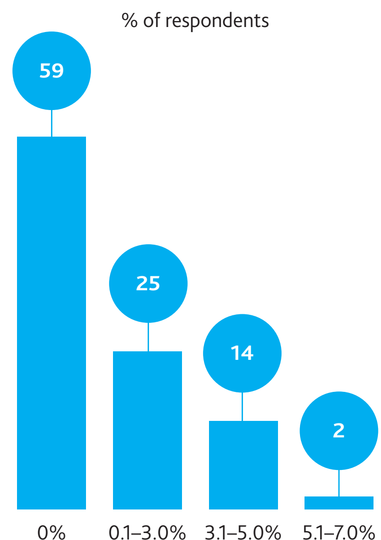
Some relate to governmental action. These include: public policies to rebuild the industrial base after the pandemic (58%); regulatory pressures to embrace ESG (52%); and the resulting rising interest in ESG issues (66%). The examples include the European Union's taxonomy on green finance, the 2019 Shareholder Rights Directive II and the Green New Deal, allocating €225 billion to achieve its 2030 climate targets.

Figure 3.0

Which factors are likely to drive the thematic premium?



What is the share of thematic funds in your pension plan's portfolio?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"We aim to harness long-term growth by turning tectonic shifts into investment ideas."

"As central banks have distorted markets, future-proofing the portfolio is vital."

Themes require long holding periods associated with high-conviction investing. This is all the more relevant given that forecasting the future is never easy.

Some drivers relate to global supply chains. These include: deglobalisation and the resulting onshoring of old supply chains (54%) and innovations that can outpace inflation in the resulting industrial transformation (53%). Examples include the recent policy breakthroughs in the US: the Inflation Reduction Act to tackle climate change and the CHIPS and Science Act to pour billions into breakthrough innovations.

Some drivers relate to changes in societal values around environmental, social and governance issues (45%), and ageing populations (41%). Examples include the rapid rise of genomics and biotech companies specialising in the manipulation of genetics and microorganisms to tackle a large array of health issues.

Turning to the current allocation, it is essential to highlight a definitional point at the outset. The sustainable investing universe had 35% of global assets by 2020, according to the latest market-sizing study from the Global Sustainable Investment Alliance. The sum covered pure play specialist companies that are at the vanguard of sustainability as well as those whose business models are not so uniquely focused. On the other hand, thematic strategies, covered here, are defined by the purity of their exposure to a specific theme.

The right-hand chart of Figure 3.0 conveys the state of our survey participants' current allocation to pure play companies covering themes highlighted in the next subsection.

Clearly, the current thematic universe is in its early stages as: 59% have no allocations, 25% have allocations of 0.1–3.0%; 14% have allocations of 3.1–5.0%; and 2% have allocations of 5.1–7.0%.

There are a number of reasons for this (see Insights). The key one is the shortage of pure play companies in listed markets. These tend to be in small and mid-cap segments where liquidity can dry up quickly when markets are roiled. The purity requirement has thus inevitably directed investments to start-ups in private markets where fees are high and liquidity is constrained. Thus, themes require long holding periods that come with high-conviction investing. This is all the more relevant given that forecasting the future is ever more difficult in this era of heightened geopolitical risk.

Interview quotes

"Our foray into thematic funds has been via ETFs, with their exposure to niche areas."

"In the past 50 years, stock prices have been driven by new companies, not established market leaders."

Insights

Thematic investing is about capturing changing industrial dynamics

The world of investing is witnessing a regime change: from deflation to inflation. Apart from this monetary dimension, the change also has a structural one caused by Covid-19 and the Russian invasion of Ukraine. We are witnessing industrial restructuring as a result of deglobalisation and technological advances. Traditional supply chains are being reconfigured, as are old forms of working. These and other transformational changes, however, are unfolding at a nonlinear pace and will surprise financial markets in terms of size and duration. Hence, a thematic approach is ideal in capturing changing industrial dynamics and anchoring portfolios to meet investor objectives.

However, our experience shows that thematic investing is sound in principle but not easy in practice. To start with, forecasting long-term durable trends is hard in a world where fat-tailed events are no longer rare. Our risk models factored in neither the pandemic nor the Ukraine war. The result is that theme funds tend to chase rather than front-run gains, as evident from the latest generation of thematic ETFs. Apart from that, themes tend to lack 'purity', as they tend to overlap: the line dividing genomics and healthcare is a fine one. Finally, many thematic funds are based on narrative fallacies. At best, they reflect portfolio managers' confirmation bias. At worst, they can be marketing gimmicks, like the infamous BRICS funds. They generated momentum in which investors bought high and sold low.

With these limitations in mind, we are investing in thematic funds covering only 'pure play' companies that seek to capitalise on the key growth points in the global economy that ride out the volatility that comes with a regime change.

A Dutch pension plan

Megatrend themes are reinforcing the core–satellite model

Climate action will remain the predominant investment theme, as it anticipates the rechannelling of capital on an unprecedented scale.

The themes being pursued currently, or likely to be pursued in the near term, are many, varied and inevitably overlap (Figure 3.1).

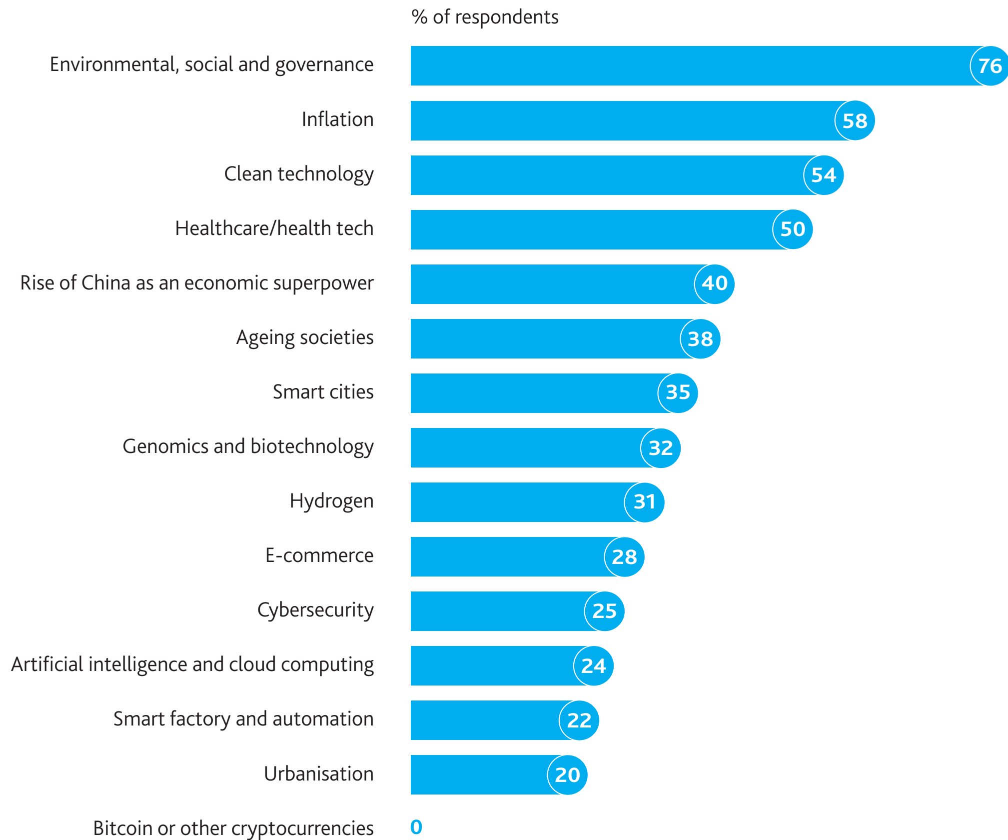
Environmental, social and governance tops the list (76%). As mentioned in the previous subsection, regulatory thrust on the part of policymakers has been a powerful contributor. That thrust, in turn, has been influenced by two data points that indicate the scale of investment opportunities, as today's capitalism undergoes its biggest makeover. As much as US$100 trillion of investment would be required to attain the net zero goal by 2050, according to the broadcaster CNN. Some US$5–7 trillion in annual spending would be required to meet the UN's 17 Sustainable Development Goals, according to the World Economic Forum.

On current reckoning, climate action is likely to top these two global initiatives and favour two themes: clean technology (54%) and hydrogen (31%). Both refer to companies engaged in delivering renewable energy from technologies like solar, wind and geothermal sources, as well as carbon capture and storage systems.

Climate action will remain the predominant investment theme, as it anticipates the rechannelling of capital on an unprecedented scale. Evidently, it is also an area in which there are more pure play thematic companies than any other area.

Another theme near the top of the list is inflation (58%). Although it is unrelated to megatrends in the way other themes are, it is dominating all asset allocation discussions currently, due to its surge in 2022. Section 2 has outlined how pension plans are responding to it.

Figure 3.1 **Which themes currently feature highly or are likely to feature highly in your pension plan's investment portfolio over the next three years?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Climate action is one theme with increasing news flow and positive investor sentiment."

"Investments in healthcare have proven far more resilient in the current bear market."

Those thematic funds invested in active funds tend to pursue multiple themes and perform periodic tactical switches to capitalise on ephemeral alpha opportunities.

Other noteworthy themes are healthcare/health tech (50%), genomics and biotechnology (32%), and ageing societies (38%). Here, the focus is on speeding up medical discoveries and commercialising them quickly, as happened with the Covid-19 vaccine. The aim is to develop tools that treat diseases in a novel way. Of special interest are companies involved in upstream research for the giant pharmaceuticals.

The final group of themes centres on deglobalisation. In this context, the rise of China as an economic superpower is notable (40%). As we saw in Section 2, major initiatives are underway to drive the economy to the higher value-added end of manufacturing and ensure self-sufficiency as China seeks to double its GDP by 2035.

Other allied themes are: smart factory and automation (22%), e-commerce (28%), cybersecurity (25%), artificial intelligence and big data (24%), and urbanisation (20%).

As we saw in Figure 3.0 in the previous subsection, current allocations to pure play thematic funds remain relatively small and they are set to grow over the next three years (Figure 1.7 in the Executive Summary), as certain current constraints ease (see Insights).

The key one is the absence of a commonly accepted template on thematic investing, providing consistent definitions and reliable data. This is essential for three critical activities: portfolio construction, manager selection and peer/fund benchmarking.

Typically, the current approach is deployed within the traditional core–satellite model. The core follows strategic asset allocation and its benchmarks, whereas the satellites cover approaches with high growth potential.

Thematic investments are usually confined to satellites and ignore the classical regional and sectoral splits. Those thematic funds invested in active funds tend to pursue multiple themes and perform tactical switches to capitalise on ephemeral alpha opportunities.

The implied rotation favours themes with greater conviction and evidence and underweights those with a less supportive outlook. After all, some themes are durable while others decay rapidly. Those pension plans with limited governance budgets tend to follow a simpler approach via ETFs or green or sustainability bonds.

Interview quotes

"Because forecasting is difficult, it is essential to rotate between themes periodically."

"There is no widely recognised nomenclature for thematic investments."

Insights

The toolkit of thematic investing is emerging gradually

Thematic investing is a promising phenomenon but it is still at a nascent stage. Our early investments were targeted at healthcare and factory automation, with small allocations. But our interest grew significantly after the Paris Agreement, when it became clear that climate action will create opportunities as well as risks. These heightened our interest, especially with the net-zero pledges made by governments and companies around the world. Currently, 6% of our assets are invested in pure play companies in private markets focusing on our chosen themes. Further growth is constrained by certain drawbacks.

The key one is the absence of a widely recognised classification system at the portfolio construction stage, with consistent definitions and reliable data on key aspects such as AuM, past performance and peer benchmarks. This creates three challenges. First, it forces us to be benchmark agnostics – something our trustees are not comfortable with. Second, it also means that when selecting asset managers, our information base is somewhat restricted – as is our choice of managers. Lack of acceptable benchmarks is a major hurdle in identifying successful thematic managers. Third, the universe of pure play thematic funds in public markets is limited. Hence our portfolio is a blend of ETFs, active equity funds, sustainability bonds and private debt. They sit in a separate sleeve in our portfolio. Given that the performance of themes can vary over time, our active funds opportunistically rebalance as and when alpha opportunities arise.

A German pension plan

The Ukraine war has slowed progress in ESG investing

There is a larger geopolitical dynamic at work that has nothing to do with ESG funds per se.

The performance of thematic funds in general and ESG ones in particular since the onset of the pandemic has been somewhat mixed (Figure 3.2, first and second charts). In both cases, the dominant response is 'too soon to tell'. The current bear market has hit all funds – the good, the bad and the ugly – indiscriminately. It has also given rise to the idea that ESG investing is exposed to bubble mentality (Figure 3.2, third chart).

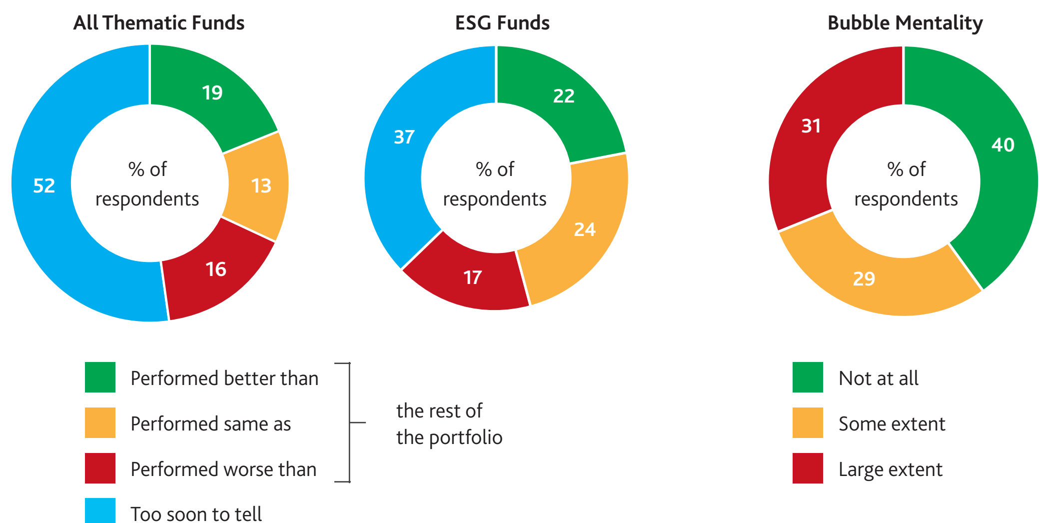
Data from the Bank of America show that ESG funds have been trailing in 2022 after outperforming over the past 10 years. That is because, by design, such funds are underweight in the energy and defence sectors, both of which have been surging amid the turmoil sparked by the Ukraine war. Thus, there is a larger geopolitical dynamic at work that has little to do with ESG funds *per se*.

Be that as it may, the periodic upheavals in capital markets worldwide in 2022 have exposed thornier issues in the design of ESG funds that also apply to thematic funds to a certain extent.

The most immediate issue is whether it is ethical to invest in a weapons manufacturer whose products end up in the hands of Ukrainians trying to defend themselves. Another issue is whether fossil fuel companies should no longer appear on exclusion screens, as they strive to plug the energy shortfall caused by the war, which also appears to pit the E, the S and the G against one another. Governments face acute trade-offs as they implement the 2050 net zero goal.

Faltering ESG performance has also laid bare the thorny issue of value judgement implicit in the ESG data from different providers. Electric car manufacturer Tesla is excluded from the S&P 500 ESG Index whereas one of the world's largest polluters, ExxonMobil, is not. Besides, there remains a big dispersion of metrics and methods used by data providers such that capital markets find it hard to price companies on ESG performance and link executive remuneration to it. The problem is all the thornier because there is also a lack of *ex post* reporting to hold investment

Figure 3.2 **Which of the following statements applies to your allocations since the market dislocation in March 2020?** **To what extent is ESG investing overly exposed to bubble mentality?**



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Many thematic funds show signs of a bull market phenomenon. Their investors tend to ignore their themes' time to maturity."

"The Ukraine war has intensified the search for low-cost energy with the lowest carbon intensity."

managers and product manufacturers to account in terms of their performance against their stated *ex ante* intentions.

Outside the investment arena, ESG also invoked a backlash in the US. Last summer, the Supreme Court issued a ruling that curtails the Environmental Protection Agency's ability to impose greenhouse gas emissions controls on the power plant sector, which is the second-biggest source of greenhouse gases. The state of Florida also updated its rules to ban pension funds from using ESG factors in their investments. All told, some 19 states have publicly declared their disapproval of ESG.

On the corporate side, more stringent reporting rules are coming.

However, our survey participants see these problems as a setback, not backsliding. They cite three sets of data points to underline the continuing structural thrust towards ESG investing.

COP26 in Glasgow strengthened the 2015 Paris Agreement by attracting new pledges ensuring that 87% of the world's greenhouse gas emissions and 89% of its economy are now covered by net zero targets. Pledges from the three biggest polluters – China, Europe and the US – are especially noteworthy.

On the corporate side, more stringent reporting rules are coming. In Europe, the new Corporate Sustainability Reporting Directive would require the top 50,000 companies to disclose audited ESG information. In the US, the Securities and Exchange Commission is also considering mandating climate risk disclosures by public companies. These initiatives would give investors clearer benchmarks on which to measure ESG funds' claims.

Finally, globally, there have been nearly 2,000 lawsuits, according to the London School of Economics' Grantham Research Institute on Climate Change and the Environment. Governments have adopted more laws tied to climate change as the scientific case to act with urgency has grown stronger. Lawyers are now able to bring cases that were impossible previously.

As a result of these structural forces, investing in ESG trends is expected to emerge more robust and client-centric and remain at the vanguard of thematic investing.

Interview quotes

"Surging oil and gas prices due to the Ukraine war are too lucrative for investors to ignore."

"Never again will Europe want to rely on rogue states for its energy needs. The transition to renewables will accelerate."

Insights

The price discovery of climate risks has been hit by geopolitical factors

Like many of our peers, our thematic investing has largely concentrated on the environmental pillar of ESG, since the adoption of article 173 of the 2016 French Transition Law. It strengthened mandatory carbon disclosure requirements for listed companies and introduced carbon reporting for institutional investors. This has been followed by a new decree in 2021 under Article 29 of the Transition Law, extending the disclosure requirement to biodiversity.

However, such regulations are necessary but not sufficient for financial markets to start pricing climate risks in earnest.

Developed economies need a systematic approach that curbs the demand for fossil fuels via carbon taxes. But, in France, that has proven difficult, as shown by the Gilet Jaune riots three years ago. Hence, attention has turned to reforming and revitalising the European Emission Trading System. We are also seeing similar reforms in Canada, China and the US.

New energy standards and blended finance projects on renewable energy, storage batteries and carbon capture systems have raced up the policy agenda, providing fresh momentum to the price discovery process after COP26. But the Russian invasion has abruptly diverted policy attention to meeting immediate energy needs while doubling down on renewable energy goals. As of yet, specifics are few and far between outside the US, but price discovery has suffered a fresh set back.

In the meantime, we seek to capture alpha returns by focusing on companies with low but rising ESG scores that are ignored by exclusionary screening, which avoids the 'sinners' and rewards the 'winners'.

A French pension plan

4 Rise of passive funds

How are they playing a role in dynamic investing?

Overview

As we saw in Theme 8 in Section 1, only 10% of our survey participants are not invested in passive funds. The rest are at varying levels: 47% have allocations of 1–25%, and the remaining 43% have allocations in excess of 25%.

Taking a three-year forward view, 29% expect these shares to increase, 45% expect them to remain static and 26% expect them to decrease.

Against this background, this section addresses two issues:

- why passives have retained their relevance in the current bear market, defying the view that they were just a bull market phenomenon
- how active funds will retain their relevance as their advance continues apace and as the downsides of passives become more real.

Active funds will continue to exist alongside their passive peers: all the more so as market prices within indices are no longer moving in lockstep.

Key findings

a. Retaining the relevance of passives

Three features have served to retain the relevance of passives in turbulent markets since March 2020:

- passives' lower costs and performance predictability, as markets move towards a low return era caused by hikes in interest rates
- passives' role as effective liquidity management, hedging and rebalancing tools that meet cash flow needs while permitting opportunism
- passives' roles as international diversifiers to capitalise on the intercountry differences in growth dynamics and inflation outlook.

b. Retaining the relevance of actives

As passives have advanced in pension portfolios, their inherent and indirect downsides have become more obvious.

The inherent ones are:

- passives generate crowded trade effects such that, by investing in the same companies, they become even bigger regardless of the quality of their fundamentals
- Passives may reduce diversification benefits insofar as an index's constituent companies tend to move in lockstep in terms of price movements and trading volumes.

The indirect ones are:

- passives have enabled the 'overfinancialisation' of markets where trading has overridden investing
- passives are highly scalable and their relentless rise results in the growing concentration of voting powers among mega indexers
- passives are increasingly used in ESG investing where data providers use different definitions and measurement methods.

Given these limitations, active funds will continue to exist alongside their passive peers: all the more so as the cross-sectional dispersion of market prices within indices is no longer moving in lockstep. Indeed, dispersion within indices has increased markedly in 2022.

Passive funds are proving their worth in the bear market

Since 2001, passives have gained traction whilst the majority of active funds have underperformed against an appropriate market benchmark after costs.

The Global Financial Crisis of 2008 was a defining moment for passives. It forced key central banks to embark on a prolonged period of quantitative easing that flooded financial markets with excess liquidity, distorted asset prices by effectively putting a floor under them, and dampened volatility. Active managers struggled, as prices became unmoored from their fundamentals. In the resulting climate, passives began to advance from the periphery of pension portfolios to the core.

As we saw in the left-hand side of Figure 1.8 of Theme 8, over 54% of our respondents now have allocations in excess of 25%. Prior to the big market correction at the outset of Covid-19, critics held that the reality of the growth in passives was best judged not by inflows when markets were rising, but by their resilience when the inevitable corrections came. In the two corrections since March 2020, active funds have struggled to beat the markets. Indeed, since 2001, passives have gained traction whilst the majority of active funds have underperformed against an appropriate market benchmark after costs, according to the S&P Dow Jones Indices SPIVA scorecard. Success, when it did occur, could not persist over longer periods.

Even in the current jittery market environment, passives appear to have retained distinct attractions for our survey participants (Figure 4.0).

The first attraction concerns investment basics. 86% cite lower cost: a vital consideration as markets move to a low nominal return environment as a result of rising rates and reduced liquidity from central banks. 68% believe that the past distortion of asset prices from central banks may well return, if they are forced into a policy pivot as unemployment starts to rise. 48% like the predictability of the performance of passive funds, unlike the big variability in active returns.

Figure 4.0 **What do you see as the main benefits of passive funds in the current market environment?**

Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"The key benefits of passives are costs, choice, simplicity, diversification and transparency."

"Of the seven most heavily traded stocks today, five are ETFs. They can slice and dice the investment universe any way you like."

Passives are complementing actives in the traditional core–satellite model.

The second attraction concerns dynamic investing. 58% see passives as an effective liquidity management tool that readily meets cash flow needs while permitting periodic opportunism in volatile markets. 37% use passives as a risk management tool that allows the hedging of various exposures. 33% also see passives as a tactical adjustment tool in the rebalancing cycle. Finally, 35% like the speed of passive trading, which offers best execution.

The third attraction relates to diversification. 49% use passives for international diversification based on country-specific growth dynamics. The regional divergence caused by the Russian invasion has reduced the correlation between markets, as we saw in Section 2. 52% see passives as complementing actives in the traditional core–satellite model. Before passives took off in the 2000s, the core was dominated by active large cap equities, sovereign bonds and IG bonds. Since then, their headlong growth has catapulted passives into the core, covering those assets traded in liquid efficient markets. Satellites, in turn, are dominated by assets trading in illiquid inefficient markets amenable to alpha generation by active managers.

The implied separation is based on two beliefs: neither style holds in every asset class or market environment; and the growing separation is unlikely to undermine the price discovery role of capital markets (see Insights).

A recent innovation is enhancing the attractiveness of passives: customised direct indexing that also allows investors to engage directly with constituent companies. It purchases the underlying securities that make up an index rather than buying a pooled vehicle. This allows the generation of 'tax alpha' when tax losses and tax gains on individual securities are netted out. It also allows investors to express their preferences about the components in the index – commonly favoured by those wanting to invest in ESG, for example.

Paradoxically, customisation involves a high tracking error, while most pension investors prefer a lower one. They see low tracking error as only setting a baseline performance expectation in line with the chosen parent index. But via customisation, they also expect to see some demonstrable upside without sacrificing baseline outcomes.

Interview quotes

"The best execution of trades is vital when markets deliver fleeting buying opportunities."

"Like digital brands, passives have benefited from the 'network effect': a product becomes more worthwhile as more people use it."

Insights

The rise of passives has not hindered the price discovery role of markets – yet

The share of passive funds has doubled in our portfolio over the past ten years on account of their superior costs and performance.

We use ETFs on a day-to-day basis in response to changing macro themes, as new information emerges. This process also makes markets more efficient, not less.

But one can't ignore the widespread concern that passives could potentially undermine the price discovery role of financial markets, owing to overtrading and the 'index premium', when every dollar goes to the same place as the previous dollar. Firms are included in an index because of their size, not their intrinsic worth. Bulk buying puts mediocre firms in the same basket as outstanding ones.

Given this inherent feature, the issue is the level of market penetration at which passives create inefficiency. Our view is that rising penetration has not, as yet, hampered price discovery per se.

The reason is that it is not the share of passive funds, but flows that matter. No matter how high the share, so long as there are active traders in the market, price discovery will happen.

Besides, active managers are not seeking to establish or discover how much a stock is worth. They are merely seeking to ascertain if the stock is worth more or less than the price at which it is currently trading. Of course, at some point, that will no longer be the case, but we are not there yet.

A Swiss pension plan

Active and passive funds are now complementary

In investing, there are no all-weather funds and passives are no exception.

Early critics referred to passives as a 'do nothing investing revolution', as investors increasingly started passively buying an index of shares, regardless of their fundamentals. This became a default option for a growing swath of pension plans worldwide. Critics who questioned whether the best choice is to abdicate choice remain confounded by the relentless rise of passives – so far.

However, in investing, there are no all-weather funds and passives are no exception. They have thrived in the unique environment of zero-bound interest rates for the past 13 years. Now, rates are on the rise and the role of central banks in propping up markets is waning. Hence, our survey participants are becoming ever more mindful of the downsides of passive investing. They are also recognising that passive investing is not decision free. They have to choose between cap-weighted, equal-weighted or other novel schemes. Every exposure entails an active choice of indices and their periodic rebalancing.

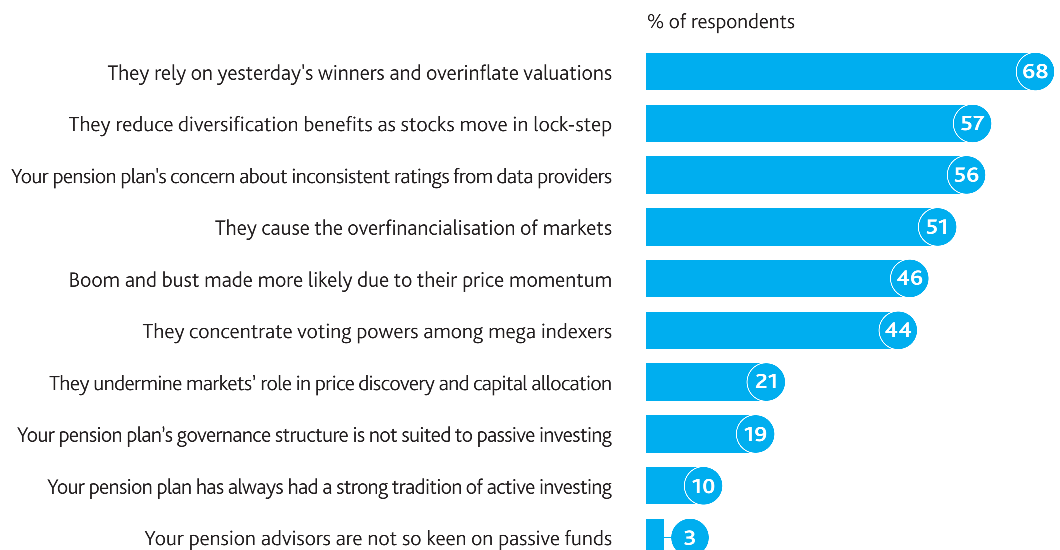
Definitional issues apart, some of the downsides are perceived as being inherent in the design of passive indices, others in the external environment in which they operate (Figure 4.1).

On the design side, passives are reported as relying on yesterday's winners that overinflate prices of the component companies (68%). By buying bulk, passives ignore the inherent merits or demerits of the component companies. This failing applies mostly to cap-weighted indices where size is the sole criterion of inclusion. Conventional value drivers like earnings growth, currency trends and macro economy are ignored. This ensures that the most valuable companies continue to remain so, irrespective of their future prospects.

Another design issue is that passives reduce diversification benefits as their components move in lockstep (57%). The correlations within indices – in terms of price movements and trading volume – has reportedly quadrupled since the 1990s. It has also tended to make booms and busts more likely due to the price momentum created by the inherent tendency to buy high and sell low (46%).

As yet, the idea that these design issues undermine markets' traditional role in price discovery is not widely shared (21%). As mentioned in the previous subsection, as long as there are active traders out there, price discovery will not be an issue.

Figure 4.1 What do you see as the main drawbacks of passive funds?



Source: Amundi Asset Management / CREATE-Research Survey 2022

Interview quotes

"Alpha is no longer possible to harvest in deep liquid markets. So, active managers are now focusing on inefficient markets."

"Passive investing is not all that passive. Investors have to make some active decisions on the choice of indices."

The market effect has been diminishing and stock-specific considerations are coming to the fore. So, conditions are now ripe for the return of actives.

Turning to the external environment, our survey identified three challenges.

To start with, the rise of passives in general and ETFs in particular has been causing the overfinancialisation of markets where trading has been overriding investing (51%). The result has been shorter time horizons, the higher velocity of trades, momentum trading, unrealistic expectations and the constant search for 'hot' products.

Furthermore, the growing concentration of voting powers among mega indexers is becoming a matter of concern (44%). On their current trajectory, the 'Big Three' are predicted to own as much as 33% of shareholder votes within the next decade, up from 5% in 1998 and 20% today, according to ETF Stream, 24 January 2022. Given its extreme scalability, the passive industry will ensure that the big will naturally get bigger, and their motives may differ from those of their underlying investors.

Finally, there are growing concerns that ESG ratings from external ESG data providers lack consistency (56%). As mentioned in Section 3, recent faltering ESG performance has laid bare the thorny issue of value judgement implicit in the ESG data from different providers, making it essential for asset managers to use their own internal rating systems. It has also raised a big question: are they 'information providers' or 'investment advisers'. This has attracted regulatory scrutiny in the US (see Insights).

Hence, the environment is turning positive for active managers. Additionally, as central bank support shifts down a gear, market prices are likely to reconnect with their fundamentals and favour active management. This is beginning to happen in the US market where the intensity of cross-sectional dispersion between stock prices has been rising. Thus, market prices are no longer moving in lockstep, thereby creating opportunities for active managers to outperform through stock picking. The market effect has been diminishing and stock-specific considerations are coming to the fore. So, conditions are now ripe for the return of actives. How far the pendulum will swing towards them remains to be seen.

Interview quotes

"By attracting ever more money, indices are becoming informationally inefficient."

"Passives now account for roughly 25% of global assets. But their share of daily trading is double that amount."

Insights

The role of ESG data providers is set to change

When it was first introduced in 1896, the Dow Jones Industrial Average was just a market proxy, not an investment idea. It was not meant to evaluate manager performance or indeed become an investment strategy, as it is today. So, index providers have long been treated as 'information providers'.

With the rise of ESG investing, however, this role is now under regulatory scrutiny. The SEC in the US announced in 2022 that it was exploring whether index providers should be reclassified as 'investment advisers' and regulated under the landmark Investment Company Act 1940. Thus far, the Act has aimed to regulate the index product but not its underlying index provider. Thus, index providers may well end up with fiduciary responsibility to their clients and end-investors adopting their indices. The robustness of ESG indices is set to improve.

The SEC's decision is largely influenced by the explosion of increasingly influential indices in the ESG and thematic space in general in the past five years. These indices are different from traditional formulaic-based cap-weighted indices in one important respect. They have much more discretion in their design and involve value judgements on the part of providers, who are enjoined to deliver predefined outcomes. Their decision to include a particular security in an index has a direct bearing on the user's decision to buy or sell that security. Hence, the index provider may well end up as a fiduciary.

It is a timely initiative. What the new index universe will look like is anyone's guess.

A Japanese pension plan

Other publications from CREATE-Research

The following reports and numerous articles and papers on the emerging trends in global investments are available free at www.create-research.co.uk

- *Impact investing 2.0: Advancing into public markets? (2022)*
- *Net zero: going beyond the hype (2022)*
- *DB plans in their end game in the post pandemic world (2021)*
- *Can capital markets save the planet? (2021)*
- *Rise of the social pillar of ESG (2021)*
- *Creating resilient pension portfolios post Covid-19 (2020)*
- *Sustainable investing: fast forwarding its evolution (2020)*
- *Passive investing: addressing climate change in investment portfolios (2020)*
- *Quantitative easing: the end of the road for pension investors? (2019)*
- *Future 2024: Future-proofing your asset allocation in the age of mega trends (2019)*
- *Passive investing: The rise of stewardship (2019)*
- *Rocky Road for the European Union: Pension Plans' Response (2018)*
- *Passive investing: Reshaping the global investment landscape (2018)*
- *Alternative investments 3.0 (2018)*
- *Back to long-term investing in the age of geopolitical risk (2017)*
- *Active investing: Shaping its future in a disruptive environment (2017)*
- *Digitisation of asset and wealth management (2017)*
- *Expecting the unexpected: How pension plans are adapting to a post-Brexit world (2016)*
- *Financial Literacy: Smoothing the path to improved retirement savings (2016)*
- *2008: A turning point in the history of investing (2016)*
- *How Pension Plans are Coping with Financial Repression (2015)*
- *Pragmatism Presides, Equities and Opportunism Rise (2015)*
- *Why the Internet Giants Will Not Conquer Asset Management (2015)*
- *Pension Dynamics: The Impact of the End of Compulsory Annuitisation in the UK (2015)*
- *Alpha behind Alpha: Rebooting the pension business models (2014)*
- *Not All Emerging Markets Are Created Equal (2014)*
- *Investing in a High Frequency Trading Environment (2014)*
- *Upping the Innovation Game in a Winner Takes All World (2013)*
- *A 360-Degree Approach to Preparing for Retirement (2013)*
- *Investing in a Debt-Fuelled World (2013)*
- *Market Volatility: Friend or Foe? (2012)*
- *Innovations in the Age of Volatility (2012)*
- *The Death of Common Sense: How Elegant Theories Contributed to the 2008 Market Collapse? (2012)*
- *Investment Innovations: Raising the Bar (2011)*
- *Exploiting Uncertainty in Investment Markets (2010)*

Prof. Amin Rajan

amin.rajan@create-research.co.uk
Telephone: +44 (0) 1892 784 846
Mobile/Cell: +44 (0) 7703 44 47 70

Other publications from Amundi Institute

All of the Amundi Institute publications are available for free at www.research-center.amundi.com

- *How do institutions segment their investment universe? (2022)*
- *Artificial Intelligence and ESG: How do they fit? (2022)*
- *Altruism or Self-Interest? ESG and Participation in Employee Share Plans (2022)*
- *Articulating asset allocation across different time horizons (2022)*
- *Advanced Investment Phazer: a guide to dynamic asset allocation (2022)*
- *Precautionary Liquidity and Retirement Saving (2022)*

About

Amundi Asset Management

Amundi, the leading European asset manager, ranking among the top 10 global players[1], offers its 100 million clients – retail, institutional and corporate – a complete range of savings and investment solutions in active and passive management, in traditional or real assets.

With its six international investment hubs[2], financial and extra-financial research capabilities and long-standing commitment to responsible investment, Amundi is a key player in the asset management landscape.

Amundi clients benefit from the expertise and advice of 5,400 employees in 35 countries. A subsidiary of the Crédit Agricole group and listed on the stock exchange, Amundi currently manages nearly €1.9 trillion of assets[3].

Amundi, a trusted partner, working every day in the interest of its clients and society

www.amundi.com

[1] Source: IPE "Top 500 Asset Managers" published in June 2022, based on assets under management as at 31/12/2021

[2] Boston, Dublin, London, Milan, Paris and Tokyo

[3] Amundi data as at 30/09/2022

Amundi Institute

In an increasingly complex and changing world, investors have expressed a critical need to better understand their environment and the evolution of investment practices in order to define their asset allocation and help construct their portfolios. Situated at the heart of the global investment process, the Amundi Institute's objective is to provide thought leadership, strengthen the advice, training and daily dialogue on these subjects across all assets for all its clients – distributors, institutions and corporates. The Amundi Institute brings together Amundi's research, market strategy, investment insights and asset allocation advisory activities. Its aim is to project the views and investment recommendations of Amundi.

www.research-center.amundi.com

CREATE-Research

CREATE-Research is an independent research boutique specialising in strategic change and the newly emerging business models in global asset management. It undertakes major research assignments from prominent financial institutions and global companies. It works closely with senior decision makers in reputable organisations across Europe and North America.

Its work is disseminated through high-profile reports and events that attract wide attention in the media. Further information can be found at www.create-research.co.uk.

Amundi ASSET MANAGEMENT | Institute

Chief editors

Monica DEFEND
Head of Amundi Institute

Vincent MORTIER
Group Chief Investment Officer

Author

Prof. Amin RAJAN
Project Leader, CREATE-Research

Editor

Claudia BERTINO
Head of Amundi Investment Insights & Publishing

IMPORTANT INFORMATION

This document is solely for informational purposes.

This document does not constitute an offer to sell, a solicitation of an offer to buy, or a recommendation of any security or any other product or service. Any securities, products, or services referenced may not be registered for sale with the relevant authority in your jurisdiction and may not be regulated or supervised by any governmental or similar authority in your jurisdiction.

Any information contained in this document may only be used for your internal use, may not be reproduced or redisseminated in any form and may not be used as a basis for or a component of any financial instruments or products or indices.

Furthermore, nothing in this document is intended to provide tax, legal, or investment advice.

Unless otherwise stated, all information contained in this document is from Amundi Asset Management S.A.S. and is as of 7 November 2022. Diversification does not guarantee a profit or protect against a loss. This document is provided on an "as is" basis and the user of this information assumes the entire risk of any use made of this information. Historical data and analysis should not be taken as an indication or guarantee of any future performance analysis, forecast or prediction. The views expressed regarding market and economic trends are those of the author and not necessarily Amundi Asset Management S.A.S. and are subject to change at any time based on market and other conditions, and there can be no assurance that countries, markets or sectors will perform as expected. These views should not be relied upon as investment advice, a security recommendation, or as an indication of trading for any Amundi product. Investment involves risks, including market, political, liquidity and currency risks.

Furthermore, in no event shall Amundi have any liability for any direct, indirect, special, incidental, punitive, consequential (including, without limitation, lost profits) or any other damages due to its use.

Date of first use: 1 December 2022 Document issued by Amundi Asset Management, "société par actions simplifiée" – SAS – Portfolio manager regulated by the AMF under number GP04000036 – Head office: 91-93 boulevard Pasteur – 75015 Paris – France – 437 574 452 RCS Paris – www.amundi.com

Photos: © GettyImages. Cathy Scola.

Find out more about
Amundi Institute Publications

research-center.amundi.com