



Marketing material
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Global version

UBS Annual Reserve Manager Survey 2023

29th Reserve Management Seminar

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June 2023

29th Annual RMS Survey

Highlights

The UBS RMS Survey is among the most authoritative depictions of official reserve management activities available. This survey was conducted during April – June 2023 and collected responses from close to 40 central banks from all regions globally.

- **The investment environment ahead:** The majority of participants (64%) see a **soft landing scenario** with a return to moderate growth and moderate inflation of 2-3% as the most likely economic regime over the next 5 years. However, 72% of survey participants think that the period of the “Great Moderation” is over and that we might experience more volatile business cycles going forward. 69% believe that we have entered a period of higher inflation that will persist for a longer period of time. 61% of participants expect US headline CPI to end up in a 3-4% range in one year time, and no participant expects CPI to end up higher than 5% or below zero. 47% think that the US-China confrontation has slowed down the internationalization trend of the RMB, but only 22% believe that sanctions on Chinese FX reserves are a risk in case of an escalation of the conflict.
- **Macro and investment concerns:** **Further escalation in geopolitical conflicts** was seen as the main concern by survey participants with 75% (2022: 80%), followed by **fear of inflation and/or an uncontrolled rise in long-term yields** with 72% (#1 risk in 2022 with 87%). When it comes to risks that are specifically related to the investment of FX reserves, the top concern which 74% of respondents cited was **asset price volatility across markets**. This concern therefore continued its upward trajectory, up from 63% in 2022 and 32% in 2021. Another risk that is on an upward trend is **falling liquidity in fixed income markets**, which reached #3 this year with 51%, up from 27% in the previous year.
- **Strategic Asset Allocation:** **FX reserve diversification** is continuing, but at a slower pace, with **Passive Equity** still showing solid results (but not the top results of the previous year) when it came to the question which asset class central banks have increased in their portfolio on a net basis over the past year. When it comes to the question of which instruments reserve managers would like to add in the coming year, there is strong interest in more conservative fixed income instruments including government bonds, supnationals and in particular Green Bonds, while there is a noticeable decline in the attractiveness of **spread products**.
- **Currencies:** The **US dollar** and the **RMB** were the most frequently mentioned currencies when it came to the question which currencies were added on a net basis in the reserves of participating sovereign institutions during the past year. Central banks are planning to add further to their Yen and **Renminbi** positions as well as to commodity currencies. The sentiment towards the euro improved significantly, with survey participants having a net positive outlook for additional euro allocations for the first time in years.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Survey special: The investment environment ahead

Key results of the 29th Annual Reserve Management Seminar Survey

- We asked participating central banks which **economic regime is most likely to materialize over the next 5 years**. The majority of participants (64%) see a **soft landing scenario** with a return to moderate growth and moderate inflation of 2-3% as the most likely economic regime. 19% fear that we might end up in a **stagflationary** world with low growth and high inflation of 6% or more; 11% think that we might experience a **recession** followed by a longer period of stagnation, with low growth and low inflation for years. Finally, only 9% see an **inflationary growth outcome**, with high growth and high inflation, as the path forward.
- While the majority sees a benign outcome for the global economy, 72% of survey participants think that the period of the “**Great Moderation**” is over and that we might experience more volatile business cycles going forward. 69% believe that we have entered a period of higher inflation that will persist for a longer period of time.
- 89% of survey participants think that we are moving towards a **multipolar world**, with US-, Europe- and China-led blocks. Should the US-China confrontation escalate, the vast majority of participants (89%) expect **more fragmentation and polarization**. Participants were much less certain about other consequences, including having to make a choice between investing in the US and China (36%) or the risk of China being isolated from the US-backed global financial system (36%). Only 22% believe that sanctions on Chinese FX reserves are a risk in case of an escalation of the conflict.
- What does that mean for the asset allocation of reserve managers? When it comes to asset classes that survey participants expect to increase in attractiveness in a post-Great Moderation environment, **very liquid and safe assets like short-term government bonds** are the most popular option for reserve managers (76%), followed by **longer-duration global government bonds** as deflation hedge (41%) and inflation-linked bonds as inflation hedge (41%). Only 15% would like to own more **energy-related assets** and securities as macro hedge. Since central banks usually do not invest in **real estate**, it is interesting to see that 9% of participants indicate that they plan owning/increasing this asset class going forward.
- Still, a relatively high number of participants (71%) indicated that they **have not yet taken any actions** to prepare for the consequences that an escalation of the US-China confrontation could have on their reserve management activities.
- 47% think that the US-China confrontation has slowed down the **internationalization trend of the RMB**, while 29% believe that it has accelerated it.
- 94% believe that the **diversification trend of FX reserves** will continue in the future. Interestingly, the Euro is regarded as the currency that is most likely to benefit from ongoing geopolitical shifts over the next 5 years.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Macro and economic issues

Key results of the 29th Annual Reserve Management Seminar Survey

- **Further escalation in geopolitical conflicts** was seen as the main concern by survey participants with 75% (2022: 80%), followed by **fear of persistent inflation and/or an uncontrolled rise in long-term yields** with 72% (#1 risk in 2022 with 87%). Risks coming from the topic of **commodity price developments and energy security**, which were at #3 in 2022 with 50%, dropped noticeably in significance and reached only 8%.
- With the risk of a global economic recession at #3 with 56%, the **top 3 key risks are less concentrated** than in previous years, with no single item reaching 80%.
- When it comes to risks that are **specifically related to the investment of FX reserves**, the top concern which 74% of respondents cited was **asset price volatility across markets**. This concern therefore continued its upward trajectory, up from 63% in 2022 and 32% in 2021. Another risk that is on an upward trend is **falling liquidity in fixed income markets**, which reached #3 this year with 51%, up from 27% in the previous year.
- The top investment-related risk in the previous year, **rising US interest rates and inflation** (2022: 87%) is now the second-most mentioned concern with 63% of participants.
- 61% of participants expect **US headline CPI** to end up in a 3-4% range in one year time. No participant expects CPI to end up higher than 5% or below zero. When it comes to the range of the FED policy rate in one year time, participants are split between 3-4% (44%) and 4-5% (50%).
- We ask survey participants each year how far the US Federal Reserve might go to support markets and the economy in their opinion.
 - 53% of respondents think that the US Fed could turn to **yield curve control** if needed (2022: 62%, 2021: 58%).
 - 39% of respondents think that the US Fed could buy **equities** if needed (2022: 57%, 2021: 42%).
 - 22% of respondents think that the US Fed could turn to **negative interest rates** if needed (2022: 7%, 2021: 16%).



Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Strategic Asset Allocation

Key results of the 29th Annual Reserve Management Seminar Survey

- Overall, 52% of participants have altered their Strategic Asset Allocation over the last 12 months (2022: 53%).
- **FX reserve diversification** is continuing, but at a slower pace, with Passive Equity still showing solid results (but not the top results of the previous year) when it comes to the question which asset class central banks have increased in their portfolio on a net basis over the past year, and which asset class they are planning to increase in the coming year.
- The global trend towards **green investing** is accelerating, with Green Bonds among the most frequently mentioned asset classes which reserve managers are planning to increase in the coming year. With gold showing equally strong results for the coming year, the trend towards inflation hedges is ongoing, with TIPS having shown strong results in the previous year.
- Overall, when it comes to the question which instruments reserve managers would like to **add in the coming year**, there is strong interest in more conservative fixed income instruments including government bonds, supranationals and in particular Green Bonds, while there is a noticeable decline in the attractiveness of spread products.
- For the first time since 2018, the **eligibility rate of equities** declined substantially in our survey group and now stands at 30%, down from 50% in the previous year. This is also due to a higher number of responses from smaller EMEA countries that do not invest in equities yet.
- 22% of participants also indicated that they now consider **investing in illiquid asset classes** (infrastructure and real estate) to enhance returns, a small decrease from 24% in 2022 (2021: 21%, 2020: 3%).
- 23% of respondents indicated that they recently moved or considered **moving passively-managed assets back to their active management strategies** (2022: 11%, 2021: 13%).



Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Management of FX reserves & Risk Management

Key results of the 29th Annual Reserve Management Seminar Survey

- 38% of survey participants answered that their portfolio is now more **diversified** than one year ago (10% less diversified, 51% broadly unchanged).
- Will the **stock-bond correlation** remain predominantly negative or positive over the next 5 years? 78% of respondents rather expect volatile swings between episodes of positive and negative correlation, while only 17% expect a regime with a predominantly negative correlation.
- What is the **maximum drawdown** central banks are willing to tolerate in their investment policy? 18% tolerate no negative returns, and 27% losses of no more than 1%. Only 23% tolerate losses of more than 5%.
- Four participants increased **maximum drawdown levels** to enhance returns in the past year, in once case by an additional minus 3% and in once case by an additional 3-5%.
- The number of participants who reported that their institution **segments or tranches** their reserves stood at 79% compared with 77% last year.
- The percentage of participating institutions that recently considered **setting up a separate entity to manage assets** stood at 9% compared with 10% last year.
- 27% of respondents indicated that their institution recently changed or considered **changing its benchmark(s) to reflect ESG**, slightly down from 30% in the previous year.
- 84% of participants use **derivatives** in their reserve portfolio. The main objectives for using them are hedging (89%), trading (48%), but less so yield enhancement (30%) or leverage (11%).



Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Currency Management

Key results of the 29th Annual Reserve Management Seminar Survey

- The **average share of USD holdings among all the participants was 56%**, down from 63% in the previous year. However, this year's sample included fewer LATAM central banks which traditionally run a very high share of USD holdings, and instead there were more participants from the Eurozone with less US dollar holdings.
- **The US dollar** and the **RMB** were the most frequently mentioned currencies when it came to the question which currencies were added on a net basis in the reserves of participating sovereign institutions during the past year. **The Canadian dollar** was the second-most frequently mentioned currency on a net basis. Similar to 2022, the **Euro** was once again the most frequently mentioned currency that participants had reduced over the course of the previous year.
- In contrast, central banks are planning to add further to their **Yen** and **Renminbi** positions as well as to commodity currencies like **the Canadian dollar** and the **AUD** and **NZD**. The sentiment towards the **euro**, which in 2022 was the most frequently mentioned currency when it comes to allocations that central banks are planning to reduce, improved significantly, with survey participants having a net positive outlook for additional euro allocations for the first time in years.
- Overall, 72% of survey respondents answered that they are **invested, or consider investing, in the Renminbi**, a decrease from 85% in the previous year (and 81% in 2021).
- The average long-term (10-year) target allocation for the RMB as a percentage of total reserves decreased to 5.2% from 5.8% in the previous year. Three participants indicated that they introduced the RMB as a new currency in their reserves, while one participant dropped it.
- 48% of participants think that central bank currency diversification will evolve towards a less USD-centric system over the next 5 years with a multipolar setup that will be concentrated around the USD, EUR and RMB.

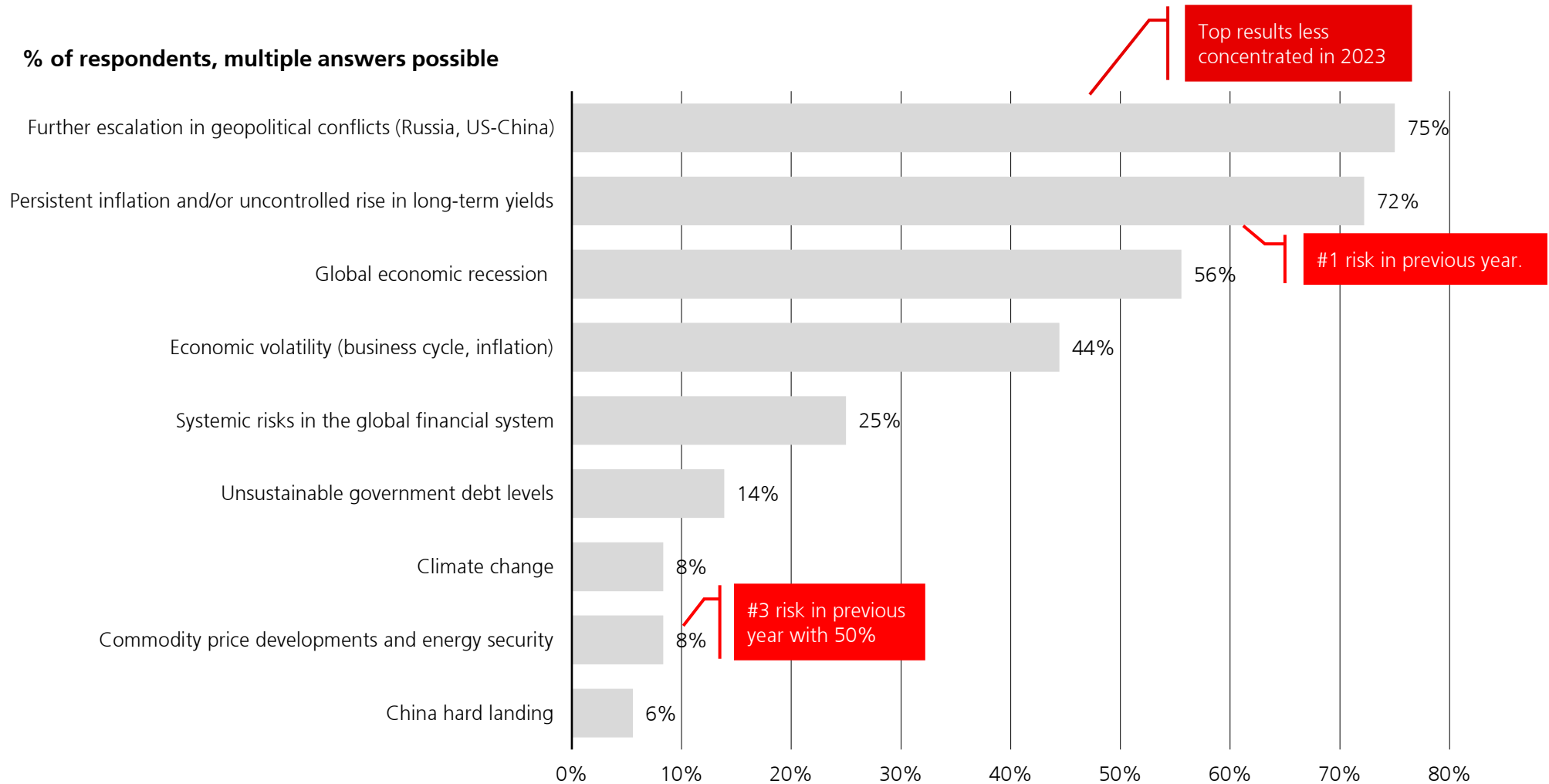


Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Main concerns impacting the global economy

What are the main risks that the global economy is currently facing?

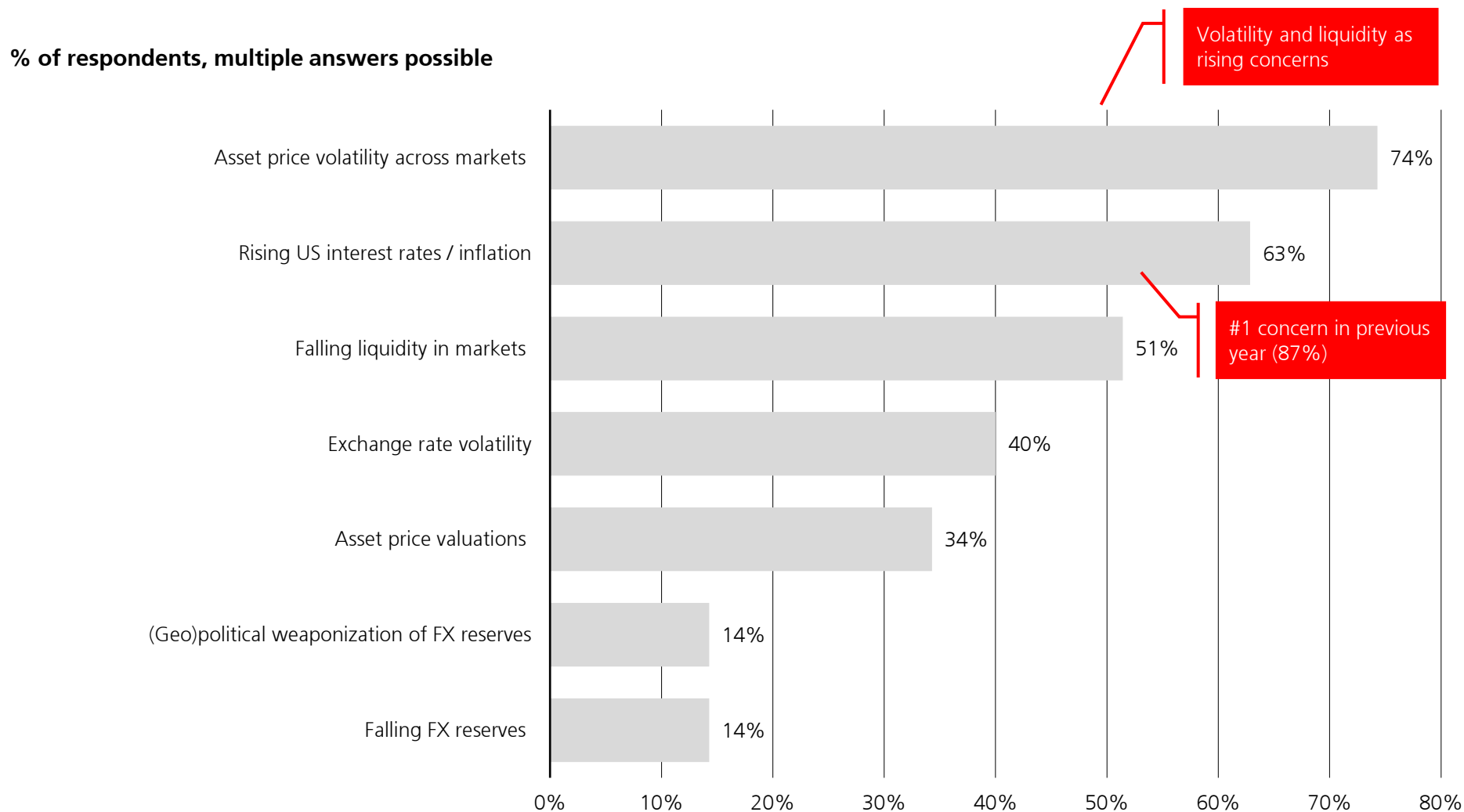
% of respondents, multiple answers possible



Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Main concerns impacting the levels of FX reserves

What are your main concerns when it comes to the investment of FX reserves?

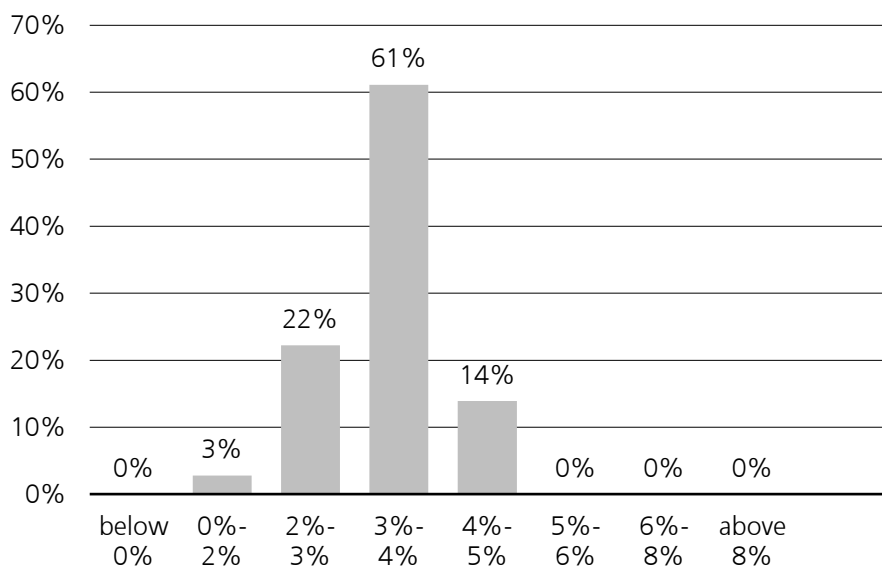


Source: UBS Annual Reserve Manager Survey, results as of June 2023.

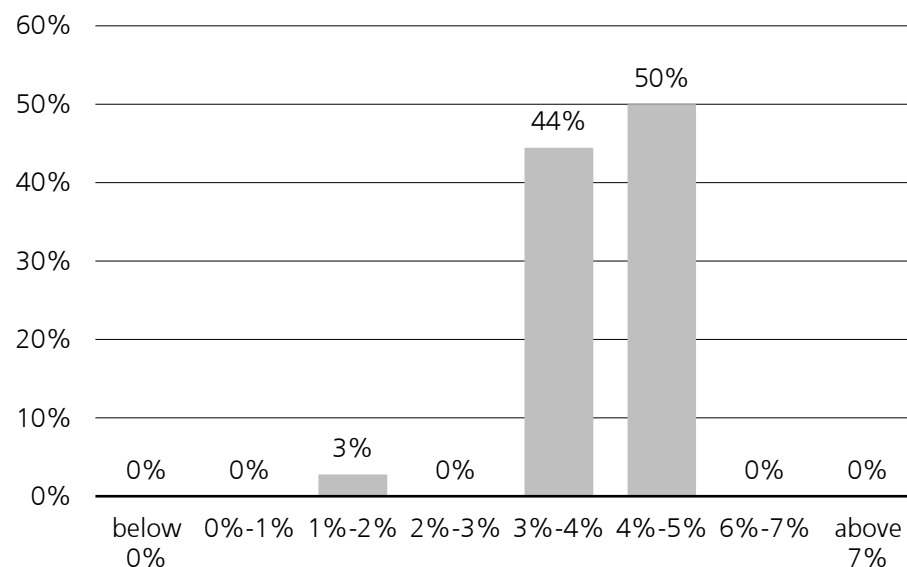
Inflation, growth and the response of central banks

42% of survey participants believe that the will US have experienced at least a technical recession (2 quarters of negative growth) at the time of the next RMS meeting in June 2024.

In which range do you see the US headline CPI in one year at the June 2024 RMS meeting?



In which range do you see the FED policy rate in one year at the June 2024 RMS meeting?



Long-term tracking of sentiment towards extraordinary measures

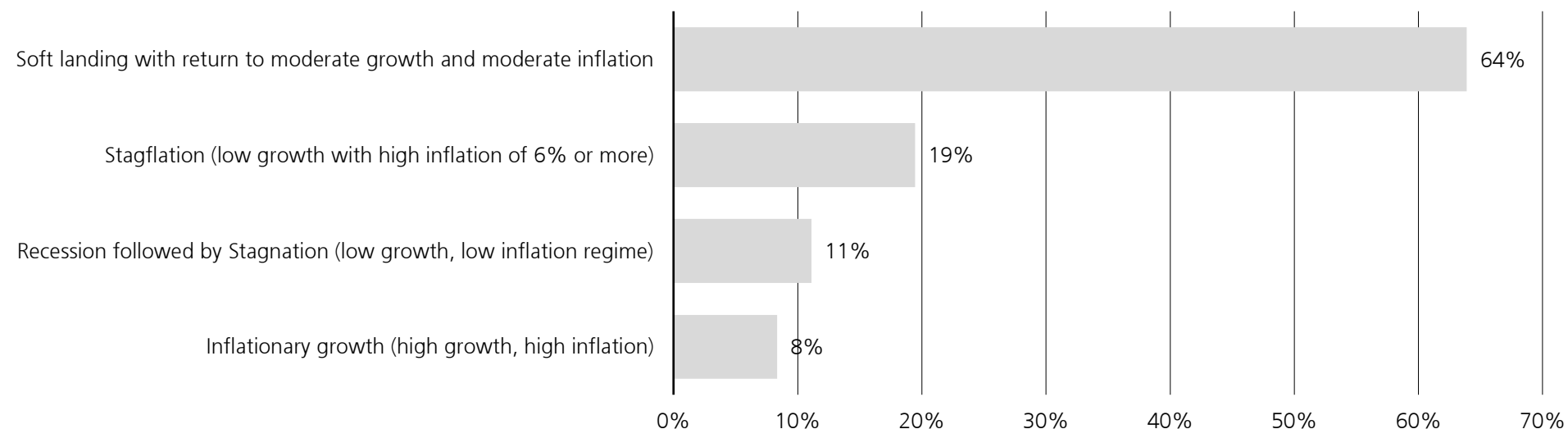
- 53% of survey participants think that the US Fed could turn to yield curve control if needed (2022:62%, 2021: 58%).
- 39% of survey participants think that the US Fed could buy equities if needed (2022:57%, 2021: 42%).
- 22% of survey participants think that the US Fed could adopt negative interest rates if needed (2022:7%, 2021: 16%).

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

The investment environment ahead

The vast majority of participants see a soft landing scenario with a return to moderate growth and moderate inflation as the most likely economic regime to materialize during the next 5 years.

Which economic regime is most likely to materialize over the next 5 years?



Assessment of the current economic environment

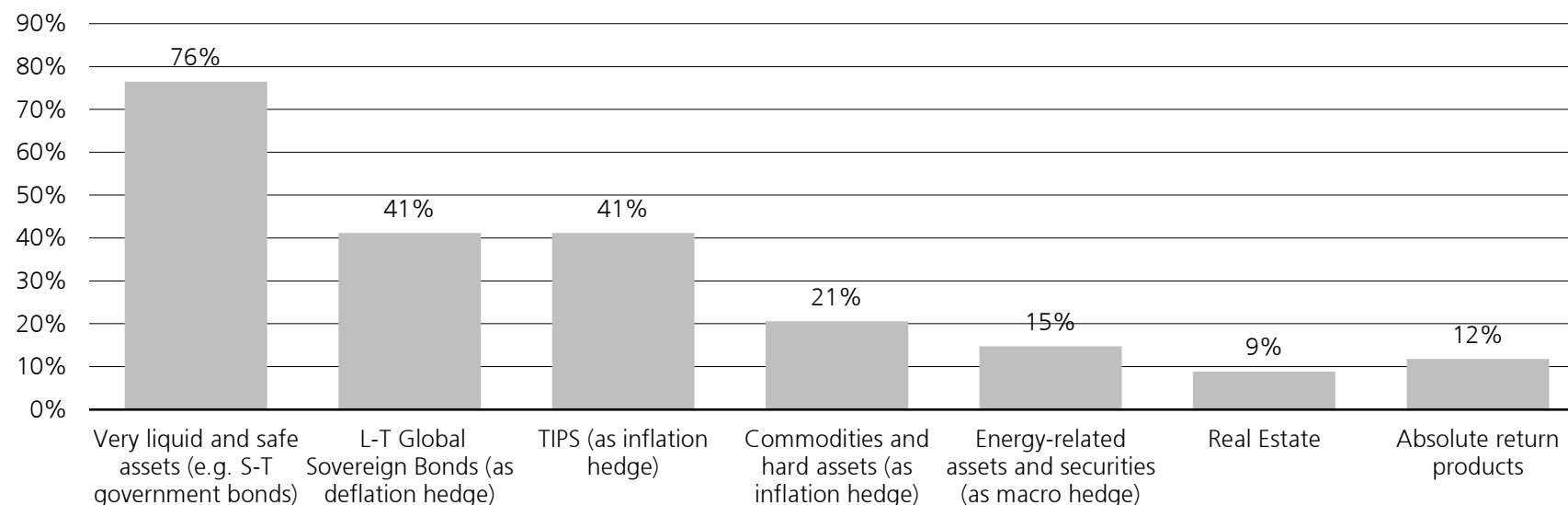
- 72% of survey participants think that the period of the “Great Moderation” is over and that we might experience more volatile business cycles going forward. 69% believe that we have entered a period of higher inflation that will persist for a longer period of time.
- 78% think that central banks will **not** return to fighting deflation with unorthodox tools like large-scale QE or negative interest rates at some point over the next 5 years.
- Will the **stock-bond correlation** remain predominantly negative or positive over the next 5 years? 78% of respondents rather expect volatile swings between episodes of positive and negative correlation, while only 13% expect a regime with a predominantly negative correlation.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Asset classes after the end of the “Great Moderation”

In the new market regime emerging from the end of the Great Moderation, which asset classes would you like to own more?

% of respondents



Preferred asset classes for a changing economic environment

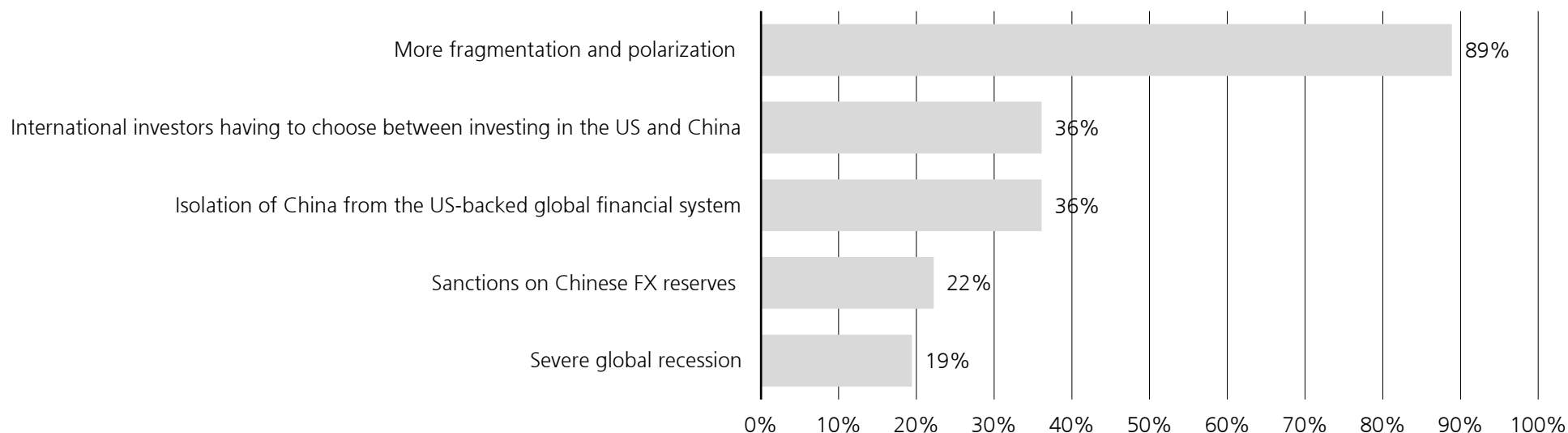
- When it comes to asset classes that survey participants expect to increase in attractiveness in a post-Great Moderation environment, very liquid and safe assets like short-term government bonds are the most popular option for reserve managers (76%), followed by longer-duration global government bonds as deflation hedge (41%) and inflation-linked bonds as inflation hedge (41%). Only 15% would like to own more energy-related assets and securities as macro hedge.
- Since central banks usually do not invest in real estate, it is interesting to see that 9% of participants indicate that they plan owning/increasing this asset class going forward.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

The political environment ahead

89% of survey participants think that we are moving towards a multipolar world

Should the US-China confrontation escalate, what would be the most likely consequences?



Assessment of the current environment

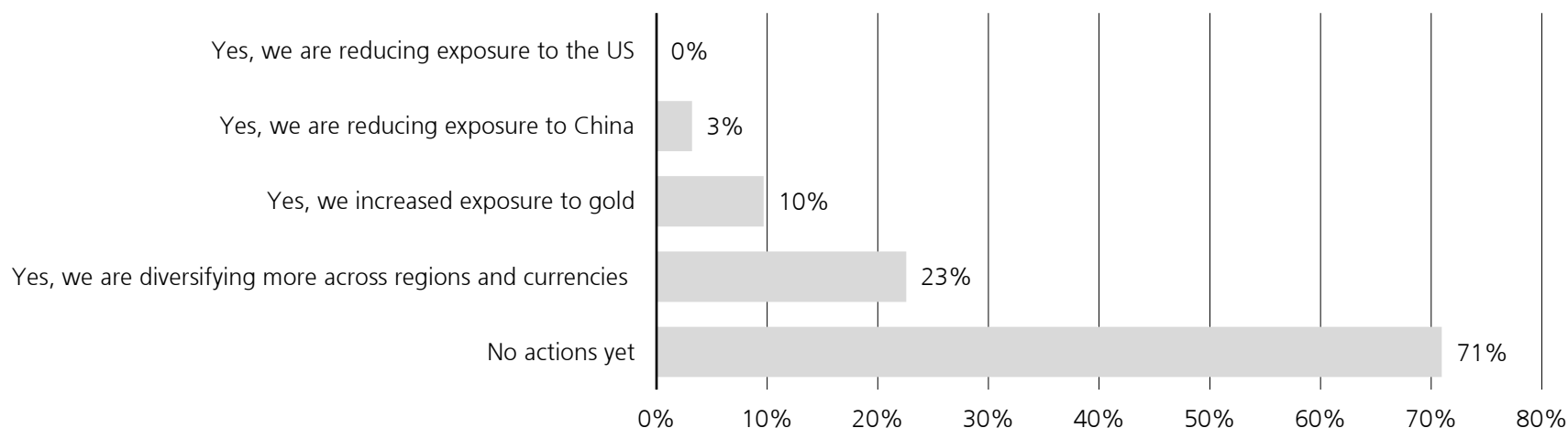
- 89% of survey participants think that we are moving towards a multipolar world, with US-, Europe- and China-led blocks.
- Should the US-China confrontation escalate, the vast majority of participants (89%) expect more fragmentation and polarization. Participants were much less certain about other consequences, including having to make a choice between investing in the US and China (36%) or the risk of China being isolated from the US-backed global financial system (36%). Only 22% believe that sanctions on Chinese FX reserves are a risk in case of an escalation of the conflict.
- 49% think that reserve management will be affected to some extent by global fragmentation and sanction risk going forward – they believe that FX reserves will remain important, but they might be managed differently. 40% see no or only a very limited impact, and 11% see a significant impact with the role of FX reserves impaired given the sanction risk.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

How do investors react to this uncertain environment?

The majority of participants (71%) have not yet taken any actions to prepare for a US-China escalation.

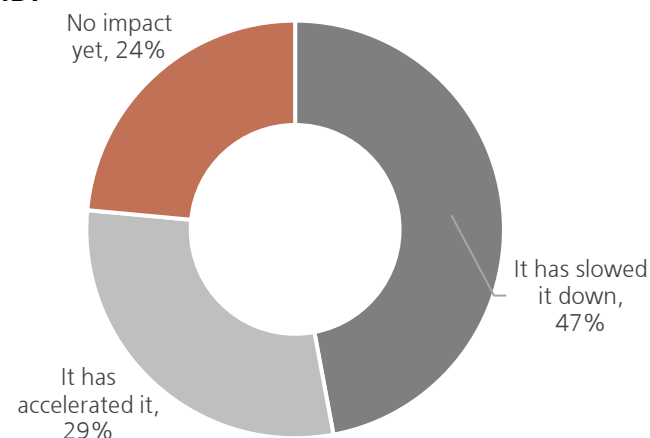
Is your institution preparing for such consequences coming out of an escalation of the US-China confrontation?



Assessment of the current environment

- A relatively high number of participants (71%) indicated that they have not yet taken any actions to prepare for the consequences that an escalation of the US-China confrontation could have on their reserve management activities.
- 47% think that the US-China confrontation has slowed down the internationalization trend of the RMB, while 29% believe that it has accelerated it.

How has the US-China confrontation affected the internationalization trend of the RMB?

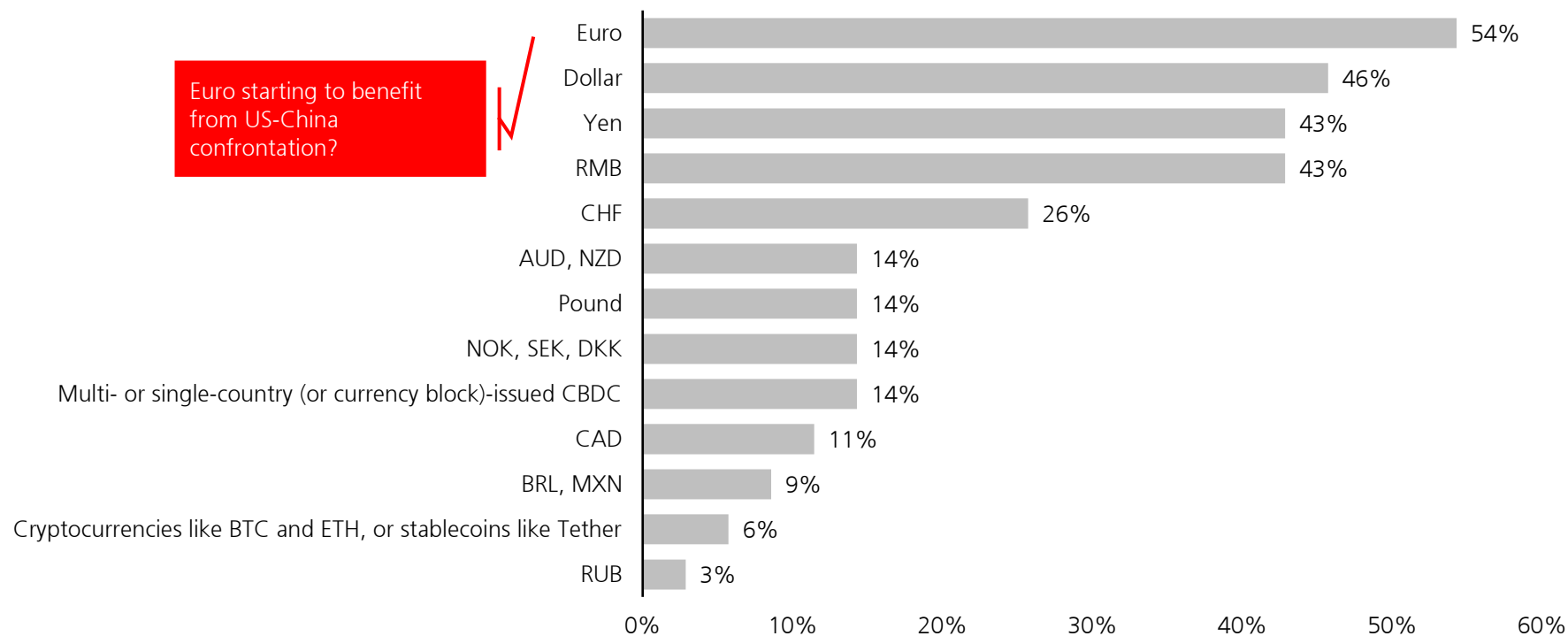


Source: UBS Annual Reserve Manager Survey, results as of June 2023.

How do investors react – currency allocations

The Euro is expected to be the main beneficiary from geopolitical shifts over the next 5 years.

Which reserve currencies or assets are most likely to benefit from macroeconomic and geopolitical shifts over the next 5 years?



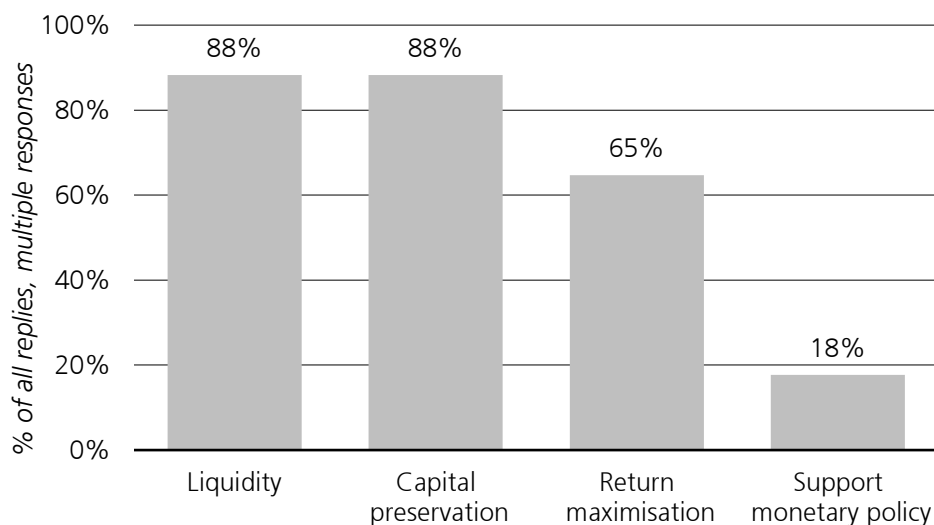
Diversification of FX reserves

- 94% believe that the diversification trend of FX reserves will continue in the future.
- Interestingly, the Euro is regarded as the currency that is most likely to benefit from ongoing geopolitical shifts over the next 5 years.

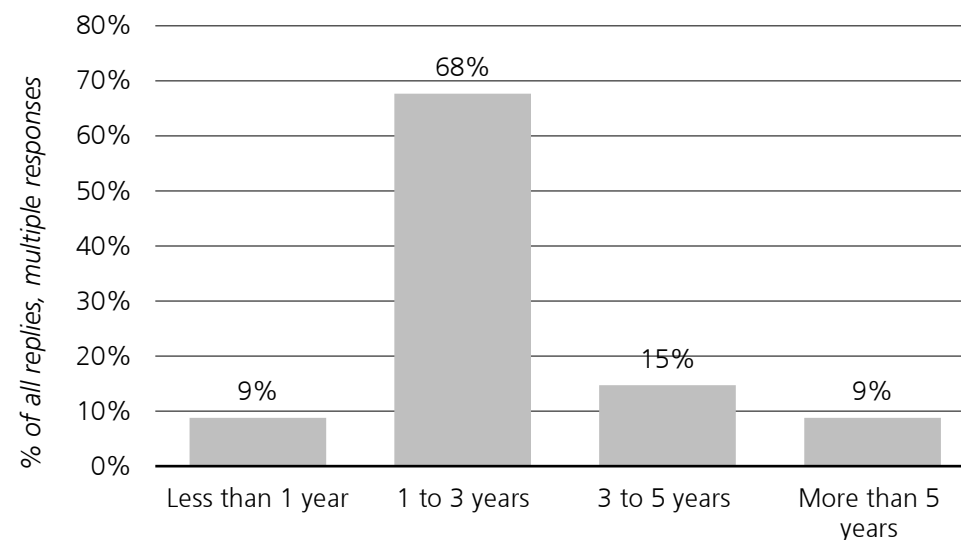
Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Key asset allocation objectives

What are your primary investment objectives?



What is your investment horizon?



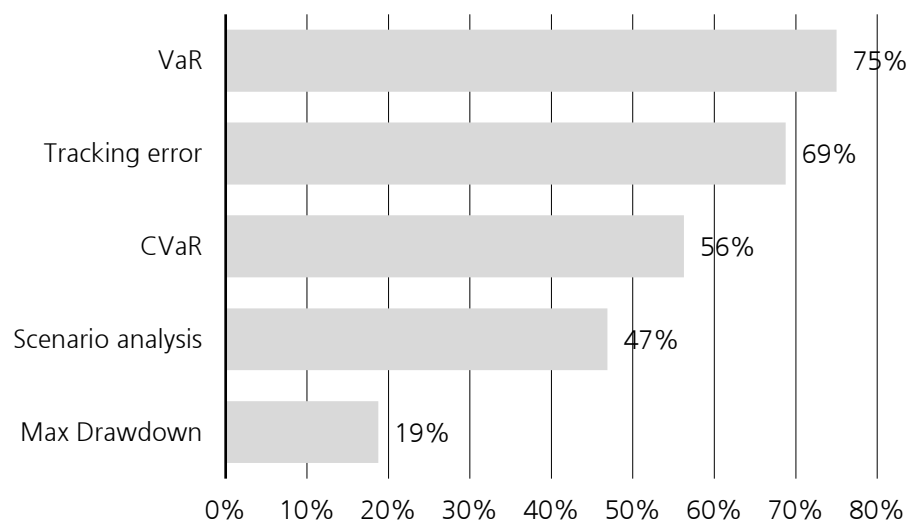
- Overall, 52% of participants **altered their Strategic Asset Allocation** over the last 12 months (previous year: 53%). 25% of participants indicated that they made significant adjustments to the currency allocation of their reserves in the previous year.
- 22% of respondents indicated that they are considering **investing in illiquid asset classes** (for example infrastructure or real estate) to enhance returns, compared with 24% in the previous year.
- 23% responded that they recently moved or considered moving passively-managed assets to **active management strategies** compared with 11% in the previous year.
- 30% of participating institutions are considering adding sustainability as another reserve management objective, compared with 37% in the previous year, and 27% recently changed or consider changing their benchmark(s) to reflect sustainability.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

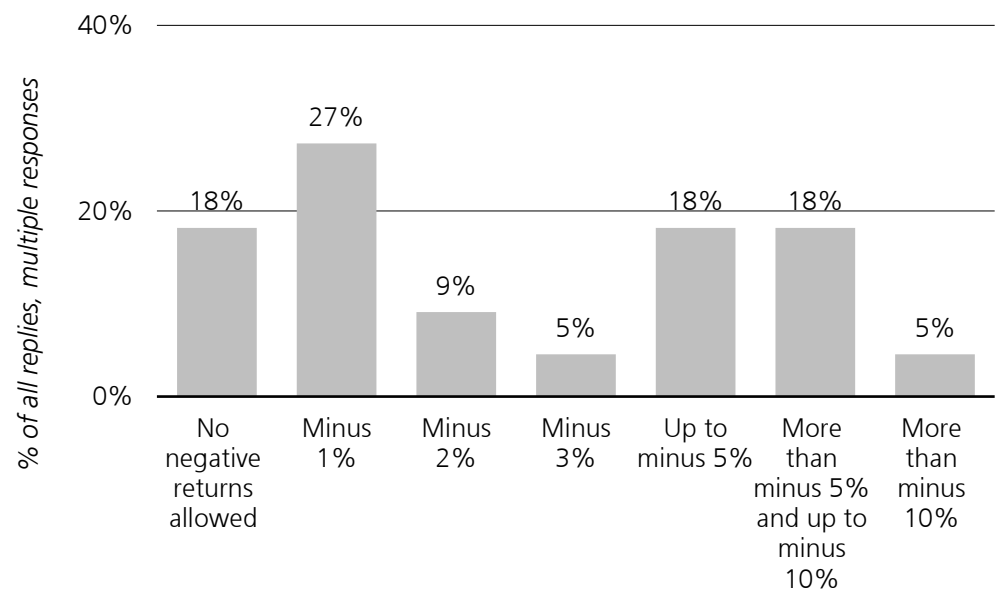
Diversification & Risk management

38% of participants answered that their portfolio is now more diversified than one year ago (9% less diversified, 53% broadly unchanged).

How do you measure risk in your portfolios?



What is the maximum drawdown you are willing to tolerate in your investment policy?



Risk and performance measurement

- Four participants **increased maximum drawdown levels** to enhance returns in the past year, in once case by an additional minus 3% and in once case by an additional 3-5%.
- 18% of survey respondents indicated that **no negative returns are tolerated** in their investment policy. 18% indicated that they tolerate a maximum drawdown of up to 5% and an additional 23% accept drawdowns of more than 5%.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Trends in approved asset classes

Which of the following instruments are approved at your institution?

In % of total respondents, multiple responses possible.

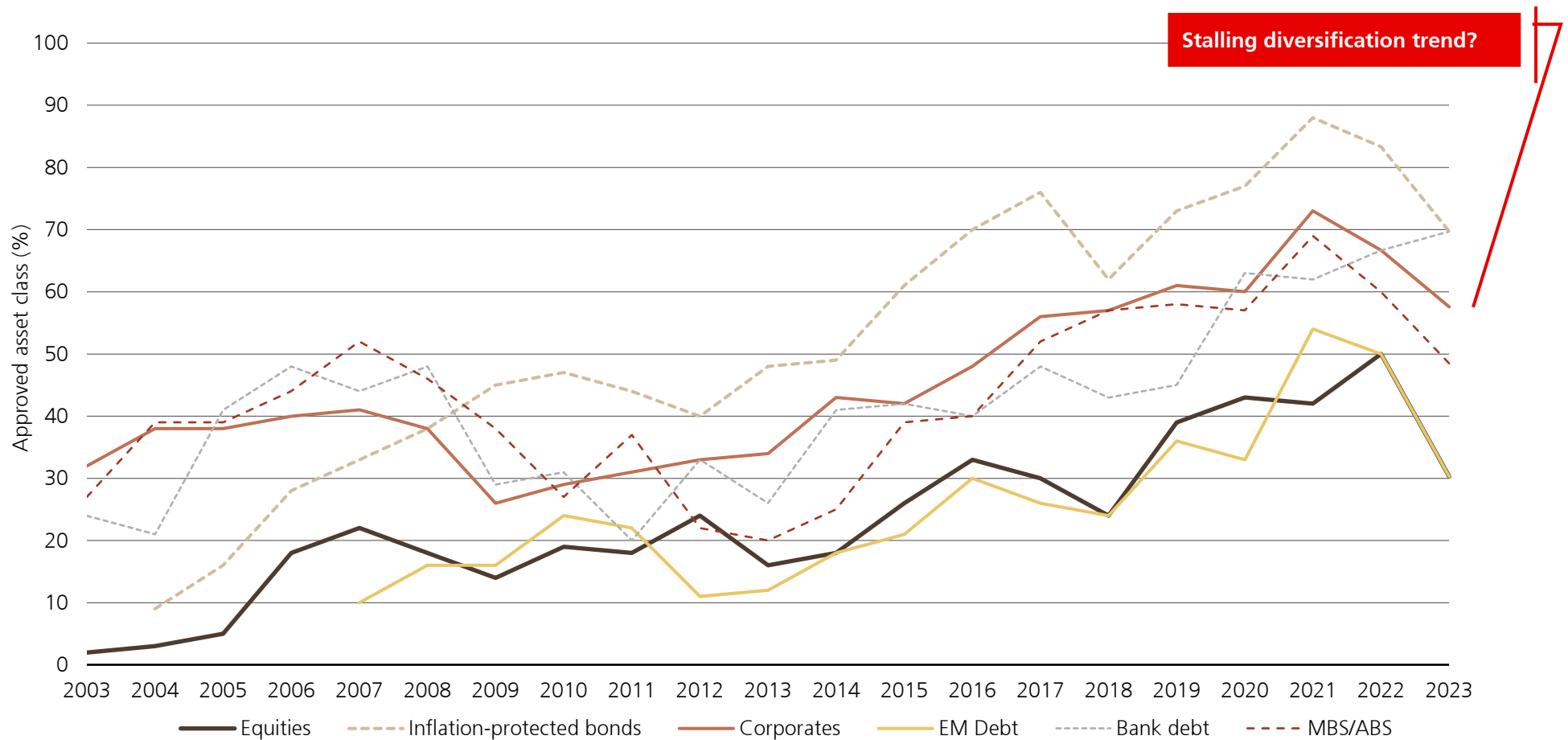
Asset Class	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Supranationals	100	100	100	100	94	95	93	90	89	94	82	87	76	70	68	70	72	70	74	63	62	60	62	54	63	60
Sovereign Eurobonds	91	87	100	100	85	86	89	93	92	90	78	73	64	68	65	66	66	64	60	60	58	58	61	60	66	66
US agencies	91	93	100	93	85	76	74	83	74	49	54	69	55	65	71	84	86	84	82	76	78	75	71	62	68	54
TIPS	70	83	88	77	73	62	76	70	61	49	48	40	44	47	45	38	33	28	16	9	na	na	na	na	na	na
Covered bonds	61	60	65	50	45	43	48	53	34	43	40	45	30	38	40	53	58	50	48	44	38	35	37	34	28	12
Bank debt	70	67	62	63	45	43	48	40	42	41	26	33	20	31	29	48	44	48	41	21	24	21	26	20	16	4
Corporates	58	67	73	60	61	57	56	48	42	43	34	33	31	29	26	38	41	40	38	38	32	28	22	20	15	10
MBS / ABS	48	60	69	57	58	57	52	40	39	25	20	22	37	27	38	46	52	44	39	39	27	22	17	19	12	2
Emerging Market debt	30	50	54	33	36	24	26	30	21	18	12	11	22	24	16	16	10	na	na	na	na	na	na	na	na	na
Equities	30	50	42	43	39	24	30	33	26	18	16	24	18	19	14	18	22	18	5	3	2	na	na	na	na	na
Private Equity	0	10	15	7	18	5	19	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Hedge Funds	0	7	12	0	15	0	11	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Trends in approved asset classes

Which of the following instruments are approved at your institution?

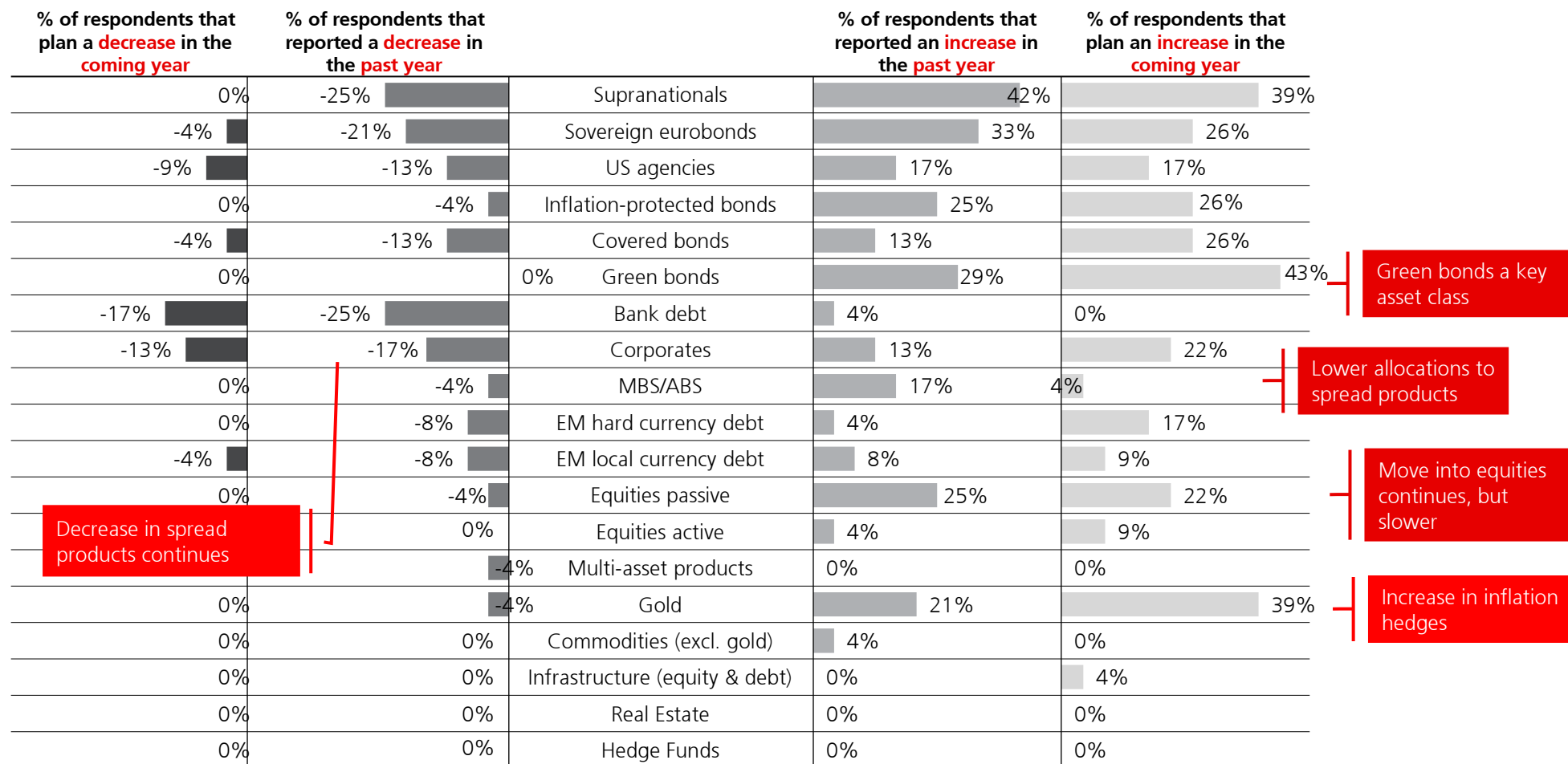
In % of total respondents, multiple responses possible.



Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Key changes in asset allocation

Which of the following instruments have you increased/decreased in your portfolio in the past year?
Which of the following instruments would you want to own more or less of over the next year?

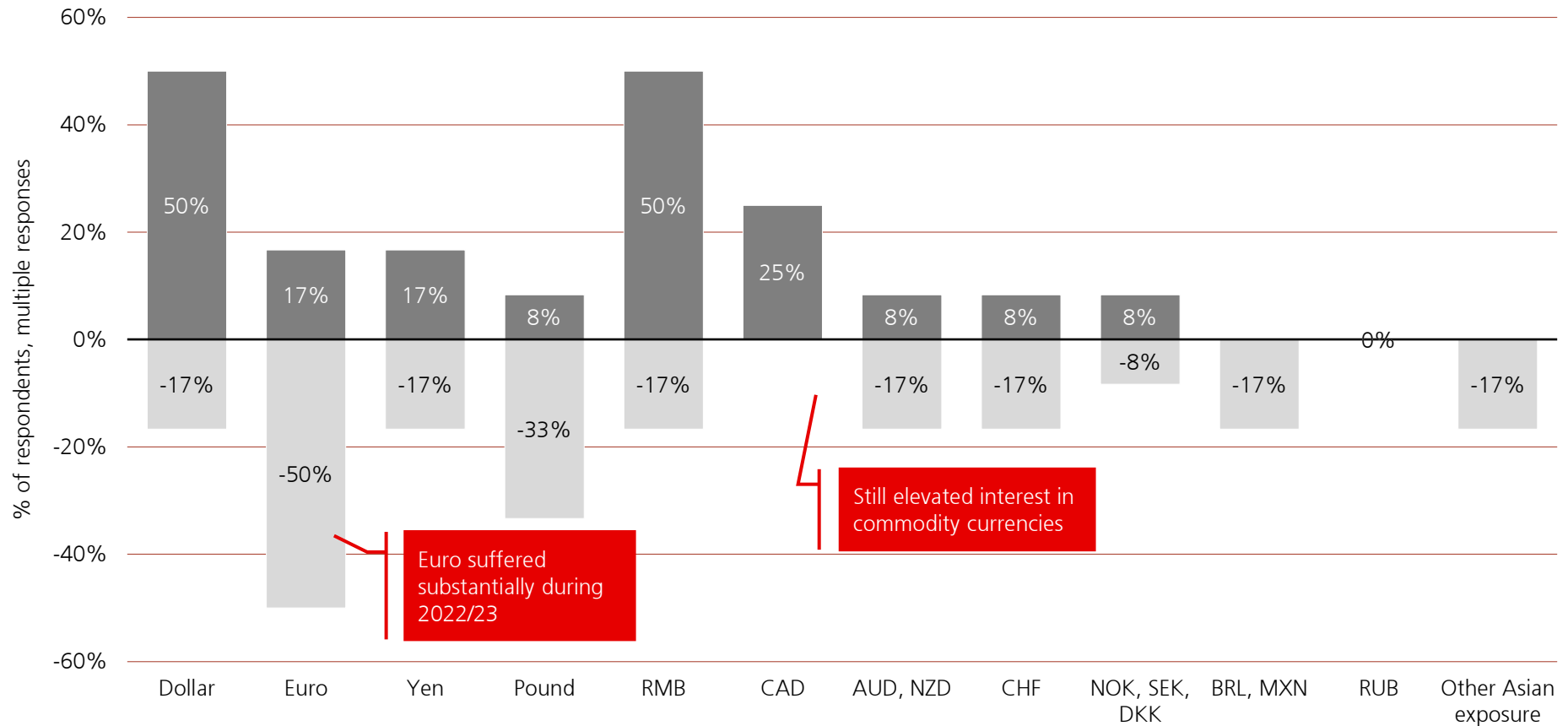


Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Currency focus: Changes in 2021/22

Indicates the % of respondents that altered their allocations to each currency up or down.

How have survey participants altered their currency allocation during the past year?



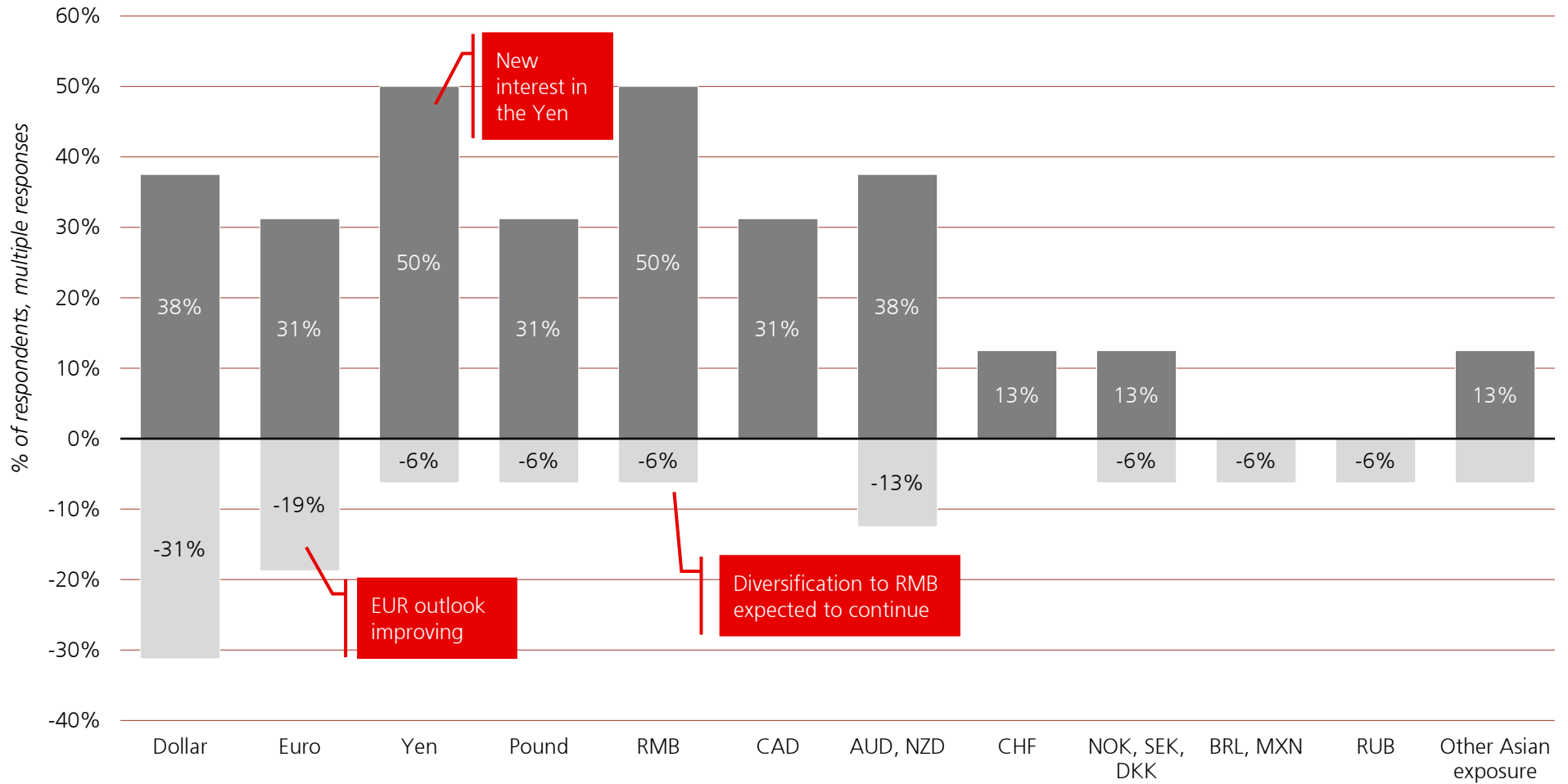
The average share of USD holdings among all participants was at 56%, down from 61% in the previous year. However, this year's sample included fewer LATAM central banks which traditionally run a very high share of USD holdings, and more participants from the Eurozone with less USD holdings.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Currency focus: Outlook

Indicates the % of respondents that expect their allocations for each currency to go up or down.

How do survey participants expect their currency allocations to change going forward?

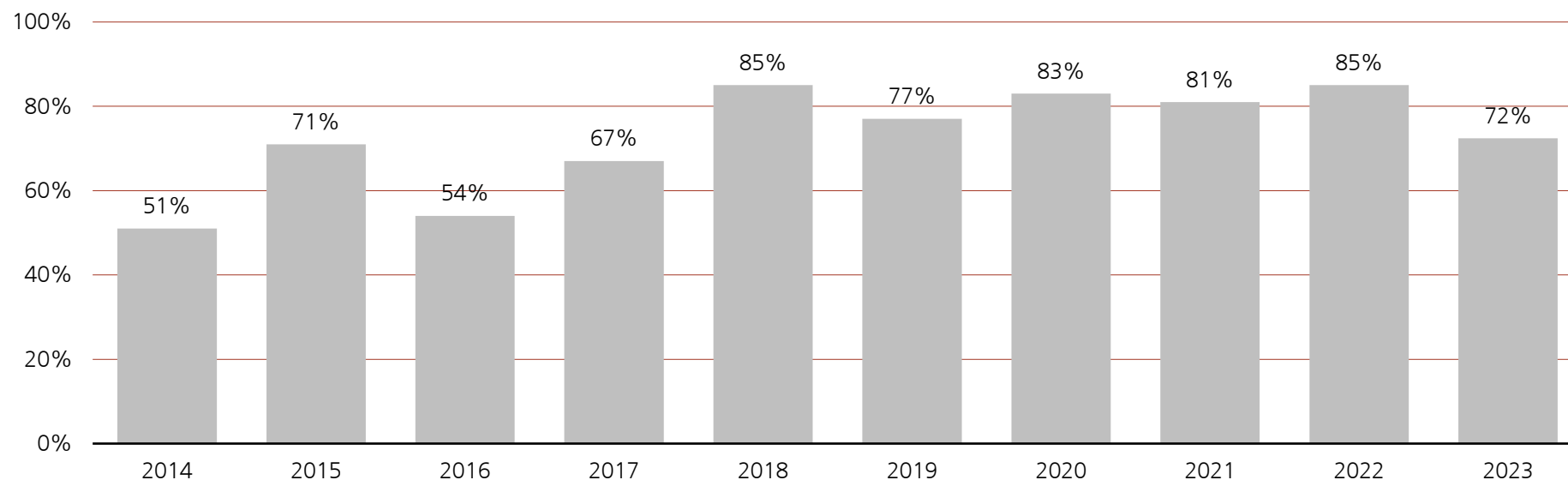


Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Trends in currency diversification

48% of participants think that central bank currency diversification will be less USD-centric over the next 5 years and evolve towards a multipolar setup with more concentration in the USD, EUR and RMB.

% of survey respondents that are invested, or consider investing, in the RMB



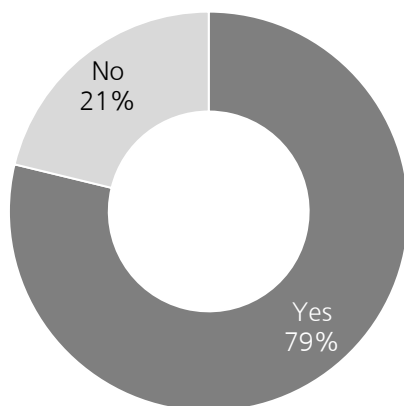
- The average long-term (10y) target allocation (not the actual allocations) to the RMB stands at around 5.2% among survey participants, a drop from 5.8% in the previous year.
- Three participants indicated that they introduced the RMB as a new currency in their reserves, while one participant dropped it.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Tranching and institutional setup

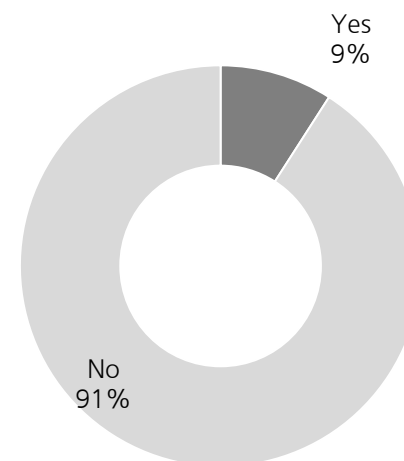
Do you segment / tranche your reserves

(e.g., in liquidity, liability and saving/total return/wealth portfolios)?



Has your institution recently considered setting up a separate entity?

(e.g., Sovereign Wealth Fund) to manage assets?



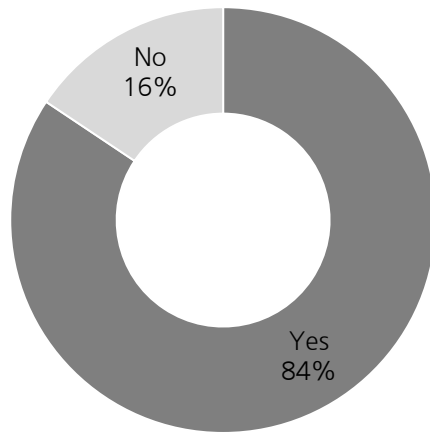
Tranching and institutional setup

- The number of participants who reported that their institution **segments** or **tranches** their reserves stood at 79% compared with 77% last year.
- The percentage of participating institutions that recently **considered setting up a separate entity** to manage assets stood at 9% compared with 10% last year.
- 27% of participants indicated that their institution recently changed or **considered changing their benchmark(s) to reflect ESG**, compared with 30% in the previous year.

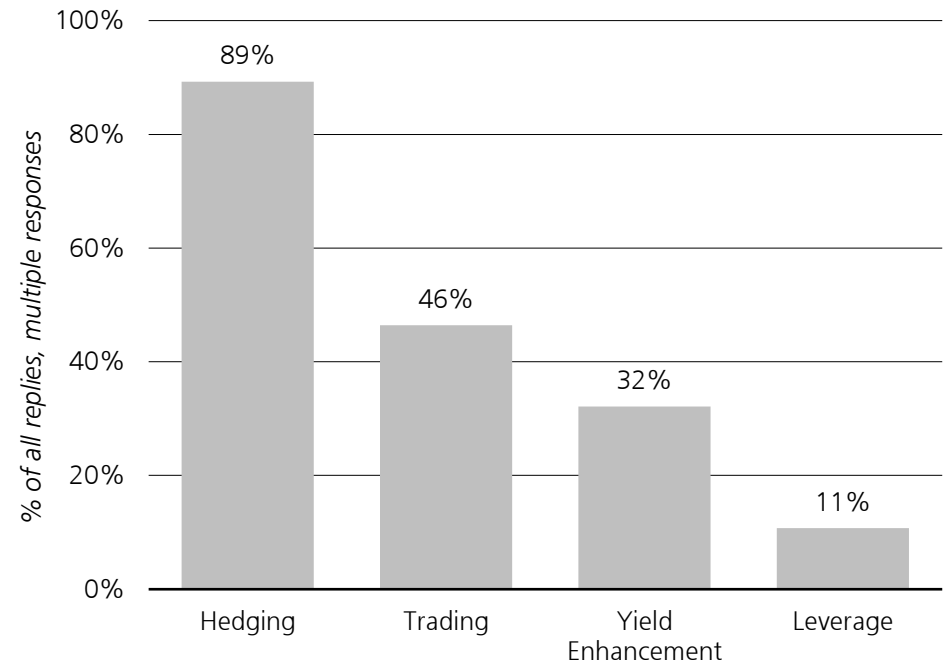
Source: UBS Annual Reserve Manager Survey, results as of June 2023.

Derivatives

Do you use derivatives within your reserve portfolio?



If you use derivatives, what are the main objectives for using them?

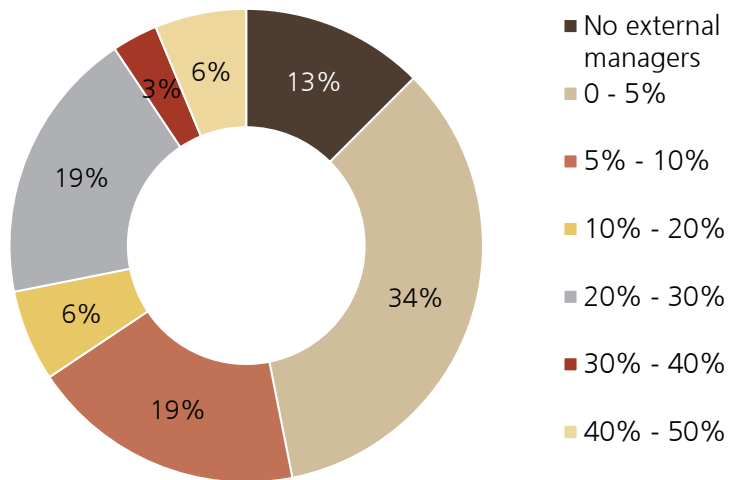


- Additional survey participants reported they use derivatives to **reduce FX risk**, but not to manage reserve assets.

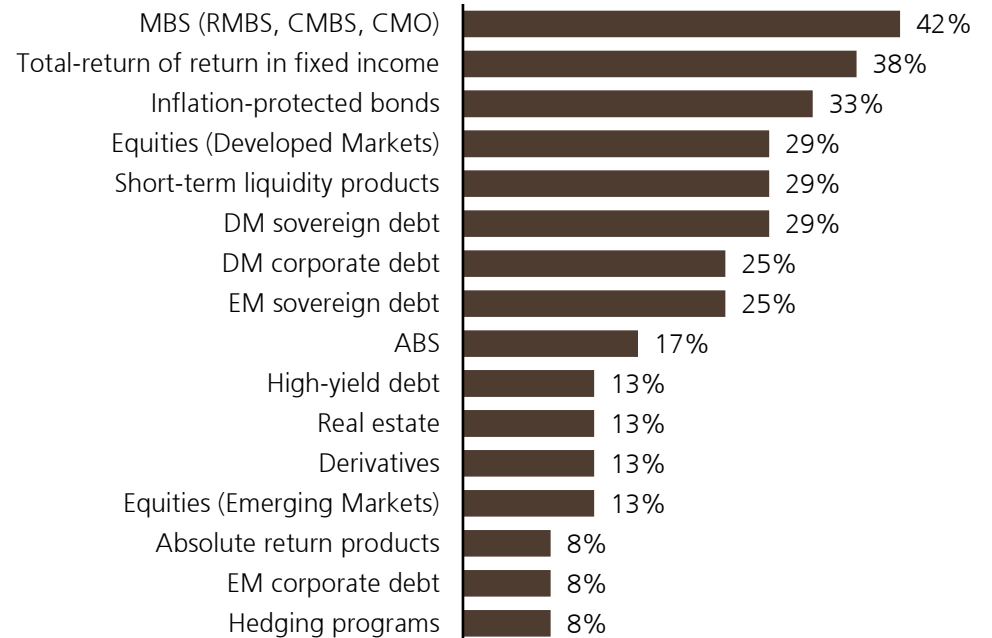
Source: UBS Annual Reserve Manager Survey, results as of June 2023.

External asset management

What percentage of your reserves are currently externally managed?



What asset classes interest you the most for external fund management?



What assets are externally managed?

- External mandates currently exist mainly in the area of MBS, Developed Market sovereign and Developed Market corporate debt, as well as total return fixed income and short-term liquidity products.
- 32% of respondents indicated that they are currently looking into tail-risk hedging strategies, compared with 22% in the previous year.
- 45% of respondents are currently considering thematic investing strategies, compared with 45% in the previous year.
- 52% are currently interested in flexible or dynamic fixed income strategies, compared with 64% in the previous year.

Source: UBS Annual Reserve Manager Survey, results as of June 2023.

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