UBS

For professional / qualified / institutional clients and investors only

Sovereign Investment Outlook 2021: The Year of Choices

UBS AM Global Sovereign Markets – Strategy & Advice

Dr. Massimiliano Castelli PhD, MSc
Head of Strategy and Advice, Global Sovereign Markets

Philipp Salman, lic. oec. HSG
Strategy & Advice, Global Sovereign Markets

January 2021

Overview

> You can't go back and change the beginning, but you can start where you are and change the ending
>
> **C. S. Lewis**
> British Author

Overview and key takeaways

- **2020** turned out to be **better than expected** for risk assets, with the portfolios of central banks and sovereign wealth funds all ending in **positive territory**. **Diversification** across asset classes and countries – once again - paid off.

- **2021** is set to be a **year of choice** for sovereign institutions. As interest rates remain low and the global economy recovers from the pandemic, several key decisions will have to be taken by central banks and sovereign wealth funds to meet the expectations of sponsors in the long run.

- In the post-Covid world, government bonds are expected to be among the worst performing asset classes. Further diversification away from this asset class should be considered. **Listed equities** and **alternatives** willy play a key role to enhance returns and to further diversify portfolios.

- Sovereign institutions should also consider increasing allocations to **China** and **emerging markets** given their better economic performance, **higher interest rates** and growing weight in global capital markets. A separate allocation to Chinese fixed income and equity should be considered.

- Some of the secular trends going on before the pandemic– **low interest rates, de-globalisation**, digitization and **climate change** – remain intact. Investors should embrace these trends, adjusting their allocations accordingly via better diversification across **countries, sectors** and companies.

- An allocation to **gold** and commodities could work well in an environment where interest rates remain low even if **growth/inflation pick up** following the end of the pandemic.

Table of contents

Section 1

2020 review

A tough year that ended well for sovereign portfolios

A year to forget that turned out to be better than expected for risk assets, with an unbroken trend towards more diversification and investments in China to conquer ongoing challenges from low yields.

Here are our key takeaways of the year 2020

Most sovereign institutions will end the year with positive returns	2020 turned out to be not as bad as feared for most asset classes. Global equities are up over 10% YTD, corporate cashflows have been surprisingly robust and company balance sheets have not been shredded. Spreads of corporate and emerging market bonds are almost back at pre-Covid levels. As a consequence, most sovereign portfolios should finish the year well in positive territory.
An unprecedented monetary and fiscal policy response	But this has been the result of an unprecedented policy response from central banks to backstop just about anything, purchasing about US$11tn of assets in 2020YTD to keep term premia and credit spreads contained. On the fiscal front, governments have intervened heavily with a host of different measures ranging from cash transfers to individuals and corporations to guarantees on loans. This translated into an estimated increase on global public debt of around USD 15tr in 2020. What will be the longer-term consequences of these actions?
Diversification – once again! - paid off in 2020 and sovereign institutions continued to diversify	The "secular" trend towards more diversification in central bank reserves has remained intact with equities now being an eligible asset class for nearly half of central banks, a new all-time high. Among sovereign investors, there is ongoing strong interest in Chinese assets and increased RMB holdings due to the yield differential and low correlations with DM markets. The "marathon" of the RMB to become a key reserve currency continues with a long-term allocation estimated by UBS at 5% in the next five years.
Low and negative yields remain the major concern	Government bonds have been an excellent hedge for reserve managers diversifying into equities during time of market stress. However, with US rates converging towards the lower zero bound already prevailing in Europe, Switzerland and Japan, this period is over as the US is unlikely to move interest rates into negative territory. The top concern among sovereigns therefore are lower/negative yields which were mentioned by 69% of respondents in our annual survey.
Sustainable indices passed an important test	The resilience of ESG indexes during the market sell off in March shows that sustainable investing does not imply lower returns and can actually provide some downside protection. The good performance might have changed the view about sustainable investing for even more investors.

Markets have recovered sharply from the sell of in March

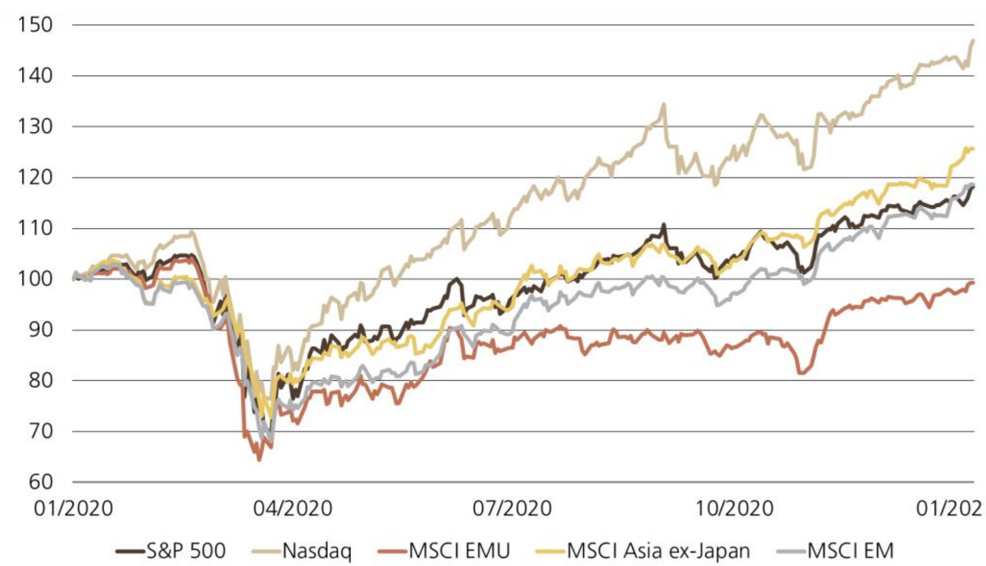
Thanks to massive policy intervention, resilient economic performance and unprecedented speed in the development of vaccines, risk assets had a much better year than feared.

Exhibit Credit spreads have narrowed

Spreads by asset class	31/12/2020	23/03/2020	31/12/2019
US IG	96	373	93
US HY	358	1,100	336
EU IG	91	245	93
EU HY	346	904	292
GBP IG	113	283	127
GBP HY	467	1,044	397
EU AT1	378	1,557	314
CDX IG	51	122	45
CDX HY	296	871	280
iTraxx Main	48	114	44
iTraxx Crossover	238	692	207
iTraxx Senior Fin	59	127	52
iTraxx Sub Fin	113	273	114
Asia IG Cash	154	278	123
Asia HY Cash	657	1,271	553
EM USD Agg	281	720	301
EM USD Sov	298	874	381
EM USD Corp	317	798	292
EM USD Govt-Owned	225	471	203
EMBI OAS	337	707	285
IEMB	356	737	309
CDX EM	152	420	174

Source: Bloomberg LLC. Data as of December 31, 2020.

Equity markets have recovered strongly



Source: Bloomberg, UBS, as of January 8, 2021.

UBS

Central Bank portfolios: Recent market performance

While portfolios that included spread products or equities suffered during the Coronavirus crisis, they more than offset these losses in the dramatic rally in risk assets that started in April 2020.

Replicated Sovereign portfolios tracking model output

	CB1	CB2	CB3	CB4
2020 January	0.30%	0.97%	1.27%	0.93%
2020 February	0.40%	0.83%	0.82%	-0.48%
2020 March	0.48%	-0.65%	-2.06%	-2.86%
2020 April	0.13%	1.13%	1.43%	2.70%
2020 May	0.05%	0.27%	0.83%	1.08%
2020 June	0.05%	0.41%	0.77%	0.84%
2020 July	0.05%	0.73%	1.19%	1.51%
2020 August	-0.01%	-0.11%	-0.17%	0.81%
2020 September	0.03%	-0.02%	-0.17%	-0.54%
2020 October	0.01%	-0.07%	-0.11%	-0.56%
2020 November	0.00%	0.46%	0.86%	2.42%
2020 December	0.03%	0.25%	0.42%	0.88%
Performance 2020	**1.52%**	**4.28%**	**5.14%**	**6.81%**
Performance 2019	2.76%	5.56%	7.10%	9.33%
Performance 2018	2.00%	1.04%	0.46%	-0.47%
Performance 2017	0.90%	2.00%	3.07%	5.22%
Performance 2016	0.91%	2.29%	3.34%	3.50%
Performance 2015	0.51%	0.31%	0.39%	0.29%
Performance 2014	0.46%	2.84%	4.13%	3.89%
Performance 2013	0.29%	-1.06%	-1.86%	2.38%
Performance 2012	0.52%	3.10%	4.96%	5.63%
Performance 2011	0.95%	4.08%	5.41%	3.52%
Performance 2010	1.23%	3.60%	4.94%	5.61%
Performance 2009	1.19%	4.76%	7.04%	8.80%
Performance 2008	4.91%	4.19%	2.95%	-3.70%
Performance 2007	6.03%	6.67%	6.70%	7.12%
Performance 2006	4.58%	3.80%	4.26%	6.23%

Central Bank sample portfolio performance (indexed, 31.12.2019 = 100)

Source: UBS AM model based on publicly available information, using broad indices and funds to replicate CBs and SWF portfolios.
For illustrative purposes only. Please see appendix for more information on portfolios. Please note that past performance is not a guide to the future.

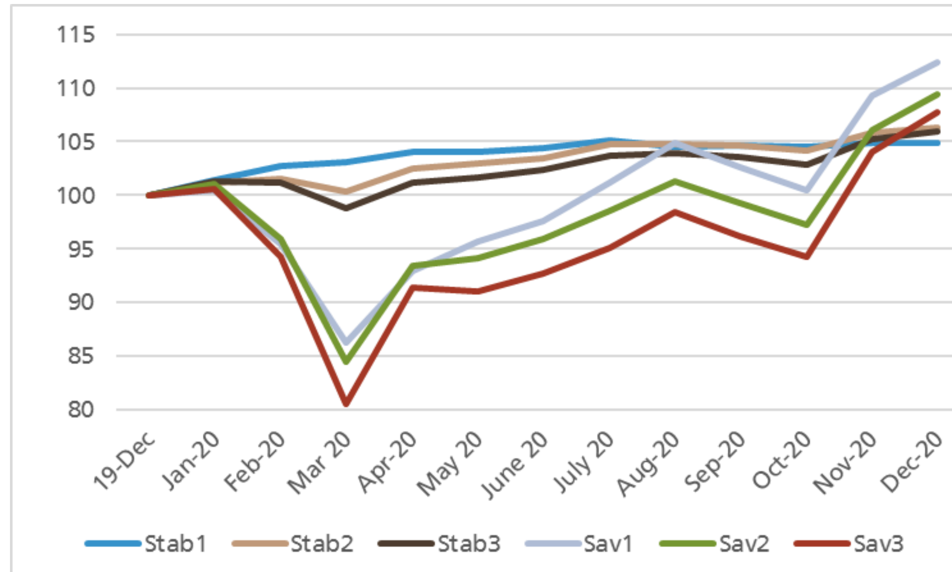
SWF portfolios: Recent market performance

Our model portfolios replicating the SAAs of several stabilization and saving funds (SWFs) show that returns are well back in positive territory after the sharp sell in March.

Replicated Sovereign portfolios tracking model output

	Stab1	*Stab2*	*Stab3*	*60/40*	*Sav1*	*Sav2*	*Sav3*
2020 January	*1.43%*	*1.22%*	*1.24%*	*1.21%*	*0.44%*	*1.07%*	*0.61%*
2020 February	*1.33%*	*0.34%*	*-0.10%*	*-2.09%*	*-4.95%*	*-5.07%*	*-6.32%*
2020 March	*0.24%*	*-1.19%*	*-2.36%*	*-4.48%*	*-9.72%*	*-12.00%*	*-14.54%*
2020 April	*1.02%*	*2.06%*	*2.40%*	*5.01%*	*7.74%*	*10.56%*	*13.50%*
2020 May	*-0.03%*	*0.48%*	*0.49%*	*1.65%*	*3.08%*	*0.80%*	*-0.52%*
2020 June	*0.29%*	*0.54%*	*0.67%*	*1.15%*	*1.95%*	*1.89%*	*1.89%*
2020 July	*0.76%*	*1.19%*	*1.32%*	*2.51%*	*3.65%*	*2.76%*	*2.62%*
2020 August	*-0.64%*	*0.09%*	*0.22%*	*1.94%*	*3.71%*	*2.84%*	*3.49%*
2020 September	*0.19%*	*-0.19%*	*-0.34%*	*-1.09%*	*-2.19%*	*-1.98%*	*-2.26%*
2020 October	*-0.17%*	*-0.46%*	*-0.62%*	*-1.47%*	*-2.12%*	*-2.11%*	*-2.01%*
2020 November	*0.33%*	*1.60%*	*2.26%*	*5.19%*	*8.78%*	*9.14%*	*10.31%*
2020 December	*0.06%*	*0.48%*	*0.66%*	*1.68%*	*2.85%*	*3.12%*	*3.57%*
Performance 2020	***4.88%***	***6.29%***	***5.91%***	***11.32%***	***12.36%***	***9.41%***	***7.69%***
Performance 2019	5.66%	7.85%	8.84%	14.96%	20.97%	22.76%	24.40%
Performance 2018	1.45%	0.44%	0.13%	-2.15%	-5.30%	-5.12%	-6.58%
Performance 2017	1.71%	3.68%	4.21%	9.72%	15.17%	12.88%	13.02%
Performance 2016	2.27%	2.87%	3.10%	4.81%	6.40%	6.87%	7.88%
Performance 2015	0.50%	0.44%	0.43%	*0.31%*	-0.53%	1.16%	0.21%
Performance 2014	3.77%	3.92%	4.68%	*6.14%*	5.86%	7.50%	6.64%
Performance 2013	-0.95%	1.58%	1.82%	*8.54%*	14.70%	14.14%	16.83%
Performance 2012	2.43%	3.86%	5.18%	*8.16%*	13.19%	15.63%	15.52%
Performance 2011	5.17%	4.18%	3.88%	*3.40%*	-0.68%	-2.16%	-5.63%
Performance 2010	4.18%	5.16%	6.12%	*8.65%*	11.08%	15.18%	17.18%
Performance 2009	1.65%	4.62%	6.51%	*10.40%*	21.73%	24.92%	27.96%
Performance 2008	7.67%	1.67%	-1.53%	*-11.88%*	-27.00%	-31.67%	-38.51%
Performance 2007	6.66%	6.92%	6.26%	*8.11%*	7.70%	3.27%	3.18%
Performance 2006	3.52%	5.12%	6.82%	*9.46%*	15.32%	15.90%	17.32%

SWF sample portfolio performance (indexed, 31.12.2019 = 100)



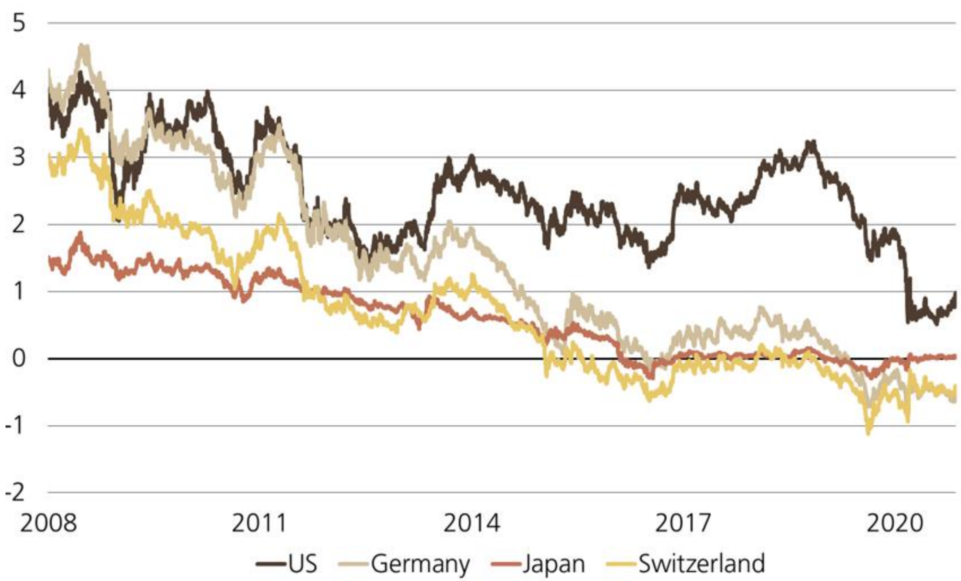
Source: UBS AM model based on publicly available information, using broad indices and listed instruments to replicate monthly performance of SWF portfolios.
For illustrative purposes only. Please note that past performance is not a guide to the future.

UBS

Sovereign investors are worried about low/negative yields (I)

Government bonds have been an excellent hedge for reserve managers diversifying into equities during time of market stress. However, with US rates converging towards the lower zero bound already prevailing in Europe, Switzerland and Japan, this period might be over as the US is unlikely to move interest rates into negative territory.

10-year bond yields for select countries, in %



Outstanding level of bonds with negative yields, in USD tr

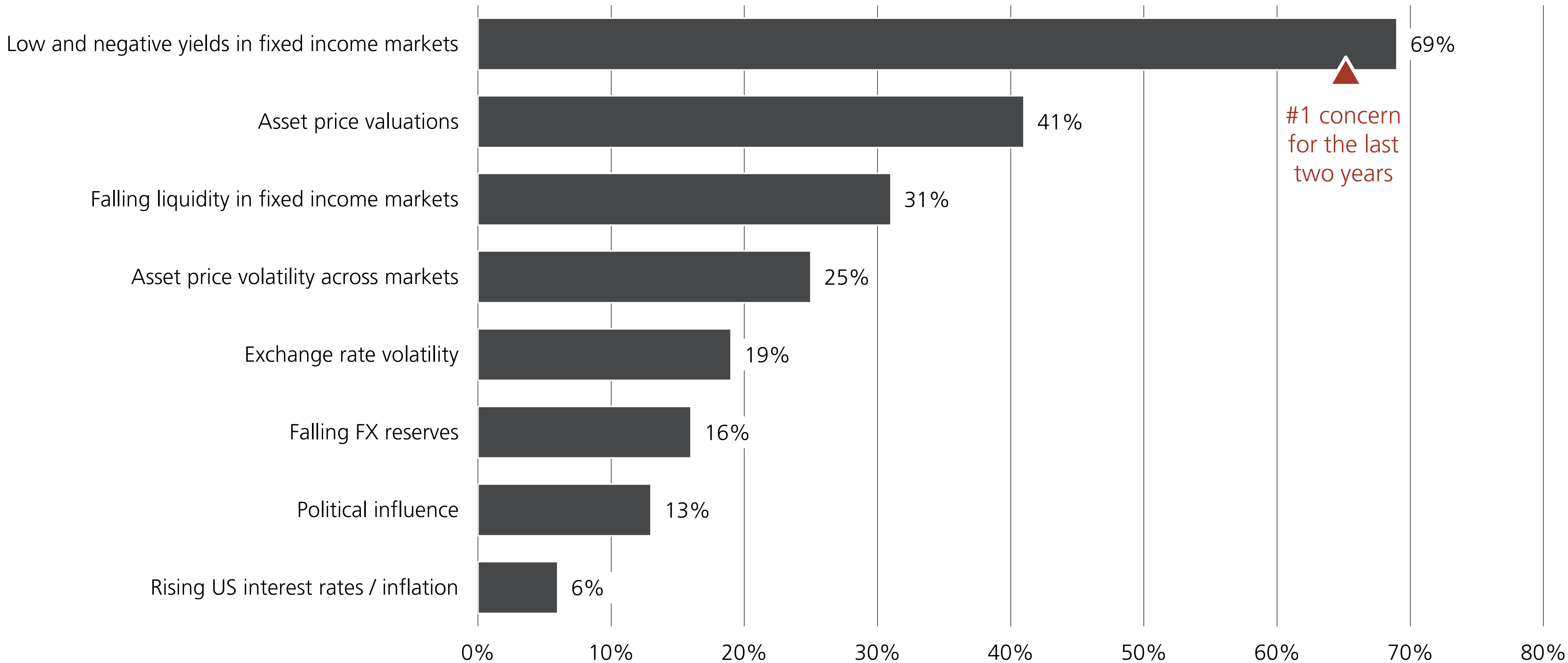
Source: Bloomberg, UBS, as of December 2020.

UBS

Sovereign investors are worried about low/negative yields (II)

We asked Sovereign Institutions about their main concerns EXCLUDING the COVID-19 when it comes to the investment of FX reserves specifically

In percentage of total respondents, multiple answers possible



Source: UBS Annual Reserve Manager Survey, results as of September 2020.

UBS

Diversification trend unbroken among Central Banks

Since 1998, the annual UBS Reserve Manager survey asks Central Banks which financial instruments are approved at their institutions. This year's results showed record eligibility numbers for equities

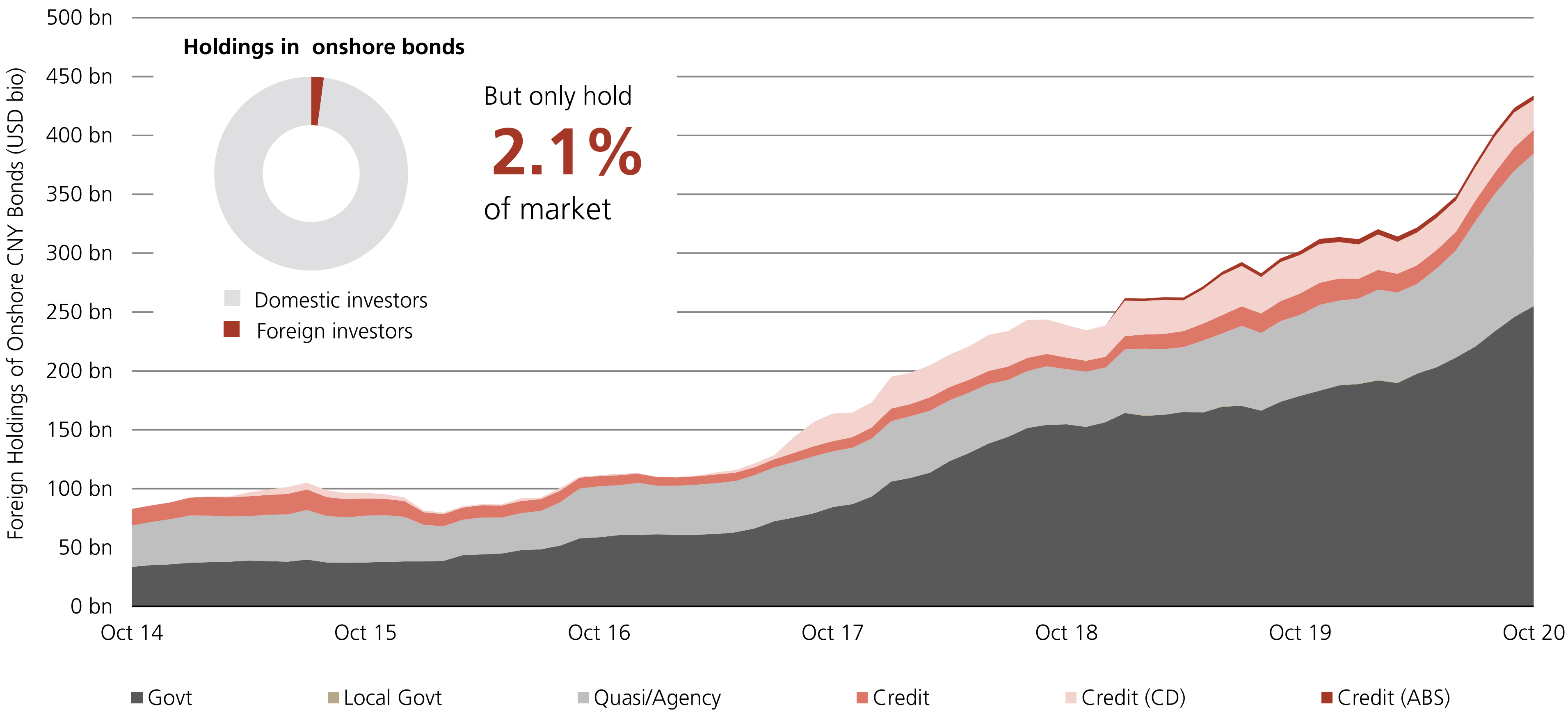
In percentage of total respondents, multiple answers possible

Asset Class	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	94	95	93	90	89	94	82	87	76	70	68	70	72	70	74	63	62	60	62	54	63	60
Sovereign Eurobonds	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	93	85	76	74	83	74	49	54	69	55	65	71	84	86	84	82	76	78	75	71	62	68	54
Inflation protected bonds	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	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	63	45	43	48	40	42	41	26	33	20	31	29	48	44	48	41	21	24	21	26	20	16	4
Corporates	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	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	33	36	24	26	30	21	18	12	11	22	24	16	16	10	na	na	na	na	na	na	na	na	na
Equities	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	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	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 September 2020.

Flows into China and EM remain strong

Diversification into China and the RMB continued, with strong foreign investor growth in China onshore markets



Source: WIND. ABS = asset-backed securities. CD = certificate of deposits. As of end of October 2020.

Section 2

2021 outlook

UBS

2021: The year of choices

Mass vaccinations will pave the way for a strong recovery in 2021. This creates a positive environment for risk assets, and we expect equities to continue delivering positive returns. Together with alternatives, equity will be an important asset class to deal with the challenges of a low yield environment.

1. Further diversify away from government bonds	Interest rates are set to remain low/negative for a prolonged period of time. In such a low yield environment, equities, spread products and alternative will remain key to generate returns. Listed equities in particular as well as EMD will play an important role in boosting the return of central banks portfolios to protect capital in real terms.
2. Increase allocation to Chinese assets	The key trend towards more regionalization will lead to a multipolar system revolving around 3 major currency blocks: USD, EUR and RMB. The rise of China is a transformational change for global capital markets. Chinese assets provide higher returns compared to USD or EUR government bonds and could be an important source of diversification.
3. Integrate sustainability into investment framework	The key principles of sustainability and long-term investing are in natural alignment with the objectives of sovereign investors. Sustainability indexes have also shown their ability to provide some downsize protection during periods of market stress as in March 2020. The Coronavirus crisis has reinforced the feeling that global and coordinated efforts must be made in critical areas to avoid dramatic risks in the future.
4. Embrace alternative asset classes including real estate, infrastructure and HFs	Alternative assets are more attractive due to lower expected returns in public markets and are poised to improve the risk/reward profile of balanced portfolios. In central bank portfolios, real estate and infrastructure will play a more important role in the future. SWFs should continue taking advantage of their lack of liquidity constraints as well as their long-term investing horizon. Opportunities provided by the dislocations caused by Covid-19, for instance in credit markets, should be considered.
4. Diversify into Gold and Commodities	With government bonds less and less able to offset downward spikes in risky assets while being exposed to inflation risks, gold and commodities could be an important portfolio diversifier. Gold can be an important hedge against tail risk events and commodity prices are expected to rise as the global economy goes back to growth potential in 2021-H1 on the back of a normalization in social mobility.
5. Embrace secular trends and thematic investments	Key secular trends – low interest rates/search for yield, de-globalisation, rise of China, digitization and climate change – will remain intact in the post-Covid world. Investors should embrace these trends and adjust their allocations accordingly. These trends will create disruptions but also opportunities for alpha generation, requiring investors to be more active in picking up the winners and avoiding the losers through an active country/sector/company selection.

Choice 1: Diversify more to enhance returns and protect real value of reserves

Central bank portfolios including Equities and EMD for different levels of risk tolerance and diversification will allow to protect capital in real terms in the post-pandemic world.

		Diversified fixed income	Adding Equity	Equity and higher levels of EMD
			+15% EQ and -7% EMD	+5% EQ and +12% EMD
				-5% S-T Bonds
			-8% Spread products	-12% Spread products
		Typical FI-only central bank portfolio		20% equities and 15% EMD
		CB3	**CB4**	**CB5**
Liquidity	Cash	10	10	10
	GGB 1 – 3	30	30	25
Division	GGB	10	10	10
Spread	Supranationals	10	8	5
	Corporates	10	8	5
	Securitised	10	8	5
Inflation hedge	TIPS	10	8	5
Risk premium	EMD	10	3	15
	Equities		15	20

	CB3	CB4	CB5
Return p.a. 2002-2020	3.94%	4.48%	5.29%
Standard Deviation 2002-2020	2.59%	3.05%	4.30%
Return/Standard Deviation	1.52	1.47	1.23
Minimum rolling yearly Return	-1.86%	-7.53%	-11.63%
Base case 5y expected returns	0.74%	1.64%	2.41%
Recession 5y expected returns	1.16%	1.13%	1.75%
Stagflation 5y expected returns	0.45%	0.61%	1.45%
Upside scenario expected returns	0.31%	1.44%	2.56%

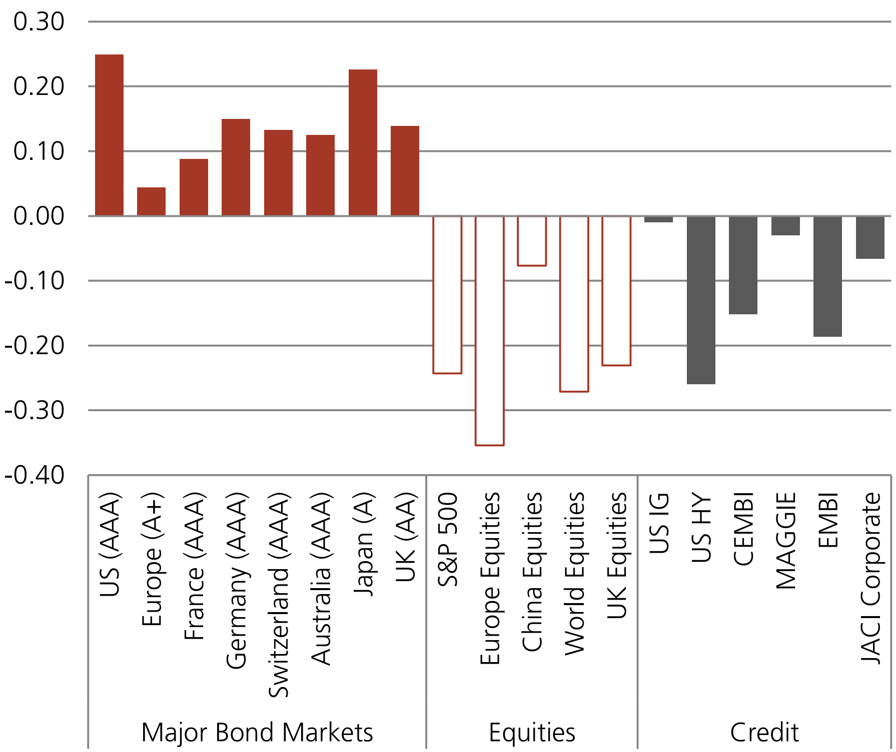
Only portfolio expected to beat inflation

Source: UBS AM. For illustrative purposes only. Past performance of investments is not necessarily an indicator of future results.

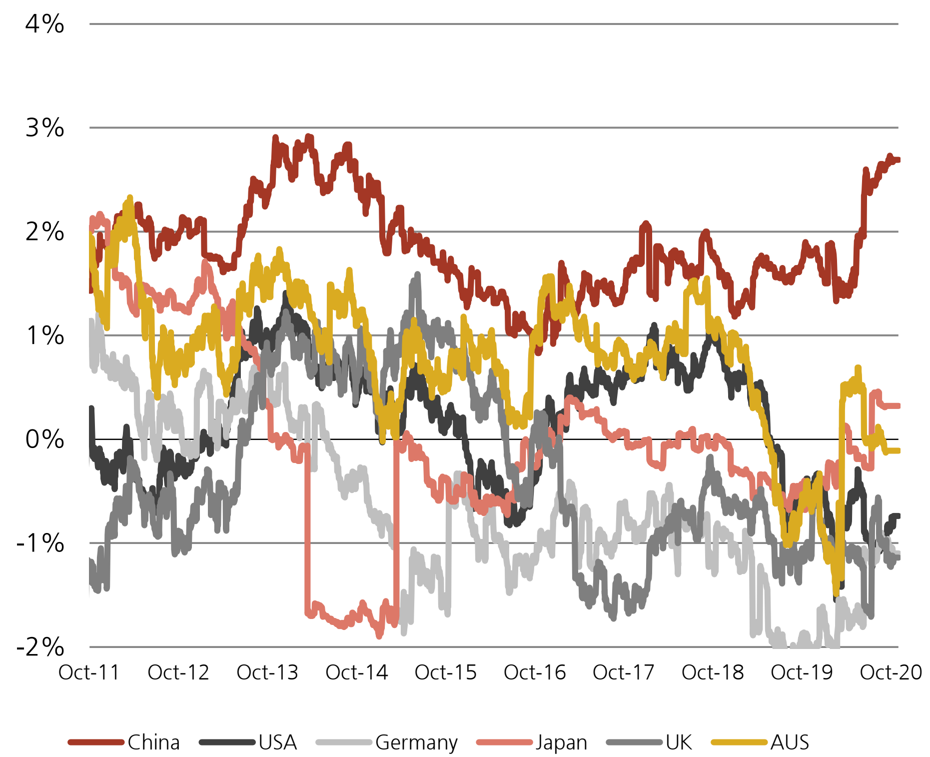
Choice 2: Adapt to a multipolar global economy by increasing allocation to Chinese assets

Chinese fixed income does not only provide return enhancement but also offers significant diversification benefits. A separate allocation to Chinese assets should be considered.

Diversification benefits through low correlations (5 years)



Wealth preservation with China bonds: Sovereign real yields
(based on core CPI)



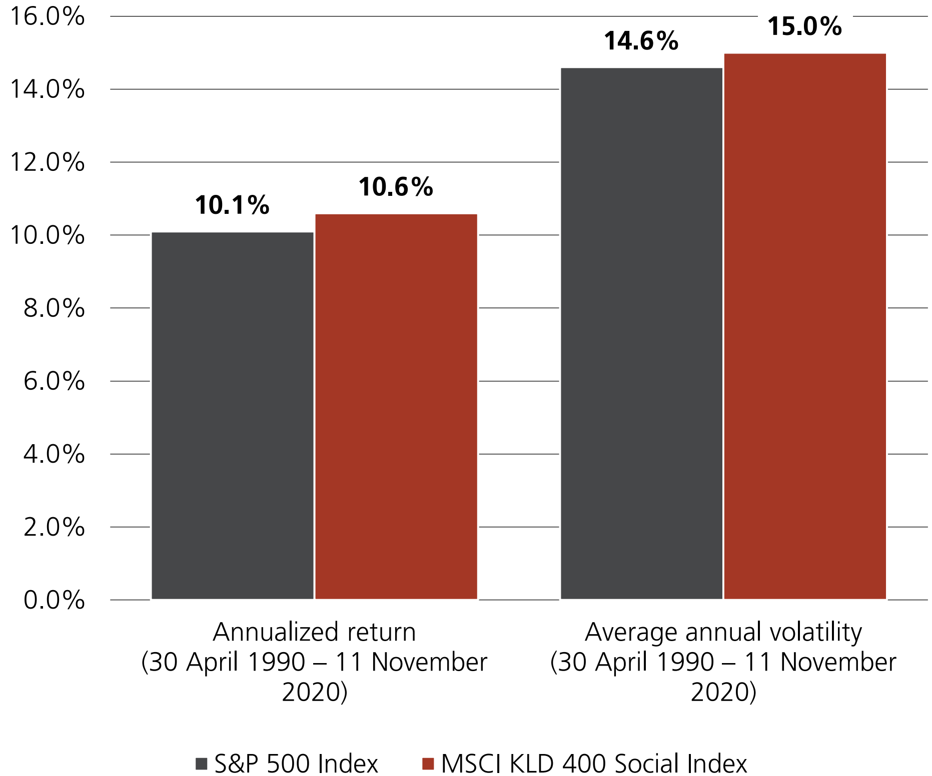
Source: UBS, Bloomberg. Data as of end October 2020

UBS

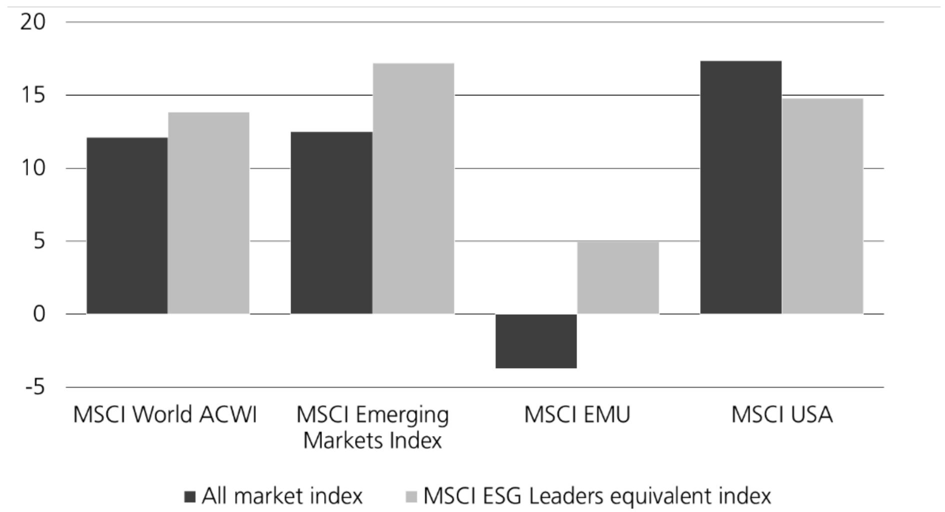
Choice 3: Sustainable strategies provide alpha and downside protection

2020 shows once again that one does not have to give up returns when investing sustainably.

S&P 500 Index vs. MSCI KLD 400 Social Index ("sustainable" US equity Index)



Year-to-date performance comparison, all market index vs. MSCI ESG Leaders equivalent index, in %



Source: Bloomberg, UBS as of December 09, 2020.

Choice 4: Embrace Alternatives

Real estate can provide an additional source of additional returns with a better risk profile. This could be the next step for reserve managers in their secular diversification trend.

		Fixed income diversified with Alternatives		Equity diversified with Alternatives
			+15% RE and +5% EMD	+15% RE and +12% EMD
		Typical FI-only central bank portfolio	-10% ST Bonds	-15% ST Bonds
			-10% Spread products	-12% Spread products

		CB3	CB3+	CB4	CB4+
Liquidity	Cash	10	10	10	10
	GGB 1 – 3	30	20	30	15
Division	GGB	10	8	10	10
Spread	Supranationals	10	8	8	5
	Corporates	10	8	8	5
	Securitised	10	8	8	5
Inflation hedge	TIPS	10	8	8	5
Risk premium	EMD	10	15	3	15
	Real Estate		15		15
	Equities			15	15

Adding EMD and Real Estate but no Equities

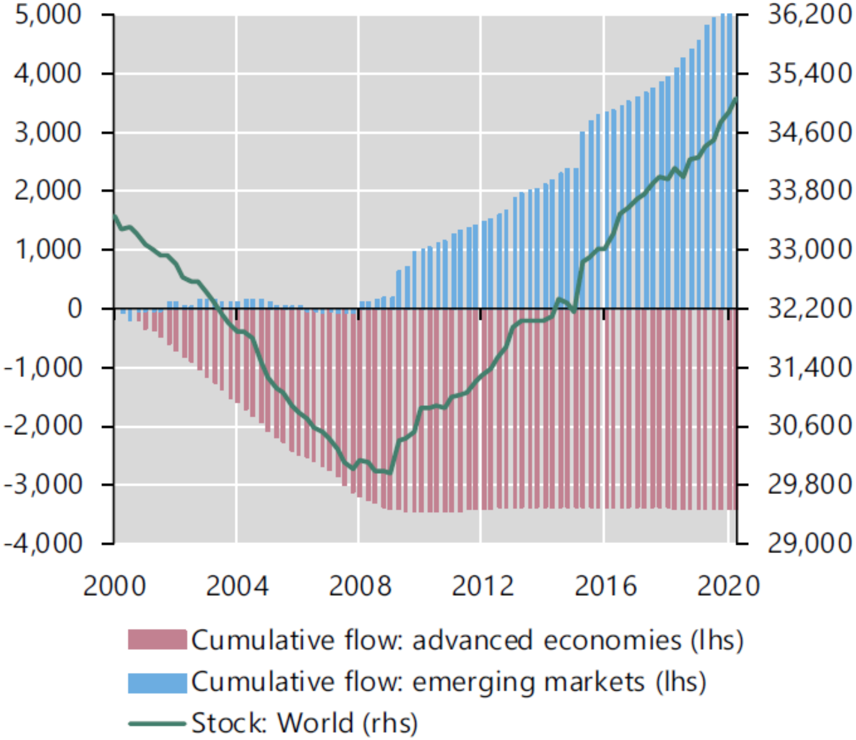
	CB3	CB3+	CB4	CB4+
Return p.a. 2002-2020	3.94%	5.14%	4.48%	5.96%
Standard Deviation 2002-2020	2.59%	3.94%	3.05%	6.15%
Return/Standard Deviation	1.52	1.30	1.47	0.97
Minimum rolling yearly Return	-1.86%	-9.38%	-7.53%	-12.34%
Base case 5y expected returns	0.74%	1.74%	1.64%	2.84%
Recession 5y expected returns	1.16%	1.68%	1.13%	1.93%
Stagflation 5y expected returns	0.45%	1.33%	0.61%	1.79%
Upside scenario expected returns	0.31%	2.84%	1.44%	4.40%

Source: UBS AM. For illustrative purposes only. Past performance of investments is not necessarily an indicator of future results.

Choice 5: Gold and Commodities

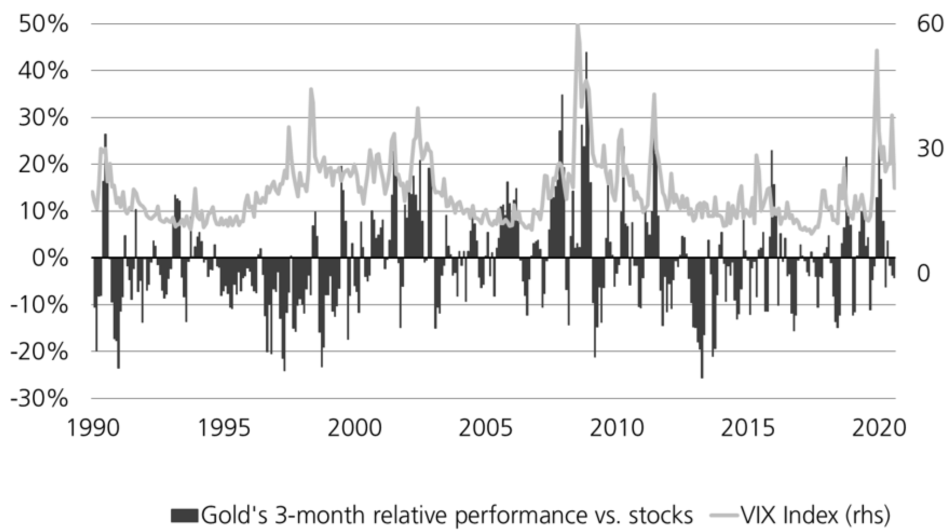
With government bonds unable to provide hedging for risky assets, gold and commodities can provide some diversification benefits. Commodities will benefit from the economic recovery in 2021 and can be an additional source of returns while gold tends to benefit in volatile times.

Official sector stock of gold and cumulative flows by country grouping since the year 2000



Source: BIS, International Monetary Fund (IMF); World Gold Council; BIS calculations. Emerging markets includes countries classified as emerging and developing economies by the IMF.

Gold's 3-month relative performance vs. stocks, VIX Index (rhs)



Source: Bloomberg, UBS, 7 December 2020

UBS

Choice 6: Embrace secular trends and thematic investments

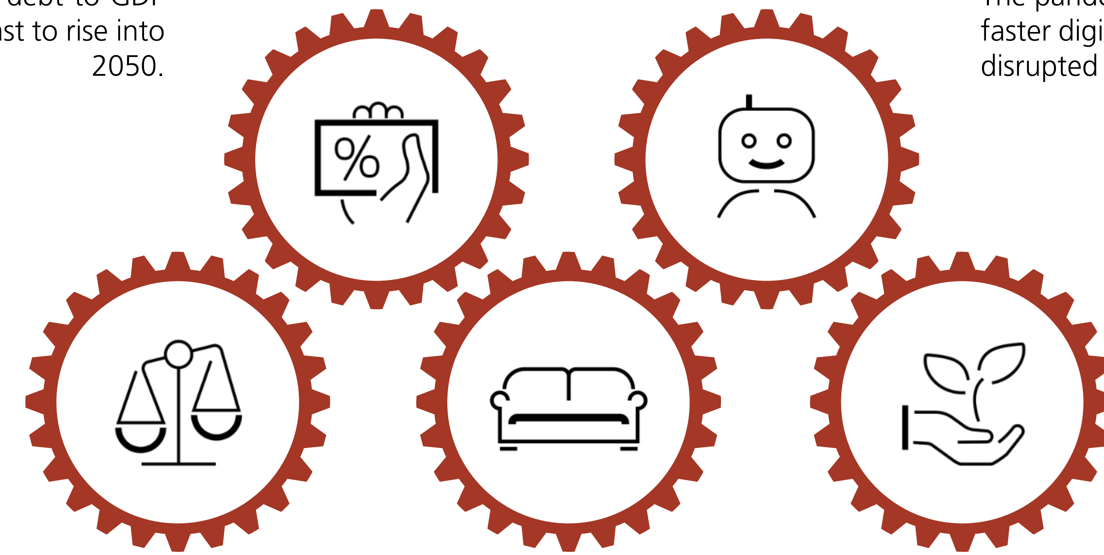
The next decade will be about the disruptors in sectors undergoing technological transformation. 5G, fintech, healthtech, and greentech could be the places to look out for.

More indebted

Advance economies' debt-to-GDP ratios are forecast to rise into 2050.

More digital

The pandemic has forced much faster digital adoption and disrupted established norms.



More unequal

The wealth gap continues to increase and could be widended further by technological disruption.

More local

Political and security concerns, a shift toward sustainability, and the fourth industrial revolution favor bringing operations closer to home.

More sustainable

Carbon neutral pledges across the globe mean that we are moving toward a greener world.

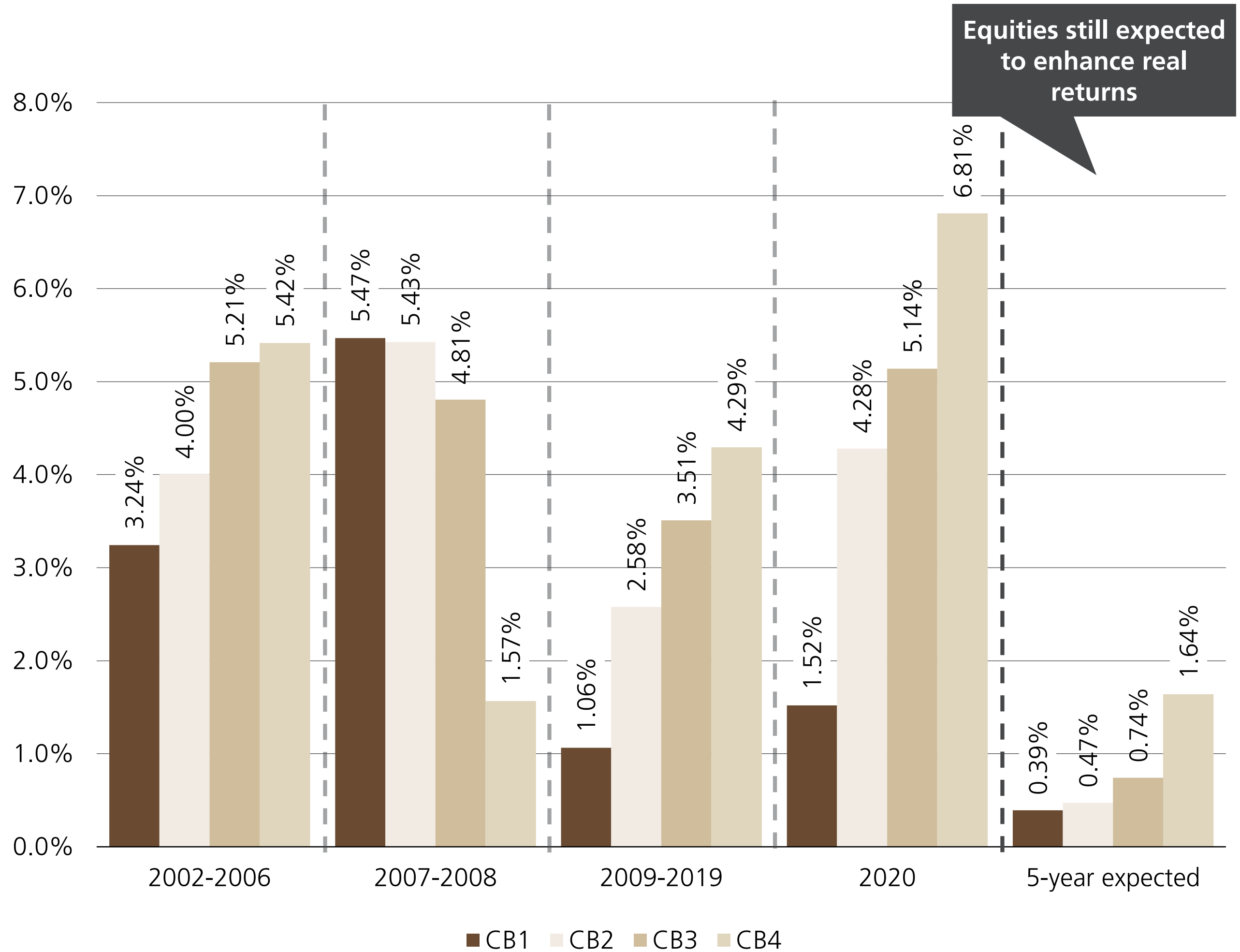
Source: UBS as of November 2020.

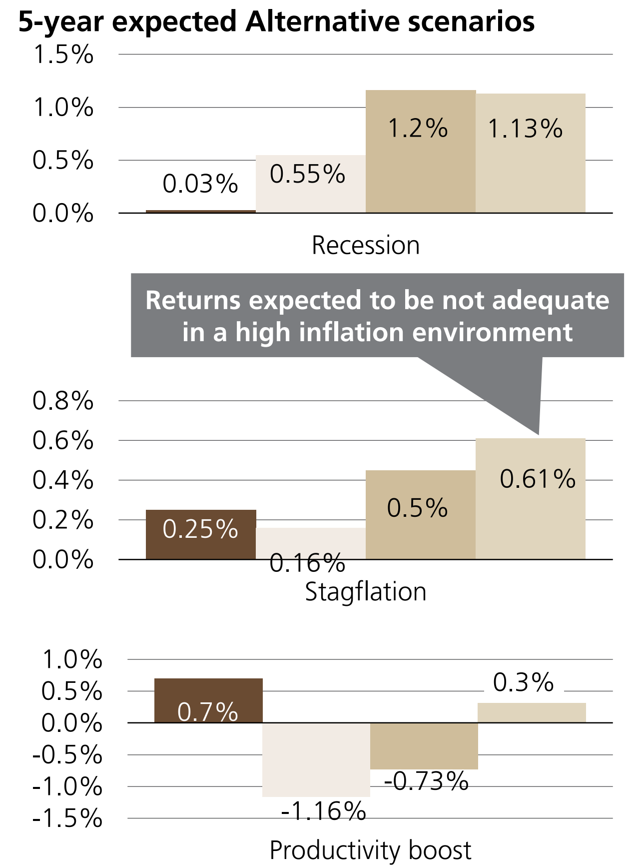
Section 3

Sovereign sample portfolios: Historic performance and 5-year expected returns

Sovereign Portfolios: Scenario performances

Comparison of Central Bank sample portfolio performance



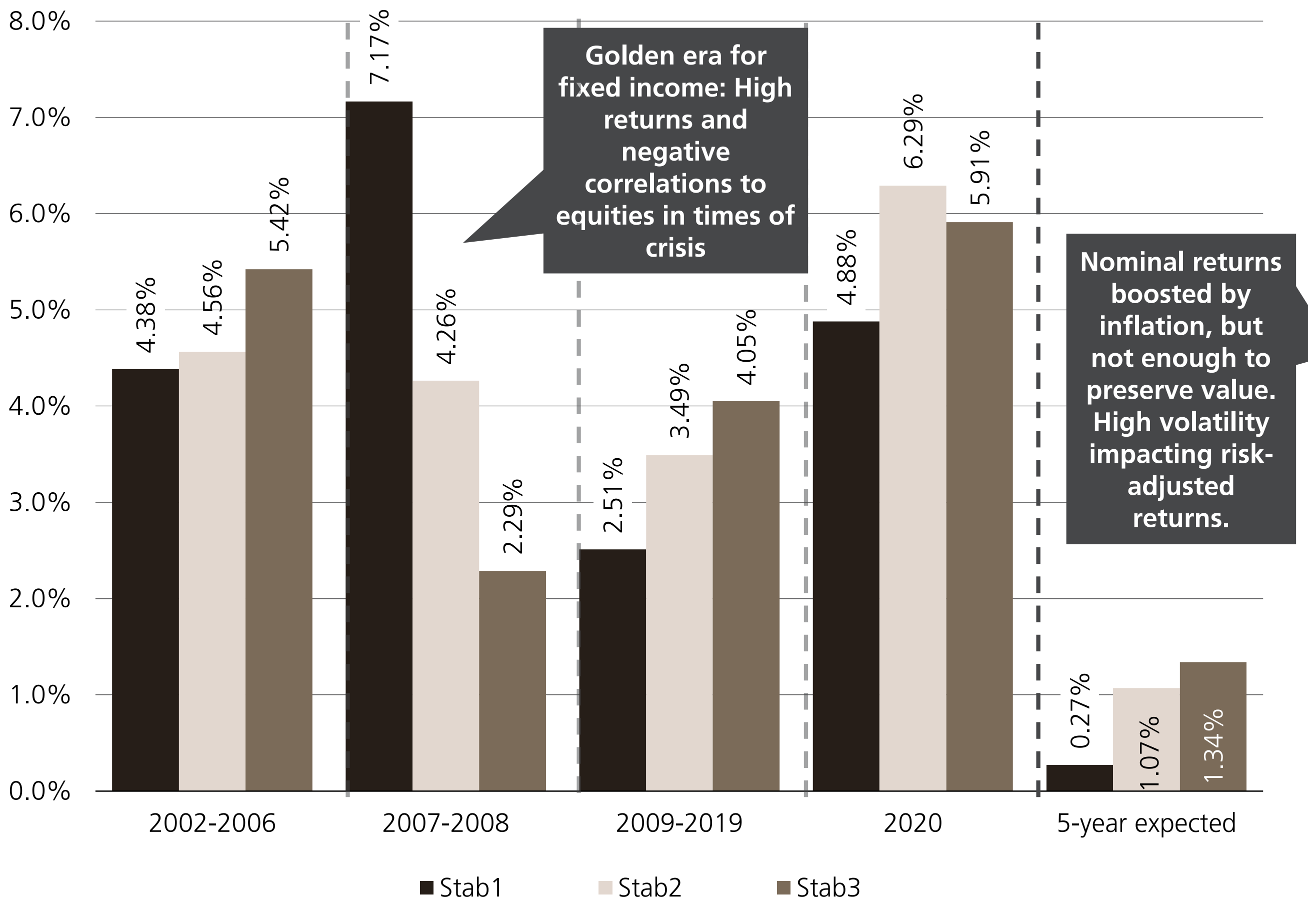


Source: UBS AM. For illustrative purposes only. Data as of end of December 2020. Past performance of investments is not necessarily an indicator of future results.

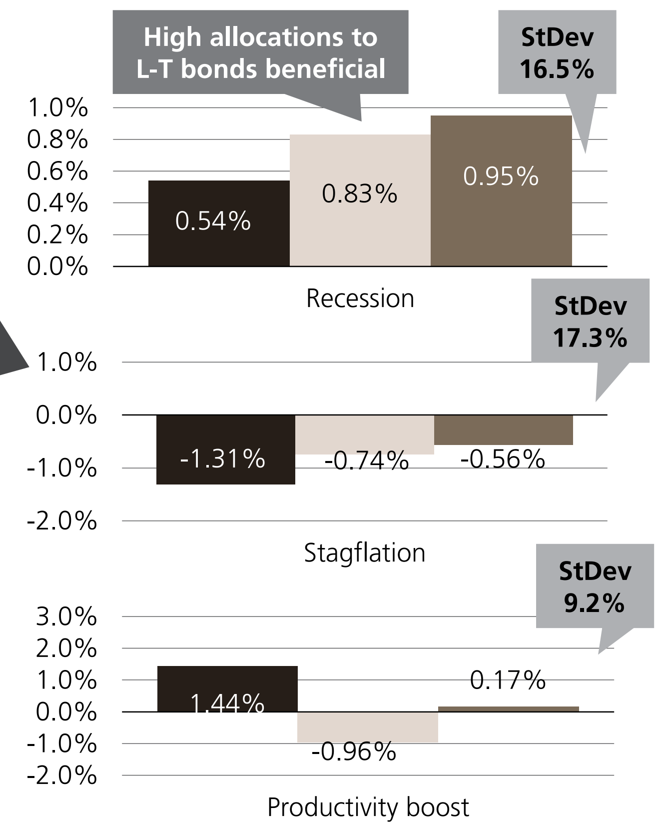
UBS

Sovereign Portfolios: Scenario performances

Comparison of Stabilization Fund sample portfolio performance



5-year expected Alternative scenarios

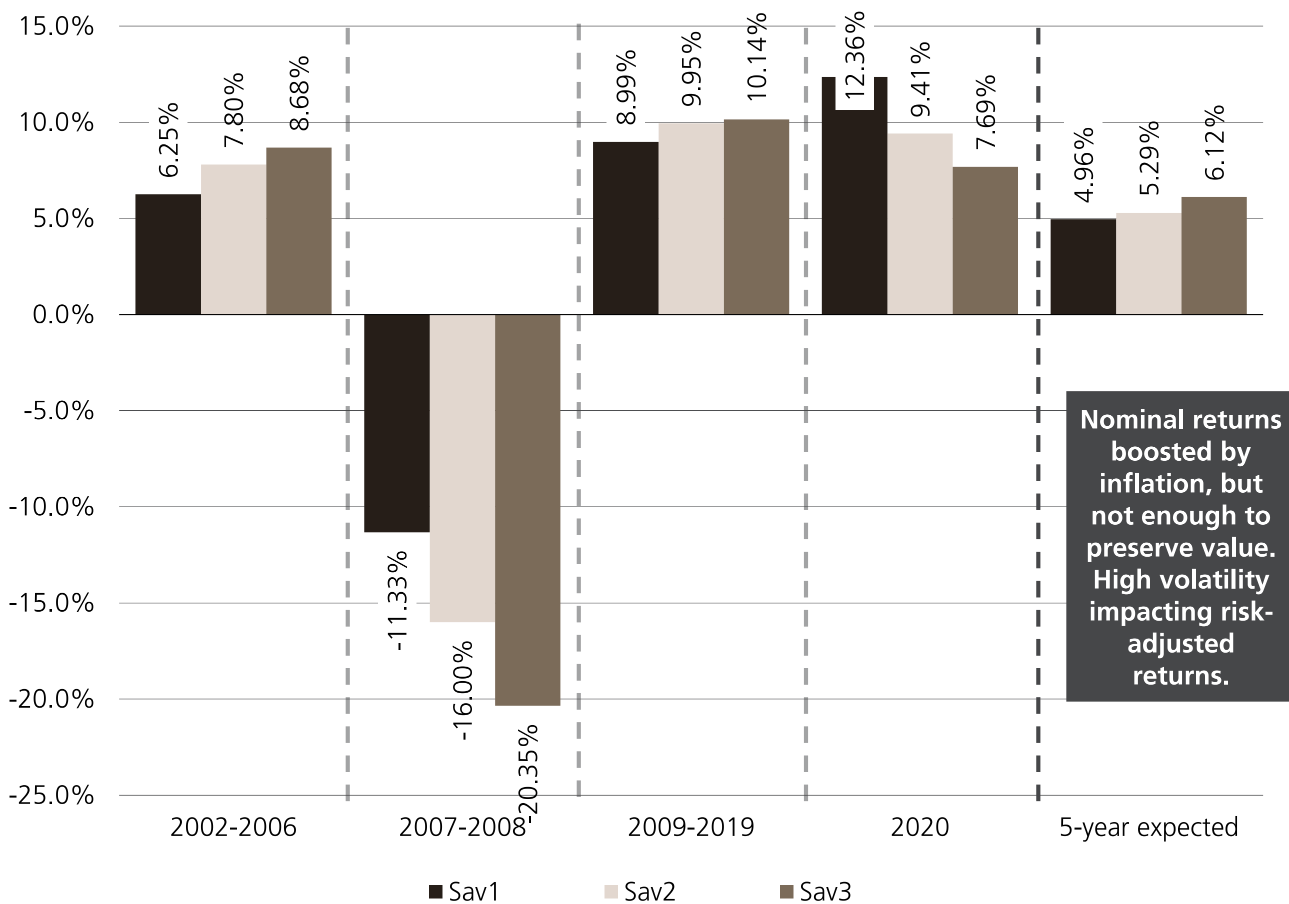


Source: UBS AM. For illustrative purposes only. Data as of end of December 2020. Past performance of investments is not necessarily an indicator of future results.

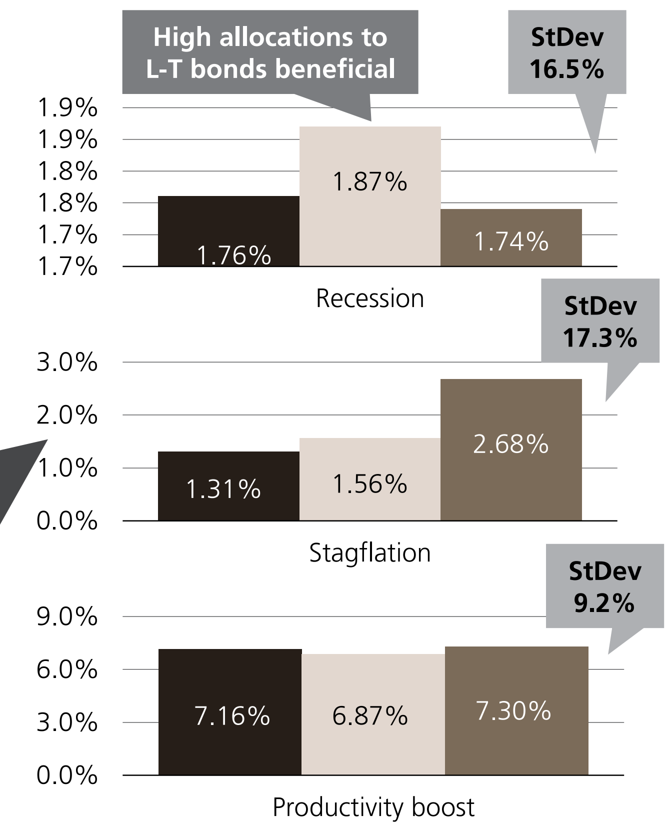
UBS

Sovereign Portfolios: Scenario performances

Comparison saving fund sample portfolio performance



5-year expected Alternative scenarios



Source: UBS AM. For illustrative purposes only. Data as of end of December 2020. Past performance of investments is not necessarily an indicator of future results.

UBS

Section 4

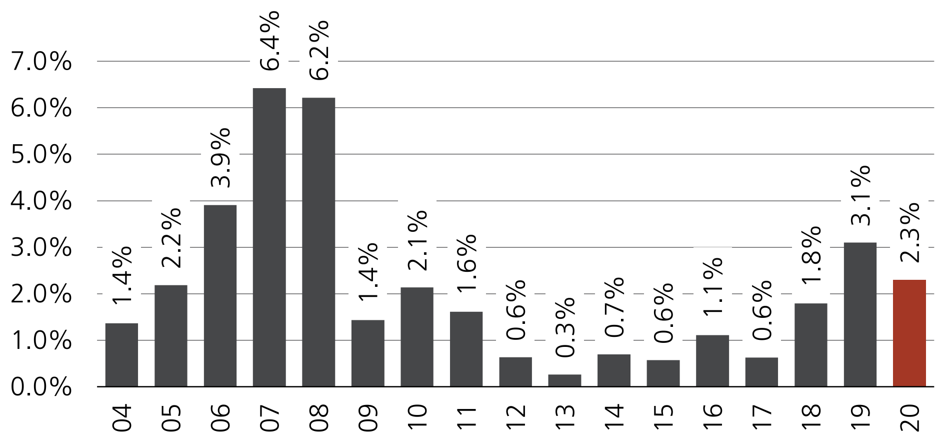
Sources and data

UBS

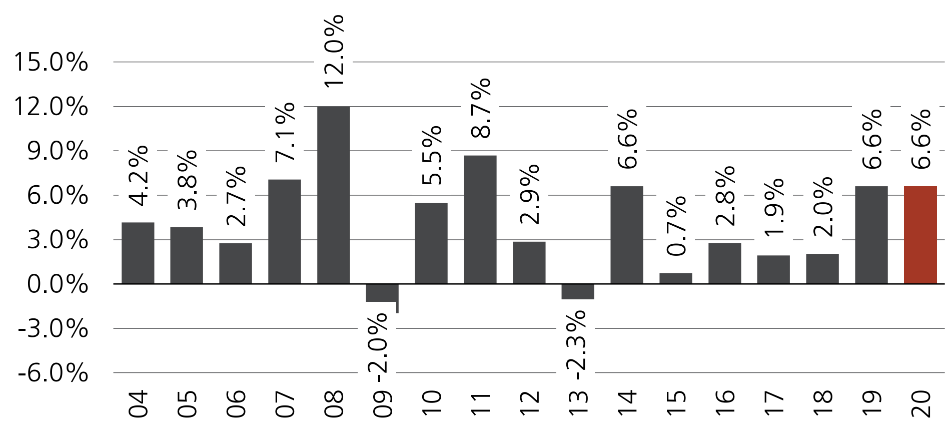
Government Bonds: Sample Portfolios

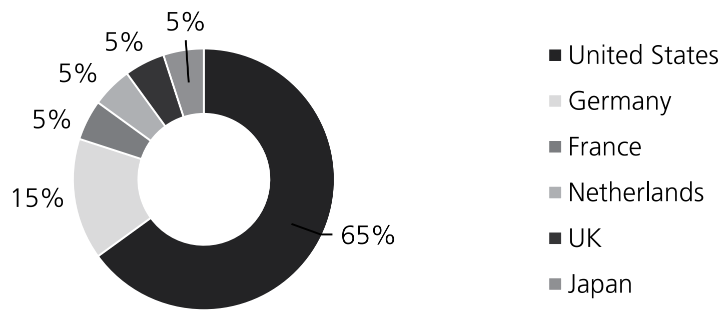
Advanced economies' government bonds are and will remain a key asset class in sovereign institutions portfolios

Global Government Bond Short Duration (GGB 1 – 3),



Global Government Bond Short Duration (GGB 1 – 3),





Key features

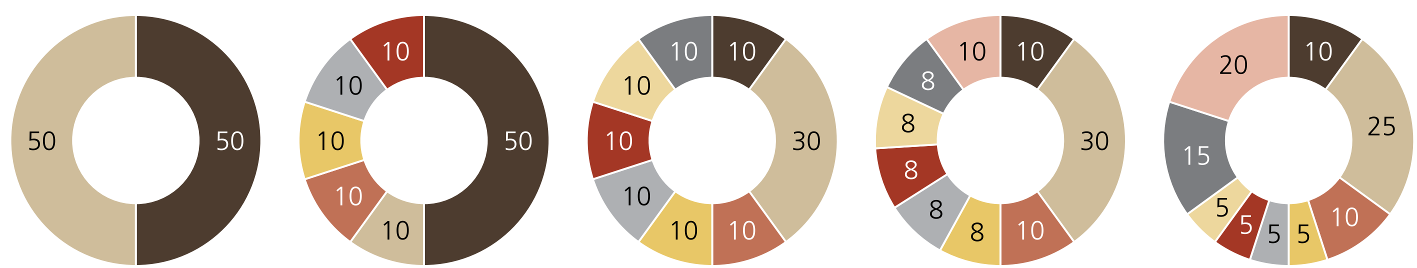
- Broadly resembling the currency composition of global FX reserves
- Non-USD indexes all hedged in USD

Source: UBS AM, Bloomberg. Data as of end of December 2020. For illustrative purposes only.
See Appendix for details on the composition of different portfolios.

Sample Portfolios: Liquid Portfolios

Sample portfolios have different levels of risk tolerance and diversification

		Liquidity Most liquid – CB working capital management	**Fixed Income Diversification** Diversification across fixed income to improve risk-adjusted returns		**Equity Diversification** Liquid equity to boost risk-adjusted returns	**Equity and more EMD** Equity and EMD to boost risk-adjusted returns
		CB1	**CB2**	**CB3**	**CB4**	**CB5**
Liquidity	Cash	50	10	10	10	10
	GGB 1 – 3	50	50	30	30	25
Division	GGB		10	10	10	10
Spread	Supranationals		10	10	8	5
	Corporates		10	10	8	5
	Securitised		10	10	8	5
Inflation hedge	TIPS			10	8	5
Risk premium	EMD			10	3	15
	Equities				15	20

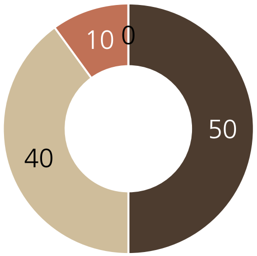


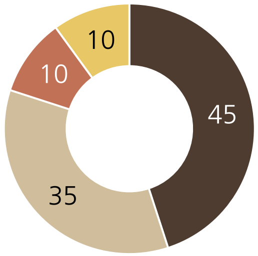
Source: UBS AM. For illustrative purposes only.

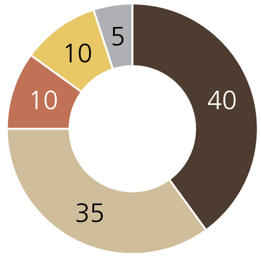
Sample Portfolios: Stabilization Funds

Majority of assets invested into liquid and high grade government bonds but longer duration to boost returns and also investing in equity and real estate

			Liquidity 50% in liquid GGB 1 – 3; GGB/Corporates to boost returns	**+ Equity** Equity to boost risk – adjusted returns	**+ Equity and RE** Equity + RE to boost risk – adjusted returns	
			Stab1	**Stab2**	**Stab3**	
Liquidity	GGB 1 – 3		50	45	40	*Investment grade*
Division	GGB		40	35	35	
Spread	Corporates		10	10	10	
Risk premium	Equities			10	10	
	Real Estate				5	





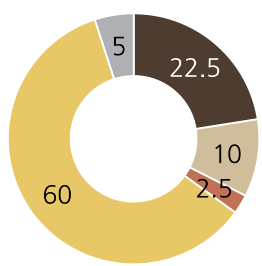


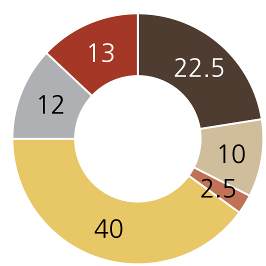
Source: UBS AM. For illustrative purposes only.

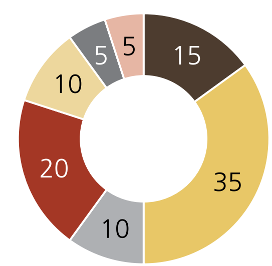
Sample Portfolios: Saving Funds

High risk tolerance but implementation can differ in terms of allocation to illiquid asset classes

		Listed liquid Assets Norwegian model majority of assets in liquid public markets	**+ Alternatives** Equity to boost risk – adjusted returns	**Large allocation to illiquid assets** Endowment model Large allocation to alternatives	
		Sav1	**Sav2**	**Sav3**	
Duration	GGB	22.5	22.5	15	*Investment grade*
Spread	Corporates	10	10		
Risk premium	EMD	2.5	2.5		
	Equities	60	40	35	
	Real Estate	5	12	10	
	Private Equity		13	20	
	Hedge Funds			10	
	Infrastructure			5	
	Commodity			5	







Source: UBS AM. For illustrative purposes only.

Asset Classes – Historical returns

	Annual Return	Annual Standard Deviation	Worst rolling 12m	Return/Risk	Sharpe Ratio
Cash	1.7%	0.46%	0.2%	3.71	0.00
Corp	5.8%	5.83%	-13.9%	0.99	0.70
GGB	4.4%	3.89%	-2.6%	1.13	0.70
TIPS	5.2%	5.88%	-9.3%	0.89	0.60
Securitised	4.3%	2.31%	-0.8%	1.87	1.13
Supra	4.5%	2.74%	-0.9%	1.66	1.03
EMD	8.3%	8.65%	-20.2%	0.97	0.76
EMD Local	5.9%	11.68%	-20.9%	0.51	0.35
Global Equity	7.2%	15.41%	-47.1%	0.47	0.34
EM Equity	4.7%	16.42%	-48.7%	0.28	0.16
Real Estate	7.9%	11.78%	-59.5%	0.67	0.52
Hedge Funds	5.4%	5.98%	-19.1%	0.87	0.57
Infrastructure	7.3%	17.14%	-51.5%	0.42	0.32
Commodity	-0.1%	16.05%	-50.3%	-0.01	-0.13
Private Equity	13.0%	23.04%	-71.4%	0.56	0.49
GGB 1 3	2.5%	1.21%	0.1%	2.09	0.69

Source: UBS Asset Management. Data as of end of December 2020. Infrastructure and Private Equity data since 2003.
This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.
* Annualized Real Estate and Private Equity data based on quarterly time series. Maximum drawdown based on listed equivalents.

Portfolios – Historical returns

Liquid portfolios

	Annual Return	Annual Standard Deviation	Worst 12 Month	Return/Risk
CB1	2.17%	0.7%	0.2%	2.99
CB2	3.13%	1.9%	-1.1%	1.69
CB3	3.94%	2.6%	-1.9%	1.51
CB4	4.48%	3.1%	-7.5%	1.46
CB5	5.29%	4.3%	-11.6%	1.23

Stabilization & Saving Funds

	Annual Return	Annual Standard Deviation	Worst 12 Month	Return/Risk
Stab1	3.47%	2.35%	-1.05%	1.48
Stab2	3.99%	2.34%	-2.83%	1.71
Stab3	4.39%	2.96%	-6.91%	1.47
Sav1	7.88%	10.17%	-33.94%	0.76
Sav2	8.84%	9.21%	-39.56%	0.95
Sav3	9.22%	11.11%	-46.48%	0.82
60/40 portfolio	5.9%	5.8%	-18.7%	1.01

Source: UBS Asset Management. Data as of end of December 2020. This does not constitute a guarantee by UBS AG, Asset Management.
This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.

Asset Classes – Expected Returns

5-year expected returns

	Base case				Recession				Stagflation				Productivity Boost			
	Return	**Std Dev**	**Risk/ Return**	**Sharpe**	**Return**	**Std Dev**	**Risk/ Return**	**Sharpe**	**Return**	**Std Dev**	**Risk/ Return**	**Sharpe**	**Return**	**Std Dev**	**Risk/ Return**	**Sharpe**
Cash	0.26%	1.35%	0.19	0.00	-0.04%	1.34%	-0.03	0.00	0.60%	1.36%	0.44	0.00	0.76%	1.34%	0.57	0.12
Global Government Bond 1-3	0.50%	1.96%	0.26	0.12	0.08%	1.96%	0.04	0.06	-0.12%	2.08%	-0.06	-0.35	-0.05%	1.88%	-0.03	-0.34
Global Government Bond	-0.21%	5.58%	-0.04	-0.08	0.61%	4.49%	0.14	0.14	-3.18%	5.85%	-0.54	-0.65	-2.36%	4.18%	-0.56	-0.71
Corporates	0.67%	6.44%	0.10	0.06	2.23%	5.57%	0.40	0.41	-0.30%	8.88%	-0.03	-0.10	0.67%	4.85%	0.14	0.01
TIPS	-0.90%	5.32%	-0.17	-0.22	0.31%	5.21%	0.06	0.07	1.99%	5.38%	0.37	0.26	-1.24%	4.83%	-0.26	-0.38
Securitized	0.94%	6.45%	0.15	0.11	1.02%	5.02%	0.20	0.21	0.31%	8.13%	0.04	-0.04	0.51%	5.23%	0.10	-0.02
Supranational	0.73%	5.77%	0.13	0.08	1.15%	4.62%	0.25	0.26	-1.15%	6.25%	-0.18	-0.28	-0.55%	4.62%	-0.12	-0.25
EMD Hard Currency	3.59%	7.38%	0.49	0.45	5.25%	8.65%	0.61	0.61	5.41%	10.47%	0.52	0.46	5.04%	5.69%	0.89	0.78
EMD Local Currency	4.28%	13.20%	0.32	0.30	3.56%	14.09%	0.25	0.26	2.90%	14.57%	0.20	0.16	4.38%	12.41%	0.35	0.30
Global Equity	7.16%	15.97%	0.45	0.43	1.03%	22.28%	0.05	0.05	2.43%	22.41%	0.11	0.08	11.53%	12.96%	0.89	0.84
Real Estate	5.66%	8.65%	0.65	0.62	1.88%	11.13%	0.17	0.17	3.29%	11.14%	0.30	0.24	10.38%	7.12%	1.46	1.37
Private Equity	9.53%	23.97%	0.40	0.39	0.17%	33.37%	0.01	0.01	2.73%	33.37%	0.08	0.06	12.76%	19.63%	0.65	0.62
Hedge Funds	3.98%	4.33%	0.92	0.86	1.29%	5.32%	0.24	0.25	2.72%	5.29%	0.51	0.40	6.38%	3.86%	1.65	1.50
Infrastructure	5.57%	16.65%	0.33	0.32	2.49%	19.03%	0.13	0.13	3.90%	19.03%	0.21	0.17	8.46%	14.81%	0.57	0.53
Gold	0.56%	12.54%	0.04	0.02	1.55%	12.42%	0.12	0.13	2.95%	12.92%	0.23	0.18	2.33%	12.45%	0.19	0.14
Commodity	0.56%	14.85%	0.04	0.02	0.39%	15.12%	0.03	0.03	6.24%	15.90%	0.39	0.35	2.54%	14.53%	0.17	0.13

Source: UBS Asset Management. Data as of end of December 2020. This does not constitute a guarantee by UBS AG, Asset Management.

This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.

Portfolios – Expected Returns

5-year expected returns

	Base case			Recession			Stagflation			Productivity Boost		
	GGR	**Std Dev**	**Return/ Risk**	**GGR**	**Std Dev**	**Return/ Risk**	**GGR**	**Std Dev**	**Return/ Risk**	**GGR**	**Std Dev**	**Return/ Risk**
CB1	0.39%	1.20%	0.32	0.03%	1.18%	0.02	0.25%	1.24%	0.20	-1.16%	1.16%	-1.00
CB2	0.47%	2.63%	0.18	0.55%	1.98%	0.28	0.16%	3.06%	0.05	-0.73%	2.18%	-0.34
CB3	0.74%	3.04%	0.24	1.16%	2.18%	0.53	0.45%	3.69%	0.12	0.31%	2.37%	0.13
CB3+	1.74%	3.44%	0.51	1.68%	2.79%	0.60	1.33%	4.68%	0.28	2.84%	2.60%	1.09
CB4	1.64%	4.01%	0.41	1.13%	3.47%	0.32	0.61%	5.77%	0.11	1.44%	2.98%	0.49
CB4+	2.84%	4.85%	0.59	1.93%	5.29%	0.37	1.79%	7.10%	0.25	4.40%	3.64%	1.21
CB5	2.41%	4.56%	0.53	1.75%	4.83%	0.36	1.45%	6.68%	0.22	2.56%	3.45%	0.74
Stab1	0.27%	3.32%	0.08	0.54%	2.50%	0.22	-1.31%	3.71%	-0.35	-0.96%	2.59%	-0.37
Stab2	1.07%	3.74%	0.29	0.83%	2.57%	0.32	-0.74%	5.08%	-0.15	0.17%	2.75%	0.06
Stab3	1.34%	3.94%	0.34	0.95%	2.87%	0.33	-0.56%	5.50%	-0.10	1.00%	2.87%	0.35
Sav1	4.96%	10.69%	0.46	1.76%	13.57%	0.13	1.31%	15.60%	0.08	7.16%	8.33%	0.86
Sav2	5.29%	10.82%	0.49	1.87%	13.91%	0.13	1.56%	15.96%	0.10	6.87%	8.31%	0.83
Sav3	6.12%	11.76%	0.52	1.74%	15.99%	0.11	2.68%	17.02%	0.16	7.30%	9.23%	0.79

Source: UBS Asset Management. Data as of end of December 2020. This does not constitute a guarantee by UBS AG, Asset Management.
This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.

Contact information

Dr Massimiliano Castelli
Head of Strategy & Advice, Global Sovereign Markets
Tel: + 41 79 84 99 448
massimiliano.castelli@ubs.com

Philipp Salman
Strategy & Advice, Global Sovereign Markets
Tel: + 41 44 234 66 27
philipp.salman@ubs.com

UBS Asset Management (UK) Ltd
5 Broadgate
London, EC2M 2QS

+44-20-7567-8000

www.ubs.com

UBS Asset Management (UK) Ltd is a subsidiary of UBS AG

Disclaimer

For marketing and information purposes by UBS. For professional / qualified / institutional clients and investors only.

This document does not replace portfolio and fund-specific materials. Commentary is at a macro or strategy level and is not with reference to any registered or other mutual fund.

Americas

The views expressed are a general guide to the views of UBS Asset Management as of August 2018. The information contained herein should not be considered a recommendation to purchase or sell securities or any particular strategy or fund. Commentary is at a macro level and is not with reference to any investment strategy, product or fund offered by UBS Asset Management. The information contained herein does not constitute investment research, has not been prepared in line with the requirements of any jurisdiction designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. The information and opinions contained in this document have been compiled or arrived at based upon information obtained from sources believed to be reliable and in good faith. All such information and opinions are subject to change without notice. Care has been taken to ensure its accuracy but no responsibility is accepted for any errors or omissions herein. A number of the comments in this document are based on current expectations and are considered "forward-looking statements". Actual future results, however, may prove to be different from expectations. The opinions expressed are a reflection of UBS Asset Management's best judgment at the time this document was compiled, and any obligation to update or alter forward-looking statements as a result of new information, future events or otherwise is disclaimed. Furthermore, these views are not intended to predict or guarantee the future performance of any individual security, asset class or market generally, nor are they intended to predict the future performance of any UBS Asset Management account, portfolio or fund.

EMEA

The information and opinions contained in this document have been compiled or arrived at based upon information obtained from sources believed to be reliable and in good faith, but is not guaranteed as being accurate, nor is it a complete statement or summary of the securities, markets or developments referred to in the document. UBS AG and / or other members of the UBS Group may have a position in and may make a purchase and / or sale of any of the securities or other financial instruments mentioned in this document.

Before investing in a product please read the latest prospectus carefully and thoroughly. Units of UBS funds mentioned herein may not be eligible for sale in all jurisdictions or to certain categories of investors and may not be offered, sold or delivered in the United States. The information mentioned herein is not intended to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. Past performance is not a reliable indicator of future results. The performance shown does not take account of any commissions and costs charged when subscribing to and redeeming units. Commissions and costs have a negative impact on performance. If the currency of a financial product or financial service is different from your reference currency, the return can increase or decrease as a result of currency fluctuations. This information pays no regard to the specific or future investment objectives, financial or tax situation or particular needs of any specific recipient.

The details and opinions contained in this document are provided by UBS without any guarantee or warranty and are for the recipient's personal use and information purposes only. This document may not be reproduced, redistributed or republished for any purpose without the written permission of UBS AG.

This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.

UK

Issued in the UK by UBS Asset Management (UK) Ltd. Authorised and regulated by the Financial Conduct Authority.

APAC

This document and its contents have not been reviewed by, delivered to or registered with any regulatory or other relevant authority in APAC. This document is for informational purposes and should not be construed as an offer or invitation to the public, direct or indirect, to buy or sell securities. This document is intended for limited distribution and only to the extent permitted under applicable laws in your jurisdiction. No representations are made with respect to the eligibility of any recipients of this document to acquire interests in securities under the laws of your jurisdiction.

Using, copying, redistributing or republishing any part of this document without prior written permission from UBS Asset Management is prohibited. Any statements made regarding investment performance objectives, risk and/or return targets shall not constitute a representation or warranty that such objectives or expectations will be achieved or risks are fully disclosed. The information and opinions contained in this document is based upon information obtained from sources believed to be reliable and in good faith but no responsibility is accepted for any misrepresentation, errors or omissions. All such information and opinions are subject to change without notice. A number of comments in this document are based on current expectations and are considered "forward-looking statements". Actual future results may prove to be different from expectations and any unforeseen risk or event may arise in the future. The opinions expressed are a reflection of UBS Asset Management's judgment at the time this document is compiled and any obligation to update or alter forward-looking statements as a result of new information, future events, or otherwise is disclaimed.

You are advised to exercise caution in relation to this document. The information in this document does not constitute advice and does not take into consideration your investment objectives, legal, financial or tax situation or particular needs in any other respect. Investors should be aware that past performance of investment is not necessarily indicative of future performance. Potential for profit is accompanied by possibility of loss. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

Australia

This document is provided by UBS Asset Management (Australia) Ltd, ABN 31 003 146 290 and AFS License No. 222605.

Source for all data and charts (if not indicated otherwise): UBS Asset Management

UBS