Year Ahead 2020

UBS House View

Global

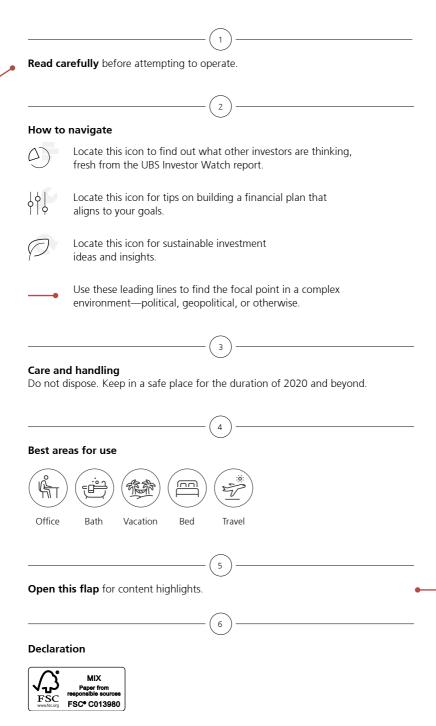
Chief Investment Office GWM Investment Research



The Year of Choices
The Decade of Transformation



Publication instruction manual



10 for 2020

- Growth muted. We expect growth to remain muted as the world adjusts to new political realities.
- Two-way uncertainty. In areas ranging from the US election to trade negotiations and economic policy, two-way uncertainty is higher than usual. Investments less exposed to the outcomes of political choices are preferable.
- Diversify before US election. The US technology, energy, financial, and healthcare sectors could be subject to volatility stemming from increased regulatory scrutiny. Diversification is key.
- 4. **Domestic and consumer.** In a more protectionist world, companies that rely on domestic and consumer spending look more resilient than those exposed to foreign and business spending.
- 5. **Dividends and quality.** In this environment, we think dividend and quality (including ESG) stocks are well positioned.
- 6. Prefer EM debt. Yields on the safest bonds are low, while risks are rising among some high yield issuers. We recommend emerging market US dollar-denominated sovereign debt and opting for bonds supporting sustainability and related purposes over traditional bonds.
- Weaker dollar. We see the US dollar weakening and favor a combination of safer and higher yielding currencies.
- 8. **Gold to outperform.** Gold should outperform more cyclical commodities, in our view.
- 9. **Low-beta alternatives**. We prefer private market strategies less dependent on the macro backdrop, and relative value and market neutral strategies within hedge funds.
- 10. Real estate risks. Risks in the owner-occupied housing market are elevated in a range of major cities. Investors should seek commercial real estate exposed to long-term trends like e-commerce and rental housing-oriented real estate.

The Year of Choices

10 for 2030

- Challenges. Over the next decade, we expect working-age populations in high-income countries to shrink, deglobalization to gain momentum, and a less favorable political backdrop for high-income individuals to emerge.
- Changes. Increased coordination between governments and central banks could spur greater economic growth, or end in inflationary catastrophe.
- 3. **Disruption.** Major environmental and technological movements and advances are likely to disrupt existing norms.
- 4. **Lower returns.** Overall, we anticipate lower returns and higher volatility for most financial assets than in the past decade.
- 5. **Time to adapt.** Investors targeting a given level of return may need to increase their holdings of equities or accept lower returns.
- 6. **Leverage an option.** With rates likely to remain low, investors could also consider utilizing leverage in the context of their financial plan.
- 7. **Build your plan.** We think the Liquidity. Longevity. Legacy. approach can help you align your investments with your goals, enabling you to balance the risks and opportunities of the decade ahead.
- 8. **Benefit from growth.** We see opportunity in companies that enable and benefit from digital transformation and genetic therapies, and in those alleviating water scarcity.
- Position with sustainability. By shifting toward sustainability-focused investments, we think investors will be better positioned to benefit from what are likely to be the most significant trends over the next decade.
- Adapt your business. Entrepreneurs also need to consider how to adapt their businesses to the effects of demographic and technological change, and potentially stiffer labor, trade, and environmental regulations.

The Decade of Transformation



Foreword

Welcome to our Year Ahead 2020, UBS's outlook on the coming year.

As 2020 approaches, many investors are feeling anxious, with geopolitical tensions a primary source of their unease. UBS's recent Investor Watch survey revealed that 79% of investors think we are entering a period of higher volatility, with 66% viewing markets as driven more by geopolitical events than fundamentals.

In what we call "The Year of Choices," we offer our view on how to navigate these markets. From the US presidential election to trade negotiations and fiscal policy, political choices will increasingly shape outcomes. In the pages that follow, we explain how we think these choices will play out, and how you can mitigate the risks they pose to portfolios.

The underlying forces complicating political and economic choices will only grow in importance over the longer term. In the decade to come, working-age populations in developed countries will begin to shrink, and a less favorable political backdrop could emerge for higher-income individuals. We also expect significant environmentally and technologically led innovations to disrupt existing norms in a deglobalizing world.

Yet investors will also enjoy ample chances to benefit from a "Decade of Transformation" that will redefine our world. From game-changing technologies to the forward-thinking companies driving the transition to a more sustainable economy, opportunities will abound to invest in the ideas that shape the future.

In a time characterized by uncertainty, sound advice is of paramount importance. We hope *Year Ahead 2020* helps you make the most of a future that is yet to be defined.

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Our outlook for 2020, and answers to the top questions facing investors in the year ahead.

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To find out more about the Year Ahead 2020, visit ubs.com/year-ahead



The Year of Choices

In 2019, global economic growth looks to have fallen to a post-financial crisis low due to slowdowns in the US, Europe, and China. Although the labor market and consumption remained relatively healthy, fixed investment and trade growth weakened as the US-China trade conflict impacted business confidence.



Mark Haefele Chief Investment Officer Global Wealth Management

In our base case, we expect sub-trend growth to continue into 2020. But in a Year of Choices – for policymakers, electorates, and investors alike – the two-way uncertainty around our base case is greater than usual.

We see three key "choices" defining outcomes:

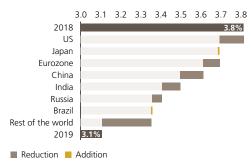
1. Stick or twist?

Elections will take place in the US and, in December 2019, the UK. The issues up for grabs include how to structure a healthcare system for an aging population, growing income inequality, the role of the nation-state in an interconnected world, technological change, and who pays for environmental damage. The polarization between candidates, magnitude of issues, and market capitalization of the US and UK markets make these elections relevant for investors around the world. How each issue is decided will shape global trends and define sectoral winners and losers. For more on what's at stake

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Global growth slowed in 2019...

Change in global growth, attributed to select regions



Source: Haver, CEIC, national statistics, UBS, as of 11 November 2019

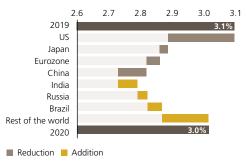
in the US vote and what it may mean for investors, please see "What does the US election mean for my portfolio?" on page 13.

2. Deal or no deal?

China's competition with the US in the economic, technological, and geopolitical spheres creates an ongoing challenge to the previous world order that will not be easily resolved. In an era of "deglobalization," the trade turmoil 1.2

...and looks to remain slow in 2020

Change in global growth, attributed to select regions



Source: Haver, CEIC, national statistics, UBS, as of 11 November 2019

between the two nations could flare up again in 2020, even if an interim deal is reached soon. But, equally, both sides have key influencers who would prefer to curb tensions. A deal to reduce or remove existing tariffs and a pledge to stop adding more could dramatically reduce global economic uncertainty, unlock pent-up investment demand, and

enable US President Donald Trump to "declare victory" in an election year. For more on how to respond to this trend, turn to "How do I invest in a protectionist world?" on page 18.

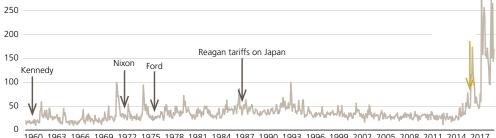
3. Monetary or fiscal?

With interest rates already close to, at, or below zero, the effectiveness of traditional monetary policy is now diminished, leaving us to consider the role of fiscal policy in stimulating growth. Given a divided US Congress, Eurozone budget constraints, and China's concerns about managing leverage, meaningful fiscal stimulus in 2020 appears unlikely, in our view. But low inflation and interest rates do provide the leeway to take a fresh look at the role of government spending, and coordinated fiscal and monetary action could offer material upside to our growth expectations, even if it might require a "mini-crisis" to force policymakers to reassess their current approach. For more on how to think about investing against this backdrop, see "How should I invest in a late-cycle, low-yield world?" on page 20.

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Trade policy uncertainty reached unprecedented levels in 2019

Measured through the frequency of articles in US newspapers that contain references to trade policy and that discuss policy-related economic uncertainty, monthly data

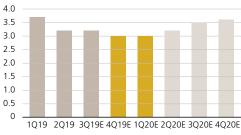


Note: y-axis is a logarithmic scale

Source: Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo "The Economic Effects of Trade Policy Uncertainty," International Finance Discussion Paper, Federal Reserve Board of Governors, as of 10 October 2019

We expect growth to bottom out in 4Q19 and 1Q20

Global real GDP growth, quarter-over-quarter, in %



E = Estimate

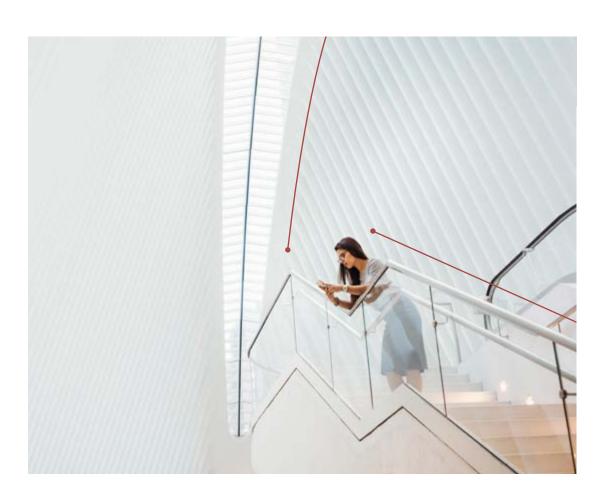
Source: Haver, CEIC, national statistics, UBS, as of 11 November 2019



(1) 79%

A full 79% of investors think we are entering a period of higher volatility; 66% think markets are driven more by geopolitical events than business fundamentals; and 58% regard investment returns as more out of their control than in the past.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019



Investing in 2020

Ultimately these choices are political decisions that financial markets find hard to price, leaving many investors reluctant to take risks. But by choosing investments that are less exposed to these political decisions, investors can reassert some control over their portfolios and, in our view, better prepare themselves for the future. Building a robust portfolio in the Year of Choices involves making the following investment decisions:

- Within equities, we recommend opting for quality and dividends in a late-cycle, low-yield world. We also advise diversifying globally while choosing domestic and consumer-focused companies that are likely to provide more reliable returns than those exposed to trade and business spending, which remain dependent on favorable political outcomes to drive performance (see page 23).
- In fixed income, we suggest a middle-ofthe-road approach in light of the very low yields on the safest debt and the rising credit risks among some high yield issuers. We favor emerging market sovereign debt, select "crossover" names in Europe, and higher-quality issuers within Asian high yield (see page 27). Investors can also seek sustainable alternatives to traditional bonds.

- **Elsewhere**, we opt for precious metals over cyclical commodities, for a barbell combination of safe-haven and higheryielding currencies to outperform the US dollar (see page 29), and for a low beta posture within alternatives.



ֈቀር Choosing your plan

For most investors the best "choice" they can make in 2020 is to filter out the political noise and invest for the long term. The majority of investment performance is driven by choosing the right strategic asset allocation, and investment success is driven by ensuring this is well aligned with personal financial goals. Throughout this report we will cover topics related to our Liquidity. Longevity. Legacy. approach to financial planning. See page 45 for more on this approach.

Liquidity. Longevity. Legacy. disclaimer:

Timeframes may vary. Strategies are subject to individual client goals, objectives, and suitability. This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.



Unsplash / Joshua Ness

Top questions

"What does the US election mean for my portfolio?" Investors should not position in the hope or expectation of a specific outcome to the presidential election. Instead, we think diversification is key. The US is one of our preferred markets, but US stocks could face higher volatility as the election approaches, and some individual sectors – such as technology, energy, financials, and healthcare – could suffer from price swings due to the risk of heightened regulatory scrutiny.

On 3 November 2020, the US electorate will choose who will occupy the White House through 2024, as well as the makeup of Congress. The country's chief executive sets the direction of policy, but implementation depends heavily on the composition of Congress. All seats in the House of Representatives are up for grabs, as usual, while to regain control of the Senate, the Democrats require only a four-seat swing, and 23 of the 35 seats being contested feature Republican incumbents.

What are the key issues for investors?

National elections tend not to affect global investors substantially. But the US presidential vote is an exception to that rule. The US comprises around 55% of the MSCI All Country World index, the Treasury bond yield is a benchmark for global financial asset valuation, and the US dollar is involved in 88% of currency transactions worldwide. So investors both inside and outside the country will need to monitor the debates that touch on a number of key issues.



45%

Investors are divided about which outcome would be most favorable for markets: 45% expect a positive impact if the Democratic candidate wins, 40% if President Trump prevails.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

Corporate taxes

Tax reform under the Trump administration lowered corporate taxes from 35% to 21%, helping boost S&P 500 earnings by close to 10%. If President Trump is reelected we would expect current corporate tax rates to remain the same.

Democratic candidates have put forward various proposals to increase corporate taxes. Former Vice President Joe Biden has discussed a 28% rate, which we estimate would lower S&P 500 earnings by 3%–4%. Massachusetts Senator Elizabeth Warren's proposals, including a 7% additional rate on profits above USD 100m, would have a roughly 7% impact.

US election probabilities implied in betting markets

Democrat		Republican	
Warren 30% Biden 21%	Candidate	Trump 79% Pence 10%	
53%	Presidency	46%	
73%	House control	27%	
35%	Senate control	65%	

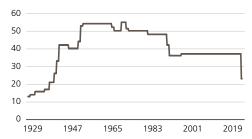
Source: PredictIt, as of 11 November 2019

Debates on this topic could increase volatility in the run-up to the election, but raising taxes would require congressional approval, and passing such a tax hike would only be likely if Democrats secure the White House and a large majority in Congress.



Corporate taxes are a key variable

US corporate tax rate, in %

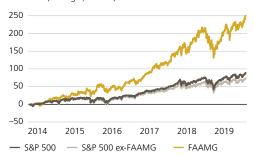


Source: Internal Revenue Services, UBS, as of 22 October 2019



Tech regulation is a potential risk

Performance of FAAMG (Facebook, Amazon, Apple, Microsoft, Google) stocks, S&P 500 with/without FAAMG



Source: Bloomberg, UBS, as of 5 November 2019

Trade policy

The US-China trade conflict has been among the primary drivers of market volatility over the course of the past year.

Although there have been signs of reconciliation between China and the US in 4Q19, investors might fear that a reelected President Trump, no longer facing a future election, could become more adversarial with China. He has already warned that a deal negotiated in his second term would be "far worse." Meanwhile, his political rivals' trade rhetoric suggests that a Democratic president would be unlikely to adopt a more conciliatory approach.

For more on how to respond to trade policy risks, please see "How do I invest in a protectionist world?" on page 18.

Technology regulation

The world's five largest listed companies are US technology firms – together they make up 16% of the S&P 500 market value and 8% of the MSCI All-Country World – and have contributed around 15% to the performance of the US market over the past five years.

Investors should prepare for greater scrutiny of big tech, in our view. President Trump has previously signaled that the tech giants could face scrutiny from antitrust regulators, and the Department of Justice is already conducting a review. Among the Democrats, Warren has released a "How we can break up Big Tech" plan, while Biden has urged further investigation before taking any action.

But although discussions on this topic could exacerbate volatility at the US tech giants, we think meaningful legislation to reduce their market share is unlikely in the near term. Proving that internet companies are monopolies is difficult; antitrust cases can take a long time to build and litigate; and presidents cannot dismantle companies on their own.

Investors concerned about increased regulation could consider diversifying exposure by shifting focus from the larger tech firms to other companies benefiting from long-term digital transformation. For more, see page 49.

Environmental legislation

The Trump administration has loosened environmental regulations, and this trend would likely continue in a second term, while any Democratic president would almost certainly retighten them.

Bigger policy changes such as the Green New Deal are unlikely to pass if Congress is divided. However, the carbon-based energy sector may well come under pressure from measures to curb carbon emissions, and the exploration and production subsector could be affected if a President Warren followed through on her pledge to ban fracking by executive order, even if the legal status of such a move is unclear.

By contrast, we would expect companies connected to clean energy, clean air, carbon reduction, and energy efficiency to perform better under a Democratic administration, so they could offer a potential "hedge" against the risk of more aggressive environmental legislation.

Redistribution

A reelected President Trump would try to make the personal tax cuts enacted in 2017 permanent. Under a Democratic administration, however, income tax rates for wealthy Americans would likely go up, in our view, with the federal minimum wage and Social Security payments probably rising as well.

Proposals like a wealth tax are unlikely to be passed without a sizable Democratic majority in Congress, but a higher top income or capital gains tax rate is more plausible.

Proposals for higher minimum wage and social security payments, if enacted, would also feed into our broader theme of choosing to add exposure to consumer rather than business spending in 2020.

Health reform

The Affordable Care Act (ACA) has been weakened under President Trump. Democrats still favor the ACA – Biden aims to preserve most of it, and build on it with a new government-run public insurance option. Warren advocates "Medicare for All," which would cost the US government about USD 32–33trn over 10 years, although any such bill would be unlikely to pass without a Democratic supermajority in the Senate.

မှု Flexibility is key

When it comes to tax planning, maximizing flexibility can be far more effective than strategies that rely on accurate forecasts of tax rates. Many investors are already building flexibility simply by saving across a mix of taxable, tax-deferred, and tax-exempt accounts. When this is paired with a careful strategy in retirement, investors can effectively manage their tax liabilities without compromising on meeting their goals if tax rates differ from expectations.

If the Democrats win, therefore, a move toward greater provision of public healthcare is likely, as is a form of restriction on the prices drug companies can charge, which already enjoys some bipartisan support. Limits to pricing power would hurt the healthcare sector and the pharmaceutical industry.



Planning your healthrelated needs

According to our estimates, the average 65-year-old healthy couple retiring in 2019 in the US will spend USD 300,000-600,000 on healthcare costs in retirement, and that's before longterm care costs. Yet just 12% of US residents have done specific planning for healthcare expenses in retirement, according to The Journal of Retirement. Health-related needs vary by person and by country, but everyone should include healthcare costs and consider the potential of requiring long-term care assistance when estimating future spending in retirement.



"How do I invest in a protectionist world?"

The trade dispute between the US and China has hampered business investment and hurt companies exposed to global trade. In the year ahead, volatility among trade- and investment-dependent companies is likely to remain elevated, with returns dependent on political choices. We therefore recommend seeking domestic- and consumer-oriented investments, which should deliver more reliable returns, while also looking for long-term beneficiaries of the deep-seated US-China rivalry.

The world is transitioning toward an era of deglobalization (see page 37) with rivalry between the US and China fueling the trend. While policymakers could choose to slow the pace of this transition in 2020, it is unlikely to reverse, in our view. The two countries have made some progress toward hammering out a partial interim trade deal, but their longerterm positions are staked out, and we see little to suggest a more substantially conciliatory approach will be adopted even after the US presidential election.

The move away from globalization is also occurring beyond the US-China conflict. Brexit is likely to result in greater frictions in UK-EU trade; Japan has taken steps to limit technology exports to Korea; and the US has threatened to impose tariffs on European goods. Elsewhere, controls over foreign ownership on national security grounds are becoming more commonplace.



a) 44%

of investors are highly worried about the trade conflict affecting their portfolios in 2020. Fewer than half (45%) expect it to be resolved before the US presidential election.

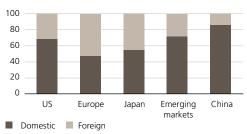
Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

In the face of deglobalization, investors should globalize their own portfolios to mitigate the risks of specific trade-related positions, while also looking for the relative winners from the US-China rivalry. It will also be important to stay nimble. With protectionism becoming a feature of the year ahead, tradeexposed markets like Korea, Taiwan, and the Eurozone could rally markedly if an agreement to roll back tariffs is reached.

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Europe is the market most exposed to global trade

Domestic vs. foreign exposure for listed companies in select regions, in %

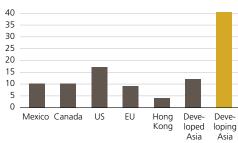


Source: Morgan Stanley, as of 30 May 2019

2.4

Trade tensions could create new opportunities

% of surveyed US companies operating in China that have moved, or plan to move, capacity to the following regions



Source: American Chamber of Commerce China, 2019 China Business Climate Survey, as of 16 December 2018

Choose domestic over global

It is important for investors to diversify globally to reduce their exposure to individual risks. But we also think that countries and sectors that derive a high proportion of their revenues domestically are likely to be more stable choices in a more protectionist world. In this regard, we like the US and Chinese markets, and are cautious on the Eurozone. For more, see page 25.

Prefer consumer to business spending

The transition to a protectionist environment will generally favor companies that depend more on consumer than business spending, in our view. While consumers ultimately bear the cost of higher tariffs, their small spending decisions are less vulnerable to geopolitical uncertainty than major business capital expenditures. Recently, manufacturing has borne the brunt of the trade-related slowdown, while consumer-facing sectors have proved more resilient. We like the US consumer discretionary sector, while materials and IT are our least preferred sectors globally. For more, see page 25.

Look for future beneficiaries

If the US-China tensions persist, emerging market infrastructure could offer opportunities as supply chains adjust and boost demand for infrastructure outside China. Some companies are already shifting their supply chains to Vietnam, Malaysia, and Thailand, promising economic and market upside. The rising relative cost of labor in China is also driving a transition toward markets like India. More generally, we expect greater infrastructure spending to take place across Southeast Asia in 2020, particularly in the Philippines, Malaysia, and Thailand.

"How should I invest in a late-cycle, low-yield world?"

The global economy is close to completing its 10th consecutive year of more than 3% growth, and bond yields are close to multi-year lows. This combination is contributing to anxiety among investors. We recommend tilting portfolios toward quality and yield, and considering explicit downside protection. Investors under-invested in the market should think about phasing strategies.



0) 55%

of investors say they expect a significant drop in the markets before the end of 2020.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

The global economy is now a full decade into a historic expansion. Global growth has not slipped below 3% in the past 10 years, the longest such run since the 1960s. The US is entering a record 11th year of expansion. Furthermore, investors have enjoyed impressive returns in almost all financial assets over the past decade. So it is easy to perceive a recession as long overdue. With prospective returns likely to be limited (see page 41), it is tempting to consider retreating to the safety of cash and awaiting a better entry point for risky assets.

While it is possible a better entry point could arise in 2020, there is no guarantee of it. In particular, a US-China trade deal or a move

toward greater monetary and fiscal policy coordination could extend the cycle and lift markets (see Scenario Analysis on page 22). The Federal Reserve has also shown greater willingness in this cycle to act pre-emptively to forestall slower growth. And, one benefit of the relatively slow pace of economic growth in recent years is that few of the imbalances typically associated with the end of an economic cycle are evident.

Investors may regard the cost of missing a modest rally as tolerable, but that begs the question of whether they would then be willing to buy in when the market is higher. It is easy to get caught in a recurring trap of waiting for a sell-off as the market sets new highs. This trap can be particularly expensive over the long term, when central bank policy is making cash and bonds unappealing.

Nonetheless, the Year of Choices is no time to be taking undue risks, and it is understandable to want to limit exposure to a possible recession. But how can you do this while not

running the risk of being perennially caught on the sidelines?

For investors holding a portfolio and wondering whether now is the right time to reduce exposure, we highlight select investment strategies:

- Tilt toward quality and dividends. In a late-cycle, low-yield environment, we believe investors should tilt their equity holdings toward quality and dividend investments. For more details, see page 24.
- Invest with protection. Investors worried about market downside could consider strategies to reduce volatility or add explicit protection. They might increase their diversification via dynamic or systematic allocation strategies, or through structured solutions such as notes that offer a degree of capital protection.

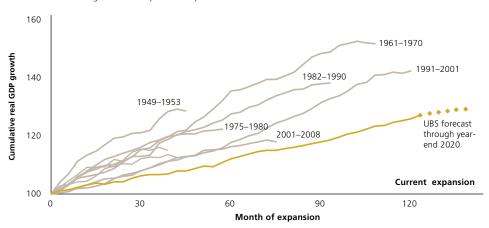


Reframing time horizons

Before making major changes to your portfolio, it is important to approach investment-related decisions through the lens of your overall financial plan to ensure assets are aligned with your specific needs and their respective time horizons. Financing longer-term goals usually does not require focusing on market timing. And for those assets that will not be needed for at least a single economic cycle, there are plenty of opportunities within our longerterm investment themes (see page 49), as well as in private market investments.

The current expansion has been long, but slow

Cumulative real GDP growth of US postwar expansions



Source: UBS, St. Louis Federal Reserve, as of 1 October 2019

And for investors holding cash waiting for the right time to invest:

- **Phasing.** On average, investing cash deposits straightaway is the best option. Historically, for a US 60% stock, 40% bond portfolio, phasing in cash over 12 months would have underperformed an all-at-once approach by an average of 4.4ppts. Still, this opportunity cost may be preferable for some investors, particularly if they are deploying a large lump-sum deposit, in which the potential cost of poor timing is greater. These investors could set a schedule for deploying capital – including a plan to speed up purchases if a dip-buying opportunity presents itself – to reduce opportunity cost while also managing the risk of regret.
- Put writing. A put writing strategy might be relevant for investors who expect rangebound markets and higher volatility, for those looking to buy into market dips in a disciplined way, or for those looking to diversify their sources of portfolio income in a low-yield world. Writing put options gives other investors the right to sell them a security at an agreed-upon price in the future, in exchange for a premium. If the market rallies, the put writer would miss out on price gains, but would retain the premium. If a sell-off occurs, the put writer would still earn the premium, but would be obliged to buy the security at the agreed-upon strike price (which could be higher than prevailing market levels).

Scenario analysis

In a Year of Choices we do not recommend positioning in a way that is overly dependent on a given scenario materializing. To identify opportunities and manage risks effectively, we seek to understand the range of outcomes, probabilities, and potential market impacts.

Scenario	"Choice" outcomes	Probability	Potential market impact over 6m
Growth boost	Trade deal / coordinated stimulus	10%–15%	– S&P 500 total return: 5%–10% – US 10-year yield: 3.0%–3.5% – EURUSD: 1.20–1.30
Stable growth	Limited deal / fiscal stimulus	50%–55%	– S&P 500 total return: 0%–5% – US 10-year yield: 1.75%–2.25% – EURUSD: 1.15–1.20
Slowdown	No deal / monetary stimulus	25%–30%	– S&P 500 total return: –10% to –15% – US 10-year yield: 0.75%–1.25% – EURUSD: 1.10–1.15
Recession	Trade escalation/ monetary stimulus	10%–15%	– S&P 500 total return: –25% to –35% – US 10-year yield: 0.25%–0.75% – EURUSD: 1.05–1.10

Source: UBS



Plainpicture / Achim Bunz

Investment views

Equities

Global equities have delivered positive returns over the past 12 months against a backdrop of slowing growth and falling interest rates. Our base case, as we enter 2020, posits muted stock market performance for the

year, but we note the two-way uncertainty in our Year of Choices. In this environment, we seek more reliable returns by focusing on quality and yield, domestic exposure, and consumer spending.

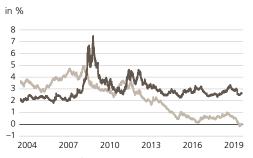
Look for quality and dividends

In 2020, we forecast equity earnings to increase by around 5% in the US and 6% in emerging markets, and to contract by 3% in the Eurozone. Meanwhile, with global central banks having cut rates to prolong the expansion, investors are likely to continue to hunt for yield. In this environment, we think investors should prioritize both quality and dividends:

- Globally, we prefer quality companies with higher profitability, lower financial leverage, and less earnings volatility than the overall index. Such companies tend to perform relatively better during periods of economic slowdown and recession.
- In the US, we position our Dividend Ruler strategy with a bias toward higher-yield, higher-quality companies compared to the overall market. We continue to believe this focus on high-quality companies should provide some downside protection if economic risks rise.
- In Asia, dividend yields are higher than their historical average, and we see scope for dividend growth. We like high-dividend yielding stocks in markets where the dividend yield on stocks is higher than the yield on government bonds, particularly in Singapore, Hong Kong, Thailand, and Taiwan.
- In Japan, one of our preferred markets as we enter 2020, we believe Japanese real estate investment trusts are well positioned to benefit in a low-yield environment.

(3.1

Dividend yields look attractive vs. bond yields



 Dividend yield of Eurozone stocks (Euro Stoxx)
 Yield of EUR-government bonds (Barclays Euro Aggregate Government index)

Source: FactSet, UBS, as of 25 October 2019

- Within the Eurozone, dividend plays are appealing, given the near record-high gap between dividend and bond yields in the region. We seek stocks with high sustainable dividend potential.
- In Switzerland, there is a similarly wide gap between dividend and bond yields. The overall MSCI CH has an average yield of around 3%, versus zero or even negative for Swiss bonds. We look for defensive names that boast attractive valuations and dividend yields, as well as robust earnings growth relative to the wider market.



67%

of investors are looking to increase their holdings of high-quality dividend-paying equities, in response to low yields.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

 In emerging markets, we believe an attractive way to improve the quality of your equity portfolio is to invest in companies highly rated according to environmental, social, and governance criteria ("ESG leaders"). Emerging markets (EM) face some major challenges in the coming years, which will put stress on resources like water, food, and energy, and may result in increased environmental and social risks. Although regulation in EM is often less robust than in developed markets, we believe it will continue to tighten, and, consequently, EM companies with higher ESG standards may deliver more sustainable financial performance with lower downside risk. The MSCI EM ESG Leaders index has already outperformed the broader MSCI EM index on average by more than 3% annually (end-of-September 2007 – end-of-September 2019).

Go domestic over global

Companies exposed to global trade are likely to be dependent on a favorable political climate in the year ahead, and so could experience higher volatility. We prefer stock markets that rely more on domestic spending.

- We prefer US stocks to Eurozone equities. 69% of US company revenue is generated domestically compared with 47% for Eurozone firms, while 58% of US revenue is derived from the consumer compared with just 36% in the Eurozone. Within Europe, we recommend focusing on the more domestically-oriented financials and utilities sectors.
- We like China within EM equities. Chinese stocks may appear vulnerable to trade tensions with the US, but in fact the country's listed companies generate only 2% of their sales in North America, and 86% domestically making the market among the least exposed to trade within EM. Chinese authorities have also stimulated their economy in response to the trade dispute.

Choose consumer over business

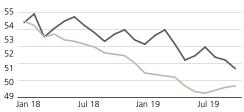
Even in the event of an interim US-China trade deal, policy uncertainty will likely continue to weigh on business investment. We expect consumer-facing sectors to prove more resilient thanks to vibrant labor markets and healthy wage growth.

 In the US, we overweight the consumer discretionary sector, which should benefit

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Consumption has proven resilient

Global manufacturing and services PMIs



Global Services PMI
 Global Manufacturing PMI

Source: JPMorgan, UBS, as of 31 October 2019

- from relative strength in the US labor market. In particular, we are attracted to strong brands with pricing power and companies aligned to the needs of millennial consumers that should drive consumption trends for years to come.
- In Europe, we like European companies exposed to consumer-driven spending in emerging markets. We look for companies that have, on average, 40% EM exposure, which we believe should bode well for sales and earnings.
- In Asia, we focus on Chinese internet and 5G beneficiaries, which should gain from consumer adoption of 5G smartphones.
- Our least preferred global sectors include materials and information technology, both of which are more exposed to business than consumer spending.





Fixed income

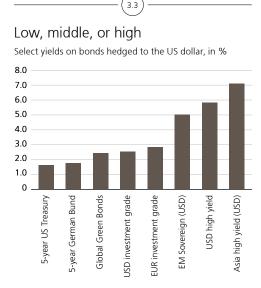
Bond yields fell sharply in the past year, and the outstanding supply of negative-yielding debt now totals as much as USD 12trn. We doubt yields will move much lower, but also see little to suggest that the yield environment will improve. Low yields might tempt investors to turn to riskier instruments. But corporate credit fundamentals at some high yield companies are showing signs of deteriorating. We recommend choosing fixed income investments in "the middle lanes," avoiding the safest and the riskiest issuers, and looking for sustainable alternatives.

Choose the middle lanes

Limiting exposure to negative-yielding debt and increasingly risky high-yielding credit means fixed income investors should look to drive in the middle lanes.

US dollar-denominated emerging market sovereign bonds offer a yield of 5% (EMBIGD index). It remains a well-diversified asset class with over 70 countries in the index, which helps investors limit exposure to idiosyncratic issues. Emerging market growth also remains structurally higher than developed markets – China alone will make up 6% of broad global bond indexes by the end of 2020, and EM 13%.

Within US fixed income, we favor senior loans over high yield bonds. They offer comparable carry to high yield, but with a secured



Source: Bloomberg, UBS, as of 22 October 2019

structure. We expect the underperformance of floating rate assets during 2019 to fade in 2020, as the rush into fixed rate securities ebbs. We think defaults will be low and recovery rates on secured loans high.

In Asia, we look for good-quality names in the high yield space, and prefer BBB within investment grade. We favor investment grade bonds, which can provide enough spread cushion to withstand the volatility in rates, including Chinese government-related issuers and select corporate bonds issued by Indian privately-owned companies. China property remains our preferred sector in high yield.

In Europe, we look for select investments in the "crossover zone" between investment grade and high yield. The ECB is buying bonds, so corporate spreads should be relatively contained, and investors able and willing to stomach the potential volatility of "crossover credit" investments can earn potentially significant alpha if key rating agency action is anticipated correctly.

Choose sustainable over traditional

Another way to improve the quality of your fixed income portfolio is to look for "sustainable" alternatives to traditional bonds.

- The green bond index (GREN) has achieved a similar total return to the ICE global corporate credit index since March 2014.
 Yet it has less exposure to cyclical sectors and a higher average credit quality than the broader investment grade market (low AA compared with low A), which should be useful against an uncertain market backdrop.
- Multilateral development bank bonds have steadily outperformed US Treasuries since January 2018, with a low volatility of excess returns.
- An alternative route into the high yield market is to seek environmental, social, and governance (ESG) engagement high yield bond funds. They provide exposure to bonds issued by companies that could benefit from specific identifiable ESG improvements. In these cases, the investment manager proactively lobbies and works with company management to drive progress.

Currencies, commodities, alternatives, real estate

Currencies

Choose barbells over greenbacks

We expect the US dollar to weaken over the course of 2020. In recent years, high interest rates, risk aversion stemming from the downturn in global trade, and support from earnings repatriation have supported the USD. But over the coming year(s) US growth and interest rates will be closer to those elsewhere in the world, and uncertainty ahead of the US election and the waning effect of tariffs suggest a weaker greenback is likely.

The dollar's exclusive position in recent years as a relatively high-yielding currency with safe-haven characteristics will be hard to replicate. But we think it can be approximated through a barbell approach that combines relatively stable low yielders with promising high yielders. In an uncertain environment, we think the Japanese yen and the Swiss franc will benefit from safe-haven flows. Meanwhile, the "hunt for yield" is likely to benefit select emerging market currencies. In particular, those countries enjoying rising

GDP growth, investment, productivity, and fiscal stimulus are likely to find their currencies in demand. Currently, we like the Indian rupee and Indonesian rupiah.

Commodities

Go precious over cyclical

We see gold appreciating in 2020, albeit at a slower pace than in 2019, when it was up 18% in the year to October. Muted economic growth and now lower interest rates reduce the opportunity cost of holding gold, which does not offer a yield. Political uncertainty could send safe-haven flows into gold. And since gold is priced in USD, a weaker dollar would in turn push gold prices higher.

In contrast, ongoing economic concerns dampen the outlook for cyclical commodities. In the absence of a broader recovery in manufacturing and investment activity, the conditions are building toward market surpluses both in industrial metals and in oil.

Of course, sudden changes in the outlook are possible, and investors should remain vigilant. In oil, OPEC supply remains a wild card. Price declines to USD 55/bbl or lower could offer an opportunity to buy, while price setbacks in copper and aluminum could also offer a chance to go long. In precious metals, investors should bear in mind that insurance-like qualities do not come for free. If geopolitical tensions ease or the economy recovers more quickly than we expect, performance would likely suffer.

Alternatives

Opting for lower beta

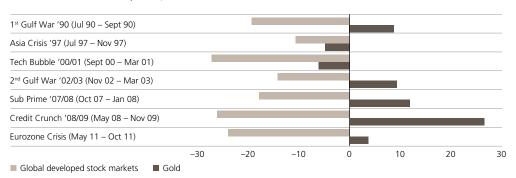
In a year with significant two-way uncertainty around our base case, we think investors should choose to pursue relative value and market neutral strategies for their hedge fund allocation. Both can still achieve returns in directionless or falling markets. We also think macro funds could outperform under such conditions. Since they can invest across a range of asset classes, they can capture carry or exploit shifts in economic policy.

In private markets, investors continue to seek an illiquidity premium, estimated by academic studies at 1–3ppts, in return for committing their funds for a longer period. However, purchase price multiples are rising and the use of debt is high, indicating that private markets may be entering a late-cycle period.

3.4

Gold can outperform during times of crisis

Performance over select time periods, in %



Source: Bloomberg, UBS, as of 29 October 2019

Against this backdrop, we favor strategies that can deliver returns less dependent on the macro environment. We like managers with proven operational value creation capabilities and investments that reflect durable organic growth rates. In private debt markets, we prefer more conservative managers who can deploy capital in less-explored areas to maintain attractive risk-reward for investors.



နှံြ Building a legacy

Private market investments can play an important role in investors' Legacy strategies. Investors, who do not need immediate access to a portion of their overall wealth, can benefit from superior long-term returns due to illiquidity premiums, access to niche opportunities, and emphasis on driving operational value.

Real estate

Picking late-cycle winners

Prices of both residential and commercial real estate have been inflated by years of low borrowing costs, affecting the choices that investors should make in coming years.

Risks in the owner-occupied housing market are elevated in a range of major cities, with a heightened danger of price declines in Paris, Munich, and Vancouver. Regulatory interventions to improve affordability have become a growing issue. However, pockets of relative value remain, including in Chicago, Milan, and Dubai. Residential investors should therefore choose their locations carefully. A diversified property portfolio in such fairly valued or undervalued cities would improve the potential for an attractive risk-adjusted rate of return over coming years, in our view.

In commercial real estate, we advocate an active management strategy. Skilled managers can still unlock value, even in periods when overall returns are likely to be modest and transaction volumes are falling. Investors should choose investments based on longterm structural trends, such as the growth of e-commerce, urbanization, and aging societies. For example, urban logistics real estate, like small warehouses and distribution centers that facilitate the last stages of the delivery process, stands to benefit from the rise of e-commerce, while secondary retail assets are coming under pressure and should be avoided.



The Decade of Transformation

The past decade generated excellent returns across financial assets, amid unprecedented monetary stimulus.

A Decade of Transformation now beckons. Working-age populations will begin to shrink in high-income countries. We expect the trend toward deglobalization to gain momentum, and foresee a less favorable political backdrop for high-income individuals. Major environmental and technological movements and advances are likely to disrupt existing norms. On the whole, we anticipate the coming decade will be a more challenging one for investors and business owners than the past one was.

Though such a transformation can be uncomfortable, it will bring opportunities with it too. Like globalization, deglobalization will also mean winners and losers. Demographic change will boost emerging markets and sectors like healthcare. The technological revolution will present myriad options for investment in areas such as 5G, artificial intelligence, cloud computing, and genetic therapies. Meanwhile, the shift in consumer preferences and government regulation toward

more sustainable products and services is only just beginning, and could prove to be the most exciting and durable growth opportunity of the next 10 years.

How to balance the risks with the opportunities in the decade ahead? We think a robust financial plan is an essential starting point. On page 45, we detail our Liquidity. Longevity. Legacy. framework, which can help you align your portfolio with your financial goals while helping to steer you clear of common investing pitfalls. It enables you to target longerterm trends (see page 49) with the confidence that your near-term needs have been addressed.

Finally, for entrepreneurs, we detail how the remaking of the world taking place might affect your company, and reveal what entrepreneurs within our UBS Industry Leader Network* are doing to prepare their own firms for a Decade of Transformation.

Liquidity. Longevity. Legacy. disclaimer:

Timeframes may vary. Strategies are subject to individual client goals, objectives, and suitability. This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.

^{*} The UBS Industry Leader Network is a global group of UBS clients and prospects who are private business owners and executives. Their views may differ from those of UBS.

The world in 2030

People moving to cities



Source: United Nations

Change in more developed market workers



-25 million

Change in less developed market workers



+470 million

5G connections





UBS estimates

Internet of Things devices

2019

10 billion



46 billion



Internet users in billion people



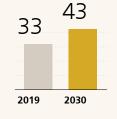
Source: Cybersecurity Ventures

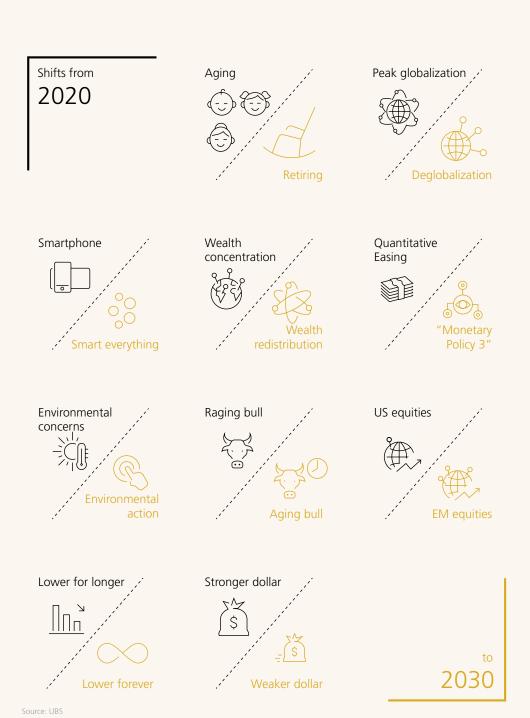


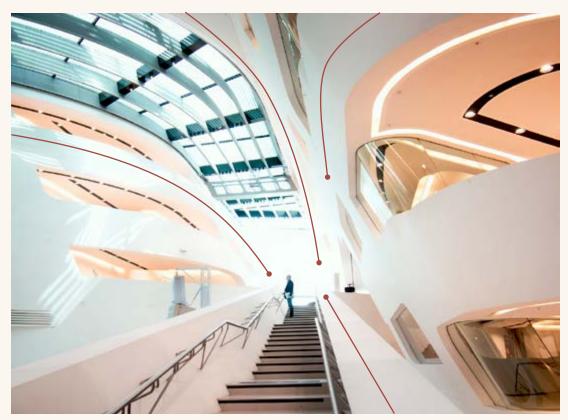
More megacities

Cities with a population over 10 million









Unsplash / Julia Solonina

Six key transformations

In a Decade of Transformation, we identify six key trends that we think will play the biggest role in shaping outcomes for investors over the coming 10 years: deglobalization, technological disruption, wealth redistribution, "monetary policy 3," demographic change, and environmental action.



87%

Surveyed investors identified an aging population (87%), smart technology (86%), increased automation (85%), artificial intelligence (85%), and diminishing natural resources (82%) as the key "mega trends" likely to change the world in the decade ahead.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

1. **Deglobalization**. After accelerating through the 1990s and 2000s, globalization peaked in the 2010s. Its recent falloff has been a product, in part, of trends such as digitalization and localized manufacturing (see Technological disruption). Policymakers could choose to slow the pace of deglobalization in 2020, but we ultimately expect the US-China rivalry to contribute to a less unified world in the 2020s. Overall economic growth will decline if economic nationalism, tariffs, currency intervention, subsidies, and capital flow restrictions become more prevalent. Meanwhile, the formation of an East-West "Silicon Curtain" could result in incompatible standards, forcing regions such as Europe, which currently benefits from relatively free trade with both China and the US, to "choose" sides. As was the case with globalization itself, relative winners and losers will emerge. Realignment of supply chains should increase infrastructure spending in some emerging markets (see page 19). Investment in technology may also climb. Companies and countries that rely more on domestic spending should fare relatively better.



2. Technological disruption. The fourth industrial revolution will lead supply chains to localize. Complex tasks like driving will become automated, and the confluence of 5G, big data, and artificial intelligence will give rise to "smart everything." Moonshot developments like quantum computing, though hard to predict, could redefine the

Europe may be caught between the US and China



boundaries of what is considered possible. More accessible gene-editing advances might even cause us to question what it is to be human. The upside is higher long-term growth, aggregate improvements in living standards, and large gains for investors in fast-growing industries (see page 49). The dangers include disruption to existing business models, problems caused by a potential fracturing in global technological standards (see Deglobalization), and the social and political consequences of technological unemployment. McKinsey estimates that up to 800 million jobs could be lost worldwide by the end of the decade as a result of technological progress. While such forecasts are imprecise, this trend has already built political momentum for policies such as universal basic incomes, and could yet have further political consequences (see Wealth redistribution).

3. Wealth redistribution. Worldwide, the share of economic output going to labor is close to a multi-decade low. In the US, the percentage of wealth owned by the top 0.1%

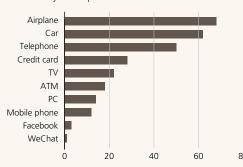
has approached that held by the bottom 90% for the first time since the 1930s. Causes include lower corporate tax rates, automation, increasingly global supply chains, and the rise of capital-light superstar firms. In the decade ahead, we expect wealth concentration to transform into wealth redistribution. Leftleaning parties in countries like the US and the UK are proposing increasingly radical prescriptions for addressing income and wealth inequality. Although voters in the months to come will provide an indication of whether wealth concentration has yet hit its political limits, investors should prepare for some combination of higher taxation, greater regulation, and antitrust measures over the next decade. Meanwhile, policies such as higher minimum wages and social security outlays (potentially funded by a *Monetary Policy 3*) could support companies exposed to consumer spending.

4. "Monetary Policy 3." The role of monetary policy expanded in the 2010s. It stepped beyond the traditional bounds of interest rate

(4.2)

A faster pace of technological change

Number of years required to reach 50m users

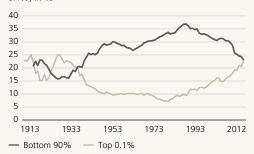


Source: UBS, as of 22 October 2019

(4.3)

Wealth inequality has risen

US net wealth shares held by bottom 90% vs. the top 0.1%, in %



Source: The World Wealth and Income Database, as of 1 October 2019

(4.4)

Federal debt is at historically high levels

Gross federal debt held by the public as a % of GDP



Source: Bloomberg, UBS, as of 30 April 2019

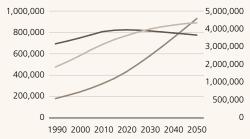
setting toward "unconventional" asset purchase programs. As policymakers consider the right course of action to pursue to manage their economies and support their aging populations (see Demographic change), we expect to see a transition toward what Bridgewater Associates' Ray Dalio has termed "Monetary Policy 3" (MP3). Here fiscal policy would assume a greater role in stimulating economies, in conjunction with monetary policy. In the most extreme form of MP3, central banks would hand over printed banknotes directly to consumers and governments. Such policy could result in higher consumption, government spending, and economic growth, or end in inflationary catastrophe. Outcomes could also be expected to vary by region.

5. Demographic change. More people, both in high and in upper-middle income countries, will retire in the next decade than will enter the workforce: working-age populations will peak in 2020 and 2025, respectively. This will



The working-age population will peak in high-income countries

Size of population in ages 15-64, in thousands



- High-income countries (left scale)
- Low-income countries (left scale)
- Middle-income countries (right scale)

Source: United Nations, Department of Economic and Social Affairs, as of 11 November 2019



47%

Regarding extreme risk scenarios, 47% of investors believe that a "natural disaster via climate change" is very or extremely likely to occur over the next decade, more so than any other scenario.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

mean lower rates of GDP expansion. It will also provoke questions about government funding (see "Monetary Policy 3"). At the same time, rapid population growth will continue in many emerging markets. Overall, it should stoke economies in these regions, as well as increase demand for things like water infrastructure. That said, countries experiencing a "demographic dividend," such as India, must also create a sufficient number of jobs

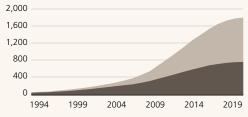
to mitigate the risk of social unrest or worsening global migration challenges. Meanwhile, we expect demographic shifts to promote consumer preferences for sustainable products (see *Environmental action*). In the next decade, the millennial generation – which polls indicate is more concerned about sustainability than prior generations – will become the biggest earning cohort worldwide.

6. Environmental action. Over the past decade, rising temperatures, extreme weather events, and concerns about air quality contributed to a sense of environmental crisis. In the decade ahead we believe this sense of crisis is likely to spur action. We expect consumer preferences to shift toward more sustainable products. Green parties could earn a higher share of the vote and influence government policy choices. And technological advances are helping clean energy to become competitive with fossil fuels. All this makes us confident that greater adoption of sustainable products and services is likely in the decade ahead, and investors should position for this trend. But we are far from certain that even a real commitment to sustainability will avert further environmental problems. So investors will need to carefully consider environmental risks in their decision-making. Such considerations are particularly relevant when investing in long-term physical assets like real estate, utilities, and infrastructure.



Climate change regulation is increasing

Sum of global executive and legislative actions



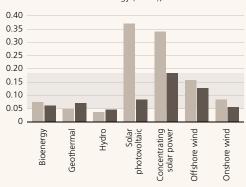
■ Executive ■ Legislative

Source: Climate Change Laws of the World database, Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law, as of 18 October 2019



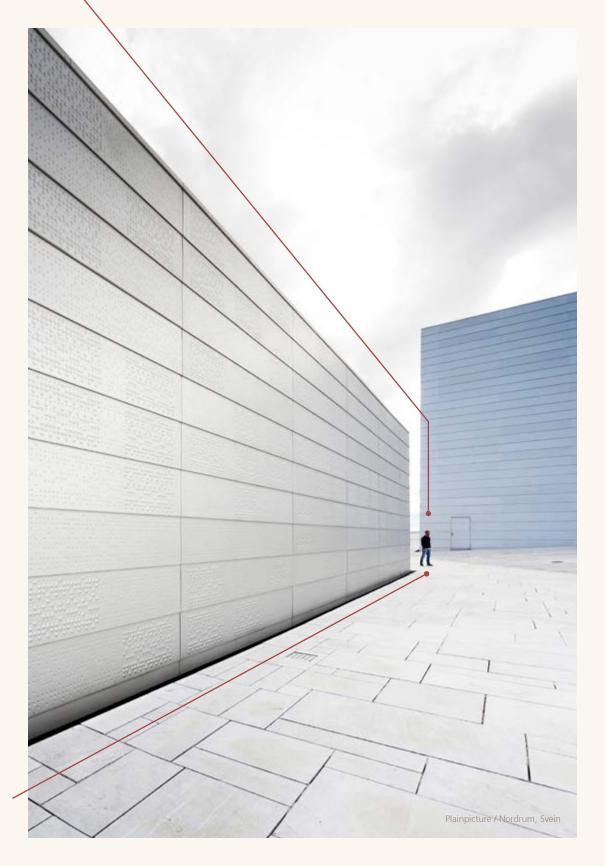
The cost of producing select renewables has dropped

Global levelized cost of energy (LCOE), in USD/kWh



Source: IRENA, UBS, as of 31 May 2019

■ 2010 ■ 2018 ■ Fossil fuel cost range



Our return assumptions

Overall, we expect the Decade of Transformation to generate lower returns and spur higher volatility for most financial assets than in the past decade. Investors targeting a given level of return in well-diversified portfolios may need to increase their allocation to riskier assets such as equities, and reduce their allocation to assets like bonds. Equally, investors targeting a given level of risk may need to accept lower, or even negative, returns as a necessary price of that safety.



69%

of investors are optimistic about investment returns over the next decade. Optimism is highest in Latin America (83%) and lowest in Switzerland (56%).

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019



39%

of investors believe equities will be the best performing asset class over the next decade. Optimism about them is highest in the US (57%) and lowest in Switzerland (10%).

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

Cash

We expect short-term interest rates to remain low relative to historical norms, albeit somewhat higher than the average of the past decade and the levels prevailing today. Low unemployment, shrinking workforces in wealthy nations, and the effects of deglobalization could push wages higher, but the effects of technological progress and wellanchored consumer price expectations should keep inflation low overall and close to central bank targets. Meanwhile, an ongoing surplus of global savings and an increasingly capitallight economy are likely to translate into real money market rates that we expect to converge to only around 0.5% in the US and below zero in Europe.

Bonds

Our estimates for bond returns stem from our view that interest rates will remain broadly low. Overall we forecast nominal returns of about 3% a year in USD high grade bonds. Within USD high yield credit, we see default rates averaging 3.5% annually, close to the long-run norm, and producing total nominal returns around 5% yearly for USD high-yield bonds.

Equities

Returns for the most part are likely to be much lower than in the last decade – we expect 4%–6% nominal returns per year in developed markets in local currency terms. Although valuations are generally below long-term averages (with the exception of the US and Switzerland), the effects of modest global economic growth and contracting profit margins are likely to weigh on returns. In particular, aging populations will contribute both to slower growth and to greater competition for labor, while deglobalization and potentially higher corporate taxes could also pressure profits.

Nonetheless, equities should still return more than most other asset classes.

Within equities, we expect emerging markets to reverse their underperformance of the past 10 years and outpace their developed counterparts. We estimate roughly 9% annual returns in USD terms thanks to the better potential for long-term profit growth. EM volatility is likely to remain high, however, so investors should prepare for periods of underperformance.

Commodities

We estimate around 4% annualized nominal returns for broadly diversified commodity indexes in USD terms. Around half of this return stems from returns on cash held as collateral against commodity futures positions. The rest comes from the long-term equilibrium level of commodity prices being higher, in our view, than current levels. The volatility of the asset class suggests to us that investors should consider broad commodity exposure as a tactical, rather than a strategic, investment.

Alternatives

Funds of hedge funds are expected to deliver around 5% annual returns to investors, a ccording to our estimates. This forecast is somewhat lower than in the past, and reflects the effect on hedge funds of lower rates on cash and fixed income. We expect risk parity funds to return around 7% a year. Although the fall in bond yields hurts such funds' prospects, the commensurate drop in interest rate expectations also leads to lower borrowing costs. It is also worth noting that the difference between expected equity returns and borrowing costs has risen over the past year. In private markets, we anticipate returns of 8%-10%, higher than in public markets due to the effects of illiquidity premiums, manager skill, and greater access to niche opportunities.

Currencies

Generally, we advise investors to hedge foreign currency exposure to reduce portfolio volatility. But we believe the Japanese yen and the British pound will deliver attractive returns over the next decade. So international investors should consider holding some Japanese and UK assets unhedged. We expect the US dollar to depreciate relative to the euro, but we anticipate this will be offset by higher interest rates in US dollars. Thus, for international investors, hedging US dollar exposure helps reduce risk but is unlikely to markedly affect returns. Other currencies, for the most part, are fairly valued in our view.



A balanced Longevity strategy

In spite of the lower returns likely in the decade ahead, we believe a welldiversified and balanced portfolio of equities, fixed income, and alternative assets should form a core part of investors' Longevity strategy.



Planning for the decade ahead

To balance the risks of a Decade of Transformation with potential longterm opportunity, investors will have to build a robust financial plan. They must think carefully about how much to devote to short-term needs, while setting aside a sufficient amount to invest for the long term. We believe the Liquidity. Longevity. Legacy. approach can help investors achieve their financial objectives, reduce their anxiety about short-term risks, and enable them to take advantage of longer-term opportunities.

Liquidity. Longevity. Legacy. disclaimer:

Timeframes may vary. Strategies are subject to individual client goals, objectives, and suitability. This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.



(1) 65%

of investors with a long-term plan feel "highly confident" about achieving their long-term objectives, versus 51% who do not have a long-term plan.

Source: UBS Investor Watch on the Year Ahead. "Decisions, decisions," 2 Volume 2019

The Liquidity. Longevity. Legacy. framework allocates your wealth into three strategies:

- The Liquidity strategy is designed to cover your needs for the near term. In general, we recommend maintaining up to a year's worth of spending in this strategy during your working years as a buffer to cover "emergency spending." For investors approaching retirement or in retirement, we recommend setting aside three to five years of cash flow needs from your portfolio, in order to navigate market volatility while reducing the risk of needing to sell investments at a loss to fund living expenses. A Liquidity strategy might be held in cash or invested in short-term bonds or a bond ladder, supplemented by borrowing capacity.
- The Longevity strategy is designed to meet your needs for the rest of your lifetime. The longer time horizon makes it important to focus on growth, but the potential need to replenish your Liquidity strategy also means you should include measures to limit volatility. We think a balanced portfolio is usually the best way to mix growth and downside protection in your Longevity strategy. For a

The Liquidity. Longevity. Legacy. framework



Source: UBS, as of 18 November 2019

30-year retirement period, investors may be able to finance their retirement with 20–30x years of net cash flow needs saved. For 40–50 year retirements, 30–35x might be needed, though specific amounts will depend on the risk profile of the Longevity strategy and whether assets have a flexible spending policy.

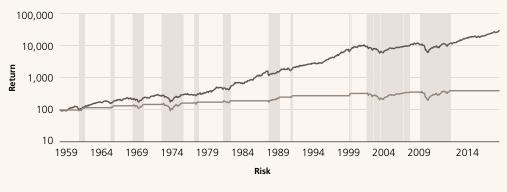
- The **Legacy** strategy contains assets in excess of what you need to meet your own lifetime spending objectives in the Liquidity or Longevity strategies. Given the longer time horizon associated with these assets, the Legacy strategy can be invested with a

Liquidity. Longevity. Legacy. disclaimer:

Timeframes may vary. Strategies are subject to individual client goals, objectives, and suitability. This approach is not a promise or quarantee that wealth, or any financial results, can or will be achieved. 5.2

Timing the market can be extremely costly

A "buy-and-hold" strategy vs. a "buy low, sell high" strategy



— "Buy-and-hold" — "Buy low, sell high" □ Invested after 10% drop

Note: Shaded areas indicate when the "buy low, sell high" strategy would have been invested. The "buy low, sell high" strategy follows a simple rule: buy stocks after a 10% drawdown, sell when stocks hit another all-time high.

Source: Ibbotson, UBS, as of 30 September 2019

different view of risk, and allocated for a unique objective: to maximize wealth. In this strategy, we generally recommend a large equity allocation, including exposure to secular trends (see page 49), as well as private equity and other illiquid investments.



51% of investors think they can effectively

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

time the market.

Avoiding pitfalls

Staying invested. The Liquidity. Longevity. Legacy. framework provides investors with greater certainty that their short-term needs have been addressed, reducing the incentive to try to time the market. This is particularly important in an uncertain, politicized environ-

ment. Although we expect returns to be more muted in the next decade than during the last, we continue to believe that being invested will remain key to protecting purchasing power. Our capital market assumptions imply an S&P 500 at roughly 4,450 by the end of 2029.

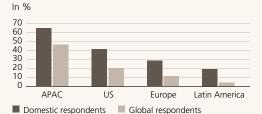
Liquidity. Longevity. Legacy. disclaimer:

Timeframes may vary. Strategies are subject to individual client goals, objectives, and suitability. This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.

Global diversification. The best protection against the risks of a Decade of Transformation will be diversification. Deglobalization, technological disruption, tax policy changes, monetary policy mistakes, an aging population, and climate change will all be felt more keenly in individual countries than at a global level. To mitigate these risks, investors will need to diversify portfolios in assets around the world, and overcome sometimes deeply rooted preferences for investing close to home.



Investors may overestimate their own regions' prospects



Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

Borrowing as part of your financial plan

We expect cash rates to average zero in euros and Swiss francs and 2–3% in US dollars over the coming years, helping to keep borrowing costs low. Risk premiums on stocks are likely to remain at or slightly above long-term averages. Economic policy, in our view, will also remain broadly friendly to debtors, particularly if an era of greater monetary and fiscal coordination ensues (see *Monetary Policy 3* on page 38). This backdrop suggests that investors should consider opportunities on both sides of their balance sheet.

There are several circumstances in which borrowing can be beneficial in the context of a broader financial plan:

 To increase leverage and boost portfolio returns. While leverage does amplify portfolio risk, and could trigger forced selling if managed imprudently, low borrowing costs mean that a wellmanaged leveraged portfolio may offer enhanced returns over the course of the next decade. Entrepreneurs may also benefit from borrowing against their portfolios to inject funds back into their private businesses.

- To avert the need to sell assets that offer high upside. A need for cash can arise for many reasons, including to pay tax bills, to take advantage of business opportunities, or to purchase property or a luxury item. However, meeting such needs by selling part or all of an investment portfolio imposes a significant opportunity cost. Though returns over the coming years are likely to be lower than in the past, we expect long-term returns of 4%–6% annually in local currencies for stocks and 8%–10% for private markets.
- To increase diversification. The wealth
 of entrepreneurs and top executives can
 become highly concentrated in a single
 asset or stock. Such concentration could
 represent a risk in a potentially transformative decade ahead. Borrowing could
 help fund a diversified portfolio, with
 investments less correlated to the bulk of
 your net worth.

Top longer-term investments

Investors can profit in the Decade of Transformation if they can identify and invest in secular winners in the context of a robust financial plan. We zero in on market segments where we see the greatest potential, in the key areas of digital transformation, genetic therapies, and water scarcity.



(A) 55%

of investors expect the technology sector to be the top performer over the next decade, followed by healthcare (35%) and energy (31%).

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019



Integrating the long and short term

Longer-term investments, such as these, can be volatile in the short term. But they can play a key role in driving long-term growth within investors' Longevity or Legacy strategies (see page 45).

Digital transformation

The digital revolution will remake numerous business models. Tech disruptors and incumbent players alike will use newly developed hard- and software to transform the world around us. Enabling technologies such as 5G, artificial intelligence (AI), and cloud computing will combine with the continued exponential growth in data to power this new era. 5G, set to be rolled out in 2020, will fuel significant innovation over the next decade via faster speeds (20x 4G), greater capacity (10x 4G), and more flexibility. The ability of this technology to transmit large amounts of data wirelessly will open doors for a vast array of new applications, ranging from autonomous driving to remote surgery.

To benefit from the upcoming wave of digital transformation, we advise diversified investing focused on six key themes:

Digital data. Data is the key input that will drive the digital transformation in the decade ahead. We expect select companies involved in storing, transferring, processing, and analyzing data to prosper.

Enabling technologies. With businesses around the world turning to 5G, AI, and cloud computing, the companies that provide these services and develop technologies related to them are likely, in our view, to enjoy increasing

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Strong growth ahead for enabling technologies

Figures in USD bn

	2017	2025
AR/VR	8	107
Cloud	260	520
Al	7.2	43
5G	2	150
Big Data	143	285
Total	420	1105

Source: IDC, Gartner, Bloomberg Intelligence, Goldman Sachs, UBS, as of 21 May 2018

demand in the decade ahead. For example, Asia, propelled by key markets China and South Korea, will account for more than 50% of global 5G capital expenditure and almost 75% of global 5G smartphone shipments in 2020, according to our estimates. The region's hardware and semiconductor supply chains should get a 5G boost as soon as next year.

E-commerce. The e-commerce industry, by our estimates, is set to average 15%–20% annual growth in the decade ahead. This advance will be fueled by AI and other technologies like augmented and virtual reality. Greater personalization and more efficient delivery systems will result, along with enhanced user experiences such as simulation and visualization.

Fintech. The financial sector's push into digital services is centered on cloud computing and Al. Growth in the decade ahead in areas like mobile payments, insurtech, and online credit could well be rapid.

Healthtech. Healthcare will become increasingly digitized. New applications like population health software, tele-medicine, and

Al-assisted diagnostic imaging will help target and deliver care, improve diagnostic effectiveness, and transform the healthcare industry.

Security and safety. Growth in connectivity and data will also contribute to greater privacy concerns among consumers. Businesses will also likely become more apprehensive about protecting their intellectual property. We expect these trends to boost investment in companies providing cybersecurity and safety solutions.

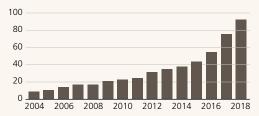
Genetic therapies

Genetic therapies represent a paradigm shift in medicine. They harbor the potential to revolutionize healthcare delivery and disrupt the biopharma industry. Such therapies – including replacing and editing genes or entire cells – hold out the promise of curing chronic diseases with a single treatment, improving outcomes while reducing or even eliminating out-patient costs.



The number of gene-therapy products in development is growing

Active trials for gene therapy products



Note: Trials for gene-therapy products using adeno-associated virus (AAV) vectors, the most common type of vector used for in vivo gene therapy.

Source: Bernstein Research, clinicaltrials.gov, as of 31 October 2018



Much remains to be proven, and there have been false starts before. The latest generation of therapies, however, has demonstrated remarkable efficacy in treating certain rare diseases in selected patient groups. Four such products have been launched in the US market, with collective sales annualizing at over USD 1bn. New technologies like CRISPR have even brought gene-editing therapies to the clinic for the first time.

Genetic therapies align well with the UN Sustainable Development Goal 3 "Good Health and Well-Being;" in a positive scenario, they could go someway toward eliminating some incurable diseases. A key sustainability risk is ineffective regulation of potentially sensitive gene-editing technology, so we focus on companies with stringent management of their research process.



50%

of investors say "health technology" is one of the long-term themes they most want to invest in, a larger percentage than for any other theme.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

If, in the decade ahead, genetic therapies can take the next step toward treating common illnesses at a manageable cost, they would profoundly disrupt the biopharma industry. Pharma and biotech companies, we believe, will begin to take such therapies increasingly seriously. We expect more acquisitions of the firms that develop them, and see the potential for marked capital appreciation of the theme if clinical trials and commercial rollouts meet our expectations.

Of course, as ever in drug development, idiosyncratic risk is high. So we recommend investing through a diversified portfolio of firms pioneering genetic therapies to manage the risks associated with clinical failure.

Water scarcity



72%

of investors listed "clean water and sanitation" as the most pressing issue facing the world.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

The world faces a mismatch between water demand and supply, and the effects of population growth could widen this gap in the decade ahead. China and India represent 35% of the world's population yet have access to less than 10% of its freshwater resources.

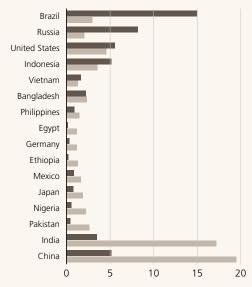
Owing to the urgency and scale of water-related issues, and the vibrant capital spending in emerging markets, we see continuous revenue and profit growth as a likely prospect for the entire water value chain, including companies involved in water exploration, distribution, and treatment. In our view, water utilities and industrials both should benefit from rising water demand, the former through greater investment and higher water tariffs and the latter through increased equipment sales.

Investors can also potentially benefit from new environmental legislation targeted at reducing ocean pollution. The International Maritime Organization is introducing new regulations to reduce the environmental impact of ballast water. Used to improve the stability of large ships, ballast water, after its discharge on arrival, can introduce damaging, nonnative species into aquatic ecosystems. We estimate that 50,000-70,000 ships worldwide still need to be fitted with water treatment systems by 2024, at an average cost of EUR 500,000 per ship. As a result, we expect ballast water treatment to be the fastestgrowing part of the overall water market, with annual growth rates in excess of 10% forecast.



Water imbalances

In the 16 most populous countries, in %



■ Share of water resources ■ Share of population

Source: The Factbook (CIA), UBS, as of 1 April 2019



Gettyimages

Effecting change

A Decade of Transformation will require investors to adapt to change. But they can also use their capital to help achieve and shape it as well. Many of the UN Sustainable Development Goals have large-scale capital requirements that we believe offer compelling investment opportunities for private investors to earn attractive returns, while contributing to goals ranging from eliminating poverty and lessening inequality to ensuring access to clean water and quality education. By replacing traditional with sustainable investments, investors can position their portfolios to participate in the most significant trends over the next decade.

So how can investors ensure they have maximum impact as they seek to contribute to a better world?

Fund disruption

Those wishing to promote sustainability without sacrificing return prospects could look at funding companies that are pioneering ways to reduce carbon emissions and pollution. We believe firms offering innovative new products and services in everything from renewable energy and energy-efficiency technologies to



82%

of investors believe the stocks of sustainable companies are good places to put their money because these companies are forward looking and better managed; another 80% want to invest in firms that represent their values. Yet only 44% of respondents said they have sustainable investments in their portfolio.

Source: UBS Investor Watch on the Year Ahead, "Decisions, decisions," 2 Volume 2019

alternative protein sources and waste management have scope to effect positive change and deliver attractive financial returns. The investments can be made via thematic public equity funds that buy company stock, or through private equity or debt. In private markets, we see particular opportunities to fund earlier-stage companies developing technology for carbon capture and utilization, as well as food companies creating plant-based meat and cheese substitutes to replace carbonintensive animal farming.

Invest in the leaders

Investors can also place funds with companies leading the way in addressing environmental, social, and governance (ESG) challenges in their industry. We believe such firms are likely to see attractive returns due to their leadership in key trends. Examples include healthcare companies making medicines affordable in emerging markets, IT companies reducing energy usage and thereby shrinking the carbon footprint of their data centers, and industrial firms implementing innovative practices that improve worker efficiency and safety. Other ESG leaders include consumer firms redesigning products and packaging to minimize waste, offering, for instance, liquid laundry detergent refills to cut down on plastic.

Support firms with room to improve

An "ESG engagement" approach identifies firms with the potential to improve ESG standards and uses investor influence to promote best practices. In doing so, it has a positive impact on sustainability and potentially on the long-term business prospects of the firms

themselves. Examples include influencing the behavior of a boat manufacturer whose waste plastic ends up in oceans, or of a financial services firm whose inflexible working hours make it harder for women to reach leadership positions. Engagement-focused investors could also advocate improving the standards of firms by, for example, encouraging the reduction of the use of antibiotics involved in factory farming, or pushing for safer work conditions in the garment industry. Engagement as a strategy for effecting change has gathered momentum in recent years, with more ESG data providers adding information on proxy voting, asset managers growing their stewardship teams, and shareholder coalitions increasing. For example, the Climate Action 100+ coalition represents over USD 35trn in AUM and has had numerous successes with the 161 companies it engages with. Over 70% have made long-term emissions reduction commitments, including high profile success with major resource-intensive companies.



A sustainable Legacy

Using capital to effect long-term positive change can be a way for investors to leave a legacy that spans beyond personal wealth. Ideas such as funding disruption, investing in ESG leaders, or transforming underperforming companies could be themes suitable for either Longevity or Legacy strategies.

Liquidity. Longevity. Legacy. disclaimer:

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Stocksy / ACALU Studio

Transforming your business

Taking advantage of opportunity in the Decade of Transformation while mitigating its risks could necessitate changes in the way entrepreneurs think about their businesses. In addition to our dedicated research for executives and entrepreneurs, we surveyed private business owners and executives in our UBS Industry Leader Network* to offer you insights into how they are tackling these trends.

^{*} The UBS Industry Leader Network is a global group of UBS clients and prospects who are private business owners and executives. Their views may differ from those of UBS.

Adapting to demographic change

From a business perspective, the aging population is most relevant in the context of shifts in spending power. Over the next decade the aggregate income of the baby boomer generation will halve. That of millennials, by contrast, will grow by one-third, making them the world's largest earners. An example of a response to this shift comes from the automotive industry. Industry Leaders* note how older drivers buy cars based on brand, build quality, and performance. Younger drivers increasingly share or rent cars and favor sustainability, reduced emissions, and convenient access. Electric vehicle and smart mobility suppliers may benefit from such population shifts at the expense of traditional car manufacturers that fail to adapt.

For more, see our publication "E&E: Five tips to prepare your company for demographic change."

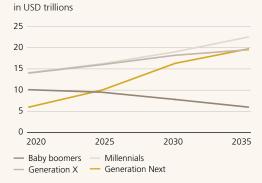
Diversifying supply chains

The deglobalization trend could affect the robustness of multinational supply chains. Companies are already seeking out alternative sources of supply to avoid tariffs imposed in the US-China trade dispute. This trend could broaden should trade disputes begin to encompass the EU (see page 37). Localizing production may also grow in popularity. Industry Leaders* said it can not only reduce exposure to trade levies but also enable businesses to meet growing demand for locally customized goods and services at scale and at speed. As with investing, diversifying your sources of supply, whether raw materials or technology, can help you mitigate risk.

For more, see our publication "How global supply chains are reacting to trade tensions."

_____(8.

Millennial spending power looks set to rise



Source: Brookings Institution, as of 30 April 2018

US tariffs are at their highest levels in recent history

Average tariff rate for all imports, in %



Source: Deutsche Bank, as of 31 December 2018

^{*} The UBS Industry Leader Network is a global group of UBS clients and prospects who are private business owners and executives. Their views may differ from those of UBS.

Identify areas of disruption

Staying on top of society-transforming technological shifts is difficult. Industry Leaders* believe the best strategy for doing so is to identify the areas where disruption (and opportunity) may be largest - they pinpoint the auto and healthcare industries. In response, they are planning to invest in smart mobility, healthtech, and enabling technologies, such as AI and 5G, to offer more personalized services fulfilled faster.

For more, see our publications "E&E: Industry 4.0 and the IIOT" and "Smart mobility."

Look at how you work

Many businesses have profited in recent years from greater flexibility in labor laws, most notably in the "gig economy." With some aspects of this trend reaching their political limits, business owners should remain mindful that more labor-friendly government policies may be enacted. Some businesses may consider investing more both in technology and in upskilling. Industry Leaders* suggest that the workforce of the future will require investment in automation and in-house training, and will be focused both on technical skills for operating machines and on "softer skills" for raising the value of human capital.

For more, see our publication "E&E: Health and well-being: Invest in your employees."

Pricing power

A shift toward central bank financing of fiscal stimulus poses a risk of higher long-term inflation in some countries. In such an environment, businesses with pricing power or major economies of scale are likely to emerge the winners. Entrepreneurs who can move away from commoditized, low-margin goods into more personalized offerings with higher barriers to entry have the greatest chance of maintaining their competitive edge.

For more, see our publication "E-commerce."

Go greener

A focus on environmental impact will grow in the decade ahead. Businesses that do not consider ESG criteria may find themselves at a disadvantage. Members of our Industry Leader Network* say they intend to invest heavily in environmental technologies, including electric vehicles, renewable energy, and alternatives to single-use plastic. They seek to tap new commercial opportunities (consumers increasingly demand greener products and services) and retain top talent (a recent survey of millennials showed that 40% have chosen a job based on sustainability criteria, compared with just 17% of baby boomers) while anticipating stiffer environmental regulation.



Executives & Entrepreneurs

For more research on how business owners can adapt to the current environment, visit ubs.com/cio and click on the Executives & Entrepreneurs tab.

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2019 in review

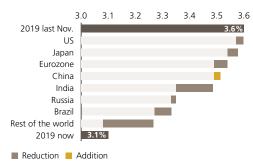
- Growth. We had forecast global economic growth would slow from 3.8% in 2018 to 3.6% in 2019. But due to a sharper-thanexpected downturn in manufacturing and greater US-China trade tensions, it disappointed even those reduced expectations, and will likely be just 3.1%.
- Rates. The growth slowdown led to a surprise in rates. The Federal Reserve was on a rate hiking path as 2019 dawned, and we had forecast three hikes in 2019. Yet the slower economy and the US-China trade conflict led the Fed to cut rates three times.
- Bonds. We did not expect bond yields to rise meaningfully, forecasting the 10-year US Treasury yield to climb from 3.05% to 3.20%. But the unexpected policy shift and the growth slowdown led to a collapse in yields. Ten-year US Treasury yields fell to a low of 1.46% in September, and their German counterparts slid from 25bps at the start of the year to a record low of -72bps. Yields are currently 1.94% and -0.27%, respectively.
- Stocks. Our base case for equity returns was for mid single-digit returns amid greater volatility. Since publication of *Year Ahead 2019*, global equities have returned around 15%. Year-to-date returns have been higher given the violent December 2018 sell-off, and with the MSCI AC World returning 22%.

- Currencies. Against our expectations,
 US dollar strength has persisted. The
 US dollar index hit a two-year high in
 September on safe-haven flows. The
 Chinese yuan met our expectations by
 depreciating over the course of the year,
 but has recently regained strength on
 signs of a US-China trade accord.
- Commodities. At the time of Year Ahead 2019 publication, we had forecast oil prices would rise from USD 60/bbl to USD 75/bbl over the following 12 months. Oil prices rallied in the first four months of the year, but have since declined on waning demand prospects.

9.1

Global growth has slowed relative to our expectations

Change in global growth, attributed to select regions



Source: Haver, CEIC, national statistics, UBS, as of 11 November 2019

Economic forecasts

	GDP growth (%)		Inflation (%)					
	2018	2019E	2020E	2021E	2018	2019E	2020E	2021E
Americas								
US	2.9	2.2	1.1	2.1	2.4	1.8	2.1	2.0
Brazil	1.1	0.9	2.5	2.5	3.7	3.6	3.7	3.8
Canada	1.9	1.5	1.4	2.0	2.2	2.0	1.9	1.9
Europe								
Eurozone	1.9	1.1	0.8	1.2	1.8	1.2	1.2	1.3
– Germany	1.5	0.5	0.6	1.1	1.9	1.3	1.1	1.2
– France	1.7	1.3	1.0	1.2	2.1	1.3	1.2	1.3
– Italy	0.7	0.2	0.4	0.5	1.2	0.6	0.6	0.7
– Spain	2.4	2.0	1.7	1.9	1.7	0.8	1.3	1.1
UK	1.4	1.2	0.9	1.2	2.5	1.8	1.8	1.8
Russia	2.3	1.0	1.8	2.3	2.9	4.5	3.2	4.0
Switzerland	2.8	0.7	0.9	1.3	0.9	0.4	0.5	0.7
Asia								
China	6.6	6.1	5.7	5.6	2.1	2.9	2.8	1.7
Japan	0.8	1.0	0.4	1.1	1.0	0.5	0.6	0.7
India	6.8	5.9	6.5	6.7	3.4	3.6	3.9	4.0
South Korea	2.7	1.8	1.9	2.7	1.5	0.3	0.9	1.8
Developed markets	2.2	1.6	1.1	1.8	2.0	1.4	1.6	1.6
Emerging markets	5.0	4.2	4.6	4.8	3.8	4.2	3.9	3.3
World	3.8	3.1	3.0	3.6	3.0	3.0	2.9	2.6

F= Estimate

Source: UBS, as of 11 November 2019

Rates and bonds

	В	ase rates		10-ye	ar yields (%	5)
	Current	2020E	2021E	Spot	Jun 20	Dec 20
USD	1.63	0.90	1.15	1.94	1.70	1.80
EUR	-0.50	-0.60	-0.60	-0.27	-0.50	-0.40
CHF	-0.75	-1.00	-1.00	-0.46	-0.80	-0.70
GBP	-0.75	0.50	0.50	0.77	0.60	0.75
JPY	-0.02	-0.30	-0.10	-0.08	-0.15	-0.05

Source: UBS, as of 11 November 2019

Commodities

	Spot	Jun 20	Dec 20
Brent crude oil (USD/bbl)	61.7	55.0	60.0
WTI crude oil (USD/bbl)	56.4	50.0	55.0
Gold (USD/oz)	1,465	1,600	1,600
Silver (USD/oz)	16.9	19.5	19.0
Copper (USD/mt)	5,924	6,000	6,300

Source: UBS, as of 11 November 2019

Currencies

Developed markets

	Spot	Jun 20	Dec 20	PPP
EURUSD	1.10	1.15	1.19	1.28
USDJPY	109	102	100	75
GBPUSD	1.28	1.34	1.38	1.56
USDCHF	0.99	0.96	0.92	0.93
EURCHF	1.09	1.10	1.10	1.20
EURGBP	0.86	0.86	0.86	0.82
AUDUSD	0.68	0.71	0.68	0.67
USDCAD	1.32	1.33	1.29	1.21
EURSEK	10.7	11.2	10.8	9.8
EURNOK	10.1	10.2	10.2	10.6

Source: UBS, as of 11 November 2019

Emerging markets

	Spot	Jun 20	Dec 20
USDCNY	7.0	7.0	7.0
USDIDR	14,067	14,000	13,900
USDINR	71.5	70.0	69.0
USDKRW	1,166	1,150	1,130
USDRUB	64	63	62
USDTRY	5.8	6.3	6.7
USDBRL	4.2	4.1	4.1
USDMXN	19.1	19.8	20.5

Source: UBS, as of 11 November 2019

Impressum

Year Ahead 2020 - UBS House View

This report has been prepared by UBS AG, UBS Switzerland AG and UBS Financial Services Inc. Please see the important disclaimer at the end of the document.

This report reflects the insights and perspective from the entire CIO team across the globe and demonstrates the intellectual leadership of UBS.

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Emerging Market Investments

Investors should be aware that Emerging Market assets are subject to, among others, potential risks linked to currency volatility, abrupt changes in the cost of capital and the economic growth outlook, as well as regulatory and sociopolitical risk, interest rate risk and higher credit risk. Assets can sometimes be very illiquid and liquidity conditions can abruptly worsen. CIO GWM generally recommends only those securities it believes have been registered under Federal US registration rules (Section 12 of the Securities Exchange Act of 1934) and individual State registration rules (commonly known as "Blue Sky" laws). Prospective investors should be aware that to the extent permitted under US law, CIO GWM may from time to time recommend bonds that are not registered under US or State securities laws. These bonds may be issued in jurisdictions where the level of required disclosures to be made by issuers is not as frequent or complete as that required by US laws.

For more background on emerging markets generally, see the CIO GWM Education Notes "Investing in Emerging Markets (Part 1): Equities," 27 August 2007, "Emerging Market Bonds: Understanding Emerging Market Bonds," 12 August 2009 and "Emerging Markets Bonds: Understanding Sovereign Risk," 17 December 2009.

Investors interested in holding bonds for a longer period are advised to select the bonds of those sovereigns with the highest credit ratings (in the investment-grade band). Such an approach should decrease the risk that an investor could end up holding bonds on which the sovereign has defaulted. Subinvestment-grade bonds are recommended only for clients with a higher risk tolerance and who seek to hold higher-yielding bonds for shorter periods only.

Nontraditional Assets

Nontraditional asset classes are alternative investments that include hedge funds, private equity, real estate, and managed futures (collectively, alternative investments). Interests of alternative investment funds are sold only to qualified investors, and only by means of offering documents that include information about the risks, performance and expenses of alternative investment funds, and which clients are urged to read carefully before subscribing and retain. An investment in an alternative investment fund is speculative and involves significant risks. Specifically, these investments (1) are not mutual funds and are not subject to the same regulatory requirements as mutual funds; (2) may have performance that is volatile, and investors may lose all or a substantial amount of their investment; (3) may engage in leverage and other speculative investment practices that may increase the risk of investment loss; (4) are long-term, illiquid investments; there is generally no secondary market for the interests of a fund, and none is expected to develop; (5) interests of alternative investment funds typically will be illiquid and subject to restrictions on transfer; (6) may not be required to provide periodic pricing or valuation information to investors; (7) generally involve complex tax strategies and there may be delays in distributing tax information to investors; (8) are subject to high fees, including management fees and other fees and expenses, all of which will reduce profits.

Interests in alternative investment funds are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency. Prospective investors should understand these risks and have the financial ability and willingness to accept them for an extended period of time before making an investment in an alternative investment fund, and should consider an alternative investment fund as a supplement to an overall investment program.

In addition to the risks that apply to alternative investments generally, the following are additional risks related to an investment in these strategies:

- **Hedge Fund Risk:** There are risks specifically associated with investing in hedge funds, which may include risks associated with investing in short sales, options, small-cap stocks, "junk bonds," derivatives, distressed securities, non-US securities and illiquid investments.
- Managed Futures: There are risks specifically associated with investing in managed futures programs. For example, not all managers focus on all strategies at all times, and managed futures strategies may have material directional elements.
- **Real Estate:** There are risks specifically associated with investing in real estate products and real estate investment trusts. They involve risks associated with debt, adverse changes in general economic or local market conditions, changes in governmental, tax, real estate and zoning laws or regulations, risks associated with capital calls and, for some real estate products, the risks associated with the ability to qualify for favorable treatment under the federal tax laws.
- **Private Equity:** There are risks specifically associated with investing in private equity. Capital calls can be made on short notice, and the failure to meet capital calls can result in significant adverse consequences including, but not limited to, a total loss of investment.
- Foreign Exchange/Currency Risk: Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in US dollars, changes in the exchange rate between the US dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a US investor.

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