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Looking ahead

Intermediate projections of the economy and capital markets – five-year outlook

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The equity rally that retraced much of the February through March drop signals that the market is pricing in a relatively quick economic rebound from the COVID-19 pandemic. However, many are concerned that the market has gotten ahead of economic realities. Is the crisis going to last two more months or will a second and third wave disrupt the economy into next year? Is there a distinction between the capital markets and underlying economic disruption? What will asset returns look like along these different paths? With tens of millions – probably hundreds of millions across the globe – now unemployed, there is a long road back.

In this paper we provide two sets of analyses of the possible outcomes over the next five years. In Part I, we use basic scenario analysis to lay out the range of possible economic and market outcomes with four different scenarios (Bull, Base, Stagnation and Stagflation) over the next five years. Although our focus in this section is on the United States, the analysis is representative of the broader global experience faced by developed and emerging markets. In Part II, we present an update of our capital market assumptions and discuss what has changed since their previous iteration in June 2019. In this section, we take a broader global view across the spectrum of investable assets.

Backdrop

As the pandemic crisis resolves, some industries may quickly bounce back to something very recognizable. Other industries – such as airlines, cruise lines, hotels, restaurants, sporting events, theater, concerts, and public transportation – may be impaired for a lot longer as we struggle to find a new balance. The impact on real estate is uncertain. Certainly, there is a short term hit to some sectors (namely, high density urban centers) and a benefit to others (suburban office parks), but we doubt the hit will be permanent in these real estate categories. The density of urban centers may decrease, but we believe that they will always have a certain dynamic element to them because of the economies of scale and high networking benefits.

Balancing disruption is innovation. We already see the creation of new businesses and models from low tech to high tech: personal protection equipment (masks and Plexiglas panels), video conferencing, and telemedicine. Moreover, interest in the biosciences has increased and new supply chains will be built.

One key drag on growth will be the continued deglobalization that began in the mid-2010s. A huge wave of globalization started in the post-WWII reconstruction period and was sustained by a series of positive shocks: for example, the fall of the Berlin Wall in the late 1980s and the entry of China into the WTO in the early 2000s. However, after the Global Financial Crisis (GFC), the appeal of free trade and immigration faded and reversed in the mid-2010s. At a minimum, we expect further deglobalization with tighter border controls and movement of strategic supply lines closer to home markets. In the long run, we believe that the drop in the expected growth rate will be minimal because there has been no destruction of physical capital and human capital has not diminished, though it may take quite a while for the markets to absorb and reallocate both factors.

Another drag on growth in the short run is the growth of precautionary savings by households. A lot of people will likely spend less and we already see the savings rate rising as they build a reserve fund for emergencies. This should put pressure on short term rates to stay low as this stock gets build up. Offsetting this are corporations which are systematically dissaving.

The pro-active policies of the central banks in an effort to stabilize the credit markets have been a substantial development. Credit spreads immediately tightened and inspired rebounds in the equity market before any of these facilities were operational. This response has taken some of the refinancing risk and solves several liquidity problems, but many firms have long-term solvency issues that only an orderly restructuring can resolve.

Finally, the huge increase in government deficits across the globe is a natural reaction to the resulting slowdown from the COVID-19 pandemic, though perhaps unprecedented in size and speed. The market is pricing in very little inflation risk premium. But this could change; for example, if policymakers over-stimulate amid supply-side constraints, inflation pressures could emerge.

Part I: Deterministic scenario projections

We present four sets of projections of the economy and capital markets.

Bull Case
- The global economy and capital markets quickly return to the pre-pandemic world of moderate growth and low inflation, potentially as a result of a successful vaccine. The economy and markets re-adapt quickly. Few permanent disruptions occur, as airlines, hotels and other vulnerable industries survive much in their current form.

Base Case
- Growth returns in the latter half of 2020 and gradually trends back toward normal growth. Some de-globalization, lingering outbreaks of COVID-19 and precautionary behaviors by consumers and businesses hamper growth initially. Inflation starts low and rises back toward trend.

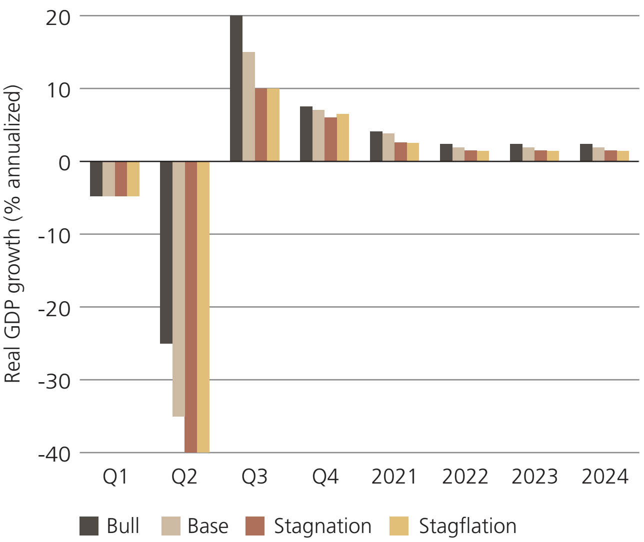
Stagnation
- This is a combination of sluggish growth and low inflation – Japanification. The economy rolls out of the pandemic-induced recession with a burst of growth, but this quickly subsides and continues at a low level.

Stagflation
- We model this as a combination of a sharp recession followed by low growth and rising inflation. Supply-side constraints limit growth and ultimately trigger inflationary pressures. Eventually, bond vigilantism reappears as investors become nervous about inflation and higher interest rates. Central banks struggle with the direction of monetary policy: higher interest rates to fight inflation or lower interest rates to spur the economy.

While our research encompasses a large range of asset classes around the world, for simplicity we present scenarios focusing on the United States as the representative economy. The projections here can be extended to many regions without loss of direction and magnitude.

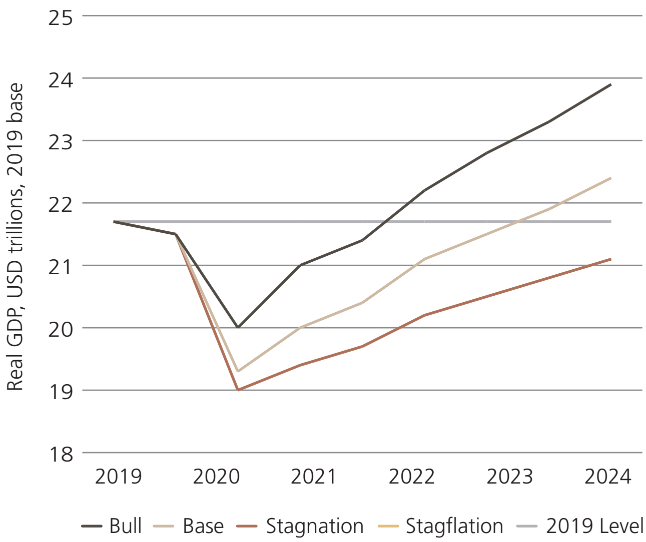
The following graphs show the paths of growth across the four scenarios. (These should broadly represent most of the developed world and many emerging markets.)

Real GDP growth across scenarios



Source: UBS Asset Management. Data as of 30 April 2020.

Real GDP across scenarios



Source: UBS Asset Management. Data as of 30 April 2020.

Real GDP in the US peaked in the fourth quarter of 2019 at $21.7 trillion and contracted sharply thereafter. In our Base case, we project real GDP will remain below $21.7 trillion until late 2022. In the Bull case, we expect that it will be early 2021, but in both our Stagnation and Stagflation cases, which have near identical levels of growth, it will take years to recover.

In all the scenarios, we expect the normal measures of inflation to decline sharply in the coming months. In the Bull case, it rebounds to a 2.0% level and the Fed starts to raise rates in 2023. In the Base case, inflation is slightly below most Central Banks' target levels (2.0%, usually). In the Stagnation case, it is initially low and stays low. In the Stagflation scenarios, inflation starts low, but aggressive monetary and fiscal stimulus triggers higher inflation, which creeps up and disrupts the markets.[1]

Now, let's extend these economic fundamentals to pricing in the capital markets for the four scenarios. First, below is a set of paths for the fixed income market.

In most scenarios, we expect the Federal Reserve to keep short interest rates low and on hold well into 2022, with the most likely hikes not occurring until at earliest 2023. And we don't expect the 10-year bond yield to get near its highs seen in 2018 (less than two years ago it was over 3.0%!). The Fed has several reasons to keep rates low: a historic recession with unprecedented levels of slack in the labor market and huge budget deficits that need to be financed. In recent communications, the Fed has indicated that they are willing to have inflation above their target level of 2% for a period of time in order to achieve full employment. We expect they will apply this in the coming future.

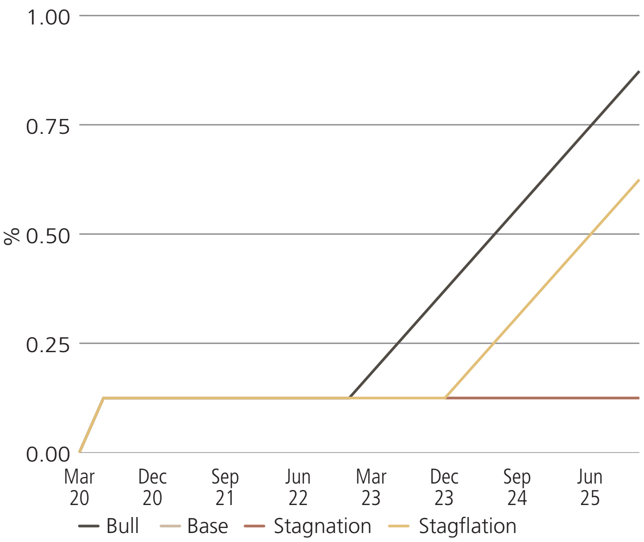
One difficulty in modeling the Stagflation scenario is the reaction of the Fed. We have the Fed being somewhat cautious here and focusing more on employment than inflation; thus, we model T-Bills rising modestly and lagging inflation. However, a more aggressive, hawkish Fed is clearly possible over time. A key question is how the Fed will react: does it suppress the yield curve to support weak growth or does it raise rates to trim inflation expectations starting to accelerate?

In our Base case, we expect 10-year government bond yields are steady through the next few months and then gradually rise as the economy shows moderate to strong growth. In our Stagnation case, we expect rates to stay low through the projection period.

After rising sharply earlier this year, credit spreads narrowed in March and April, especially in the US where the Fed established programs to buy a wide array of bonds to keep interest rates low, facilitate easier refinancing, and provide liquidity to stressed markets. In our Base Case we expect the recovery to be slower than what the market currently is pricing and we expect ongoing volatility in the credit market as the economy confronts challenges with restarting.

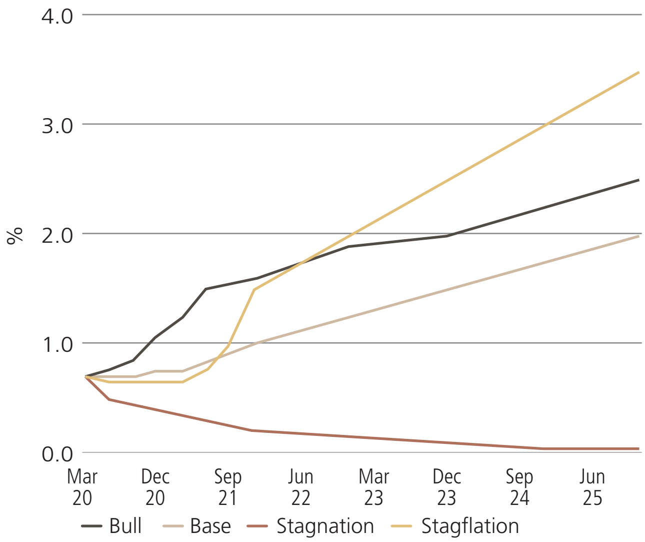
1 Inflation deserves a special note in the short run. In normal times, the basket of goods that are included in the definition of the consumption basket is stable. But in times of huge disruption, the measure of inflation may be difficult to interpret, potentially even misleading. How do we incorporate goods for which demand is plummeting (airfares and restaurant dining) with goods surging in demand (personal protection equipment)?

Projected US 1-month T-Bill yields by scenario



Source: UBS Asset Management. Data as of 30 April 2020.

Projected US 10-yr yields by scenario

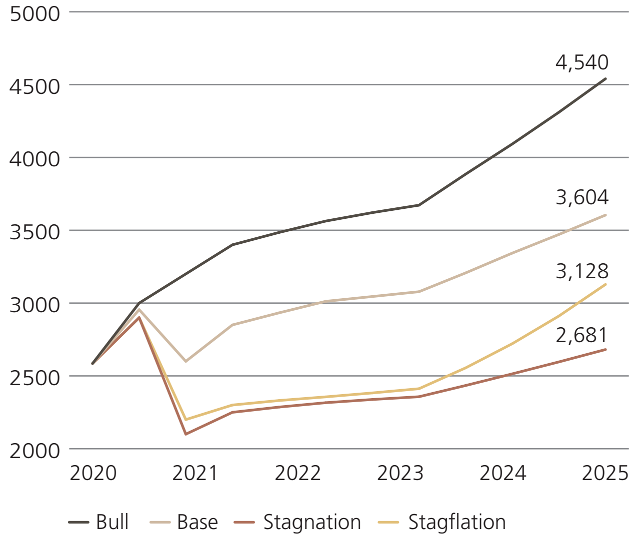


Source: UBS Asset Management. Data as of 30 April 2020.

In the equity market, we lay out the potential paths for the S&P 500 price level. Our Base Case projection has a renewed growth in equities after a near-term drop due to on-going stumbles as the economy recovers. We don't doubt that there is a long period of growth ahead of us; we just expect it to be bumpier than indicated by the recent rally. In the Bull case, we quickly reach new highs due to economic strength resulting from fiscal and monetary stimulus. In the two bearish cases, we don't reach the February highs for many years.

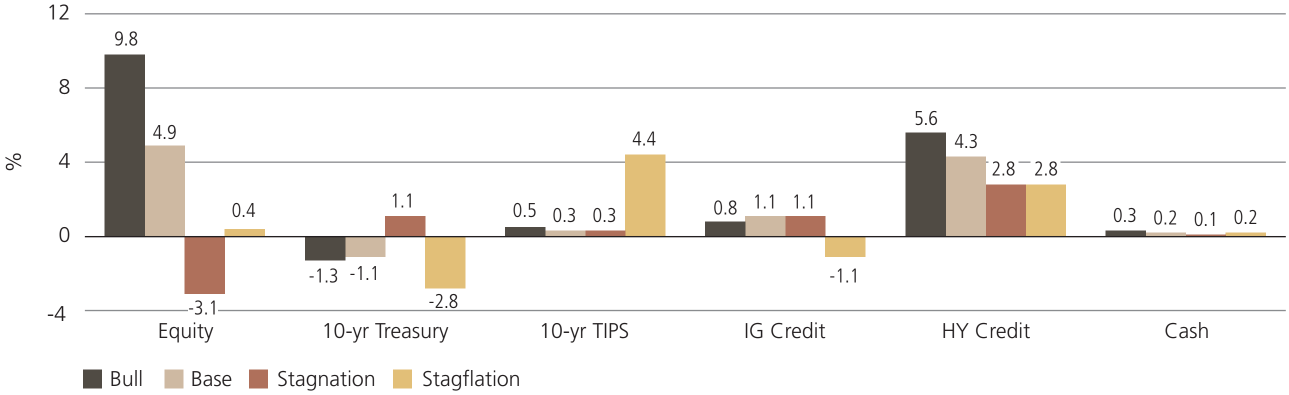
On a cumulative return basis over the five years ending June 2025, we project the following sets of returns in nominal and real terms.

Projected S&P 500 price levels across scenarios



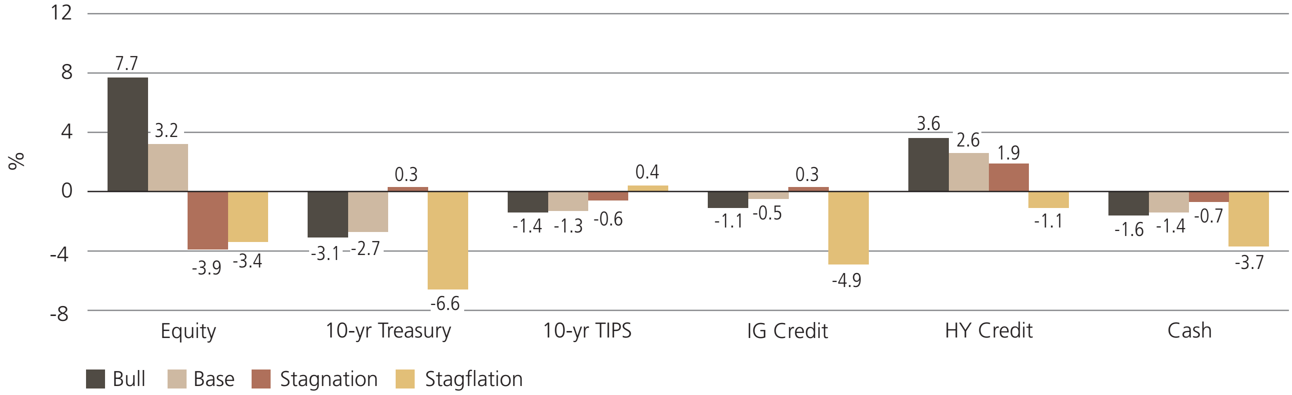
Source: UBS Asset Management. Data as of 30 April 2020.

Five-yr nominal returns through June 2025



Source: UBS Asset Management. Data as of 30 April 2020.

Five-yr real returns through June 2025



Source: UBS Asset Management. Data as of 30 April 2020.

Some observations:

- Despite the low starting yields, the possible return upside for Treasuries in the short run is the Stagnation case. The first year of this scenario has Treasuries earning a positive return and looks even better in real terms.
- Notice that TIPS perform best in the Stagflation scenario. Initially, the returns are poor as the economy bounces back and experiences a modest rebound. It really takes off in the 'out years' as inflation builds to levels higher than anticipated.
- High yield bonds look good in all the scenarios because of the high starting yield. Spreads continued to tighten into May, so the expected returns have declined.

Stock-bond correlation
One key area that we want to highlight across these scenarios is the stock-bond correlation. Over the last 22 years, the returns of stocks have been negatively correlated with the return on Treasury bonds. (In general, this is true for most developed countries, but there are exceptions such as Canada, Australia and several emerging market countries).

We believe that there is an increased likelihood that this negative correlation will break down sometime in the next five years. First, with central banks committed to low interest rates, QE, and potentially yield curve control, the correlation would go to zero because short-term rates would remain constant. Then, if inflation creeps up, investors will likely start to shun bonds, pushing yields up through the auctions (though central banks will not allow significant increases and will buy up the bonds to keep rates low). At some point central banks may relent and at least allow the yield curve to steepen in order to accommodate inflation risk premiums for holding longer dated bonds. In this case, we believe we would see a reversal and a positive stock-bond correlation.

The historic data indicate that the stock-bond relationship is regime dependent. The critical threshold is sustained 2.5% inflation; below this, we expect the relationship to be negative; above this, there has been a positive stock-bond correlation.

These scenarios provide a range of market events that investors need to prepare for. These scenarios not only affect returns, but the potential relationship of stocks and bonds as well as the relative performance of asset classes.

Global implications for returns
With adjustments, these scenarios project to other major markets and produce similar results, though the level may vary depending on local valuation, interest rates and policy reactions.

One major adjustment is for valuation outside the US. Non-US equity markets have done worse than the US, but we expect a rebound, as not only the markets are cheaper, but their currencies are as well.

Normally, in scenario analysis, it is difficult to comment on the direction of currencies. Currency performance is about relative performance. For example, if one region is growing more strongly than the other, the currency will typically appreciate relative to the other, though underlying fundamentals will alter this drift and rate. We will address our expectations for currency in our five-year capital market assumptions in the following section.

The negative stock-bond correlation appears to be robust for the US, Japan, Europe, and the non-commodity emerging markets. Again, until we see a burst of sustained inflation, we don't expect the relationship to turn positive.

Scenario	Stock-Bond Correlation	Implications
Bull	Stock-bond correlation **remains negative** as inflation does not go above 2.5% for an extended time period.	Diversified portfolios continue to provide low volatility and consistent returns. Risk-on/risk-off positioning has a natural hedge.
Base Case	Stock-bond correlation remains generally negative, but with yield curve controls, this may **drift towards zero**.	Bonds offer less diversification than has been the case of the last 20 years, increasing complexity for risk management.
Stagnation	Stock-bond correlation becomes **less stable**. At times this can be negative (with flight-to-quality events), but because of lower bounds, the relationship can drift to zero as well.	Diversified portfolios will be subject to more volatility as the stock-bond correlation is erratic. Investors take on more risk (higher exposure to credits over sovereigns, for example) to increase yield and expected return.
Stagflation	Initially, the stock-bond correlation remains negative, but as additional stimulus programs get rolled out and budget deficits rise, inflation rises as well. Short term rates are kept low for a while as central banks are conflicted on which front to fight: inflation or low growth. When inflation rises to 2.5% and is expected to stay there, we get an **eventual change to a positive** stock-bond correlation.	Risk management for traditional stock-bond portfolios becomes more difficult, requiring real or alternative assets to hedge against inflation. Although nominal returns start to rise, in real terms the markets do poorly. Enhanced risk controlled techniques needed; disciplined volatility management.

Part II: Capital Market Assumptions Update

UBS Investment Solutions provides estimates of capital market returns across a wide array of asset classes and from multiple currency perspectives.[2] For this paper, we focus on our 5-yr Baseline expected geometric returns. These 5-yr Baseline estimates closely match the Base Case in the deterministic scenario projections provided above. They are built to be very consistent with each other.

Our last publication highlighted our June 2019 assumptions. Since then, equities ended the decade with an admirable 10-year record and momentum continued with new highs into February.

Then the pandemic hit and the equity markets dropped more than 30% before rallying sharply. Government bond yields across all maturities declined in the US – which lowered expected return in local terms. Credit markets have had surprising ups and downs, but are still at relatively wide levels going into the end of May.

The main updates in our five-year capital market assumptions compared to our mid-2019 report are:

- Expected equity returns in nominal terms are higher, as valuation is improved.
- Government bond yields are even lower, so expected returns are lower. European yields did not drop as much as US yields, but were lower to start with.
  - In general, we lowered expected 10-year yields in developed countries in 2025 by 0.4% to 1.1%. This has offset some of the drop in yields in projected returns.
- Credit spreads are higher due to higher default risks, but returns are more attractive relative to governments. They bottomed out in early January 2020 before ballooning late in the first quarter of 2020. They tightened significantly in April and into May.
- The dollar appreciated against most, but not all currencies. Emerging markets had extremely large depreciations (Brazil -29.2% for example). In general, we view the dollar as overvalued against both developed market and emerging market currencies.

Global asset class returns

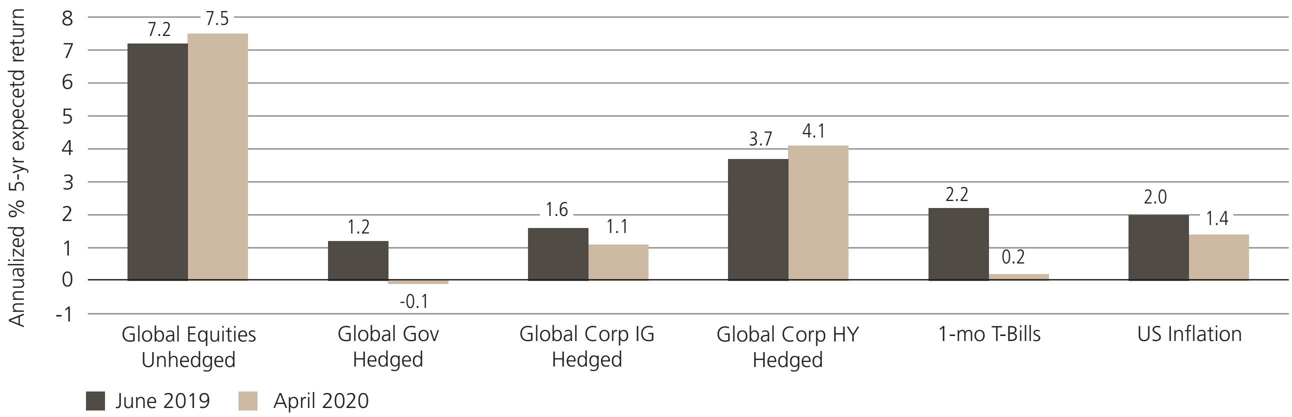
In nominal terms, the expected return of equities rises to 7.5%[3] in unhedged USD terms, an increase of 0.3% from the June 2019 version. A portfolio of global government bonds is expected to return -0.1% in hedged USD terms, a large drop from the 1.2% in June 2019. Global credit drops from 1.6% to 1.3% and high yield bonds grows from 3.7% to about 4%. Cash declines the most, dropping from 2.2% to 0.2%.

In general the expected returns for risk markets have improved while the expected returns for safe assets have declined. The improvement for equities is due to improved valuations (i.e., equity prices falling more than discounted future earnings). For most markets, this improvement is quite large, but it is somewhat offset by declines in expected growth and inflation. US Large Cap equity is one significant outlier to this, as this expected return declines due to the large bounce back in valuations. US large cap returns fell to 4.9%; the valuation improvement since last June (0.5% increase) is offset by lower expected inflation (0.6% decline) and decline in aggregate earnings growth (a 0.1% decline).

In inflation-adjusted terms, prospective returns in April 2020 look a bit better than the pure nominal rates indicates. With lower inflation, the real return is boosted. In the short run, it is possible that with negative inflation and unchanged bond rates, real returns could be 2% to 3%, well within its historic performance.

[2] We provide Equilibrium, 5-yr and 10-yr estimates of the capital markets that will vary over time. By far, the most interest from clients is on our 5-year expectations.
[3] Our convention is to report equity returns in unhedged terms and fixed income in hedged terms.

Five-year expected returns in USD terms

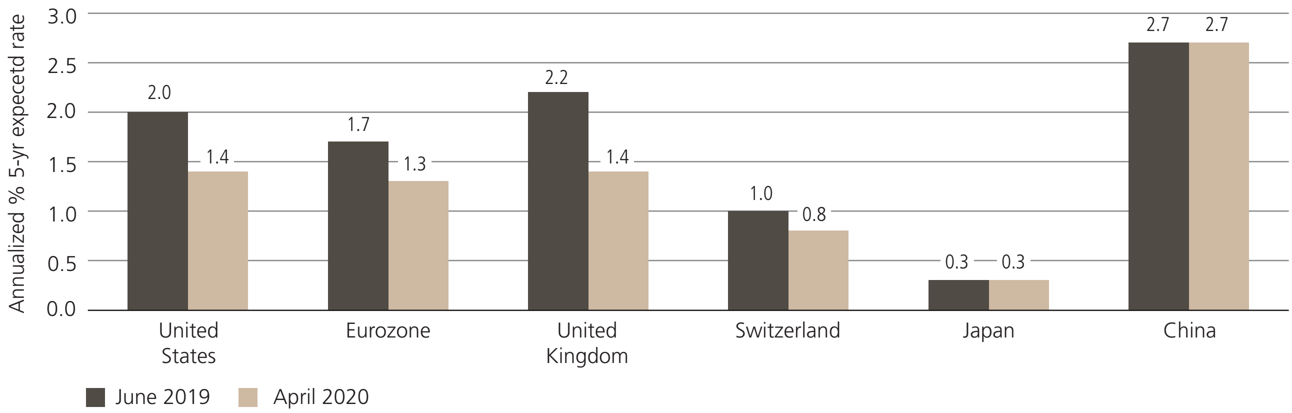


Source: UBS Asset Management. Data as of 30 April 2020.

Economic fundamentals

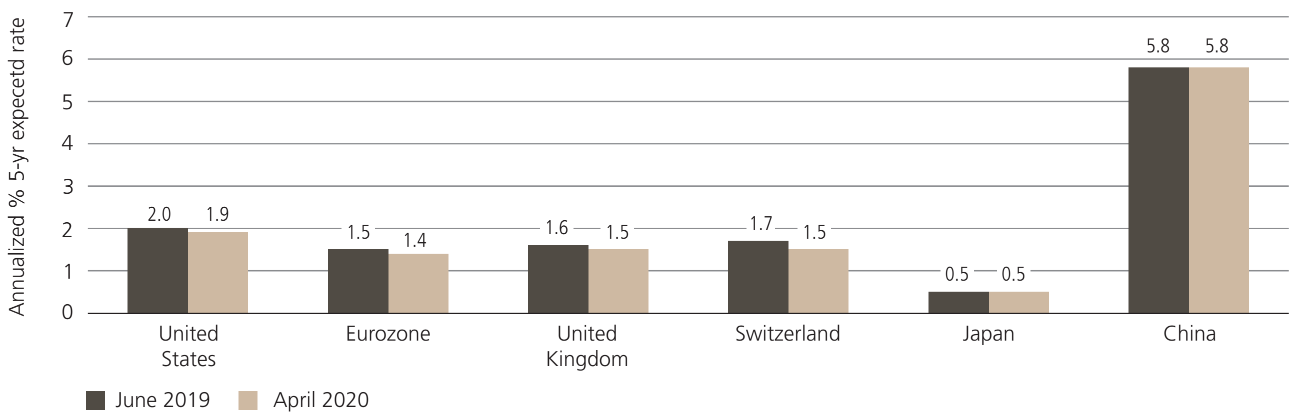
Our estimate of expected inflation dropped sharply in the last ten months. The 10-year breakeven inflation rate for the US, for example, declined from 1.7% in June 2019 to 1.1% at the end of April and reached a low of 0.9% in March.

Five-year expected inflation



Source: UBS Asset Management. Data as of 30 April 2020.

Five-year expected growth



Source: UBS Asset Management. Data as of 30 April 2020.

Equities

Over the last 10 months, there were wide variations in equity returns. The S&P 500 dropped 10.8%, but the Eurozone, UK, and Australia had larger declines (19.9%, 21.7%, and 21.3%, respectively). Japan and Switzerland had smaller declines than the US. The emerging markets dropped 18.2% in USD terms. China was one of the better equity market performers since last June, as their market fell earlier and recovered earlier.

For prospective returns, our 5-year Baseline estimates in local nominal terms have increased with the glaring exception of the US where returns are down slightly. For the US, the prospective valuation improves, but this is exactly offset by a lower inflation rate and growth path. Interestingly with inflation declining, expected real returns have generally increased.

There are some large increases in expected equity returns in USD terms for several regions: Eurozone, UK, China[4], and Australia. Most of the gain is through expected currency appreciation, as the dollar has soared in the last 10 months. We expect the large increase in the dollar in the last 10 months to abate and reverse slightly.

Emerging market countries are expected to have the higher return, but this is accompanied by the highest risk as well.

Equity market 5-year expected returns

	June 2019		April 2020		Real returns of Unhedged USD	
	Local	USD Unh	Local	USD Unh	June 2019	April 2020
US Large Cap	5.1	5.1	4.9	4.9	3.1	3.5
Eurozone	8.3	9.1	8.6	10.5	7.1	9.1
Switzerland	7.3	7.3	7.2	7.7	5.3	6.3
United Kingdom	8.6	9.5	8.7	10.6	7.5	9.2
Japan	5.7	8.3	5.9	8.6	6.3	7.2
China	8.2	8.0	11.3	11.4	6.0	10.0
Australia	8.5	8.7	9.4	10.2	6.7	8.8
Canada	6.8	7.6	7.0	8.5	5.6	7.1
Global		7.2		7.5	5.2	6.1
Developed Markets		6.6		6.8	4.6	5.4
Emerging Markets		11.2		11.8	9.2	10.4
Dev Mkts x US		8.7		9.6	6.7	8.2
Inflation		2.0		1.4		

Source: UBS Asset Management. Data as of 30 April 2020.

4 Our expected equity return for China increased because we only recently started to overlay a valuation metric with our April assumptions. The June 2019 estimate was based purely on expected inflation, earnings growth and dividends only.

Fixed income
In the last ten months, government bond yields in the developed markets dropped for most countries. In particular, the US saw its 10-year Treasury yield drop from 2.0% to 0.7% – one of the largest drops – and most other DM nations saw more modest declines. Germany saw only a 0.1% decline in already negative 10-year Bunds and the UK 10-year Gilt dropped 0.5%. Switzerland and Japan recorded slight increases.

In developing our intermediate views we have lowered the path of bond yields in the developed markets in the last ten months. In general, we have lowered them anywhere from 40 bps to 100 basis points.

10-year Government Bond yields and expected changes

	June 2019 baseline			April 2020 baseline		
	Starting yield	**In 5 yrs**	**Rise in yields**	**Starting yield**	**In 5 yrs**	**Rise in yields**
US	2.0	3.1	1.1	0.6	2.0	1.4
Australia	1.3	2.5	1.2	0.9	1.8	0.9
Canada	1.5	2.9	1.4	0.5	2.0	1.5
Germany	-0.3	0.9	1.2	-0.5	0.5	1.0
France	0.0	1.2	1.2	-0.1	0.8	0.9
Italy	2.1	2.2	0.1	1.8	2.1	0.3
Spain	0.4	1.6	1.2	0.7	1.5	0.8
Japan	-0.2	0.4	0.6	0.0	0.4	0.4
Switzerland	-0.6	0.9	1.4	-0.5	0.4	0.9
UK	0.8	2.5	1.7	0.2	1.5	1.3
China	3.2	3.5	0.3	2.5	3.0	0.5

Source: UBS Asset Management. Data as of 30 April 2020.

Fixed income (continued)

For the US, our expected returns on holding a government bond index for 5-years have fallen the most from 1.0% to -0.7%. Other countries – Switzerland, for example, have expected returns in CHF terms rise from -3.1% to -2.4%.[5] Credit spreads narrowed sharply going into the New Year, then widened to recession levels in a period of weeks and now have fallen back. On net, the expected return to investment grade credit has declined, but looks attractive relative to sovereigns.

In the credit markets, both investments grade and high yield credits rallied significantly in April and May, with IG option-adjusted spreads narrowing from 255 to 165 bps and high yield spread narrowing from 880 to 634 bps. This has produced two month returns of 6.3% for IG bonds and 9.1% for high yield. Consequently, we have updated our estimates of credit returns to reflect the end of May.

Selected bond market returns 5-yr baseline

	June 2019 Baseline		April 2020 Baseline	
	5yr Local	5yr Hdg USD	5yr Local	5yr Hdg USD
Government Bonds				
US Treasuries	1.0	1.0	-0.7	-0.7
Australia Gov	0.1	0.8	0.0	0.1
Canada Gov	0.2	0.5	-0.8	-1.0
Eurozone Gov	-0.8	1.6	-0.6	0.2
Japan Gov	-1.0	1.3	-0.5	0.0
Switzerland Gov	-3.1	-0.3	-2.4	-1.4
United Kingdom Gov	-2.1	-0.7	-2.4	-2.5
Global Government	-0.2	1.2	-0.5	-0.1
Other Markets				
US Corporates	1.4	1.4	1.0[1]	1.0[1]
US High Yield	3.7	3.7	4.2[1]	4.2[1]
US TIPS	1.5	1.5	0.2	0.2
EMD Hard Currency	4.5	4.5	7.3	7.3

[1] Updated to reflect change in spreads in May
Source: UBS Asset Management. Data as of 30 April 2020.

[5] When we look at real terms or excess return terms, things look better, but there still has been a decline in many markets.

Cash markets

In general, cash rates[6] have fallen sharply across the globe in both real and nominal terms in the last ten months, with the biggest drop coming at the end of the period. Countries with some room for them to drop (the US and many emerging markets) saw large declines in 1-month to 3-month yields. The US 1-month Bill rate dropped from 2.32% to 0.05%--a significant move in this market. The exceptions are Europe and Japan; European bill rates actually rose slightly and Japan's rates dropped only 6 basis points (a relatively large move for Japan).

The emerging markets mirrored the developed and there were sharp declines in countries with already high rates (Brazil, Mexico, South Africa) and more modest declines in countries with limited room for decreases (Korea, Taiwan). Turkey and Argentina, in particular, had large declines, recovering some from their dismal experiences in 2019.

Five-year expected return from rolling 1-month Treasury Bills

	Expected 5-yr T-Bills returns		Expected 5-yr inflation		Expected 5-yr real cash returns	
	June 2019	April 2020	June 2019	April 2020	June 2019	April 2020
United States	2.1	0.2	2.0	1.4	0.1	-1.2
Eurozone	-0.2	-0.4	1.7	1.3	-1.9	-1.7
China	2.6	1.5	2.8	2.7	-0.2	-1.2
United Kingdom	0.7	0.4	2.2	1.4	-1.5	-1.0
Japan	0.0	-0.2	0.3	0.3	-0.3	-0.5
Switzerland	-0.5	-0.3	1.0	0.8	-1.5	-1.1
South Korea	1.8	1.0	2.0	1.4	-0.2	-0.4
Taiwan	1.0	0.3	1.9	1.2	-0.9	-0.9
Brazil	5.5	3.1	4.2	3.2	1.3	-0.1
Mexico	7.1	5.3	3.3	2.7	3.8	2.6
South Africa	6.4	4.1	4.5	4.1	1.9	0.0
Turkey	19.6	8.5	11.5	9.5	8.1	-1.0

Source: UBS Asset Management. Data as of 30 April 2020.

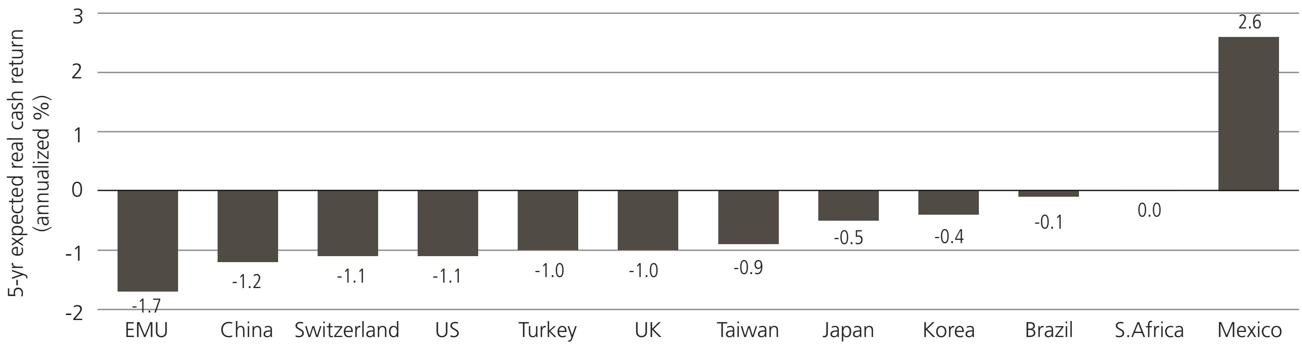
[6] We follow several rates in the cash markets. Traditionally, we have used the 3-month Libor rate or an equivalent rate since this has been an important benchmark that is widely available for all currencies. With the transition away from Libor, we will also focus on 1-month, 3-month government bill and 1-year government bond rates where available and extrapolate them to all countries. 1-month bill yields are excellent estimates of what money market funds return, so they play an important role for investors needing the highest degree of liquidity. Libor rates and other deposit rates better estimate hedging costs in currency markets as well as what investor must pay to leverage or short positions. Another key rate that we follow is the 1-year government yield, as it is used in UBS's valuation calculations.

Cash markets (continued)

We expect real cash rates to be negative for quite a while. Rates will likely stay low as central banks will be reluctant to tighten prematurely.

Another development in the cash markets was a huge increase in risk premiums on the credit side. Libor rates (and other short rates with credit risks) saw increased spreads over government bill rates, but have subsided into April and May.

Five-year expected real cash returns



Source: UBS Asset Management. Data as of 30 April 2020.

Currencies

In the past ten months the US dollar rose against almost all currencies with the DXY gaining 3.0%.

Several emerging market countries had substantial currency declines: for example, Argentina (-36%), Brazil (-29%) and South Africa (-23%). Two developed market economies that had large declines were Norway (-17%) and Australia (-7%). The Japanese yen and the Swiss franc ended up with small changes relative to the US dollar, while the euro dropped about 4.0%.

Overall, we view the US dollar as overvalued on a long run basis against the EUR and EM currencies. As a result we expect the USD to decline slightly in the coming years, partly as a result of the flight-to-quality effect wearing off.

In the following table we compare the changes in currency effects from a USD investor's perspective. These estimates are based on purchasing power parity, the relative paths of inflation, and the degree of reversion to fair value. In June of 2019, a USD investor in Eurozone equities or bonds should have expected an additional return of 0.8% per year due to the euro rising in value relative to the dollar. Interest rate differentials were quite large at that point in time, so hedging would have improved expected returns by 2.4%. Since then the dollar appreciated and interest rate differentials narrowed. Consequently, by April 2020, we expect that this same investor now expects their euro investments to appreciate by 1.9%, but hedging 'income' to drop to 0.8%.

We also apply the same methodology when looking at multi-currency baskets such as global equities or global government bonds. For example, a USD investor investing in developed market equities ex US would have expected 1.1% gains per year from foreign currency appreciation in the June 2019 assumptions and this increased to 1.8% in our April 2020 assumptions.

Another effect of the narrowing of interest rate differentials is that hedged impacts are lower. For example, for a global government bond portfolio, the impact of hedging dropped from 1.4% to 0.4%. As can be seen in the chart below, this impact is across the board for this group of major currencies. Many investors on the wrong side of the hedging proposition have found the high negative income unattractive (for example, Japanese investors who are considering whether to hedge a US real estate portfolio). Now this consideration has narrowed, making hedging more attractive from their perspective.

Currency impacts in USD terms

	June 2019 Currency		April 2020 Currency	
	Unhedged	Hedged	Unhedged	Hedged
EUR	0.8	2.4	1.9	0.8
GBP	1.0	1.4	1.9	-0.1
JPY	2.6	2.3	2.7	0.6
CHF	0.0	2.8	0.5	1.0
CAD	0.8	0.3	1.5	-0.2
AUD	0.3	0.7	0.8	0.2
CNY	-0.2	-0.5	0.0	-1.3
Index Baskets				
Dev Mkt Eq x US	1.1	1.9	1.8	0.4
Global Equity	0.4	0.4	0.7	-0.1
Global Eq x US	0.9	0.9	1.5	-0.2
EME	0.2	-1.9	0.7	-2.0
Global Gov	0.9	1.4	1.4	0.4
Global Gov x US	1.4	2.2	2.1	0.6
Global Credit	0.2	0.3	0.4	0.0
EMD Local	0.3	-2.1	1.3	-2.9

Source: UBS Asset Management. Data as of 30 April 2020.

Alternatives

The prospects for real estate are highly uncertain. Some segments suddenly have a questionable future—is there a permanent hit to malls and central business district office buildings? We expect a lot of turnover and adjustment, but potential for great opportunities exist as well. We projected a relatively low return for real estate in 2019 (4.9%) and see little rationale for returns to be much higher, though we expect the dispersion of returns across funds to be higher.

We have updated our methodology for hedge funds and will use some factor adjustments to the returns. We would expect that with better valuation and an increased opportunity set, the expected hedge fund alpha has increased, though financing constraints may limit the scalability of opportunities. Although these returns appear to be low, they are net-of-fees and provide a fairly high premium over cash interest rates and should beat most bond markets (with the exception of high yield). Even with these low returns, if hedge funds can provide low correlation with other asset classes, they can play important roles in moderate and low risk portfolios.

In private equity, we expect a large discrepancy by vintage year. Vintages in the 2017 to 2019 years should start to see significant write-downs of NAVs over the next three quarters along with lower than expected distributions; however, vintages starting in 2020 are investing in a brighter market environment. Distressed debt investing and buy-out funds suddenly have a plethora of opportunities and could do quite well.

Alternatives: 5-yr expected returns in USD terms

	June 2019	April 2020
US Real Estate (unlevered)	4.9	4.8
Hedge Funds (Low Vol)	3.9	3.5
Hedge Funds (High Vol)	4.5	4.0
US Private Equity	7.7	7.5
Global Private Equity (unhedged)	9.1	9.0

Source: UBS Asset Management. Data as of 30 April 2020.

Summary

The pandemic of 2020 has dramatically shifted the starting point and path of the economy. More than ever, investors face a wider array of economic outcomes to prepare for. Along with bouts of volatility and normal rotations of performance, we need to prepare for regime shifts that alter some fundamental relationships in the markets.

Given the uncertainty in the markets, scenario analysis is another tool to evaluate the range of outcomes across specific economic and capital market paths. This analysis allows us to explore the downsides as well as the upsides in the different asset classes and allow investors to understand the driving forces. Complementing this with standard tools and modern risk control analytics should help prepare investors to build better, more resilient portfolios.

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