Forecast
Market Outlooks

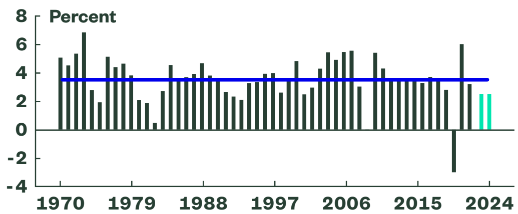
Q2 2023

Forecasts Quarter 2, 2023

Simona Mocuta
Chief Economist
Page 2

Global Economic Outlook

Figure 1
Weak Growth Ahead for Global Economy



World Real GDP Growth (WEO)

World, Real World GDP, State Street Global Advisors Forecast

Long Term Average Growth (3.5%)

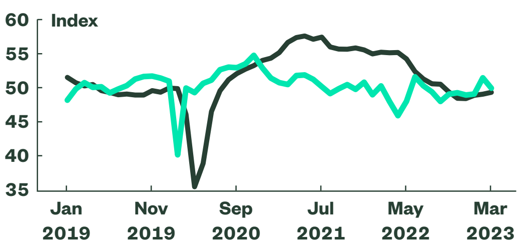
Source: IMF, WEO, State Street Global Advisors, as at March 31, 2023. The above forecast is an estimate based on certain assumptions and analysis made by the State Street Global Advisors Economics Team. There is no guarantee that the estimates will be achieved.

- The banking sector flare-up in March has introduced new uncertainties within the pre-existing growth slowdown narrative. Overtightening risks now more acute.
- Liquidity withdrawal and demand slowdown accentuate the unfolding global disinflation, facilitating a policy pivot towards lower rates.

Simona Mocuta
Chief Economist
Page 7

Emerging Markets Outlook

Figure 2
China Closing Underperformance Gap



World ex China, S&P Global Manufacturing PMI, SA

China, Caixin Manufacturing PMI, SA

Sources: Macrobond, SSGA Economics, SPDJI as of March 31, 2023.

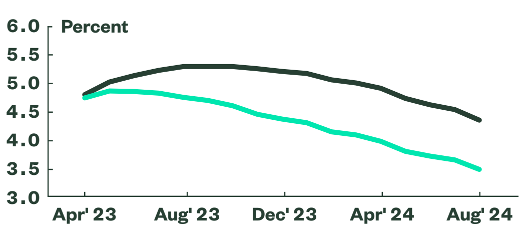
- Mixed performance likely across EM economies, with a China reopening rebound being a key performance driver.
- China's reopening should boost EM growth performance, but risks remain.

Jerry Holly, CFA
Senior Portfolio Manager, Investment Solutions Group

Page 8

Global Capital Markets

Figure 3
Markets Move to Price in Lower Rates



Fed Fund Futures 28 February 2023

Fed Fund Futures 31 March 2023

Source: FactSet as of March 31, 2023. For illustrative purposes only.

- There is often information to be learned from the behavior of crowds and we think that excessive bearish sentiment is likely one of the factors underpinning equity market resilience today and in the near term.
- Cash and fixed income assets largely look attractive from a cross asset valuation perspective, but sharp re-pricings in the expected level of interest rates suggest future gains may be harder to come by.

Global Economic Outlook

Simona Mocuta
Chief Economist

One quarter into 2023 and the outlook has not improved much since our assessment at the end of last year. Indeed, apart from inflation, very few things are likely to get much better from here. And the curve ball of banking sector turbulence in Q1 has added a new source of uncertainty.

This is our unsettling conclusion from the confusing amalgamation of macro data, policy developments, and wild market swings of the past few months. We had been warning for some time that — amid a global monetary policy tightening cycle of almost unprecedented speed and intensity — vulnerabilities were growing under the surface. To quote from our previous Forecasts publication, we were afraid that "something, somewhere, snaps, triggering a chain reaction of financial market stress that then reverberates throughout the real economy, driving an abrupt shift from the appearance of resilience to the threat of failure."

Three months later, something has clearly snapped. The question now is whether the fallout from the banking sector turmoil has been contained. Much depends on the evolving policy responses and ringfencing measures authorities have already deployed and others that may still be in the pipeline. Big picture, it looks pretty good so far; after all, it was impressive to see how smoothly the acquisition of a global systemically important bank went.

That said, even if the banking flare-up is well contained, this is not the end of the story. The hit to sentiment will likely linger, whether among consumers, businesses, banks themselves, and investors. We reckon the same is true even for policymakers, who had been, to some degree, experientially testing the limits of tightening. It seems reasonable to anticipate a higher degree of caution, whether in regard to loan-making, consumer spending, business hiring and capex deployment, and risk appetite in general. Credit availability, credit demand, and credit quality all seem poised to deteriorate from here on.

Given the surge in the cost of capital, this was already the anticipated direction of travel but recent events hasten the shift. The silver lining here is that weaker demand and tighter credit conditions should help accelerate ongoing disinflation and allow central banks to end the tightening cycle sooner than they otherwise might have. The next big question will be "how long until they start to cut?".

United States: Time to Reassess

Last quarter, we wrote that we were "somewhat perplexed by FOMC's continued incremental hawkishness in spite of growing evidence that the inflation tide is turning." At that point, we favored a 5.0% peak Fed Funds rate with rate cuts before the end of 2023. Those views rested on a high conviction call around disinflation, a focus on the lagged but powerful demand-destruction effects of sharply higher costs of capital, and concerns around possible financial market stress in the aftermath of rapid policy tightening. Signs of distress across the financial market ecosystem had, after all, already appeared (UK pensions, crypto, etc.) and it seemed a matter of time before something else would percolate to the surface. Our view has always been that it is better for central banks to voluntarily pause the tightening cycle before a stress episode unfolds, since it is hard to contain it once it erupts. Moreover, there is the associated risks that, as part of that containment effort, policymakers find themselves forced onto an easing cycle sooner than they'd like.

All economists know that any forecast put on paper is subject to merciless criticism. It is the nature of the job. It is also why we think the numbers themselves are usually less important than the narrative behind them. To us, that macro narrative had been unchanged for some time and was compelling: a growth slowdown accompanied by disinflation, facilitating an earlier and deeper policy pivot than envisioned in the Fed dot plot. Evidently, that narrative came under a lot of scrutiny over the course of February and early March as a string of data releases (and, even more importantly, data revisions) cast doubt over progress on disinflation.

So, how has our macro view changed in light of recent developments? To be clear, many elements of the view have not changed at all; in fact, they have been further cemented. This is especially true of the disinflation narrative. It is impossible to truly estimate the behavioral changes resulting from recent banking sector turmoil, but directionally at least, these events imply a tightening of credit conditions relative to what would have otherwise been the case. Recent months had already brought ample evidence that the moment of economic "peak euphoria" was well in the past and that a more cautious tone was taking hold among businesses and consumers. Consider the following examples. The number of people quitting their jobs peaked in November 2021; while it almost got back to that peak in April 2022, it has since retreated by about 14%. The share of homes sold for more than the asking price spiked to over 60% in April 2022 but dropped to the teens in December–January. Core durable goods orders (non-defense capital goods excluding aircraft) peaked in August 2022. Excluding the composition-driven surge in April 2020, wage inflation (as measured by average hourly earnings) peaked in March 2022 and has since eased by about 1.3 percentage points.

Disinflation Trend Underpins Rate Cut Potential

We expect these trends — all of which tell a story of disinflation — to continue; some may well accelerate. The next few months should bring about material moderation in inflation rates, with headline (consumer price index (CPI) and personal consumption expenditures (PCE) likely dropping below 4.0% year-over-year (y/y) by June and core PCE not far above that level. Even if not much credit tightening transpires by then, would further Fed rate hikes seem necessary at that point? We think not. And so, unless the Fed hikes at the early May meeting, it's dot plot terminal of 5.25% is likely to remain unrealized. That seems like a lesser problem than running the risks of hiking then only to reverse course soon thereafter. Hence, we think the Fed is done. To be fair, the way we really think about a May hike is the following: Could it happen? Yes. Will it happen? Probably not. Should it happen? Definitely not.

On the basis of ongoing improvements in inflation and softening growth, we do see 50 basis points worth of cuts as warranted before year end, either in the form of two small cuts in November and December, or a larger move in December. The current market pricing of 100 basis points worth of cuts through December strikes us as too aggressive; it would only be warranted if banking sector troubles take a turn for the worse. That said, we also think that the 80 basis points worth of cuts envisioned in the March summary of economic projections (SEP) through end-2024 is too little in the face of the economic trajectory we expect. We look for at least twice that degree of easing by the end of 2024.

Recession Unlikely in 2023. But 2024?

On growth, we had long resisted joining the "recession is inevitable" camp, and the evidence of resilience in the first quarter data validated that position. Having kept our 2023 growth forecast at 0.4% since September, we've actually upgraded that number to 0.9%. The upgrade reflects three main factors: a stronger end to 2022 that provided a higher "launch pad" for the economy (this matters for annual averages), the strong reported spending data through February, and more aid from trade (itself a reflection of better growth prospects in Europe).

Despite this forecast change, we think the chances of recession through end-2024 have risen and now slightly exceed 50%. Indeed, the 2023 growth improvement is fully offset by deteriorating growth expectations for 2024, when we no longer anticipate any improvement in performance. While the labor market starts from a position of strength, delaying the possible recession, we do see a faster pick-up in unemployment late this year and beyond, likely approaching 5.5% by late-2024. This further aids disinflation and allows the Fed to calibrate policy rates lower in the face of these dynamics. This is still a fairly modest increase in unemployment by historical standards, implying that even if a recession takes hold, it would likely be shallow. It could, however, morph into something deeper and more prolonged, and could even take hold much sooner, if certain risk events materialize. Amid the focus on the banking sector, the impending debt ceiling fight has temporarily taken a back seat. Yet it is but one of the many things that could go wrong in coming months.

Eurozone: Upgrading Prospects for 2023

Back in September 2022, when we maintained a positive 2023 growth forecast for the eurozone amid deep concerns around risks of energy supply disruptions, we were generally seen as overly optimistic. When we maintained that forecast in December, the contrast with the slight contraction anticipated by consensus became even starker. Since then, however, with the winter season essentially over and natural gas storage not depleted, sentiment for the eurozone's short-term economic performance improved meaningfully. In light of demonstrated resilience and incoming data, what seemed optimistic three months ago no longer seems sufficient. As such, we've nudged the 2023 forecast a little higher, to 0.7%; we are still a touch above the rapidly ascending consensus, but no longer meaningfully so.

The economy performed impressively well over the course of 2022, with growth reaching 3.5%, well ahead of the US. A cushion of excess savings, meaningful fiscal transfers to help households cope with high energy prices, and support from tourism demand, were key factors that allowed real consumer spending to grow 4.3% in 2022 (the most since 2001) despite inflation exceeding 8.0%. Equally welcome was another year of strong fixed investment growth, which we see not only as a positive to current growth, but a likely driver of future productivity gains.

Evidently, the picture is far less buoyant as we look ahead at 2023. The lagged negative drag from high inflation translates into meager consumer spending growth this year, although we don't anticipate an outright contraction. Tourism inflows should help limit the damage. Investment spending slows similarly — this is a story of broad-based slowdown but no outright contraction in any particular segment of the economy.

The inflation problem remains acute though the worst has passed. We see headline inflation slowing from 8.4% last year to around 5.5% in 2023 before it decelerates more sharply to under 3.0% in 2024. Concerns remain about a delayed wage-price response, but so far, incoming wage agreements have been reassuring in that regard. For the past several months, the European Central Bank (ECB) has been engaged in a belated rush to tighten policy to fight inflation. It delivered a 50 basis point hike in March, just days before banking troubles spread to Europe. It does not yet appear to be done on the rate hike front, but it is likely to be nearly done. We see one more 25 bps hike by mid-year and then an extended hold period (assuming market conditions allow it). There remains a reasonable argument to be made that the ECB should perhaps do a little more, say 50 bps of additional hikes, but given percolating risks in the banking sector, a more cautious approach seems warranted.

United Kingdom: Defying Expectations

The UK has been the recipient of a sizable growth forecast upgrade this quarter. Seemingly against all odds — and nearly all forecasts — the economy has not (yet) entered a recession, not even a technical one. Admittedly, it did contract slightly in the third quarter of 2022, but if early estimates hold true, real GDP was merely flat (q/q) during the fourth quarter. Moreover, high frequency data suggest a surprising, though very welcome, degree of resilience at the start of 2023. Monthly GDP was up slightly in January and purchasing managers indexes (PMIs) signaled a notable improvement in service sector activity in January–February.

Given some additional fiscal aid, given the labor market resilience, given that inflation is now in an established downtrend (despite an upside surprise in February), given the likely influx of tourists (not least from China) this year, given the retreat in regional natural gas prices, and given the Bank of England's measured policy tightening, we now expect a small increase in consumer spending this year versus a slight decline in the previous forecast. This is the most important factor driving the 2023 GDP growth upgrade from -0.7% in the December forecast to 0.3% now. This is an unusually large move from one quarter to the next, and it is well above consensus (-0.5% at the time of writing). As such, there is a genuine risk that we may yet be forced to revisit and lower these numbers down the line. But the extent to which the UK consumer has demonstrated so much resilience through what is arguably the worst of this crisis this is encouraging.

The apparent resilience in the labor market is critically important to the consumer spending outlook. While the labor market did take a turn for the worse towards the end of last summer, with employment declining for a few months, conditions appear to have stabilized since then. The claimant count unemployment rate continues to incrementally decline, although progress has leveled off recently. And while labor demand appears to be shifting away from full-time toward part-time employment, it is good to see overall employment and the activity rate picking up again. Wage inflation is slowly moderating, something the BoE wants to see in order to help lower inflationary pressures and bring inflation back to target over time. It will indeed take some time to bring inflation to target. After a 9.1% surge in 2022, we see headline CPI inflation averaging 6.8% this year (unchanged since the December forecast). A sub-3.0% average is expected in 2024.

Following the December hike that put the bank rate at 3.5%, we wrote that a cumulative 100 basis points (bps) worth of additional hikes seemed appropriate. The BoE delivered 75 bps worth of hikes since then (50 bps in February and 25 bps in March). Given the recent banking sector turmoil, another hike seems less compelling, but remains possible. The BoE remains open minded about the prospect, saying in the March policy statement that "If there were to be evidence of more persistent pressures, then further tightening in monetary policy would be required." However, the language seems to imply that more tightening is the alternative scenario, rather than the base case. We'd favor a pause in order to prevent unforeseen stresses. We'd also favor a prolonged hold at current levels to await a convincing inflation retreat. The BoE may well lag the Fed with respect to the timing of the first cut, which we do not anticipate will come until early 2024.

Japan: Growth Prospects Looking up

Japan could be a vital silver lining to a global economy grinding rather slowly to a halt in the next two years. With an economy that could grow at or above potential and a monetary policy slated to normalize, Japan has an exciting couple of years ahead. Amidst high inflation of recent times, the Bank of Japan (BoJ) responded cautiously to expectations of policy normalization in that they needed to achieve price stability "sustainably and stably accompanied by wage increases".

We have been expecting wage growth higher than the consensus of +3.0% at the shunto wage negotiations but were pleasantly surprised with a 3.8% outcome at the first round of results (including seniority pay). The 2.3% growth in base salaries (excluding seniority pay) may result in higher scheduled cash earnings, so a structural shift in the underlying wage dynamics may be afoot. Smaller unions (those with less than 300 members) also had a good outcome at 3.5%. Furthermore, wage growth may continue in 2024 given the declining demography in Japan and persistent price pressures.

Indeed, price pressures remain robust despite the effects of electricity subsidies that dragged the annual headline CPI lower. The BoJ core CPI (excluding fresh food and energy) rose 0.4% month-over-month (m/m) in February, translating into 3.5% y/y, the fastest since 1982 and above consensus expectations. Despite recently announced subsidies and base effects, we expect headline CPI to average 2.1% y/y this year and drop to 1.5% in 2024. Importantly, energy subsidies may fade from February 2024, which may add some basis points to the headline. Services inflation is gradually improving, and we expect its contribution to rise. Case in point, the services PMI in March reached 54.2, the highest level since 2013, and prices charged have risen for 10 months. And finally, firms in the BoJ Tankan survey indicate higher output prices in the longer run; all these dynamics suggest the start of a regime shift in price-wage dynamics.

Policy Tweak by BoJ Warranted

The combination of active price pressures and a better shunto outcome supports another Yield Curve Control (YCC) tweak from the BoJ. The central bank's estimate of the output gap may turn positive in April, adding another reason to amend the YCC confidently.

We are biased to widening the target band around the current 10-year JGB by 50 bps but a shift to targeting five-year JGBs is equally likely. So we expect the BoJ to target the 10-year JGB at 0% ± 100 bps. Such a move could be interpreted as effectively removing YCC altogether, but we do not think the BoJ will do away with this critical tool that has served the policy well. Timing-wise, the move may come in June this year but could be pushed further out if the recent banking turbulence gathers steam.

We are confident Japanese banks will not face any significant turmoil because of their solid balance sheets and a significantly low ratio of government securities held to maturity. However, the issues encountered by small US banks are a cautionary tale as Japanese banks hold nearly 84 trillion yen worth of JGBs. This is precisely why we do not expect BoJ to exit NIRP (negative interest rate policy) in a hurry; the chances are somewhat low in our thinking. Hence, expanding YCC and still having a target range will help.

Finally, we are optimistic that Japan may grow above its potential in 2023 and carry some momentum into the following year. Aided by better wage prospects, domestic consumption should drive GDP growth to an average of 1.4% y/y this year and 1.1% in 2024. However, exports may cool as the global appetite for goods consumption has receded, and China thus far has not lived up to expectations of rapid recovery. Finally, we believe risks to Japan's macro outlook stem more from the outside than within.

Emerging Markets Outlook

Simona Mocuta
Chief Economist

China's reopening is a key factor in emerging market performance, although a slowdown in global goods demand remains a headwind for manufacturing and commodity-exposed economies.

There has been a somewhat ironic dynamic surrounding China's reopening process. On one hand, this reopening has probably been the most significant development vis-a-vis the emerging market (EM) growth outlook over the past several months. On the other, it has not made much of a change to existing forecasts simply because it had long been anticipated. As such, it made a difference not so much in respect to the EM growth trajectory per se, but rather it strengthened the confidence in that pre-existing forecast. This has indeed been the case with our own projections. While the reopening process has turned visible and fast, it did not drive a forecast upgrade in March simply because we had already anticipated this rebound. Hence, while China itself displays a sharp cyclical upturn, the broader EM universe remains stuck in what could be described as an extended middling growth period.

Within this overall backdrop, several themes are worth highlighting. Near term, the rebalancing away from goods to services consumption globally — but particularly so in the United States — can create some headwinds for those economies geared directly towards goods production. This includes China and it also includes some commodity exporters. By contrast, service-oriented economies, especially those well-positioned to capitalize from what is likely to become a noticeable wave of foreign travel by Chinese tourists, should experience a growth boost.

Reshoring is a slower moving but much longer lasting theme, one that is bound to introduce more differentiation across EM economies in coming years. The drive towards near-shoring, towards shortening and simplifying global supply chains, is a broad-based global phenomenon. Location matters for success here, so proximity to big final demand markets like the US, the European Union, or even China, will become increasingly necessary, though far from sufficient, advantages in coming years. The availability of reasonably cheap and reliable productive resources (raw materials, labor, energy and transportation infrastructure) and a good rule of law to entice foreign capital are the other boxes to be ticked off on that list. There might not be a clear winner as no country can truly boast leadership across all these dimensions. But this is a relative, not an absolute game; the goal is not perfection, but outperformance. Investing in emerging markets will increasingly become a story of identifying those individual outperformers. In a world that's moving away from global supply chains, the tide no longer lifts all boats.

Global Capital Markets Outlook

Jerry Holly, CFA
Senior Portfolio Manager
Investment Solutions Group

There is often information to be learned from the behavior of crowds and we think that excessive bearish sentiment is likely one of the factors underpinning equity market resilience today and in the near-term. Cash and fixed income assets largely look attractive from a cross asset valuation perspective, but sharp re-pricings in the expected level of interest rates suggest future gains may be harder to come by.

Madness, Wisdom and Carnival Games

I was able to attend an industry dinner recently and the speaker provided an engaging presentation centered on investor psychology and the importance of understanding what investors learn from their mistakes. One example that was highlighted used the technology bubble bursting in the early 2000s as a case study. It was noted, at least anecdotally, that many of those investors did in fact take some lessons home from that affair — namely, to avoid investing in technology stocks. In the ensuing years, many of these newly battle-scarred investors set their sights instead on Floridian real estate. Rather than eschewing tech shares, it seems that more constructive lessons probably could have been gleaned from Charles Mackay's work from the mid-1800s: *"Extraordinary Popular Delusions and the Madness of Crowds."*

Bank regulators are all too familiar with the madness of crowds. Preventing bank runs and panics has been at the forefront of banking regulations for as long as there have been banks. But containing risks in the financial system — whether it be money markets, capital markets or the banks that operate in their midst — is not too dissimilar to a game of "whack-a-mole." Get one risk in order and another one inevitably pops up somewhere else. Tier one capital ratios are nice because they account for the riskiness of the assets that a bank holds. But there are plenty of assets with zero risk weights, which would elude capture under such a risk measure. Here, plainer vanilla leverage ratios can help limit the total size of a bank's balance sheet — even if they may not adequately capture the riskiness of its assets. Furthermore, some of the most pernicious risks might shift away from the regulated banking sector altogether — even if we were able to fortify every state and nationally chartered banking institution. From a consumer perspective, FDIC insurance in the United States goes a long way toward easing potential fears from every-day depositors, but it may also contribute to aggressive banking practices and "democratizes" the risk of a bank's operations and risk management failures. As Jim Grant has pointed out "what the bank offered the depositor in the days before federal deposit insurance was safety."[1]

Clearly there are cases when the crowd can go mad. But by the same token, it can also be a surprising source of wisdom. A more recent exploration of this idea, at least compared with Mackey's account, can be found in James Surowiecki's *The Wisdom of Crowds*. In it, he shows how, under certain conditions, groups can be remarkably accurate and intelligent in problem solving. Were the depositors that fled Silicon Valley Bank exhibiting madness or wisdom in trying to salvage their own finances? Probably a bit of both is my own view, but we'll see that the conditions present in that particular risk management failure were not conducive to showing us how crowds can really shine.

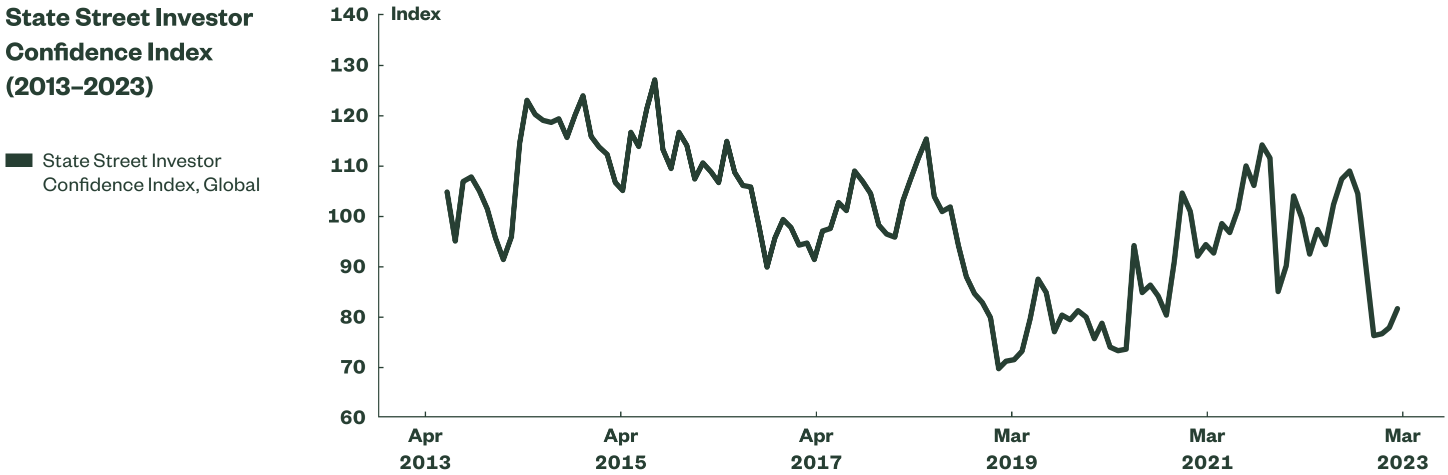
As we navigate the current market landscape amidst great uncertainty and a slowing economic backdrop, we'll take the opportunity to see where we might be able to parse some wisdom from the crowd and also guard against potential risks that might be spawned by popular delusions. Just as certain financial relationships hold under some conditions, but fail under others, we'll want to be equally circumspect when extrapolating insight from the masses.

Contrarian Regime Signals

Measuring sentiment in the markets lends itself quite well to the idea that there is information value in the behavior of crowds. And, in most respects, the intuition here is that the crowds have lost their mind. Contrarian investing is the catch phrase, and if the crowd is doing one thing then surely you want to be positioned differently.

On this point, the signs are mixed but do offer some rays of hope that equity markets may continue their sturdy first quarter performance. Speculative positioning in US equity futures is quite short, on balance. Investor margin balances are also very low — suggesting caution still reigns. And our own State Street Investor Confidence Index, which tracks real money positioning across institutional investors, remains fairly depressed even if it has started to improve. All of these indicators suggest that risk taking is relatively muted. And if that's the case, there will likely be less selling pressure if negative developments arise.

Figure 4
State Street Investor Confidence Index (2013–2023)



Source: State Street as of March 31, 2023. For illustrative purposes only.

Our own Market Regime Indicator (MRI) — which relies more heavily on market risk signals such as implied volatility and credit spreads — is also suggesting that risk sentiment is actually in a pretty good spot for equity markets. Low risk aversion is the language we use and this factor contributes to our constructive outlook across equity markets. But, at a certain point, low risk aversion becomes "too low" risk aversion. And that is how we defend against the madness of crowds in our interpretation of this information. We aren't at the "too low" point yet, and there appear to be plentiful risks to keep investors wary. But if the crowd does start to pay less attention to those risks, the MRI is a useful tool for detection.

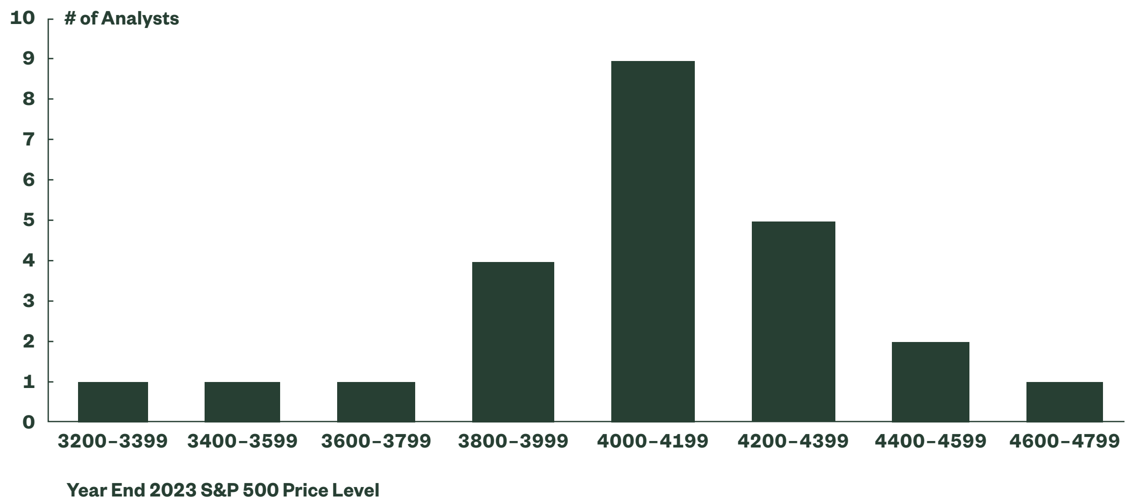
Bearish Crowding in Equities

Coming back to the Silicon Valley Bank depositors, what were the conditions like in that episode compared to what Surowiecki puts forth as key ingredients to generate collective wisdom? Well, the short answer is, the ingredients were all wrong. Though there is some nuance to his arguments, the key conditions needed to extract wisdom from a group are diversity, independence and decentralization, plus a mechanism to aggregate all of those views. It has been widely covered that the depositor base for Silicon Valley Bank was far less diverse than the typical bank, so diversity was lacking. Given that many of the depositors appeared to be well-connected to one another from a communications perspective there was also very little independence in their decision-making. And, to the extent that their depositors were taking cues from private equity advisors, the decentralization bit also falls short.

In our investment process, we're not a large enough group to take full advantage of the wisdom of crowds, but we do promote as much of these virtues as possible. We start with the facts and the output from our quantitative models. Only after our portfolio managers have independently assessed the relevant information do we join forces to debate how to position our portfolios. At the moment, the data point us toward a reasonably constructive view of equity markets. Given the recent resilience of markets, momentum factors have started to improve. And sentiment surrounding earnings and sales expectations appears to be holding up ok — particularly in regional markets like Europe where we maintain an overweight allocation. From a value perspective, there is much concern in the market writ large surrounding lofty valuations, but we see counterarguments in that free cash flow yields are well above average for broad based stock indexes and profitability ratios such as operating returns on assets are holding up quite well. Some variables related to macroeconomic developments and market structure point to less optimistic assessments, especially as fund flows to equities deteriorate and intra-market stock-level dispersion declines. But on balance we continue to see some degree of support for equities from a diverse cross section of factors — not to mention the sentiment information captured in our MRI.

Though we see support, it may be worth taking a look at how other (less optimistic) groups foresee the future. In Figure 5, we can see the year-end 2023 estimates for the S&P 500 price level from the sell side firms that publish this information in Bloomberg. There is a reasonably wide range of estimates, which suggests a good degree of independence in judgment. At the high end, we have estimates for the S&P 500 at 4,750 at year-end which would translate into a 16% gain (at the time of writing). At the other end of the spectrum, we can find an S&P price target of 3,225 — and if that gloomy prediction were to come true it would represent a loss of over 20%. But those represent the tails, and the bulk of the price estimates can be found between 3,800 and 4,400. In fact, the median estimate stood at 4,075, which was about 1% lower than where the market was trading when the information was assembled. And while there are many trading sessions until the end of the year, we can't help but wonder if some of the broader bearish sentiment may have crept into the distribution of sell side equity estimates. Here we would prefer to buck the crowd.

Figure 5
Sell Side Price Targets for S&P 500 Index



Source: Bloomberg Finance L.P., as of March 16, 2023. For illustrative purposes only.

Rate Expectations — Too Far, Too Fast

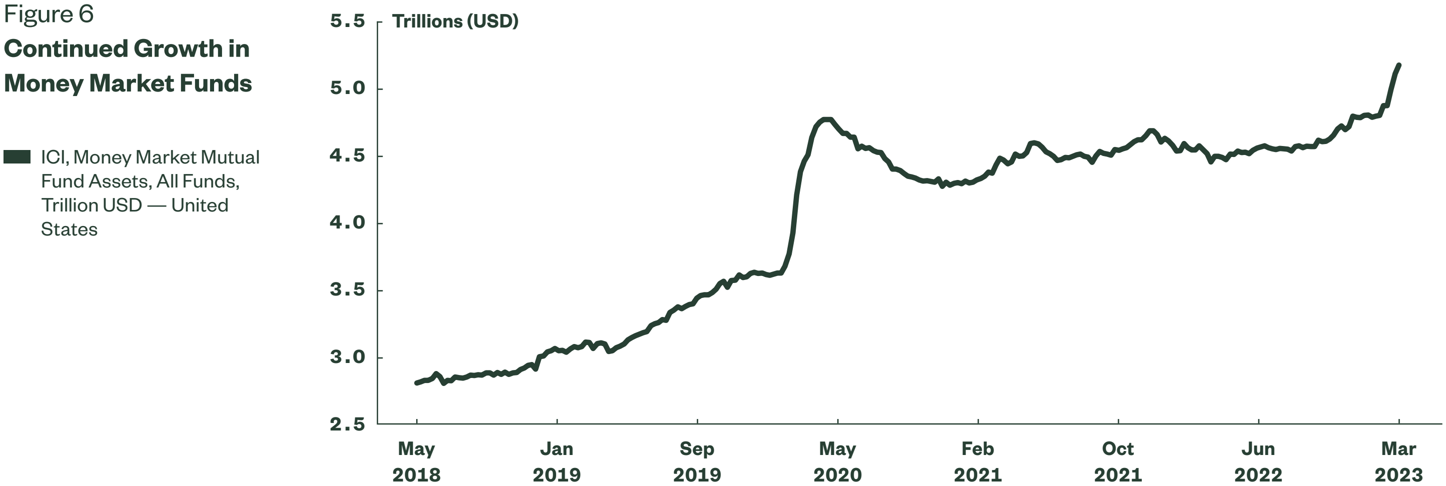
While sentiment, and other equity factors, keep us cautiously optimistic, that is not to say that we are ignoring the meaningful macroeconomic risks that could lead markets astray. Tighter credit availability due to banking turmoil, protracted weakness in commercial real estate and geopolitical risks all cast a cloud over the horizon. To quote our own economic outlook, "Aside from inflation, very few things get better from here."

But that last glimmer of macroeconomic hope — of falling inflation — is an important one. And we think it can serve as a key foundation for equity markets as well as fixed income. Lower inflation allows the Federal Reserve to ease interest rates which props up bond prices while lowering cap rates, both of which help heal problems in the banking sector and commercial real estate. This is just one of many virtuous narratives that might take shape.

In any event, the belief in easing inflation concerns underpins one of our more pivotal shifts in fixed income thinking over the past several months. Namely, that we see the yield curve evolving in a steepening direction over the remainder of the year. But this view comes with a rather large caveat, and it comes back to our topic du jour — crowd behavior.

To be fair, there are two separate and distinct crowds operating in money markets and bond markets that we need to address. The first crowding effect that has characterized interest rate and credit markets has been the dramatic fund flows entering into money market funds. Figure 6 shows how assets in money funds had been steadily growing over the past couple of years, but hooked sharply higher amidst the banking turmoil. For our part, whether the shift toward money markets was driven by risk aversion or just the higher interest rates on offer — both rationales seem reasonable. We are also hanging onto some excess cash in our portfolios given the healthy current income and still outsized interest rate volatility characterizing the markets.

Figure 6
Continued Growth in Money Market Funds



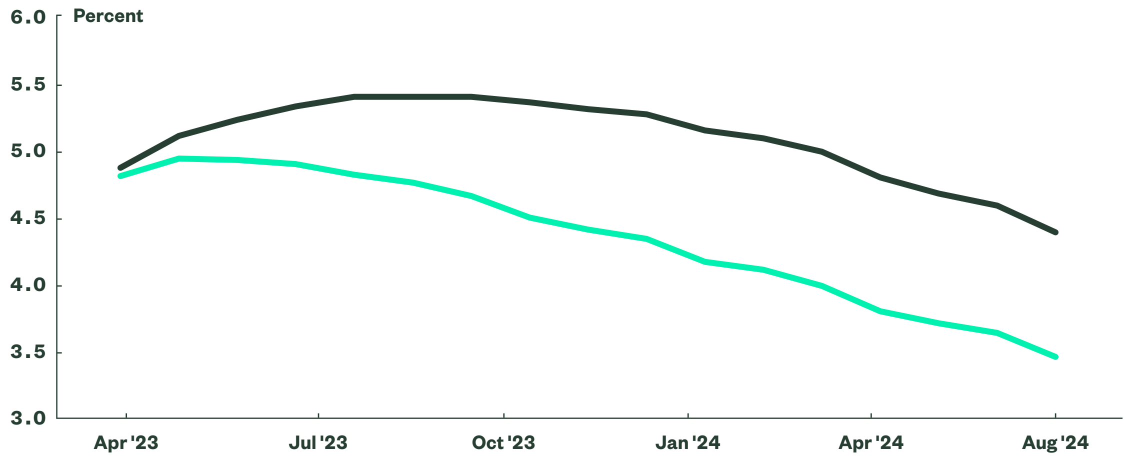
Source: FactSet as of March 31, 2023. Past performance is not a reliable indicator of future performance.

But if money market flows make sense, we have a harder time rationalizing the clearing prices associated with the activities of speculators in federal funds futures, overnight index swaps and similar instruments. No doubt that a couple of bank failures may go a long way towards giving the Federal Reserve misgivings about continued interest rate hikes, but if the battle against inflation is still firm in early spring then it's difficult for us to see short rates moving lower by late summer. Figure 7 shows how much market expectations changed for the path of the federal funds rate between the end of February and the end of March, using federal funds futures.
At the end of February, this data implied that the fed funds rate would reach a peak of almost 5.5% in mid-2023 and there wasn't really any expectation for rate cuts until early 2024. By the end of March, participants in this market judged May as the final (potential) hike with meaningful probabilities of a cut by late summer or early fall.

Figure 7
Shift in the Implied Federal Funds Rate

Fed Funds Rate
28 February 2023

Fed Funds Rate
31 March 2023



Source: FactSet as of March 31, 2023. For illustrative purposes only.

What does that mean for our allocations? Well, we maintain confidence in the longer-term trend of a steeper US yield curve. But given the re-pricing that occurred in March, we think the path to get there has become a bit bumpier. Our fixed income allocations are roughly duration neutral with our benchmarks but we've backed off some of our bond holdings in the belly of the curve amidst what we see as potentially popular delusions in interest rate futures.

Selective Exposure in Commodities

Commodity futures markets, by contrast, appear to have normalized to some extent. Commodity curves, in aggregate, have returned to a state of slight contango after offering up positive backwardation returns for all of 2022. In isolation, that development crimps our view of the asset class but the overall outlook is mixed with sub-sectors like energy looking more attractive while greater risks confront markets such as industrial metals. For energy commodities, tight supplies, China's reopening and a steady uptick in travel help to offset concerns surrounding the possibility of slower growth or recession in developed markets. But it's industrial metals where the balance of risks seems more prominent under a subdued global growth outlook, especially given the sector's sensitivity to real estate.

Gold continues to look attractive, even after its recent rally to north of $2,000 per ounce. The technical indicators we follow to judge the stability of price trends remain very strong and while fundamental factors are mixed, intermediate-term expectations of lower interest rates and a weaker US dollar make gold a useful diversifier in the current environment.

Crowd-Sourced Conclusions

If we come back to Surowiecki's *The Wisdom of Crowds*, he describes the essence of his findings in that "The idea of the wisdom of crowds is not that a group will always give you the right answer but that on average it will consistently come up with a better answer than any individual could provide."[2] So don't take it from me personally, but to the extent that our team approach can foster diversity of perspectives with independent opinions aggregated in a decentralized way — that would seem to be a reasonable path to tackle the uncertainty affecting asset markets at this time.

Sources: Bloomberg, FactSet, J.P. Morgan, Barclays, MSCI, Morgan Stanley and The Economist as of March 31, 2023.

Endnotes

1 Grant, James. *Money of the Mind — Borrowing and Lending in America from the Civil War to Michael Milken.* Farrar Straus Giroux, 1994, Page 81.

2 Surowiecki, James. *The Wisdom of Crowds — Why the Many Are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations*. Doubleday, 2004, Page 235.

State Street Global Advisors Forecasts as of 31 March 2023

	2023 (%)	2024 (%)
Real GDP Growth		
Global	2.5	2.5
US	0.9	0.7
Australia	1.5	2.0
Canada	0.5	1.5
Eurozone	0.7	1.1
France	0.8	1.0
Germany	0.3	1.2
Italy	1.1	1.1
UK	0.3	1.2
Japan	1.4	1.1
Brazil	0.6	1.9
China	5.0	4.7
India	6.0	5.8
Mexico	1.5	2.0
South Africa	0.9	1.5
South Korea	1.3	2.0
Taiwan	1.9	2.3
Inflation		
Developed Economies	5.0	2.5
US	4.0	2.2
Australia	4.2	2.4
Canada	4.2	2.5
Eurozone	5.7	2.4
France	4.6	2.5
Germany	6.0	2.3
Italy	6.2	2.3
UK	6.8	2.8
Japan	2.1	1.5
China	2.3	2.2

	31 March 2023 (%)	31 March 2024 (%)
Central Bank Rates		
US (upper bound)	5.00	4.00
Australia	3.60	3.60
Canada	4.50	3.75
Euro	3.00	3.25
UK	4.25	4.00
Japan	-0.10	-0.10
Brazil	13.75	11.00
China	4.35	4.35
India	6.50	6.50
Mexico	11.25	8.75
South Africa	7.75	7.00
South Korea	3.50	3.00
10-Year Bond Yields		
US	3.49	2.93
Australia	3.30	3.18
Canada	2.88	2.46
Germany	2.33	2.40
UK	3.52	3.33
Japan	0.32	0.38
Exchange Rates		
Australian Dollar (A$/$)	0.67	0.74
British Pound (£/$)	1.24	1.34
Canadian Dollar ($/C$)	1.35	1.23
Euro (€/$)	1.09	1.16
Japanese Yen ($/¥)	133.09	115.00
Swiss Franc ($/SFr)	0.91	0.97
Chinese Yuan ($/¥)	6.87	6.50

One-Year Return Forecasts	USD (%)	EUR (%)	GBP (%)	JPY (%)	AUD (%)	CAD (%)
S&P 500	6.5	-0.3	-1.7	-8.0	-3.6	-3.2
Russell 2000	7.2	0.4	-1.1	-7.4	-3.0	-2.6
MSCI EAFE	7.1	0.3	-1.2	-7.5	-3.1	-2.7
MSCI EM	7.8	1.0	-0.5	-6.9	-2.4	-2.0
Barclays Capital Aggregate Bond Index	4.8	-1.8	-3.3	-9.4	-5.1	-4.8
Citigroup World Government Bond Index	3.0	-3.5	-5.0	-11.0	-6.8	-6.4
Goldman Sachs Commodities Index	2.7	-3.8	-5.2	-11.3	-7.0	-6.7
Dow Jones US Select REIT Index	5.7	-1.0	-2.5	-8.7	-4.3	-3.9

State Street Global Advisors Forecasts, as of March 31, 2023.
The above estimates based on certain assumptions and analysis made by State Street Global Advisors. There is no guarantee that the estimates will be achieved.

About State Street Global Advisors

Our clients are the world's governments, institutions and financial advisors. To help them achieve their financial goals we live our guiding principles each and every day:

- Start with rigor
- Build from breadth
- Invest as stewards
- Invent the future

For four decades, these principles have helped us be the quiet power in a tumultuous investing world. Helping millions of people secure their financial futures. This takes each of our employees in 29 offices around the world, and a firm-wide conviction that we can always do it better. As a result, we are the world's fourth-largest asset manager* with US $3.62 trillion† under our care.

* Pensions & Investments Research Center, as of December 31, 2021.
† This figure is presented as of March 31, 2023 and includes approximately $65.03 billion USD of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated. Please note all AUM is unaudited.

ssga.com

Information Classification: General

Marketing communication

State Street Global Advisors Worldwide Entities

Abu Dhabi: State Street Global Advisors Limited, ADGM Branch, Al Khatem Tower, Suite 42801, Level 28, ADGM Square, Al Maryah Island, P.O Box 76404, Abu Dhabi, United Arab Emirates. Regulated by the ADGM Financial Services Regulatory Authority. T: +971 2 245 9000. **Australia:** State Street Global Advisors, Australia, Limited (ABN 42 003 914 225) is the holder of an Australian Financial Services License (AFSL Number 238276). Registered office: Level 14, 420 George Street, Sydney, NSW 2000, Australia. T: +612 9240-7600. F: +612 9240-7611. **Belgium:** State Street Global Advisors Belgium, Chaussée de La Hulpe 185, 1170 Brussels, Belgium. T: +32 2 663 2036. State Street Global Advisors Belgium is a branch office of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. **Canada:** State Street Global Advisors, Ltd., 1981 McGill College Avenue, Suite 500, Montreal, Qc, H3A 3A8, T: +514 282 2400 and 30 Adelaide Street East Suite 800, Toronto, Ontario M5C 3G6. T: +647 775 5900. **France:** State Street Global Advisors Europe Limited, France Branch ("State Street Global Advisors France") is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors France is registered in France with company number RCS Nanterre 899 183 289, and its office is located at Coeur Défense – Tour A – La Défense 4, 33e étage, 100, Esplanade du Général de Gaulle, 92 931 Paris La Défense Cedex, France. T: +33 1 44 45 40 00. F: +33 1 44 45 41 92. **Germany:** State Street Global Advisors Europe Limited, Branch in Germany, Brienner Strasse 59, D-80333 Munich, Germany ("State Street Global Advisors Germany"). T: +49 (0)89 55878 400. State Street Global Advisors Germany is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. **Hong Kong:** State Street Global Advisors Asia Limited, 68/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. T: +852 2103-0288. F: +852 2103-0200. **Ireland:** State Street Global Advisors Europe Limited is regulated by the Central Bank of Ireland. Registered office address 78 Sir John Rogerson's Quay, Dublin 2. Registered Number: 49934. T: +353 (0)1 776 3000. F: +353 (0)1 776 3300. **Italy:** State Street Global Advisors Europe Limited, Italy Branch ("State Street Global Advisors Italy") is a branch of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Italy is registered in Italy with company number 11871450968 — REA: 2628603 and VAT number 11871450968, and its office is located at Via Ferrante Aporti, 10 - 20125 Milan, Italy. T: +39 02 32066 100. F: +39 02 32066 155. **Japan:** State Street Global Advisors (Japan) Co., Ltd., Toranomon Hills Mori Tower 25F 1-23-1 Toranomon, Minato-ku, Tokyo 105-6325 Japan. T: +81-3-4530-7380. Financial Instruments Business Operator, Kanto Local Financial Bureau (Kinsho #345), Membership: Japan Investment Advisers Association, The Investment Trust Association, Japan, Japan Securities Dealers' Association. **Netherlands:** State Street Global Advisors Netherlands, Apollo Building 7th floor, Herikerbergweg 29, 1101 CN Amsterdam, Netherlands. T: +31 20 7181 000. State Street Global Advisors Netherlands is a branch office of State Street Global Advisors Europe Limited, registered in Ireland with company number 49934, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. **Singapore:** State Street Global Advisors Singapore Limited, 168, Robinson Road, #33-01 Capital Tower, Singapore 068912 (Company Reg. No: 200002719D, regulated by the Monetary Authority of Singapore). T: +65 6826-7555. F: +65 6826-7501. **Switzerland:** State Street Global Advisors AG, Beethovenstr. 19, CH-8027 Zurich. Registered with the Register of Commerce Zurich CHE-105.078.458. T: +41 (0)44 245 70 00. F: +41 (0)44 245 70 16. **United Kingdom:** State Street Global Advisors Limited. Authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 2509928. VAT No. 5776591 81. Registered office: 20 Churchill Place, Canary Wharf, London, E14 5HJ. T: 020 3395 6000. F: 020 3395 6350. **United States:** State Street Global Advisors, 1 Iron Street, Boston, MA 02210-1641. T: +1 617 786 3000.

Risk associated with equity investing include stock values which may fluctuate in response to the activities of individual companies and general market and economic conditions.

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor. All material has been obtained from sources believed to be reliable. There is no representation or warranty as to the accuracy of the information and State Street shall have no liability for decisions based on such information.

The information contained in this communication is not a research recommendation or 'investment research' and is classified as a 'Marketing Communication' in accordance with the Markets in Financial Instruments Directive (2014/65/EU) or applicable Swiss regulation. This means that this marketing communication (a) has not been prepared in accordance with legal requirements designed to promote the independence of investment research (b) is not subject to any prohibition on dealing ahead of the dissemination of investment research.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns.

Foreign investments involve greater risks than investments, including political and economic risks and the risk of currency fluctuations, all of which may be magnified in emerging markets.

Investing in commodities entail significant risk and is not appropriate for all investors. Commodities investing entail significant risk as commodity prices can be extremely volatile due to wide range of factors. A few such factors include overall market movements, real or perceived inflationary trends, commodity index volatility, international, economic and political changes, change in interest and currency exchange rates.

Investing in foreign domiciled securities may involve risk of capital loss from unfavorable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations. Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Investing in REITs involves certain distinct risks in addition to those risks associated with investing in the real estate industry in general. Equity REITs may be affected by changes in the value of the underlying property owned by the REITs, while mortgage REITs may be affected by the quality of credit extended. REITs are subject to heavy cash flow dependency, default by borrowers and self-liquidation. REITs, especially mortgage REITs, are also subject to interest rate risk (i.e., as interest rates rise, the value of the REIT may decline).

Investing involves risk including the risk of loss of principal.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

Past performance is not a reliable indicator of future performance.

All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment.

Companies with large market capitalizations go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalizations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalizations.

Investments in small-sized companies may involve greater risks than in those of larger, better known companies.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

ID1527326-4698458.9.1.GBL.RTL 0423
Exp. Date: 04/30/2024