



PANORAMA

QUARTERLY THOUGHT LEADERSHIP PUBLICATION FOR OUR CLIENTS

FIRST QUARTER, 2021

GLOBAL INVESTING

Secular Forces Are Carving New Paths for Active Investing

GLOBAL EQUITIES

Why the Future Now Looks Brighter for Value Investing

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Finding "Deeper Value" ir Emerging Markets

ASIAN BONDS

Chinese Government Bond
Opportunities Are Going Global

PERSONAL PROFILE

Ernest Yeung
Portfolio Manager, Emerging Markets
Discovery Strategy



WELCOME.....

......to the first quarter 2021 edition of Panorama, T. Rowe Price's investment magazine for Asian investors. While better times likely lie ahead, in the early months there is a race to be won between the rollout of the coronavirus vaccines and a worsening pandemic second wave. This race could weigh on global markets in the first quarter, resulting in higher volatility. But following President Biden's USD1.9 trillion package, we are confident there is enough policy stimulus underway to promote a broad global economic recovery this year. With expectations already high, equities may need to see confirmation of an earnings recovery if they are to make further progress.

In both equity and fixed income markets, the uneven impact of the coronavirus pandemic and subsequent economic recovery in countries, sectors, and companies means that strong macro and bottom-up analysis combined with skillful security selection are going to be critical to investment success in 2021.

In our lead article, Multi-Asset Solutions experts Yoram Lustig and Michael Walsh analyze the secular forces that are carving out new paths for active investors. While passive and rules-based quantitative investment strategies typically rely on past events and data, active strategies can be more forward-looking and anticipate change in an environment where the coronavirus has accelerated and redirected many long-term trends.

Looking at the role of bonds in a traditional 60/40 balanced portfolio, our Global Multi-Asset team explain how in a world of sustained low yields, Asian investors may need to make their equity allocation work harder through active management and also consider new portfolio diversifiers, such as long-duration bonds or alternative assets.

Another hot topic for equity investors currently is whether conditions are ripe for a style rotation from growth stocks back into value. Sebastien Mallet, who manages the T. Rowe Price Global Value Equity Strategy, believes a broader economic recovery and improving corporate earnings are likely to benefit cyclical and value areas of the market most.

Emerging market (EM) stocks also encountered a major style headwind in 2020. The huge policy stimulus in the developed market (DM) economies should help to reflate EM economies in 2021, allowing value stocks to recover some of the lost ground.

Turning next to Asian bonds, we look at the growing opportunities in Chinese government bonds. They continue to attract rising foreign inflows as the asset class joins the key fixed income benchmarks, offering attractive low-beta duration and diversification characteristics.

Lastly, for our Personal Profile interview we spoke to Ernest Yeung, who manages T. Rowe Price's Emerging Markets Discovery Equity Strategy. After a difficult year for value-oriented strategies, Ernest explains why there are good reasons for value investors to be more optimistic in 2021, beginning with the global rollout of effective coronavirus vaccines.

As ever, we welcome your comments and feedback on Panorama; our contact details can be found on the back cover of the magazine.

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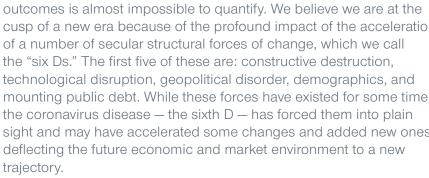


SECULAR FORCES ARE CARVING NEW PATHS FOR ACTIVE INVESTING

The coronavirus has accelerated and redirected long-term trends.

- The "six Ds" of secular change are: constructive destruction, technological disruption, geopolitical disorder, demographics, mounting debt, and the coronavirus.
- The key to investing amid these changes is to look ahead to the future possibilities rather than relying on extrapolating past behaviors.
- While passive and rules-based quantitative investment strategies typically rely on past events and data, active strategies can be more forward-looking and anticipate change.

The world has taken a new turn in 2020, and the range of potential outcomes is almost impossible to quantify. We believe we are at the cusp of a new era because of the profound impact of the acceleration of a number of secular structural forces of change, which we call the "six Ds." The first five of these are: constructive destruction. technological disruption, geopolitical disorder, demographics, and mounting public debt. While these forces have existed for some time, the coronavirus disease — the sixth D — has forced them into plain sight and may have accelerated some changes and added new ones, deflecting the future economic and market environment to a new





Constructive Destruction



Technological Disruption



Geopolitical Disorder



Global Demographics



Mounting





Coronavirus Disease

Yoram Lustig

FMFA and LatAm

Michael Walsh

Head of Multi-Asset Solutions,

Multi-Asset Solutions Strategist

Rather than expect the world to revert to the path it was on before the coronavirus, we believe investors should consider the extent to which the pandemic has changed the direction of travel:

- The scale and speed of the economic contraction has created uncertainty about the shape and length of the recovery, as well as potential opportunities;
- Technological disruption has gained momentum, and the ways in which we transport, work, and shop are unlikely to return to the way they were;
- Geopolitical disorder has become a persistent and significant concern for many investors;
- Aging demographics have been moderating economic growth and inflation, while the pandemic may change the health care needs and behaviors of the elderly; and
- Debt levels that were yet to return to normal following the 2008 global financial crisis (GFC) have soared.

While the pandemic is not the sole cause of these secular changes, it is proving to amplify and accelerate their impacts.

Constructive destruction is the natural cleansing process that crises and recessions bring.

Let's take a closer look at the various changes in turn.



Constructive Destruction: Positioning to Differentiate Between New Winners and Losers

Constructive destruction is the natural cleansing process that crises and recessions bring. Viable companies survive, while weaker ones do not. Credit rating downgrades exceed upgrades, indicating that widespread corporate failures are to be expected. This process ultimately leads to a more efficient allocation of resources as capital, labor, and investments concentrate on stronger businesses.

Different letters in the alphabet have typically been used to describe the potential shape of economic recoveries: V, U, W, or L. We believe this misses the point: Whatever path the recovery follows, gross domestic product (GDP) is likely to eventually recover to pre-coronavirus levels. However, the drivers of

output may well be different. For example, the relative contributions to GDP from technology, hospitality and leisure, and energy may change dramatically during and following a crisis. This is likely to have major implications for capital allocation.

Investment Implications

During periods of constructive destruction, active managers seek to identify the likely survivors — and non-survivors — through in-depth research focused on company fundamentals. In the current environment, when failures can lead to permanent losses, dodging the losers may be even more important than backing the winners.

Entire sectors and industries are likely to struggle for years in the wake of the current crisis. For example, companies across the "bricks and mortar" retail, travel, hospitality, and entertainment sectors might need to adapt to the new normal or disappear entirely. During such regime shifts, when disruption is abundant, careful selection can distinguish between those companies that are likely to adapt with new business models and those that are unlikely or unable to do so.



Technological Disruption: Active Has Flexibility to Adapt to New Paradigms

The pandemic has intensified a range of outcomes from revolutions in technology and communication. A few decades ago, the largest corporations in the U.S. were in the industrials, energy, and materials sectors. Now the information technology, consumer discretionary, and communication sectors dominate. Within sectors, the leaders have come and gone.

...the largest companies in 2025 and 2030 are likely to be different from those of today.

In a world of accelerated innovation and changing consumption patterns, the largest companies in 2025 and 2030 are likely to be different from those of today. The key to successful investing is to try to identify the leaders of tomorrow rather than simply invest in the leaders of yesterday.

Investment Implications

Technological disruption has significantly affected the relative performance of value and growth investment styles. Growth and value stocks have historically taken turns to outperform each other for relatively

FIGURE 1: Growth Has Outperformed Value Since the GFC

Technology stocks have dominated



Past performance is not a reliable indicator of future performance.

As of October 31, 2020.

Fama French value factor (HML, high minus low book-to-market), January 1990 through September 2020. The dotted lines are the linear trend from January 1990 to December 2006 and from January 2007 to September 2020.

Source: Fama French data library; calculations by T. Rowe Price. http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

short periods, but the current growth cycle, which began after the GFC, has been the longest ever. Growth overweights technology stocks, which have performed well since 2007 and are expected to continue doing so. Value, which is often favored by rules-based factor and smart beta strategies, tends to overweight financials, where banks currently face challenges because of low interest rates. We believe investors need to rethink whether some strategies that systematically overweight value rely on old paradigms. If so, they may need to redesign them or consider using adaptive active management.

Fracking—another technological development—has led to lower energy prices. Falling energy prices are not only deflationary, they are also a headwind for commodity exporters and a tailwind for commodity importers. Another source of disruption, it typically leads to dispersion — the domain of active managers. This presents another source of discretionary alpha, and it gives momentum to moving away from fossil fuel and a potential advantage to portfolios integrating environmental, social, and corporate governance (ESG) factors.

We believe that active management is better positioned to benefit from ESG integration than passive investing, not just by excluding certain types of company (which passive strategies can also do to some degree), but also by investing in firms developing green energy, promoting social fairness, and adhering to good governance practices. Investors should consider ESG as a potential source of return, not just a way to do good, especially in the post COVID-19 (the disease caused by the coronavirus) world, as interest in green technology and ESG may increase.



Geopolitical Disorder: Adapting to the Future Shape of Markets

Since the GFC, consumer price inflation has diminished, and wage growth has been muted. However, the prices of assets—both financial and property—have skyrocketed. This has led to a widening wealth gap in many countries across the globe. The coronavirus crisis has only served to widen the chasm between the haves and have nots, amplifying the potential for political changes and social unrest.

The crisis has also put the spotlight on a range of other geopolitical conflicts and tensions, including the intensifying rivalry between the U.S. and China, the dire economic situation of some energy- and commodity-exporting countries, and the pace of deglobalization as countries and companies reconsider the security of supply chains.

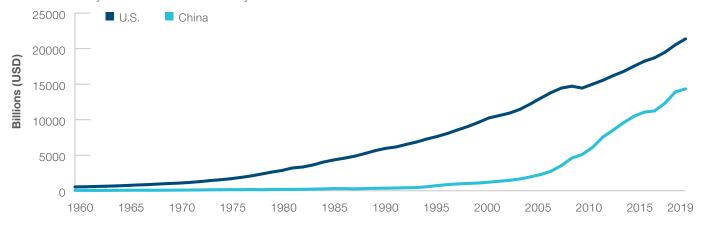
Investment Implications

Geopolitical disorder has implications for market capitalization weighting schemes often used by indices. The weights of securities, sectors, and countries' financial markets are set by their market value. However, this method is not only backward-looking, reflecting the performance of investments up to the present, it ignores global structural changes.

For example, if China's rate of economic expansion continues, its current weighting in global stock indices will soon be understated (Figure 2). While China has the second-largest GDP in the world after the U.S. and may surpass the U.S. economy in the

FIGURE 2: The Gap Between the U.S. and China Is Closing

China's GDP may soon exceed that of its major rival



As of January 1, 2019.

Source: The World Bank; calculations by T. Rowe Price. GDP in current billions of U.S. dollars. 1960 through 2019.

near future, the weight of China's stock market in global indices, such as MSCI All Country World Index (ACWI), is less than 5%, while the U.S. is weighted at over 50%. Passive index trackers, following market cap indices, cannot account for potential future developments using today's market values. Active managers have greater potential to monitor and anticipate global trends and position their portfolios accordingly.



Demographics and Mounting Debt: The Japanification of the Developed World

Describing Japan's nearly 30-year battle against deflation and anemic economic growth, Japanification is characterized by ineffective monetary measures, near-zero bond yields, and ballooning public debt. There are signs that Japanification may become a phenomenon throughout the developed world. For example,

Europe's aging population and a rigid economy may mean the region suffers from slower economic expansion, persistent lower inflation, and sub-zero real interest rates over time. Similarly, the U.S. may face Japanification because of its diminishing inflation, faltering economic growth, and very low interest rates (Figure 3).

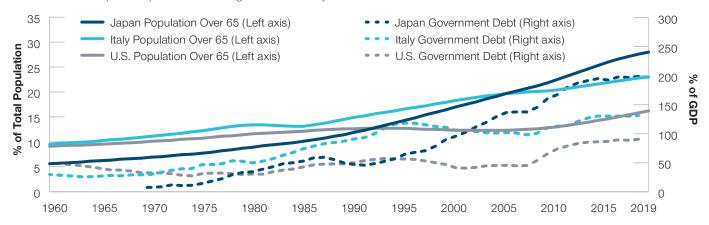
There are signs that Japanification may become a phenomenon throughout the developed world.

Investment Implications

Lower interest rates make income-oriented investments less attractive. Some illiquid investments, such as real estate and infrastructure, supposedly offer a stable, inflation-linked stream of long-term

FIGURE 3: Japanification May Be Spreading

The U.S. and Europe face persistent weak growth and low yields

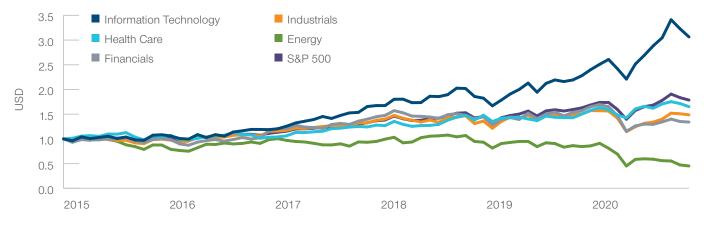


As of January 1, 2019.

Sources: The World Bank (population ages 65 and above % of total population), International Monetary Fund (central government debt % of GDP); calculations by T. Rowe Price. Japan, Italy, and the U.S., 1960 through 2019.

FIGURE 4: The Coronavirus Has Driven Dispersion

Technology has soared ahead of financials and energy



Past performance is not a reliable indicator of future performance.

As of October 30, 2020.

January 2015 through October 2020, total returns of selected sectors in the S&P 500, calculated in U.S. dollars. Source: S&P (see Additional Disclosure), calculations by T. Rowe Price.

income. When interest rates and inflation remain low, however, the cash flows generated by such investments are lower and may no longer be an adequate compensation for their illiquidity and high transaction costs. Instead of being forced into less liquid asset classes, investors seeking income should broaden their universe and consider other, potentially more liquid investments. For example, emerging market corporate bonds and multi-asset income strategies both offer higher cash flows potential than government bonds while typically providing greater liquidity than real estate and infrastructure.

Another implication of falling rates is the benign economic conditions after the GFC. Falling interest rates have boosted the prices of most assets. In this environment, passive investing was attractive as asset values tended to increase. However, the drop in interest rates has mostly completed its downward journey — after falling from 4% to 0%, rates are unlikely to drop to -4%. Going forward, implementing investment strategies via passively tracking indices may not work so well.



The Disease: Volatile Markets Heighten Opportunity for Research-Led Selection

The pandemic has disrupted global financial markets, reigniting volatility and widening the dispersion of returns across sectors (Figure 4). It also appears to be changing the way we live and work.

Investment Implications

The coronavirus pandemic has unsettled markets, sending investments in various directions. For active managers, these dynamics bring welcome dispersion from which skilled managers can identify

investments with tailwind stories and deselect those facing headwinds.

For example, in a world in which a global health crisis has resulted in people across the world having to work from home and self-isolate, sectors such as health care, connectivity-enabling technology, and online commerce could be long-term winners. On the other hand, we would expect that an economic standstill will negatively impact demand for commodities and transportation and will be challenging for banks and physical retailers. Skillful active managers have the opportunity to flourish in this environment.

...emotional irrationality leads to deviations of market prices from fundamentals.

Volatility was low for much of the past decade but rose abruptly this year. When crises occur, investors constantly calibrate expectations to an evolving reality — like aiming at moving targets, market prices constantly change, trying to reflect the most probable scenarios. During such volatile periods of adjustments, emotional irrationality leads to deviations of market prices from fundamentals. This is the time when prices mostly diverge from intrinsic values, so acute investors with a keen eye, a clear head, and patience can identify openings, waiting for prices to eventually converge with valuations over time. Volatility is helpful because it should create abundant investment opportunities for skilled active managers.

The virus may also mean that people work more from home, travel less, and maintain social distance from each other for an extended period. This may mean that some investments, such as commercial property investing in office space and capital allocated to airports, may suffer. Investors in such assets may need to reassess those holdings.

Active Management May Be Better Placed to Embrace the Future

When the future takes a different turn, it may be more difficult to infer from past trends and relationships. Only investors who can acclimatize are likely to succeed. Passive index trackers, for example, base their investments on the shape of markets today; similarly, rules-based, quantitative strategies, such as factor investing and smart beta, are based on extrapolating past behaviors and relationships. When things change, we believe those strategies are unlikely to adapt unless they are redesigned. Redesigning them, however, requires the accumulation of extensive data, so these strategies may struggle during transitionary periods.

We believe that active management can imagine and adapt to the new future. Investors should rethink whether by opting for passive they may not only be exposing themselves to hidden biases, concentration risk, and wider systemic risk, but they might also miss out on the potentially unique opportunities provided by a forward-looking, judgment-based approach.



WHY THE FUTURE NOW LOOKS BRIGHTER FOR VALUE INVESTING

Three scenarios that could propel a style rotation back to value.

- The extreme valuation dispersion between value and growth stocks stands near historic levels. Economic recovery and improving corporate earnings are likely to benefit cyclical and value areas of the market most.
- A coronavirus vaccine is key to unlocking short-term performance, but long term, inflation is required to deliver a more sustained rotation.
- The narrow leadership and increasingly bifurcated nature of markets has created many opportunities for uncertainty and mispricing to be exploited.

The growth versus value style debate intensified as the dominance of "growth" accelerated during the coronavirus pandemic. Value investing has remained deeply out of favor, but we sense the dynamics are changing and the environment is now looking more favorable for value investing.

When regime changes happen, they are often swift and dramatic with large stock price movements, so positioning early is important. With many investors currently not positioned for a style rotation, we examine three scenarios that could favor value investing and help investors consider their allocations.



Sebastien Mallet Portfolio Manager, Global Value Equity Strategy

FIGURE 1: Three Factors Shaping the Year Ahead for Value

Vaccine, valuations, and greater focus on fiscal spending will favor value areas of the market



1. Post-Pandemic Recovery

Economic environment for cyclical stocks set to improve



2. Political Dynamics

New U.S. administration could bolster fiscal and monetary support



3. Valuations in Focus

Market concentration of secular growth stocks under scrutiny

The world could be set for a cyclical bounce in 2021, and we are positioned for that scenario.



Post-Coronavirus Economic Recovery Set to Drive Cyclical Stock Performance

We believe the global economy is currently in a mini "W-shaped" recovery as we progress through the coronavirus pandemic. A brief recovery after the first wave has been interrupted by a resurgence in cases in the U.S. and Europe with PMIs¹ softening. However, this is likely to improve as we enter the first quarter of 2021.

Virus cases could fall, or at least become more manageable, while recent news from Pfizer and Moderna of potential vaccines, along with others in the pipeline, could accelerate our way out of this pandemic. Initial optimism is exceedingly high right now, and that could fade, but ultimately, a vaccine that works effectively will help drive economic recovery, and that would favor cyclical parts of the market.

China is a great example of how a recovery scenario could potentially play out globally. China has had much more success in suppressing the virus, and its economy is benefiting. Consumer spending, car sales, and economic growth have all bounced back strongly from the depths of the pandemic back in March.

Globally, some of the most sensitive sectors to the pandemic have been industrials, materials, energy, real estate, and transportation. Year-on-year earnings

comparisons from March 2021 onward are, however, likely to look much more favorable.



New Political Dynamics Shape a Favorable Fiscal and Monetary Backdrop

The victory of Democratic candidate Joseph Biden in the U.S. presidential election brings with it a range of potential value-positive policy measures. Among the possible policy actions in play are the easing of trade uncertainty (reestablishing a pillar for global growth), increased fiscal stimulus, a potentially weaker U.S. dollar, and more substantial reflationary policies.

We expect President Biden to prioritize additional fiscal spending to stimulate the economy as it recovers from the steep downturn caused by the coronavirus pandemic. We also anticipate increased infrastructure spending alongside the possibility of higher corporate taxes. Higher taxes historically have been more detrimental to areas within the growth complex, however.

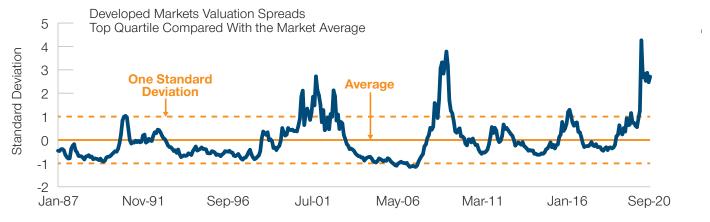
While a Biden administration is seen as supportive of corporate tax increases, it is far from certain that these would be enacted. There are many hurdles ahead for a Biden presidency, including a split Congress and the uncertain balance of the Senate, which may dampen prospects for spending and policy changes in the near term.

Arguments for more unconventional policy to bolster economic growth have also gained traction. This includes those who favor central bank balance sheets being put to work to provide tangible income for consumers in the form of fiscal handouts. We have already seen this approach, in part, to deal with the coronavirus pandemic.

¹ Purchasing managers' indexes.

FIGURE 2: Valuation Spreads Between Value and Growth Remain Near Historic Levels

When spreads widen, opportunities arise for value investors to exploit January 1987 to September 2020.



Developed markets spreads are represented by the MSCI World Index. We form value and growth portfolios in each country using four ratios: book-to-market (B/M); earnings-price (E/P); cash earnings to price (CE/P); and dividend yield (D/P). Firms in the country portfolios are value-weighted. To construct the developed market spreads, we weight each country in proportion to its global weight. Analysis is for research purposes only and does not represent actual portfolios or investments.

Source: Empirical Research Partners Analysis.

Modern Monetary Theory, which holds that governments should use fiscal policy to generate full employment, is one variation on this line of thought.

Nobody has yet demonstrated that delegating monetary policy to elected politicians will bring about better economic outcomes than the current method of allowing central banks to manage it, but helicopter money has gained traction. The gradual erosion of central bank independence means that the current environment is probably more conducive to helicopter money than it was just a few years ago.

Growth stocks have benefited from technological advances and recently from work-from-home dynamics, which have helped power cash flow and earnings.



Shifting Market Dynamics Put Focus on Valuations

Value stocks have come under huge pressure as economic uncertainty has prompted investors to shorten their time horizons, pile into secular winners, and avoid cyclicals. Fear and uncertainty have also meant investors have favored well-understood growth stories during the recovery rally without regard to valuation.

However, the market's extreme and singular focus on secular growth and an extreme aversion to cyclical

risks have contributed to the narrowing in market leadership. The FAANGs² have become the market. This market concentration has become a concern, and we expect a broadening away from this narrow group of mega-cap market leaders.

With the MSCI World Value Index having a meaningful overweight to financials, energy, and utilities and underweight exposure to technology and consumer discretionary—value sectors have the potential to benefit from an economic recovery and any revision to the overconcentration profile currently evident.

This is not to call a turn in the growth/value performance cycle, especially a sustainable reversion. We are also not signaling a uniform downturn for growth stocks. Indeed, many with the best growth profiles will likely continue to generate high free cash flow margins.

However, the idea that today's biggest companies—primarily U.S. technology companies—will continue to dominate the next decade should be viewed with caution. Seldom do the same companies, or even economies, manage to sustain such dominance.

Better Times Ahead

Although many of the trends driving growth outperformance may endure, we believe value stocks offer significant upside potential at this time. The maturity, narrowness, and magnitude of the current growth cycle, along with the gathering debate about the scope for a more inflationary and interventionist

² FAANGs: Acronym used in reference to the stocks of the five tech companies Facebook, Amazon, Apple, Netflix, and Alphabet (the G refers to Alphabet's core company Google).

Economic recovery and expansionary government policy may see a potential return to a more inflationary environment, which historically has benefited value areas.

world, suggest that a change may be afoot. Key to unlocking short-term performance is a coronavirus vaccine, while a more prolonged style rotation will likely need inflation.

Importantly, with valuation spreads between value and growth currently at extreme levels, a sustained regime change is not essential to see improved investment returns for value stocks. Crucially, we believe that the quality and quantity of the opportunity set available to value investors right now is as compelling as it has ever been.

T. ROWE PRICE BEYOND THE NUMBERS

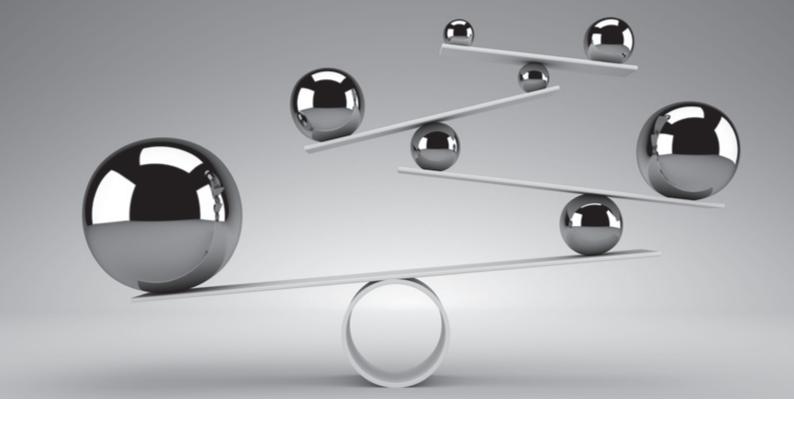
THE ART OF VALUE—PINPOINTING THE UNDERAPPRECIATED

Trying to deliver alpha in value areas of the market has been difficult over the last decade, as growth outperformance has been so strong. But we believe in the power of value investing, which has, at times, meant adopting the contrarian trade.

Our focus has always been on finding companies that we believe are trading below their intrinsic values, usually because of some short-term dislocation that our fundamental research suggests could be resolved.

We are not looking for the cheapest stocks, but instead for the most compellingly valued names relative to their long-term prospects. For example, banks have faced deep secular challenges ever since the global financial crisis back in 2008–2009. With unprecedented suppression of interest rates and quantitative easing (QE), banks have been deeply out of favor.

But our analysis paints a much better picture for the sector. For some banks, the secular headwinds remain, but many now have much better capital ratios and less leverage on their loan books, with some also actively looking to increase their loan growth going forward. Even if we remain in this ultralow interest rate environment, which is highly likely in the near term, we believe there are still areas within the sector that offer opportunities, especially those with investment banking or asset management arms.



ROLE OF BONDS IN A 60/40 PORTFOLIO

Flat is the new up.

- Investors should consider re-evaluating the role of bonds in a traditional 60/40 balanced portfolio as today's very low yields are likely to persist.
- We look at ways to 'stretch' or redesign the 60/40 balanced portfolio in order to mitigate the impact of low yields on overall portfolio risk and return.
- Investors may need to make their equity allocation work harder through active management, and consider new diversifiers like long duration bonds or alternatives.

For a zero-yield world, the traditional role that bonds play in a balanced 60/40 portfolio of equities and bonds has been placed under significant review. Bonds typically provide for two attributes: income and downside risk management. The income component is almost gone for the more conservative of the bond universe, and the risk mitigation component is seriously challenged. Does that mean that balanced investors should sell bonds and find a replacement asset? If so, which one? We don't think the answer is trivial. Bonds still have an important role in a balanced portfolio. This role just needs to be reevaluated in the light of very low yields. In this paper, we look at the impact of this zero-yield world on the two key bond attributes: income and downside risk management. We look at some practical solutions to help respond to the new challenges. We conclude with a possible design on how to rethink the traditional 60/40 balanced portfolio allocation.



Thomas Poullaouec Head of Multi-Asset Solutions, APAC



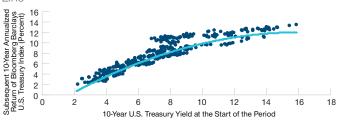
Nathan Wang Solutions Analyst, Multi-Asset Solutions, APAC

Other contributors/thanks to: Robert Harlow, Justin Harvey, Andrew Armstrong, and Peter Austin for their insights and comments.

Bonds still have an important role in a balanced portfolio.

FIGURE 1: U.S. 10-Year Treasury Bond Yield vs. Subsequent Return of U.S. Treasury

Subsequent Annualized 10-Year Return and Indicative Trend Line



As of September 30, 2020,

Past performance is not a reliable indicator of future performance.
Source: Bloomberg (see Additional Disclosure). All data analysis by T. Rowe Price.
Based on month-end 10-year U.S. Treasury yields over the period 1/31/1973
through 7/30/2010 and annualized return of the Bloomberg Barclays U.S. Treasury
Index over the corresponding subsequent 10-year period.

I. Impact on Subsequent Return Expectations

Let's start with the bad news. We believe the current 10-year yield level can be a reasonable expectation for the subsequent 10-year return from holding U.S. Treasuries. In Figure 1, we look at the historical 10-year U.S. Treasury yield level (X axis) and the annualized return of the Bloomberg Barclays U.S. Treasury Index over the subsequent 10-year period. The relationship was strong between current yield and subsequent return, and it extended to other developed Treasury markets. Given current low yields, we think investors should therefore expect a low return on their U.S. Treasury allocation for the next 10 years.

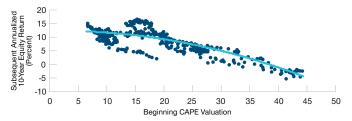
...a traditional 60/40 portfolio could be expected to generate a low-single-digit annualized return over the next 10 years.

We can use the level of yield as a valuation gauge for the U.S. Treasury market. Similarly, we can use the cyclically adjusted price/earnings (CAPE) ratio as a valuation indicator for the U.S. equity market. We replicate the same analysis and use the starting CAPE ratio for the S&P 500 Index as the X axis and annualized return of the S&P 500 Index over the subsequent 10-year period as the Y axis.

While the relationship was not as strong for equities as for bonds, the relationship still held: The more expensive the investor's starting level, the lower the subsequent return. Currently, the CAPE ratio is close to 30x, which would imply a potential subsequent equity return in the low single digits, annualized for the next 10 years, based on the above analysis (see Figure 2).

FIGURE 2: S&P 500 CAPE Ratio vs. Subsequent Equity Return

Subsequent Annualized 10-Year Return and Indicative Trend Line



As of August 31, 2020.

Past performance is not a reliable indicator of future performance.

Sources: Bloomberg and Department of Economics, Yale University (see Additional Disclosure). Data analysis by T. Rowe Price.

Based on the S&P 500 Shiller CAPE ratio, measured monthly, over the period 1/4/1973 through 7/1/2010, and annualized return of the S&P 500 Index over the corresponding subsequent 10-year period.

To make things worse, based on our analysis low yields and high equity valuations are related. When yields have been lower than 6%, investors historically would have experienced higher CAPE ratios (see Figure 3).

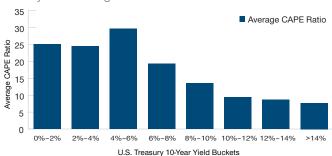
In summary, this doesn't bode well for a traditional 60/40 balanced portfolio investing in equities and bonds as both assets could be expected to perform relatively poorly in the next decade based on long-term historical relationships between current valuations and subsequent returns.

The easiest solution is to reset expectations on what a traditional balanced portfolio could deliver. Based on the above historical data, a traditional 60/40 portfolio could be expected to generate a low-single-digit annualized return over the next 10 years. Unfortunately, resetting expectations to such a low level won't solve the financial needs of many of today's investors.

Although thinking in terms of excess returns versus the risk-free rate and/or inflation makes sense, not all investors think that way about their return objectives. Some investors prefer to think in terms of nominal or

FIGURE 3: S&P 500 Average CAPE vs. U.S. 10-Year Treasury Yield

January 1973 to August 2020



As of August 31, 2020.

Sources: Bloomberg and Department of Economics, Yale University (see Additional Disclosure). Period 1/31/1973 through 8/31/2020. Data analysis by T. Rowe Price.

total return. It is obviously harder today to generate 6%¹ in nominal terms than when cash yields were positive.

If we think in excess (or real) return terms, the world of a 60/40 investor did not materially change with low yields. Based on historical levels of volatility and the correlation between equities and bonds, we found that the expected Sharpe ratio (excess return versus the risk-free rate divided by volatility) for bonds is not too demanding to justify a 40% allocation. To simplify, the excess return of bonds versus cash should be at least one-fifth of the bond volatility to maintain a 40% portfolio allocation to bonds. In this context, the yield curve slope (the difference between the long-term and short-term yields) matters more when it comes to achieving the target excess or real return of a 60/40 portfolio.

On the other hand, if we take the side of investors who focus on a constant nominal return target rather than the return in excess of cash or inflation, the question becomes: What is the implied level of equity return you need to have in order to keep the 60/40 allocation given the current bond return expectation and a 6% objective? We assume that the bond return expectation is the yield at the start of each period. We then compute the required equity return expectation to reach 6% overall with a 60/40 asset allocation.

...the equity return expectation for a static 60/40 investor who wants to meet a 6% nominal return target has increased...

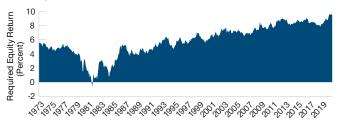
Figure 4 highlights that the equity return expectation for a static 60/40 investor who wants to meet a 6% nominal return target has increased steadily since the 1980s. The current data imply an expected equity return of close to 10%. While this could still be feasible in a TINA world,² it would be at odds with our previous finding around valuation and subsequent return (see Figures 2 and 3).

In order to keep the 6% nominal return target within a low-yield environment, we think a more realistic approach would be to consider changing the composition of the portfolio.³ We now assume that the equity return forecast is set at 8% in line with the long-term trend (See Journal of Financial Markets, June 1998). We then derive the fixed income allocation required to achieve the 6% nominal return target.

Today, one would only be able to own 27% in bonds (Figure 5). In other words, the investor needs to take an additional 13% equity risk compared with the 60/40 reference portfolio in order to achieve their 6% nominal return target.

FIGURE 4: Equity Return Required to Achieve a 6% Portfolio Return

For a 60/40 Balanced Portfolio



The hypothetical information presented is shown for illustrative, informational purposes only. This material does not reflect the actual returns/allocations of any portfolio and is not a reliable indicator of future results. The historical yields used as part of the basis for this analysis are based on the end-month 10-year U.S. Treasury yield. Management fees, transaction costs, taxes, and potential expenses are not considered and would reduce returns. Actual investment results and future required returns may differ significantly. Changing the assumptions may yield different results.

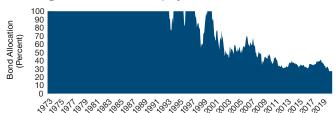
As of September 30, 2020.

We assume that the bond return expectation is the yield at the time, bond returns are based on the end-month 10-year U.S. Treasury yield.

Source: Bloomberg (see Additional Disclosure). Period 1/31/1973 through 9/30/2020. Data analysis by T. Rowe Price.

FIGURE 5: Bond Allocation Required to Achieve a 6% Portfolio Return

Assuming an 8% Return on Equity



The hypothetical information presented is shown for illustrative, informational purposes only. This material does not reflect the actual returns/allocations of any portfolio and is not a reliable indicator of future results. The historical yields used as part of the basis for this analysis are based on the end-month 10-year U.S. Treasury yield. Management fees, transaction costs, taxes, and potential expenses are not considered and would reduce returns. Actual investment results and future required returns may differ significantly. Changing the assumptions may yield different results.

As of September 30, 2020.

Source: Bloomberg (see Additional Disclosure). Period 1/31/1973 through 9/30/2020. Data analysis by T. Rowe Price.

The equity returns used as part of the basis for this analysis are based on historical long-term average returns (See Journal of Financial Markets, June 1998.)

¹ We pick 6% return as an arbitrary number based on our experience on what investors are typically targeting over a cycle on a gross-of-fees basis. Note that we are always using the annualized return in this paper, unless otherwise noted.

²TINA stands for There Is No Alternative. It describes the current market environment created by extra-loose monetary policies that incentivize investors to invest in higher-risk, higher-yielding assets.

³ While we only look at the stock/bond allocation in this section of the paper, we will look at introducing new assets in the section that follows.

Conclusion #1: Since future nominal bond returns are expected to be low given current low starting yields, investors need to make their equity allocation work harder (i.e., generate a higher return) or increase their equity risk exposure. It appears that the status quo of a 60/40 allocation is expected to lead to a lower nominal return outcome than has been achieved historically.

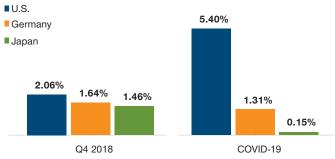
Sovereign bond yields are currently at record-low levels everywhere in the world.

II. Impact on Downside Risk Management

Low yields globally are a vicious circle: At a time when an investor would have to increase equity risk to meet portfolio return objectives, the defense provided by the bond allocation is diminished. Here we look at the impact on the diversification characteristics of bonds in a traditional equity/bond portfolio.

FIGURE 6: Government Bond Performance During Stress Periods

Return (%) in Local Currency



Past performance is not a reliable indicator of future performance. Source: Bloomberg (see Additional Disclosure): Bloomberg Barclays U.S. Treasury Index, Bloomberg Barclays Germany Government All Bonds Index, and Bloomberg Barclays Japan Government Float Adjusted Bond Index. Periods are defined as follows: Q4 2018 is from 10/1/2018 through 12/27/2018 (market bottom). COVID-19 is from 2/19/2020 through 3/18/2020. The periods selected are the two major equity drawdowns of 20% or more as measured by the S&P 500 since late 2014. Data analysis by T. Rowe Price.

Sovereign bond yields are currently at record-low levels everywhere in the world. The yield on the Bloomberg Barclays global Treasury index fell below 0.4% this year, the lowest since 1990. It only recovered to 0.5% at the end of August. Assuming yields go to zero in an equity drawdown scenario, the expected return for this index is its yield times its duration (approximately 8.5 years), i.e., around 4.25%, which is not much of a buffer to mitigate an equity drawdown of 20% plus.

While low yields might be new to certain investors, especially in the U.S. or Australia, it has been the

This paper draws on the analysis from the following papers written by T. Rowe Price investment experts. We encourage readers to refer to their findings to develop a robust asset allocation framework in a low-yield world.

- 1. When Diversification Fails (Sébastien Page and Robert Panariello)—August 2019
- A Diversified Approach to Tail-Risk Mitigation (Bob Harlow and Sean McWilliams)—March 2020
- 3. The Quest for Defense (Yoram Lustig)— October 2019
- 4. Looking Beyond Negative Yields (Steven Boothe and Lowell Yura)—December 2019

norm for many investors across the world for many years. The 10-year sovereign yield in Japan has been below 1% since the end of 2011 and stuck around 0% since the Bank of Japan implemented its yield curve control policy in 2016. Similarly, the 10-year sovereign yield in Germany has been below 1% since the last quarter of 2014.

...the returns from bonds are still expected to be flat... or slightly positive during market stresses.

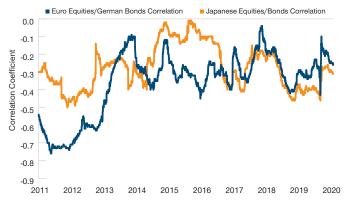
Since late 2014, we have had two major equity drawdowns of 20% or more as measured by the S&P 500: Q4 2018 and the recent coronavirus episode. Based on index performance, we look at what has been the return of a generic 10-year bond investment in local currency for Japan and Germany and compare them with the U.S.

We find that the returns were still positive during these two stress periods. However, the returns were lower for both German and Japanese bonds compared with the U.S. Especially, during the coronavirus crisis where the U.S. had the luxury of starting with a much higher yield after a period of rate hikes from the Fed in 2017–2019.

Government bonds still play a diversifier role...even with low or negative yields.

FIGURE 7: Equity and Bond Rolling Correlation

Rolling One-Year Correlation



Past performance is not a reliable indicator of future performance. July 8, 2011 to March 16, 2020.

Sources: Bloomberg: EURO STOXX 50 Index, Bloomberg Barclays Germany Government All Bonds Index, TOPIX Index, and Bloomberg Barclays Japan Government Float Adjusted Bond Index (see Additional Disclosure).

While the diversification benefits are expected to be lower under a low-yield environment (coupled with yield curve control policies or negative interest rate policies), the returns from bonds are still expected to be flat (like in Japan during the coronavirus crisis) or slightly positive during market stresses. Shall we just assume that "flat is the new up" for bonds in periods of market stress?

Indeed, the negative correlation between local equity and local sovereign bonds remained in place in Germany and Japan even after their yields fell below 1% (Figure 7). So the engine of diversification still works; it just runs at a slower speed. These findings are consistent with our previous research papers: "When Diversification Fails" and "Looking Beyond Negative Yields."

Conclusion #2: Government bonds still play a diversifier role in a 60/40 portfolio, even with low or negative yields. Investors should

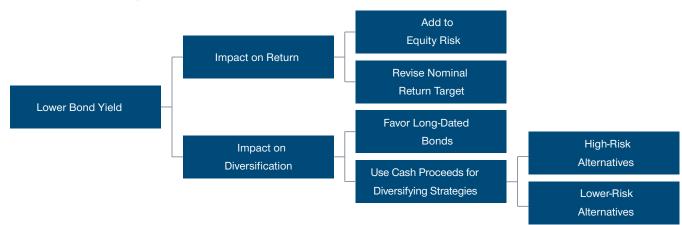
reset expectations about the magnitude of the diversification benefit rather than its existence.

III. Alternative 60/40 Portfolio Design—Stretch It Further

From the previous two sections, we think that the potential way forward for a 60/40 balanced investor is to "stretch" their portfolio. By stretching it, we mean:

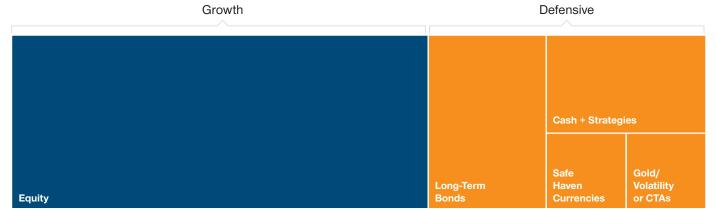
- The equity allocation becomes even more paramount than before to meet the long-term growth target. For some investors, adding to equity risk (or equity-sensitive assets) might make sense. Moreover, the importance of active management is greater when beta returns are modest. Alpha from active managers could represent a higher share of the final total portfolio return. For others who can't accept a higher risk profile, they might revise their nominal return target lower or consider risk-managed equity strategies.
- The traditional bond allocation can potentially be restructured in different ways:
 - Keep duration in your portfolio but invest further out in maturities. Longer-dated bonds are less directly impacted by central bank policies and, therefore, are expected to behave according to the bond "playbook" with closer sensitivity to economic drivers. Keeping the same analogy, 30-year bonds may be the new 10-year bonds. Moreover, investing in longer-dated bonds frees up some cash as you will likely need a lower amount of portfolio capital to achieve the same amount of duration.
 - The remaining cash can be used to potentially invest in diversifying strategies. In a very schematic way, we could group them into two

FIGURE 8: Extensions to the Traditional Balanced Portfolio Schematic Illustration of 60/40 Portfolio Construction



Source: T. Rowe Price.

For illustrative purpose only. This is not intended to be investment advice or a recommendation to take any particular investment action.



Source: T. Rowe Price.

For illustrative purpose only. This is not intended to be investment advice or a recommendation to take any particular investment action.

categories: lower-risk strategies such as haven currencies, high-quality corporate bonds, or multi-strategy liquid alternatives, and higher-risk strategies such as volatility, gold, or derivatives.

In his paper "The Quest for Defense," our colleague Yoram Lustig quantifies the protective score⁴ of various asset classes. For U.S.-based investors, he found that using Treasuries, haven currencies, and gold offers investors an attractive protective score. We use his findings to look at a portfolio that would use our approach discussed above and his selected assets.

To design the "stretched" 60/40 portfolio, we consider:

- No increase in the equity risk but with some level of risk management overlay. Also, a higher proportion of "active" versus "passive" strategies may be considered in striving to offset the low expected returns from market betas.
- Consider keeping the same duration risk. We find that a hypothetical 17% allocation to long-term U.S. Treasuries (based on the Bloomberg Barclays Long Treasury Total Return Index) would have generated the same average duration risk as a 40% allocation to the Bloomberg Barclays U.S. Treasury Index over the past 20 years.
- The remaining cash can then be used to invest in diversifying strategies, such as:
 - "cash plus" strategies, which can potentially offer some upside returns while still controlling for the total risk. Investors should also consider

- short-dated high yield bonds with appropriate credit research oversight.
- a mix of haven currencies, high-quality corporate bonds, gold, volatility, and/or managed futures strategies.

These are some of our ideas to rethink the 60/40 portfolio design. We understand that each investor may have different needs and objectives that could lead to different decisions.

Conclusion #3: The low-yield environment requires a rethinking of the 60/40 portfolio design. Practical solutions exist and should be assessed in line with each investor's risk tolerance and return objectives.

...we find that there are ways to build robust portfolios without increasing overall risk dramatically.

Conclusion

The impact of low bond yields on the design of the 60/40 balanced portfolio are expected to be with us for the foreseeable future. In addition to resetting expectations, we find that there are ways to build robust portfolios without increasing overall risk dramatically. While "flat" may be the new "up" for the role of bonds in a 60/40 portfolio, the concept of the traditional balanced portfolio has not been killed by the arrival of low yields. **The traditional 60/40 portfolio may be dead; long live the extended 60/40 portfolio!**

^{4 &}quot;Protective score" is a metric that quantifies and ranks the protective quality of assets with respect to global equities (or any other selected asset), considering the protection's cost and effectiveness.



FINDING "DEEPER VALUE" IN EMERGING MARKETS

Value-growth divergence may be peaking.

- We search for 'forgotten' stocks in Emerging Markets that we believe are under-owned and under-researched and are about to experience fundamental change, with limited downside and significant upside potential.
- After the pandemic-related global sell off and the resulting market dislocations, we identified better investment opportunities in "covid-off cyclicals".
- 2020 has been a very tough year for our strategy, though the huge policy stimulus should help to reflate economies and allow value stocks to recover.



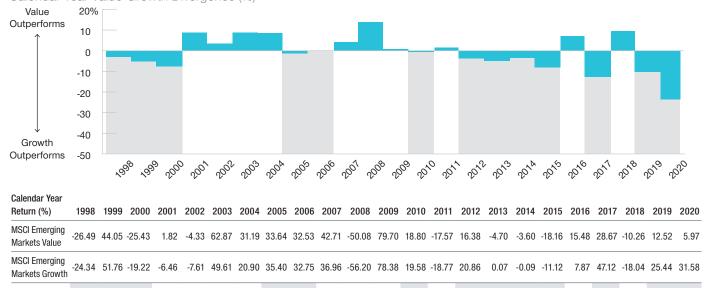
Ernest Yeung Portfolio Manager Emerging Markets Discovery Equity Strategy

Fintech Growth Is Accelerating at a Blistering Pace

Value funds – whether global, developed or emerging – encountered a major style headwind in 2020. Globally, economy-sensitive value stocks underperformed during the coronavirus pandemic, which was to be expected. Value companies tend to be in traditional sectors that need growth in real economic activity to keep their earnings coming. With economies all but closing during their lockdowns, these companies could not generate earnings growth. Later, value stocks failed to rebound in the early phases of economic recovery, counter to historical experience. From a relative earnings perspective, the pandemic boosted e-commerce, cloud computing and online services and entertainment, favouring many of the large-cap internet growth stocks that were market leaders prior to the coronavirus

FIGURE 1: EM Value-Growth Style Divergence is Extreme

Calendar Year Value-Growth Divergence (%)



5.75

6.12

1.32 -0.78

1.20 -4.48 -4.76 -3.51 -7.04

7.61 -18.45

7.78 -12.92 -25.61

Past performance is not a reliable indicator of future performance.

8.27

-2.15 -7.70 -6.21

Relative

Source: As at December 31, 2020. Financial data and analytics provider FactSet. Copyright 2020 FactSet. All Rights Reserved. Please see Additional Disclosures page for information about this MSCI information.

3.28 13.25 10.29 -1.76 -0.22

pandemic. The result has been a market recovery characterized by concentrated sector leadership and narrow breadth that has been driven by COVID-19 trades in addition to the value versus growth factor. In Emerging Markets (EM), growth outperformed value by a record margin in 2020, the largest style divergence ever (Figure 1).

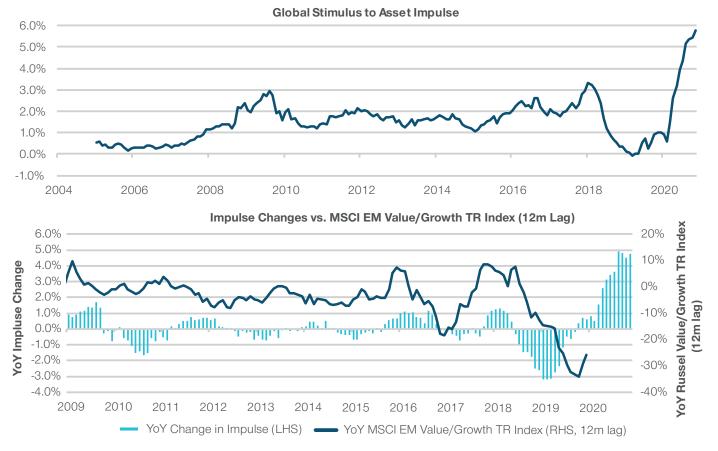
Stocks that were perceived to be "COVIDoff" were indiscriminately sold off as investors chased "COVID-on" beneficiaries.

The shock of global recession this year was caused by the medical response to contain the coronavirus and not by the build-up of macroeconomic imbalances, the more traditional route. As such, it is likely to be relatively short, albeit deep, with the successful reopening of economies seen as depending on the distribution of an effective coronavirus vaccine. Here, the recent news has been very encouraging, with several effective vaccines available for widespread distribution. Add up the production plans of the major pharma companies involved, and global pharmaceutical production could be around 8.5 billion doses in 2021 – enough to potentially inoculate over half of the world's population.

While the initial impact of the coronavirus crisis has been to push the divergence of value and growth stocks to all-time highs, the latter part of the year was dominated by the "COVID-on"/"COVIDoff" trade. This has been a one factor trade and in our view presents the single biggest market disconnection we are currently experiencing. Stocks that were perceived to be "COVID-off" were indiscriminately sold off as investors chased "COVIDon" beneficiaries. However, traditional growth stocks such as cosmetics, gaming, airport operators have been sold off regardless of fundamentals. We expect the unprecedented global policy stimulus introduced this year will continue to have a beneficial impact on economies in 2021, as much of the income transfers have not been spent but remain sitting in people's bank accounts. As effective vaccines become more widely available, business and consumers become more confident, allowing social and economic behaviour to normalize globally (Figure 2). At that point a broader economic recovery should lead to an unwinding of many of this year's "COVID" trades also supporting a market rotation away from growth in favor of value. Cyclical/old economy stocks in 2020 have become more forgotten and unloved than ever before. Looking at this opportunity set, we see no fundamental justification for value stocks to be quite so unloved, since many of them exhibit strong balance sheets and high cashflow generation while the economic impact of the coronavirus shock will fade as vaccines become available.

FIGURE 2: Massive Global Stimulus May Trigger A Value Rotation

EM Value/Growth responds to stimulus with a lag



As of November 30, 2020.

Past performance is not a reliable indicator of future performance.

Sources: Bloomberg Finance L.P., Bank of International Settlements/Haver Analytics. Please see Additional Disclosures page for information about this MSCI information.

Our "Discovery" Thesis for Investing in EM Stocks

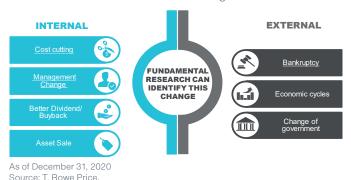
We believe that an active manager who seeks to identify such companies via a disciplined, bottom up approach is more likely to succeed than a passive, indexed approach to EM value stocks. Instead of focusing on a particular index and quantitative screens, we prefer to invest bottom up, looking closely at what we believe drives the share price of every stock in the portfolio. Because we believe that buying cheap and waiting for mean reversion does not work well for EM, our starting point is not valuation. Our core investment thesis is that there are many good value opportunities at the stock level in emerging markets that tend to get 'forgotten' or overlooked by mainstream EM equity funds.

We tend to agree that the bottom 25% of EM stocks by quality are often "value traps" that are justifiably ignored by foreign investors. But among the next two quartiles – stocks that can be thought of as being of average EM quality – there will always be some that are about to move into the top 25% in terms of quality, re-rating over time in the process

(as well as others that are headed lower). We like to search for EM businesses in the mid quartiles that are successfully addressing the reasons for past underperformance and where management are confident that future performance can improve (Figure 3). Often, such stocks can be characterised as having been 'forgotten' or neglected by the majority of EM portfolio managers. We look for signs of fundamental improvement that can help an EM stock to move up from being average quality to being good quality.

FIGURE 3: EM Value Stocks May Not Need Strong Top Line Growth

Potential drivers for a value stock re-rating



Such forgotten stocks can experience strong share price appreciation.

We do not invest on the basis of a one-off, short-term time catalyst. Rather, we look to invest in change that we expect will lead over time to fundamental improvement. The change can be company specific (eg: cost cutting, change in management, divestment), or it can be external (industry consolidation, government change that leads to a better run economy). We believe such forgotten stocks can experience strong share price appreciation. We also look for a buffer such as a strong balance sheet that can provide a measure of downside support, acting as an 'anchor' to stocks that are already 'cheap,' which in turn implies a potentially favourable asymmetric risk profile.

In Adversity Lies Opportunity

As investors have been chasing COVID beneficiaries they have not been taking into account the solid fundamentals of old economy stocks, providing us a fertile hunting ground. A deep dive into EM corporate balance sheets reveals these remain intact in most cyclical industries – where banks, energy and materials industries typically have low recapitalisation risk and are fundamentally strong. Solid bottom-up fundamentals coupled with the structural change in the way governments have been stimulating during the coronavirus crisis, in our view, provide the ingredients for a style regime change in the near term, and possibly the longer term. For the first time since the strategy's inception, we see fundamental change to support a style-based rotation.

In the past we witnessed developed market governments and central banks pumping a lot of money into banks and corporates to recapitalise weak corporates' balance sheets. Such was the case of Japan in the 90s and western economies after Lehman Brothers collapsed. This type of stimulus failed to have a multiplier effect in these economies. Now, post-COVID, we believe something has changed - governments have realised that low interest rates alone are not enough to kick-start economies. This time around very little money is going into struggling corporates. Globally, other than a few airlines, governments have hardly stepped in for industry-wide bailouts, instead targeting the consumer (helicopter money) and we believe this should likely result in a visible multiplier effect which could in turn benefit beaten-down sectors and

stocks. This offers the external fundamental change that we seek to invest in.

Outlook

We are of the view that the current extreme growth/ value divergence will prove unsustainable. At some point, the unprecedented monetary and fiscal stimulus deployed by governments to deal with the COVID-19 crisis is likely to result in a global reflation trade that can be expected to trigger a sustained rebound in value stocks. Since strategy inception up to the onset of the coronavirus crisis, our portfolio has been tilted towards the 'core-value' end of value. The extreme shifts in markets in 2020 have prompted us to favour a deeper value exposure. We are of the view that the conditions are currently being created to power a strong tailwind in 2021 for EM value investors.

Emerging markets have had a difficult time as an unpopular asset class, especially in the first quarter of this year when the pandemic started to accelerate across the world. The global emerging markets asset class experienced 35 consecutive weeks of outflows. But we are of the view that emerging markets are also likely to recover earlier than developed markets, as many of these countries did not implement extended lockdowns and as a result are already experiencing V-shaped production recovery. In most of the emerging markets, governments do not actually have the capacity to lockdown, because there is a large informal economy and people are without savings. Weaker fiscal balances make it equally hard for governments to lock down entire economies, as western style consumer relief efforts are unaffordable. As a result, the deterioration of fiscal positions ended up being cyclical phenomena. We see improved GDP and fiscal accounts and are hopeful of a road to recovery from here on out.

WHAT WE'RE WATCHING NEXT

We remain constructive toward EM equities and are looking for confirmation that a peak in performance divergence between value-oriented and growth stocks has been reached. We expect a cyclical recovery in EM supported by measured stimulus, strong household savings, pent-up consumer demand, and the return of corporate capital expenditure. The balance sheets of many cyclical industries like banks, energy, and materials are fundamentally strong with low recapitalization risk.



CHINESE GOVERNMENT BOND OPPORTUNITIES ARE GOING GLOBAL

Foreign fund flows are increasing as asset class joins global benchmarks and continues to offer attractive low beta duration and diversification characteristics.

- The inclusion of Chinese local currency bonds in major global bond indices has driven an increase in foreign ownership.
- Chinese government bonds continue to provide low beta duration characteristics and attractive diversification benefits relative to core government bonds.
- China's V-shaped economic recovery amid the global pandemic should provide a supportive tailwind for the asset class.

China's government bond market has charted a rapid rise over the past two decades on the back of its robust economic growth. The asset class has also made considerable strides to integrate into the global financial system in recent years. FTSE Russell announced in September that they would be including Chinese bonds in its World Government Bond Index (WGBI), following earlier decisions by Bloomberg to include China in its flagship Bloomberg Barclays Global Aggregate Bond Index and J.P. Morgan in its Global Bond Index Emerging Market (GBI-EM).

Foreign ownership of Chinese government bonds has reached approximately USD \$230 billion, representing 9% of the Chinese government bond market, according to China Central Depository & Clearing (CCDC). We believe foreign fund flows will accelerate both to account for the index inclusion changes and also to take advantage of



Leonard Kwan Portfolio Manager, Emerging Markets Fixed Income the asset class' low beta duration characteristics and diversification benefits. Going forward, we believe foreign fund flows could amount to around USD \$100 billion per year.

Robust Economic Expansion Has Driven Asset Class Growth

The RMB-denominated Chinese government bond market, defined as central government bonds, has grown more than four-fold over the past 15 years, representing a total market size of approximately RMB 18 trillion (USD \$2.7 trillion). We expect this opportunity set will continue to grow in both depth and breadth, especially given that China's economy has managed to record sustained growth even amid the coronavirus pandemic. Notably, the IMF forecasted that China will be the only major economy to record positive growth in 2020 followed by a robust 8.2% expansion projected for 2021.

After shifting to a consumer-led growth model following decades of rapid expansion, China continues to establish new ambitious economic development goals. Without providing specific numerical targets, President Xi Jinping said that it was possible China could match the standards of a so-called high-income country by 2025 and double the country's per capita income by 2035. In our view, there are still significant growth opportunities, but policymakers will need to pay close attention to rising debt levels, aging demographics as well as drive further rebalancing in the economy.

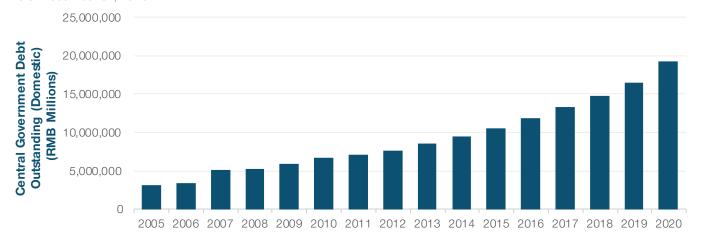
Market Reforms Opening Up Access to China's Markets

Because of its capital controls, China has historically been a difficult market to invest in for global investors. This has changed in recent years, however. China has implemented a number of measures to improve access to its fixed income market via its Bond Connect program through which foreign investors can invest in Chinese bonds through links between Hong Kong and Mainland financial markets. Authorities have effectively handed over a certain amount of control of its capital markets to overseas investors, allowing them to sell their positions. It might even be possible for investors to short Chinese bonds once a functioning futures markets is accessible.

Monetary authorities continue to exercise monetary policy through interest rates and bank reserve requirement ratios ("RRR") along with interest on excess reserves rate ("IOER"), while moving to provide ample liquidity to the market through open market operations and short-term liquidity facilities when necessary. With China pushing for broader international use of the renminbi, the Chinese government and the People's Bank of China (PBoC) has worked extensively to enhance and strengthen the country's bond market. The PBoC has also engaged in joint research with the International Swaps and Derivatives Association (ISDA) to promote RMBdenominated bonds as collateral for derivative transactions.

In terms of the local currency component of Chinese government bonds, the renminbi floats in a narrow margin around a fixed base exchange

FIGURE 1: Chinese Government Bond market grew rapidly with economic development: A 2.7 trillion U.S. dollar market As of December 31, 2020



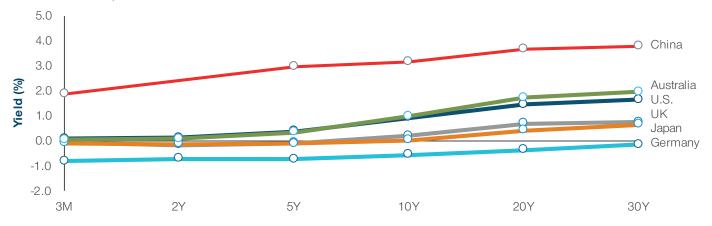
^{*}Book-entry Treasury Bonds

Source: Ministry of Finance in China/Haver Analytics, China Central Depository & Clearing Co.

¹ For more information, please see our recent whitepaper "What to Expect from China" (November 2020)

FIGURE 2: Chinese Government Bonds Offer Attractive Yields

As of December 31, 2020



Past performance is not a reliable indicator of future performance. Source: Bloomberg Finance L.P.. Data analysis by T. Rowe Price.

rate determined with reference to a basket of world currencies. The Chinese Foreign Exchange Trade System (CFETS), run by the PBoC, sets the base rate based on previous day closing prices at domestic banks. In October, CFETS announced the phasing out of the "counter-cyclical" factor used to adjust the base rate, allowing exchange rates to fluctuate more with the market and adding transparency to renminbi pricing. This is also likely to be a move to enhance international recognition of China's currency.

Attractive Risk Adjusted Return

We believe that investors should consider how adding Chinese government bonds could potentially result in a more diversified portfolio capable of achieving consistent returns. The asset class offers a higher yield than the broader WGBI benchmark along with a lower duration – an attractive expected risk return profile, in our view. Furthermore, the PBoC has its own interest rate cycle and operates under different dynamics from the Federal Reserve and the European Central Bank, giving these bonds uncorrelated characteristics to developed government bonds.

As for the currency component of Chinese government bonds, while heightened US-China tensions may add to temporary volatility in the currency market, we believe the interest rate differential against developed currencies and China's current account surplus should support the renminbi.

WHAT WE'RE WATCHING NEXT

The Chinese government bond market has grown in both depth and breadth, while also achieving inclusion into global benchmarks. We expect foreign fund flows into this market will continue to accelerate, eager to capitalize on the asset class' attractive risk adjusted return profile and diversification benefits.

Over time, we expect the opportunity set within the asset class will further expand, favoring strategic investors who can make effective allocation decisions based on an extensive macroeconomic research process along with an informed understanding of the market's evolving capital controls.

MEET ERNEST YEUNG

An Interview with Ernest Yeung, Portfolio Manager, Emerging Markets Discovery Equity Strategy



Ernest Yeung
Portfolio Manager
Emerging Markets
Discovery Equity
Strategy

BIOGRAPHY

Career

Ernest has 19 years of investment experience, 17 of which have been with T. Rowe Price.

2015 - present

Portfolio manager, T. Rowe Price's Emerging Markets Discovery Equity Strategy

2009 - 2015

Co-portfolio manager for T. Rowe Price's International Small-Cap Equity Strategies.

2003 - 2009

Joined T. Rowe Price in London as a telecom analyst, later moving to Hong Kong.

2001 - 2003

Ernest worked as an analyst with HSBC Asset Management in London.

Professional & Education

Ernest has an M.A., with honours, in economics from Cambridge University. He also holds the Chartered Financial Analyst designation and the Investment Management Certificate

Hi Ernest, first of all, can you tell us how you came to choose a career in asset management?

Well, at age 13 I left Hong Kong to study in the UK, leading to an MA in economics from Cambridge University. After graduating, I thought I might like asset management, and I was lucky to find an internship with J.P. Morgan in London. I fell in love with asset management and realized immediately that I was a "born and bred" buysider! After two years with HSBC Asset Management in London I moved to T. Rowe Price as a telecom analyst, later moving back to Hong Kong. We were a much smaller outfit in Europe and Asia then, not nearly as well-known as we are today. Although my experience level was not high, T. Rowe Price was willing to take me on and give me all the training and support I needed to become a successful fund manager.

Value investing has enjoyed something of a resurgence in the past couple of months. What was the trigger for this, Ernest, and can it persist?

On November 9 last year, pharmaceutical companies Pfizer and BioNTech announced they had developed a vaccine that was more than 90 per cent effective in preventing COVID-19, citing interim results from phase 3 of their clinical trial. This announcement caused general elation across the globe and coincided with a recovery for value-style investors globally. The good news on vaccines was something that I think we had all been hoping for. It was the key catalyst for markets in this inflection point away from growth back to value. Value at that point had become more forgotten than at any time in history, reflected in the huge performance gap with growth stocks. We think that in the short term, which we define as the next six to twelve months, there is now a good chance of a recovery in value, not least in the emerging markets.

Stock markets always discount changes early and we saw signs of an inflection point last. November after Pfizer first announced it had an effective vaccine for the coronavirus. I would say the market is not yet completely convinced about a strong global recovery this year, but the tide of opinion is changing. Normally, the stock market price trend changes in anticipation some six to eight months before actual events, so I think the market is telling us that sometime in 2021, probably around midyear, the world will have become a lot more normal than it is today.

Apart from the rollout of a coronavirus vaccine, are there other reasons for value investors to become more optimistic in 2021?

Yes, there are. We actually think something very important has changed. People used to say that the developed world had become more like

¹ The specific securities identified and described are for informational purposes only and do not represent recommendations

FIGURE 1: Ernest can't wait to get back on the road and visit companies with the EM team



Japan, where it didn't matter how much you stimulated the economy, since nothing really worked. Developed market governments and central banks post Lehman had pumped a lot of money into their banks and into corporates. But most of this money was used to recapitalize damaged balance sheets – as we saw in Japan in the 1990s. Hence, with new spending largely absent, there was no multiplier effect visible in the economy. That is one of the reasons why Japan has had almost no growth in the past 20 years. There was no inflation impact in developed markets because the average worker did not benefit from the stimulus. It mostly benefited asset owners and tycoons. If you were a salary earner, you simply didn't feel it.

But after COVID last year something changed. Governments knew low interest rates alone would not be enough. So this time they did not simply pump money into the banks. Apart from a few airlines, governments have not stepped in with industry-wide bailouts. Instead, most of the COVID subsidies and relief measures went straight into people's pockets in the form of employment benefits and cash handouts, as in the U.S. CARES Act, or as furlough funds in the UK and Australia. It was the day helicopter money finally arrived.

We believe this type of stimulus can have a larger, more visible multiplier effect. It is a major change compared to what we experienced in the past 10 to 20 years. Perhaps this way of deploying policy stimulus will determine economic growth and the potential for inflation in the next three to five years. The key thing for people to keep in mind is that

there is a structural change in how governments are stimulating their economies. Possibly, this is aligning the stars for a regime change in the longer term, beyond the next 12 months. I would advise everyone to put this on their radar screen.

After last year's roller coaster, what sort of year do you expect for EM in 2021?

First of all, I believe that emerging markets (EM) have the potential to recover earlier than developed markets (DM), since many of them did not implement extended lockdowns and as a result are seeing more of a V-shaped economic recovery. We should keep in mind that, China apart, lockdown is mainly a DM phenomenon. In most EM, governments simply do not have the capacity to lock down their economy because there is typically a large informal sector where many people don't have any savings to speak of. So these countries couldn't afford strict national lockdowns, so they were forced to just let the virus run its course.

Because EM countries did not have to pay out extensive income transfers and unemployment benefits last year, their fiscal situation is improving steadily. As government fiscal balances in EM are weaker, they didn't stimulate their economies nearly as much as the U.S. or Europe. So the deterioration in fiscal positions was largely cyclical and may be expected to improve now that GDP is bouncing back. So we are probably seeing the worst point for emerging market FX and yields currently, and the situation is likely to improve from here on. How much improvement I can't say, but my prediction is that we've likely seen the worst.

ABOUT US

T. Rowe Price is a global independent investment management firm. We are solely focused on long-term results for our clients, managing a full range of investment strategies in multiple asset classes. For over 80 years, our consistent investment approach has helped us focus on promising opportunities while at the same time carefully managing risk.

We established our Tokyo office and Hong Kong office in 1982 and 1987 respectively, and since then we have expanded our business by operating in Australia and Singapore. Today we have more than 200 associates based locally.

INDEPENDENT ASSET MANAGER

Our sole business is managing our clients' interests

ALIGNMENT OF INTERESTS

We are a publicly listed company with substantial employee ownership

FINANCIAL STRENGTH

We carry no outstanding long-term debt and maintain substantial cash reserves

GLOBAL EXPERTISE

Continually growing global team of investment professionals

Founded in

Baltimore, USA in 1937

US\$1.47

trillion in assets under management^{1, 2}

724

investment professionals worldwide³

Local presence in

17

countries3

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² As at December 31 2020. Preliminary data. Subject to adjustment.

³ As at December 31 2020.

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