

BARINGS

MULTI ASSET

Forecasting the Next Decade: Plotting A Course Through Uncharted Waters

BARINGS INSIGHTS

Highlights From Our Multi Asset 10-Year Forecasts

- The COVID-19 crisis has disrupted markets, leaving the valuations of many riskier assets more attractive than they have been for years. One of the key advantages of taking a long-term approach to analyzing economies and markets is the ability to step away from the eye of the storm and consider the longer-term outlook. This framework does just that.
- Beyond the current disruption, consensus estimates of long-term trends in economic growth are generally too low, in our view. The evidence is that debt and demographics do not necessarily drag growth down. We expect real economic growth will remain decent—though far from stellar. Inflation looks to be structurally lower than in previous cycles.
- Some of the asset classes with higher return forecasts are to be found within credit. Global equities should deliver mid-single digit annualized returns from here, albeit at higher levels of volatility compared to credit markets.
- We have added forecasts for more exotic areas of credit, such as mezzanine CLOs, to our 10-year framework for the first time. For those with the risk tolerance, we believe these areas offer compelling investment opportunities.
- Sustainability is key. Our return projections naturally dilute equity and bond returns for countries with less sustainable practices such as environment degradation or high levels of CO2 emissions.
- Investors will need to be more dynamic and selective about asset classes. Over the past 30 years, a traditional balanced strategy delivered an annual return of around 8% per annum. For the next ten years, a static balanced portfolio will most likely deliver not more than 3.6% per annum.
- Typically, we would prepare this analysis as of March 31 each year. However, in light of the exceptional market moves in the latter stages of March 2020, this year we have run our numbers as of April 30 instead.

Revisiting Our Long-Term Forecasting

Each year, the Barings Multi Asset Group steps back from the day-to-day market movements to consider the secular issues that drive markets over the long term. At times like these, when the global economy and markets are facing significant short- to medium-term disruptions, these long-term forecasts make us more focused and disciplined as investors and serve as an extremely useful anchor point on reality.

Factors such as demographics, productivity trends and the sustainability of a country's investment environment sit outside the normal one-year forecasting period used by many analysts. Yet, these are tectonic plates which are likely to move economies and markets over the long term. A significant research effort goes into analyzing, reviewing, and debating our ten-year forecasts; the output of which we cover in this paper.

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Our Methodology

We combine these long-term drivers of markets with today's valuations and produce total return forecasts for major asset classes over the next ten years. This is a three-stage process:

Step one: Quantify specific secular trends. This includes productivity and demographic trends as well as our assessment of the likely evolution over the next ten years of financial repression mechanisms such as quantitative easing. We are aided in part by looking back at prior episodes, to determine how long the current state of affairs could last, as well as our own forward-looking analysis.

Step two: Convert economic views into market views. This will reflect our judgment of how well certain relationships will hold. As in previous years, our ESG framework plays an important role here, aiding the conversion of a given economic view into a view on a country by applying specific country risk premia.

Step three: Combine these views with current market valuations, to see how each asset class may fare over the next decade, allowing for a 'normal' recession to take place.

In a sense, economic questions become simpler when viewed over a decade. Over such a long period, the economic cycle could be considered to smooth itself out. We may not be able to predict the exact year a recession will occur, but we can be reasonably confident that a recession will strike at some stage. Making allowances for the inevitable hit to our main assumptions (such as profit margins and default rates) is a sensible approach.

The benefit of this approach is that it allows the total returns of each asset class to be compared across markets using a consistent set of assumptions. Effectively, each asset class is being asked to respond to the same set of macroeconomic challenges, including a recession. By looking at how each asset is priced today, we can judge which of the markets will do best as the economic cycle progresses.



Box 1: Slow and Steady Go Our Forecasts: The Impact of Covid-19

The utility of ten-year forecasting is as an anchor point. The exercise becomes self-defeating if it incorporates too many knee jerk changes to market conditions.

A good example is corporate defaults within the high yield bond market. For our forecasts we assume an average annualized default rate of 3.5%, which is based on our view of long-run trends. In periods of economic stability, such a default rate may appear far too punitive. But in times of crisis the opposite is true: in the next 12–18 months defaults look set to exceed this level comfortably. However, it is also likely that later in the cycle default rates will normalize and return to levels below our average figure of 3.5%. The key is an approach that allows for a recession to hit every ten years and takes into account the potential impact from it. This way both good times and bad times are accounted for ‘in the numbers’. For us, the bottom line is that COVID-19 doesn’t make us feel the need to change our view on defaults.

Nor does COVID-19 make us want to change our view on long-term inflation trends. Some argue that the huge money printing that has happened in response to the crisis will eventually result in CPI taking off. We do not think this is likely, as meaningful inflation is quite rare. The last time it was seen was in the 1970s, and it was a result of huge jumps in oil prices, powerful trade unions, and the structural collapse of supply chains in the face of the Cold War. Today’s environment looks very different—with oil prices weak, and the internet, both of which help control pricing pressure better than a central bank ever could. Yes, there is some merit in the ‘just-in-case not just-in-time’ supply chain impacts that may come out of the crisis (which could create supply side inflation), but the crisis is also accelerating spending online, where costs are easier and quicker to compare. In this context, the current crisis has not led us to change our benign views on the trend level of inflation.

Some of our other views need tweaking—we have to consider structural changes the downturn may impart, such as the distortion to markets from unlimited QE packages. In response, we have lowered our exit assumption for the 10-year bond yield (See “QE to infinity, and beyond! Cutting our bond yield forecasts” below). We believe that COVID-19 means financial repression will continue to exist, resulting in lower bond yields.

What Does Our Approach Predict for the Next Decade?

Looking beyond the current crisis, technology will drive growth higher than many predict.

Our real growth forecasts for the U.S. and the U.K. see these two nations growing at a trend of 2.2% and 1.5%, respectively, for the next decade. Despite being relatively modest, these figures put us in the more bullish camp versus other commentators. The IMF, for example, forecasts trend growth at around 1.7% for the U.S.

We can all agree that slowing demographics doesn’t help growth, as fewer people means a lower output. But we believe it is wrong to conflate aging demographics with a lower output per worker—countries with some of the worst demographics (such as Germany and Japan) have seen some of the best productivity growth.

We also don’t think it is the case that the burden of debt will stifle growth. Interest rates are lower than ever, therefore debt servicing costs remain low. So the two most frequently cited reasons for an extended period of low growth are likely overstated.

In fact, we suspect productivity growth is likely to be revised up, even after the impact of the COVID-19 crisis is accounted for. Growth estimates for the economic cycle from 2009–2019 have been increased almost like clockwork with every edition of official statistics. We suspect it will be the same for the next cycle too. Commentators like the IMF will likely need to revise up during the next cycle, just as they did during the last cycle.

Inflation Will Remain Benign

Economic textbooks would lead one to believe that, after a decade of economic expansion, and with unemployment rates around the world at record lows, inflation over the past 2–3 years should have taken off. However, the Philips curve—the relationship that predicts that lower unemployment leads to higher inflation—has not asserted itself at all in recent years. Indeed, inflation and unemployment have been almost completely independent of one another. And we do not expect the Philips curve to assert itself in the next decade either.

Technology has a big part to play here—advances have meant that assets can be used more productively (the Uber and AirBnB effect), workers can be found by employers more easily (the LinkedIn effect), and tasks can be passed around the world where there is productive capacity (the globalization effect). All of this means that the bottlenecks of yesteryear that used to cause squeezes in certain pockets, and hence inflationary pressures, are far less likely going forward.

As a result, and coupled with the quickening growth of the internet, we have trimmed our inflation forecasts, which led us to trim our forecasts for nominal GDP. Of course, there may be short lived technical bouts of inflation—driven perhaps by a rebound in oil prices should the market recover from its current lows—but we do not believe these will be structural or long-term.

QE to Infinity, and Beyond! Cutting Our Bond Yield Forecasts

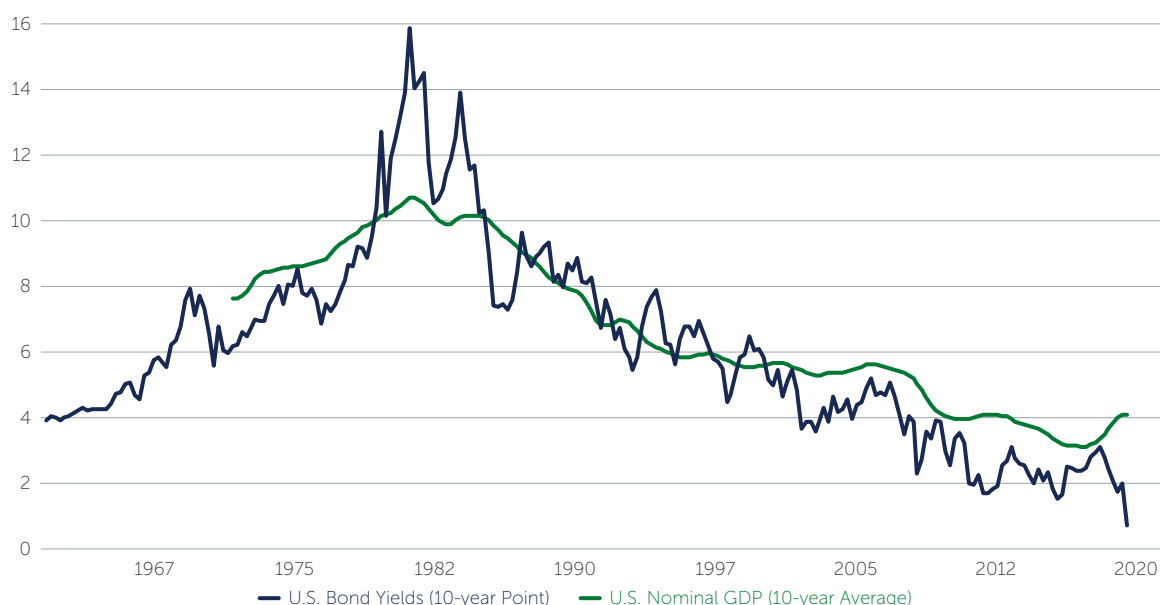
Since “unconventional” monetary policies such as quantitative easing (QE) became, well, conventional, markets have played a game of tug of war. On the one side has been economic fundamentals, which, as we outline above, are best described as sluggish, even for those, like us, on the optimistic side. On the other end of the rope has been liquidity—the money injected into the financial system by central banks and policy makers—that has encouraged investors to take more risk. The “financial repression” effect of QE has lowered yields on government debt and increased the valuations of riskier financial investments.

We believe this game of tug of war is set to continue. In response to the disruption caused by COVID-19, policy makers have responded by injecting unprecedented quantities of liquidity—some of which are unlimited—which may have a similar effect as the post-global financial crisis (GFC) liquidity injections did in the 2008–2012 period. Our analysis takes this into account in a number of ways, but below is a good example which looks at the government bond universe.

There is a clear and longstanding relationship between nominal GDP and bond yields (FIGURE 1). However, over more recent periods, bonds yields have been suppressed relative to nominal GDP trends. There are several reasons for this, but we think one of the most powerful reasons is the huge scale QE packages that have led to purchases of swathes of bonds around the world.

We previously assumed that the undershoot of nominal bond yields relative to nominal GDP would fade from the 1.5% that we had seen since the GFC, to something closer to 1%, as central bankers tried to wind down their stimulus programs. However, the COVID-19 crisis reverses this trend, with stimulus programs back in full flow. Against this backdrop, we have increased our estimate of the likely undershoot back to the 1.5% level. Combined with slightly lower inflation—meaning lower nominal GDP—our expectation for 10-year US bond yields in 2030 is 2.3%.

FIGURE 1: The Relationship Between Nominal GDP and Bond Yields

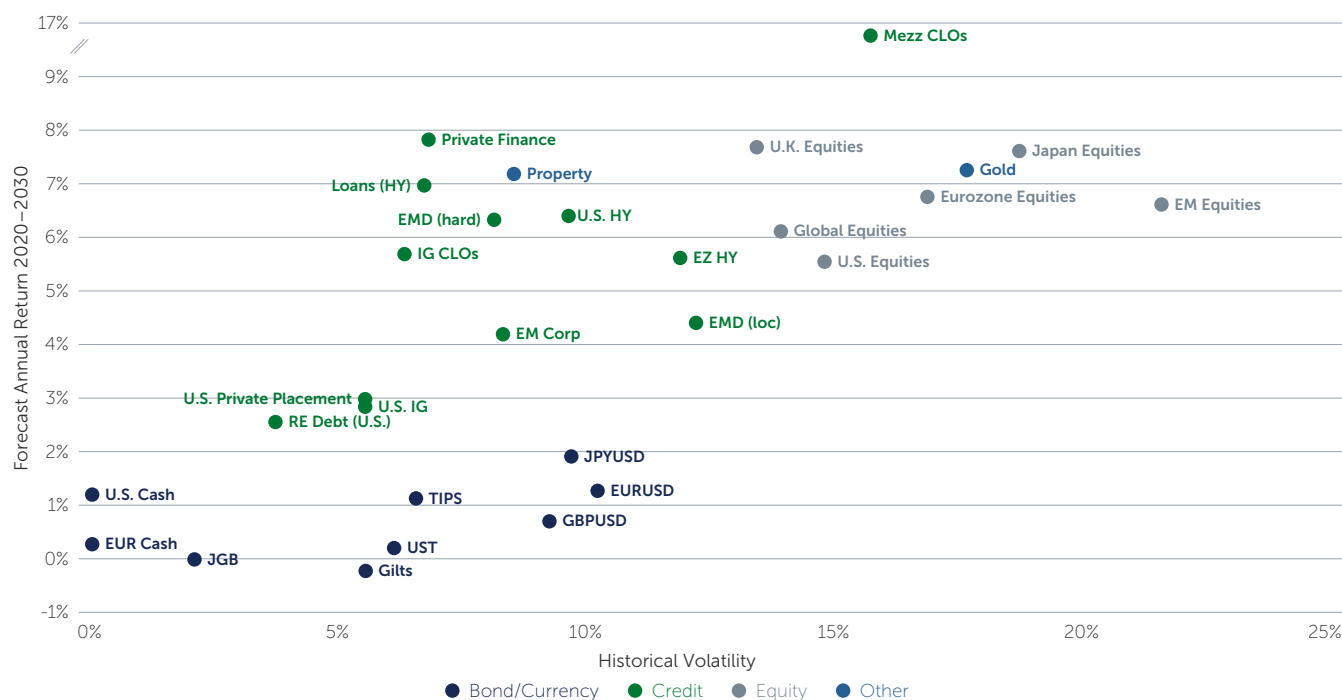


SOURCES: Barings, Bloomberg. As of April 2020

From Economics to Markets: What Our Views Say About Markets

Below are our forecasts (FIGURE 2).

FIGURE 2: Multi Asset Long Term Forecasts (10 Years Starting April 30, 2020)



SOURCES: Barings, Bloomberg. As of April 2020. Local currency returns, except for EM and FX (USD). EM indices use standard index weights. Risk is calculated as the long term realized volatility, except for property and private debt, where adjustments are made to account for their illiquidity.

1) G4 government bonds to tread water

With yields around 0.6% per year, U.S. Treasuries aren't likely to give much return. The trouble is, yields aren't likely to stay this low forever.

We have what is considered today to be a bullish view on economics versus consensus and with it we forecast that government bond yields will rise. To some degree, our view that rates will rise is already priced into the market—with the market expecting the 10-year bond in ten years' time to yield around 1.5% at the time of writing (April 2020). Our forecast of 2.3% in ten years' time is significantly higher than consensus. The net impact of this will be capital losses for holders of long duration U.S. Treasuries.

Why do we think yields will rise from where they are trading today? Firstly, inflation hasn't gone away completely (see box "The impact of Covid 19"). Secondly, and more importantly, during the current crisis, the central banks that performed "well" according to the market are those that were in a position to cut rates. Central banks with rates at zero (e.g. the ECB and the BoJ) have been far less successful. We suspect this could bring about a change in central bank attitude to 'hike a bit when you can, so you can cut when you have to'. This means rates won't be at zero forever, and neither will bond yields.



Box 2: The Rise of Technology: Valuing a Secular Growth Story and the Impact On Regional Returns

Perhaps the biggest secular trend of our time is the rise of big tech—Apple, Google and Amazon to name just a few. These global companies are nearly all listed in the U.S. but the sources of their revenue growth are far reaching. With small business activity around the world being conducted on iPhones, advertised on Google and sold via Amazon, the full benefit of growth is not felt in the domestic economy but is instead absorbed by the U.S. The net effect is a transfer of revenues from other regions to the U.S. equity market, regardless of where the transactions take place. This, along with faster predicted GDP growth, is a big part of the reason that our forecast for sales growth is three times faster in the U.S. than in Europe.

Not only does the regional bias of technology mean more rapid sales growth in America, but it also means higher profit margins and higher sustainable valuations. These favorable ending conditions have to be considered against the richness of valuations in the market today, where the U.S. is at multi-decade premiums over many other markets.

Despite the favorable assumptions, the impact of the high starting valuation results in forecasts that favor areas away from the U.S. Are we being too conservative on what the U.S. can deliver? Perhaps it will take the recession beyond the COVID-19 crisis, but ultimately we feel that the valuation gap is too high over the long term.

2) Prospects for equities look as good as they have in years

Since we last ran our forecasts in 2019, equity market valuation multiples have fallen quite dramatically, and as such markets now offer a better entry point from a valuation standpoint. In light of the significant liquidity programs that have been unleashed around the world, we have also modestly increased our long-term assessment of fair value P/E multiples relative to our last forecast. The net effect of this is that while we saw little upside from multiple expansion in our last forecast, and indeed significant multiple contraction in areas like the U.S., from today's starting levels we believe there is scope for multiple expansion in most major stock markets.

However, our lower forecasts for inflation naturally mean a slowing in nominal corporate sales growth relative to our forecasts in prior years. Nevertheless, we believe the combination of multiple expansion, sales growth, and dividends suggests equity markets should be set to deliver high single digit returns from here—which is as high as our forecasts have been for a while.

We set out the breakdown of our forecast equity returns below (FIGURE 4). Firstly, sales growth will continue to be positive, as nominal GDP expands. Then, we assess corporate profit margins, and the valuation which the market will award those profits. It is apparent that in the near term dividend yields are going to be challenged, as corporates divert their cash flow toward their own balance sheets. However, we expect this to normalize over time, and add dividends in our forecast to provide a total return estimate. As the emerging markets index is multi-currency in nature, we show returns in U.S. dollar terms and also provide the return component associated with its currency moves. All other returns are shown in local currency terms.

FIGURE 4: Breaking Down Our Equity Return Forecasts

Region	Sales Growth	Margin Change	Multiple Change	Dividend	FX Moves	Total Return Forecast
U.S.	4.8%	-0.8%	-0.6%	2.0%	-	5.4%
U.K.	1.6%	0.5%	1.5%	3.9%	-	7.5%
Europe	1.4%	0.0%	2.1%	3.2%	-	6.7%
Japan	1.2%	0.8%	3.1%	2.4%	-	7.5%
EM ²	4.3%	-2.3%	2.9%	2.7%	-1.1%	6.5%

SOURCES: Bloomberg, Factset. Barings calculations as of April 30, 2020.

2. Note that all forecasts are in local currency terms, except for EM equities which are in USD terms. We forecast the impact of FX movements over the period will detract 1.1% pa from EM equity returns.



Box 3: Technical Insight: Quantifying the Roll-Down Effect

We take a degree of professional pride in our forecasts, particularly when it comes to the details behind the drivers of returns. A good example is within the fixed income asset class. When forecasting bond returns, one aspect which is often neglected is the impact of curve steepness and the commensurate roll-down of a bond as it becomes closer to maturity. In general, yield curves are upward sloping (the longer the maturity, the higher the yield), and so the “roll return” is usually positive since bond prices rise when yields fall. For example, a 10-year bond in one year’s time will become a 9-year bond with a lower yield, and the capital appreciation on the bond from that yield decline can be quantified as the roll return.

Over time, the slope of the yield curve, or the steepness, fluctuates through the economic cycle, and a long-term average can be observed. Our forecast for roll return is then pinned on the assumption that the steepness will tend towards this long-term average, and over the period, an average roll return is achieved each year.

Similarly, credit spread curves are also generally upward sloping, implying that we should expect more roll return from corporate bonds than from treasuries. This makes sense in theory, since the credit risk associated with corporate bonds should rise as the time to maturity increases, because of the heightened probability of default.

An example of how roll fits into the total return picture is shown in U.S. IG Corporate bonds below (FIGURE 3). At times of steep curves, the contribution to return from roll can be significant, and so without it any forecast is underestimating the potential for returns. Our approach naturally captures the changing curve steepness and the impact it may have on returns.

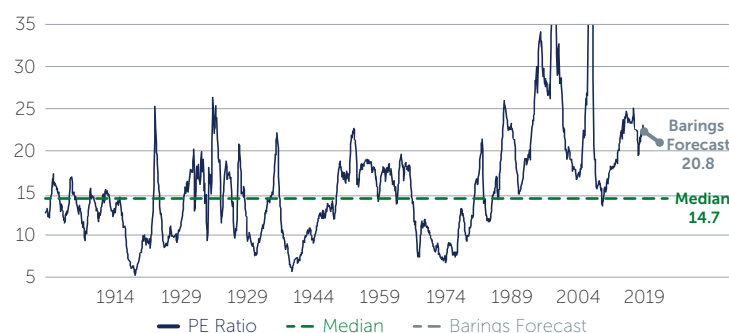
FIGURE 3: Components of Returns: Investment Grade Example

(1) Capital Loss from Yield Backup	-0.7%
(2) Average Coupon	3.2%
(3) Losses from Credit Events	-0.3%
(4) Roll-down	0.6%
(1)+(2)+(3)+(4) Total Return	2.8%

SOURCE: Barings. As of April 2020.

With markets suffering in the COVID-19 crash, investors can expect some upside in price earnings multiples in most major markets over the next decade. In the U.S., we estimate that multiples will gently drift down from today’s levels to around 21x reported earnings, detracting about half a percent per year from total returns (FIGURE 5). Other countries see a valuation re-rating, and given their cheaper starting position, the effect on returns is more powerful.

FIGURE 5: U.S. Equity Valuations



SOURCES: Bloomberg, Barings. As of April 2020.

3) Credit markets offer compelling value opportunities

One of the standout features of the market selloff that took place in the first quarter of 2020 was the lack of discrimination of returns by asset class. To give an example, in the last few significant market selloffs, investment grade credit has often been insulated from drawdowns. Sometimes it has been positive and sometimes slightly negative during major equity market turmoil, but largely this asset class has been a reasonable place for shelter. This has not been the case during the current market downturn—IG credit suffered 40% of the fall in the stock markets, which is a truly unprecedented down-capture. The same dynamic played out across much of the credit complex, leaving in its wake an interesting valuation dynamic for long-term investors, and potential compelling opportunities in the global credit markets if we look forward from today’s starting levels.

HY bonds and loans are probably the highlight, with the potential to return over 6% per annum from current levels, after allowances are made for the impact of defaults. While government bond yields could back up from here, we believe the magnitude of any such move is well contained, and therefore the impact on credit total returns is somewhat limited.

This year we have extended our analysis to include asset classes such as mezzanine collateralized loan obligations (CLOs) for the first time. And the returns look attractive—even when allowing for some defaults in the underlying credit markets. For those with the risk tolerance, we believe structured credit offers good value.

4) Precious metals are still a good way to diversify portfolios—probably better than government bonds

We judge gold to have a bright future from here, delivering returns of around 7.2% per annum, more than 6% per annum higher than the likely returns on other safe haven assets such as U.S. Treasuries. Our framework for assessing precious metals such as gold relies on the longstanding relationship gold has with monetary aggregates such as M2 (FIGURE 6). M2 in turn is positively linked to nominal GDP in the U.S.—this makes sense because a larger economy with more transactions requires more money, all else equal. However, in the post 2008 era since QE has become the norm, we have seen M2 grow at a faster pace than nominal GDP. With the significant expansion of central bank balance sheets in response to the COVID-19 crisis, and reflecting our view that QE is here to stay, our analysis allows for M2 to grow around 2% faster than nominal GDP over the next decade.

FIGURE 6: The Relationship Between Gold and M2 in the U.S.



SOURCES: Bloomberg, Barings. As of April 2020.

“We judge gold to have a bright future from here, delivering returns of around 7.2% per annum, more than 6% per annum higher than the likely returns on other safe haven assets such as U.S. Treasuries.”

The Role of ESG

Uniquely, as far as we are aware, our forecasts integrate environmental, social and governance (ESG) factors into predicted returns. This is done on a country-by-country basis, where we dilute both equity and bond returns from countries with less sustainable practices.

What does sustainable mean in this context? It is the same thing any prudent investor should look for:

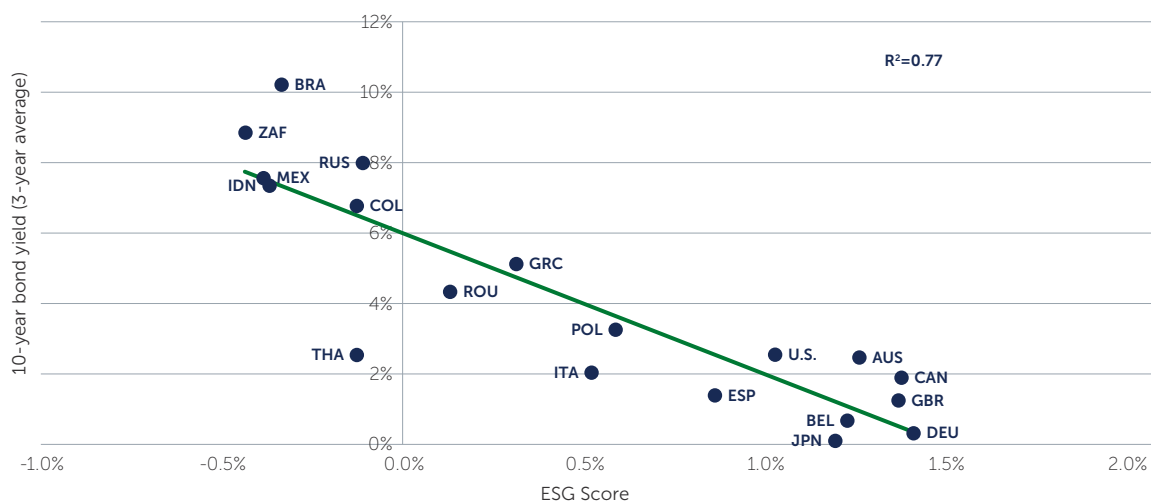
- **Environmental:** Low environmental degradation—good husbandry of the natural environment is critical for any investor.
- **Social:** Making the most of the human in society—good educational scores, high levels of participation, low levels of inequality.
- **Governance:** A stable investment environment—rules of law and low levels of corruption.

This year we have extended these scores into a much broader data set, drawing upon data from large and credible institutions such as the World Bank, the OECD and Yale University. In Appendix 2 of this paper we include a full report on our top down ESG analysis. In summary our report shows:

1. ESG factors work best as an aggregate: Countries with weaker E, S and G scores have higher bond yields and this relationship becomes even stronger when we combine the individual E, S and G factors into a single composite “ESG” indicator. Below we demonstrate how clear the relationship is (**FIGURE 7**).
2. ESG is independent of fundamental factors: One critique of top down ESG approaches could be that poor ESG scores and high inflation could be occurring simultaneously, offering the illusion that ESG scores matter, when really bond yields are just driven by inflation dynamics. Our analysis is robust to this critique, and the relationship we find between weaker ESG scores and higher bond yields remains just as strong whether we focus on nominal bond yields or real bond yields.

We use our ESG scores in the process of converting economic views to market predictions for an asset. In essence, our ESG framework penalizes those countries with lower ESG scores, as a poor ESG score would mean our framework will associate that country with a higher bond yield and a lower level of corporate sales growth over time. We believe this is right and fair—countries with a worse track record on ESG factors should see investors responding with a set of assumptions that are more conservative, and therefore higher costs of funding and higher bond yields. Certainly, this is what is seen in practice.

FIGURE 7: The Relationship Between ESG Scores and Bond Yields



SOURCES: Barings, OCED, World Bank, Yale University, Bloomberg, Barings calculations. As of August 2019.

What Weight to Give ESG Versus Fundamental Factors?

Our approach to this question is based on what works. Our 10-year work covers 22 countries. If we had perfect foresight about the subsequent macroeconomic trends from 2015–2020, what weight of fundamental factors versus the ESG scores would have created the closest fit between predicted bond yields and actual bond yields for those countries? Our analysis finds the best fit at a 2/3rd weight to fundamental factors, and 1/3rd ESG weighting. It is worth noting that the inclusion of ESG improves predictive power versus fundamental factors alone, and the high weight we ascribe to ESG, shows just how important it is.

“Times are changing. The 60/40 balanced portfolio has relied on a collapse in global bond yields and associated strong performance from government bond markets to boost its returns, while dampening risk. Increasingly we are of the view that this cannot continue.”

Going Beyond a Traditional Balanced Portfolio: Implications for Investors

For the past 30 years, investors have had it relatively easy. They could simply have owned a traditional portfolio of equities and bonds and watched it deliver handsome returns of around 8% per annum. Even over the past ten years, such a stance would have delivered a decent 6% return.

Now, times are changing. The 60/40 balanced portfolio has relied on a collapse in global bond yields and associated strong performance from government bond markets to boost its returns, while dampening risk. Increasingly we are of the view that this cannot continue. With the vast majority of developed government bonds yielding 1% or less, almost all of the juice has been squeezed—leaving the 60% equity allocation to do all the heavy lifting.

We think that from today’s starting levels it is possible for equities to do some heavy lifting. However, with traditional government bonds unable to contribute much, investors will be faced with a lower return of around 3.6% (FIGURE 8). And that return will probably come at the cost of higher volatility too, given the limited juice left in government bond markets—which are the traditional diversifier.

FIGURE 8: Historical and Forecast Returns for a 60/40 Balanced Portfolio

The Traditional 60/40	Past 30 years (Approximately, U.S. Assets)	Past 10 Years	Next 10 Years
Return	8% p.a.	6% p.a.	3.6% p.a.

SOURCE: Barings. As of April 2020.

IMPROVING ON THE TRADITIONAL STATIC BALANCED STRATEGY
THE FUTURE OF MULTI ASSET INVESTING



In Our View There are Four Ways Investors Could Tackle the Problem:

1) Adopt a dynamic approach to asset allocation. Investors need to construct a portfolio that looks beyond the traditional equity and bond asset classes. Some of the highest returning assets today are both in the credit and commodity complexes. However, simply replacing government bonds with credit would cause portfolio risk to balloon—perhaps beyond the tolerance of many investors. And of course, over time the most attractive asset classes will change. Investors need to be able to take advantage of these shifts and be ready to act. Our ten-year framework is a key anchor point that helps us avoid getting caught up in short-term drama or exuberance.

2) Maximize return potential. Although equity beta should deliver reasonable returns from current levels, within equities, investors will still need to extract alpha from country, sector, style and security selection to maximize their return potential.

3) Harvest illiquidity premiums. It is no surprise that some of the better performing assets on a risk/return basis are those which might be considered less liquid. Investors will need to decide if they can tolerate a degree of illiquidity risk in their portfolios.

4) Active FX management. Much of the turbulence over the past few years has originated in the FX market. With alarming regularity, certain currencies have been very volatile. This has presented strong opportunities for active managers who are able to take advantage of these moves—which we believe is something that is likely to continue into the future.

Conclusion

Our ten-year view is based around certain core beliefs:

- A resumption of moderate economic growth is likely;
- Interest rates will remain low, with yields rising only modestly. Nevertheless, developed government bonds will likely underwhelm;
- Current valuations of riskier assets provide a reasonable margin of safety—such that decent returns should be enjoyed from here for many markets.

While we observe compelling opportunities in riskier markets, from a portfolio perspective, diversification is more difficult to achieve, as bond markets are currently offering low yields. In this context, our preferred diversifiers are gold and currencies.

Over time the most attractive asset classes will change. Investors need to be able to take advantage of these shifts and be ready to act. Dynamic asset allocation is key.



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Appendix: Frequently Asked Questions

Why do you do it?

- Long-term secular factors, such as demographics, sit outside our normal 12–18 month forecasting period
- Like the slow movement of tectonic plates, secular factors like demographics, productivity and the quality of governance can be crucial in driving markets over the longer term
- Each year the Barings Multi Asset group performs a ‘deep dive’ on the likely impact of these trends on markets
- Our ten-year framework is a key anchor point that helps us avoid getting caught up in short-term drama or exuberance

What factors do you look at?

- We consider secular trends such as:
 - Productivity trends
 - Demographics
 - Availability of credit
 - Financial repression
 - Globalization and political factors
- We combine these drivers with ESG factors to give market-based assumptions. In turn these normalized assumptions are combined with current market valuations
- This allows total returns of each asset class to be compared across markets using a consistent set of assumptions

Why ten years?

- Ten years is chosen as a decade is longer than the typical economic cycle. Conclusions are therefore secular rather than just cyclical
- Ten years is also short enough to be useful to investors

Can you tell me more about the ESG process and how that feeds into the 10-year forecasts?

- ESG scores feature in the process of converting economic views into market views
- ESG scores are applied to both equity and bond forecasts
- Data from large and credible institutions such as Yale University, the OECD and the World Bank is used to ensure data is directly comparable across countries

Is there any evidence that incorporating ESG is useful to investors?

- Yes. Given we are projecting over the next decade, it makes sense to incorporate the degree to which growth is sustainable into these longer-term projections. To give an example, there is clear evidence that in the bond world countries with worse ESG scores tend to see higher yields, even after inflation dynamics are accounted for.

What are the key conclusions from your predictions this time around?

ECONOMIC

- Growth will be slow, but will come in better than consensus expects
- Nevertheless, productivity and demographics will all present headwinds versus the past 30 years
- Despite our longstanding caution on economics, consensus trend growth expectations have for some time been too bearish, particularly for the U.S.
- Inflation will remain under control—it has not presented itself for the past decade, despite traditional indicators like the Philips curve flashing red
- Low interest rates will be with us for a long period of time

FIXED INCOME

- Bond yields will rise from today's levels with the ten-year bond yielding 2.3% in ten years' time, implying that U.S. government bond yields will move higher from today's levels
- The equilibrium U.S. policy rate in 2030 will be just 1.5%, derived by applying a normalized shape of the yield curve to our bond yield
- For the U.K., the expected equilibrium GBP policy rate in 2030 is just 0.5%, with the ten-year bond yielding only 1.4%
- Credit of all types should outperform G4 government bonds from here, and should deliver attractive returns

EQUITIES

- In general, equities should perform well from today's starting levels, offering mid single digit annual returns:
 - Valuations for most areas are less expensive than at last year's forecast date and offer upside potential
 - U.S. equities may struggle to keep pace over the next decade. With profit margins high, U.S. equities may see mild margin erosion as interest costs rise
- The emerging markets are predicted to deliver relatively good returns. While we expect profit margins to fall, the underlying economic growth, and the starting valuations, should be more than enough to offset this

CURRENCY

- The U.S. dollar is looking expensive at today's levels, with all major currencies likely to appreciate versus the U.S. dollar over the next decade
- The yen is the most likely currency to see appreciation; in ten years' time, we judge that the structural forces supporting the yen will bring it closer to fair value
- Sterling has the potential to appreciate versus the U.S. dollar, but is nearer to fair value than some might suggest

FOR PORTFOLIOS

- Thinking beyond historical portfolio strategies is vital. A traditional balanced approach is highly unlikely to deliver the best returns for investors
- Non-traditional areas from certain types of credit to commodities present some of the best opportunities, particularly on a risk/reward basis
- Over time, the most attractive asset classes will change. Investors need to be able to take advantage of these shifts and be ready to act. Dynamic asset allocation is key.

Appendix 2: Our ESG Framework in Detail

Key points in this appendix:

- Asset allocators need a country (rather than a company) ESG framework, but most published ESG research is focused on companies
- Our research shows why asset allocators should pay attention to ESG. We focus on the fixed income universe as the purest form of investment into a country
- Building up composite country ESG scores from each of the E, S and G components improves the power of the analysis when compared to any one individual factor

ESG analysis is gaining popularity in investment circles at a rapid pace; but hitherto much of the thought from the investment industry has gone into ESG from a bottom up perspective. While the available literature on ESG from a top down asset allocation perspective is relatively sparse, the concepts are not new—indeed some of the underlying ideas can be traced back to economic theories from as early as the 1830s³.

This comes as no surprise. From a bottom up perspective, the impact of ESG factors on individual companies is usually clear. However, from a top down perspective, how does one make an assessment of the relative merits between countries? Our approach, which we set out in detail later, is to develop ESG scores for each country for each of the E, S and G components. We then assess the relationship between bond yields—as the purest expression of the risk premium that the market places on investments in that economy—and our ESG scores. Our ESG scores are formulated using data from large and credible institutions such as the World Bank, the OECD and Yale University. Crucially, this provides an independent source of data that is simple to use and directly comparable across countries.

In our view these ESG considerations are most impactful over the long term and should feed into any long-term asset allocation framework. Over shorter-term periods it is possible that sloppy or unethical practice will not handicap a nation's performance. However, in the fullness of time, these things often come back to bite. As this analysis shows, the market demands higher risk premia in the form of higher bond yields for countries with weaker ESG scores.



3. <https://www.econlib.org/library/Enc/TragedyoftheCommons.html>

THE ENVIRONMENTAL SCORE

The concept of the environment being important ‘to top down thinkers’ was first introduced in the 1830s by William Forster Lloyd, a political economist at Oxford University, but later made famous by Garrett Hardin⁴. His analysis of cattle owners on England’s green pastures suggested that without long-term effects governing their actions, individual owners would have the incentive to continue adding more and more cattle until fields were at bursting point. Why? Because the short-term gains all accrue to the individual cattle owners—i.e. they harvest more milk. However, the longer-term costs are born by all users of the pastures, as over time the over-grazing would lead to poor quality of natural resource to feed future generations of cattle, causing relative hardship for everyone. The ‘tragedy of the commons’ has been taught to economics students ever since.

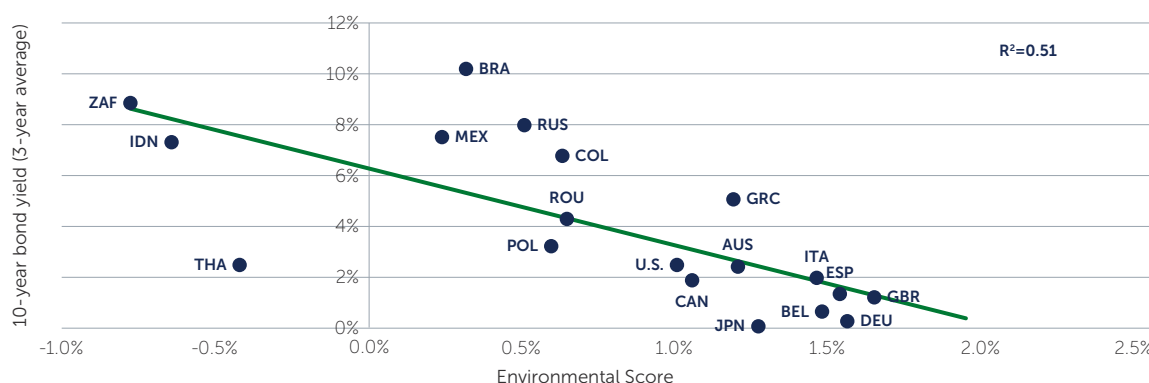
The story of Maya Bay in Thailand is a modern day case in point. Made famous by the 2000 film “The Beach”—in which Leonardo DiCaprio discovers the beautiful coastline—its popularity as a tourist destination boomed soon after. Unfortunately, the rapid growth of tourism in this space had severe consequences for the environment, with the local authorities forced to take action to preserve the coral and other such elements of the environment⁵.

Clearly this is a micro example, but it is symptomatic of a much broader issue—growth in the short term can be hugely beneficial, but sustainability of that growth is the key to long-term success.

We score the environmental performance of an economy by making use of Yale University’s Environmental Performance Index (EPI)⁶. This index is a weighted average of 24 component parts that fit into the broad categories of environmental health and ecosystem vitality—examples include air quality, water quality and fish stocks. Ultimately the aim of this index is to assess the environmental sustainability of each economy and offer it a score on that metric.

In the chart below we can see the environmental score versus 10-year bond yields. As the chart shows, there is a clear relationship between countries that have a poor environmental score and countries that have higher bond yields. Put another way, poor scores lead to higher risk premia on fixed income investments in that economy.

FIGURE 9: Environmental Score vs. Bond Yields



SOURCES: Barings, Yale University, Bloomberg, Barings calculations. As of August 2019.

4. https://www.garretthardinsociety.org/articles_pdf/tragedy_of_the_commons.pdf
 5. <https://www.bbc.co.uk/news/world-asia-48222627>
 6. <https://epi.envirocenter.yale.edu/>

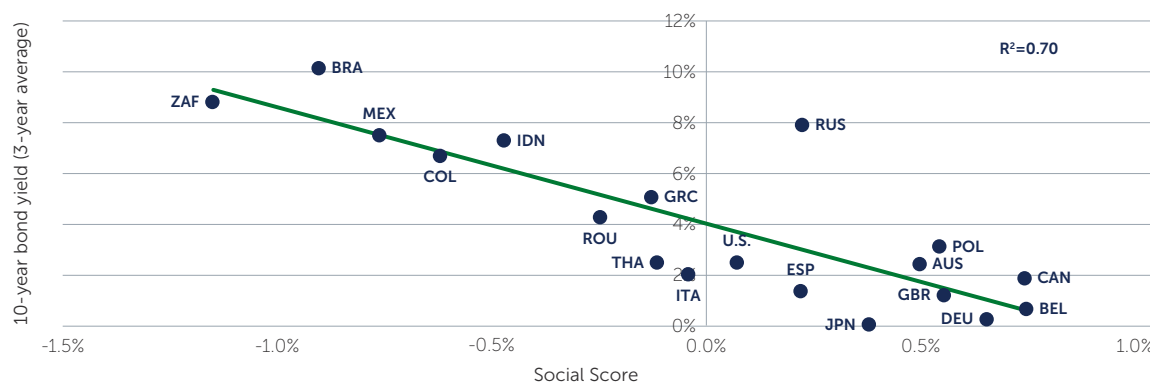
THE SOCIAL SCORE

The social factor is probably the least commonly discussed aspect in the ESG arena, but is no less important, especially to top down investors. We define the social factor by three components; educational quality, economic inequality and female participation rates. Why are these important?

- The principle behind income inequality being an important component dates right back to the times of the famous economist John Maynard Keynes. Keynesian theory of marginal propensity to consume suggests that as an individual’s income rises, the portion of income spent falls and the portion saved rises. In other words, the greater the extent of inequality in an economy the more the wealth is concentrated with individuals with low marginal propensity to consume (i.e. richer savers). As it is spending and not saving that generates economic growth and corporate profits, unequal societies have less potential for sustainable economic growth. **We score income inequality using data on Gini co-efficients from the World Bank.**
- Educational quality sets the standard for future generations of workers in an economy—those that form the productive base as well as those that form the research base to push things forward and improve productive capacity. The better the education level in an economy, the better equipped the population is to research and develop new techniques and technologies and therefore improve productivity going forwards. Ultimately, over the long term, economies that are becoming more efficient over time will have more sustainable economic growth. **We score educational quality based on the OECD’s PISA rankings of educational attainment.**
- The final component we consider is **female labor participation rates from the World Bank’s data set.** Economies that do not allow the full talent pool the opportunity to work are potentially missing out on swathes of productive workers. Put another way, by only including a subset of available individuals in the labor force, strong talents could be sitting on the side-lines. There are many ways one can measure equality of opportunity in the workforce, but the measure we have chosen is female participation rates. Ultimately we judge societies that are not inclusive to have less potential for long-run sustainable economic growth, as they are not maximizing available resource.

We equal weight these three factors into a composite score for Social. This is shown against bond yields on the chart below. As the chart shows, there is a clear relationship between countries that have poor social dynamics and countries that have higher bond yields (or higher risk premia on investments in that country).

FIGURE 10: Social Score vs. Bond Yields



SOURCES: Barings, OECD, World Bank, Barings calculations. As of August 2019.

THE GOVERNANCE SCORE

The governance aspect is probably the most commonly discussed aspect of any ESG framework, with many investors openly discussing matters of governance without necessarily realizing they paid attention to ESG. This factor needs no introduction; clearly the weaker the governance framework, the less attractive the investment proposition in a given economy.

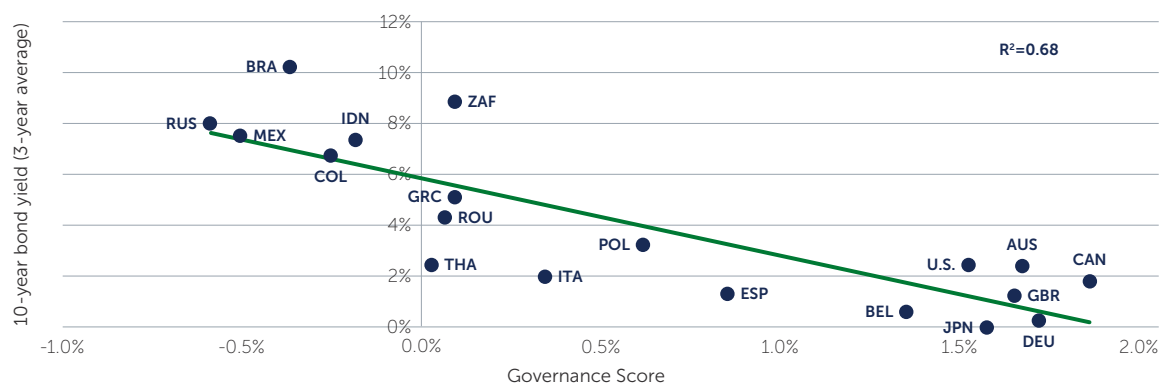
We believe there are three areas in which governance, from a top down perspective, can best be assessed.

We use the World Bank’s Worldwide Governance indicators to score governance as follows:

- The first area we consider is the government effectiveness score of a country. It measures the quality and independence of the civil services, and the quality of policy formulation and implementation. The stronger the political framework the more stable and predictable the investment landscape is likely to be, offering comfort to long-term investors.
- The second area is the rule of law. Things like strong property rights are important for businesses and investors alike, as in order to invest for the future, stability in this area is key. In particular, strong and stable property rights, and a well-established legal system offer longer term investors the comfort to deploy their capital investments in a country. Finally, it is important for investors that the law is upheld, and crimes—particularly fraud and financial crimes—do not go unnoticed.
- The final area is control of corruption. Clearly a corrupt landscape, where finances are syphoned off from productive investments in order to pay bribes, for example, is a less attractive investment proposition. Long-term investors, when appraising the right price for investments in an economy, will want comfort that the capital they are deploying is going to productive use.

The three sub-scores described above are combined in equal weight into a composite score for Governance, which we plot against bond yields on the chart below. As the chart shows, there is a clear relationship between countries that have poor governance and countries that have higher bond yields (higher risk premia), which is no surprise, given the dynamics we set out above.

FIGURE 11: Governance Score vs. Bond Yield



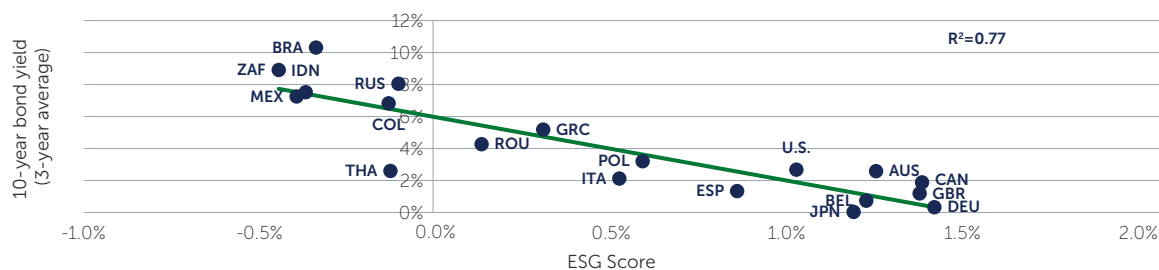
SOURCES: Barings, World Bank, Bloomberg, Barings calculations. As of August 2019.

BRINGING THE E, S & G COMPONENTS TOGETHER

The charts in the Environmental, Social and Governance sections, outlined previously, clearly show that there is a relationship between those economies that have weaker scores for the components, and investors requiring a higher risk premium (via higher bond yields) to invest in that economy. But what about the combined effect of all three?

When we combine all three factors into our single ESG score the results are stronger than for any of the component parts alone. As the chart below shows, the combination of all three factors causes the dispersion of individual countries around the trend line to shrink to very low levels, and offers an R2 (a basic measure of the relationship between the two) that is higher than any individual component part. In other words, there is a strong and reliable signal given to investors from our combined ESG score.

FIGURE 12: Barings Composite ESG Score vs. Bond Yields



SOURCES: Barings, OCED, World Bank, Yale University, Bloomberg, Barings calculations. As of August 2019. Composite is weighted 50% to Governance, 25% to Social and 25% to Environmental factors.

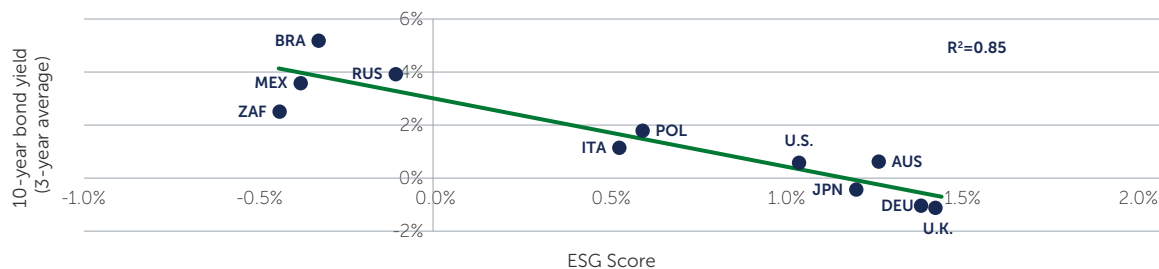
IS THIS RELATIONSHIP JUST ABOUT INFLATION DYNAMICS?

One reasonable critique of the approach taken so far, which compares ESG scores to nominal bond yields, is that generally those countries with higher inflation tend also to be the countries with lower ESG scores. So are we just identifying the relationship between inflation and ESG?

To answer that the below chart plots real yields versus ESG scores, to remove the inflation component from the analysis. As many countries do not consistently issue inflation-linked bonds, the sample size is somewhat smaller for this analysis. However, to supplement the analysis we have estimated the real yields of Poland (as a country with a middle of the road ESG score) and Russia (as one of the larger issuers of investable debt).

Again, the relationship here is very strong, with those countries with the weakest ESG scores needing to offer the largest real risk premium to attract investors to buy their bonds, independent of the relative inflation differences between countries.

FIGURE 13: Barings Composite ESG Score vs. Real Bond Yields



SOURCES: Barings, OCED, World Bank, Yale University, Bloomberg, Barings calculations. As of August 2019. We have created "real yields" by subtracting a long term average realized inflation from nominal bond yields. We have also adjusted U.K. real yields by the long term wedge between RPI and CPI, to make their basis more consistent with their global counterparts.

WHAT DOES THIS ALL MEAN FOR INVESTORS?

There is a clear linkage between each of the Environmental, Social and Governance metrics and the risk premium that a country has to offer investors to attract them to invest. As can be seen from the charts, our preferred measure of the linkage between the ESG score and bond yields—the R2—gets stronger when we combine the E, S and G into a single composite indicator and remains just as strong whether we focus on nominal bond yields or real bond yields.

No framework will be perfect for measuring a complex issue such as ESG performance. However, our measures have been selected to have both a theoretical underpinning and we have shown in this piece their predictive power to market characteristics such as yield levels.

The bottom line is simple: ESG considerations should formulate part of any prudent investors' analytical tool kit. All else equal, investors should direct their capital to cleaner, more sustainable and better governed areas of the world. And nations should be rewarded by the bond market when they improve on these measures. Countries that currently pay little attention should think twice—higher yields, higher funding costs, and headwinds to growth may be just around the corner.

HOW AND WHY WE HAVE CHOSEN OUR ESG DATA

In this section we set out to answer some of the questions readers may have on our methodology or data choices. In doing this analysis our guiding principle has been that no one measure is perfect, and no approach can capture all the complex issues within the ESG landscape. However, our measures have been debated at length and selected to be intellectually robust, consistently implementable across countries and representative of the broad and complex range of ESG issues that top down investors need to grapple with.

We believe in the following principles:

1. **Blended composite measures are better than relying solely on one measure.** A perfect measure for any score is impossible to find. By blending a variety of underlying statistics, we can reduce the error of any one measure. Where the data are already a composite of a range of underlying indicators (e.g. the Yale Environmental Performance index), we are happy to use this alone.
2. **Independence and credibility is key.** All of the components of our scores come from large, credible third party institutions, which have primary purpose outside of pure financial analysis. This means we can be more confident that there isn't circular logic in our analysis, with one financial metric being used to estimate another, for example.
3. **Data should be internationally comparable.** We have selected our source data to be comparable across countries on a consistent basis. While there may be better standalone measures for certain components for individual countries, we would not want our conclusions to be clouded by questions of data quality. Far better for the analysis to be a pure expression of relative differences between countries. The data we use are all publically available and easy to access.
4. **Developed and middle income countries are our focus.** On the multi asset side, we tend to focus on the large liquid markets. This has two implications:
 - This means that frontier markets tend not to be our main interest. Rather the analysis is focused on the largest local currency government bond issuers in both the developed and emerging market indices.
 - The measures we choose must be pertinent to the mix of countries under consideration. Hence measures like primary education enrollment rates, where all developed and middle income countries tend to score near 100% are not helpful.
5. **Weightings matter.** Within our composite Social and Governance scores we have weighted each of the components equally, as we believe they all deserve equal dignity. Within our combined overall ESG score we offer a higher weight to governance (50%) than to social (25%) or to environmental (25%), as ultimately we believe that strong governance underpins any investment.
6. **To reduce the risk of our analysis capturing a particularly favorable, or unfavorable, market environment we do two things.** First, our analysis uses long term bond yields at the 10-year point, which should be somewhat more stable than shorter-term rates. Secondly, we take a three-year average of these 10-year bond yields, again, to reduce the probability of market volatility as at the analysis date impacting our conclusions.

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