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WHITEPAPER

Shedding the Home-Country Bias:

Why Going Global Makes Sense for High Yield Investors

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For today's investor





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Main responsibilities

Brent is a high yield portfolio manager for our global high yield, U.S. high yield and bank loan products.

Experience and qualifications

Prior to assuming the role of portfolio manager, Brent was a senior credit analyst. Before joining Aviva Investors, he worked as an investment analyst with Victory Park Capital, a multi-strategy hedge fund. His prior experience includes positions as an equity analyst with Robert W. Baird and a fixed income analyst with Conseco Capital Management.

Brent holds a Bachelor's degree in Finance from the University of Illinois. He is a CFA® charterholder and a member of both the CFA Institute and the CFA Society of Chicago.

Shedding the home-country bias: why going global makes sense for high yield investors

Going global empowers portfolio managers to generate more alpha – so it’s no surprise that investors are increasingly recognizing the benefits of global approaches to mainstream asset classes, such as equities. High yield bonds, however, are often approached on a fragmented, regional basis. Here we explore how overcoming a home-country bias in high yield offers improved potential for diversification and creates meaningful advantages for investors seeking a wider range of alpha sources.

At Aviva Investors, we believe that developed market high yield bonds should be managed separately from emerging market (EM) debt. The issues we raise specific to EM debt lead us to the conclusion that combining it with developing market debt does not make sense. Therefore, at Aviva Investors, we manage these strategies separately, with a dedicated EM debt team in place to analyze, understand and take advantage of the risks and opportunities in that market. To begin, we’ll briefly review how the high yield market has grown in recent years then examine the diversification benefits of a global approach. Given our focus on developed markets, these parts of the conversation will be concentrated on the US and European high yield markets.

High Yield Periodic Chart - Calendar Year Total Returns

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 YTD	Annualized
EM HY 4.8%	EM HY -20.7%	EHY 84.6%	EHY 16.5%	EM HY 5.1%	EHY 28.8%	EHY 10.5%	EHY 5.8%	EM HY 6.9%	USHY 17.1%	EM HY 9.5%	EHY -0.8%	EM HY 10.0%	EHY 8.7%
USHY 2.3%	USHY -25.9%	GHY 62.3%	EM HY 15.3%	USHY 5.0%	EM HY 23.8%	GHY 8.1%	GHY 3.3%	EHY 2.0%	EM HY 15.9%	EHY 8.9%	GHY -1.8%	USHY 9.9%	GHY 7.5%
GHY 1.9%	GHY -26.5%	USHY 58.8%	GHY 15.1%	GHY 3.5%	GHY 18.2%	USHY 7.4%	USHY 2.5%	GHY -3.0%	GHY 15.6%	GHY 7.8%	USHY -2.1%	GHY 9.8%	EM HY 7.5%
EHY -0.7%	EHY -31.2%	EM HY 43.7%	USHY 14.9%	EHY -2.5%	USHY 15.8%	EM HY -1.3%	EM HY -1.4%	USHY -4.4%	EHY 10.6%	USHY 7.5%	EM HY -4.7%	EHY 9.4%	USHY 7.2%

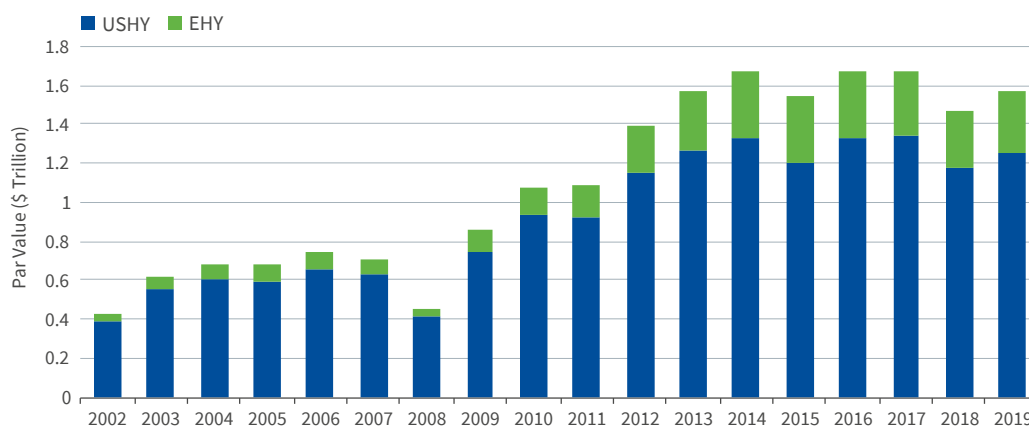
Past performance is no guarantee of future results. Source: Bloomberg Barclays, as of June 30, 2019. High Yield asset class performance is expressed in US Dollars and represented by: Emerging Markets (EMHY): Bloomberg Barclays EM USD Aggregate Index; US (USHY): Bloomberg Barclays U.S. High Yield – 2% Issuer Cap; Global (GHY): Bloomberg Barclays Global High Yield Excl CMBS & EMG 2% Cap; European (EHY): Bloomberg Barclays Pan-European High Yield. Total returns for periods of less than one year are cumulative. Annualized performance is average annualized total returns from January 1, 2007 - June 30, 2019.

Background

The high yield bond market first took flight in the mid-1980s, consisting primarily of US-dollar denominated bonds, and expanded to Europe after the advent of the euro in 1999. Today, the US and the European high yield bond markets are relatively well diversified by industry, and, over the last decade, default rates are fairly consistent across both regions. In terms of size, the US market is approximately

\$1.245 trillion (Bloomberg Barclays U.S. High Yield – 2% Issuer Cap) and the European market is \$302 billion (Bloomberg Barclays Pan-European High Yield hedged to USD), as measured by outstanding par amount. Both have experienced noteworthy growth in the past decade, with the European market more than tripling in size and the US market growing nearly two-fold.

Figure 1. High Yield Market Doubles from 2009 - 2019



Source: Bloomberg Barclays, as of June 30, 2019. USHY: Bloomberg Barclays U.S. High Yield 2% Issuer Cap. EHY: Bloomberg Barclays Pan-European High Yield.

Potential diversification benefits: alpha potential from a wider opportunity set

Familiarity bias is part of human nature. For US-based high yield investors, it commonly takes the form of home-country bias, which is the propensity to invest primarily in securities issued by US companies. While it's understandable to want to stick with what feels most familiar, a home-country bias significantly curtails the universe of available investment opportunities.

In fact, when we break down the investible high yield universe by country of risk, we see that investors who allocate only to US high yield miss out on more than 30% of the opportunity set.

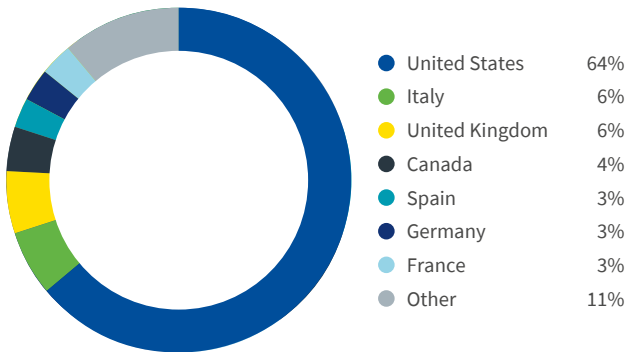
Alternatively, a manager given the freedom to pursue a global mandate will naturally be presented with a more diverse selection of companies to choose from and, potentially, more alpha sources from which to deliver returns. A portfolio with only US high yield securities tends to be heavily exposed to the narrower economic and market forces of the domestic market, while a global portfolio with bonds outside the home market can offer exposure to a wider array of opportunities.

Diversification is especially powerful in the high yield market, given its ability to transform the asymmetrical return profile of a single high yield bond (in which downside potential far exceeds upside potential) into a more bell-shaped return profile.

The diversification benefits of going global are primarily driven by variations in:

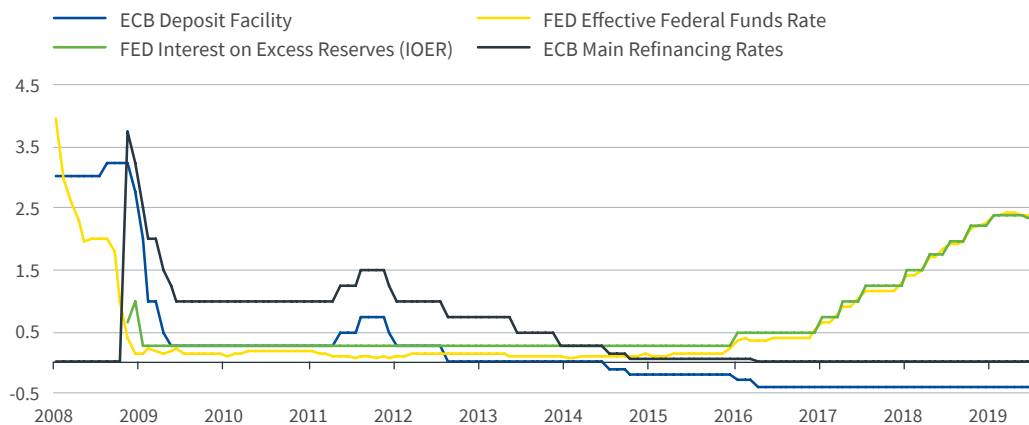
- Economic conditions and monetary policy trends** – GDP growth rates and monetary policy trends in the US and Eurozone have had periods of considerable divergence in recent years; monetary policy trends have also taken different tracks. A high yield manager with a global mandate could enjoy the flexibility to choose the best investments from a wider opportunity set – for example, by taking advantage of spread tightening on the back of dovish rhetoric from the European Central Bank (ECB) or by choosing bonds from US issuers which tend to perform better in the later innings of an economic cycle.

Figure 2. Large Portion of Investible High Yield Universe is Beyond US



Source: Bloomberg Barclays, as of June 30, 2019

Figure 3. Key Interest Rates – US and Eurozone

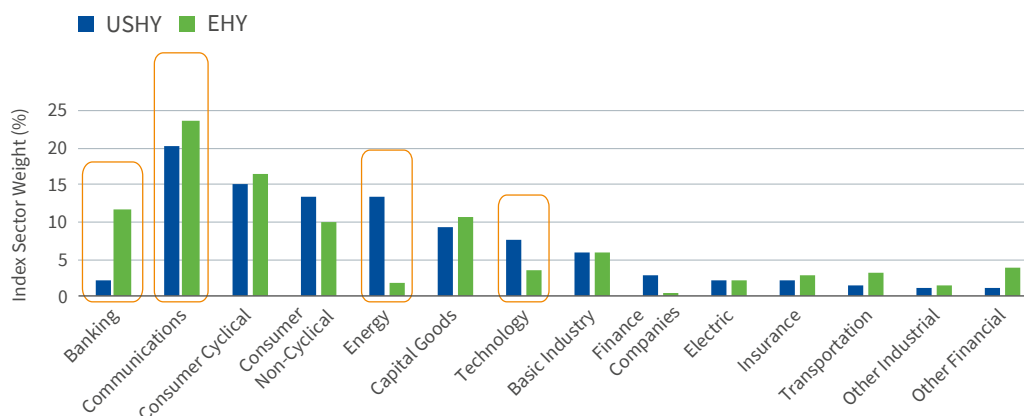


Source: ECB, St. Louis FED, as of June 30, 2019

- Sector composition** – While both the US and European high yield markets are more diversified by sector now than in their early days, some noteworthy concentrations still exist. In the US, the energy sector is dominant, representing approximately 13% of the benchmark index. In Europe, banking is the prominent sector, representing roughly 12% of its benchmark. Once again,

a global mandate creates more opportunity: For example, a manager who is bearish on the US energy sector but not able to invest outside of his or her home country would have significantly fewer options than a manager with the freedom to search for attractive investments in the European markets.

Figure 4. Sector Concentrations in US and European Indexes

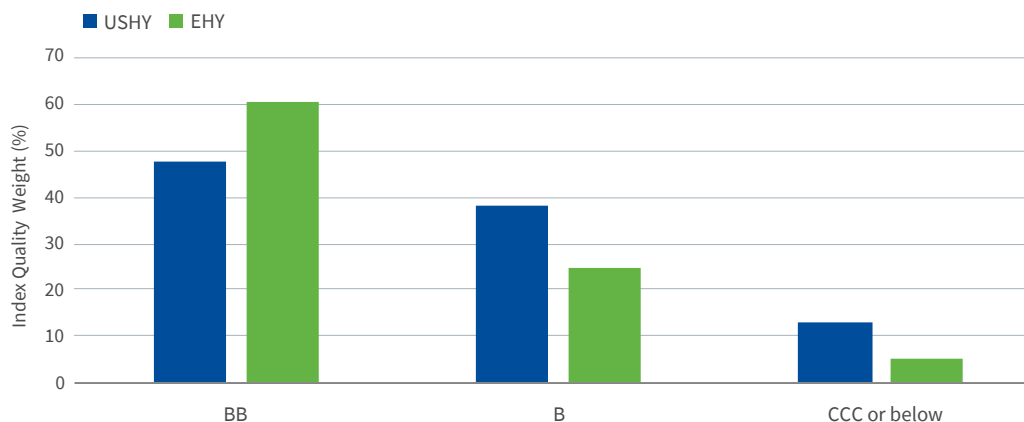


Source: Bloomberg Barclays, as of June 30, 2019. USHY: Bloomberg Barclays U.S. High Yield 2% Issuer Cap. EHY: Bloomberg Barclays Pan-European High Yield.

- Quality** – Quality also differs by region, as measured by credit rating, covenant strength and default rates. According to these criteria, US-based managers seeking to identify higher-quality bonds within the high yield space stand to benefit from expanding their universe to include the European market. The average credit rating in the European market (Ba2) is two

notches higher than in the US (B1), and the European market has proportionately more BB-rated bonds than the US (roughly 60% market weight vs. 48%). Furthermore, bonds rated CCC or below are less prevalent in Europe (less than 6% market weight) than in the US (13%).

Figure 5. European Market Offers Higher Credit Quality

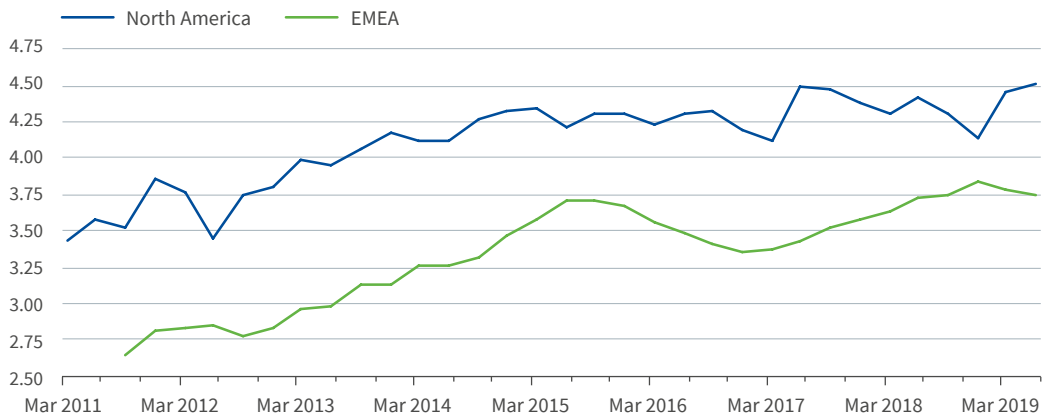


Source: Bloomberg Barclays, as of June 30, 2019. USHY: Bloomberg Barclays U.S. High Yield 2% Issuer Cap. EHY: Bloomberg Barclays Pan-European High Yield.

There is also a notable difference in covenant strength: European bonds typically have stronger investor protections than those in the US. Moody's Credit Quality Indicator (CQI) is a helpful way to examine covenant strength.* The CQI represents a three-month rolling average covenant quality score weighted by each month's

total number of bonds. On a scale of 1.0 to 5.0, a higher score denotes weaker covenant quality. Though trending higher in recent years, the EMEA region score of approximately 3.75 is notably lower than North America's score of 4.50.

Figure 6. European Market Offers Stronger Investor Protections – Moody's Credit Quality Indicator

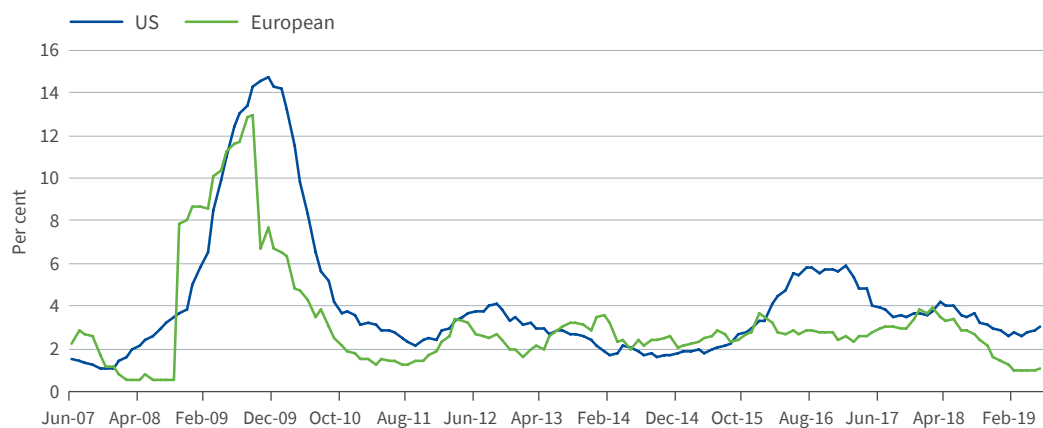


Source: Moody's Investment Services, as of June 30, 2019

Lastly, the European market has experienced lower default rates in recent years than the US market. A global mandate empowers managers

to tactically rotate out of a market that is experiencing an uptick in defaults and into a market where default rates are trending down.

Figure 7. High Yield Default Rates



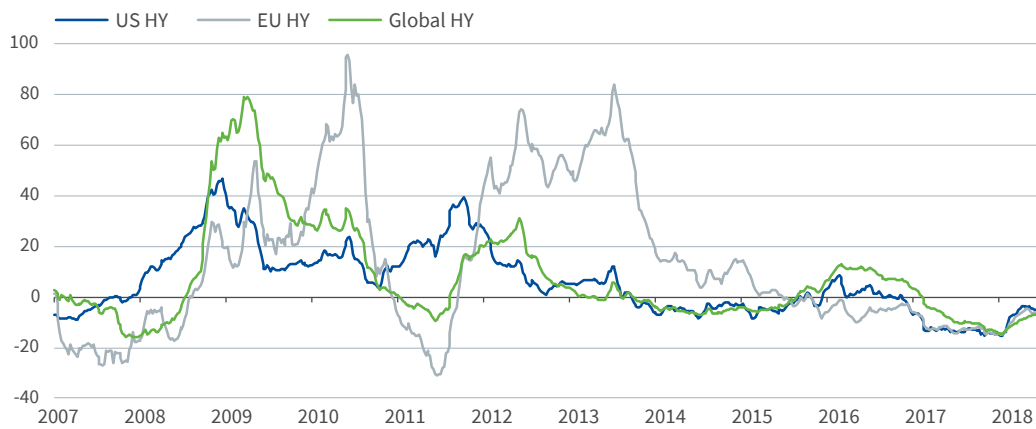
Source: Moody's Investor Services, as of June 30, 2019

• **Fund flow trends** – Because mutual funds hold nearly a quarter of all high yield assets, fund flows affect the performance of bonds as forced sellers and buyers impact price action. Investor

behavior, however, can differ widely between the US and European markets.

*Aviva Investors is not affiliated with Moody's. Moody's Credit Quality Indicator is provided for informational purposes and their covenant quality score is no guarantee against default.

Figure 8. High Yield Mutual Fund Flows (% of AUM)



Source: Deutsche Bank, EPFR, as of June 30, 2019

In fact, over the last decade, the correlation between US and European institutional high yield fund flows is a mere 0.29 (Source: evestment, as of June 30, 2019). As a result, managers who are able to invest in both the US and European markets are better able to navigate the consequences of fund flows.

The importance of a holistic global portfolio

The ability to reap the full benefits of a global approach to high yield depends to some degree on how the investment approach is structured and how investment teams are incentivized. In our view, a coordinated approach to managing global high yield bonds with incentives aligned at the portfolio level produces the best outcomes for investors.

Sleeved vs. coordinated approaches

There are two main methods of managing global high yield: One we call the sleeved approach and the other the coordinated approach. Both methods utilize local market expertise, research and execution of trades.

In the sleeved approach, the portfolio is divided into a US portion and a European portion. The allocation between the two markets is not necessarily static, and so regional allocation can be an alpha source. However, accessing the alpha sources available from multicurrency issuance by the same issuer becomes more problematic, as do overall portfolio construction themes. Sleeved US portfolio managers construct their portion independently of their European counterparts. This is acceptable in a multi-asset class framework, but when managing a single asset class, it is important to have everyone rowing in the same direction.

Consider, for example, the implications of a European portfolio manager adopting a “risk on” stance while the US manager holds a “risk off” portfolio, or the European manager builds positions of 3%, while the largest US position is 2%. When selecting a manager

for a global mandate, these disconnects would rightfully be non-starters for any prudent consultant or institutional client.

In the coordinated approach, the global mandate benefits from the same local expertise and execution within respective regional markets as in the sleeved approach. However, bond selection is compared across regions, industries and currencies. For example, a chemical company in the US is compared with the global universe of chemical companies rather than purely within its regional universe. This requires constant communication between the US and European portfolio managers and also with regional research teams in order to emphasize industry and company expertise on a global scale while maintaining local intelligence. The portfolio is constructed with a holistic view of the global market, evaluating the opportunities across the entire universe.

Incentives and team behavior

It is of critical importance to ensure that an investment team’s incentives are aligned with its clients’ objectives. In the sleeved approach, it is common for a portion of each portfolio manager’s remuneration to be tied to the performance of their sleeve. While this method emphasizes direct accountability, it does not align the manager’s incentives directly with the client’s objective. A sleeve may perform well, but if the overall portfolio does not perform well, the investor may be at risk because the investment team did not focus on the client’s overall objective at the portfolio level.

By contrast, the coordinated approach emphasizes a team-based style that is fully aligned with the client’s objective. All the portfolio managers in the US and Europe have the same objective: the performance of the overall portfolio. While it could be argued that this incentive method makes individual managers less accountable, it can also be argued that the managers are more accountable to the client as a team. We believe alignment of incentives at the portfolio level produces the right team behavior.

Think global, act local: accessing the alpha in multicurrency issuance

One clear advantage of managing a coordinated global high yield mandate is capturing the capital structure inefficiencies between multicurrency tranches of the same issuer. This allows the manager to increase yield on a currency-hedged basis without increasing credit risk or default probability. If an investor has separate US and European high yield mandates, the combined portfolios may own the same issuer but in both USD and euro-denominations, rather than focusing on the most attractive denomination.

Two examples illustrate this point:

Netflix Inc.*

California-based Netflix Inc. is a subscription streaming service that allows members to watch TV shows, movies and other content on internet-connected devices. In 2018, the company issued 2029

On September 30, 2019, we studied 42 issuers with pairs of USD- and euro-denominated bonds maturing the same year. On average, the euro-denominated bonds traded 38 basis points (bps) wider than their USD counterparts. While euro-denominated bonds were generally trading wider at the time of our analysis, the range is worth noting: Pairs traded from as much as 293 bps wider to 168 bps tighter, with the median difference being 22 bps wider.

maturity bonds in both USD and euros. The euro-denominated bond provides 47 bps of additional option-adjusted spread (OAS) and the yield to worst is only 1.7% lower.

Name	Currency	Coupon (%)	Maturity	OAS	YTW (%)	Price	Moody's	S&P
Netflix Inc	EUR	4.625%	5/15/2029	374	3.2%	111.45	Ba3	BB-
Netflix Inc	USD	6.375%	5/15/2029	328	4.9%	111.00	Ba3	BB-
Difference				47	-1.7%	0.45		

OCI N.V.*

Netherlands-based OCI N.V. is a leading global producer and distributor of natural gas-based fertilizers and industrial chemicals.

The USD-denominated bond provides 172 bps of additional OAS, the yield to worst is 2.9% higher and the dollar price is \$0.05 lower.

Name	Currency	Coupon (%)	Maturity	OAS	YTS (%)	Price	Moody's	S&P
OCI NV	USD	6.625%	4/15/2023	278	3.3%	105.00	B1	BB
OCI NV	EUR	5.000%	4/15/2023	107	0.4%	104.95	B1	BB
Difference				172	2.9%	0.05		

Why sticking to developed markets creates a better risk-return profile

As noted above, the Aviva Investors Global High Yield strategy is designed to provide investors with pure developed market high yield corporate credit risk. Although the USD market for debt from Emerging Market (EM) issuers has grown rapidly in recent years — and is now larger than the US high yield market¹ — we have deliberately chosen to exclude EM bonds.

We believe that developed market high yield bonds should be managed separately from emerging market debt because of differing risk profiles. The Emerging Market Debt (EMD) universe includes bonds from corporate issuers as well as quasi-sovereign

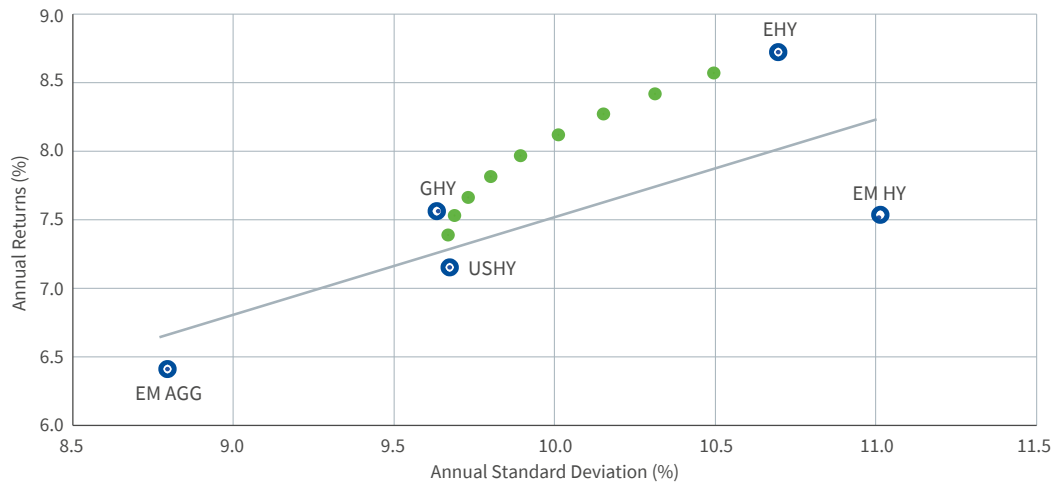
issuers, which results in a strong correlation to sovereign risk. Exchange rate fluctuations, currency devaluations, political and social disruptions, nationalizations and appropriations are also larger concerns for EMD. In addition, many emerging market countries lack sufficient standards to provide accounting transparency and lack well-defined bankruptcy codes to provide creditor protections in the event of default.

When examined in the context of risk-adjusted return potential, we find developed market bonds more attractive than EM debt.

¹ Source: Bloomberg, Barclays Research, as of December 2018

* Source: Bloomberg, Barclays Research, as of September 30, 2019. This material is provided for illustrative purposes only and is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. The opinions expressed are subject to change. References to specific securities, asset classes and financial markets are for illustrative purposes only and are not intended to be and should not be interpreted as recommendations. Reliance upon information in this material is at the sole risk and discretion of the reader. The material was prepared without regard to specific objectives, financial situation or needs of any investor.

Figure 9. Efficient Frontier (January 1, 2007 – June 30, 2019)

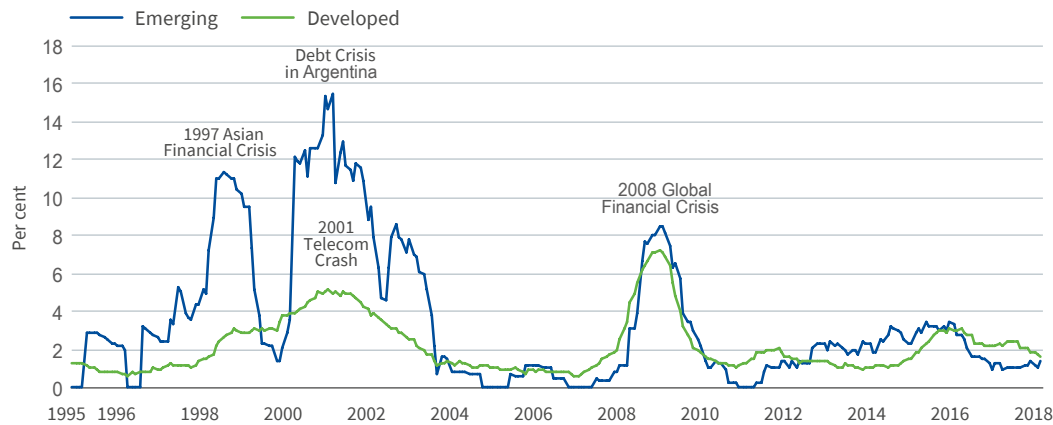


Past performance is no guarantee of future results. Source: Bloomberg, Barclays Research, as of December 2018

It's also important to closely examine default dynamics within EM debt. Based on Moody's data collected from 1995 to 2018, the average five-year cumulative default rate in EM is more than 30% higher than in developed markets (12.99% vs 9.91%). Additionally,

EM defaults tend to cluster around country crises and recessions: The aggregate default rate roughly doubles during "crisis" years on average over one- and three-year horizons.

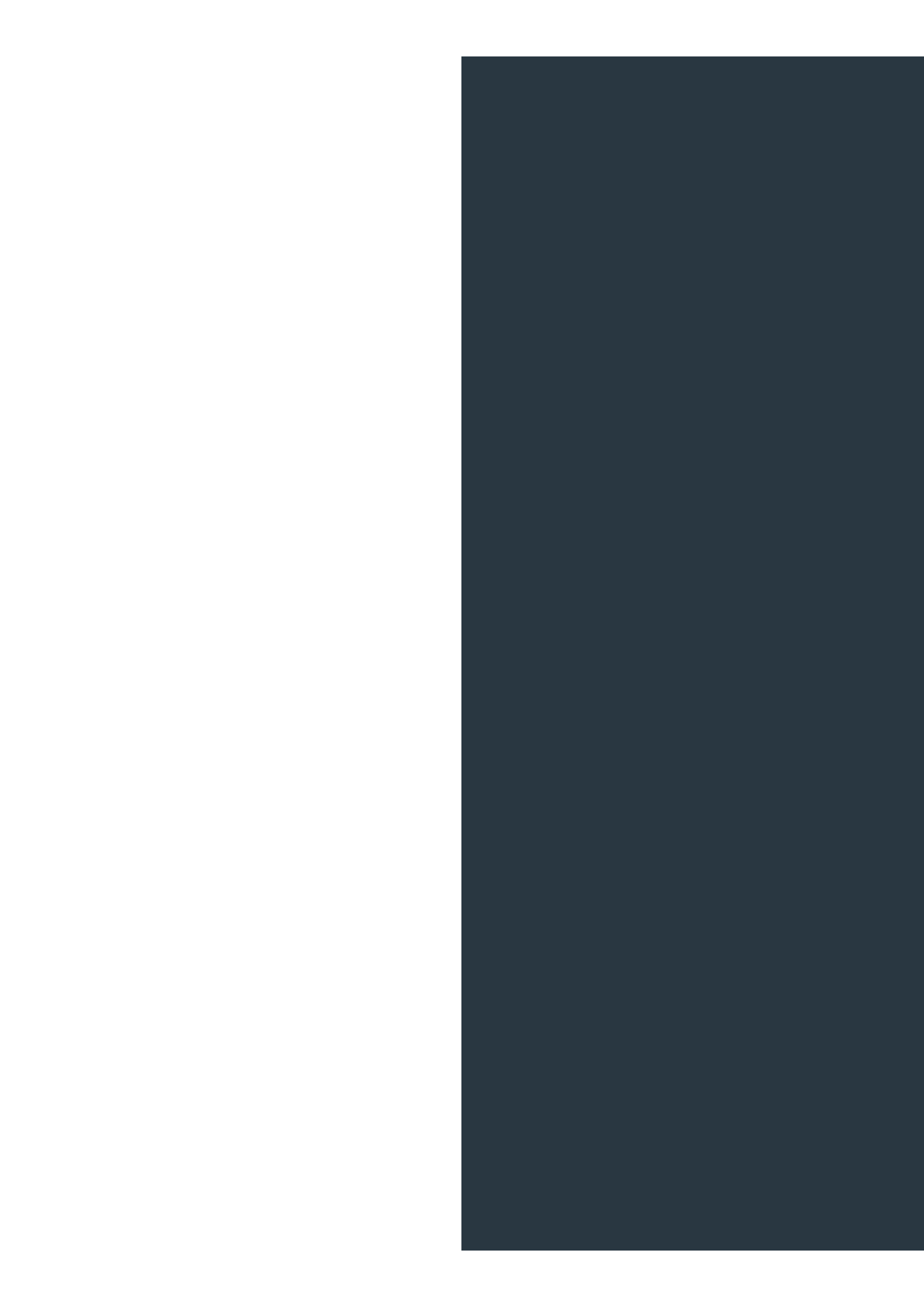
Figure 10. Default Rates in Emerging and Developed Markets



Source: Moody's Investor Services as of December 31, 2018

Key points

- European and US high yield markets are well-diversified by industry and default rates are consistent across both regions.
- A global approach to high yield creates the freedom to capitalize on a more diverse selection of companies and, potentially, more alpha sources from which to deliver returns.
- The diversification benefits of going global are primarily driven by variations in economic conditions and monetary policy trends, sector composition, quality, and fund flow dynamics.
- Multi-currency issuance by individual issuers allows investors to focus on the most attractive area of an issuer's capital structure, and potentially increase yield with no additional credit risk.
- A coordinated approach to global high bonds emphasizes the performance objectives of the overall high yield portfolio and aligns clients' interests directly with those of the portfolio managers.
- When examined in the context of risk-adjusted return potential, we find developed market bonds more attractive than emerging market debt.



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Key Risks

The value of an investment and any income from it can go down as well as up and can fluctuate in response to changes in currency exchange rates. Investors may not get back the original amount invested.

Bond values are affected by changes in interest rates and the bond issuer's creditworthiness. Bonds that offer the potential for a higher income typically have a greater risk of default.

The strategies may invest in emerging markets, these markets may be volatile and carry higher risk than developed markets.

