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Go global in fixed income

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Executive Summary

A global approach to fixed income can help investors to diversify domestic bond portfolios and improve risk-adjusted performance through a diverse set of interest rate and credit exposures. Investment managers that build portfolios from a truly global opportunity set can introduce exposures to non-US credit, access to emerging markets debt and oftentimes FX exposures if deemed attractive.

One of the major risks in global bond portfolios is unhedged foreign currency exposure, which is accompanied by foreign currency risk. Currency movements often outweigh the performance of the underlying security selection. We therefore believe unhedged global bond managers must be evaluated on their currency management skill in addition to their skill in managing bonds.

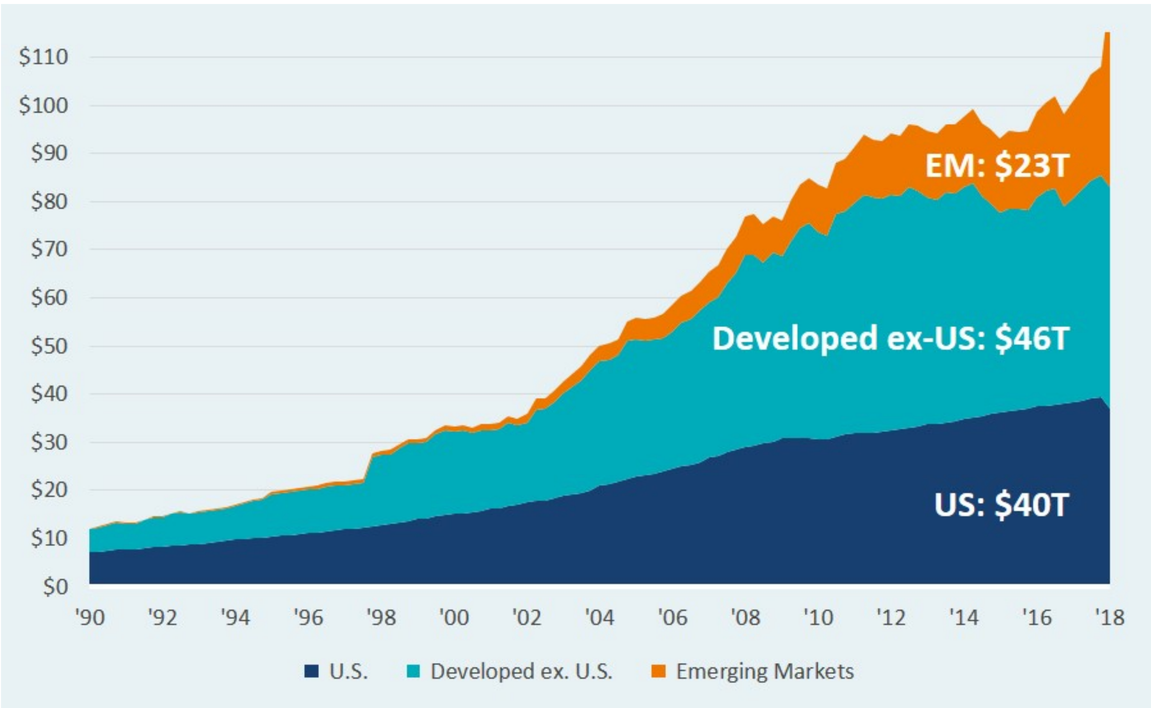
Hedged global bonds can more consistently provide attractive risk-adjusted returns for investors looking to diversify their domestically dominated fixed income portfolios than unhedged global bonds. We will explore the pros and cons of various approaches, examine if unhedged global bond managers can provide competitive performance versus hedged global benchmarks and determine when it makes sense to invest in unhedged global bond managers.

Introduction: the global bond universe

Nearly two-thirds of the world's debt market exists outside of the US, and there are also many more inefficiencies to capture in a global landscape than when solely investing in domestic bonds. According to the IMF[1], the aggregate size of world debt was more than $184 trillion in nominal value as of 2017 (the most recent figure provided by the IMF). The size of the formal global fixed income market is in fact $110 trillion[2]; this is essentially the broadest category of available liquid fixed income assets.

Exhibit A depicts the evolution of the global debt outstanding over the last 30 years. Over time, the composition of the market has changed. In 1989 US fixed income made up the majority global bond market (61%) with developed ex-US making up 38% and emerging markets making up the balance with 1%. Today, emerging markets have slowly increased their share of world debt outstanding to 21%; developed markets ex-US and the US make up 42% and 37%, respectively.

EXHIBIT A – GLOBAL BOND MARKET[2]



Source: JPMorgan, as of 9/30/2018

By expanding guidelines on their fixed income portfolios to include global bonds, US investors can benefit from having access to a broader opportunity set.

Benefits

Investing in global bonds brings various benefits to investors, including diversification, an attractive risk/return profile and a larger opportunity set with more potential drivers of investment value added. Over time, global bonds typically have had a low correlation to other asset classes, bringing diversification benefits to traditional US equity and bond portfolios.

Exhibit B below portrays a 16-year correlation matrix containing global bonds (both unhedged and hedged) alongside various equity and fixed income asset classes. Global bonds have had low correlations to most of the asset classes shown below. It is interesting to note that on a standalone basis, unhedged global bonds have shown to have higher correlations than their hedged counterparts. Hedged global bonds have proven to be a better diversifier than unhedged global bonds over the analyzed period, most notably versus equities and US high yield. This table also looks at the diversifying benefit of adding global bonds to simple portfolios, rather than single asset classes. The correlations of global bonds with a traditional stock/bond portfolio, shown as 60% S&P 500 and 40% Bloomberg Barclays Aggregate (0.36 for unhedged and 0.10 for hedged), are lower than most asset classes shown in the chart, providing evidence that adding global bonds to a traditional 60/40 portfolio brings diversification benefits.

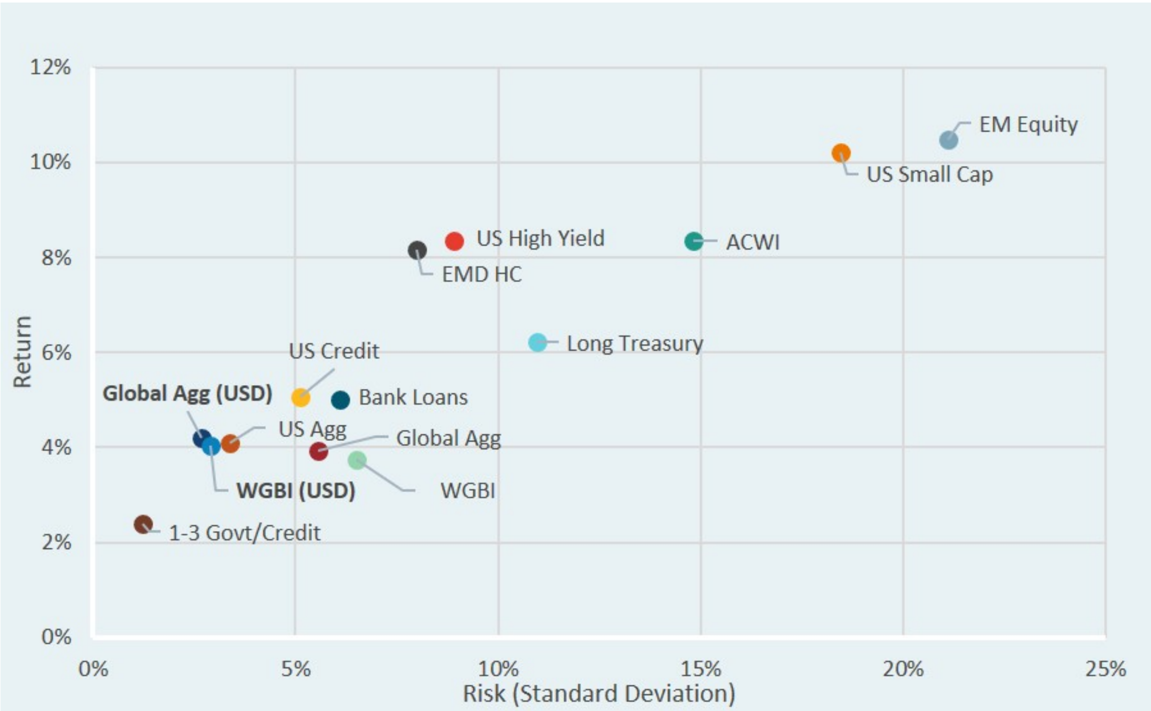
EXHIBIT B: CORRELATION OF GLOBAL BONDS WITH TRADITIONAL ASSET CLASSES[3]

CORRELATION FEBRUARY 2003-MAY 2019	**60% S&P 500 / 40% Barclays Agg**	**Global Agg**	**Global Agg (USD Hedged)**	**US Agg**	**US High Yield**	**US IG Credit**	**EMD - Hard**	**EMD - Local**	**ACWI**	**EM Equity**	**US Small Cap**	**US Large Cap**
60% S&P 500 / 40% Barclays Agg	**1.00**	0.36	0.10	0.15	0.73	0.40	0.62	0.62	0.95	0.78	0.88	0.99
Global Agg	0.36	**1.00**	0.67	0.72	0.35	0.71	0.64	0.68	0.37	0.42	0.15	0.25
Global Agg (USD Hedged)	0.10	0.67	**1.00**	0.94	0.12	0.82	0.53	0.32	-0.01	0.05	-0.13	-0.06
US Agg	0.15	0.72	0.94	**1.00**	0.22	0.88	0.62	0.38	0.05	0.13	-0.08	-0.01
US High Yield	0.73	0.35	0.12	0.22	**1.00**	0.55	0.74	0.61	0.76	0.71	0.66	0.71
US IG Credit	0.40	0.71	0.82	0.88	0.55	**1.00**	0.79	0.54	0.35	0.39	0.17	0.26
EMD - Hard	0.62	0.64	0.53	0.62	0.74	0.79	**1.00**	0.78	0.62	0.67	0.43	0.52
EMD - Local	0.62	0.68	0.32	0.38	0.61	0.54	0.78	**1.00**	0.70	0.78	0.48	0.56
ACWI	0.95	0.37	-0.01	0.05	0.76	0.35	0.62	0.70	**1.00**	0.89	0.85	0.95
EM Equity	0.78	0.42	0.05	0.13	0.71	0.39	0.67	0.78	0.89	**1.00**	0.69	0.76
US Small Cap	0.88	0.15	-0.13	-0.08	0.66	0.17	0.43	0.48	0.85	0.69	**1.00**	0.90
US Large Cap	0.99	0.25	-0.06	-0.01	0.71	0.26	0.52	0.56	0.95	0.76	0.90	**1.00**

Source: MPI as of 5/31/2019. 2/2003 represents a common inception date for indices shown (2/2003-5/2019).

In addition to correlation benefits, global bonds have also displayed relatively attractive risk and return attributes. *Exhibit C* depicts the risk and return of various fixed income indices, with a focus on hedged and unhedged global bond indices since February 2003. Global bond indices (bolded) look attractive over this period on a risk basis relative to other asset classes, while over this 16-year period the hedged versions of the global bond benchmarks (purple boldface) have shown superior risk/return profiles than their unhedged counterparts. *Exhibit D* shows the Sharpe ratios for the global bond indices over the same period. The Sharpe ratio for hedged global bonds represents the highest risk-adjusted return for any asset class shown on *Exhibit C* over this period. This improvement is due to both a reduction in risk and an increase in return due to the absence of foreign exchange exposure.

EXHIBIT C – RISK/RETURN OF HEDGED AND UNHEDGED GLOBAL BOND INDICES (2/2003-5/2019)



Source: As of 5/31/2019. 2/2003 is common inception for indices.

EXHIBIT D – SHARPE RATIO (12/2000-5/2019)

Index	Sharpe Ratio
Global Agg	0.48
Global Agg (USD)	1.10
WGBI	0.38
WGBI (USD)	0.95
US Aggregate	0.84

Source: As of 5/31/2019, eVestment, indices are Bloomberg Barclays & FTSE

The growth of Emerging Market Debt has expanded the universe and opportunity set for fixed income investors. *Exhibit A* showed us that emerging markets have increased their share of debt outstanding over the last twenty years, edging closer to the US in terms of market size. This has caused the global fixed income asset class to become more complex as investment managers have shifted their portfolio exposures to include a substantial and often static allocation to emerging markets debt in global bond portfolios. Emerging Market Debt has been increasing in popularity for the last decade, offering investors compelling relative value compared to developed market rates and credit in what has been a low rate environment. As investors have increased exposure to EMD, global bond managers have followed suit by increasing allocations in their underlying funds.

Lastly, investing in bonds with a global lens allows investment managers more levers to pull in their attempt to add value versus their US aggregate-based counterparts that focus mostly on domestic bonds. For many global bond managers, top-down macro views based on global risk sentiment inform bottom-up portfolio construction. Most global bond managers investing with this style argue that a larger opportunity set to express house views can translate into a higher ability to harvest global risk premiums. Global bond managers often have broader scope to embed multiple strategies as part of their process to earn excess return in their portfolios such as, for example, taking advantage of broader geographical diversification, allocating to off-benchmark countries, incorporating more complex spread duration and curve strategies, opportunistically investing in FX, taking top-down views on emerging markets versus developed markets. By increasing the universe of potential investments global bond managers can invest in countries that may be at a more attractive point in the cycle.

Risks

Investing in global fixed income brings a unique set of risks. In particular, movements in currency markets represent a high share of overall total volatility at the portfolio level but, as can be seen in *Exhibit C*, this volatility has not generally been consistently compensated. The standard deviation of the unhedged Global Agg Index is higher than the US Agg (around 2.2% higher), with the increase driven mostly from currency risk[4]. Conversely, the hedged version of the Global Agg has less than half the standard deviation of its unhedged counterpart and is around 0.7% lower than the US Agg. We can conclude that investing in a hedged global bond portfolio can result in a portfolio with lower risk profile due to the absence of currency, and that this reduction in risk is unlikely to harm, and may even enhance, the actual portfolio return.

Another risk which affects this asset class is the role of EMD; global bond portfolios often contain a static allocation to emerging markets debt, which introduces a complicated set of risks: foreign exchange risk, liquidity risk, poor sovereign and corporate governance, credit and default risk, political risk, and additional heightened/unexpected volatility. According to the eVestment, the median allocation to emerging markets was roughly 8% versus 0% ten years ago. Performance in EMD is also impacted by macro factors in developed markets, as investors tend to view EMD has a homogenous group of countries and sell EMD allocations as a whole to express risk-off views. To compensate investors for these heightened risks EMD typically trades with an increased spread over Treasuries. Despite these additional risks we believe that the addition of EMD to a rate-dominated global fixed income portfolio provides more exposure to a more representative global opportunity set than simply holding a portfolio of predominantly G10 rates. We believe that investors are compensated for the added risks with a yield premium over similarly rated developed market bonds, but we note the importance of credit work and country selection in managing portfolios that include EMD.

Finally, there will always be idiosyncratic risks in global bond markets. Geopolitical issues, country-specific issues, trade tensions, elections, and natural disasters will all affect global risk sentiment and will therefore affect global bond portfolios. While these risks will always be present in these markets, the role of active management in this space is to manage this downside while capitalizing on the upside available. We believe that the ability to avoid and successfully navigate idiosyncratic risks is paramount to having a successful investment strategy.

Hedged or unhedged?

While we have touched on the question of currency above, it needs to be addressed in more detail. While there have been periods where exposure to foreign currency has proven to be beneficial, history also shows several periods where the added currency risks have erased the value added from the underlying security selection. Following the global financial crisis, the US dollar weakened relative to global currencies which provided a tailwind to performance. After 2012, global central bank policies began their divergence, starting with the United States. The Federal Reserve's announcement that it would begin tapering its purchases of US government securities resulted in the strengthening of the US dollar relative to other currencies. While rates have largely remained at low levels, currency movements have overshadowed the coupon.

In our analysis thus far, we have solely used benchmark data to describe the opportunity set for investing in global bonds. Next, we will assess manager skill in both the hedged and unhedged global bond universes. *Exhibit E* depicts 10-year Sharpe ratios of global bond indices, as well as peer group statistics for both hedged and unhedged global bond managers. From this data, we can conclude that over this time, both hedged and unhedged global bond managers in the top 5% of their respective peer groups were able to provide superior risk-adjusted returns versus the hedged global bond benchmark. From there, top quartile hedged global bond managers had better Sharpe ratios than their unhedged counterparts. Interestingly, hedged global bond managers in the 95th percentile had the worst Sharpe Ratios, far below the managers with the same ranking in the unhedged universe. Ultimately it seems clear that there are managers that have demonstrated skill over the 10-year trailing period in both the hedged and unhedged fixed income peer groups.

EXHIBIT E: 10-YEAR SHARPE RATIOS – GLOBAL BOND HEDGED AND UNHEDGED PEER GROUPS

Indices	10-year Sharpe Ratios
Hedged GFI 5%	1.60
Unhedged GFI 5%	1.55
Global Agg (USD)	1.50
Hedged GFI 25%	1.26
US Aggregate	1.17
Unhedged GFI 25%	1.06
Unhedged GFI Median	0.75
Hedged GFI Median	0.68
Unhedged GFI 75%	0.57
Global Agg	0.47
Hedged GFI 75%	0.33
Unhedged GFI 95%	0.30
Hedged GFI 95th%	-0.02

Source: eVestment as of 5/31/2019. Peer groups include eVestment Global Fixed Income – Hedged; Global Fixed Income – Unhedged.

Exhibit F displays excess returns of eVestment's Global Fixed Income – Unhedged universe versus the Bloomberg Barclays Global Aggregate – Hedged benchmark. Essentially, this exhibit investigates whether top-quartile unhedged global bond managers can consistently outperform the hedged benchmark over time. It seems clear that the top quartile managers in the unhedged universe have a good track record over the past ~12 years (outperforming the hedged benchmark nine out of the last twelve periods). Median managers have had a tougher time, however, outperforming a hedged benchmark roughly 50% of the time, with lower ranked managers doing more poorly.

From these Exhibits we can see that some investment managers in the unhedged global fixed income space have consistently and repeatedly demonstrated skill versus peers in navigating fixed income markets, though it is unclear if this is due to skill or just the effect of foreign currency on their portfolio. In assessing the skill of various global fixed income teams, we like to see investment managers make country and currency allocations independent of each other, instead of investing in the currency as a byproduct of country allocation. We also like to see risk carefully managed at all stages of portfolio construction, with a dedicated process around assessing the impact of foreign currency as part of the risk budget. We believe that thoughtful processes concerning foreign exchange market investment lead to more successful investment outcomes when managing currency. In addition, we recognize the growth of currency benchmarks which can provide us with a neutral tool against which we can assess the currency management skill of managers attempting to manage currency risk. While little used for this purpose today, we will increasingly use these benchmarks to assess portfolio manager currency management skill.

EXHIBIT F – UNHEDGED GLOBAL FIXED INCOME EXCCESS RETURNS VS A HEDGED BENCHMARK

GLOBAL FIXED INCOME - UNHEDGED UNIVERSE

Excess returns vs Barclays Global Aggregate-Hedged	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD 2019
High	15.65	92.64	30.63	18.40	24.23	22.18	7.35	4.30	20.79	25.57	5.64	8.20
5th Percentile	7.76	48.40	12.07	4.50	15.00	10.37	-0.71	0.23	9.89	12.72	0.59	7.55
25th Percentile	1.16	19.18	6.83	1.32	7.81	3.86	-3.75	-2.24	2.94	7.91	-2.34	5.66
Median	-6.64	8.57	2.89	-0.59	3.88	0.34	-5.97	-4.19	-0.21	5.57	-4.02	4.47
75th Percentile	-17.33	1.79	0.97	-3.18	-0.01	-3.02	-8.03	-5.98	-2.29	3.49	-5.91	2.95
95th Percentile	-35.00	-3.53	-3.29	-7.82	-4.00	-5.88	-13.47	-11.52	-6.59	-0.03	-10.15	0.77
Low	-52.84	-13.17	-11.35	-18.16	-15.69	-11.25	-21.17	-17.27	-18.99	-4.19	-13.13	-5.34
# Observations	217	235	256	293	315	343	360	366	366	356	343	72

Source: eVestment as of 5/31/2019

To summarize, we have concluded that a hedged exposure to the asset class has proven to be a more successful and consistent way to capture the beta of the asset class with less risk with the caveat that skilled global bond managers may also be able to add value through currency management. Additionally, it is important to note that it may not be possible to completely hedge portfolios due to increased transaction costs and decreased efficiency in dealing with emerging market currencies. Because of this, we prefer that investment managers have thoughtful processes revolving around hedging and the management of currency risks.

Conclusion

While investing in global fixed income does come with risks we believe that global fixed income can play an important role in portfolios. We appreciate the diversification benefits that the asset class brings, especially when added to a 60/40[5] stock and bond portfolio. Further, we believe that a hedged total return approach to global fixed income presents a compelling opportunity for investors. We believe that while global fixed income does present investors with a diverse opportunity set, the exposures should generally be hedged back to the US dollar (when deemed attractive and at a reasonable cost) with the goal of mitigating currency volatility. Furthermore, for those investors who decide to take unhedged currency exposure, an investment manager should be selected who displays both currency management skill and fixed income skill, or investors should consider allocating to a dedicated currency manager alongside their hedged global fixed income allocation.

Notes & Disclosures

1. *Bringing Down High Debt, IMF, https://blogs.imf.org/2018/04/18/bringing-down-high-debt/*

2. *Guide to the Markets, JPMorgan, Pg. 39 https://am.jpmorgan.com/gi/getdoc/1383567905737*

3. *Asset classes used: 60% S&P 500/40% Barclays Aggregate; Bloomberg Barclays Global Aggregate; Bloomberg Barclays Global Aggregate Hedged (USD); Bloomberg Barclays US Aggregate; Bloomberg Barclays US Corporate High Yield; Bloomberg Barclays US Credit; JPM EMBI Global Diversified; JPM GBI-EM Global Diversified; MSCI ACWI-ND; MSCI EM-ND; Russell 2000; S&P 500*

4. *For the period 2/2003-5/2019, the standard deviation of the Bloomberg Barclays Global Aggregate Index was 5.55% and the standard deviation of the Bloomberg Barclays US Aggregate Index was 3.36%. The standard deviation for the Global Agg (USD) was 2.67%.*

5. *References a 60% S&P 500/40% Bloomberg Barclays US Aggregate portfolio allocation mix.*

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