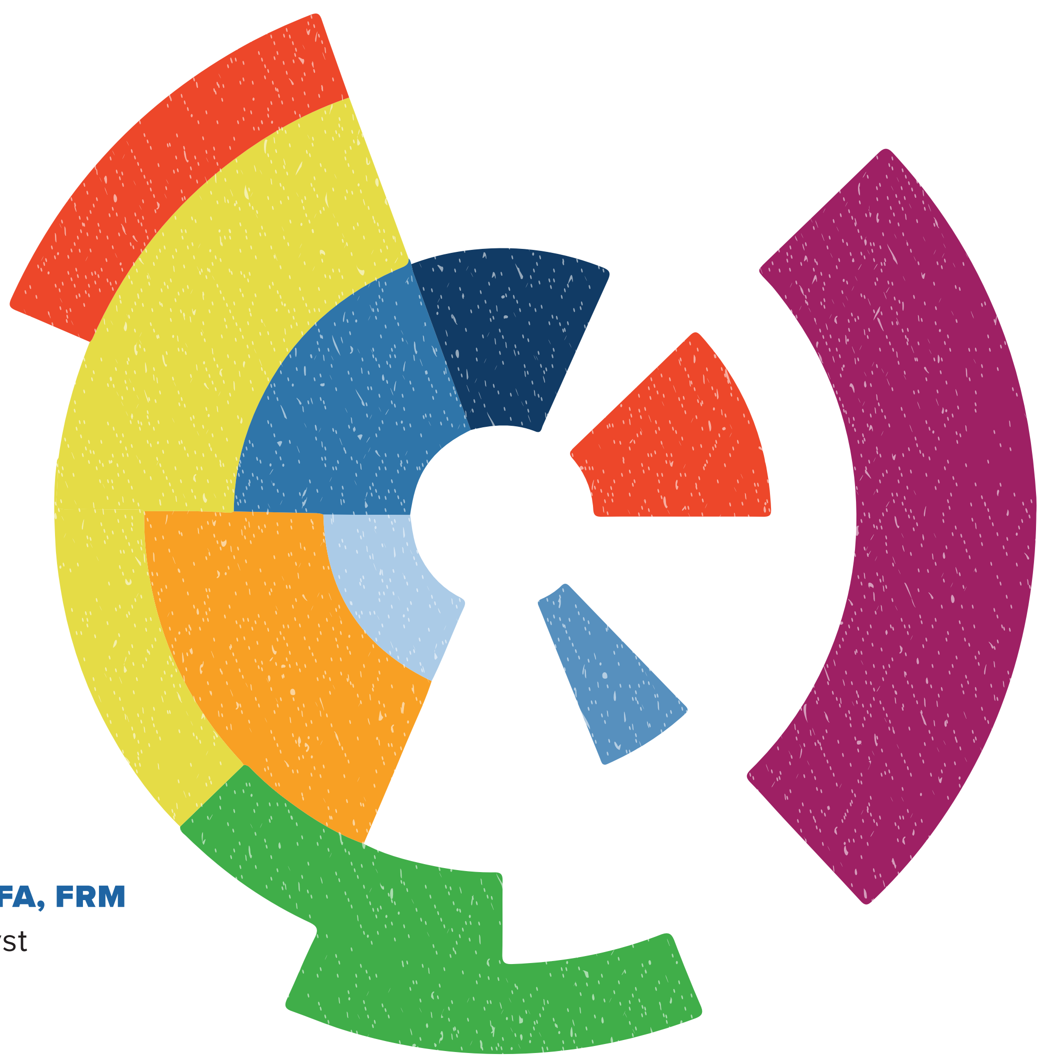
LM CAPITAL GROUP
GLOBAL BOND MANAGEMENT

Emerging Market Debt: LM Capital Group

A Low Risk Approach to Emerging Market Debt

October 16, 2019

Part 3



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Executive Summary

The first two parts of the three-part Emerging Market Debt (EMD) investing series published earlier focused on a thematic opportunity in Latin America and how LM Capital's investment philosophy is built to take advantage of these opportunities. In part three, we compare LM Capital's EMD strategy versus its peers and make a case for a low risk approach to EMD investing. We make these comparisons across performance and portfolio characteristics:

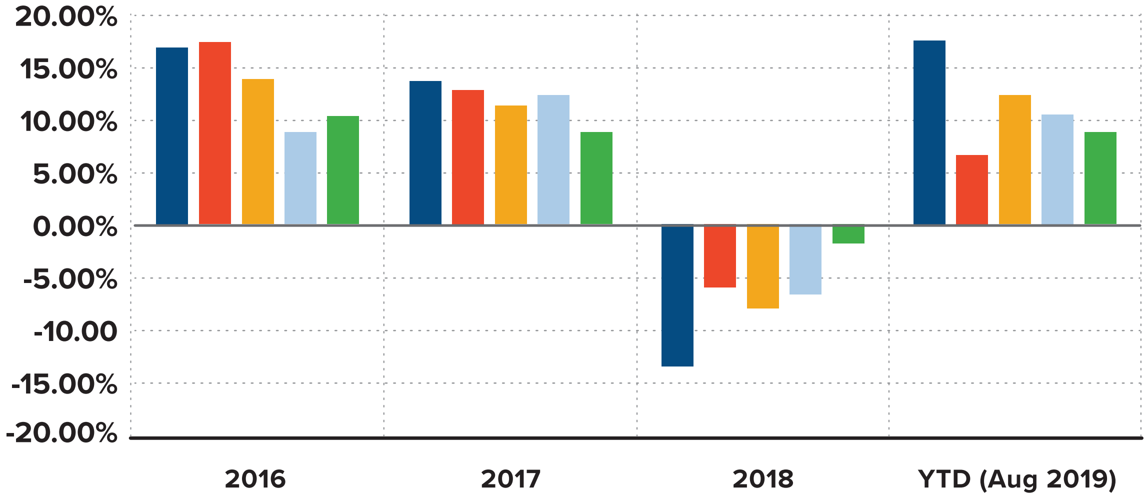
- Risk-Adjusted Performance
- Volatility and Drawdown
- Quality Allocation
- Sector Allocation
- Currency Allocation
- Uncorrelated Excess Returns vs Market Factors

LM Capital looks at emerging market debt as a fixed income instrument in which liquidity and principal protection are key aspects of the investment process. Identifying investments with higher quality bias is the foundation of our bottom-up credit research process. We focus extensively on the risk/reward aspect of every investment, as our research indicates higher quality helps achieve higher risk-adjusted returns over a complete market cycle.

LM Capital's approach to active management generates alpha that is uncorrelated to standard market factors (high yield spread, US equity) and is also negatively correlated to the alpha generated by its peers. Therefore, LM Capital is uniquely positioned to improve the total portfolio Sharpe Ratio when included as a standalone emerging market debt manager or when added in conjunction with other emerging market managers. Among its peers, LM Capital has a higher quality rating and a lower exposure to spread risk.

Peer Comparison: Calendar Year Peformance

Chart 1



	2016	2017	2018	YTD (Aug 2019)
Western EMD (EMD US)	16.68%	14.27%	-13.69%	17.07%
Ashmore EMD (EMKIX US)	17.02%	13.55%	-5.38%	6.32%
Stone Harbor EMD (SHMDX US)	14.13%	11.56%	-8.49%	12.33%
Lazard EMD (LEDIX US)	8.50%	12.80%	-7.51%	10.30%
LM Capital EMD	**10.19%**	**8.92%**	**-1.54%**	**8.58%**

3 Year Total Return (August 2019)	**Western EMD**	Ashmore EMD	Stone Harbor EMD	Lazard EMD	**LM Capital EMD**
	5.47%	13.22%	10.96%	9.75%	**15.09%**

Source: Returns for mutual funds are inclusive of fees and are obtained from Bloomberg. Performance for LM Capital is net of fees (40bps/year) *LM Capital Returns are GIPS Verified through June 2019. Past performance is not indicative of future results. Western EMD is a closed end mutual fund. Market price return has been used for this exercise as compared to NAV return.

Low Volatility Bias

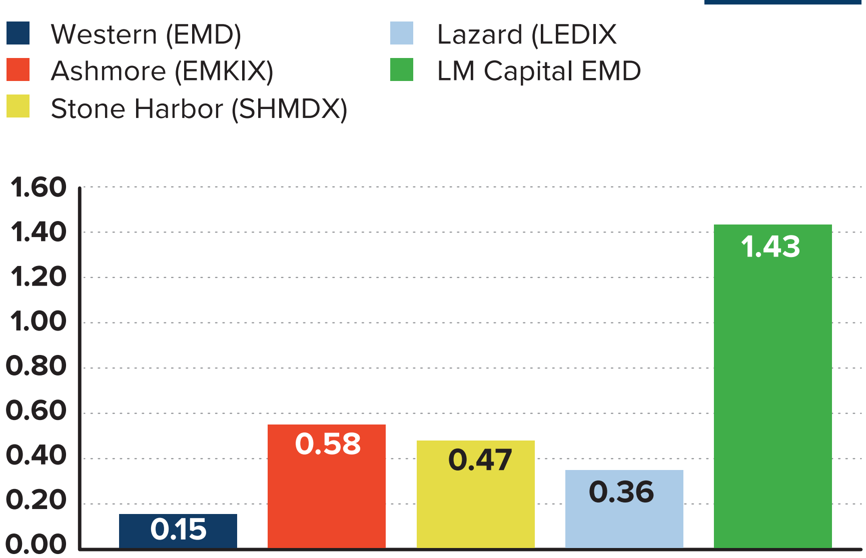
Annualized 24 Month Portfolio Risk Over Time (Ex post methodology)

Chart 2

Date	Western EMD	Ashmore EMD	Stone Harbor EMD	Lazard EMD	LM Capital EMD
6/30/2017	14.15	9.78	7.60	8.84	**5.36**
9/29/2017	12.98	8.86	7.07	8.09	**4.47**
12/29/2017	10.24	8.10	6.25	7.76	**3.87**
3/29/2018	9.47	6.61	5.58	7.41	**3.34**
6/29/2018	9.36	6.68	5.77	7.70	**3.30**
9/28/2018	8.40	7.15	7.16	8.91	**3.27**
12/31/2018	8.21	6.31	6.76	7.65	**2.87**
3/31/2019	11.33	6.86	7.94	8.52	**3.20**
6/31/2019	12.15	7.28	8.15	8.97	**3.34**
Volatility of Volatility	1.96	1.10	0.86	0.58	**0.74**

3 Year Annualized Return/Risk

Chart 3



Source: Returns for mutual funds are inclusive of fees and are obtained from Bloomberg. LM composite returns are net of fees (40bps/year) Western EMD is a closed end mutual fund. Market price return has been used for this exercise as compared to NAV return. Ex-post risk is a risk measurement technique that uses actual historic returns to predict the risk associated with an investment in the future. Ex-post risk is measured as standard deviation of monthly returns.

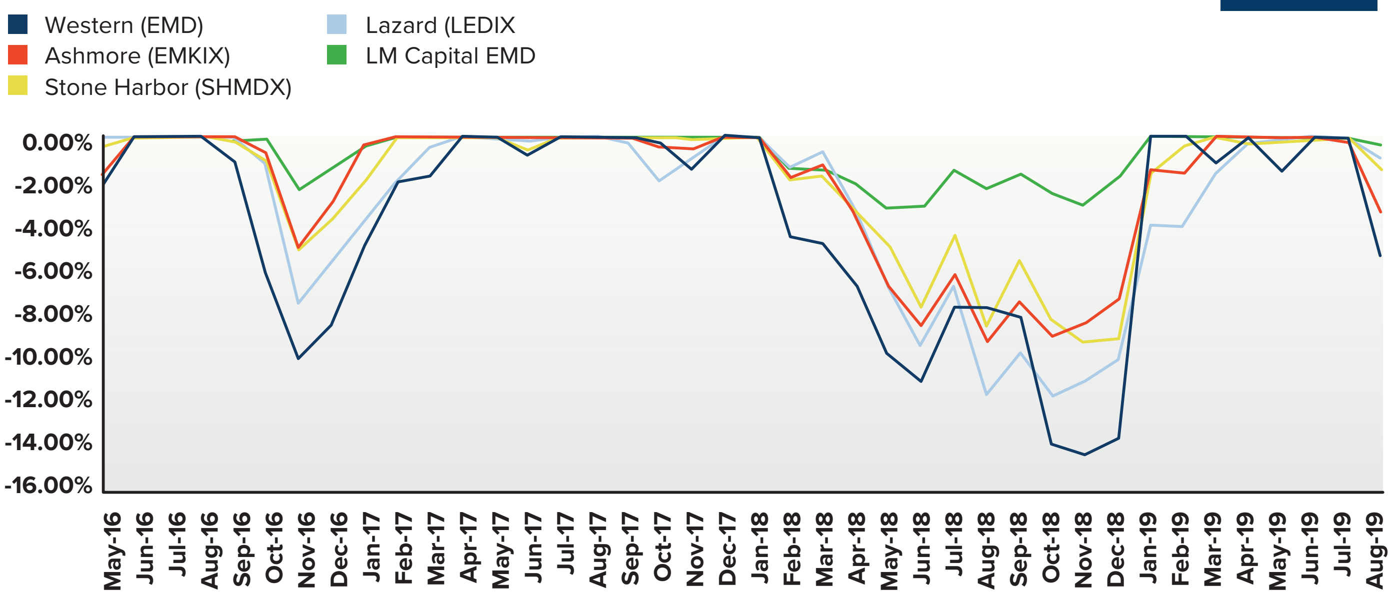
Chart 2: Volatility of Volatility (VolV) is an important metric that we consider to ensure stability of our investment process. Looking at 2-year volatilities since the inception of our strategy, we maintain a consistently lower volatility as compared to our peers. This stability of risk measured using the volatility of volatility metric is a result of a repeatable investment process.

Taking into account the sector and quality allocations discussed earlier, we compare the volatility for LM Capital's EMD strategy with its peers. Our mantra of "high quality, high liquidity and low volatility" helps to generate higher risk adjusted returns.

Chart 3: Over a 3-year period ending August 2019, LM Capital generated the highest return per unit of risk using both ex post and ex ante estimates of risk relative to its peers. Instead of seeking returns by investing in high risk securities, LM Capital believes in generating consistent returns through investments in higher quality securities. The diversification benefits associated with a quality first approach helps reduce the risk associated with emerging market debt investing.

Rolling 12 Month Max Drawdown

Chart 4



Source: Returns for mutual funds are inclusive of fees and are obtained from Bloomberg. LM composite returns are net of fees (40bps/year) Western EMD is a closed end mutual fund. Market price return has been used for this exercise as compared to NAV return.

Drawdown is another important metric we used to measure the success of our investment process is. The chart above compares the maximum drawdown over a 12-month period for LM Capital's EMD strategy versus its peers. Lower volatility and lower drawdown are directly linked to each other, given our investment process that includes a bias on higher quality.

Bloomberg Factor Model Risk Analysis

Bloomberg's Factor Model breaks down the portfolio by estimating security exposures across three factor groups:

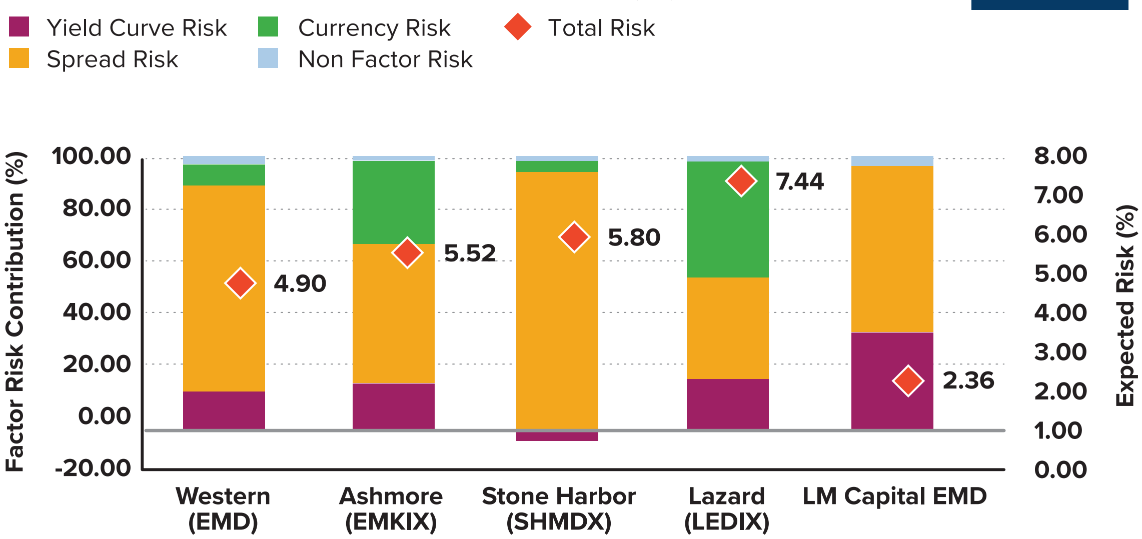
Yields, Spread and Currency. Spread factors are mainly associated with three key sub factors: Region, Industry group and Country, with Region being the dominant factor.

Charts 5: As a percentage of total risk, Expected Risk is divided across three factor groups with currency being the most volatile factor group. LM Capital's EMD strategy has the lowest ex-ante risk (2.40%) when compared to its peers mainly due to investment in higher quality securities (i.e. lower spread risk). Given the market environment and strong US dollar, LM Capital has a maintained a significant overweight to US dollar denominated bonds (>95%) which has helped avoid risk from currency bets.

Chart 6: Region factors are the key drivers of spread risk. Diversified regional exposure might give a false sense of diversification.

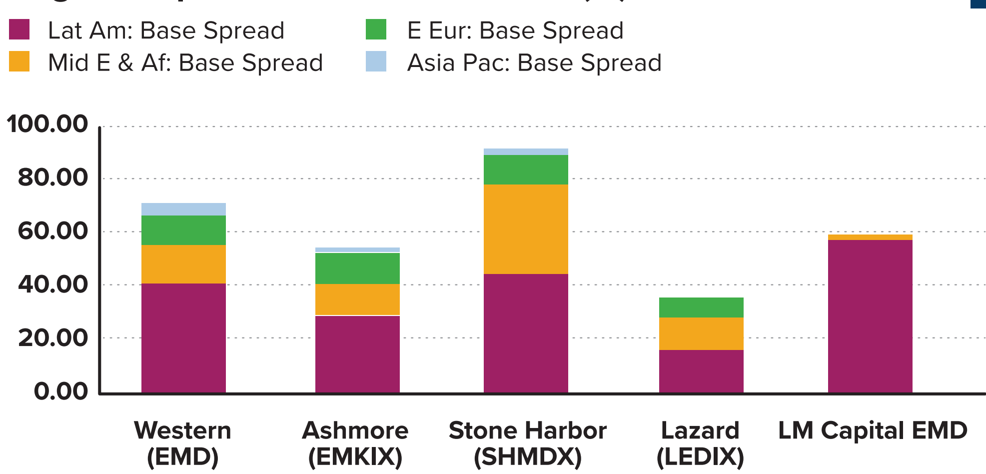
Factor Group - Total Risk Contribution (%)

Chart 5



Region - Spread Risk Contribution (%)

Chart 6



Mutual fund data is based on quarterly holdings obtained from Bloomberg

Chart 7: Within EM, this illusion of region-based diversification is broken through elevated correlations as shown by the tables below. Factors like US dollar strength/weakness are a significant driver of return across these regions. Region factors that track the spread risk for the Bloomberg Factor Model also show elevated correlations between them.

For EM investing, we believe true diversification benefits can be harnessed by identifying investments with smaller beta to the factors driving index return. e.g. Identifying issuers which generate bulk of their revenue in US dollars helps decouple their performance from currency-driven index return.

10 Year (2009 - 2019) Correlations between monthly returns for regional components of **Bloomberg Barclays EM USD Aggregate Index and JPM EM Currency Index**

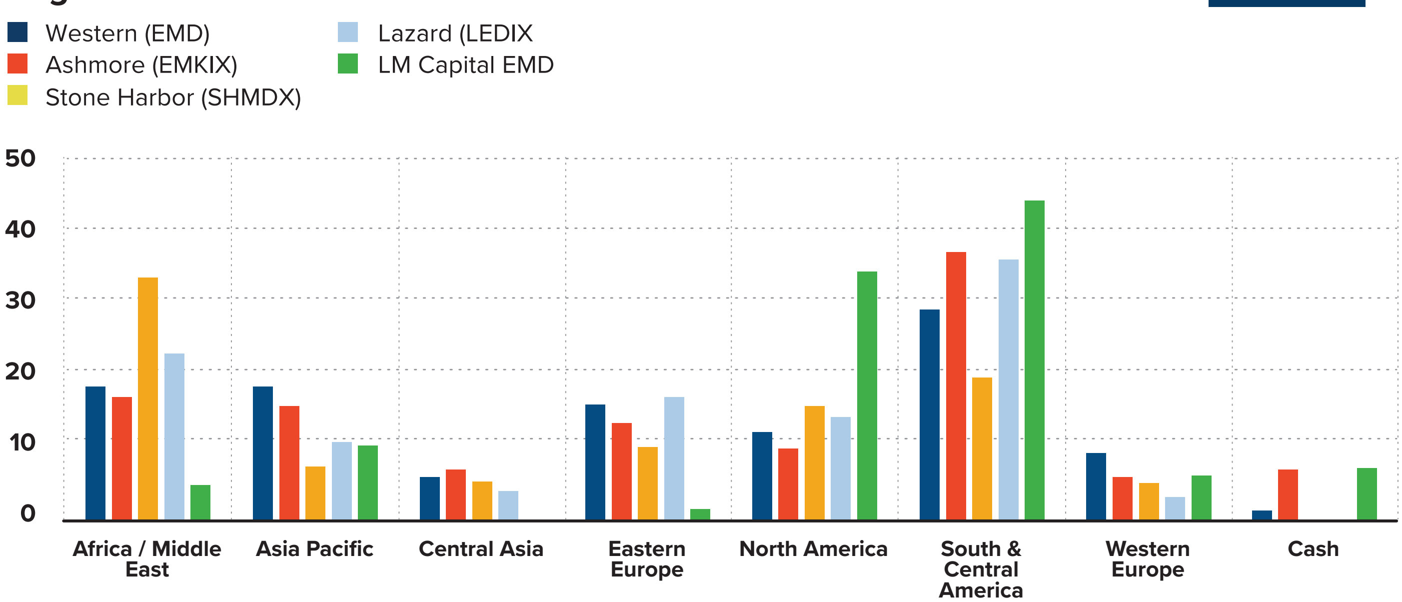
Chart 7

	Latin America	EMEA	Asia	EM Currency Index
Latin America	1.00	0.85	0.81	0.75
EMEA	0.85	1.00	0.88	0.74
Asia	0.81	0.88	1.00	0.67
EM Currency Index	0.75	0.74	0.67	1.00

Correlations (Bloomberg Factor Model)	Lat Am: Base Spread	Asia Pac: Base Spread	E Eur: Base Spread	Mid E & Af: Base Spread
Lat Am: Base Spread	1.00	0.68	0.75	0.83
Asia Pac: Base Spread	0.68	1.00	0.56	0.70
E Eur: Base Spread	0.75	0.56	1.00	0.76
Mid E & Af: Base Spread	0.83	0.70	0.76	1.00

Region Allocation

Chart 8



Source: Bloomberg

Quality Effect: Emerging Market Debt

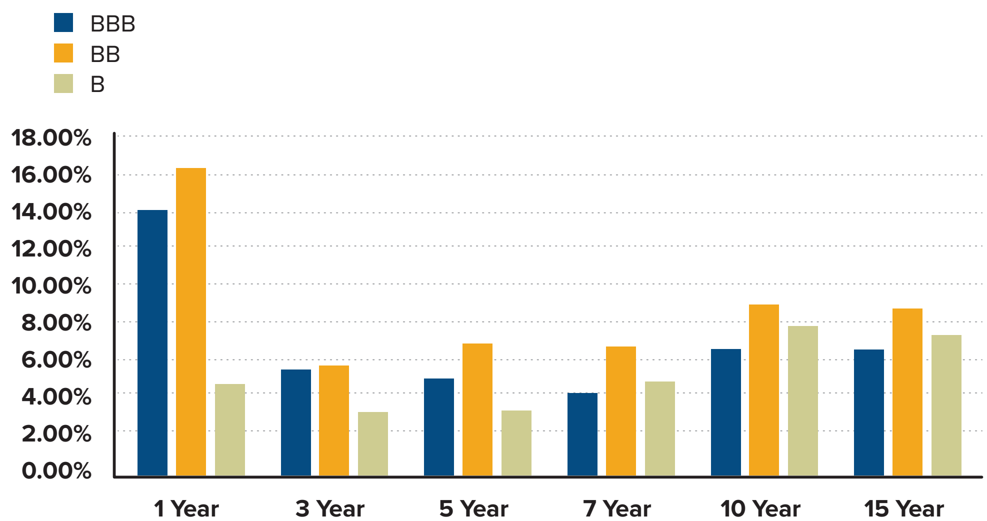
Chart 9: Historically, the best returns in Emerging Market Debt (EMD) have come from bonds rated BB, the rating category just below investment grade. Since August 2004, BBs have returned 8.51% comparted to 6.61% for BBBs and 7.48% for lower rated Bs.

This is counterintuitive, as lower rated categories (B and CCCs) have higher yields. But below a BB credit rating, losses from risk of defaults overcomes the higher coupon payments, and investors end up earning lower total returns than they would have received from buying lower-yielding, higher rated bonds.

Chart 10: While BBs have a higher return as compared to any category of USD-denominated EMD, they exhibit a volatility level closer to investment grade than high yield. The annualized risk across different time periods for BBs is considerably lower as compared to lower rated Bs. On a risk-adjusted basis, BBs have performed significantly better as compared to BBBs and lower rated Bs.

Annualized Return (August 2019)
Quality breakdown Bloomberg EM USD Index

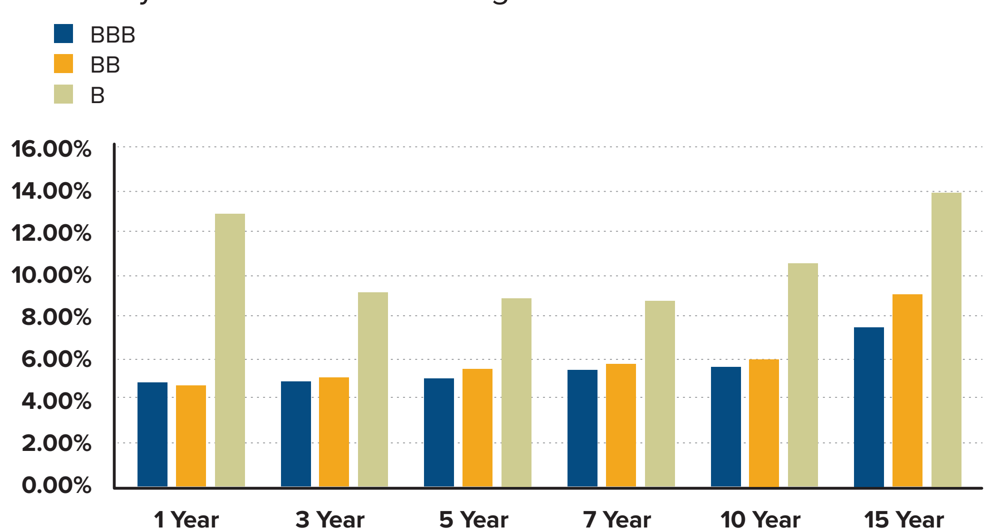
Chart 9



Source: Bloomberg

Annualized Risk (August 2019)
Quality breakdown Bloomberg EM USD Index

Chart 10

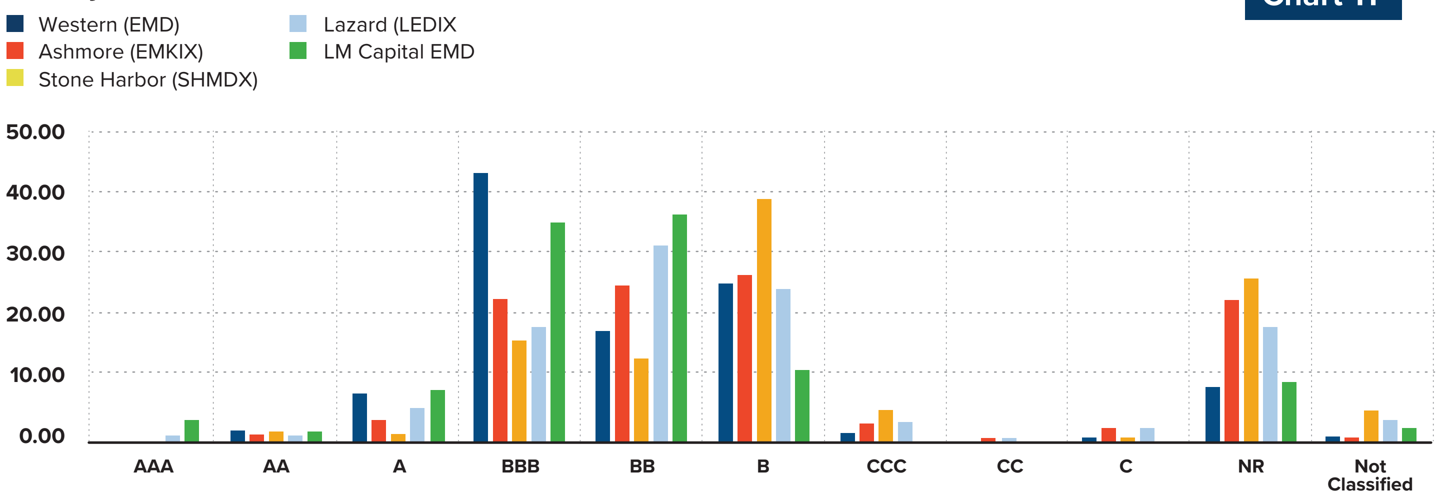


*Risk is calculated as standard deviation of monthly returns

Chart 11: As LM Capital's EMD strategy aims to maximize risk-adjusted return, we maintain an overweight to BB rated bonds when compared to our peers. LM Capital's philosophy of investing in higher quality and more liquid bonds leads to an underweight to lower rated Bs when compared to other EMD managers.

Quality Allocation

Chart 11



Mutual fund data is based on quarterly holdings obtained from Bloomberg

Credit vs Sovereign: Emerging Market Debt

Chart 12: The composition of the index has changed significantly in the last seven years. Credit allocation increased with increased global supply and demand for EMD allowing corporations to tap the debt market. Over the last seven years, Credit has significantly outperformed its sovereign peers on a risk-adjusted basis. Credit sector is comprised of quasi-sovereign and corporate issuers.

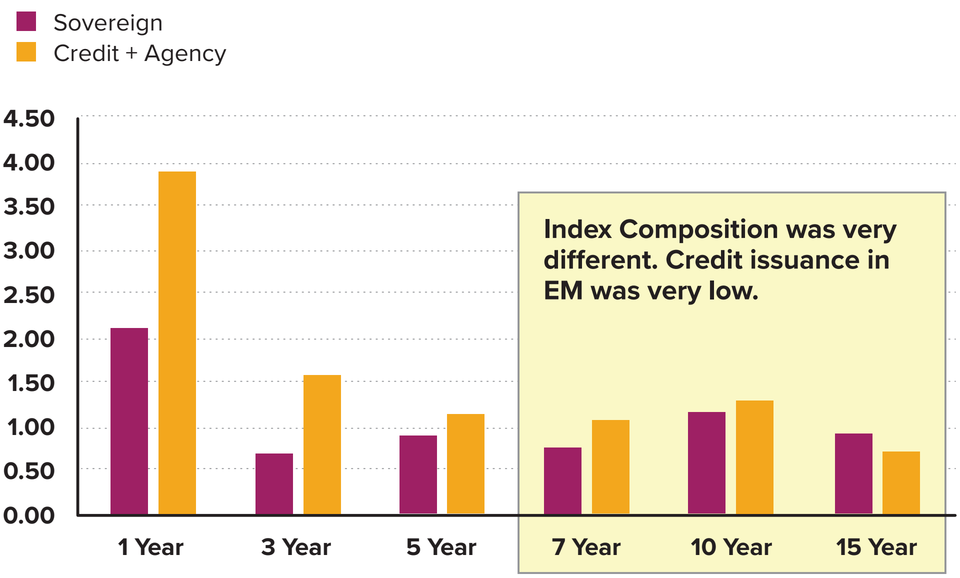
Chart 13: Meanwhile, during the same period, the credit sector in EMD is associated with lower volatility as compared to the sovereign sector.

Sovereign includes high-risk investments (Venezuela, Angola, Turkey, Nigeria, etc.) that expose the portfolio to severe drawdowns. Although the returns generated by both sectors are similar, increased volatility for the sovereign sector leads to higher risk for drawdown and lower risk-adjusted returns.

Return / Risk (August 2019)

Sector breakdown Bloomberg EM USD Index

Chart 12

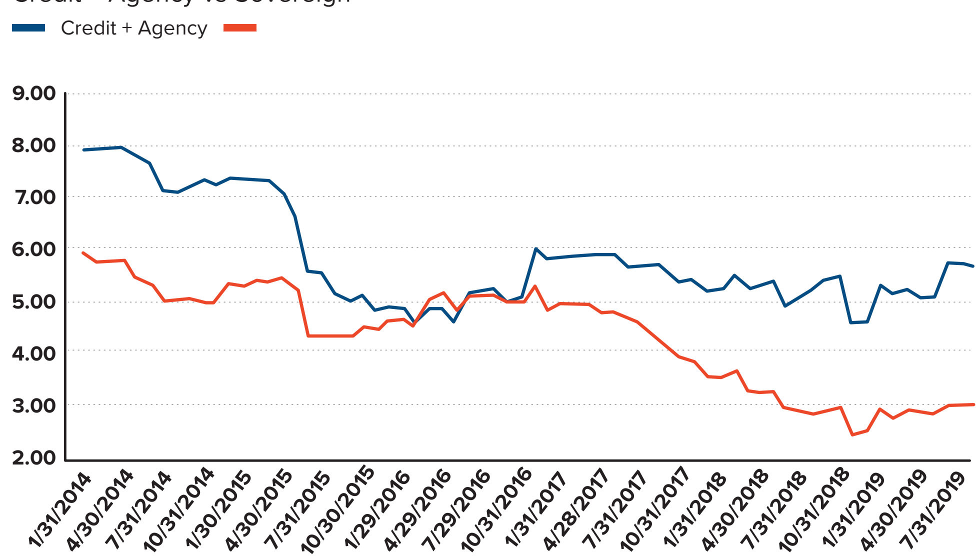


Source: Bloomberg

Rolling 2 Year Volatility Comparison

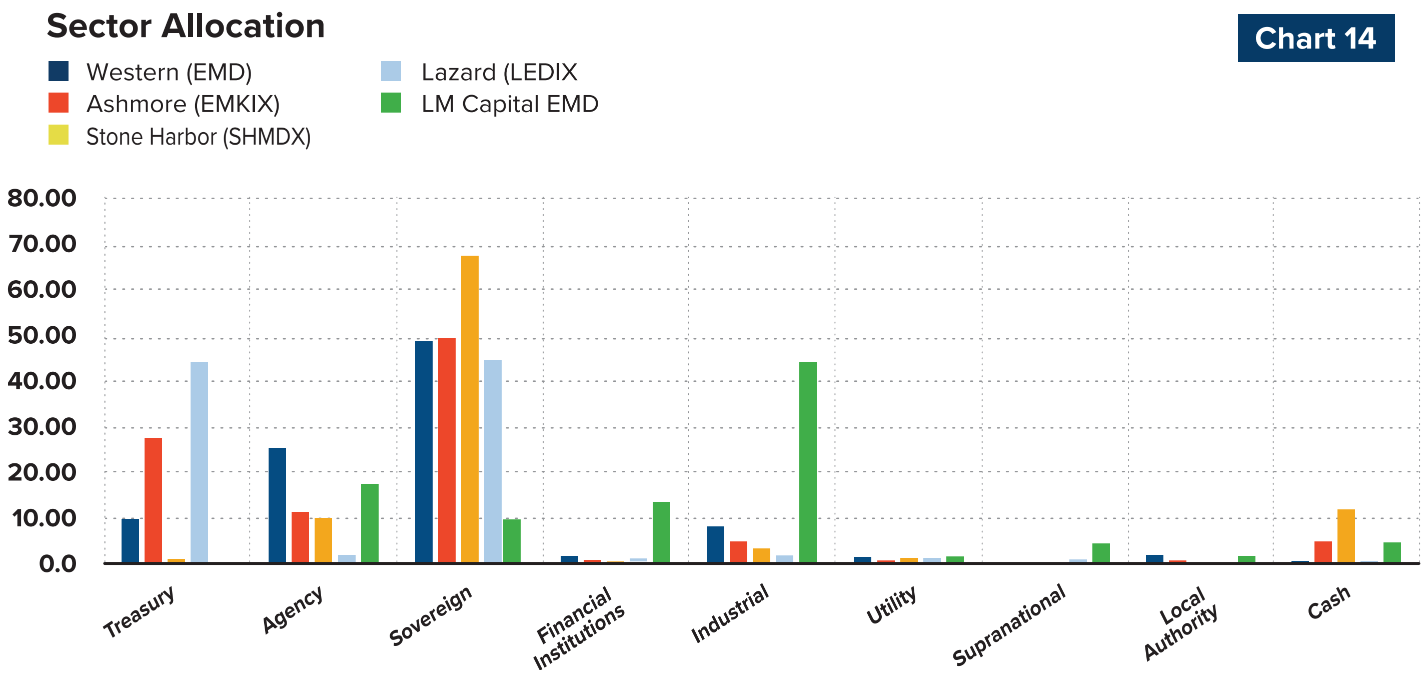
Credit + Agency vs Sovereign

Chart 13



Source: Bloomberg

Chart 14: Taking into account the lower volatility associated with the credit sector, LM Capital maintains an overweight to credit as compared to its peers. This is in line with our investment process that focusses on investing in issues with three key characteristics: high quality, low volatility and high liquidity.



Mutual fund data is based on quarterly holdings obtained from Bloomberg

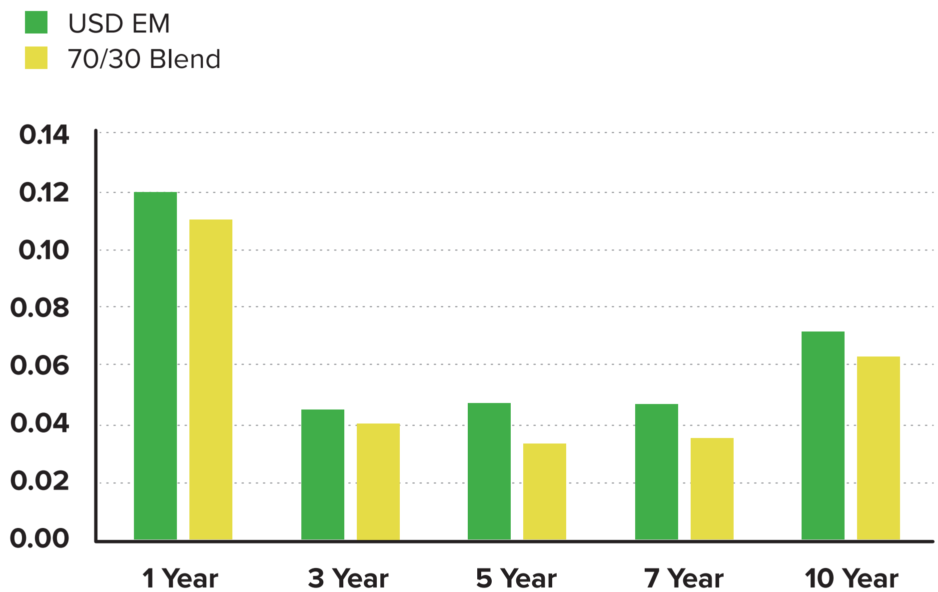
USD Emerging Market Debt vs Blended Emerging Market Debt

Chart 15: Over the last ten years ending August 31, 2019, at every occurrence of the dollar-denominated index has a higher return when compared to a Blended EM Index (70/30).

Chart 16: Over the last ten years, the local currency bond allocation in the blended index has served as a drag on the returns while consistently adding volatility. On a risk-adjusted basis the US-denominated EM Index has consistently outperformed the Blended EM Index.

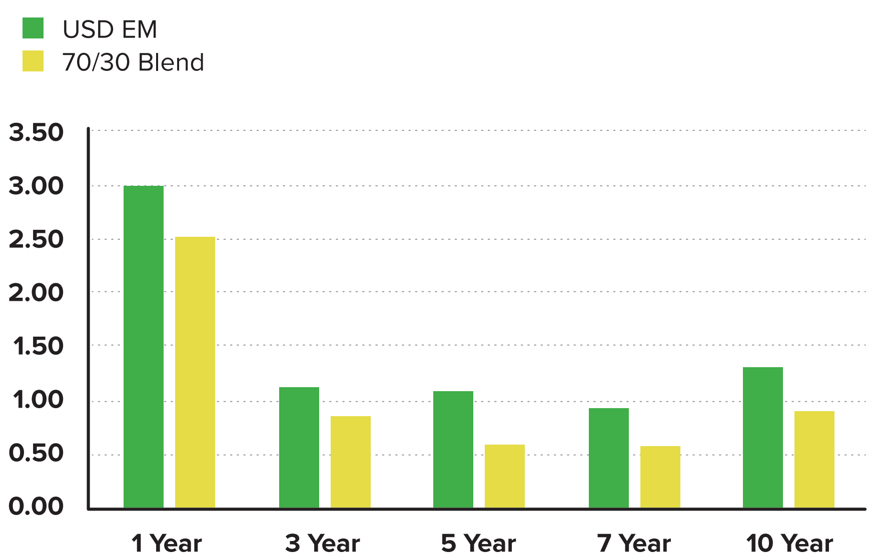
Annualized Return (August 2019) **Chart 15**

70/30 Blended vs Bloomberg USD EM Index



Return / Risk (August 2019) **Chart 16**

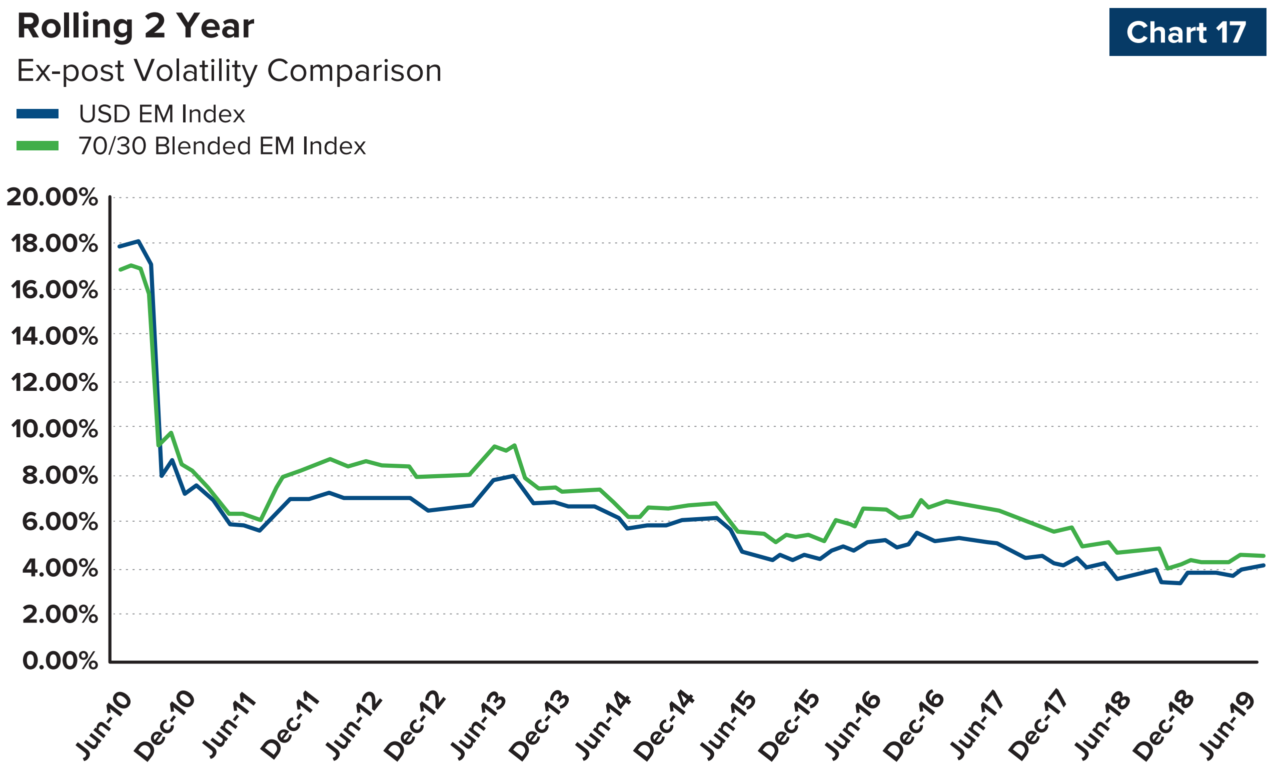
70/30 Blended EM Index vs Bloomberg USD EM Index



Blended EM Index: (70%) Bloomberg EM USD Index + (30%) Bloomberg EM LC Gov Index

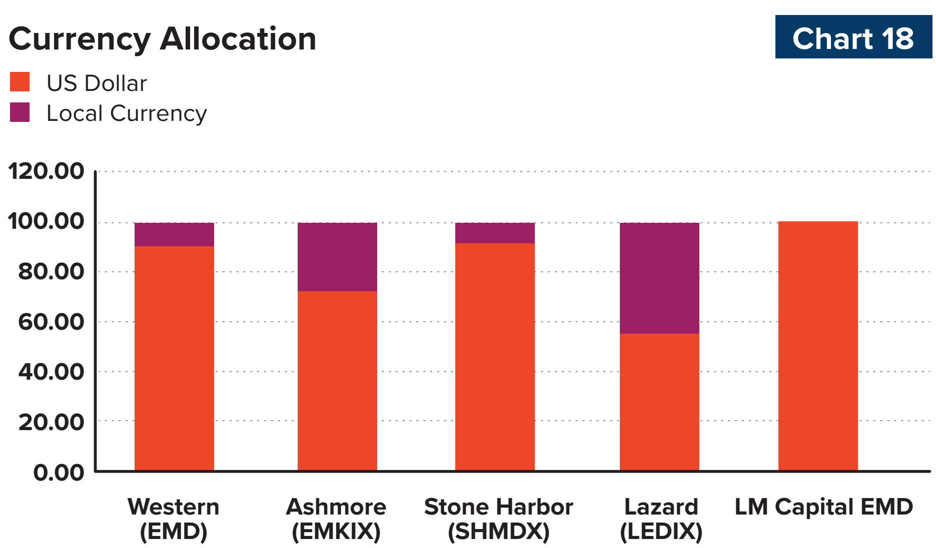
*Risk is calculated as standard deviation of monthly returns

Chart 17: Local currency bonds are associated with higher risk as seen from the rolling volatility comparison.



*Volatility is calculated as standard deviation of monthly returns

Chart 18: At LM Capital, we view local currency bonds as an opportunistic investment. Allocations are made to local currency bonds only when the risk/reward is attractive and the allocation fits our investment philosophy of high liquidity, high quality and low volatility. An example of this would be a small allocation (1%) that we made to a local currency Mexican credit bond in early 2019. We liquidated the position mid-year when the currency volatility was on the rise and risk/reward was unfavorable.



Mutual fund data is based on quarterly holdings obtained from Bloomberg

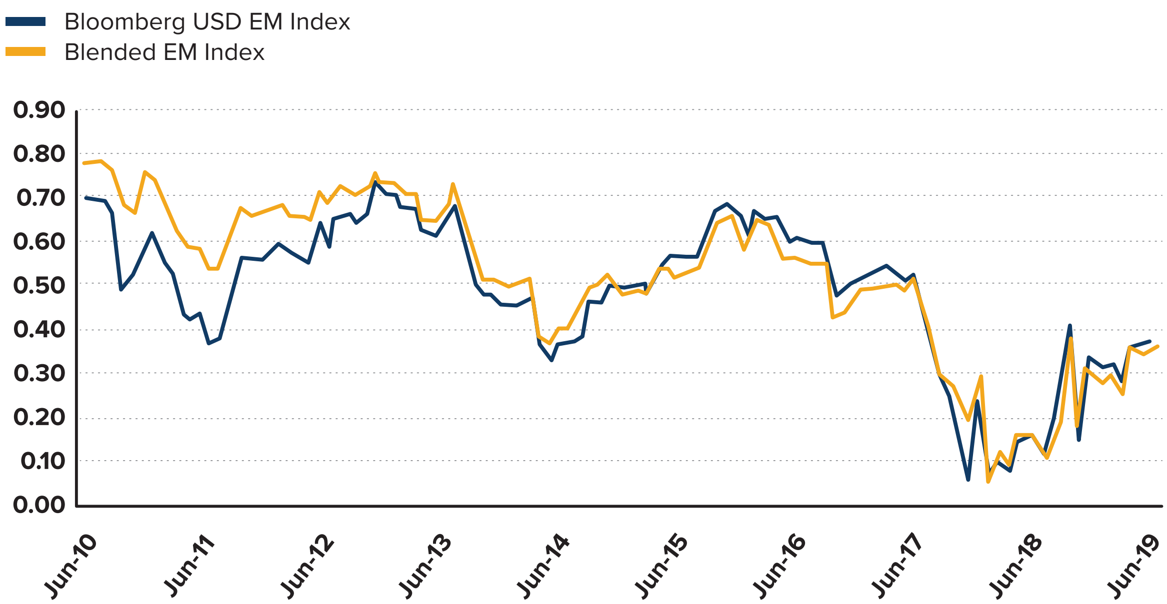
Diversification benefits from local currency bonds are overstated

Although often touted as a benefit of a blended EM index, diversification benefits from local currency bonds have failed to materialize in the last ten years.

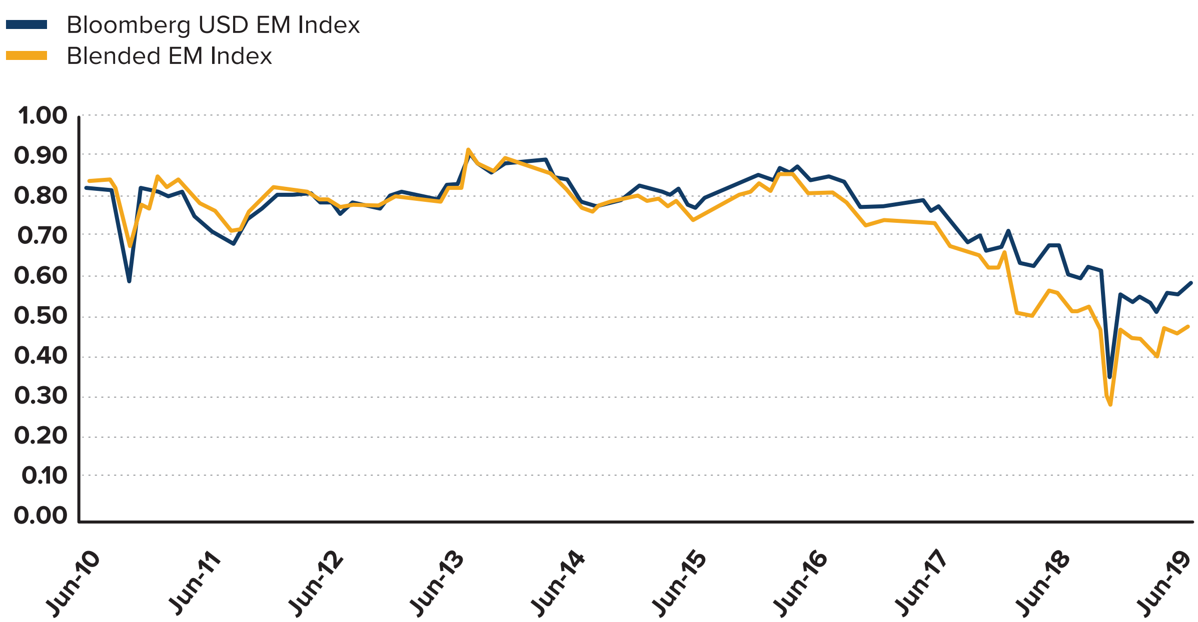
Correlations for a blended EM index are very similar to the U.S. Dollar counterpart on a two-year rolling basis. On a cumulative ten-year period, we actually see higher correlation for the blended EM Index vs growth factors (S&P 500 Index and High Yield Index)

2 Year Rolling Correlation vs SPX Index

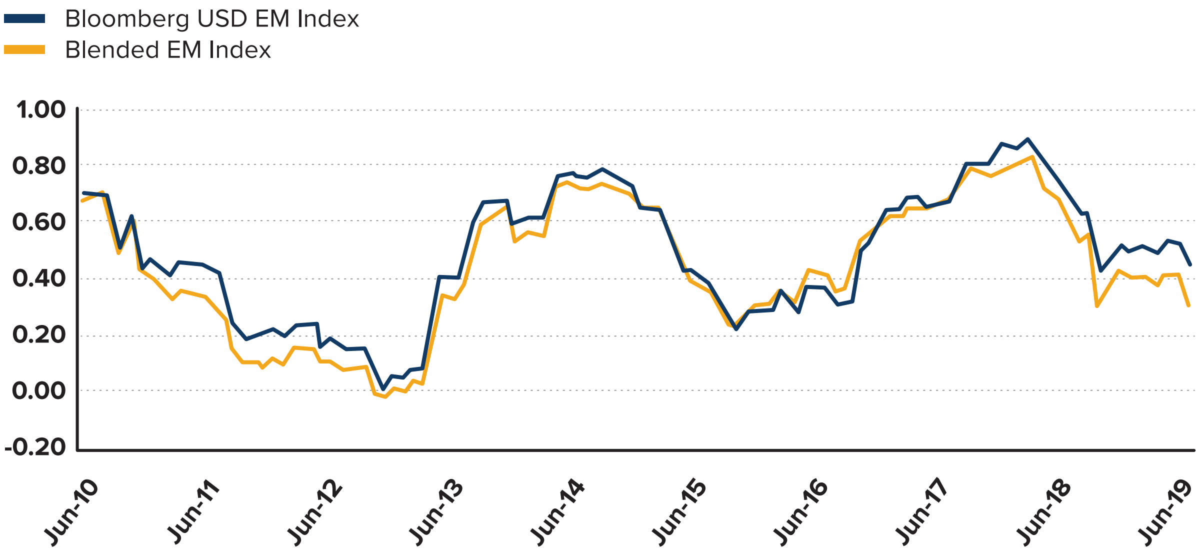
Chart 19



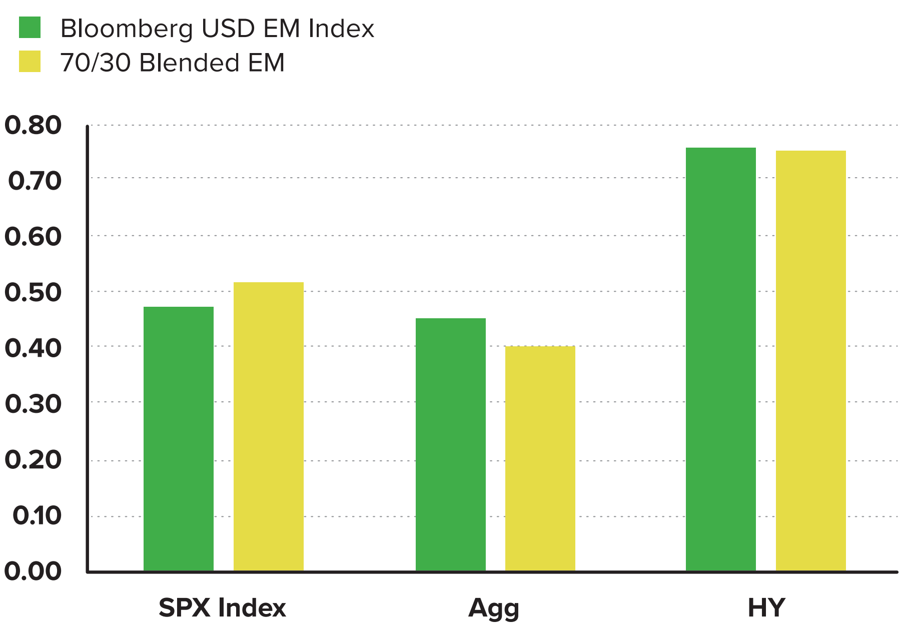
2 Year Rolling Correlation vs High Yield



2 Year Rolling Correlation vs Barclays Agg



10 Year Correlations vs Market Factors



LM Capital's EMD Strategy – An uncorrelated alpha generation approach

Excess Return (Alpha) is calculated by subtracting Bloomberg Barclays EM USD Aggregate Index return from the monthly strategy return. This can be considered a good proxy to judge if active management adds positive value when compared to a passive indexing strategy.

The table below demonstrates the correlation between the excess returns generated by different EMD managers over a three-year period. We also compare the correlation of these excess returns to systematic market factors (S&P 500, US Agg and High Yield)

Excess Return Correlations (March 2016 - March 2019)

	Western (EMD)	Ashmore (EMKIX)	Stone Harbor (SHMDX)	Lazard (LEDIX)	LM Capital EMD	SPX Index	Barc US Agg	US HY
Western (EMD)		0.51	0.53	0.41	-0.13	0.65	0.25	0.70
Ashmore (EMKIX)	0.51		0.72	0.84	0.07	0.40	0.11	0.60
Stone Harbor (SHMDX)	0.53	0.72		0.74	-0.27	0.45	0.12	0.59
Lazard (LEDIX)	0.41	0.84	0.74		-0.16	0.23	0.16	0.35
LM Capital EMD	-0.13	0.07	-0.27	-0.16		0.19	-0.42	0.22
SPX Index	0.65	0.40	0.45	0.23	0.19		-0.06	0.71
Barc US Agg	0.25	0.11	0.12	0.16	-0.42	-0.06		0.14
US HY	0.70	0.60	0.59	0.35	0.22	0.71	0.14	

Past performance is not indicative of future results

Source: Returns for mutual funds are inclusive of fees and are obtained from Bloomberg. LM composite returns are net of fees (40bps/year) Western EMD is a closed end mutual fund. Market price return has been used for this exercise as compared to NAV return.

Positive excess return correlation between managers can indicate a similar style bias in their active management approach. In Table 1, EMD managers with high positive excess return correlations with each other (Western, Ashmore, Stone Harbor, Lazard) also show a high correlation with market factors (SP 500 Index and US High Yield Index). Based on this observation, one can assume that the excess return (Alpha) generated by these active managers will be negative when SPX and US HY returns are negative during a risk-off regime.

Excess returns generated by LM Capital's EMD strategy are either uncorrelated or negatively correlated with its peers. LM Capital's excess returns also have a much lower correlation to market factors (SPX and HY). This is representative of the unique active management approach followed by LM Capital that can add consistent positive value in different market regimes. LM Capital's investment process differentiates itself in:

- Higher Quality Bias
- Lower Volatility
- Higher Liquidity
- Lower Local Currency allocation.

From a portfolio construction perspective, the Sharpe Ratio of the total portfolio can be improved using the diversification beneifits provided by an active manager that generates uncorrelated alpha versus its peers. LM Capital's ability to provide this uncorrelated alpha makes it a perfect partner to another EMD strategy.

Conclusion:

LM Capital's unique approach to active management differentiates itself from other emerging market managers with respect to performance and portfolio characteristics. Over the last three years, LM Capital's EMD strategy has generated a Sharpe Ratio that is significantly higher when compared to its peers. Among its peers, LM Capital has a higher quality rating and a lower exposure to spread risk. This can be attributed to an investment philosophy that is rooted in high quality, high liquidity and principal protection.

This differentiated approach generates an alpha (excess returns) that is uncorrelated to its peers and standard market factors (S&P 500, Bloomberg Barclays Aggregate Index and Bloomberg Barclays High Yield). This makes LM Capital uniquely positioned to improve the total portfolio Sharpe ratio when added as a standalone manager or when added in conjunction with other emerging market strategies.

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