

# Investmentfocus

*October 2008*

## Finding Opportunities in Senior Loans Amid Increased Volatility

### Executive Summary

As the repercussions of the credit crisis continue to spread and the U.S. economy faces a possible recession, volatility across asset classes has increased significantly. This volatility has persisted even in the aftermath of recent credit-easing measures taken by governments around the world.

While this volatility is a challenge to investors, we believe that it also represents an opportunity, especially given the generally solid underlying fundamentals of the senior loan market.

In this paper, we analyze some of the causes of this volatility—including a steep decline in investor demand for loans, as well as a loosening of structures for many new issues. We also look at the fundamentals of the market—including defaults, corporate leverage levels and issuer performance—and place these factors within the proper context.

The default rate, for example, has been rising, but it has nonetheless remained well within historical norms. Likewise, corporate balance sheets were not particularly stretched prior to the credit contraction that commenced last year. And, in spite of the many pressures on issuers, corporate performance has generally remained quite strong.

Finally, we suggest some key factors that investors should consider when seeking to take advantage of the senior loan market's volatility and asset-class characteristics, including selection of issuers, the use of leverage and patience amid the near-term uncertainty in the market. We believe that senior loans' sound fundamentals and appealing risk/return profile represent a significant opportunity for investors with a long-term investment horizon.



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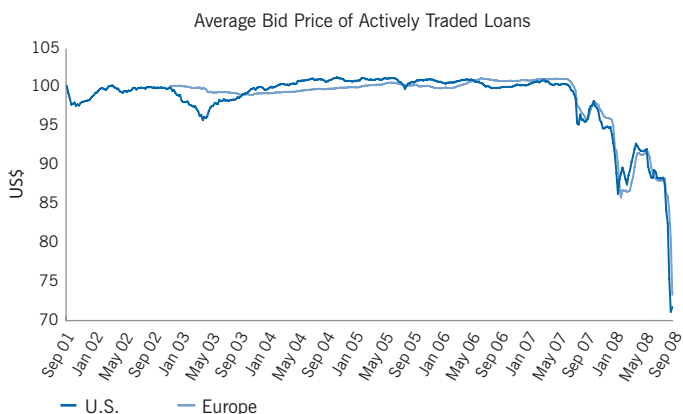


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### Identifying the Causes of Volatility

The senior loan market has certainly not been immune to the heightened volatility coursing through markets around the world. Looking at the average bid price of actively traded loans in the market over the past seven years, it is readily apparent that the pricing of loans has become much more volatile recently relative to anything we have experienced on a historical basis (*Display 1*).

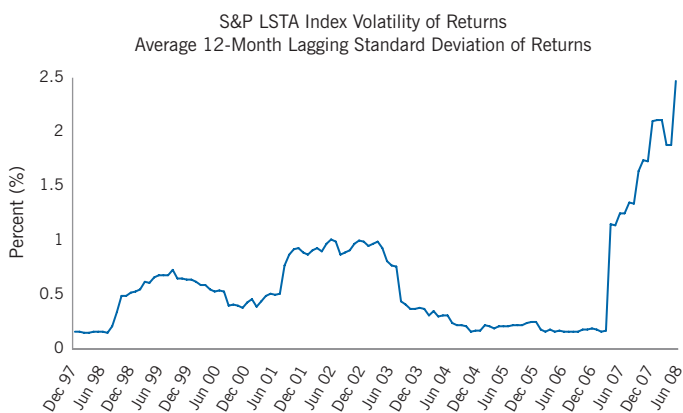
**Display 1: Loan pricing volatility has increased**



Source: Standard and Poor's, LoanStats Weekly Supplemental, October 16, 2008. Past performance is no guarantee of future results.

Further underlining this shift in the market, the average standard deviation of monthly returns for the S&P LSTA Leveraged Loan Index, a broad-based senior loan index, has risen sharply, from less than 50 basis points a decade ago to 250-basis-point range by the middle of this year (*Display 2*).

**Display 2: Volatility has risen sharply on a standard-deviation basis**



Source: Standard and Poor's, S&P/LSTA Leveraged Loan Index September 2008 Review

Looked at another way, the average bid price of actively traded loans in the U.S. market had a high/low range from September 2001 through June 2007 of US\$5.5. This included the recessionary period of 2001/2002, when loan bid prices hit a low of US\$95.8. In contrast, over the past 15 months, the high/low range has been US\$29.9, with average prices reaching as low as US\$71.1.

From a broad perspective, the combination of a poor technical environment and a fundamental change in the characteristics of new issuance in 2006 and 2007 led to pressure on loan prices over the past 15 months.

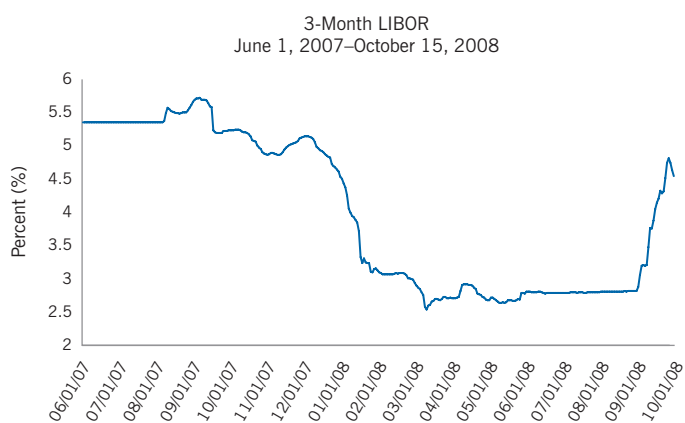
Regarding the technical picture—specifically on the supply side—banks and arrangers were extremely aggressive in underwriting new loans towards the end of 2006 and into 2007. Companies were also eager to obtain financing at the relatively low spreads that existed at the time. This created a huge forward calendar of loans underwritten but not syndicated into the market—indeed, the calendar in the summer of 2007 stood at an all-time peak of US\$240 billion. As we entered this period, however, market participants were not overly concerned about this loaded calendar because the demand for senior loans was continuing to grow at a rapid pace, and it appeared as if the market could successfully absorb this new supply.

As it turns out, not only did demand for loans stop growing, but it shrank quickly and significantly. Approaching the summer of 2007, the demand for senior loan paper was split between a few investor groups. By most accounts, structured products (collateralized loan obligations, or CLOs) represented more than half of the demand for loans in the U.S. (closer to 80–90% in Europe), with the remainder coming from retail and institutional investors. But investor demand for new CLO vehicles abruptly ended that summer. It became difficult to profitably structure new vehicles. The liability spreads of the vehicles widened out significantly, as investors in the rated tranches—primarily structured investment vehicles (SIVs), conduits and banks—pulled back from the market due to problems they were experiencing in other asset classes, particularly mortgages and mortgage-backed securities. Without the ability to launch new vehicles, the demand for senior loans from the CLO market dried up quickly—and not only did it dry up, but several vehicles that were warehousing loans in anticipation of launching a product actually reversed course and sold senior loans aggressively in the market.

In addition, U.S. retail investors began to slow their purchases of senior loan mutual funds, and, in the later stages of the credit turmoil, became net sellers of funds. Historically, in declining interest-rate environments, retail demand subsides as investors put new money to work in fixed-rate instruments relative to

floating rate. In this case, a declining level of short-term rates, in conjunction with increased volatility, helped prompt retail demand to tail off quickly. The London Interbank Offered Rate (LIBOR)—a gauge of interbank borrowing costs—has recently spiked higher (*Display 3*), reflecting the stress in the credit markets. It remains to be seen if this recent increase in LIBOR will be sustained or if it will drift towards the fed funds rate.

**Display 3: LIBOR has spiked, after a prolonged rate decline**



Source: Bloomberg

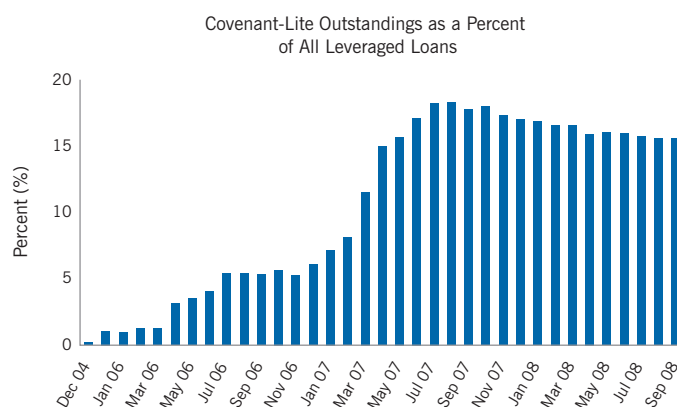
The final segment of demand for the asset class is institutional, which includes hedge funds, pension plans, corporates and other sophisticated investors. Within this group, it became apparent that some hedge funds reversed course from net buyers to net sellers. This change was clear in the first quarter of 2008, as many leveraged investors raised cash aggressively to meet margin calls. With asset values declining, a number of investors were forced to sell assets and de-lever. This de-leveraging continues today, and has accelerated in recent weeks. Interestingly, however, traditional institutional demand has increased during the past 15 months. We have detected some buying by pensions and corporate investors, as they perceive value in loans trading significantly below par.

Overall, with a dramatic decline in demand—most notably from the CLO market—and a significant forward calendar of loans, the technical picture for the senior loan market has been very poor. The lack of equilibrium between supply and demand put pressure on secondary market prices, and it continues to be a challenge for the market today.

From the fundamental side, the excessive liquidity in the market in the late stage of the credit cycle changed some of the characteristics of new-loan issuance in the pipeline. With substantial demand,

new-loan issues coming to market in 2006 and early 2007 were often oversubscribed, which gave borrowers the upper hand in negotiating loan terms and conditions. With borrowers in a strong position, structures became weaker and issuance of second-lien loans, covenant-lite loans and loan-only capital structures dramatically increased (*Display 4*). While the majority of issuance during this period maintained the traditional features of the asset class (including first-lien collateral positions and full covenant packages), it is clear that these weakening structures were having a meaningful impact on the characteristics of the market as a whole.

**Display 4: The number of loans with weakened structures rose sharply in 2007**



Source: Standard and Poor's. S&P/LSTA Leveraged Loan Index September 2008 Review

The natural result of increased issuance with no protective covenants or reduced collateral coverage (particularly second-lien or loan-only capital structures) is an increase in the volatility of loan prices. With collateral coverage and covenants closer to the high-yield bond market, this subset of the senior loan market would be expected to see—and has seen—a volatility profile similar to high-yield bonds. While the technical pressures previously discussed have had a significant influence on recent senior loan market volatility, the increase in the issuance of weaker structures would have sparked a rise in volatility regardless of the technical pressures.

### Looking into Senior Loan Market Fundamentals

Beyond volatility, there are a number of fundamental characteristics of the senior loan market today that represent both challenges and opportunities for investors. In the remainder of this section, we explore three key characteristics—default rate, corporate leverage levels and issuer performance—to determine the current state of market fundamentals.

### Default Rates

Defaults have clearly been on the rise over the past 12 months. We began the year with a trailing 12-month default rate by principal amount of just under 25 basis points. However, this rate has steadily risen since that time, and by the end of August had reached approximately 2%. But while the default rate has been moving upward, it has remained well within normal historical levels.

Nonetheless, with a slowing economy and tight credit markets, we can expect to see this default picture darken further—with year-end defaults likely to be close to 4%, with the potential for upper-single-digit default rates continuing into 2009. The Standard & Poor’s (S&P) Global Fixed Income Research Group predicted in a September 2008 report a worst-case default rate for non-financial, speculative-grade issuers of 7.2% annualized over the next three years.

Yet, while the prospect of rising defaults is disconcerting to many, our view is that, at current market prices, investors are being compensated for annual default rates significantly in excess of what is expected to occur. Indeed, current loan prices amply reward investors for this risk of rising defaults—and much more.

As of October 7, the average “flow name” senior loan was trading at a discounted margin of LIBOR + 1,190bps, using a four-year repayment assumption. According to S&P, this implies that the market could withstand a 23.6% default rate (assuming that loans recovered 70% in a default, just below their historical average), and still return LIBOR + 258bps (the historical risk premium associated with investing in senior loans). This 23.6% implied default rate is well in excess of current and projected year-end default rates, as well as the historical peak in default rates of 8.2% in 2000. In order for loans to return 0%, defaults would have to climb much further—to 32.2%, based upon price levels in early October.

Upon taking a closer look at the issuers that defaulted this year, we can see that there is a concentration in a few industry groups, with close to half of the defaults occurring in just two industries—real estate (representing 30% of defaults this year) and automotive (19%).<sup>1</sup> Two other industries of note are gaming and transportation, each at 11%. We witnessed a similar pattern in prior slowdowns—during the 2001–2002 period, for example, a significant portion of the defaults occurred in the health-care and telecommunications industries.

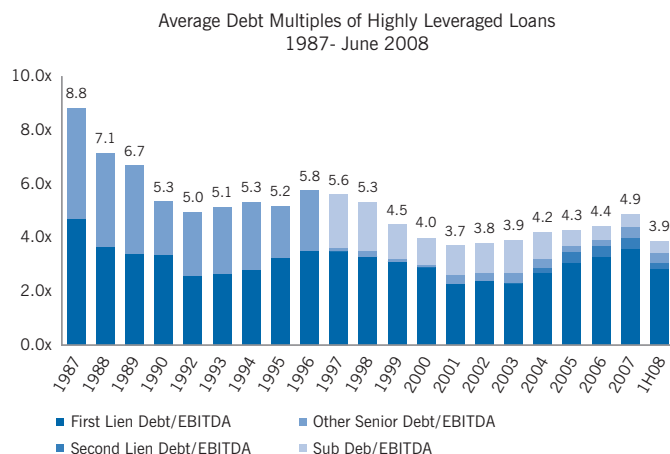
Therefore, in the current environment, while defaults have begun to rise, they remain concentrated in a small number of industry groups. And amid the increasing default rate, the current market price of loans appears to be providing investors with a significant cushion for future defaults.

### Corporate Leverage Levels

While there are certainly individual examples of companies that took on breathtaking levels of leverage over the past few years, issuers in the senior loan market as a whole kept leverage to reasonable levels. Even as loan issuance peaked in 2006 and 2007, issuer debt multiples stayed within historical norms. Total debt multiples remained below 5 times, and senior leverage remained below 4 times. Corporate balance sheets generally were not stretched significantly prior to the credit contraction that began last year.

As illustrated in *Display 5*, debt multiples have contracted significantly for recent new-loan issuance (first half of 2008). Loans structured in 2008 have typically been part of a conservative balance sheet with total leverage below historic norms. The lower leverage of recent deals coming to market provides more cushion to help withstand a slowdown in cash flows generated by the firms involved.

**Display 5: Debt multiples have contracted substantially this year**



Source: Standard and Poor’s Leveraged Lending Review 2Q 2008

### Issuer Performance

While the performance of issuers is certainly weaker today than it was 18 months ago, corporate performance is generally holding up well. During the first half of this year, EBITDA growth among public filers within the S&P LSTA Index remained encouraging. Specifically, during the first quarter, that growth came in at 7.5%, while the second quarter saw it improve to 9.7% on a year-over-year basis. These levels, while down from the double-digit growth rates of the past few years, nonetheless provide a foundation upon which most issuers can continue to service debt.

<sup>1</sup> Based on a Standard & Poor’s research report (September 23, 2008).

## Exploring Opportunities Amid Rising Volatility

We believe that the current volatility in the senior loan market has created some potentially compelling opportunities for investors. In identifying these opportunities, we see several particular considerations—issuer selection, leverage and patience—that investors should take into account when weighing their options in the space.

### Issuer Selection

Issuer selection, as always, will be critical in constructing a senior loan portfolio in this environment. Focusing on issues with the “traditional” senior loan structure—including first-lien, covenants, bonds and equity below in the capital structure—should help manage volatility and may provide the traditional

benefit of the asset class: high recovery rates in the event of default. In addition, from a credit standpoint, moving up in credit quality may be advisable given the challenging outlook for the economy over the next few years. In spite of the dislocation in the credit markets, we believe investors can construct a portfolio with solid credit fundamentals and still establish the potential for an attractive return profile. With the recent pressure on loan prices, we do not feel that investors are being paid to stretch for weaker, more “bond-like” structures.

### Leverage

Given the shortage of liquidity in the market, as well as the near-term volatility, we believe that investors should consider the use of leverage very carefully. At current loan prices and spreads,

## Display 6: The strength of the senior loan market is illustrated by estimated returns...

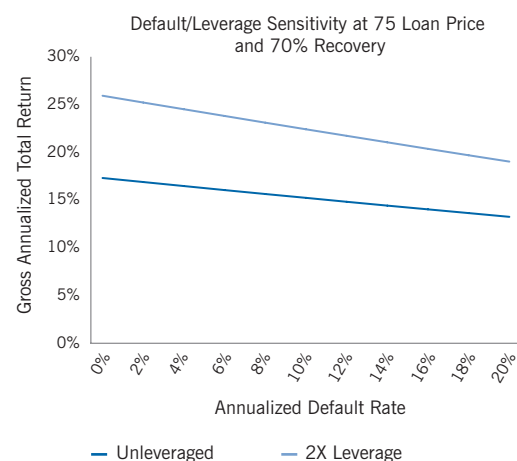
Unleveraged Assumptions				2X Leverage Assumptions			
Loan Price:	70	75	80	Loan Price:	70	75	80
Cash Loan Spread	2.75%	2.75%	2.75%	Cash Loan Spread	2.75%	2.75%	2.75%
Effective Spread	3.93%	3.67%	3.44%	Effective Spread	3.93%	3.67%	3.44%
Annualized Appreciation (3-year average life)	10.00%	8.33%	6.67%	Less: Borrowing Spread	1.50%	1.50%	1.50%
Plus LIBOR	3.50%	3.50%	3.50%	Net Spread	2.43%	2.17%	1.94%
<b>Gross Annualized Total Return</b>	<b>17.43%</b>	<b>15.50%</b>	<b>13.60%</b>	Annualized Appreciation (3-year average life)	10.00%	8.33%	6.67%
				Total Return	12.43%	10.50%	8.60%
				Leverage Benefit (2x)	24.86%	21.00%	17.21%
				Plus LIBOR	3.50%	3.50%	3.50%
				<b>Gross Annualized Total Return</b>	<b>28.36%</b>	<b>24.50%</b>	<b>20.71%</b>

Source: Morgan Stanley Investment Management

This hypothetical illustration is for illustrative purposes only. This illustration does not reflect the performance of any specific investment. Employing leverage may result in increased volatility.

The gross return calculation includes the effective cash spread of loans, accretion of discount over three years, LIBOR, and the net benefit of leverage (cost of leverage assumed L+300). Had the gross returns been reduced by administrative and management fees that might be incurred, results would be lower. For informational purposes only. This information is based on simulated future default/ recovery rates that Morgan Stanley Investment Management created. The model assumes a three-year life with loans not in default repaying at par and the current average spreads referred to above. While the results above reflect the application of the methodology stated, they are inherently limited by the fact that they do not represent actual trading results or the performance of an actual managed portfolio at a future point in time. The hypothetical performance shown here is not that of any actual account or any specific investment. Therefore, this hypothetical performance may not be indicative of how a Morgan Stanley Senior Loan portfolio or any specific investment would actually perform in the future. The default/leverage chart utilized the forward LIBOR curve over a three-year period as part of the gross return calculation. This provides a market-based assumption for the future level of LIBOR, and therefore the results on the chart differ from the table which assumes a flat level of LIBOR.

## ... and by these returns' resiliency as measured within the context of default sensitivity



the risk/reward profile, in our view, looks compelling on an unleveraged or lightly leveraged (2x) basis. We would caution against higher levels of leverage, however, for fear of tripping covenants and being forced to liquidate loans at an inopportune time. The use of excessive leverage impacted many investors over the past 15 months. As loan prices have fallen, some portfolios have been forced to sell in order to remain compliant with leverage covenants. This risk of forced liquidation at a trough in prices can create a poor investment outcome.

### **Patience**

Volatility in the senior loan asset class is not likely to dissipate any time soon. However, timing the exact bottom of any market is always difficult, if not impossible. As a result, investors might find time-tested concepts like dollar-cost averaging to be effective for taking advantage of the potential opportunities that exist in the asset class, and also to help manage some of the near-term volatility. Negotiating that volatility is one of the prime challenges investors face. Those with a broad perspective on the market and patience in putting new pools of capital to work may find an easier path to success than those seeking to invest quickly. It is better to construct a well-diversified portfolio of higher-quality loans over time, than rush to take advantage of prices on any given day. A more disciplined approach to ramping up a portfolio would also help manage the near-term volatility in the market.

### **Potential Opportunity in Senior Loans**

As shown in the hypothetical illustration in *Display 6* (previous page), the potential returns offered in the senior loan market at various average loan prices can be significant. We also highlight the resiliency of returns by showing the default sensitivity in the second part of this chart. These are purely “back of the envelope” calculations that can help provide a guide as to where the loan market is currently trading. Any specific portfolio will have its own expected return based on construction guidelines.

### **Conclusion**

With many institutional investors exploring strategies to take advantage of the recent turmoil in the credit markets, we believe that the senior loan market may offer a compelling opportunity. Indeed, we think that the difficulties in the global economy, as well as the volatility in senior loans, specifically, have obscured the market’s solid fundamentals and attractive risk-return profile. As a result, we see a strong intermediate- and long-term story for the senior loan market, and a promising outlook that augurs well for investors with exposure to this asset class.

# Morgan Stanley Investment Management Publications

Following are recent thought-leadership papers covering a range of investment issues:

## **The Endowment Model: Theory and More Experience**

October 2008—The “endowment model”—portfolios with broadly diversified asset allocations—does not fit the textbook definition of a diversification that lowers volatility. In this paper, our research suggests that diversification should not be viewed as smoothing returns and lowering short-term volatility, but rather as a strategy for accumulating incremental returns and achieving more divergent outcomes over the long-term.

## **Weekend Events Trigger Re-Pricing of Risk, Raise Probability of Concerted Rate Cuts**

September 2008—The investing world started the week of September 15 with an avalanche of news to digest, as Lehman Brothers filed for Chapter 11 bankruptcy protection and Bank of America acquired Merrill Lynch. In this report, our portfolio managers and economists provide insights on the macroeconomic implications of these events and their impact on the credit markets.

## **Understanding the U.S. Rescue Plan for Freddie Mac and Fannie Mae**

September 2008—In a move aimed at reducing the uncertainty surrounding the future of battered mortgage giants Freddie Mac and Fannie Mae, the U.S. Treasury and the Federal Housing Finance Authority devised a rescue plan that seeks to strengthen the financial position of the struggling government-sponsored enterprises, as well as ease the crunch in the mortgage markets. In this paper, our strategy, economic and portfolio-management specialists provide an in-depth analysis of the rescue plan, outline its primary objectives, and contextualize the implications for the markets and the U.S. economy. What Are the Implications of the U.S. Government’s Plan to Shore Up Freddie Mac and Fannie Mae?

## **Opportunities, Challenges and Dynamics of Investing in Emerging Markets Real Estate**

September 2008—The leading forces driving the world’s economy are becoming more fragmented as emerging market nations play a growing role in shaping economic trends and determining the pace of overall growth. This a positive phenomenon, in our view. And we see this bifurcation between developed and developing countries paving the way for a secular period of economic and market outperformance on the part of the emerging markets. In this paper,

we suggest opportunities to take advantage of this trend by focusing on six particular emerging markets—China, India, Russia, Poland, Brazil and Mexico.

## **Asset-Liability Management within a Corporate Finance Framework**

September 2008—Most traditional asset-liability management processes, in our view, are flawed because they fail to take into account the complete range of the risks impacting a pension’s primary stakeholders—plan participants and the plan sponsor’s shareholders. These include: 1) risks inherent in the liabilities, 2) financial risks of the plan sponsor, and 3) pension investment risks. In this white paper, we focus on these issues and provide a comprehensive framework to address the risks inherent in the pension plan process. The ultimate goal is an efficient, integrated pension solution incorporating pension finance, corporate finance and capital markets considerations that advances the best interests of a plan’s participants and the plan sponsor’s shareholders.

## **The “Endowment Model”: Theory and Experience**

August 2008—The so-called U.S. “endowment model”—characterized by a broadly diversified asset allocation involving only minor amounts of equities and bonds—has proven to deliver higher returns than traditional equity-bond (60/40) allocations while exhibiting a similar risk profile, according to our empirical analysis. Using data from 2003 to 2007, our findings show that while this performance has enhanced the appeal of the endowment model, investors should be cautious when using it as a basis for future extrapolation.

## **Global Small Caps: Time to Revisit?**

August 2008—As a result of recent changes to MSCI’s index construction methodology, the weighting to global small-cap stocks within the MSCI equity universe has almost tripled. While the asset class has suffered from a recent sell-off, the existence of strong fundamentals (e.g., lower valuations, an improved risk/return profile and expanded profit margins) indicate that global small caps represent a potentially attractive opportunity in the current environment. This article examines the recent technical changes to the MSCI indices, and reviews other compelling evidence indicating that global small caps represent a potentially attractive investment opportunity.

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