The Case for Small- and Mid-Cap Equities: Economic leverage, along with a large opportunity set, enhances long-term potential for alpha generation

Executive Summary

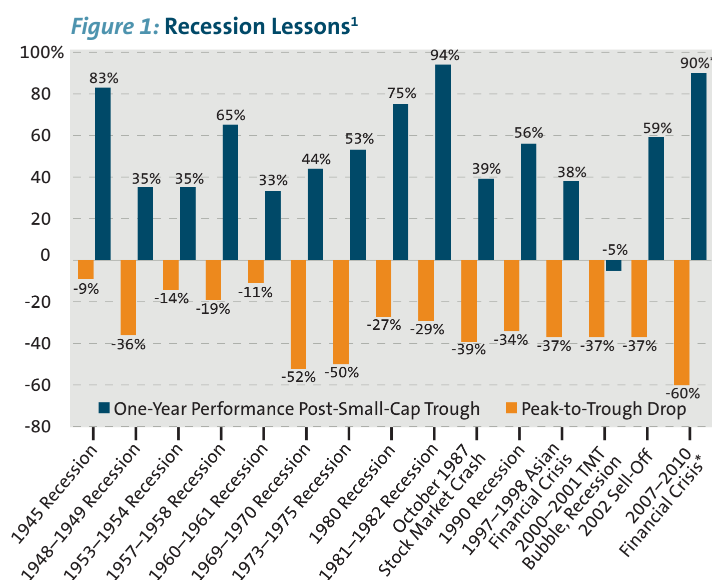
- Historically, when a positive inflection point in economic growth has been reached, strong returns have been generated in the small- and mid-cap (SMID) asset class. Importantly, this trend has often engendered multi-year cycles, helping the asset class to outperform on a relative basis.
- Upon initial investigation, recent gains may appear to have rendered some small-cap valuations less attractive on a relative basis, compared with the past. However, upon closer examination, we find that specific regions offer better value than others. This highlights the need to evaluate the asset class on both a regional and country basis.
- The small-cap opportunity set is larger than is generally perceived. This, along with diversification benefits of combining small-cap allocations with other asset classes, creates the potential for higher portfolio returns with only a moderate increase in risk. Investors, however, need to adopt a medium- to long-term focus.
- There is considerable potential to add value through proprietary research and active management, as SMID markets tend to be less efficient in light of the limited amount of public information and analyst coverage compared with the large-cap segment.
- With differing prospects for each country and region, we believe that bottom-up fundamental research can provide a vital edge in navigating still-difficult financial market conditions.

Extraordinary policy stimuli, the more ordinary cyclical process of inventory adjustment, and tentative signs of a revival in business investment have produced a marked improvement in global economic conditions since the depths of the financial crisis. As a result, small- and mid-cap equities have enjoyed a strong rebound from their March 2009 lows. However, after such a strong rally in share prices, it is important to focus on the long-term fundamentals for the asset class. In this Investment Dialogue, we also examine the importance and strategic benefits of approaching investment on a regional basis.

Small- and mid-cap equities historically have benefited from cyclical upturns

Historically, whenever there has been a positive inflexion point in economic indicators, SMID equities have performed strongly. Indeed, there is long-term historical evidence of this dynamic in environments where economic growth has begun to trend upwards. Figure 1 illustrates that small-cap stocks (in this case, U.S. small caps) have recovered an average of 50% following previous recessions and/or major stock market events.

Figure 1: **Recession Lessons**[1]



Source: Citi Investment Research, Small-/Mid-Cap Strategy

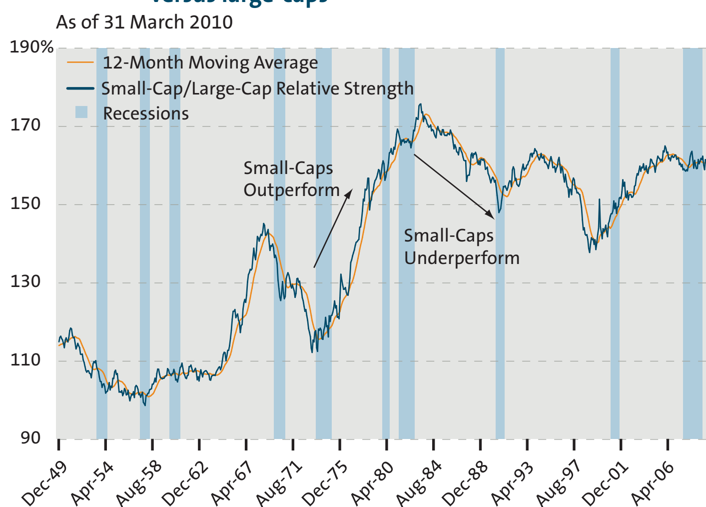
[1](1945 – 1980: Ibbotson Small Cap peak-to-trough drops and one-year recoveries (based on month-end closing prices). 1980–2009: Russell 2000 early recession/sell-offs and 12-month recoveries off the bottom (based on daily peaks and troughs). * Sell-off through 9 Mar 2009, recovery 9 Mar 2009 to 31 July 2010).

The latest recession has been no different. Using the most widely recognized U.S. small-cap benchmark (the Russell 2000 Index) as an example, the market has rebounded 90% from its March 2009 trough through 31 July 2010.

Importantly, this pattern has often engendered multi-year cycles where small and mid caps have outperformed on a relative basis, with the average outperformance cycle lasting around six years (Figure 2). This should provide some comfort to investors, who have enjoyed strong returns so far, by providing a positive historical backdrop for the asset class going forward.

***Figure 2*: Relative performance of U.S. small-caps versus large-caps**

As of 31 March 2010



Source: Center for Research in Securities Prices (CRSP); Graduate School of Business, University of Chicago; T. Rowe Price; The Leuthold Group, April 2010

Rationale for investing in the asset class over the long term remains robust

The fundamental reasons for investing in small- and mid-cap equities continue to remain compelling. Smaller companies are at the forefront of creative development, selecting the best new ideas that will help to contribute to long-term GDP growth, while the sheer diversity of the companies available to investors is also very appealing. The asset class contains small enterprises (in some circumstances start-up companies), often with promising technological developments, that can potentially lead to high growth rates. Moreover, in the current environment, where growth has been difficult to achieve, the SMID opportunity set offers access to potentially higher growth rates that are not easily available elsewhere.

A large opportunity set, but limited coverage, offers potential for greater alpha generation

A crucial element of any asset allocation study is the identification of the relevant opportunity set of investable asset classes. What perhaps is not widely recognized is that small and mid caps offer a much larger opportunity set than some investors perceive (Figure 3). In fact, moving beyond the global large-cap universe almost triples the opportunity set available to investors.

Small- and mid-cap companies also operate in a much less efficient space in terms of analyst coverage (Figure 4, page 3). This lack of broad research coverage often can lead to price anomalies that active managers with the sufficient resources can exploit. The financial crisis has resulted in even less research coverage of the asset class in the near term, a trend that is likely to persist. This means that experience and resources will become even more crucial in this area going forward.

***Figure 3:* Small and mid caps make up a large part of the international investable universe**

World Indices – Market Capitalization	Total Market Value (U.S.$)
S&P 500 Index	9,968,943,000,000
Russell 2500 Index (Rep. SMID)	**2,247,403,000,000**
Russell 2000 Index (Rep. Small-Cap)	**987,543,100,000**
MSCI Europe Index	6,270,519,000,000
MSCI EAFE Small/Mid Cap Index	**2,990,642,800,000**
FTSE 100 Index	2,121,384,500,000
MSCI Europe Small/Mid Cap Index	**1,830,814,300,000**
MSCI EAFE Small Cap Index	**1,272,147,500,000**
S&P Pan Europe Small Cap Index	**1,247,487,300,000**
CAC 40 Index	864,647,300,000
MSCI Europe Small Cap Index	**734,517,700,000**
Dax Index	686,117,500,000
MSCI Emerging Markets Index	3,236,316,000,000
MSCI AC Asia Ex-Japan Index	2,271,185,300,000
Topix (First Section)	1,989,468,000,000
MSCI EM Latin America Index	760,935,500,000

Sources: FactSet, as of 31 July 2010; MSCI

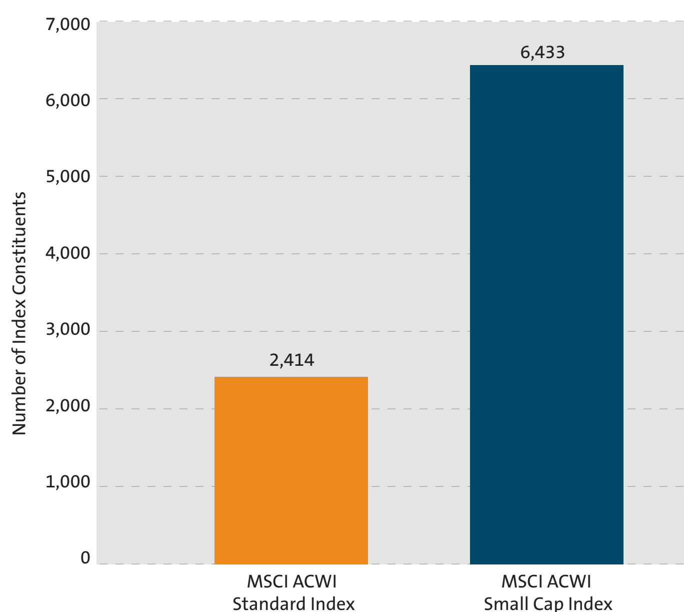
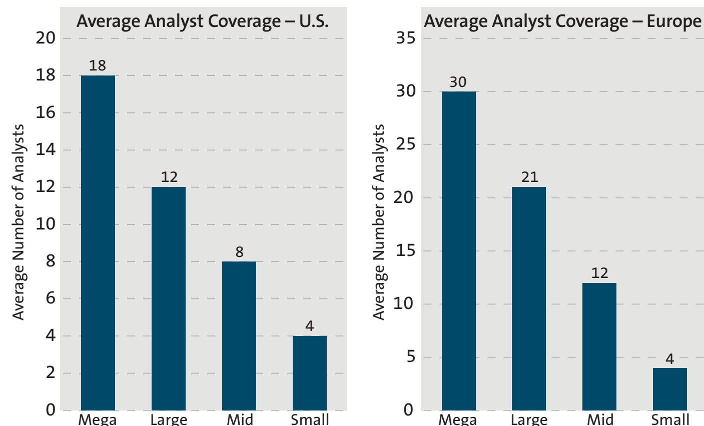


Figure 4: **SMID Universe is systematically less well covered**
As of 31 Dec 2009



Sources: U.S. analyst coverage data from Merrill Lynch Small-Cap Research, European analyst coverage data from J.P. Morgan

Expanding the opportunity set to include mid-cap equities

Increasing the opportunity set to include mid-cap equities has many benefits. A SMID portfolio can continue to hold small-cap companies as they grow in size, enabling the portfolio to capture the compounding growth as smaller companies emerge from their early start-up phases into mid-size enterprises. This absence of a market-cap constraint can give a SMID portfolio a structural advantage, creating the potential for greater returns. Furthermore, companies growing from small- to mid-capitalization do not need to be sold out of an investment portfolio to satisfy an artificial market-cap constraint. Generally, when a small-cap manager has to liquidate a position purely because of a market-cap constraint, this decision is not done based on a research viewpoint.

Mid-cap stocks also can offer the flexible, innovative, high-growth aspects of small-cap stocks, but with the additional benefits of proven management, established products, and greater liquidity. The Russell 2500 Index, one of the most recognized SMID indices, enjoys almost double the liquidity of the Russell 2000 Index, as measured by the average daily trading volume of the underlying stocks. In many ways, mid caps sit in a sweet spot between small and large caps, having greater access to capital than small cap but being more adaptive than most large-cap companies.

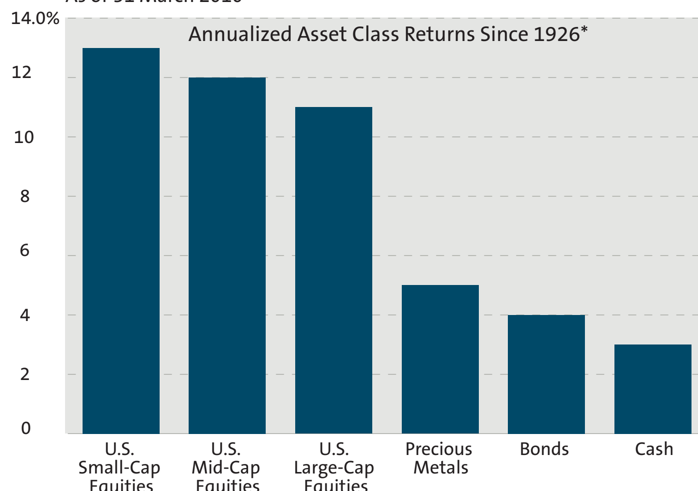
Despite these powerful attributes, however, mid-cap stocks still are largely overlooked by investors. One reason may be that many mid-cap stocks started out as something altogether different. Some mid-cap companies began as smaller firms that grew, while others were once large-cap companies that have since declined. Another possible explanation for investor neglect of mid caps is that some widely recognized mid-cap benchmarks, such as the Standard & Poor's MidCap 400 and the Russell Midcap Index, did not even exist until the early 1990s. Regardless, mid-cap stocks today represent an important and valuable part of the equity market.

Does the small-cap premium hold up through historical analysis?

The idea of a "small cap premium" has long been theorized, and much research has been conducted on the subject. The main support for the theory originated with research published by Rolf Banz in 1981.[2] Banz's research indicated that smaller-company stocks provided systematically higher returns than larger companies. He suggested that size by itself was not the likely driver of this outperformance, but rather a hidden risk factor that differs from market volatility, or beta. This analysis dovetails well with Modern Portfolio Theory, which argues that higher risk is linked to higher returns. Since smaller stocks are said to carry higher risks than large cap stocks, it would therefore be logical for them to deliver higher returns. Certainly, over long periods of time, it has been proven that small and mid caps tend to outperform large caps (Figure 5). This example focuses on U.S. small caps, but Banz's research indicated that the small cap premium also existed across international markets.

However, it is important to recognize that there have been, and will be, shorter-term periods when small caps perform poorly relative to large cap. Attempting to time the perfect entry point

Figure 5: **U.S. small caps and mid caps have delivered gains of over 10% annually since 1926**[3]
As of 31 March 2010



Sources: CRSP; Graduate School of Business, University of Chicago; T. Rowe Price; The Leuthold Group April 2010
*Precious metals returns since 1947.

[2] Banz. "The Relationship between Return and Market Value of Common Stocks," Journal of Financial Economics, vol. 9, no.1, 1981.

[3] All Returns are annualized returns from 1926 to 30 June 2009, except precious metals, which are from 1947 to 30 June 2009. Equity returns based on CRSP; University of Chicago data, Large: Decile 1, Mid: Decile 2 and 3, Small: Decile 4 and 5. Precious metals returns are based on CRB CCI Precious Metals Index. Bonds returns are based on U.S. IT Government Index from 1926 to 1972, Lehman Brothers Government Corporate Index from 1973 to 1975, Barclays Capital U.S. Aggregate Index from 1976 to present. Cash is based on 30-day Treasury bill yield.

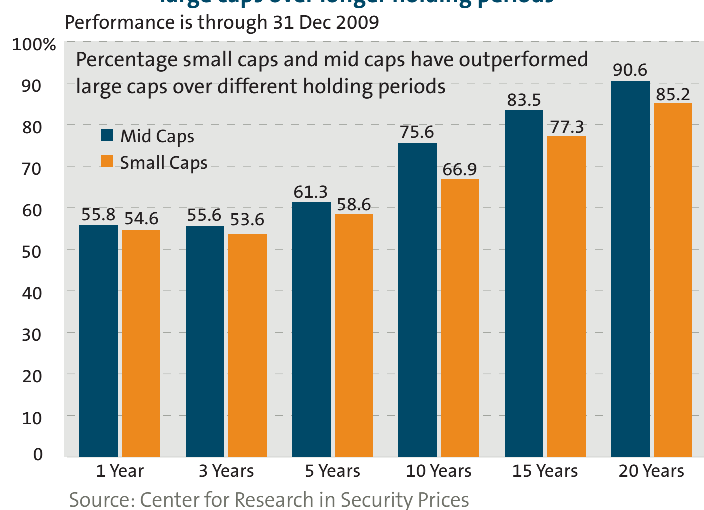
for investing is extremely difficult, if not futile. This highlights the need to adopt a longer-term perspective when approaching investment in the SMID universe. Indeed, Figure 6 illustrates how investors potentially can be rewarded for taking such a long-term view. Here, there is clear evidence that, as the rolling holding periods are extended, we see stronger numbers posted by both the small- and mid-cap segments versus large caps. Indeed, over a rolling five-year period, mid caps beat large caps around 61% of the time and small caps 59%. Over the rolling 10-year period, mid caps outperformed large caps just over 75% of the time, while over 20 years, small- and mid-cap equities outperformed their large-cap counterparts more than 85% and almost 91% of the time, respectively.

Importance and strategic benefits of approaching investment on a regional basis

Compared with large-cap firms, smaller companies tend to compete on more of a local or regional basis. Local factors such as news flow, local contacts, and liquidity conditions are particularly important when approaching investment. With small- and mid-cap companies requiring more in-depth analytical work as discussed before, and sell-side research being far more limited compared with large-cap companies, this can create difficulties for small-cap investors. This problem of low and regionalized sell-side coverage particularly exacerbates the difficulty of executing a small cap strategy globally. Given such a large universe for the SMID asset class, a regional focus is therefore needed, and this can also help to demarcate the universe (Figure 7).

Figure 6: **Better success for small and mid caps versus large caps over longer holding periods**

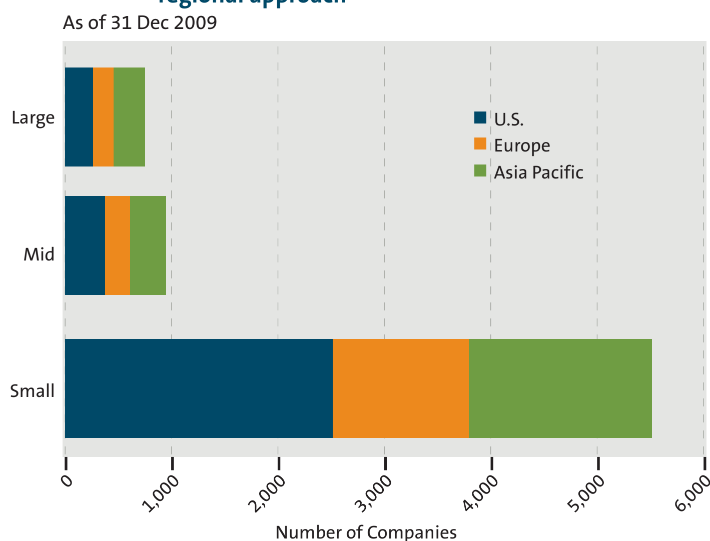
Performance is through 31 Dec 2009



Source: Center for Research in Security Prices

Figure 7: **Large investable universe requires local and regional approach**

As of 31 Dec 2009



Source: S&P Developed Global BMI

Figure 8: **Small and Mid caps offer comparable diversification benefits**

Correlation Matrix (May 1995 – May 2010)

	Russell 2000	Russell 2500	S&P Pan Europe Small Cap	S&P 500	MSCI Europe	MSCI Emerging Markets	Global Bonds*
Russell 2000 Index	1.00						
Russell 2500 Index	0.99	1.00					
S&P Pan Europe Small Cap Index	0.77	0.81	1.00				
S&P 500 Index	0.79	0.84	0.75	1.00			
MSCI Europe Index	0.74	0.79	0.93	0.83	1.00		
MSCI Emerging Markets	0.80	0.85	0.87	0.95	0.94	1.00	
Global Bonds*	0.07	0.08	0.25	0.12	0.26	0.20	1.00

Sources: Zephyr StyleAdvisor, T. Rowe Price

*Global bonds measured against Barclays Capital Global Aggregate Index.

Additionally, having an original perspective, on the ground in each region, can add value. The ability to perform company visits and assess management capabilities (which is more important in small cap investing since key executives can have a larger effect on the performance of a company) can prove invaluable in attempting to generate alpha. This is further discussed in the "*Approaching investment in this distinctive area*" section.

Diversification and risk/return relationship

Typically, investors seek small-cap equities not only for their return potential but also for their diversification benefits. In any given market cycle, environments that favor large-cap equities do not always favor small caps, and vice versa. In general, having an allocation to both asset classes lowers overall volatility and smoothes investment returns over time. This leads us to the next question: What if an investor builds a SMID allocation instead of a purely small-cap portfolio? Would the diversification benefits be lost? The answer is no. In the U.S., for example, over the past 15 years the correlation of the Russell 2500 with the S&P 500 is almost identical to that of the Russell 2000, providing a similar diversification benefit (Figure 8, page 4). Over the same period, the SMID and small cap benchmarks also have an almost perfect correlation to each other.

Further, T. Rowe Price believes a SMID allocation provides even more diversification benefits when combined with large-cap equities because the mix captures more of the investable universe than is attained with a simple large/small U.S. equity allocation. As seen in Figure 9, an S&P 500/Russell 2000 combination comes up short compared with the S&P 500/Russell 2500, which captures more of the U.S. equity opportunity set, particularly companies in the U.S. $2 billion–$5 billion range.

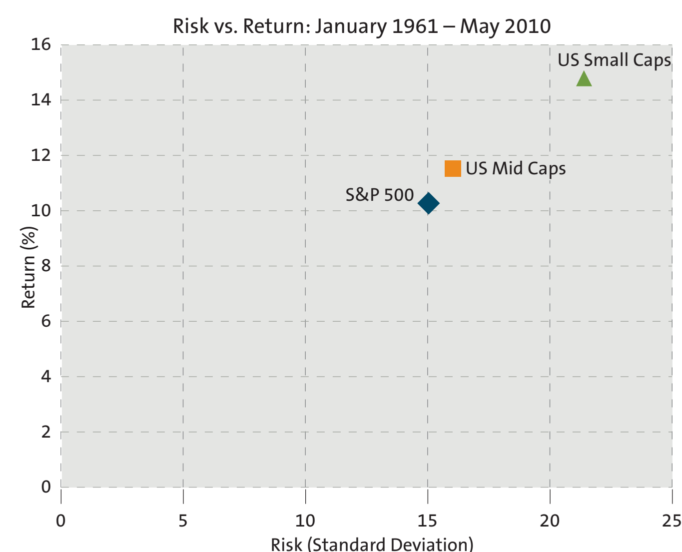
Generally, however, it must be noted that correlation figures today among markets are much higher than in "normalized" periods. The financial crisis has demonstrated once again how strongly world equity markets become inextricably linked in times of global stress.

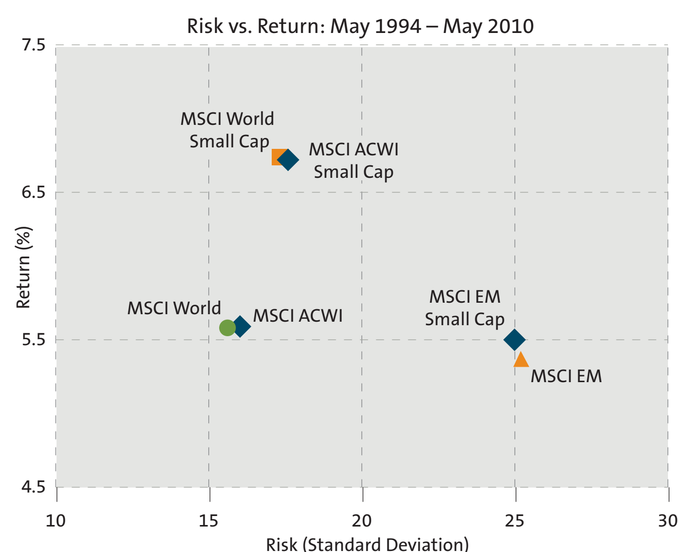
Figure 9: **SMIDs capture more of the U.S. opportunity**
Correlation matrix (May 1995 – May 2010)

As at 28/06/10	S&P 500 No. of Companies	Russell 2500 No. of Companies	Russell 2000 No. of Companies	S&P 500 Index (%)	Russell 2500 Index (%)	Russell 2000 Index (%)
U.S. $2.0 & Below	14	2,105	1,993	2.8%	84.0%	99.2%
U.S. $2.0 – U.S. $5.0	99	395	17	19.8%	15.8%	0.8%
U.S. $5.0 – U.S. $15.0	231	5	0	46.2%	0.2%	0.0%
U.S. $15.0 – U.S. $50.0	112	0	0	22.4%	0.0%	0.0%
U.S. $50.0 & Above	44	0	0	8.8%	0.0%	0.0%
	500	2,505	2,010			

Sources: Citi Investment Research, Small-/Mid-Cap Strategy

Figure 10: **Small and mid caps increase portfolio return potential with only a moderate increase in risk**
Three years ended 30 June 2010, in euros





Sources: T. Rowe Price, MSCI

Turning to the risk/return relationship for the sector, we find that while the volatility risk for both small- and mid-cap equities is undoubtedly greater than for large caps, the potential rewards also can be commensurately larger. As can be seen (Figure 10, page 5), for only moderate additional risk—especially within the mid-cap segment—annual total returns historically have been greater than for large cap equities. Of course, on an individual basis, SMID stocks typically are riskier than large, well-established "blue chip" stocks. This is why active management is imperative, while creating a broad opportunity set is also key.

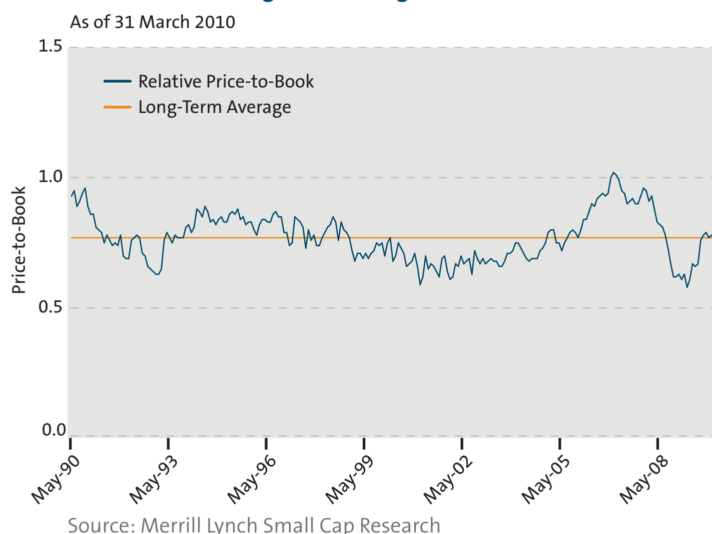
Valuations and the search for higher risk-adjusted returns

Small-cap companies typically sell at a P/E discount to large-cap companies, reflecting their higher risk, lower liquidity, and greater volatility. Currently, however, relative valuations for small caps are perplexing some investors since P/E ratios for many small-cap stocks are now higher than for their larger-cap counterparts. We believe this is likely to be a short term aberration that should correct itself going forward. This view is supported by an expectation that small-cap earnings will recover strongly throughout 2010, especially as small-cap balance sheets generally are in far better shape than in past cycles and because of restructuring initiatives implemented by many businesses over the last two years. This has resulted in significant operating leverage, which should help to fuel margin expansion going forward. Additionally, there are increasing signs that M&A activity is picking up, a trend that is likely to improve further given the likely stabilization in sequential GDP trends, which should also help to restore corporate confidence. History suggests that it is rare to see a recovery in M&A deals without continued improvement in small- and mid-cap stock prices.

However, it is important to recognize that there are large differentials within the global SMID universe. Currently, U.S. SMID companies are trading close to, or just above, long-term averages on various valuation metrics on an absolute basis. By contrast, European valuations are far more attractive, especially on a relative basis to the U.S. (Figure 11).

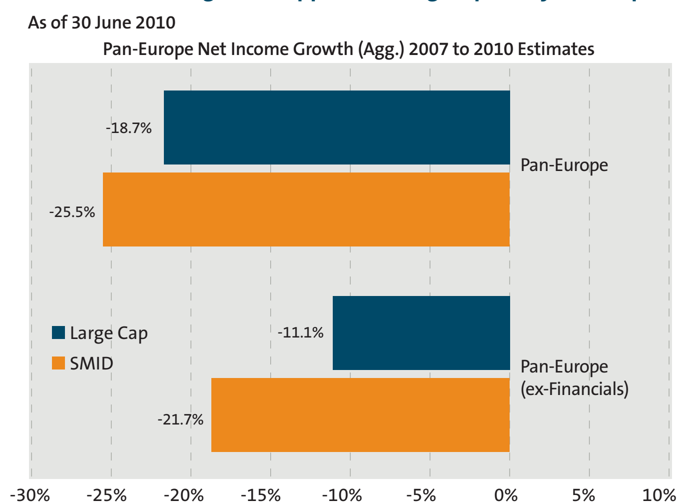
The underperformance of the European SMID segment is not due to the fact that it corrected more from peak to trough during the crisis, but rather that U.S. SMID has rallied much more from their lows, discounting the economic recovery more fully. However, by the same token, we believe European SMIDs offer greater potential for earnings upside. As shown in Figure 12, 2010 IBES earnings estimates remain 25.5% below their 2007 peaks for Pan-European SMID stocks but only 3.2% below for their U.S. peers. While part of this differential seems to make sense (given that the U.S. economy tends to lead the European economy in recoveries by an average of six months), it does imply that European small- and mid-cap stocks should benefit from stronger upward earnings revisions going forward.

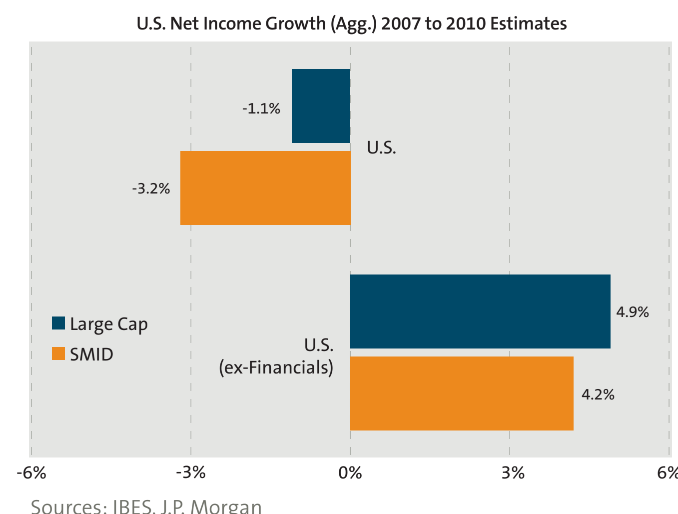
Figure 11: **European equity valuations look relatively attractive versus U.S. equities when compared with long-term averages**



Source: Merrill Lynch Small Cap Research

Figure 12: **Earnings forecasts remain low, but potential for faster growth appears strong, especially in Europe**



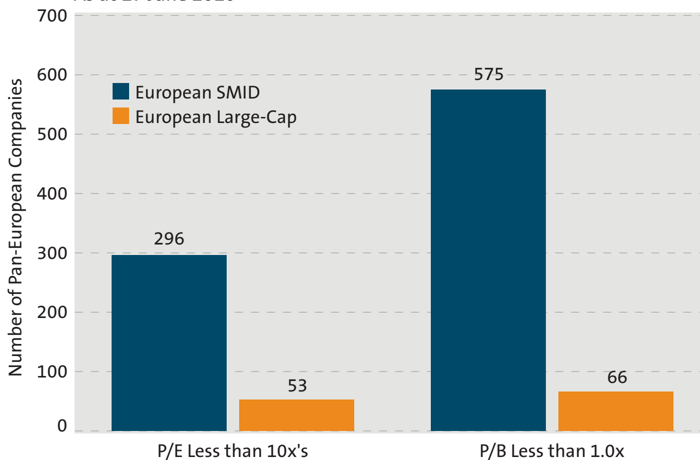


Sources: IBES, J.P. Morgan

Moreover, when looking at valuations from a different perspective (i.e., stock-level opportunities), Pan-European SMIDs appear far more attractive than their large-cap counterparts. Figure 13 illustrates that more than a year after the start of the post-recession equity rally, there are a large number of European SMID companies still trading below 1.0x book value and a number that are currently valued at P/E ratios of 10 or less. This helps to support the case that there is ample deep value opportunities within Europe and especially within the small- and mid-cap segment.

Figure 13: **European small- and mid-cap valuations offer opportunities to benefit from upward earnings revisions**

As at 17 June 2010



Sources: IBES, J.P. Morgan

Approaching investment in this distinctive area

Over a full investment cycle, a strategic allocation to SMID equities should enhance most investment portfolios. However, bottom-up fundamental research is key to understanding both the opportunities and risks associated with small- and mid-cap companies. Indeed, the lack of analytical coverage creates greater inefficiencies in small- and mid-cap markets. As a result, returns can be quite polarized. Therefore, there is a need for active management. An ability to conduct in-depth research, identifying high-quality companies with low leverage and with cycle-tested management teams is imperative to approaching any investment. This requires a research platform that can effectively synthesize industry and stock-specific analysis. An ability to delve deeper into the opportunity set should also increase a manager's ability to outperform.

When evaluating company fundamentals, it is important to emphasize free cash flow. This metric is central to determining value for smaller companies and is one of purest measures of corporate financial performance as it is less susceptible to manipulation than earnings. Qualitative investigation, including the assessment of a company's market position, business model, and management team and the structure of the industry in which it operates, is also imperative for stock selection.

It is also paramount to search for the best opportunities over the long term—not playing themes, but instead focusing on high-conviction ideas. This approach allows an investor to fully exploit valuation anomalies, while also reducing trading costs. The ability to diverge and look beyond the index is also valuable. This should also help to produce the best opportunity set for a portfolio.

What are the potential downsides of investing in small- and mid-cap equities?

As an asset class, small-cap stocks historically have been riskier than large-cap stocks, but have also provided greater returns. However, the size segment clearly is more economically sensitive than large caps. If there are signs that we may experience a more protracted recovery going forward, this could create a headwind for the asset class. Some small-cap stocks can also have a more limited international exposure, (although this continues to diminish). If emerging markets are indeed to be at the vanguard of global economic growth (as consensus would have us believe) this could possibly hinder relative performance. However, utilizing active management and expanding the opportunity set to include mid caps, which generally have greater international exposure can help to mitigate some of these risks.

Liquidity is also a lingering concern as multi-cap investors have not yet wholly embraced the trade back into small caps. However, there are encouraging signs that small-cap trading volumes are picking up relative to their large-cap counterparts.

Conclusions

Arguably, the SMID asset class offers one of the highest betas to economic growth. SMID equities are often at the vanguard of stock market trends—selling off as economies contract and rising sharply when recovery begins. However, we believe it is important to focus on more fundamental factors, such as the size of the SMID opportunity set, the potential diversification benefits, and the long-term historical outperformance relative to large caps.

We believe these distinctive characteristics offer a compelling risk-return profile, especially for investors who are underweight the asset class or have no exposure at all. Prospects may, of course, differ across countries and regions, but adopting a bottom-up approach to investment can help to identify the strongest opportunities within each area. In the near term, however, staggering investments across regions over the remainder of the year may prove the most prudent approach, as investors may have an opportunity to add at lower levels.

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