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CAMBRIDGE ASSOCIATES LLC

THE CASE FOR DIVERSIFIED EMERGING MARKETS EXPOSURE

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Report Contents

The Case for Diversified Emerging Markets Exposure

Many investors believe, as we do, that emerging markets offer a more compelling long-term growth story than do developed markets, and that portfolios should be tilted toward such regions to participate in this growth. However, before committing more funds to the area, investors should first re-evaluate how they allocate their exposure. While most allocations currently consist of long-only strategies that use the MSCI Emerging Markets Index as a benchmark (or invest in the index itself), such strategies tend to be overly concentrated in certain regions and countries; further, they often provide exposure to large multinationals (e.g., Gazprom, Petrobras, and Samsung) as opposed to smaller firms more directly exposed to emerging markets economies. In simple terms, most investors in emerging markets are essentially invested in large multinationals based in the BRICs (Brazil, Russia, India, and China), while many of the most compelling opportunities are to be found elsewhere, whether in smaller markets and/or companies, or different asset classes such as debt or even currency.

Thus, while current allocations are fine as far as they go—in essence, they provide a decent amount of emerging markets beta and generally require relatively little oversight—investors considering larger allocations (e.g., significantly more than 5% of the total portfolio) should look to implement an emerging markets strategy with broad exposure across several asset classes. In short, such a program should more closely resemble the portfolio's developed markets investments, with the goal of generating equity-like returns at lower volatility over the long term, and more meaningfully exploiting inherent inefficiencies in the emerging markets universe.

This is easier said than done, of course—investing in smaller companies, frontier countries, and local currency debt markets exposes one to a different set of risks not so easily quantified, and as such requires a greater level of sophistication and oversight, both on the part of investors and managers. Indeed, while our assumption in this paper is that an investor has already decided to implement a larger-than-typical allocation to emerging markets, such a strategy exposes one to different risks, regardless of the *way* it is implemented—for example, a "hard landing" in China or continued turbulence in the Middle East are just two of the many scenarios that could upend the positive outlook for emerging markets. However, for those that believe an expanded emerging markets allocation makes sense, adequate diversification is critical—a program without such diversification would in essence be exposing a large portion of assets to a fairly narrow strategy with a history of dramatic ups and downs.

This paper discusses the rationale for making such a shift, as well as the risks inherent in embracing such a strategy, both from a broad asset allocation perspective (i.e., allocating substantially more than 5% to emerging markets) and more granularly—i.e., shifting money into multiple investment strategies within emerging markets, such as local currency debt, hedge funds, and private investments. We also provide a sample portfolio that walks through one way to think about structuring such an allocation, as well as analysis comparing a diversified emerging markets portfolio to a traditionally structured allocation.

The Strategic Case for Emerging Markets Exposure

As mentioned, a starting assumption for increasing one's emerging markets exposure is that an investor *already* has a favorable view of long-term strategic prospects for emerging markets.[1] We believe such a view is warranted, even as we acknowledge that there are significant risks to this outlook. Indeed, investors that pursue an expanded emerging markets allocation beyond that suggested by global equity indices should be cognizant that they are not only exposing themselves to the risk of under-performance and capital loss should emerging markets not perform as expected, but also that they are taking on a good deal of peer risk—among Cambridge Associates clients, particularly our U.S.-based clients, it is rare to see an investor with even 10% emerging markets exposure at the total portfolio level. Thus an investor that ratchets up its allocation will likely have a return stream that looks dramatically different from its peers. Therefore, it is worth briefly reviewing the fundamentals underlying the structural growth story.

To begin, emerging economies are generally in much better fiscal shape than their developed counterparts—they have far less debt (including government, business, and consumer sectors), less onerous pension and health care schemes, and their banking systems, as a general rule, are better capitalized. Indeed, one could argue that emerging markets' quick recovery from the global financial crisis—both economically and in financial markets—has been due in large part to their better fiscal health, although the very low interest rate policies pursued by major central banks, along with rampant government spending in developed markets, has also played a role. (We would be remiss, of course, to not mention the large role played by China's government, which for the first time responded to a crisis with a "stimulus" package of its own—clearly this has been a key factor driving emerging markets growth, although as with similar packages in developed markets, its long-term effects are yet to be determined. Indeed, while some analysts have cheered the "success" of the Chinese plan due to its quick implementation, the main reason for the rapid deployment was that the government directed it to favored enterprises, which may not be synonymous with those that would use the cash most productively.)

Further, while most developed markets find themselves increasingly weighed down by the demographic time bomb of health and pension schemes, as well as proliferating government red tape, many emerging economies have little in the way of long-term liabilities, and governments are generally imposing *fewer* burdens on companies and individuals. Indeed, although the U.S. government recently expended enormous time and effort debating small changes in tax rates for individuals, there was precious little attention paid to the country's *corporate* tax rate, which remains among the highest in the world. Most emerging markets also have dramatically lower levels of consumption and consumer credit than do developed markets; in other words, most economic growth remains organic (albeit fueled by developed markets credit expansion), and there is thus more potential for a credit-driven growth cycle to unfold.

Finally, while standards of disclosure and protection of shareholder rights are generally lower in emerging markets than in developed countries, the gap has narrowed considerably (Exhibit 1). For instance, many countries have significantly strengthened property rights, reinforced legal frameworks, improved creditor rights, and adopted globally

[1] For more information on our tactical asset allocation views on emerging markets and our thoughts on emerging markets asset class valuations please see our Market Commentaries *Emerging Markets Equities: Still Cautious* (May 2010), *Emerging Markets Currency Funds: Time to Hitch a Ride on the Local* (May 2010), and *More Than a Passing Fad: Emerging Markets Bond Funds Deserve Strategic Consideration for Many Portfolios* (February 2011), and our monthly *Notes on Current Valuations* publication.

accepted accounting standards, all of which have fostered a maturation of capital markets. Thus, local debt and equity markets have witnessed greater market participation, increasing and stable investment flows, and more international capital-raising activity. Indeed, in some emerging markets countries regulations arguably require more disclosure than those in the United States. In Brazil, for example, hedge funds and asset managers have to report net asset values and holdings to regulators on a daily basis.

Current Exposures

Institutions have made significant shifts in asset allocations over the last decade, with exposure to bonds falling while equity allocations have grown and become more diversified, with home country bias reduced across the globe. For example, U.S. endowments—for which we have the most robust dataset—have increased allocations to global ex U.S. equities, marketable alternatives, and non-marketable alternatives, while cutting U.S. equity allocations. Still, the average U.S. endowment has just 5.9% of assets allocated to dedicated emerging markets equity managers[2], well below their 13% weight in the MSCI All Country World Index (ACWI) (20.5% when not adjusted for free float),[3] and a pittance of the 44% of world GDP represented by emerging markets on a purchasing power parity (PPP) basis (Exhibit 2).[4] Measured at current exchange rates, meanwhile, emerging markets compose about 30% of world GDP in US$ terms.

Of course, virtually all investors have additional emerging markets exposure through both non-U.S./global equity managers and multinational firms based in developed markets. However, for those looking to build a diversified program, we would not view such exposures—particularly the latter—as part of the main strategy for a couple of reasons. First, for most multinationals, emerging markets–generated profits are significantly diluted by the (generally) much larger developed markets business. In addition, while such companies may pull in a growing share of profits from emerging markets, they still trade on developed markets exchanges, and prices will be impacted, particularly in the short term, by "home market" issues (e.g., flows of funds, local central bank policy, government actions).

Most investors currently structure emerging markets investments rather simply, accessing exposure through long-only equity products. However, depending on the specific vehicles used, investing in this manner likely limits the potential sources of return, as most emerging markets managers benchmark to the MSCI Emerging Markets Index, which not only has a nearly 60% weight to the BRICs (Exhibit 3), but also excludes many developing markets in North Africa, the Middle East, and the Asia Pacific region. As noted, the index is also concentrated in a small number of sectors and multinational companies.

Not Your Father's Emerging Markets

As noted earlier, we believe investors that decide to significantly expand emerging markets allocations should structure the emerging markets portfolio in a similar way to a developed markets portfolio, using strategies seeking to maximize returns and minimize volatility. Put simply, until recently

[2] Represents the average allocation for the 437 institutions in the Cambridge Associates U.S. endowment universe (consisting of colleges and universities, foundations, independent schools, museums and libraries, medical endowments, and other endowed institutions) for the quarter ended December 31, 2010.
[3] The ACWI Index covers both developed and emerging equity markets.
[4] While PPP metrics likely overstate the case here, they are useful for providing the upper conceivable bound of emerging markets' share of the global economy.

investors were mainly looking to emerging markets as a beta play on high growth markets, as well as a weak diversifier. Further, emerging markets valuations traded at a persistent discount to developed markets until a few years ago (Exhibit 4), providing investors with a relatively inexpensive play on such growth. However, the checkered history of emerging markets booms and busts led most investors to be uncomfortable with outsized allocations to emerging markets (e.g., above 7% or 8% at the total portfolio level), at least on an ongoing basis. In addition, the roster of emerging markets hedge funds and other alternative managers has been very thin until recently, and thus even investors comfortable with an outsized exposure would have had difficulty filling out an institutional-quality program.

By contrast, today the emerging markets growth story is well known, and valuations, particularly of the major emerging markets that make up the MSCI index, have adjusted upward; the number of institutional-quality managers, meanwhile, has mushroomed. Thus, our preferred approach for emerging markets investors today is more nuanced than in the past; rather than looking for pure (opportunistic) beta, we now view emerging markets as deserving of a multi–asset class investment approach, with a focus on both alpha and beta.

More specifically, investors should look to craft a strategy that, while still incorporating emerging markets beta, also includes allocations dedicated to manager alpha (e.g., hedge funds and private investments) as well as different asset classes, such as local currency debt markets. The first step in this process is to identify the asset classes to be included. A comprehensive program would include traditional public equity investments, hedge funds, private investments, debt, cash, and currency exposure (Exhibit 5). While all share some beta exposure, each has somewhat differentiated return drivers and will play a separate, but complementary, role in an emerging markets program.

Standard Emerging Markets Managers: Core Beta

This is what most investors think of as "emerging markets"—large-cap, index-like equity exposure, typically garnered through index funds, large-cap emerging markets active managers, and emerging markets exposure within a global mandate. This allocation should anchor the emerging markets portfolio and provides the simplest means of adjusting exposures to express tactical views on emerging markets.

Regional, Small-Cap, and Frontier Managers: Capturing Growth Beyond the BRICs

These are managers invested in areas "beyond the BRICs"—that is, different countries and capitalization sizes than the companies found in the emerging markets indices. They typically invest in concentrated niche plays or in countries not heavily represented in emerging markets indices, with a focus on underresearched micro-, small-, and mid-cap equities, as well as frontier markets. While such managers should display relatively low correlations to core beta managers, they also have liquidity and access constraints. Further, there are fewer institutional-quality managers, and those that exist generally have short track records, while fees tend to be high and funds capacity constrained. Exposure to frontier markets can also be obtained through a limited number of index funds.

Hedge Funds: Equity-Like Returns with Lower Volatility

For many investors, the notion of emerging markets hedge funds has always been a bit of a misnomer, as the main reason for investing in emerging markets (exposure to emerging markets beta) has seemed a bit contrary to the concept of hedge funds as diversifying assets. However, we have always believed a well-designed hedge fund program should provide equity-like returns over a full market cycle. While the smaller universe of emerging markets managers may make this more difficult than in developed markets, the basic premise—that downside protection (Exhibit 6) allows faster compounding despite sacrificing some upside participation—still holds (Exhibits 7 and 8).

Thus, in a diversified emerging markets portfolio, hedge funds should be used in a similar way as they are in a developed markets allocation. The broadening and deepening of the emerging markets hedge fund manager roster has given investors more institutional-quality choices than in the past, although the number of proven managers remains relatively small. In addition, the proliferation of newly public companies, along with an increase in merger & acquisition activity, has increased the size of the pool in which such managers fish, and should provide increased opportunities for talented managers to add value. One concern is that shorting remains difficult in many emerging markets. While it is true that many major developed markets also severely restricted short-selling in 2008—so, this is not purely an emerging markets issue—short-selling restrictions tend to be a more structural problem in emerging markets.

Emerging Markets Debt and Currency/Cash: Ballast with Growth Potential[5]

Over its 20-year history, the emerging markets debt market has evolved from a distressed, equity-like market to a broad bond market similar in many ways to those of developed markets. The emerging markets debt arena now encompasses a diverse mix of sovereign and corporate credit, as well as liquid currency and local rate markets; in short, the market is large and liquid, with a broad geographic span.[6]

[5] For an in-depth look at this area, please see our aforementioned Market Commentaries on emerging markets debt.

[6] Liquidity does vary significantly among different types of debt—sovereign debt, both external and local currency, tends to be fairly liquid, corporate debt much less so.

The space is dominated by investment-grade and BB credits, and the main holders are local pensions mandated to stay in fixed income. Emerging markets debt can offer investors exposure to a broader swath of companies than is available through equity markets. Emerging markets cash is essentially a currency play—particularly since it does not in many cases provide the carry[7] it did in the past. While local currency debt and equities also offer currency exposure, local currency allocations offer exposure not intertwined with other return sources.

Finally, the manager universe continues to expand, with a number of broad mandate managers now seeking to allocate capital across *all* emerging markets debt and currency markets. While it is of course important to scrutinize such managers' experience and skill given the evolving state of these markets, we believe the best will likely be able to add value in what remain inefficient and fractured markets.

Private Investments: Return-Enhancing Diversifier

Direct investments through illiquid vehicles can offer investors access to consumer growth and other underrepresented sectors in public markets. Geographic focus can be global, regional, or country funds (especially the latter two, including both emerging and frontier markets); roughly two-thirds of the funds we track are based in Asia (Exhibit 9). As with hedge funds, there is a growing acceptance and awareness of private investments in many emerging markets countries, with improvements to enabling regulations and legislation. The pool of quality managers with track records is developing, although many are still unproven, and most charge high fees and require extended lock-up periods. Thus, while returns have been strong (Exhibits 10 and 11), it remains to be seen how the industry will handle the recent influx of funds—

[7] Higher rates than developed markets.

more than 65% of committed capital to emerging markets private equity and venture capital funds was raised from 2005 to 2008. As with developed markets private equity and venture capital funds, manager selection and access is most crucial here (Exhibit 12); however, for investors serious about approaching emerging markets exposure holistically, some exposure would be desirable.

Putting It All Together

So how can one use this information to construct an emerging markets portfolio that incorporates the expanded opportunity set of investments? While the basic premise is similar to that of diversification in developed markets—i.e., adding lower-volatility assets to provide ballast and smooth returns, and incorporating investments with higher alpha potential—emerging markets diversification is also intended to expose investors to other sources of return more correlated with the underlying economies. In other words, investors with a long-only large-cap emerging markets portfolio could conceivably be right on the emerging markets growth thesis, yet fail to capture much of this growth due to holding mainly large multinationals that simply happen to be *based* in emerging markets.

Further, certain parts of emerging markets remain less accessible than their counterparts in developed markets, so investors need to think more creatively about their approach. For example, while institutional investors have long used private equity structures to access illiquid investments in developed markets, choices are far more limited in emerging markets; track records are also short and political risk looms large. As a result, a growing number of emerging markets funds specialize in small, locally focused companies whose fortunes are tied more to organic emerging markets growth than developed market exports. While not an exact match for private equity, such funds provide investors with far different exposures than those reflected in the MSCI Emerging Markets Index, and should be less sensitive to global economic trends. That said, investors should certainly not write off private equity—while most such emerging markets managers are not institutional quality, a growing number have proven themselves capable of producing significant alpha; indeed, assuming emerging markets continue to broaden and deepen, we would expect this trend to continue. As noted above, we believe investors can use emerging markets hedge funds in a similar manner to developed markets programs—to provide equity-like returns with less volatility. This will get easier as the hedge fund roster continues to expand.

While most investors view US$-denominated emerging markets sovereign debt as a high-risk/high-return asset class, its profile has changed fairly dramatically in recent years. While US$ emerging markets sovereigns[8] have trounced other asset classes since 1993 (Exhibit 13), this was mainly due to outperformance from 1993 to 2002; returns since 2002 for emerging markets debt have been far more subdued, even as emerging markets equities have soared (Exhibit 14). Even still, emerging markets debt has proved a solid diversifier over this period—Exhibit 15 shows rolling one-, three- and five-year returns for a number of different asset blends, and it is clear that the inclusion of emerging markets debt in an emerging markets portfolio over the past decade or so would have generally tamped down volatility without sacrificing much return. Much of this, of course, is due to the better fiscal and economic conditions of emerging markets over this period, and we would expect emerging markets debt to continue to play a similar "volatility-reducing" role unless and until such conditions no longer prevail. (And obviously we will not see a repeat of 1990s returns given current yields.) Emerging

[8] Technically the index includes non–local currency denominated emerging markets debt, though in practice most of the debt issues included in the index are denominated in U.S. dollars.

markets corporate debt, meanwhile, remains a fractured and difficult-to-access market, particularly in the local currency space. Thus, investors with an interest in the sector should either hire a dedicated emerging markets debt manager or a multi–asset class emerging markets manager.

Finally, in order to make this a bit more concrete, a sample portfolio is included, with allocations based on those of current clients actively expanding and broadening their emerging markets investment strategies. Importantly, this should *not* be considered a specific recommendation, but rather one example of an approach to a broad emerging markets mandate. Different investors will prefer different strategies and implementation options based on risk tolerances, capacity to implement illiquid investments, ability to access the top managers, and available resources for managing a complex portfolio.

The traditional portfolio shown in Exhibit 16 is a fairly typical structure designed to capture diversified beta through long-only managers—it is focused solely on public equity exposure, and although it allocates 20% of its total to both a regional and small-cap manager, the objective is clearly to capture emerging markets beta. On the other hand, the "broad approach" portfolio, which assumes an allocation twice the size of the original, is designed to tamp down volatility while still achieving equity-like returns. In short, it is quite similar to most institutional allocations to developed markets.

Thus, the broad approach portfolio has an identical equity exposure to the first portfolio in absolute terms, buttressed with investments in debt, hedge funds, and emerging markets cash. As shown in Exhibit 17, over the past ten years this portfolio would have posted slightly lower returns than the traditional portfolio, but with significantly less volatility, resulting in a significantly higher Sharpe ratio. We should also note that these hypothetical portfolios are composed purely of returns for manager benchmarks, and thus show no benefit from manager skill; given the still-immature nature of many emerging markets, as well as the relatively small flows to smaller/less popular markets, we believe carefully selected managers should be able to generate outperformance.

As mentioned, this is merely one way to approach this issue. Much as investors have different allocations to long-only managers and hedge funds in developed markets, there is no "right" answer for how to approach an expanded allocation to emerging markets. But for investors looking to expand their allocation to emerging markets, this structure would at the very least provide a solid jumping-off point.

Risks to Our Approach

There are, of course, risks to the approach promulgated here. While the main risk to *not* going this route (i.e., continuing to use standard emerging markets equity managers) is that you are not getting "true" emerging markets exposure, investors that implement a more complicated manager structure expose themselves to a number of potential problems. Hedge funds and private equity managers are by definition less liquid than long-only funds, in large part because they hold less-liquid securities. This raises two (related) issues—first, investors in such strategies could get stuck holding "frozen" securities (or have managers "gate" or otherwise restrict investments), and second, lack of liquidity could restrict investors' ability to be nimble and react to changing market conditions. To be clear, we are *not* saying that investors should (or need to) be less nimble with diversified emerging markets portfolios than with developed markets portfolios—tilt the portfolio to where relative values are most attractive within emerging markets, or reduce/increase emerging markets equity beta when valuations are rich/cheap—but simply pointing out that liquidity may be more fleeting in emerging markets. Indeed, since many of the markets alluded to in this paper are, by definition, smaller and less liquid than those that make up the MSCI Emerging Markets Index, the risk of getting trapped in less liquid investments is heightened. This highlights the need to hold a significant allocation to standard emerging markets managers or index funds as noted above.

On a related note, a diversified emerging markets strategy by definition involves greater complexity and higher fees, as well as more active manager risk. As many of these managers have relatively short histories, the risk that they will not outperform their high fees is an important consideration.

Another important pitfall is the relationship (or lack thereof) between economic growth and equity returns. Indeed, investors often overlook the difference between *economies* and *markets*. Said a different way, the key determinant of returns is not the future rate of economic growth, but the *price paid for that growth* (assuming it flows through to corporate profitability in a predictable manner). As counterintuitive as it may seem, studies have actually shown equity market returns have a *negative* correlation with GDP growth, likely due in part to investors anticipating such growth and bidding up assets in advance. Further, equity dilution tends to sap returns for investors—particularly foreign investors—over time, and the inherent difference between equity market composition and underlying economic growth means *any* investment strategy will have some "tracking error" relative to growth rates.

While such analysis also applies to developed markets, most investors in emerging markets (and particularly those considering outsized allocations) are specifically looking to capitalize on the long-term economic growth story. Thus, it is important to emphasize, as noted earlier, that investors could be right about future emerging markets economic growth, yet fail to fully participate in this growth through an expanded emerging markets allocation. Indeed, while such issues are of course magnified for portfolios that only include public equities, they apply across asset classes. In other words, an investor that diversifies exposures as suggested here *could nevertheless fail to capitalize as expected on emerging markets growth*. While we believe a diversified program makes sense, partly because it should mitigate such issues, the reality is that capitalizing on economic growth is a difficult and unpredictable process, and there is no guarantee that an expanded emerging markets program will deliver returns commensurate with underlying economic growth.

A related risk is that, despite the positive fundamental changes discussed earlier, emerging markets are likely to continue to boom and bust *even if* the long-term growth story remains intact. In other words, the transition from export-oriented economies to strong local markets is unlikely to be smooth. While diversification should help to some degree, a significant downturn could easily swamp such efforts and test the resolve of even the most committed emerging markets investor. Along similar lines, an expanded emerging markets allocation can also expose an investor to a good deal more currency risk. While many investors today view such exposure as a positive—e.g., as a way to hedge a sharp decline in the U.S. dollar, euro, or yen—it was not so long ago (for example, Mexico in the early 1990s and Asia in the late 1990s) that foreign investors took substantial hits from sudden currency devaluations in such markets. Further, currency hedging for many emerging markets remains prohibitively expensive (if it is even available) due to lack of forward contracts.

Another risk, of course, is that emerging markets equity prices rise sharply, and traditional, high-beta BRIC strategies outperform portfolios "held back" by hedge funds and emerging markets cash products. Further, smaller-cap stocks and smaller markets could underperform the BRIC-dominated strategies. However, we view this as a short-term risk, as more diversified portfolios *should* outperform over the long term—in other words, exposure to a wider opportunity set is worth the risk of short-term underperformance.

Finally, while manager options have multiplied, they remain far less numerous than those available to investors in developed markets, and a dramatic increase in the number of investors pursuing such strategies could easily overwhelm this relatively small universe.

Conclusion

The broadening and deepening of emerging markets' equity and debt markets, coupled with their much-improved—and superior to developed markets—fiscal positions, has changed the equation for investors. Whereas emerging markets formerly occupied a niche as a high-beta play on economic growth, both globally and within emerging markets, they have made strides to the point where they deserve a diversified investment program similar to developed markets. The concurrent improvement in manager options, meanwhile, has made implementation of such a program far less onerous, though as noted, monitoring for investors and managers will be more involved than with long-only programs. ■

EXHIBITS

Exhibit 1

World Bank/IFC "Doing Business" Rankings

Overall Ease of Doing Business

Country	Rank	Country	Rank
Singapore	1	Poland	70
Hong Kong	2	Kuwait	74
United Kingdom	4	Vietnam	78
United States	5	China	79
Korea	16	Pakistan	83
Japan	18	Egypt	94
Thailand	19	Kenya	98
Malaysia	21	Sri Lanka	102
Germany	22	Bangladesh	107
France	26	Argentina	115
Taiwan	33	Indonesia	121
South Africa	34	Russia	123
Mexico	35	Brazil	127
United Arab Emirates	40	India	134
Qatar	50	Nigeria	137
Romania	56	Ukraine	145
Oman	57	Philippines	148
Kazakhstan	59	Central African Republic	182
Turkey	65	Chad	183

Protecting Investors

Country	Rank	Country	Rank
New Zealand	1	Brazil	74
Singapore	2	Egypt	74
Malaysia	4	France	74
United States	5	Korea	74
United Kingdom	10	Sri Lanka	74
South Africa	10	Taiwan	74
Thailand	12	China	93
Japan	16	Germany	93
Bangladesh	20	Kenya	93
Kuwait	28	Oman	93
Pakistan	28	Qatar	93
India	44	Russia	93
Indonesia	44	Argentina	109
Kazakhstan	44	Ukraine	109
Mexico	44	United Arab Emirates	120
Poland	44	Philippines	132
Romania	44	Vietnam	173
Nigeria	59	Laos	182
Turkey	59	Afghanistan	183

Emerging Markets

Frontier Markets

Source: World Bank, www.doingbusiness.org (2011).

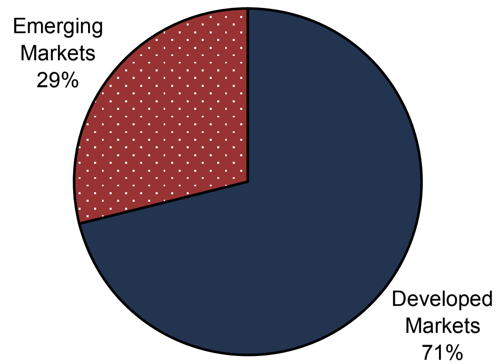
Notes: The World Bank Group ranks 183 economies on their business regulations and enforcement across ten broad equally weighted topics. Included in the table on the left are the top ten countries in either market cap, population, or GDP for the MSCI Emerging Markets Index and the MSCI Frontier Market Index, as well as the G5 countries and the top two and bottom two countries ranked in the World Bank/IFC's "Overall Ease of Doing Business" rankings. As one of the ten categories used in determining the overall ranking, "Protecting Investors" measures the strength of minority shareholder protections against directors' misuse of corporate assets for personal gain. The indicators are based on three factors: (1) transparency of related-party transactions, (2) liability for self-dealing, and (3) shareholder's ability to sue officers and directors for misconduct. Included in the table on the right are the top ten countries in either market cap, population or GDP for the MSCI Emerging Markets Index and the MSCI Frontier Market Index, as well as the G5 countries and the top two and bottom two countries ranked in the World Bank/IFC's "Protecting Investors" rankings.

Exhibit 2

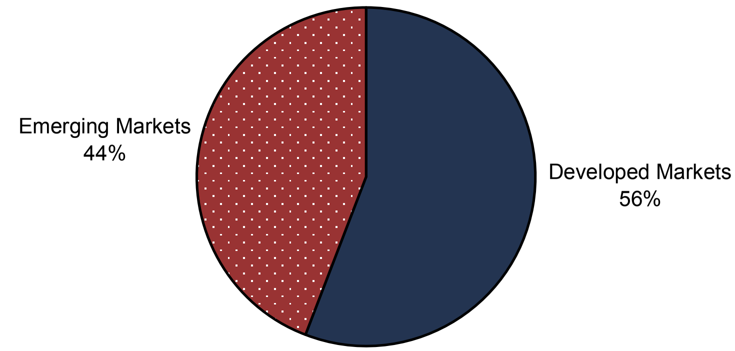
Measuring the Size of Emerging Markets

As of December 31, 2010

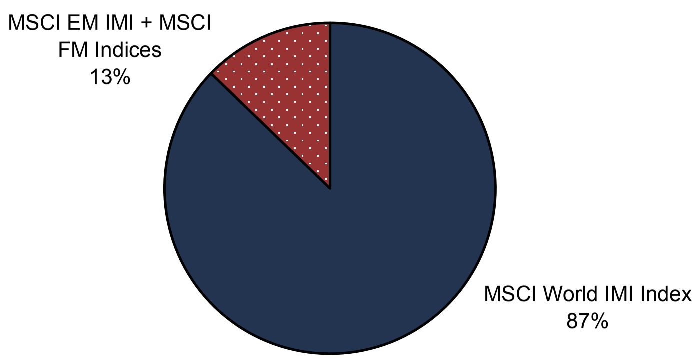
GDP (Current Prices)
2009 US$ billions



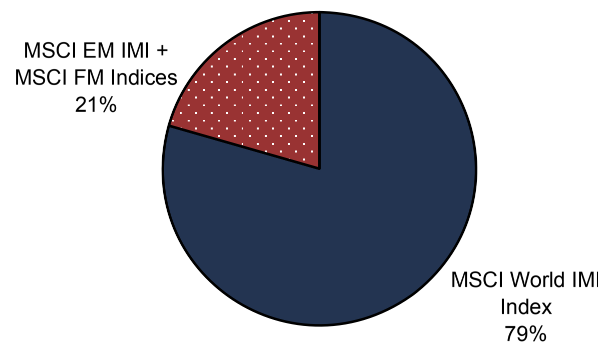
GDP (PPP Weights)
2009 US$ billions



Float-Adjusted Market Cap



Full Market Cap

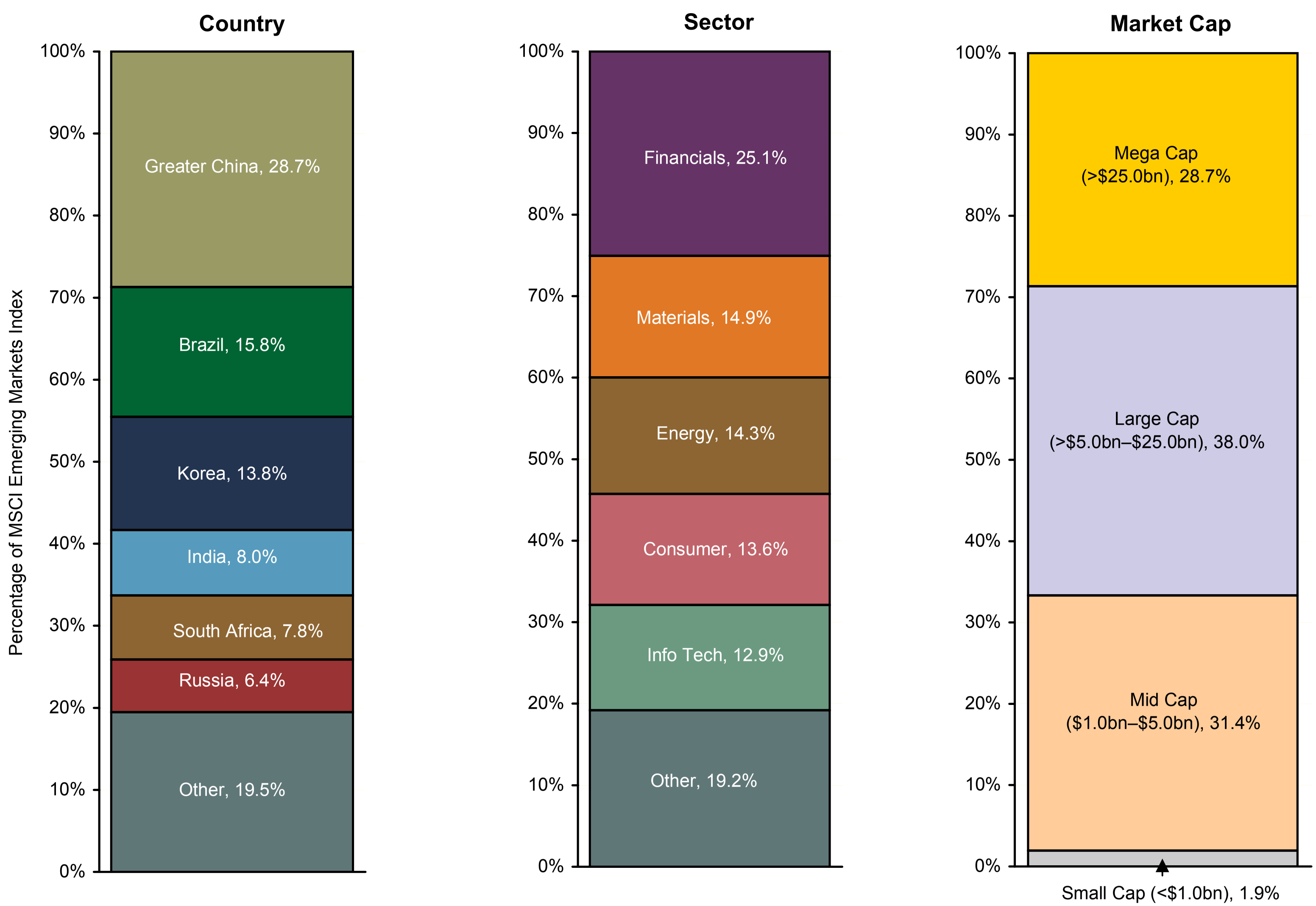


Sources: FactSet Research Systems, Goldman Sachs, MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: GDP uses 2009 U.S. dollars.

Exhibit 3

MSCI Emerging Markets Index: Country, Sector and Market Cap Exposures

As of December 31, 2010

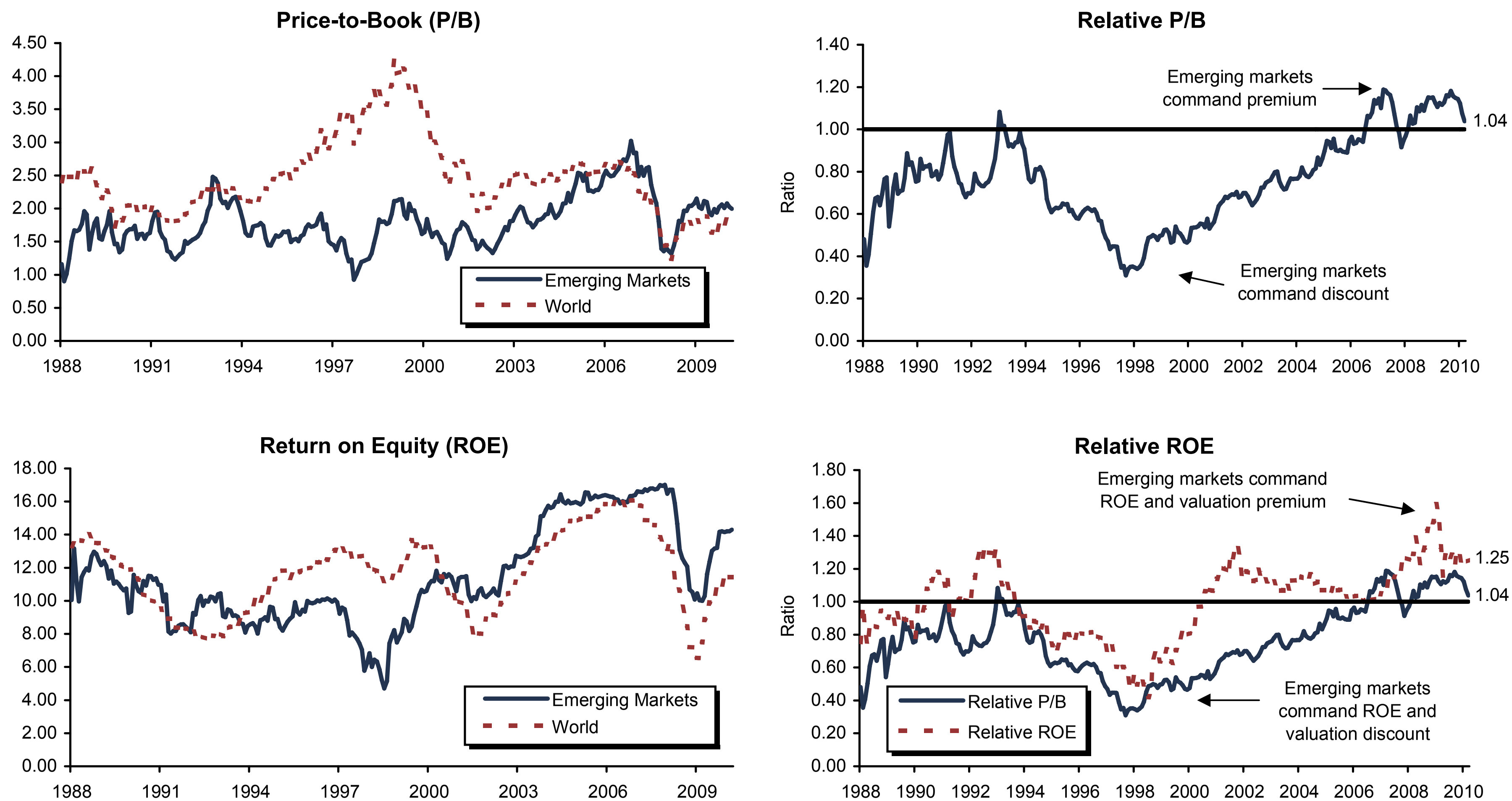


Sources: FactSet Research Systems and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.
Notes: For country breakouts, only countries representing more than 5% of the index are shown individually. Greater China includes Taiwan.

Exhibit 4

Emerging Markets Relative Valuation

December 31, 1988 – February 28, 2011



Sources: MSCI Inc., Standard and Poor's, and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Relative valuation graphs show MSCI Emerging Markets Index valuation as a percentage of MSCI World's valuation. For emerging markets valuations, the S&P IFCI Composite Index is used until August 1995; the MSCI Emerging Markets is used thereafter.

Exhibit 5

Framework to Build an Emerging Markets Strategic Allocation: A Multi–Asset Class Approach

Depending on your objectives, goals, and risk profile, build muscle in parts of the skeleton that have attributes likely to support your objective.

Alpha Generator/Higher Volatility

Regional, Small-Cap and Frontier Satellites

Concentrated, niche plays unique to specific regions/countries; regional small/mid-cap managers; low correlating frontier* or hybrid small-cap/frontier managers

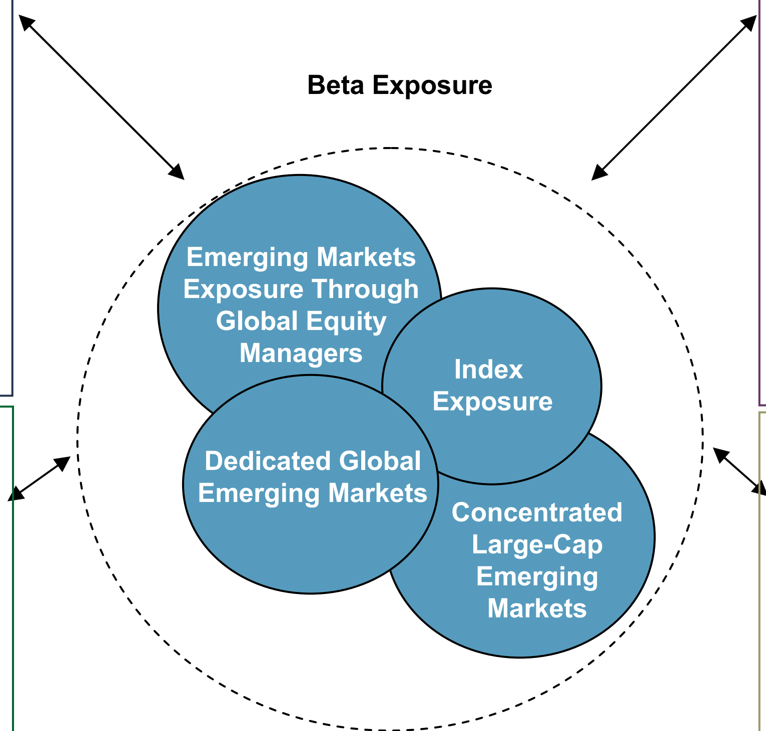
Characteristics
- Less-trafficked names
- Low correlation to index
- Likely heavy focus on consumer story
- Minimal sell-side coverage (info edge)
- High volatility
- Short track record
- High fees • AUM constrained
- Short list of institutional-quality managers

Alpha Generator/Volatility Dampener

Hedge Funds

Dedicated (mostly long/short) regional and global/emerging markets managers; global macro with an emerging markets emphasis

Characteristics
- Single name shorts grow more common and less expensive as local markets develop. As a result, the opportunity set is expanding
- Lower volatility
- Multiple asset class exposure
- Mitigate market entry/exit timing risk
- Broader sector exposure
- Capitalize on country differentiation
- More tools (shorting, derivatives)
- High fees • AUM constrained
- Short manager list



Low Beta/Volatility Dampener

Emerging Markets Cash & Debt

Emerging markets cash/currency, sovereign and corporate credit, or market-neutral long/short

Characteristics
- Low beta exposure to emerging markets growth story
- Yield enhancing
- Differentiated return source from "carry," currency, and spread compression
- Maturing yield curve
- Attractive local market technicals

Return Enhancement/Diversifier

Private Investments

Direct public and private exposure through traditional illiquid vehicles; activist frontier managers; net/net cash managers

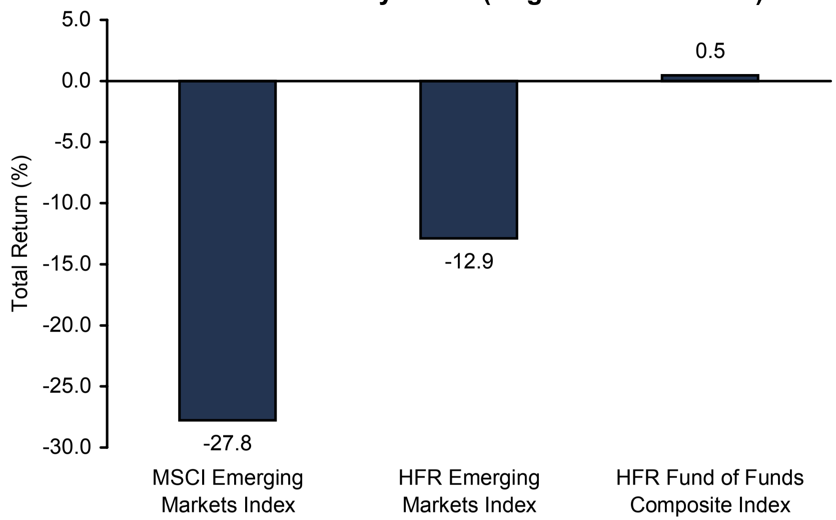
Characteristics
- Global, regional, or country focus
- Access to consumer growth companies and other underrepresented sectors in public markets
- Ability to mitigate some risk through activism or control
- Evolving pool of quality managers with track records

* Frontier markets are currently high beta and low volatility for technical reasons. We expect this to change as these markets develop.

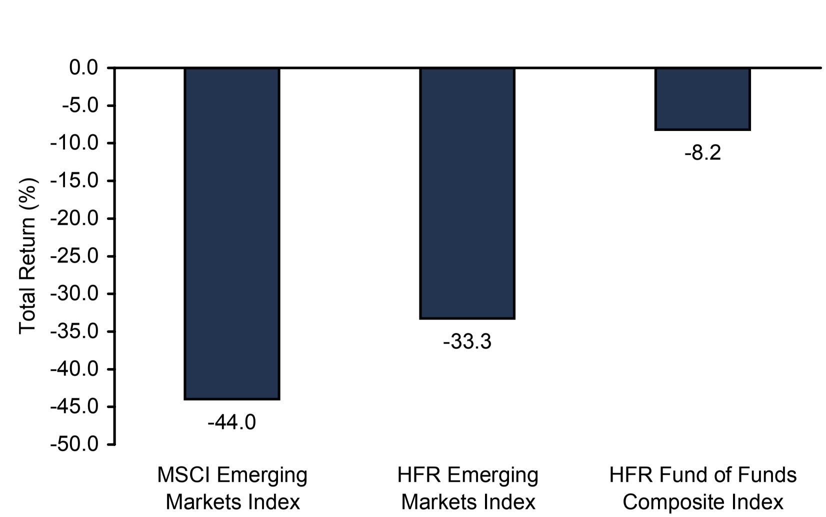
Exhibit 6

Emerging Markets Hedge Fund Downside Protection

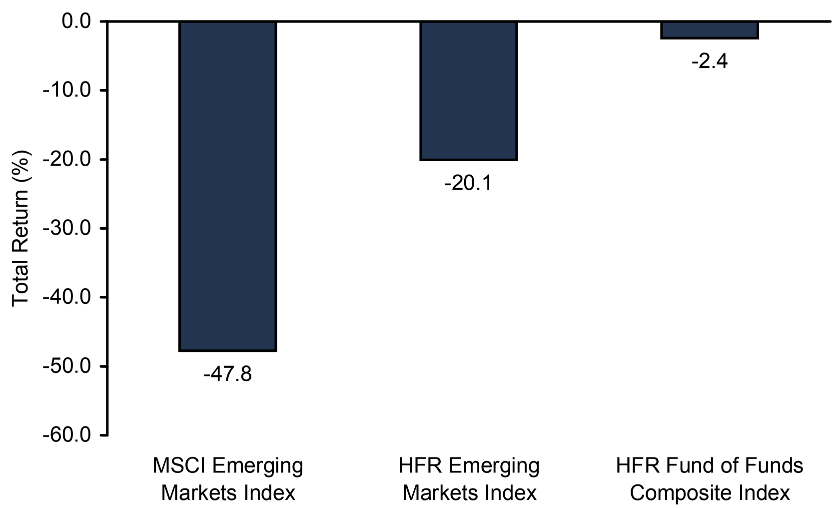
Asian Currency Crisis (Aug 1997 – Nov 1997)



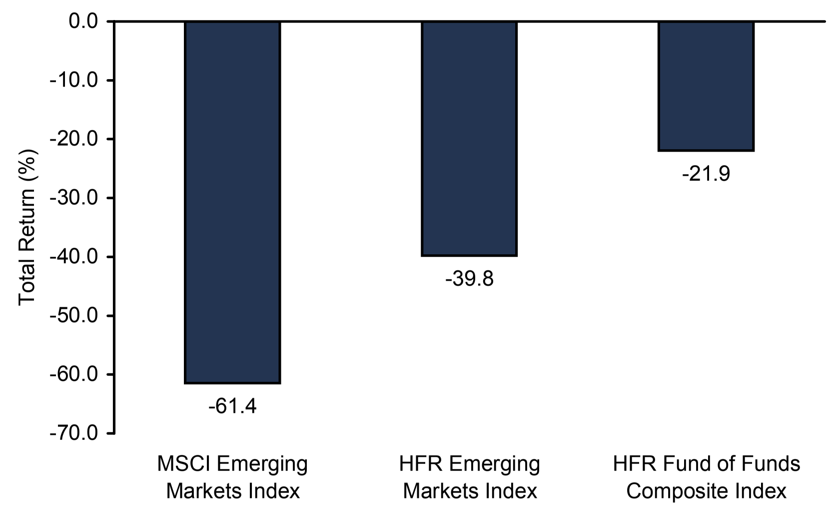
Russian Debt Crisis (Apr 1998 – Aug 1998)



Bursting of Tech Bubble (Apr 2000 – Sep 2001)



Credit Crisis (Nov 2007 – Feb 2009)

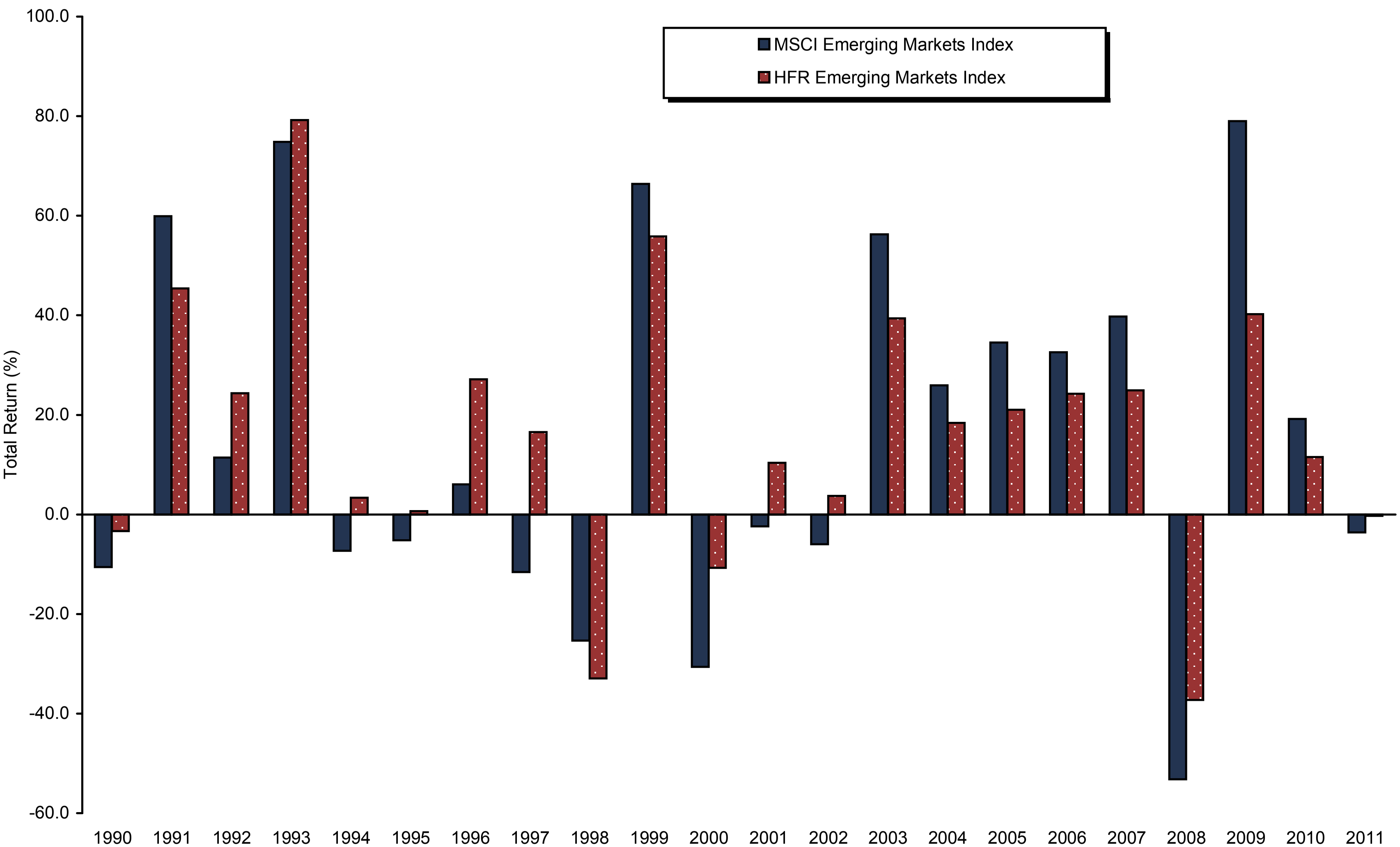


Sources: Hedge Fund Research, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Returns are in U.S. dollars.

Exhibit 7

Annual Performance: Emerging Markets Equities Versus Emerging Markets Hedge Funds

1990–2011 • U.S. Dollar

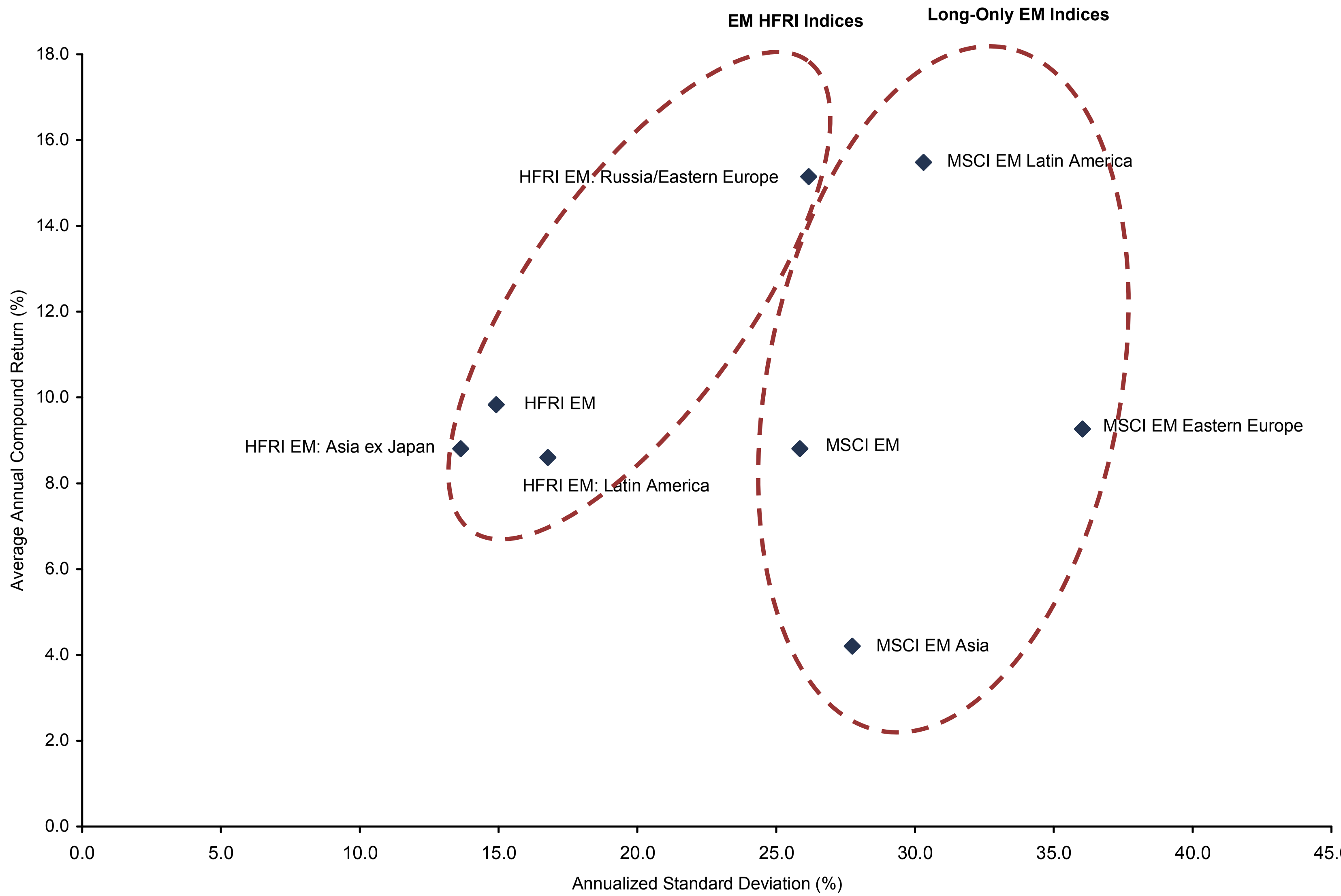


Sources: Hedge Fund Research, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Data for 2011 are as of February 28.

Exhibit 8

Emerging Markets Risk/Return Analysis

January 31, 1997 – February 28, 2011 • U.S. Dollar

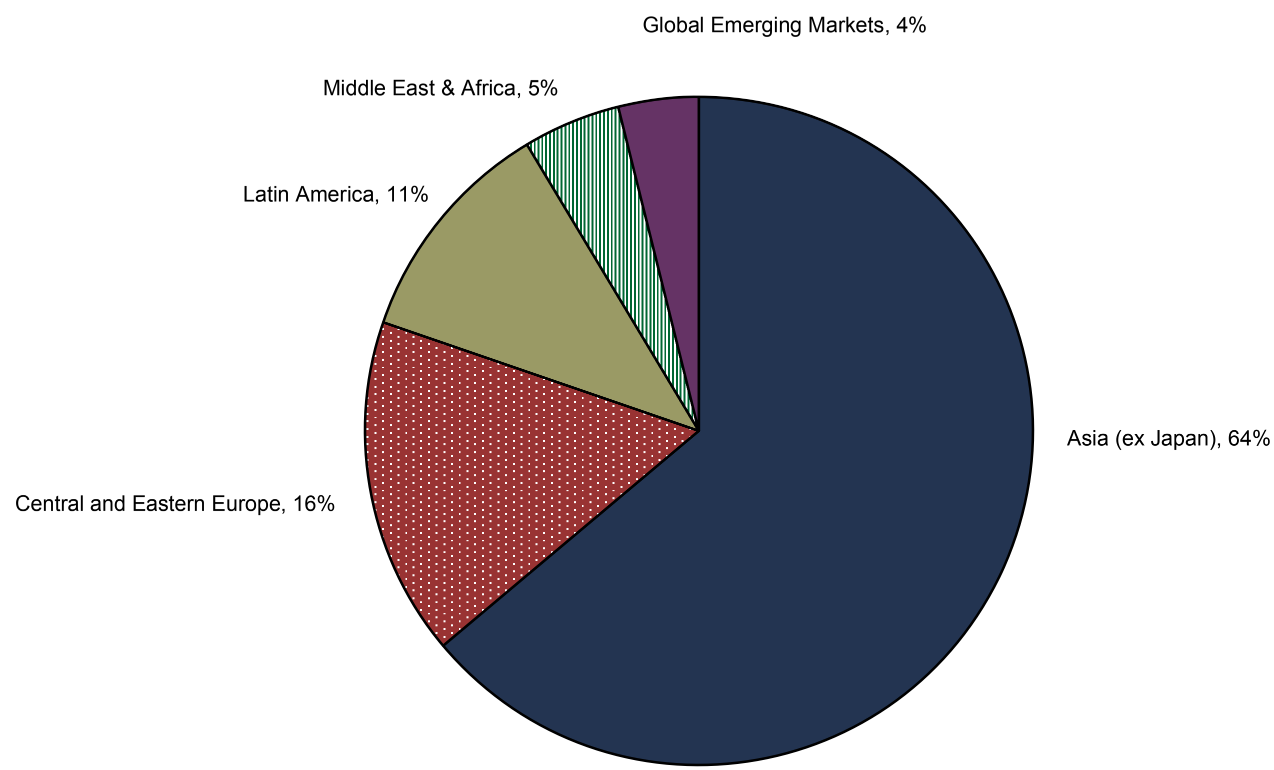


Sources: Hedge Fund Research, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Exhibit 9

Emerging Markets Private Equity/Venture Capital Coverage

As of September 30, 2010 • By Number of Funds



Source: Cambridge Associates LLC Non-Marketable Alternative Assets Database.

Exhibit 10

Regional Comparison of Emerging Markets Private Equity End-to-End Returns

Periods Ended September 30, 2010 • U.S. Dollar

	Annualized Returns (%)			
Asset Class	One Year	Three Years	Five Years	Ten Years
CA Emerging Markets Private Equity & Venture Capital Index	**25.0**	**6.5**	**14.1**	**9.1**
CA Asia Emerging Markets PE & VC Index	31.4	8.1	14.2	9.3
CA Central and Eastern Europe PE & VC Index	2.7	-5.3	11.0	15.8
CA Latin America & Caribbean PE & VC Index	10.2	11.3	18.0	2.7
MSCI Emerging Markets	**20.5**	**-1.2**	**13.1**	**13.8**
MSCI Emerging Markets: Asia	19.1	-2.8	13.5	12.4
MSCI Emerging Markets: Eastern Europe	13.5	-12.4	1.9	15.1
MSCI Emerging Markets: Latin America	21.9	4.9	19.3	19.7
S&P 500	**10.2**	**-7.2**	**0.6**	**-0.4**

Sources: Cambridge Associates LLC Non-Marketable Alternative Assets Database, MSCI Inc., Standard & Poor's, and Thomson Datastream. MSCI data provided “as is” without any express or implied warranties.

Notes: Returns for private equity and venture capital indices are end-to-end pooled means net of management fees, expenses, and carried interest. The pooled means represent the end-to-end rates of return calculated on the aggregate of all cash flows and beginning and ending market values as reported by the general partners to Cambridge Associates LLC in their quarterly and annual audited financial reports. Central and Eastern Europe includes Russia.

Exhibit 11

Comparative End-to-End Returns

Periods Ended September 30, 2010 • Percent (%)

	CA U.S. Venture Capital Index*	CA U.S. Private Equity Index*	CA W. Europe Private Equity Index*	CA Emerging Markets PE and VC Index*	MSCI Emerging Markets Index	S&P 500 Index
1 Qtr	3.8	5.1	11.9	9.3	18.2	11.3
1 Year	8.2	17.7	16.0	25.0	20.5	10.2
3 Years	-2.1	1.3	-5.8	6.5	-1.2	-7.2
5 Years	4.3	9.1	13.9	14.1	13.1	0.6
10 Years	-4.6	8.1	16.4	9.1	13.8	-0.4
15 Years	36.9	12.1	17.8	7.9	8.4	6.5

Sources: Cambridge Associates LLC U.S. Venture Capital Index®, Cambridge Associates LLC U.S. Private Equity Index®, Cambridge Associates LLC Non-Marketable Alternative Assets Database, MSCI Inc., and Standard & Poor's. MSCI data provided “as is” without any express or implied warranties.
Note: All returns are in U.S. dollars.
* Cambridge Associates LLC proprietary index; pooled end-to-end returns net of fees, expenses, and carried interest.

Exhibit 12

Comparison of Pooled Mean Returns of Various Private Equity Categories End-to-End Returns

Periods Ended September 30, 2010 • Percent (%)

Asset Class		Five-Year			Ten-Year	
CA Emerging Markets PE & VC		14.1			9.1	
CA U.S. Private Equity		9.1			8.1	
CA U.S. Venture Capital		4.3	10.9		-4.6	9.2
Top Two Quartiles Only	8.5			7.6		
CA Emerging Markets PE & VC		25.0			18.3	
CA U.S. Private Equity		17.6			15.7	
CA U.S. Venture Capital		10.6	9.6		-1.4	8.0
Second Quartile Only	4.6			3.2		
CA Emerging Markets PE & VC		15.4			10.3	
CA U.S. Private Equity		13.0			12.5	
CA U.S. Venture Capital		5.7			-3.3	
MSCI Emerging Markets		13.1			13.8	
S&P 500		0.6			-0.4	
Russell 2000®		1.6			4.0	
Dow Jones Small Cap		3.2			5.4	
Nasdaq Composite		1.9			-4.3	

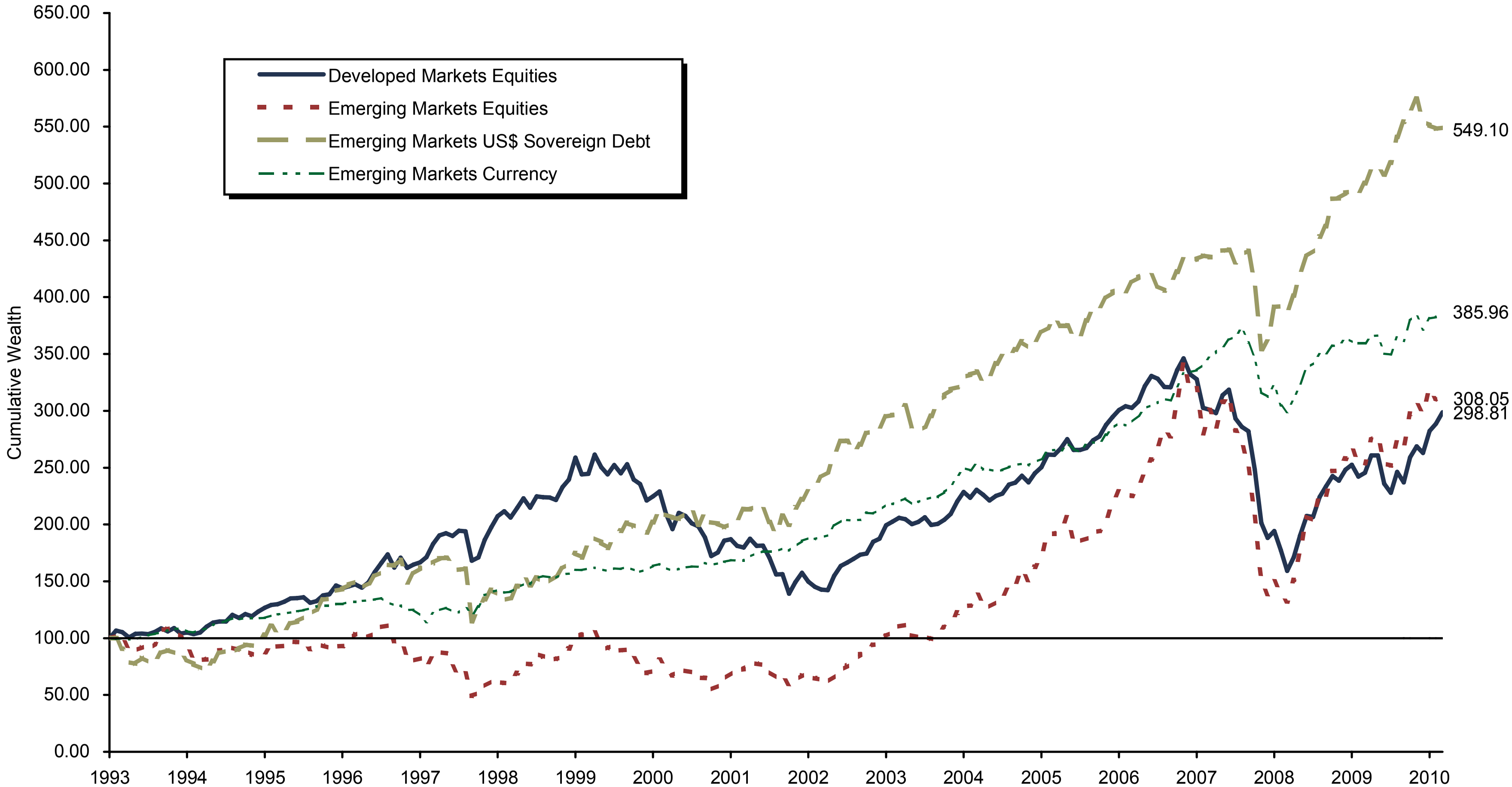
Sources: Cambridge Associates LLC Non-Marketable Alternative Assets Database, Dow Jones & Company, Inc., Frank Russell Company, MSCI Inc. Standard & Poor's, and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: All returns are in U.S. dollars. Returns for private equity and venture capital indices are end-to-end pooled means net of management fees, expenses, and carried interest. The pooled means represent the end-to-end rates of return calculated on the aggregate of all cash flows and beginning and ending market values as reported by the general partners to Cambridge Associates LLC in their quarterly and annual audited financial reports. U.S. private equity includes buyout, special equity expansion, special situations, restructuring, and mezzanine funds.

Exhibit 13

Emerging Markets Debt Cumulative Wealth

December 31, 1993 – February 28, 2011 • U.S. Dollar



Sources: J.P. Morgan Securities, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

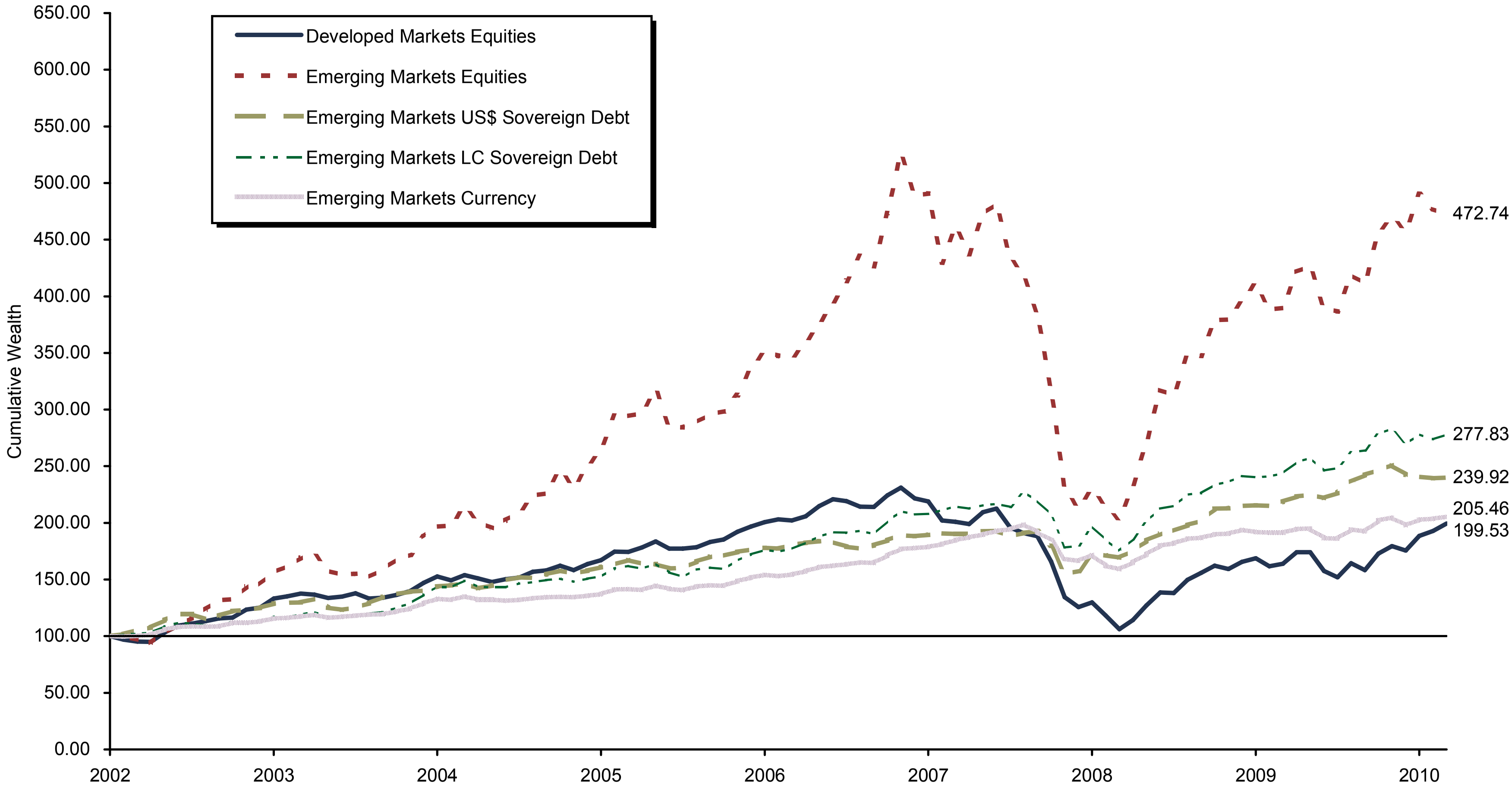
Notes: Performance for developed markets equities is that for the MSCI World Index; emerging markets equities, MSCI Emerging Markets Index; emerging markets US$ sovereign debt, J.P. Morgan Emerging Markets Bond Index (EMBI) Plus; and emerging markets currency, J.P. Morgan Emerging Local Markets Index Plus. The J.P. Morgan EMBI Plus is an index of non–local currency denominated emerging markets debt. Total returns for MSCI emerging markets indices are gross of dividend taxes. Total returns for MSCI developed markets indices are net of dividend taxes.

956m (modified)

Exhibit 14

Emerging Markets Debt Cumulative Wealth

December 31, 2002 – February 28, 2011 • U.S. Dollar



Sources: J.P. Morgan Securities, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

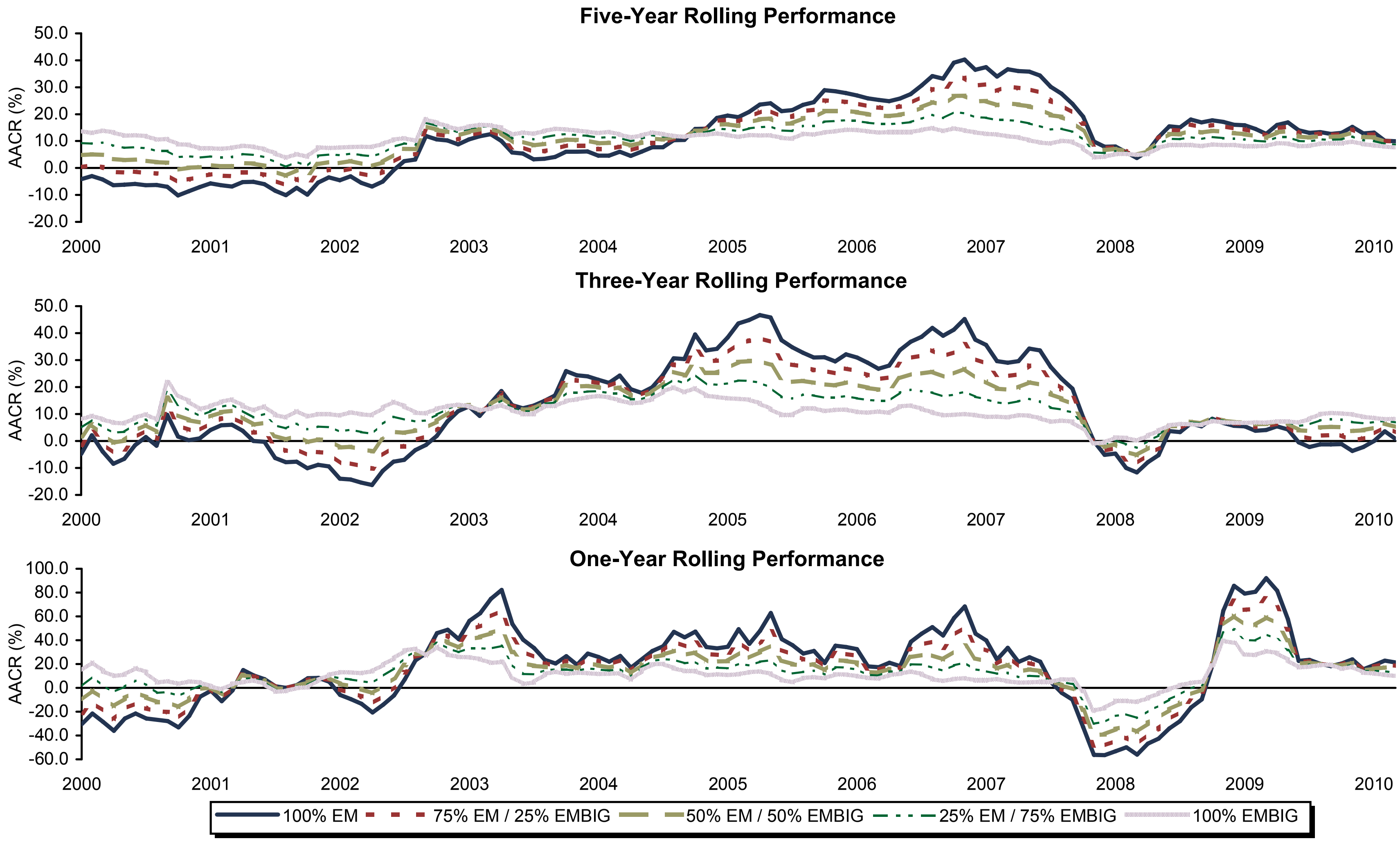
Notes: Performance for developed markets equities is that for the MSCI World Index; emerging markets equities, MSCI Emerging Markets Index; emerging markets US$ sovereign debt, J.P. Morgan Emerging Markets Bond Index (EMBI) Plus; emerging markets LC sovereign debt, J.P. Morgan Government Bond Index Emerging Markets Global Diversified; and emerging markets currency, J.P. Morgan Emerging Local Markets Index Plus. The J.P. Morgan EMBI Plus is an index of non–local currency denominated emerging markets debt. Total returns for MSCI emerging markets indices are gross of dividend taxes. Total returns for MSCI developed markets indices are net of dividend taxes.

956m (modified)

Exhibit 15

Performance of Emerging Markets Equities, Debt and Various Blends

December 31, 2000 – February 28, 2011 • U.S. Dollar



Sources: J.P. Morgan Securities, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Note: The first data point on the five-year graph represents monthly data from January 31, 1996, through December 31, 2000. The first data point on the three-year graph represents monthly data from January 31, 1998, through December 31, 2000. The first data point on the one-year graph represents monthly data from January 31, 2000, through December 31, 2000. Emerging markets equities are represented by the MSCI Emerging Markets Index. Emerging markets debt is represented by the J.P. Morgan Emerging Markets Bond Index Global, which is an index of non–local currency denominated emerging markets debt.

Exhibit 16

Emerging Markets Hypothetical Portfolios

Traditional Approach

	% of EM Exposure
Core/Beta	60.00%
Satellites	40.00%
Regional Specific	*20.00%*
Small Cap	*20.00%*
Dedicated EM Broad Hedge	---
Emerging Markets Debt	---
Emerging Markets Cash	---
Total Emerging Markets Exposure	100.00%

Broad Approach

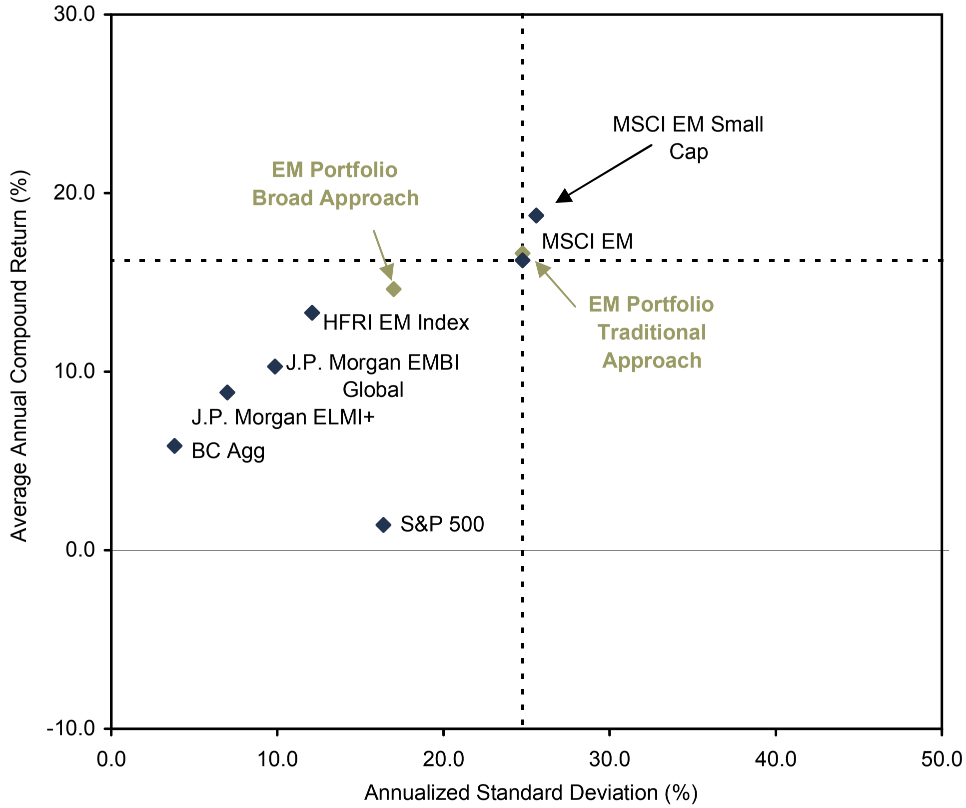
(assumes 2 times allocation of traditional approach)

	% of EM Exposure
Core/Beta	30.00%
Satellites	20.00%
Regional Specific	*10.00%*
Small Cap	*10.00%*
Dedicated EM Broad Hedge	30.00%
Emerging Markets Debt	10.00%
Emerging Markets Cash	10.00%
Total Emerging Markets Exposure	100.00%

Exhibit 17

Risk/Return Analysis for Hypothetical Portfolios

January 1, 2001 – December 31, 2010 • U.S. Dollar



	AACR (%)	Annualized Std Dev (%)	Sharpe Ratio*
Index Blends			
EM Portfolio Traditional Approach	16.6	24.8	0.66
EM Portfolio Broad Approach	14.6	17.0	0.75
Indices			
MSCI EM	16.2	24.8	0.64
HFRI EM Index	13.3	12.1	0.90
MSCI EM Small Cap	18.7	25.6	0.72
J.P. Morgan EMBI Global	10.3	9.9	0.81
J.P. Morgan ELMI+	8.8	7.0	0.91
S&P 500	1.4	16.4	0.02
BC Agg	5.8	3.8	0.89

Sources: Barclays Capital, Hedge Fund Research, Inc., J.P. Morgan Securities, Inc., MSCI Inc., Standard & Poor's, and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: Calculations are based on monthly data. The allocation of the broad approach portfolio is twice that of the traditional approach portfolio.

* The Sharpe ratio represents the amount of return over the risk-free rate that can be expected for each unit of risk accepted. To calculate this number, subtract the average T-bill return (risk-free return) from the manager's average return, then divide by the manager's standard deviation.