EMPEA

MAY 2016

Currency Risk Management Survey

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Foreword from AMEXCAP

Currency volatility has become a pressing issue over the last 18 months. The impact of the decline in crude oil prices and China's slowdown continues to be felt across the globe, hurting the currencies of nations that rely heavily on demand from the world's second-biggest economy. Mexico has not been immune, and last year the peso fell by 17% relative to the U.S. dollar, which is notable since the economy of Mexico does not demonstrate any real signs of weakness. Indeed, Mexico grew at a rate of 2.5% last year compared with the 1% rate seen across Latin America as a whole.

As private equity markets have become more integrated and limited partners invest in private equity funds across the globe, currency risk presents growing challenges for both limited and general partners. Exchange rates fluctuate, especially over the longer holding periods typical of private equity investments, and sometimes more so in emerging markets where FX markets are not as mature or as liquid. In emerging markets with flexible exchange rate regimes, movements occur continuously, and currency risk is present at various stages of the investment process. For example, a limited partner that commits to a foreign-currency denominated private equity fund will be affected between the date the commitment is made, and when the drawdowns take place, potentially creating a liquidity problem for the LP. Alternatively, if there is an appreciation of the LP's home currency relative to the fund's currency, it may lead to underexposure relative to an LP's target allocation.

In the case of an LP that has committed capital to a fund acquiring assets exclusively in the fund's own currency (e.g., U.S. pension funds investing in a peso-based Mexican fund), to the extent that the MXN/USD rate moves during the lifetime of the fund, returns may be reduced or even wiped out. Alternatively, currency movements could amplify returns in the fund's currency. Another example highlighting the complexity of currency exposure would be the case of a U.S. LP committing to a euro-denominated global buyout fund that invests part of its capital in Asia. While currency risk is typically hedged for any debt used in the acquisition, the equity part in the deal is usually not. As a result, LPs are doubly exposed to currency risk—both at the individual portfolio company level as well as at the level of the fund's overall returns.

For a general partner, the challenges are also serious. If the GP's fund economics are denominated in the LP's currency and the GP's currency depreciates, this could leave the fund with a hurdle rate that is impossible to obtain, creating a misalignment of economic interests. This is the condition that some funds are experiencing nowadays, and which occurs during certain global economic cycles. Unfortunately, this form of currency risk is very difficult to hedge; as cash flows are highly unpredictable in terms of their exact timing and size, and traditional instruments are largely inappropriate.

Furthermore, it is not very clear if LPs can successfully hedge currency risk in their emerging market private equity portfolios due to the nature of private equity investments and the unpredictability of cash flows. Notably, CalPERS abandoned a 22 year-old passive currency hedging program because they argued that it had practically no effect on the returns or volatility on their approximately US$280 billion pension fund.[1]

The Mexican Association of Private Equity and Venture Capital Funds (AMEXCAP) and its members are very interested in shining more light on this topic, and want to identify best practices among LPs committing capital to country-specific GPs whose funds and hurdle rates (as well as the underlying assets of the portfolio) are denominated in local currency. Among them:

- What would need to happen in order for LPs to commit in local currency?
- What is the LP perspective and rationale for agreeing (or not) to fund economics in local currency or their own currency?
- How are LP-GP relationships managed when fund economics are denominated in U.S. dollars but some type of hedging strategy is being implemented?
- What are the hedging strategies implemented by LPs or GPs to mitigate currency risk and who bears the burden of hedging? What has been the outcome of these strategies and what is their likelihood of continuing in the future?

With this in mind, we appreciate the opportunity to partner with EMPEA on the industry's first survey of emerging market private equity practitioners regarding the important issue of currency risk management.

María Ariza
CEO
AMEXCAP

[1] Randy Diamond, "CalPERS will abandon passive currency hedging: 22-year-old program contributed nothing to fund's bottom line," *Pensions&Investments*, 3 March 2014.

Currency Risk Management Survey Executive Summary

EMPEA's *Currency Risk Management Survey* is the first pan-emerging markets exploration of the impact of currency volatility on the private equity industry. The survey features the views of 146 industry practitioners, and aims to provide the industry with a better understanding of how both GPs and LPs[*] report and manage exchange rate movements in their EM PE portfolios—including decisions regarding whether, when and how to hedge.

Key findings from the *Currency Risk Management Survey* include:

Approximately 75% of respondents rank currency risk as an important or very important factor for their firm. **While 72% of LPs believe that ongoing currency volatility will lead to a delay in exits, only 31% of GPs do.**

Nearly 60% of respondents say exchange rate movements have subtracted value from their realized EM PE investments, with **several respondents estimating losses of US$500 million or more since 1 January 2014.**

Only one-third of respondents believe EM currency depreciations / devaluations create a worrisome misalignment of interest between GPs and LPs with respect to fund economics.

There is a **lack of agreement on preferred methodologies for translating local currency performance** into the fund's functional currency. While the IPEV Guidelines[†] advise using the spot rate as of the reporting date, only half of the respondents in the *Survey* indicate this as their preferred approach.

When the local currency differs from the fund currency, slightly more than half of LP respondents evaluate GPs by looking at the performance of both in parallel, while 46% primarily rely upon performance in the fund's currency. **In instances where an FX move causes a U.S. dollar fund's performance to fall below its benchmark, 75% of LPs indicate that they would consider a GP's local currency performance when evaluating a commitment or re-up.**

A majority of respondents—63% of LPs and 57% of GPs—do not construct their portfolios with currency risk as an explicit objective.

A majority of GPs neither hedge their investments nor exits. For those GPs that do not hedge entries, 25% say they elect not to do so, while 36% report that the price of hedging products is too expensive. Amongst the 45% of GPs that hedge exits, deal-contingent forwards are the most-preferred vehicle for doing so.

Approximately 65% of LPs do not hedge FX risk with their EM PE commitments, while roughly 11% run a currency overlay, which hedges the institution's exposures across their entire portfolio of assets and fund managers.

Approximately **one-third of LP respondents want their EM PE GPs to hedge FX risk.** When asked which types of EM PE funds they believe should hedge FX risk, LPs most frequently selected country-dedicated funds.

Amongst the 68 firms that have implemented FX hedges, less than one-third report that they have paid off, while 38% report that it is too soon to say.

[*] The breakdown of participants is 96 GPs and 50 LPs.
[†] For more information on the International Private Equity and Venture Capital (IPEV) Valuation Guidelines, see: http://www.privateequityvaluation.com.

Introduction

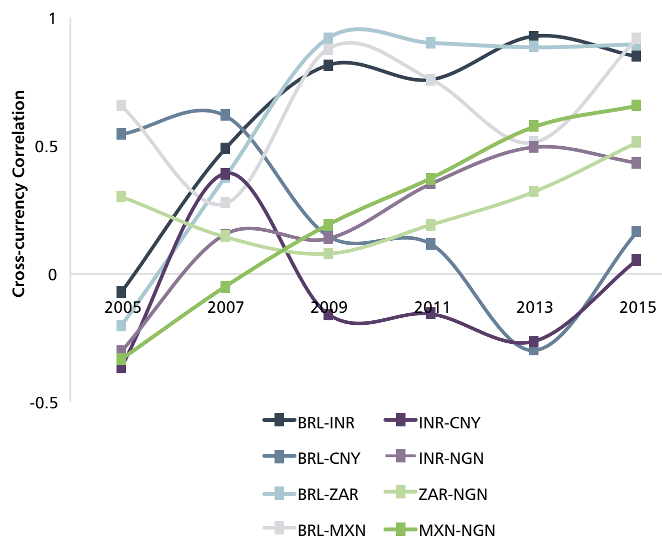
Long-term investors in emerging markets are no strangers to currency risk. Over the last 20 years, the Asian financial crisis, the Russian rouble crisis, and the Argentine and Brazilian crises—among others—have all demonstrated the inherent risks of currency depreciation and devaluation. Indeed, the severe economic and human consequences of past currency crises have prompted many governments to implement a number of structural reforms that have underpinned emerging markets' relative growth and financial stability over the last decade. The extraordinary scope and duration of expansionary monetary policies following the global financial crisis, however, injected an enormous amount of liquidity into the global financial system; and as the onset of the U.S. Federal Reserve Bank's tightening cycle reverses this process, currencies are absorbing a large degree of the shock, creating challenges for the emerging markets private equity community.

The Trend Is Your Friend Until the Bend at the End

An inflection point in global liquidity conditions occurred in 2013, when the U.S. Federal Reserve Bank began tapering its asset purchases (known as Quantitative Easing), thus reversing a decade-long declining trend line in the value of the U.S. dollar (see Exhibit 1). At the time, market participants observed heightened volatility across emerging market asset classes, and the so-called "Taper Tantrum" led to reductions in net private capital inflows in emerging markets—particularly with respect to bank loans.[2]

The U.S. dollar has appreciated rapidly over the last 18 months and is currently stronger than it has been at any time since 2002. The strong dollar has coincided with increased FX volatility, lower oil prices and weaker EM currencies. With respect to volatility, Ashvin Chhabra, Chief Investment Officer of Merrill Lynch Wealth Management, has determined that currency volatility is at its highest levels for non-crisis periods over the last 20 years.[3] Moreover, this volatility is occurring in an environment in which many free floating or lightly managed EM currencies have become more correlated with one another, creating potential risks for pan-EM and regional funds that previously may have benefitted from greater diversification (see Exhibit 2).

Exhibit 2: Cross-currency correlations have been increasing over the last decade—particularly since 2013



Source: IMF.
Note: Representative rates, with two-year average correlations. Data as of 15 February 2016.

Exhibit 1: The U.S. dollar has broken a decade-long weakening trend and has hit levels not seen since 2002

Source: Federal Reserve Bank of St. Louis.
Note: Jan 1997=100. Data as of 13 April 2016.

[2] For an earlier treatment of this topic, see the EMPEA Brief, "European Bank Deleveraging: Opportunities and Challenges for EM PE Investors," October 2012.
[3] Ashvin B. Chhabra, "A Sleeping Giant Awakens," CIO Reports: *The Monthly Letter,* February 2015.

While U.S. dollar strength has historically been associated with low oil prices (and vice versa), the surge in U.S. shale production led to a glut in supply, and amplified the decline in the price of oil beginning in 2014. When married with the slowdown in China and the broader softening of demand for products in the commodity complex, the currencies of natural resource exporters and countries that rely on oil revenues—such as Brazil, Mexico, Nigeria and Russia—have depreciated sharply against the U.S. dollar (see Exhibit 3).

An "Ever-present" Risk

In EMPEA's 2014 *Global Limited Partners Survey*, currency risk ranked as the top macro-related concern amongst LPs, with 21% of respondents labeling it as the "most concerning risk" (followed by an economic slowdown in China). They may have been right to be concerned. To wit, according to EMPEA data, nearly 25% of the capital invested in EM private capital deals between 2013 and 2015 has been deployed into countries that have experienced a depreciation of 30% or more in their currencies against the U.S. dollar. The question remains whether the worst is now behind us, or if tepid global growth could lead to competitive devaluations. In the process of drafting this report, Janet Yellen, Chair of the Board of Governors of the U.S. Federal Reserve System, signaled that global economic weakness may present risks to the U.S. economic / inflationary outlook, implying a "flatter" curve for policy normalization (i.e., fewer rate hikes in 2016), thereby potentially reducing pressures on EM currencies.

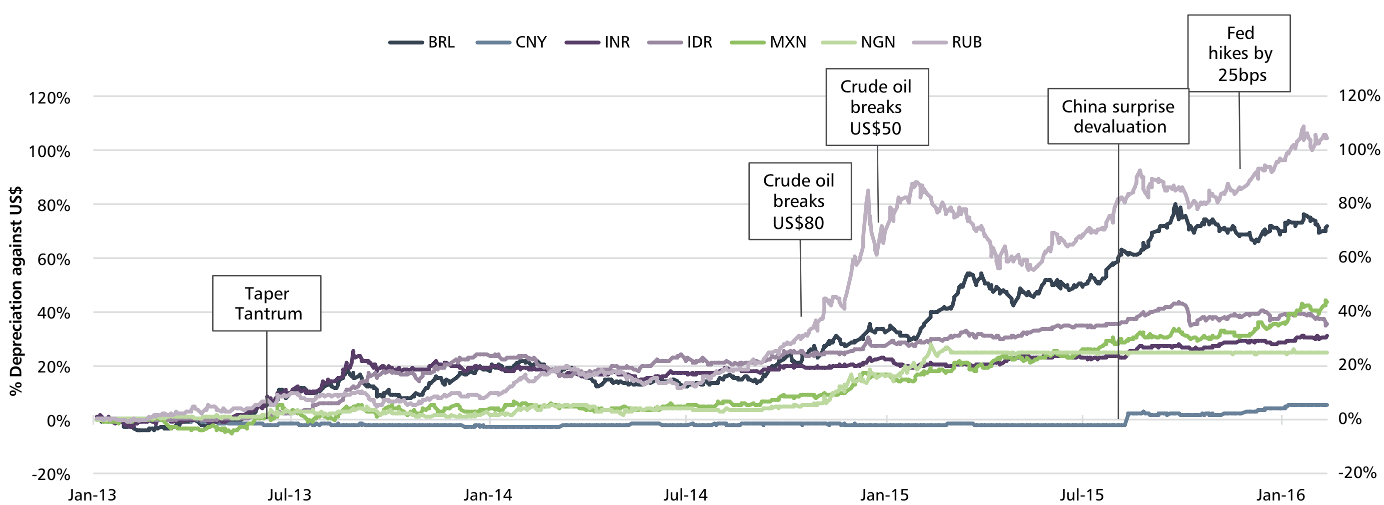
Be that as it may, 69% of respondents in our *Currency Risk Management Survey* believe FX risk has increased compared to three to five years ago; and as one survey participant notes "devaluation risk is ever-present in our investments." For other investors, FX risk may inhibit commitments to EM PE altogether—in EMPEA's 2016 *Global Limited Partners Survey*, currency risk was cited as one of the two largest deterrents to investing in the asset class in seven out of ten markets / regions.[4]

Outline of the Report

This report blends quantitative findings from a survey of 146 industry professionals undertaken between 7-22 March 2016, with qualitative insights derived from in-person and telephone interviews with LPs, GPs and service providers (see Participant Demographics on page 20).

Following a thought leadership contribution from Tom Speechley, Partner and Head of Global Markets at The Abraaj Group, this report opens with an assessment of how important currency risk is to industry professionals and to what extent practitioners believe FX volatility will impact investment and exit activity. It then turns to how practitioners prefer to translate local currency performance into a reporting currency, as well as how LPs evaluate the performance of GPs in light of currency volatility. This section also includes views on whether carried interest terms should be adjusted based on GPs' local currency performance. The third section explores whether and how firms hedge their FX exposure. Finally, the report concludes with some thoughts on what all of this means for the industry writ large.

Exhibit 3: Low oil prices and anticipation of Fed rate hikes weakened a number of EM currencies



Sources: IMF and Investing.com.
Note: Representative rates for the period 1 January 2013 through 15 February 2016. Data as of 15 February 2016.

[4] Currency risk ranked as the largest deterrent in Latin America ex-Brazil, Southeast Asia and India, and the second-largest deterrent in Russia / CIS, Turkey, Brazil and Sub-Saharan Africa.

Managing Private Equity Currency Risk in Global Growth Markets

Mission Impossible or Holy Grail?

Tom Speechley, Partner and Head of Global Markets, The Abraaj Group

Last year's fluctuations in global currencies brought currency risk into focus for LPs and GPs, many of whom invest not only in developed markets but also in growth markets across Asia, Africa, the Middle East and Latin America. Expectations of a stronger U.S. dollar, backed by higher U.S. interest rates, depressed the values of currencies around the world. The Fed, in effect, has been setting monetary policy for many other countries since the advent of Quantitative Easing. Moreover, current monetary policies increase the chances of ongoing currency turmoil during 2016.

The low frequency and uncertainty of the timing of cash flows in private equity, as well as the relatively low liquidity and market depth of financial products in many global growth markets, create challenges for investors wanting to hedge their exposure. However, where traditional hedging solutions may not offer a solution, GPs should not throw in the towel. Once one recognizes that currency depreciation does not impact all companies in the same way, much can be done in practice to manage the exposure.

It should all start at the strategy development stage and, though always subject to the limits imposed by the capital available to the GP, diversification will inevitably offer benefits. When carefully diversified, the impact of currency depreciation can be minimized. For example, the weighted average depreciation of Abraaj's portfolio currencies across more than 30 countries in 2015 was less than the depreciation of the euro over the same period. The recent depreciation cycle has not been a growth market phenomenon but an "everything but the U.S. dollar" one. For example, during 2015 the Canadian dollar depreciated 19% against the U.S. dollar, roughly two times the move in the Indonesian rupiah (though the latter generates more headlines).

More fundamentally, an investment strategy can be tailored toward companies that are better able to weather currency depreciation. At one extreme, a company with a local currency cost base and dollarized revenues will benefit from depreciation against the dollar, but such scenarios are rare in practice outside of a few specialized sectors. More commonly, a company will have a mix of local currency and dollar-linked input costs with revenues denominated largely in local currency. Such a company needs a mechanism to operationally hedge the mismatch, such as alternative supply channels or pricing power to pass on the implied cost of depreciation to their consumers as inflation.

The point, as with most factors impacting the risk-return realities of private equity, is that microeconomic performance is still at the heart of a private equity investment's success. Therefore, when investing in a company, two types of currency-related risk need to be differentiated. Currency risk on fund-level transactions needs to be managed separately and independently from the currency risk on operating performance, which is specific for each partner company. The most significant fund-level transactions in private equity are the purchase, sale and periodic dividend flows, and conventional short-term hedges can mitigate the worst impacts of volatility during these events.

Managing the currency risk on operating performance, however, requires additional systems and tools. Traditional hedging solutions are simply not practicable in most growth markets over the life of an investment. Starting from the initial proposal to the investment committee, the company's sensitivity to currency risk depreciation needs to be analyzed and assessed. Each investment opportunity has a different revenue / cost base and balance sheet structure with exposures that can create currency mismatches. Each of these elements affects the company's sensitivity to currency depreciation. Sensitivity analysis at an individual investment level also helps diversification at the fund level. Due consideration of currency assumptions can ensure that a buffer is embedded in ex-ante returns analysis, helping to hold the notional risk at a manageable level. In the final analysis, the growth profile of a target company is arguably the most important aspect to get right. Companies with expanding revenue bases and increasing productivity will inevitably fare better, and the best companies can outgrow whatever the financial markets throw at them over a typical investment cycle.

Put another way, a private equity investor can view currency risk differently from a trader or a macroeconomist. The latter will ultimately default to observations of the nominal exchange rates impacting a country's currency and the reasons behind any volatility—such as current account deficits, commodity revenue volatility or Fed policy—but what truly matters for a private equity investor is the inflation and price-adjusted currency change, since this will be reflected in the performance of the specific companies in which it has invested. A company's pricing power plays a key role in creating U.S. dollar-based returns. For example, even though the Ghanaian cedi lost more than 50% of its value against the U.S. dollar over a period of 24 months, our investment in a consumer product company operating in the country was able to increase its revenues in U.S. dollar terms by 24% during the same period, following a 25% price increase carefully timed not to cannibalize sales volume growth.

Other angles must also be considered, with vigorous legal and compliance analysis essential to avoid taking risks where there should be limited risk appetite. Due to the nature of certain growth markets, unsuspecting GPs can be faced with jurisdictions where there are strict controls on currency transactions either internally within the jurisdiction, or externally with other jurisdictions.

Investing in global growth markets has many challenges when it comes to managing currency risk. GPs who take a holistic approach that differentiates company-specific currency risks from those that are related to macroeconomic factors, who are aware of the limitations of financial market products, who have strong systems and processes in place to understand and price the risk, and who have a flexible investment mandate are the ones who will be turning the higher risks they are taking into higher returns.

Importance of Currency Risk

“While volatility has increased, the underlying risk has remained the same. It’s the LPs’ perceptions of the market that have changed.

– Global Fund Manager

“You either invest in emerging markets or you don’t. If you do, you live with the currency risk.

– Private Pension Fund

“Much of the bad news is behind us. Emerging market currencies have recently experienced a significant devaluation, which provides a good set up for the next couple of years.

– Global Fund Manager

Importance of Currency Risk

For most industry practitioners, currency risk is top of mind, with 73% of all survey participants ranking it as an important or very important factor for their firm. However, GPs appear to be more concerned than LPs (see Exhibit 4). To illustrate, 47% of GP respondents consider currency risk to be very important compared to only 23% of LPs, while only 21% of GPs consider currency risk to be not important or somewhat important compared to 40% of LPs.

Currency is especially pertinent for GPs that do not raise local currency funds, 52% of which report currency risk as very important compared to 36% of GPs that raise local currency funds. As one West Africa-focused GP explains, "We raise funds in U.S. dollars and invest in the local currency, so our returns are affected by changes in the local FX rate relative to the U.S. dollar."

Notably, despite the possibility of currency depreciation and devaluation negatively affecting returns and subsequently carried interest for the GP, in the case of U.S. dollar funds, 65 of the 139 respondents (47%) do not think that EM currency depreciation creates a worrisome misalignment of interest between LPs and GPs with respect to fund economics (see Exhibit 5). As one India-focused GP explains, "The currency mismatch is known upfront to all parties, and portfolio management strategy is made accordingly."

Nonetheless, 46 respondents do see a misalignment, and these respondents represent a blend of LP types, as well as fund managers active across multiple geographies and strategies. Reflecting on a worst-case scenario, one South Africa-focused fund manager offers, "GPs can do everything right and fall below hurdles due to currency depreciation, which dilutes the incentive to 'rescue' funds where carry is significantly underwater."

Exhibit 4: How important of a factor is currency risk to your firm?

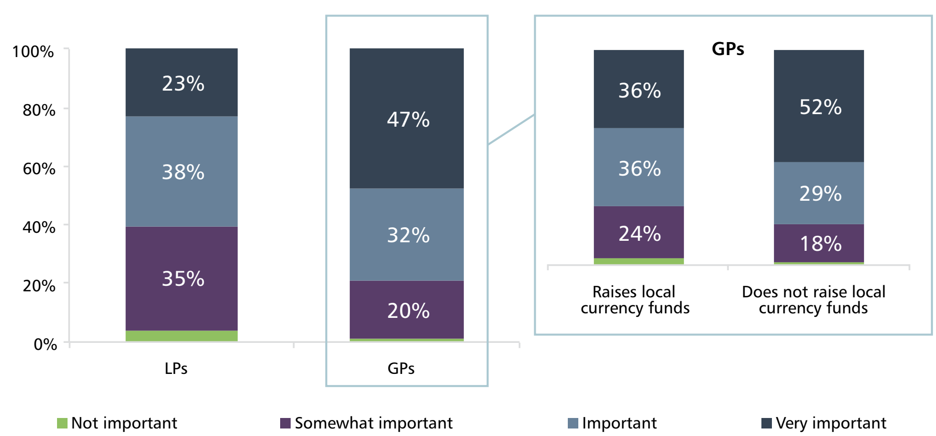
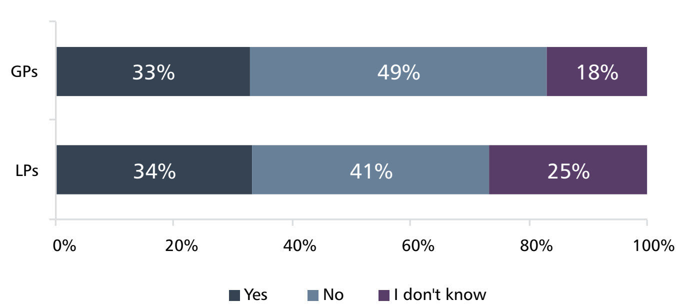


Exhibit 5: In the case of a U.S. dollar-denominated fund, do EM currency depreciations against the U.S. dollar create a worrisome misalignment of interest?



> "We want to make sure that the fund managers we invest with have an awareness of and strategy for dealing with currency risks.
>
> *– Fund of Funds*

Historically, currency volatility has had a negative impact on the majority of GP respondents. For firms that have invested in EM PE for five years or more, 58% of respondents say that exchange rate movements have subtracted value (see Exhibit 6), with several recording estimated total dollar value losses of US$500 million or more since 1 January 2014. Furthermore, a majority of respondents (69%) report that currency risk has increased compared to three to five years ago (see Exhibit 7).

Nevertheless, respondents (68% of LPs and 78%) of GPs do not think that EM currency volatility will delay their commitments or investments over the next 12 months (see Exhibit 8). However, 72% of LP respondents do expect to see a delay in exits due to currency volatility compared to only 31% of GPs (see Exhibit 9).

> "Being a dollar-denominated private equity fund that focuses on investments in South America, currency risk is crucial not only for the foreign exchange translation impact on U.S. dollar valuations and returns, but also for its operational impact on some of the businesses (e.g., businesses that import components in U.S. dollars but sell end-products in local currency).
>
> *– Regional Fund Manager*

Exhibit 6: For EM PE investors of 5+ years, what impact have exchange rate movements had on your realized EM PE investments?

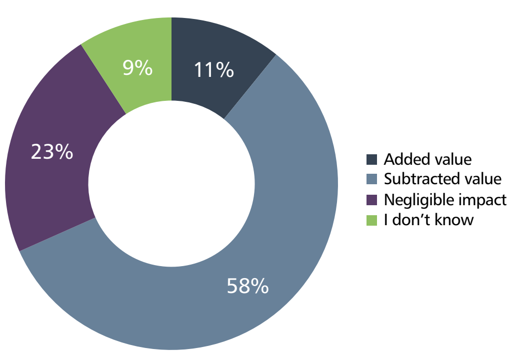


Exhibit 8: Due to EM currency volatility, do you expect to delay your commitments to EM PE funds / investments over the next 12 months?

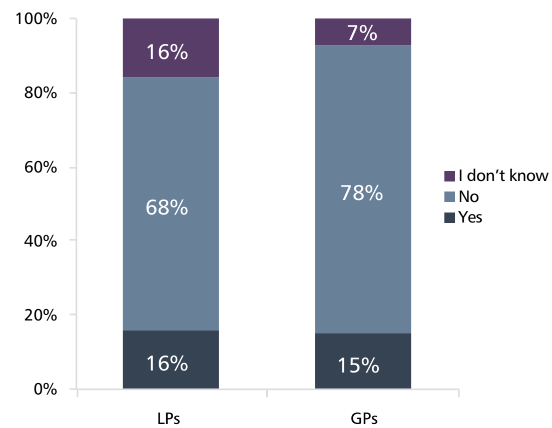


Exhibit 7: How does EM currency risk compare to 3-5 years ago?

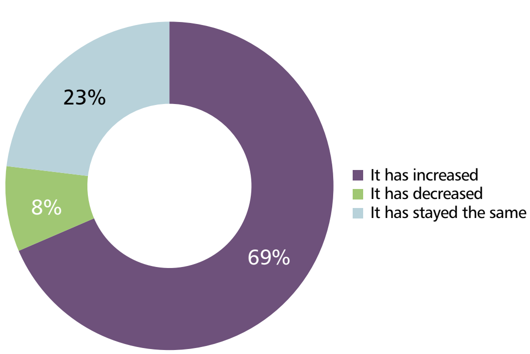
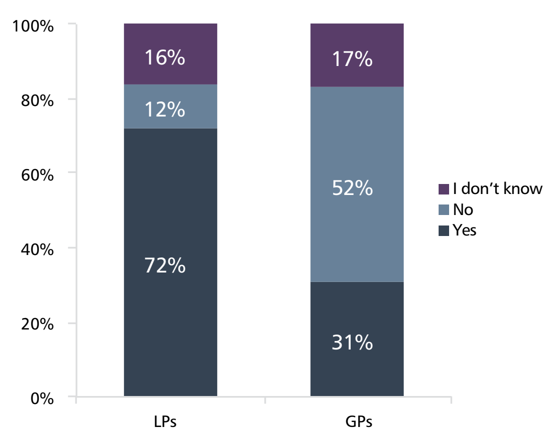


Exhibit 9: Due to EM currency volatility, do you expect to see a delay in exits?



Reporting & Evaluation

“We will rarely fault a GP for a significant unexpected move in a currency. We generally feel like we should shoulder the blame for big currency-related events in our portfolio. That said, currency events more often than not are tied to broader economic cycles, and if we have a GP that is plowing money into an overheated market that subsequently collapses, and one of the byproducts is currency depreciation, then we are going to be giving them grief for reasons that have less to do with the currency and more with their ability to manage vintage risk.

– Endowment / Foundation

“When U.S. dollar and EM currency performance are both presented, it helps us to see better the alpha versus the beta. If the manager emphasizes local currency performance and obscures U.S. dollar performance, that reduces our trust in the manager. On the flip side, should the GP be rewarded if the FX works in favor of the fund through no alpha creation by the GP?

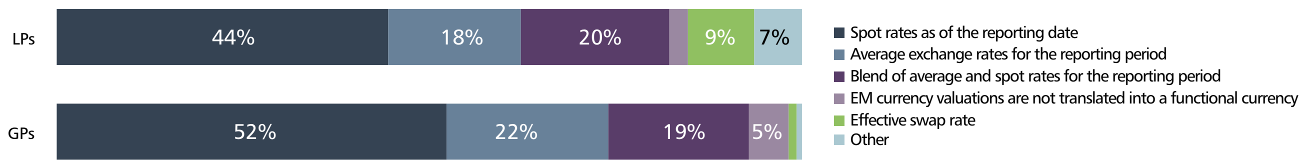
– Family Office / Private Trust

Reporting and Evaluation of Fund Managers

Volatile FX movements across a number of emerging markets have led some managers to seek guidance on the appropriate methodology for valuing and translating the fund's investments for quarterly and annual reports. The December 2015 edition of the International Private Equity and Venture Capital (IPEV) Guidelines suggests that in instances "where the reporting currency of the fund is different from the currency in which the investment is denominated, translation in the reporting currency for reporting purposes should be done using the bid spot exchange rate prevailing at the measurement date."

A majority of GP respondents and slightly less than half of LP respondents indicate that this is their preferred approach for translating local currency performance into the functional currency (see Exhibit 10). However, professionals employ a variety of approaches, including the use of average exchange rates for the reporting period (18% of LPs and 22% of GPs), and a blend of average and spot rates depending upon whether the items were related to the cash flow statement or balance sheet (20% of LPs and 19% of GPs). These differing methodologies can have a material impact on how a company's performance is communicated.

Exhibit 10: Preferred methodology for translating local currency performance into the fund's functional / reporting currency



Evaluation of Fund Managers

While there is generally broad agreement that FX risk is exogenous to the GP, the question remains whether it impacts how LPs evaluate the performance of the fund manager. We sought to ascertain how LPs evaluate GP performance, and determine whether currency volatility impacts LPs' decisions to commit or re-up to a fund. With respect to evaluation, a slim majority (52%) of LP respondents examine a GP's performance in the fund and local currencies in parallel (see Exhibit 11). As one DFI representative confides, "We track gross and net IRRs in local currency and U.S. dollars because we have to take both of them into account. The local currency performance tells you what's driving the return: are revenues growing? Margins? Is it multiple expansion? But we also want the GPs to be cognizant that they may need to adjust their strategies going forward since we are dollar investors, and as a DFI we are trying to attract more dollar investors into these markets."

Forty-six percent of LP respondents say that they primarily evaluate performance in the fund's currency. Nevertheless, when asked if they would consider a GP's local currency performance when evaluating a commitment or re-up if FX volatility were to take a fund below its benchmark, nearly 70% of LP respondents indicate that they would (see Exhibit 12). These respondents represent a wide array of institutions, including funds of funds, DFIs, family offices / private trusts, insurance companies and corporate pension funds. Three of the four respondents who indicate that they would not commit capital to a fund whose returns were below its benchmark due to an adverse FX move are representatives from public pension funds.

Exhibit 11: How do you evaluate GPs' performance when the fund is denominated in a different currency than the one used where the firm is investing?

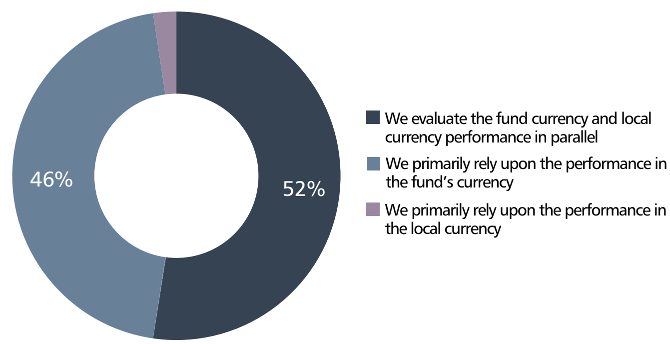
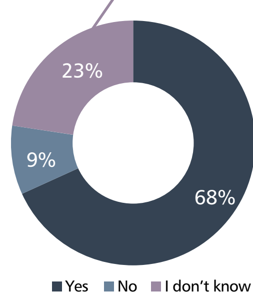


Exhibit 12: If an FX move were to erode the U.S. dollar returns of a fund below its benchmark, would you consider the GP's local currency performance when evaluating a commitment or re-up?

We would evaluate on a case-by-case basis. Absolute returns are most important, but we understand the difference between macro risk and a manager's value creation. *– Endowment / Foundation*



We consider both currencies, but ultimately we need to deliver U.S. dollar returns to investors and our carry is dependent on U.S. dollar returns. *– Fund of Funds*

We are measured in U.S. dollars so it is the primary benchmark; however, when considering re-ups, local currency returns carry weight and are likely a better predictor of future returns. *– Endowment / Foundation*

A re-up really depends on our outlook for that country and the manager's investment thesis. *– Family Office / Private Trust*

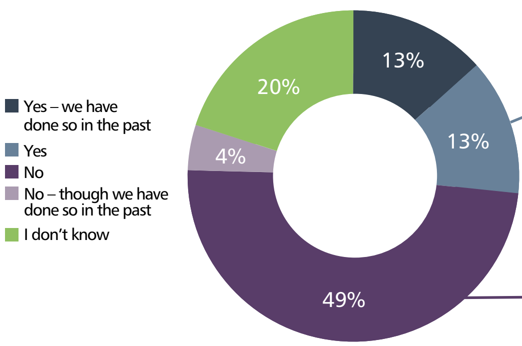
Local currency performance is relevant for a rearview mirror context, but the current local currency risk and devaluation expectations also affect projected U.S. dollar returns and the required projected IRR hurdle rates. *– Fund of Funds*

Currency Risk and Carried Interest

While only 33% of LP and GP respondents believe that EM currency depreciations against the U.S. dollar create a worrisome misalignment of interest with respect to fund economics (see Exhibit 5), there can be instances where FX volatility can take a fund below its water line and thus reduce or eliminate carried interest payments to the GP. This can have enduring consequences. As one respondent notes, "If a GP is unable to reward the performance of their team, it may impact their ability to retain talent over the long term."

We wanted to explore whether LPs in U.S. dollar-denominated funds would be open to paying carry based on local currency performance. Roughly a quarter of LP respondents indicate a willingness to consider carried interest based on local currency performance, while slightly more than half report that they would not be willing to do so (see Exhibit 13).

Exhibit 13: Would you consider agreeing to carried interest based exclusively on a GP's local currency performance?



We would consider it; in doing so we would look for a demonstrated ability to achieve high enough returns in local currency to offset possible devaluation expectations, and / or a demonstrated ability to select sectors and companies that mitigate FX risk (e.g., contracts in hard currencies, export revenues, etc.). – *Fund of Funds*

It would depend upon the investment thesis and the quality of the GP's team. – *Public Pension Fund*

We would look for significant investment from LPs in local currency, or a high enough hurdle rate in the local currency. – *DFI*

We would not agree to local currency carry because the GP has to manage the currency risk through portfolio management—their selection of companies, whether they have natural hedges, do they have pricing power, etc. If we take away the incentive to manage the currency risk of the portfolio, then they're not going to think about it. They would just do whatever is best for them in local currency. – *Fund of Funds*

We are unlikely to accept this risk. Our view is that the GP has the role and visibility on the timing of cash flows to take on managing the FX risk. – *Family Office / Private Trust*

Our returns are calculated in U.S. dollars, so GPs should be paid in U.S. dollars to maintain an alignment of interest. – *Public Pension Fund*

"It's a constant debate whether we should consider carried interest based on local currency performance. I understand the GP's perspective, but we disclose our portfolio publicly, and it could come back and bite us if we were paying out profit when we didn't earn any ourselves. I might be open to it, though, if the waterfall was structured well and if there were clawbacks in instances where the GP might be reaping profits from currency upside—we would want to share in that process, and the reverse would be true if exchange rates moved against them.

– Institutional LP

WHAT WOULD YOU LOOK FOR IN A GP / LPA TO CONSIDER PAYING CARRIED INTEREST BASED ON LOCAL CURRENCY PERFORMANCE?

"The GP has no control over FX, but the GP does have control over the portfolio companies' FX exposure. When it comes to evaluating the GP, we would ask ourselves: (1) is it reasonable to expect the GP to target a local IRR of, say, 5% more than a normal U.S. dollar return in order to cover the FX risk? (2) Is some of the FX loss the GP's fault? If so, is there a way to adjust the GP's carry accordingly?" – *Fund of Funds*

"We would look for higher preferred return hurdle rates with graduated carried interest (i.e., increased carry if net returns exceed base expectations)." – *Family Office / Private Trust*

"Strong GP clawback clauses and / or some form of equalization so that the LPs do not inherit the entire magnitude of currency risk." – *Fund of Funds*

"The hurdle would have to be adjusted by inflation rates, so that the fund manager doesn't have a free ride." – *Public Pension Fund*

Hedging Currency Risk

> Everywhere I've been, people have talked about hedging. It's just not possible. At the end of the day, if you were to commit, say, US$10 million to a fund, and then hedge it for five years due to interest rate differentials, the cost ends up being US$15 million. It defeats the purpose.
>
> *– Private Pension Fund*

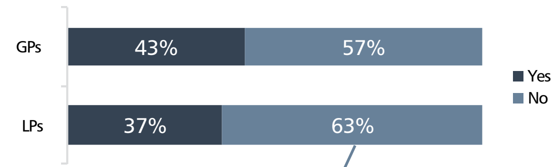
> It may be detrimental to returns in the long run to hedge currency risk with currency derivatives. However, a balanced approach to portfolio design should be used to hedge currency risks (i.e., investing in multiple currencies and allocating some capital to investments with U.S. dollar or euro revenues).
>
> *– DFI*

Mitigating Risk Through Portfolio Construction

A majority of respondents—57% of GPs and 63% of LPs—do not construct their portfolios with currency risk mitigation as an explicit objective (see Exhibit 14). Perhaps the extent of recent volatility has caught investors by surprise. As one DFI representative explains, "This is a very new phenomenon and it has really been something that's hit us in a critical way in the last 18 months. Before it was actually going the other direction. As a dollar investor you were benefiting from the emerging market currencies against the weak dollar. This is not something that we've had to build into our investment strategy until very recently."

For those GPs and LPs that have explicit investment criteria around risk mitigation, a variety of strategies are used. Some focus on investing in companies with U.S. dollar or other hard currency revenues, such as export-oriented businesses, while others attempt to limit the debt exposure in their portfolio companies. Participants also raise diversification by sector, region and time horizon as alternative strategies to mitigate FX risk.

Exhibit 14: Do you construct your portfolio with currency risk mitigation as an explicit objective?



In regard to mitigating risk, it's a factor of both broad portfolio construction as well as manager selection, but we don't have any sort of formal framework or exposure guidelines that we could build the portfolio towards. — *Endowment / Foundation*

For EM funds, the GP has to identify who's responsible for FX management and report regularly. — *Family Office / Private Trust*

> In general, it is just too difficult to hedge these exposures. You could run an overlay for the reserve currencies, but many of the companies based in developed markets tend to generate revenue globally, so they are naturally hedged. When you enter into emerging market funds seeking country exposure, it's often for diversification purposes. If you hedge, you reduce your diversification.
>
> *– Private Pension Fund*

A SAMPLE OF GP AND LP PORTFOLIO CONSTRUCTION STRATEGIES:

"We look for companies that have natural hedges and / or a proven ability to pass through the impact of foreign currency changes." *– Pan-emerging Market-focused GP*

"We do not usually invest in companies with significant liabilities in U.S. dollars as long as their revenues are in an EM currency." *– Latin America-focused GP*

"We utilize a local cost structure and focus on export-oriented businesses, but are careful in the case of reversals, which in the past have killed portfolio companies that relied on particular currency rates in their model. Ideally we want to have flexibility and diversification." *– South Africa-focused GP*

"It's more the diversification risk that we look for. When we're looking at the regional and sub-regional funds, then we look at how these individual currencies move and dance together. What we're looking at is the risk management that the fund manager does in constructing their own portfolio. We also look at whether or not the GP has thought about currency risk in the construction of their own portfolio or are they just going after every lead in front of them." *– Fund of Funds*

"We conduct a thorough analysis on inflation and currency movement differentiation." *– Bank / Asset Manager*

"We consider diversification across countries, types of economies (e.g., commodity vs. manufacturing) and vintages. We also encourage GPs to reduce FX imbalances in their portfolio companies." *– Fund of Funds*

GPs: Hedging at Entry and Exit

The majority of GPs surveyed neither hedge their investments into nor their exits from their portfolio companies. With respect to capital deployment, roughly 60% of GPs say they never hedge entries (see Exhibit 15). When asked why, the prohibitive cost of hedging instruments is most frequently cited, while 17 respondents note that certain hedging options such as deal-contingent forwards, vanilla options or similar instruments are not available in their markets (see Exhibit 16). Notably, 19 GP respondents elect not to hedge their entry prices.

Exhibit 15: Do you employ deal-contingent forwards, vanilla options or other instruments to hedge entry prices?

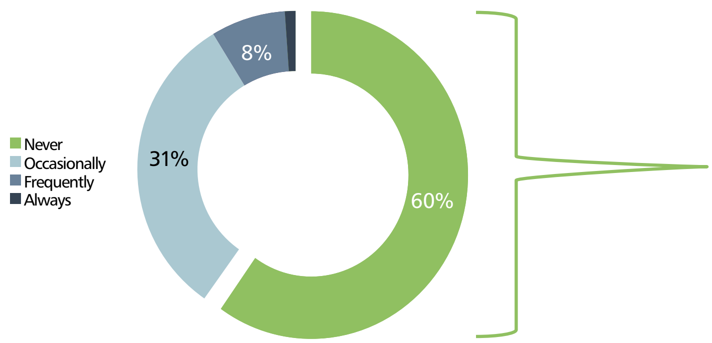
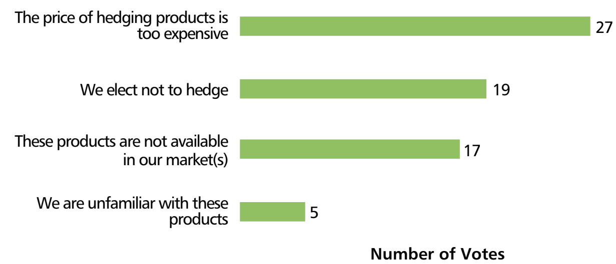


Exhibit 16: Why haven't you used instruments to hedge entries?



Note: Respondents were asked to select all that apply.

GP respondents are slightly more likely to hedge currency risk at exit, though 55% of GPs relay that they never hedge their exits, while 36% do so occasionally (see Exhibit 17). With respect to favored instruments, deal-contingent forwards received 26 GP votes, followed by collars (seven votes) and in-the-money and out-of-the money puts (four votes each; see Exhibit 18). Other strategies employed by GPs include the use of forwards, synthetics and forward swaps.

Exhibit 17: Do you hedge currency risk at exit?

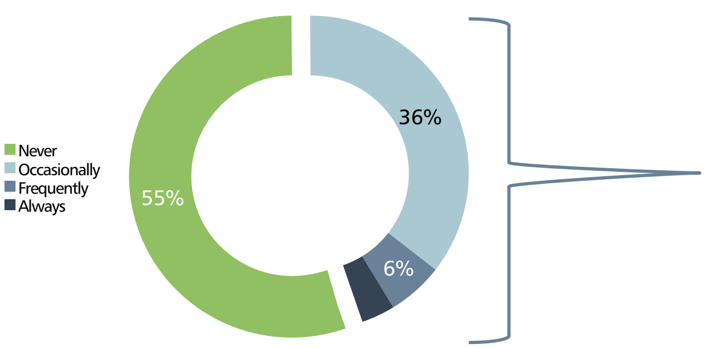
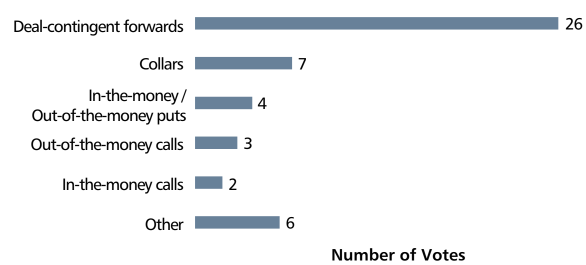


Exhibit 18: How do you prefer to hedge exits?



Note: Respondents were asked to select all that apply.

GPs: Hedging over the Holding Period

Unlike entries and exits, where the size and timing of cash flows can be reasonably estimated within a short window, hedging throughout the holding period of an investment can present a number of challenges. Fully 64% of GP respondents indicate that they never hedge currency risk during the holding period of investment—including for dividend payments—while 27% occasionally hedge (see Exhibit 19).

For those GPs that do hedge, they employ a wide variety of instruments (see Exhibit 20), with collars being the preferred hedging instrument. In addition to the options ranked in Exhibit 20, some GPs indicate that they make underlying hedges at the company level, hold interest payments in escrow and buy or sell volatility to create synthetic put or call options.

For those GPs that do not hedge, the cost of hedging is ranked as the primary inhibitor (receiving 65 votes), followed by the lack of suitable hedging products in their markets (42 votes; see Exhibit 21 for ranking). Some respondents note that their Limited Partner Agreements restrict hedging activities to short-term known cash flows, thus largely preventing them from entering derivatives contracts throughout the holding period of an investment.

Exhibit 19: Do you hedge currency risk during the holding period of your investment?

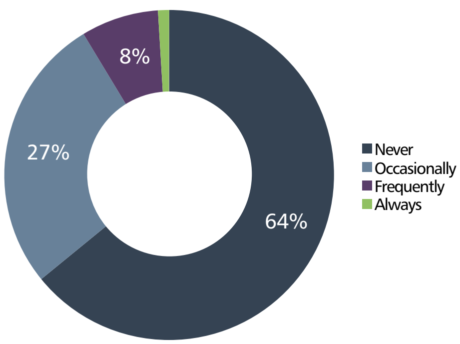
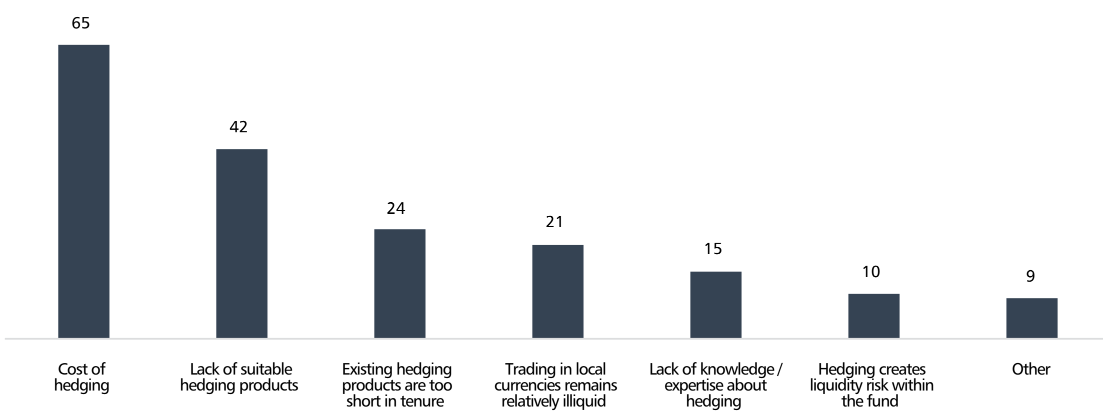


Exhibit 20: Which hedging instruments do you prefer to use?

1	Collars
2	Out-of-the-money puts
3 (tied)	Rollover forwards on a 3- or 6-month basis
3 (tied)	Rollover forwards on a 9- or 12-month basis
5	Out-of-the-money calls
6 (tied)	In-the-money puts
6 (tied)	In-the-money calls

Exhibit 21: Inhibitors to hedging currency risk during the holding period of an investment



Note: Exhibit shows number of respondents selecting the answer. Respondents were asked to select all that apply.

LPs: Perspectives on Hedging

A clear majority (64%) of LP respondents do not hedge FX risk with their EM PE commitments, while roughly 11% run a currency overlay (which hedges the institution's exposures across their entire portfolio of assets and fund managers), and a similar number hedge some of their fund commitments (see Exhibit 22).

One experienced pension fund investor relays, "In general it is just too difficult to hedge these exposures. You could run an overlay for the reserve currencies, but many of the companies based in developed markets tend to generate revenue globally, so they are naturally hedged. When you enter into emerging market funds seeking country exposure, it's often for diversification purposes. If you hedge, you reduce your diversification."

In addition, one endowment representative notes, "We have found that it's just too expensive to hedge, particularly in some of the far-flung emerging markets. Where possible, we will try to do a dollar-cost average over a commitment period, but even when we looked at overlays they didn't appear to be as effective as we thought they might be."

Exhibit 22: Do you hedge FX risk with your EM PE commitments?

FX risk is an explicit risk that we want to take on; it is part of our investment thesis that the underlying currency will appreciate against the U.S. dollar over the life of the investment. – *Family Office / Private Trust*

Our experience is that over time, the currency losses are partly recouped by the higher growth of the investee companies and inflation in local FX. It is more important to focus on well-positioned companies with pricing power that can increase prices in line with inflation. – *DFI*

"Invest to the Best of Your Ability and Create the Most Alpha that You Can"

A Conversation with Mounir Guen, CEO of MVision Private Equity Advisers

How are LPs approaching the issue of currency risk in light of the volatility we've seen over the last 18 months?

There are different philosophies toward the question of FX risk. In some cases, investors believe that they are in it for the long term, and that over the long term currency risk washes out. But they are actually being reviewed over the short term. So while the planning itself might have a long-term structure, the individuals who are working with the exposure are assessed on their performance on a quarterly basis, which then leads to discussions of comfort with economic dynamics and potential risks.

From the GP perspective, have you seen any best practices with respect to currency risk management?

It's extremely difficult to protect yourself because you can't really use structured instruments to manage your portfolio. If you look at general partners that are active in reserve currency markets, you will see that they have quite dynamic policies at the portfolio company level, but not at the fund level. In my experience, when I have seen GPs employ hedges at the fund level, in most cases those hedges have actually taken out a large chunk of the performance, because the instruments are extremely expensive. That's not to say that there's nothing to be done—you can work at the company level to mitigate the impact of FX movements, for example by matching revenues to costs and liabilities.

In some developed markets, such as Australia and Japan, GPs raise local currency funds and earn carry based on the local currency performance of their investments. Why don't we see more LPs agreeing to commit to funds and pay carry in local currency in emerging markets?

This is an interesting question, because a lot of emerging market and new economy funds are in U.S. dollars; and that creates a potential risk at the waterfall level for the general partners. What you will find is that most GPs are open to living with that risk.

Part of the nuance with countries like Japan and Australia is that local investors can invest with local general partners that perform well without having to worry about the fluctuation of the currency. They can truly just focus on the alpha—they don't have exogenous factors that can impact their final return profile. The reason that these funds earn carry in local currency is because almost all of their capital comes from local investors.

What advice would you give to industry participants who are currently battling FX volatility in their unrealized portfolios?

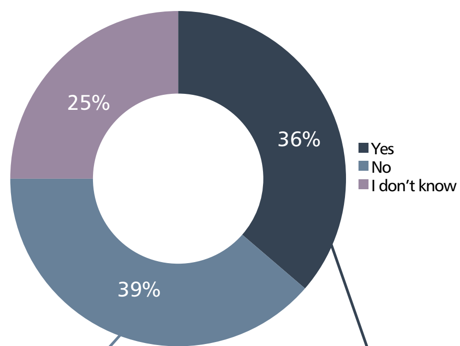
The best practice is to have a consistent, regular return and have repeat investors who, over the long term, can wash through this. Unfortunately, that's not always the case. I think the only policy you can follow is: invest to the best of your ability and create the most alpha that you can. If you start becoming too financially focused, you could impact the portfolio by creating a drag during good years and maybe get the hedge wrong. Then it's unexplainable. The investors won't tolerate it. They won't tolerate you making money off the hedge, and they will never tolerate you losing money on the hedge.

LP Views on GPs' Use of Hedges

When it comes to LP views toward GPs' use of hedges, the findings are a bit more mixed—the yes and no votes are split virtually equally, with a quarter of respondents answering "I don't know" (see Exhibit 23). Most of the respondents answering in the affirmative were representatives from select DFIs, while the "no" respondents represent a blend of commercial and multilateral investors.

Amongst those LPs who answered in the affirmative, we asked them to select which types of funds—defined by geographic remit—they want to hedge currency risk. Country-dedicated funds received the most selections (11), followed by regional funds (8; see Exhibit 24). This is a somewhat ironic result, given that country-dedicated funds may be the least well placed to hedge—they tend to run smaller funds, and thus have less operating budget to manage FX risk.

Exhibit 23: Do you want EM PE GPs to hedge FX risk?



It is usually too expensive and few GPs have the sophistication / experience to do so effectively. The appropriate pacing of fund disbursement throughout the investment period and usage of seller financing and local credit when opportune are good GP practices. – *Fund of Funds*

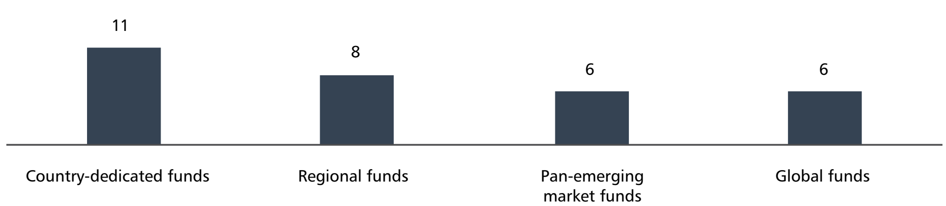
Internal hedges within companies are good. Hedges of a fund portfolio are both difficult and may cost more than the benefits derived from such hedges. – *Fund of Funds*

It is too expensive. Natural hedges should be considered. – *Insurance Company*

GP hedging needs to be evaluated on a case-by-case basis. If there is high visibility into cash flows, then hedging can be appropriate, but in our experience this is a rarity in EM PE. – *Public Pension Fund*

I see it as a best practice to use some kind of hedging instrument when it comes to exits if it is within three to six months. – *Fund of Funds*

Exhibit 24: Which of the following types of EM PE funds do you want to hedge FX risk?

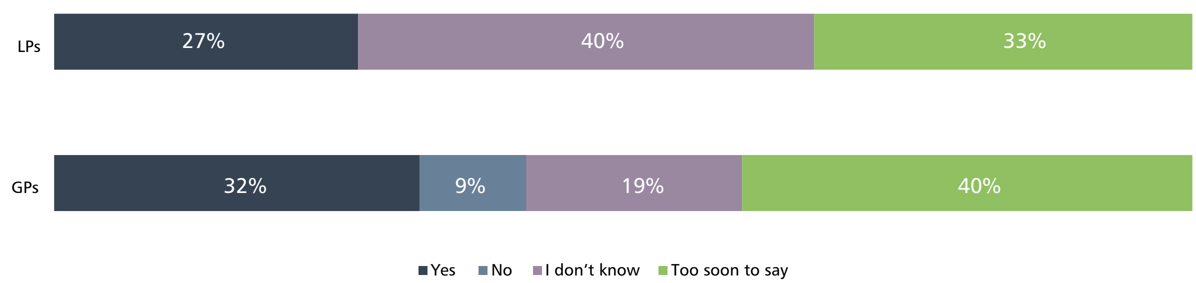


Note: Exhibit shows number of respondents selecting the answer. Respondents were asked to select all that apply.

Have Hedges Paid Off?

Amongst the 68 respondent firms that have implemented FX hedges—15 LPs and 53 GPs—less than one-third report that they have paid off, while only 9% of GPs (and zero LPs) report that they have not (see Exhibit 25). Within the GP segment answering that they have paid off, the respondents represent a blend of country-dedicated (e.g., Brazil, India, Russia and South Africa) and regional funds. The vast majority of respondents across both firm types, however, report that they either don't know or it is too soon to say.

Exhibit 25: Have your EM PE hedges paid off, given the costs associated with implementing them?



Conclusions

Until such time as the global economy operates under Keynes's Bancor (his proposal of one universal currency), FX risk will remain a part of every international investment decision. Beyond the risks of depreciation and devaluation—China surprised global investors with its move last year, and a number of countries maintaining pegs are encountering stress—investors in emerging markets occasionally experience capital controls. The latter have been implemented in Egypt and Nigeria as this report goes to press, serving as an added layer of complication. Currency risk, in short, is here to stay.

There are, however, some areas where agreement upon—and broader adoption of—best practices could be useful. These include:

- Methodologies for translating local currency performance into the fund's functional currency in quarterly and annual reports. This survey highlights that within LP and GP cohorts, opinions differ on the best methodology for doing so; and though IPEV suggests using the spot rate as of the reporting date, only about half of respondents prefer this method. EMPEA has endorsed the IPEV Guidelines along with a large number of private equity and venture capital industry associations.

- Due consideration should be paid to reporting local currency and fund currency performance in parallel. There is a general consensus that local currency reporting provides LPs with a clearer view on the GP's ability to create value, and a majority of LP respondents report that they would consider local currency performance when evaluating a commitment or a re-up.

- Recognition that a majority of industry participants—as measured by this survey—do not construct their portfolios with currency risk as an explicit objective. Moreover, most LPs do not hedge the currency risk of their EM PE commitments, and most commercial LPs that responded to this *Survey* don't want their GPs to hedge either.

- Recognition that in most cases, fund managers should not hedge during the holding period of their investments; hedges often are simply cost prohibitive. However, fund managers should explore the feasibility of using hedging instruments when they have visibility on the relative timing and sizing of cash flows tied to an entry or exit, and when the fees don't create an undue drag on performance.

At this point in time, many FX hedges for most emerging market private equity funds appear to be impractical. The costs are prohibitive and trading in most currencies remains relatively illiquid, and synthetic hedges based off of interest rates or commodity prices offer impure protection—historical correlations can break down during periods of stress, precisely when hedges are needed most. Perhaps some enterprising entrepreneurs can find a solution to this problem; according to practitioners interviewed for this publication, previous efforts to offer more affordable hedges through mutualization worked until EM currencies stopped appreciating against the dollar.

At the end of the day, it's hard to avoid the conclusion that LPs should acknowledge the currency risk associated with EM PE investments, and view it as diversification within their portfolios. On the other hand, GPs should give due consideration to managing their portfolios to perform in the functional currency, sourcing deals with natural hedges or pricing power when appropriate, and selectively employing hedges (when reasonably priced) on entry and exit.

In grand perspective, the gradual opening up of local capital across emerging markets is one of the most promising developments for the mitigation of currency risk within the asset class. As has been demonstrated not only in the United States, but also by select fundraises in Australia, Japan, China and South Africa, a proper match between the local currency and the fund currency creates true alignment of interest, and shared participation in a fund manager's ability to create value.

EMPEA would welcome the opportunity to engage with you on this issue. Please contact us at consulting@empea.net.

Participant Demographics and Survey Definitions

In March 2016, EMPEA surveyed 146 GPs and LPs headquartered across 40 countries.

Exhibit 26: Survey respondents by firm type

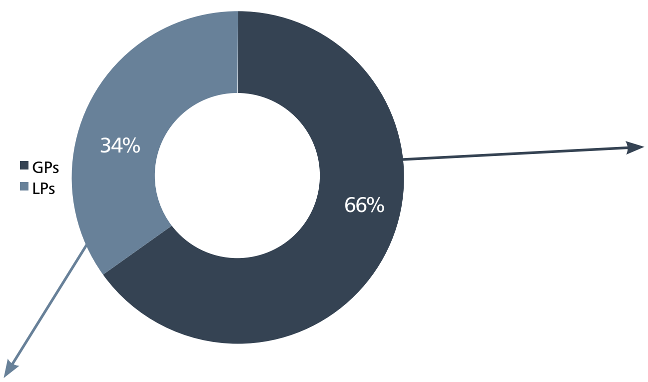
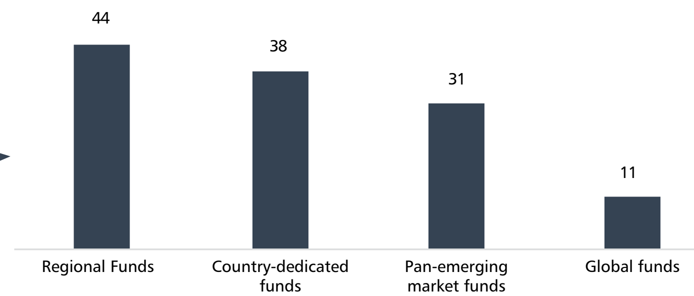


Exhibit 28: Geographic remit of GP respondents' funds



Note: Respondents were asked to select all that apply.

Exhibit 27: LP respondents by institution type

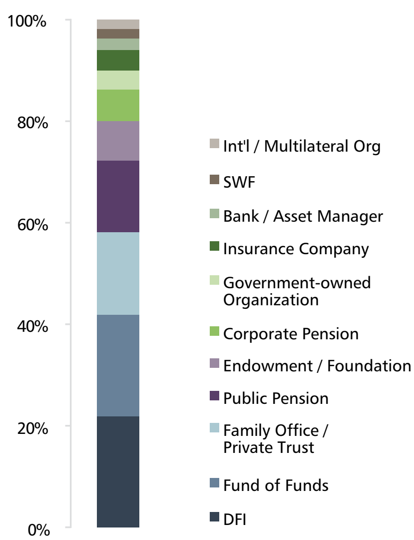
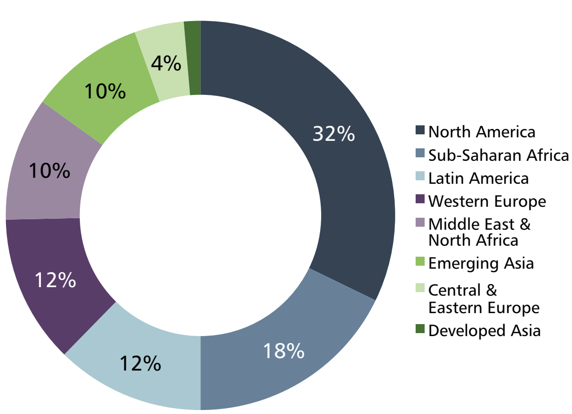


Exhibit 29: Participants by headquarters region



Survey Definitions

"Emerging markets" (abbreviated to "EM") encompass the private equity markets of all countries outside of the United States, Canada, Western Europe, Israel, Japan, Australia and New Zealand, collectively referred to as "developed markets."

"Private equity" (abbreviated to "PE") encompasses buyout, growth capital and venture capital investments.

"Emerging markets private equity" (abbreviated to "EM PE") funds encompass PE funds that principally target investments in emerging markets.

"Limited partners" (abbreviated to "LPs") are investors in PE funds.

"General partners" (abbreviated to GPs") are PE fund managers.

"Development finance institution" (abbreviated to "DFI") is a government-backed institution that provides financing and technical assistance for projects in developing countries to catalyze economic growth and development.

"Limited partnership agreement" (abbreviated to "LPA") is a legal document that outlines the terms and conditions governing the relationship between LPs and GPs in a private equity fund.

Note: In some exhibits, percentages may not sum to 100% due to rounding.

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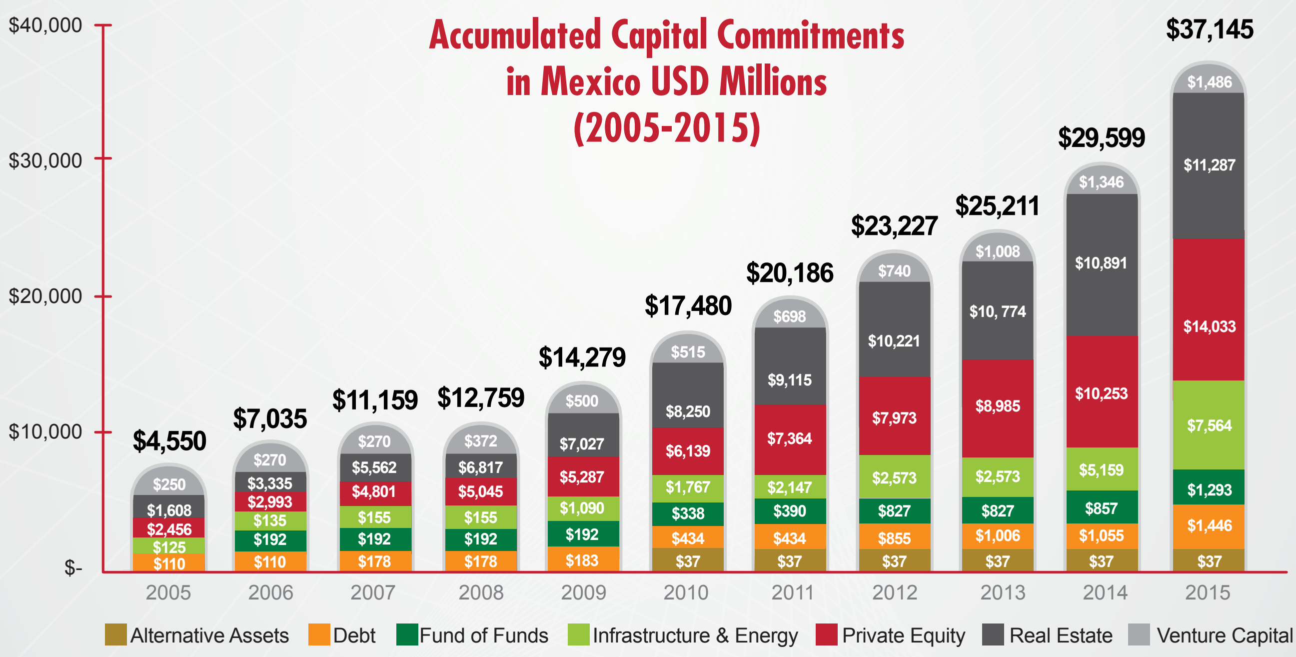

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