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Expanding Institutional Investment into Emerging Markets via Currency Risk Mitigation

Interim findings and the road toward a solution

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EMPEA

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Project Team

Sarona Asset Management – Lead Organization

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EMPEA is *the* global industry association for private capital in emerging markets. EMPEA is an independent non-profit organization with over 300 member firms, comprising institutional investors, fund managers and industry advisors, who together manage more than US$1 trillion of assets and have offices in more than 100 countries across the globe. EMPEA supports its members through global authoritative intelligence, conferences, networking, education and advocacy with the broad purpose of catalyzing private investment in developing economies.

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Crystalus Inc. is a leading international advisory firm specializing in development finance and risk management, including public-private partnering approaches, capital deployment, fund structuring, due diligence and best practices. Crystalus has advised on nearly US$5 billion in new development finance initiatives, with clients spanning private-sector fund managers, multilateral development banks, development finance institutions, donor agencies, and major foundations.

Acknowledgements

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This report shares the interim findings from the project "Expanding Institutional Investment into Emerging Markets Via Currency Risk Mitigation," an initiative supported by USAID's Office of Private Capital and Microenterprise (PCM). PCM works across USAID sectors and across a powerful network of traditional and non-traditional investors to catalyze private finance for development, and increase the scale, impact, and sustainability of USAID programs.

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Photo: Morgana Wingard

Letter from Sarona Asset Management

Dear Reader,

Fear is a strange thing—never more so than for private equity investing in emerging markets. Investors fear what they don't know, and local currency risk is a big unknown.

Our own experience bears this out. From 2005 to mid-2014, 36 emerging-market currencies in Sarona's investment portfolio fell an average of 1.3% per annum. Then the price of oil collapsed, and over the next 18 months the same 36 currencies dropped an average of 12.3% per annum.

That's why investors are afraid.

As a global leader in private-equity impact investing, Sarona is a catalyst for change across the frontier and emerging markets, serving as a bridge between private institutional capital and local entrepreneurs.

This is hard to do when investors fear the risks of FX volatility. If we can reduce this risk, billions of dollars currently on the sidelines may be motivated to invest in the phenomenal growth of mid-market companies in emerging markets.

That's why Sarona has joined forces with USAID, EMPEA and Crystalus to examine this problem and seek innovative solutions. This report is an important first step.

It's clear that existing hedging tools don't work to reduce currency risk for private equity investors. These tools are designed for debt, where cash flow amounts and timing are easier to predict. For private equity, we need new tools and new thinking.

This report underlines the substantial demand from private institutional investors for local currency risk mitigation, and provides clear and compelling guideposts in developing solutions.

I believe these solutions are within our reach, and look forward to working with all stakeholders—private and public—to get there.

Sincerely,

Gerhard Pries
CEO & Managing Partner
Sarona Asset Management

Executive Summary

Photo: USAID

Currency risk is one of the top concerns of investors in emerging markets private equity ("EM PE") funds, inhibiting institutional investment into emerging markets broadly, and into frontier markets in particular. With nearly 75% of EM PE funds being denominated in U.S. dollars, local currency depreciations can have a material impact on institutional investors' returns. To wit, 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 against the U.S. dollar during the same period, placing strains on investors' portfolios.

In the face of this persistent challenge, why has hedging currency risk proven to be so difficult for private equity firms? USAID's Office of Private Capital and Microenterprise (PCM) sponsored this project, "Expanding Institutional Investment into Emerging Markets Via Currency Risk Mitigation," to glean a clearer understanding of the problem, and to identify potential currency hedging mechanisms that could catalyze private capital flows into developing economies.

Our research reveals that **two crucial gaps in the market** leave EM PE investors largely unable to hedge currency risk:

1. **A lack of suitable products** for private equity investments; and,
2. **A lack of solutions that cover the holding period** of an investment.

To help identify remedies for this vexing challenge, EMPEA surveyed 119 individuals active in EM PE to better understand practitioners' current use of hedging instruments, as well as the features they would seek in an ideal hedging solution. The survey's findings are feeding into a research and development process to identify, develop and pilot a new hedging solution / mechanism that could help mitigate currency risk for private equity investors in emerging markets. Key findings from the survey include:

- A cost-effective hedging instrument could unlock sizable volumes of capital for new and / or frontier markets where institutional investors (also referred to as limited partners, or "LPs") have not yet invested. Roughly **70% of commercial LPs** indicate that a hedging instrument would remove a barrier to investment.
- Though 87% of respondents believe it is important for fund managers (also referred to as general partners, or "GPs") to hedge during the holding period of an investment, **only 14% of GP respondents** have done so.
- The GPs that have used hedging instruments during the holding period recount a familiar refrain: high costs, limited duration and difficulty in finding a broker or investment bank that would offer suitable products.
- **None** of the hedging products commercially available today meet the criteria EM PE investors demand.
- An ideal hedging product would meet at least the following five criteria. It would: be developed for GPs, but applicable for LPs; resemble the mechanics of a put option; cover a portion of an investment's notional value; operate like an insurance policy; and, be priced no greater than between 2% and 5% of annual returns.
- In the face of inadequate hedging solutions, the most frequently cited strategies for mitigating currency risk include:
  - Seeking out natural hedges (e.g., investing in companies whose revenues and liabilities do not present a currency mismatch, or selecting businesses that generate U.S. dollar revenues and local currency costs);
  - Identifying portfolio companies with growth rates that offset local currency depreciation, and / or underwriting for substantial local currency depreciation;
  - Hedging only known short-term cash flows (i.e., capital calls and distributions); and,
  - Disbursing cash in tranches to spread currency risk over time.
- The international donor / development community can play a key role in creating a new market for hedging in emerging and frontier market currencies. For example, amongst other roles, they could provide up-front financing or cost-sharing arrangements for premium payments for hedging instruments.

The bottom line from our research is that there is pent-up demand for a cost-effective currency hedging solution tailored for private equity investments in emerging markets. Substantial institutional capital—currently sitting on the sidelines—could be unlocked to fuel private sector development in these markets. In developing new hedging solutions for private equity, the donor / development community could play key risk- and cost-sharing roles.

Introduction

Photo: USAID

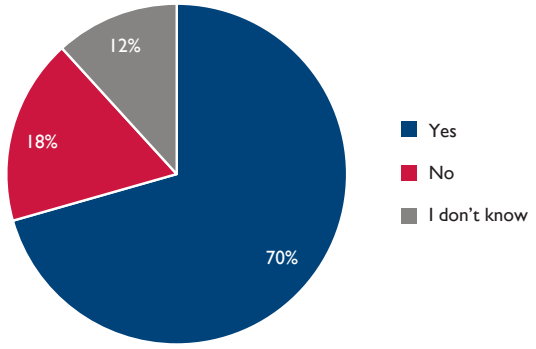
A Roadblock to Institutional Investment in Emerging Markets

Currency risk is one of the top concerns of investors in emerging markets private equity ("EM PE") funds. Recent surveys of industry participants, notably EMPEA's 2016 *Currency Risk Management Survey,* reveal that nearly 75% of practitioners rank currency risk as an important or very important factor for their firm, while approximately 60% report that exchange rate movements have subtracted value from their realized EM PE investments (with several respondents estimating losses of US$500 million or more since January 2014). In addition, according to data from EMPEA's annual *Global Limited Partners Surveys,* currency risk is the top macro-related concern amongst institutional investors in EM PE funds. [1]

More to the point, currency risk is inhibiting institutional investment into emerging markets broadly, and into frontier markets in particular. This is a key source of capital sorely needed in these markets to foster sustainable growth and development. Beyond mere capital, however, private sector investment helps mobilize much-needed know-how, networks and other resources for local enterprises.

As part of our research for this study, we surveyed commercial institutional investors (such as endowments, family offices, foundations, funds of funds, insurance companies and pension funds) to ascertain whether a cost-effective hedging solution would increase their appetite for investing in new markets where they have not yet invested. A clear majority—70% of surveyed commercial limited partners ("LPs")—note that a hedging solution would increase their likelihood of investing in new markets (see Exhibit 1).[2]

Exhibit 1: Commercial LPs—Would a cost-effective hedging instrument increase your appetite for investing in new / frontier markets?



Source: EMPEA.
Note: Includes 17 responses.

A Persistent Challenge

Given the series of financial crises that beset emerging economies over the last two decades, as well as the sizable currency depreciations and devaluations witnessed in recent years (such as the Mexican peso, Nigerian naira and Russian ruble), it is little surprise that currency risk plays a decisive role in commercial investors' decision-making processes. After all, roughly 75% of EM PE funds are denominated in U.S. dollars.[3] Moreover, nearly 25% of the capital invested in EM deals between 2013 and 2015 was deployed into countries that experienced a depreciation of 30% or more against the U.S. dollar during the same period.[4] Anecdotal reports from private equity fund managers (also referred to as general partners, or "GPs") suggest that some have fallen beneath their "waterline" (the hurdle rate at which the fund manager receives carried interest from its investments), raising fears that some fund managers may lose the incentive to harvest investments, and LPs' capital could be locked up in assets for an extended period.

1. Notably, the other top concern is political risk, which has conceptual and practical linkages to currency risk (e.g., country risk). In some—though by no means all—instances, political risk and currency risk may be driven by the same events, such as a tumultuous election leading to capital outflows, which in turn can weaken the local currency.
2. Note that this finding excludes respondents from development finance institutions and multilateral organizations. These organizations are typically more willing to absorb currency risk, as their mandate is to be in these markets irrespective of market conditions.
3. EMPEA. Local currency funds in China (RMB funds) account for 7%, Euro-denominated funds account for 6%, and Brazilian real and South African rand funds account for 3% and 2%, respectively.
4. EMPEA, *Currency Risk Management Survey* (May 2016).

Exhibit 2: Broad trade-weighted U.S. dollar index (Jan 1995-Apr 2017)

Source: Federal Reserve Bank of St. Louis.

The U.S. dollar has strengthened against a broad basket of currencies, and is reaching its highest level in two decades, marking a clear reversal from the weakening trend witnessed from 2002-2012 (see Exhibit 2). As the U.S. Federal Reserve Bank pursues a policy of incremental interest rate increases, a strong U.S. dollar could become a mainstay of the emerging markets investing landscape, with all of the challenges this portends.

Why Is Currency Risk So Difficult for Private Equity Firms to Hedge?

Why do private equity investors find it so problematic to hedge local currency risk? Why aren't current market offerings working? Is it simply a matter of the price, availability or tenor of existing hedging products? Is it more a function of local capital markets lacking sufficient depth and breadth? The answer is a resounding "No!"

An early focus of our research was to unravel these complex and poorly understood questions in a clear and understandable manner. In a nutshell, there are two crucial gaps in the market that leave emerging markets private equity investors largely unable to hedge currency risk: a lack of suitable products for private equity investments, and a lack of solutions that cover the holding period of an investment.[5]

While hedging solutions for debt investments in emerging and frontier markets have become easier to source in recent years, thanks in part to the pioneering work of firms such as TCX and MFX Solutions, private equity hedges remain a vexing challenge. On the one hand, identifying the appropriate product can be difficult, as oftentimes the timing and sizing of cash flows are unknown. On the other hand, given interest rate differentials, the shape of forward curves and even the pricing power of counterparties, the cost of such hedging instruments can be prohibitively expensive.

The second gap in the market exists during the holding period of a private equity investment. Though discrete solutions may be secured upon entry and exit of portfolio companies—times when the timing and sizing of cash flows are more predictable—there are few, if any, cost-effective solutions available during the holding period of an investment, when local currency depreciation and devaluation risks can be highest.

In a nutshell, there are two crucial gaps in the market that leave emerging markets private equity investors largely unable to hedge currency risk: a lack of suitable products for private equity investments, and a lack of solutions that cover the holding period of an investment.

5. Readers unfamiliar with currency hedging products are invited to read a primer on currency hedging derivatives beginning on page 43.

Moreover, even those hedging instruments that may be available during the holding period of a private equity investment—such as forwards—can give rise to unacceptable risks to the private equity fund manager and / or its LPs. For example, since some of these instruments have local currency delivery obligations, the fund manager may be required to deliver the contracted volume of local currency, even in instances when the manager does not achieve an exit. This delivery risk is unacceptable in the private equity context. Consider, for example, the liquidity risk and the foregone returns if a fund manager had to meet this liability with the firm's own funds; or, even worse, had to ask LPs for an additional cash infusion simply to purchase the local currency required to deliver on an unused forward contract.

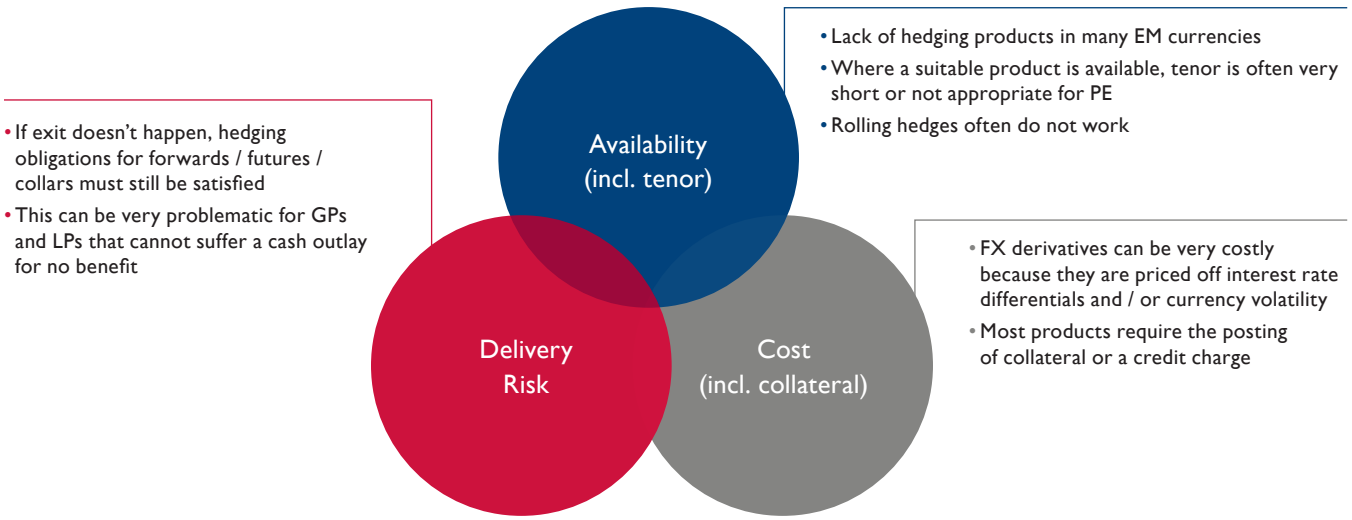
Our team's research reveals that several factors make the holding period problematic: availability, cost and the aforementioned delivery risk (see Diagram I).

Availability: In many developing country currencies, the availability of hedging products is limited in terms of type, tenor and amount; and, in some instances, the availability of the currency itself can be limited.

Cost: In addition to the underlying driver of interest rate differentials, there are additional cost-related challenges. For example, options can be very costly because they are priced in part on the volatility of the reference currency. In addition, some products require the posting of collateral, which can often become a requirement when the counterparty is an unrated entity (and which most private equity funds are). These collateral charges can create liquidity pressures within the private equity fund itself. Finally, managing these hedging products can be administratively burdensome to maintain over an investment holding period, which may last five to seven years (or longer, in some instances).

Delivery risk: Since PE cash flows are hard to predict—particularly for exits—hedging products can give rise to delivery risk in the event that a certain kind of hedging contract (e.g., a forward) has matured and an investment is either not exited, or realized in a different amount.

Diagram 1: Factors explaining why currency risk is so difficult for private equity investors to hedge during the holding period of an investment



To compensate for this lack of solutions, other currency risk mitigation / hedging strategies have been employed. However, they do have drawbacks. For example, some investors have tried to use "proxies" to hedge currency risk; in other words, they have tried to use commodity prices (e.g., oil) to hedge the currency of a natural resource-exporting country, or hedge a regional peer's currency that may offer more liquidity (e.g., Mexican peso for Colombian peso). However, many of these correlations can be tenuous and break down over time—often precisely at the moments when a hedge is needed most.

Some institutional investors have used "overlay" strategies to hedge currency risk across their portfolio (e.g., equities, bonds, hedge funds, private equity, real assets, etc.). Oftentimes, this function is outsourced to a firm that focuses on foreign exchange risk management, leaving the investment team within the LP to focus on asset allocation, security selection and manager selection. This overlay strategy generally requires a diverse portfolio of assets; a portfolio concentrated in private equity commitments would not lend itself to an overlay strategy given the problems described previously. Notably, several high-profile LPs have terminated their currency overlay programs. To take one example, CalPERS—one of the ten largest investors in private equity globally[6]—determined:

> *The original goal of the [Currency Overlay] Program was to reduce Total Fund volatility … Since its inception in July 1992 to June 2013, the Program reduced the Total Fund's return volatility by 9 bps on an annualized basis. However, this 9 bps reduction in volatility is not statistically significant. Total Fund net return was increased by 2 bps from July 1992 to June 2013 on an annualized basis. This 2 bps increase is not statistically significant … Additionally, this ignores the cost of liquidity necessary to maintain the Program … Staff recommends eliminating the passive Currency Overlay Program.*[7]

Though one should be careful drawing industry-wide conclusions from one illustrative example, the overlay strategy does not provide a tailored solution for the specific needs of private equity fund investments in emerging markets. Innovative approaches are required.

Outline of this Report

This report opens with findings from EMPEA's second currency risk survey, which was conducted in January 2017 and drew responses from 119 industry professionals (see Appendix I for further details on survey participant demographics). This section begins with an exploration of whether private equity fund managers and institutional investors employ firm-wide policies for managing emerging market currency risk. It then turns to participants' current use of hedging products—with a focus on use during the holding period of an investment—and the limitations of existing solutions. Then, it explores respondents' demands from an ideal hedging product.

In the subsequent sections, the report shares the contours of potential hedging solutions that have been identified as part of the research efforts undertaken for this initiative, as well as the next steps the project team is conducting. Finally, the report concludes with an overview of why currency risk's impact on private equity funds is salient to the donor / development community, and lays out a non-exhaustive list of roles that the development community could explore to ameliorate currency risk, thereby helping to mobilize further private capital flows to developing economies.

For newcomers to the topic of currency risk management, a primer on currency hedging derivatives is provided in Appendix II. The primer supplies practitioners and industry stakeholders with an overview of exchange-traded and "over-the-counter" hedging instruments, as well as the size of the markets for these products. Key takeaways for the private equity industry are provided.

To compensate for this lack of solutions, other currency risk mitigation strategies have been employed. However, they do have drawbacks.

Innovative approaches are required.

6. Private Equity International, *LP 50*, July / August 2015. Available at: https://www.privateequityinternational.com/uploadedFiles/Private_Equity_International/PEI/Pagebuilder/Aliased/Rankings/LP50/PEI_137_JulyAugust_LP50.pdf.
7. California Public Employees' Retirement System, Currency Overlay Program: Asset Allocation / Risk Management, 16 September 2013.

Findings from EMPEA's Currency Risk Survey Part II

Photo: Thomas Cristofoletti, USAID

Key Findings from EMPEA's Currency Risk Survey Part II

In January 2017, EMPEA surveyed 119 individuals active in emerging markets private equity to better understand practitioners' current use of hedging instruments, as well as the features they would seek in an ideal hedging solution.[8] The survey's findings are feeding into a research and development process to identify, develop and pilot a new hedging solution / mechanism that could help mitigate currency risk for private equity investors in emerging markets. Key findings from the survey include:

1. A cost-effective hedging instrument could unlock sizable volumes of capital for new and / or frontier markets where institutional investors have not yet invested. Roughly **70% of commercial LPs** indicate that a hedging instrument would remove a barrier to investment.

2. Though 87% of respondents believe it is important for GPs to hedge during the holding period of an investment, **only 14% of GP respondents** have done so.

3. An ideal hedging product would meet at least the following five criteria. It would: be developed for GPs, but applicable for LPs; protect against extreme depreciations / devaluations (i.e., ≥25%); cover a portion of an investment's notional value; operate like an insurance policy; and, be priced no greater than between 2% and 5% of annual returns.

4. The international donor / development community can play a key role in creating a new market for hedging in emerging and frontier market currencies. For example, amongst other roles, they could provide up-front financing or cost-sharing arrangements for the premium payments required for hedging instruments.

The Bottom Line

There is pent-up demand for a cost-effective currency hedging solution tailored for private equity investments in emerging markets. Substantial institutional capital—currently sitting on the sidelines—could be unlocked to fuel private sector development in these markets. Current private equity hedging activity is predominantly occurring during the entry and exit periods (when the sizing and timing of cash flows are better known); hedging during the holding period—when the risks of depreciation and / or devaluation are greatest—is very limited. In developing new hedging solutions for private equity, the donor / development community could play key risk- and cost-sharing roles.

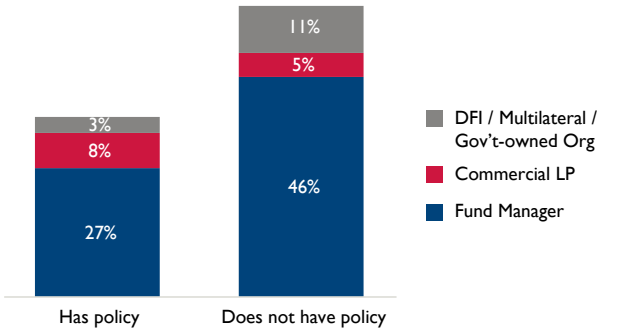
8. The breakdown of respondents is 86 fund managers (GPs) and 33 institutional investors (LPs).

Policies for Managing Emerging Market Currency Risk

The One-Minute Read

- A resounding 70% of commercial LPs say a cost-effective hedging instrument would increase their appetite for investing in new and / or frontier markets.
- A majority (62%) of respondents to EMPEA's second currency risk survey do not have a currency risk management policy for private equity investments in emerging markets.
- The most frequently cited strategies for mitigating currency risk include: seeking out natural hedges; identifying portfolio companies with growth rates that offset local currency depreciation, and / or underwriting for substantial local currency depreciation; hedging only known short-term cash flows (i.e., capital calls and distributions); and, disbursing cash in tranches to spread currency risk over time.

Exhibit 3: Does respondent's firm have a policy for managing EM currency risk?



Source: EMPEA.

EMPEA's first *Currency Risk Management Survey* (May 2016), which included responses from 146 emerging market private equity practitioners, revealed that 73% of respondents believed currency risk to be an important or very important factor for their firm. Moreover, 69% believed that emerging market currency risk had increased compared to the previous three to five years, and 58% reported that exchange rate movements had subtracted value from their realized emerging market private equity investments.

In light of these material concerns, we sought to identify how many and which types of firms have policies for managing emerging market currency risk. A majority of respondents to EMPEA's second currency risk survey (62%) indicate that they do not have a currency risk management policy (see Exhibit 3). Given the developmental role of DFIs and multilateral organizations, a clear majority of them indicate a lack of specific policies for private equity; however, they all have enterprise-wide policies regarding currency risk management. It is notable that the one segment that deviates from the trend is commercial LPs: more of these firms have currency risk management policies than don't.

We collected 55 qualitative responses describing respondents' currency risk policies (or lack thereof). Most of these responses could be bucketed into six categories. In declining order of frequency these were:

- Not to hedge at all;
- To seek out natural hedges (e.g., invest in companies whose revenues and liabilities do not present a currency mismatch, or to select businesses that have U.S. dollar revenues and local currency costs);[9]
- To identify portfolio companies with growth rates that offset local currency depreciation and / or to forecast substantial local currency depreciation impacts when underwriting transactions;
- To hedge only known short-term cash flows (i.e., capital calls and distributions);

9. Note that this can result in adverse selection (i.e., avoiding promising prospective investee companies that do not have natural hedges). In addition, it could carry potential impacts from a developmental perspective (e.g., domestic demand-driven businesses may secure less funding).

- To disburse cash in tranches to spread currency risk over time; and,
- To hedge at the portfolio company level (for GPs), or at the institutional level (for LPs; i.e., a currency overlay).

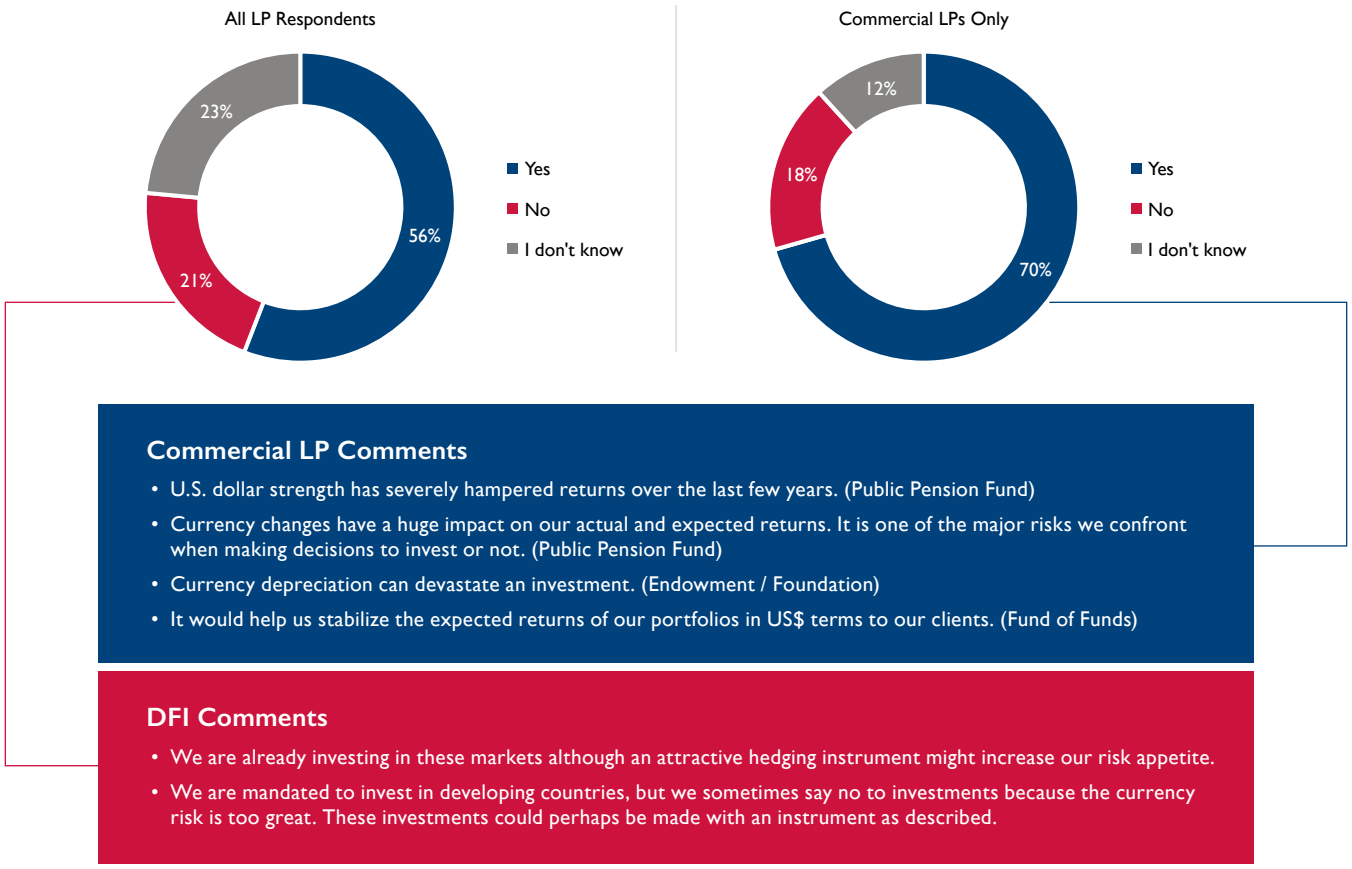
Intriguingly, even though 74 respondents report that their firms do not have a policy, several of their comments align with respondents from firms that do have a policy (e.g., not to hedge at all, or to pursue natural hedges). This suggests that regardless of whether an organization has formalized policies, practices and procedures in place, the behaviors of most firms in EM PE seem to be similar.

Geographically, the fund manager respondents who indicate that their firms have a currency risk policy lean toward firms that are active Sub-Saharan Africa (20), Latin America (18), and Emerging Asia (14).

Could a Hedging Instrument Unlock Capital for New Markets?

Given this initiative's focus on mobilizing greater institutional investment into developing countries, we sought to identify whether a cost-effective hedging solution would unlock capital for new and / or frontier markets where LPs have not yet invested. A resounding 70% of commercial investors say a cost-effective hedging instrument would increase their appetite for investing in new and / or frontier markets, suggesting that a hedging solution could have a material impact on private capital flows to emerging economies (see Exhibit 4).[10]

Exhibit 4: Would a cost-effective hedging instrument increase your firm's appetite for investing in new and / or frontier markets?



Source: EMPEA.

10. Given that development finance institutions, multilateral organizations and government-owned organizations often invest in these markets as part of their mandate (e.g., private and financial sector development), we removed them from the pool of respondents to produce a segment of commercial LPs. In contrast with the commercial LP sample, the DFI cohort is less likely to enter new / frontier markets due to the existence of a hedging product. To be fair, in many instances, these institutions are already pioneering investment in said markets.

Current Use of Hedging Products

The One-Minute Read

- Although 85% of GP respondents believe hedging during the holding period to be somewhat, very or extremely important, only 14% report that their firm has done so. This underlines the necessity of identifying a cost-effective solution for the industry.
- The fund managers that have used hedging instruments during the holding period recount a familiar refrain: high costs, limited duration and difficulty in finding a broker or investment bank that would offer product.
- The vast majority of GP and LP respondents indicate that their firms allocate zero budget for hedging currency risk.
- Though currency hedging during the holding period is limited across the board, Emerging Asia and Latin America constitute 70% of activity uncovered in this survey; by instrument, non-deliverable forwards and vanilla forwards have been preferred, accounting for nearly 85% of responses.

A majority of fund manager respondents to EMPEA's May 2016 *Currency Risk Management Survey* noted that they never hedge their investments into (60%), nor exits from (55%) portfolio companies. Moreover 64% of fund managers indicated that they never hedge their investments during the holding period. In this new survey, we sought to understand whether firms allocate budget to undertake hedging activities (and if so, how much), and to glean greater granularity on where and what types of hedging instruments private equity fund managers have used during the holding period of an investment.

Budget for Hedging

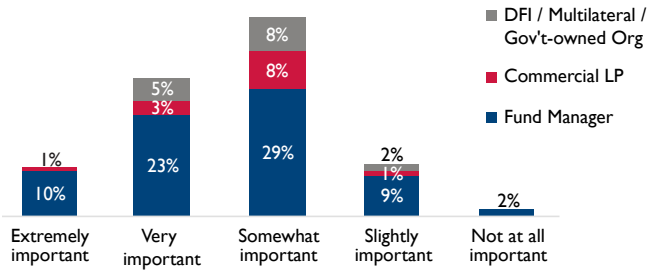
The vast majority of fund manager and institutional investor respondents indicate that their firms allocate *zero* budget for hedging currency risk. However, several fund managers note that their firms do allocate funds for hedging on a transactional basis, though such amounts are—by definition—hard to quantify.

We also sought to determine whether LPs would be willing to have GPs set aside a portion of drawn capital to cover hedging costs (see pages 33-34 for additional details). On this point, respondents indicate a willingness to set aside an average of 3.6% and a median of 3.0% of drawn capital for the purposes of hedging.

The Importance of Hedging During the Holding Period of an Investment

Given that several suitable hedging solutions do exist during the entry and exit periods of an investment, periods when the timing is relatively short and the size of cash flows are more easily known, we sought to quantify practitioners' views on the importance of hedging during the holding period of an investment—the period for which few suitable solutions exist, and during which the majority of financial loss due to depreciation / devaluation is likely to occur. Approximately 87% of respondents believe hedging during this period to be somewhat, very or extremely important, while only 13% find it slightly or not at all important (see Exhibit 5). This proportion holds across the three core segments of respondents: fund managers, commercial LPs, and DFIs / multilateral organizations.

Exhibit 5: How important is it for GPs to hedge during the holding period of an investment?



Source: EMPEA.

> The broad consensus on the importance of hedging during the holding period of an investment, and the relatively limited number of firms taking action to hedge during this period, underlines the necessity of identifying a cost-effective solution for the industry. There is a clear gap in the market.

And yet, despite the fact that 85% of GP respondents (73) note that hedging during the holding period is somewhat, very, or extremely important, only 14% (12) report their firm has actually done so (see Exhibit 6). Amongst those that have, half are global / pan-emerging market funds, two are regional funds (Asia, Latin America), and the balance are country-dedicated funds. This is a telling point as global / pan-emerging market and regional funds tend to be larger in size, and can dedicate resources toward building in-house hedging expertise. Moreover, these larger firms may pursue leveraged buyout transactions—for which the acquisition financing may (or may not) be hedged—and / or offer a broader array of investment strategies, such as private debt, which may be hedged more easily using existing instruments.

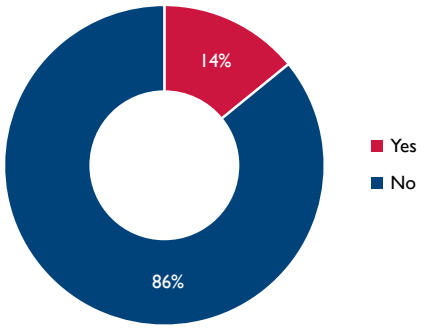
The broad consensus on the importance of hedging during the holding period of an investment, and the relatively limited number of firms taking action to hedge during this period, underlines the necessity of identifying a cost-effective solution for the industry. There is a clear gap in the market.

Overview of Markets and Instruments that Fund Managers Have Used during the Holding Period

Note: the following sections / charts report on markets and instrument types where fund managers have used currency hedges during the holding period of an investment. The underlying asset being hedged cannot be confirmed, and therefore may not necessarily be pure private equity; rather, it may refer to acquisition financing, mezzanine debt, senior debt, loans, etc., all of which better lend themselves to the use of traditional hedging products during the holding period of an investment.

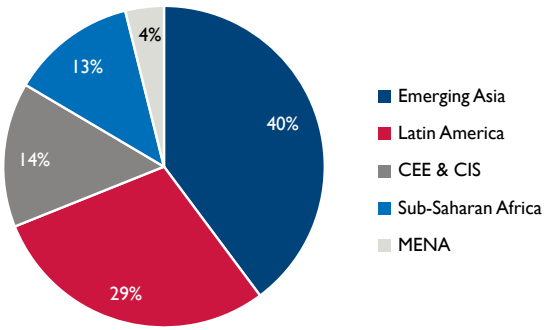
Though the amount of currency hedging activity occurring during the holding period of an investment is limited across the board, Emerging Asian and Latin American currencies have been hedged the most in our sample, with 41 and 30 responses, respectively, constituting 70% of the sample (see Exhibit 7). The Middle East and North Africa region has seen the least hedging activity (4 responses), though this may be due in part to the large number of countries that have pegged their currency to the U.S. dollar (e.g., Jordan, Saudi Arabia, United Arab Emirates, etc.). With the exception of Peru, which appears overrepresented in our sample, the countries in which hedging activities have taken place align with some of the most popular markets for private equity investment (see Exhibit 8). Nevertheless, hedged transactions constitute a tiny fraction of all deal activity.

Exhibit 6: GPs Only—Has your firm hedged during the holding period of an investment?



Source: EMPEA.
Note: Includes 85 responses.

Exhibit 7: Regions where GPs have hedged during the holding period



Source: EMPEA.
Note: Includes 103 responses.


Photo: Thomas Cristofoletti, USAID

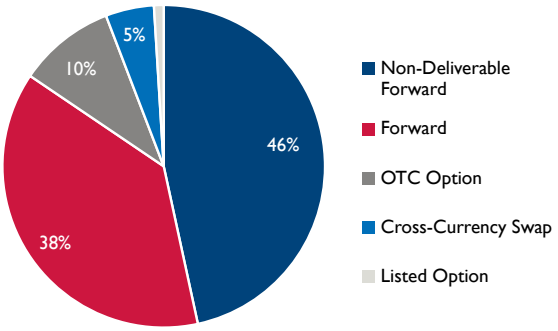
Exhibit 8: With the possible exception of Peru, hedging has been limited relative to all investment activity

Country	Number of Hedging Occurrences (According to Survey)	Aggregate Value of PE Deals in Market (2012-16, US$m)	Aggregate Number of PE Deals in Market (2012-16, #)
Peru	12	$393	32
China	11	$51,020	2,134
Mexico	11	$1,888	159
Indonesia	10	$1,803	146
India	10	$21,517	1,619
Colombia	9	$688	46
Philippines	9	$480	31
South Africa	9	$1,504	97
Brazil	8	$11,847	371
South Korea	8	$13,867	133
Malaysia	8	$1,490	89

Source: EMPEA.

In aggregate across all emerging market regions, GPs have relied upon forward strategies, which lock in an exchange rate, during the holding period. Non-deliverable forwards (48) and vanilla forwards (39) have been the preferred instruments, accounting for nearly 85% of responses (see Exhibit 9). OTC options and cross-currency swaps received 10 and five responses, respectively, while only one instance of listed options has been cited (for the Peruvian Sol). As noted above, the underlying asset may be a type other than equity; for example, where respondents indicate the use of cross-currency swaps, the underlying asset is likely to be debt.

Exhibit 9: Instruments GPs have used to hedge during the holding period



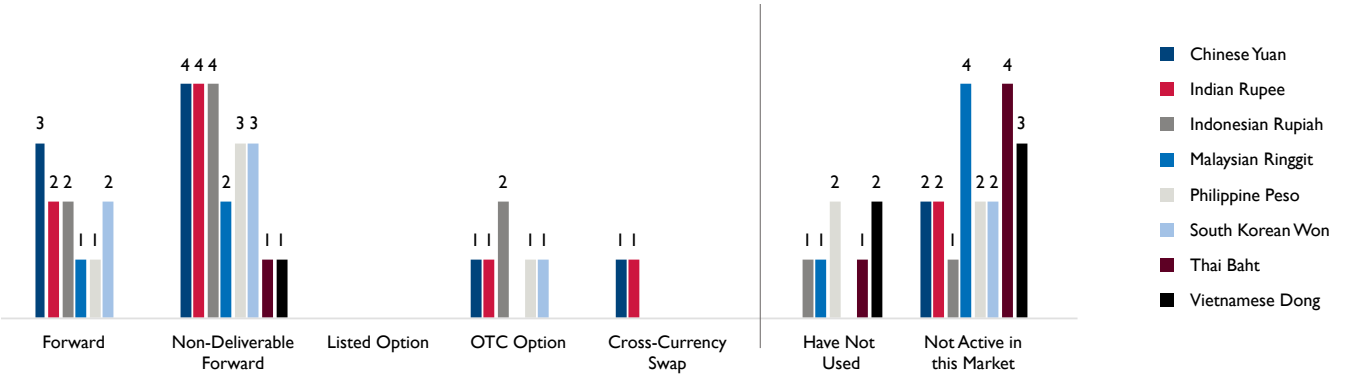
Source: EMPEA.
Note: Includes 103 responses.

Emerging Asia

With 41 responses, Emerging Asia has been home to most of the hedged transactions uncovered in this survey. In large measure, this is likely due to the larger potential pool of investments: the region was home to 4,603 private equity deals between 2012-16 with a total value of US$98.8 billion, amounting to 69% and 76% of all EM PE activity, respectively, over the period.

Non-deliverable forwards have been used in each of the markets surveyed—China, India, Indonesia, Malaysia, the Philippines, South Korea, Thailand and Vietnam—while vanilla forwards have been used in all of the above save for the Southeast Asian nations of Thailand and Vietnam (see Exhibit 10). Surprisingly, respondents indicate that they have used over-the-counter options for the Chinese yuan, Indian rupee, Indonesian rupiah, Malaysian ringgit and Philippine peso.

Exhibit 10: Hedging instruments used during the holding period in Emerging Asia



Source: EMPEA.

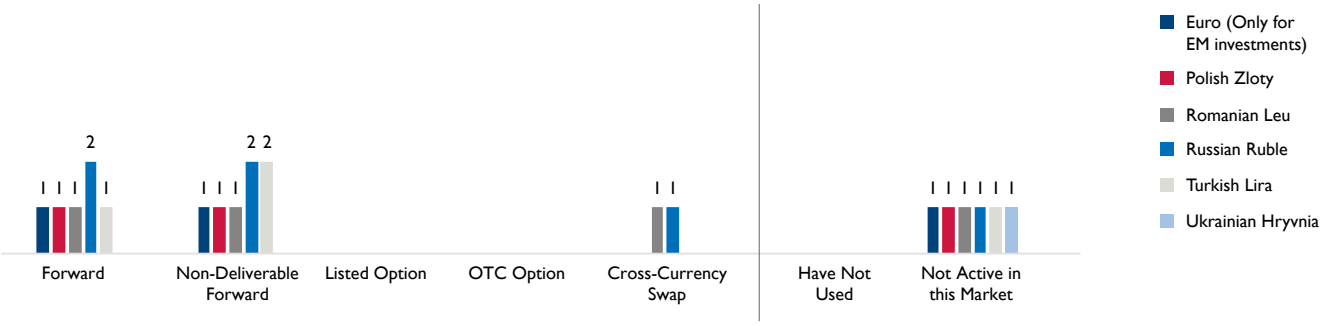
Photo: USAID

Central and Eastern Europe / Turkey / Commonwealth of Independent States

The region encompassing Central and Eastern Europe, Turkey, and the Commonwealth of Independent States registers only 15 responses of hedged transactions (see Exhibit 11). The relatively subdued level is somewhat surprising—though the region accounted for only 593 private equity deals between 2012-16 (9% of EM total) with a value of US$6.8 billion (5% of EM total), it does benefit from having access to a deeper pool of hedging intermediaries (such as investment banks and hedging advisors), as well as more liquid currencies, such as the Euro.

With respect to instruments, forwards and non-deliverable forwards have been used for the Euro, Polish zloty, Romanian leu, Russian ruble and Turkish lira. Two instances of cross-currency swaps have been noted, for the leu and the ruble, while no respondents have used option strategies to hedge their investments.

Exhibit 11: Hedging instruments used during the holding period in CEE, Turkey & CIS



Source: EMPEA.

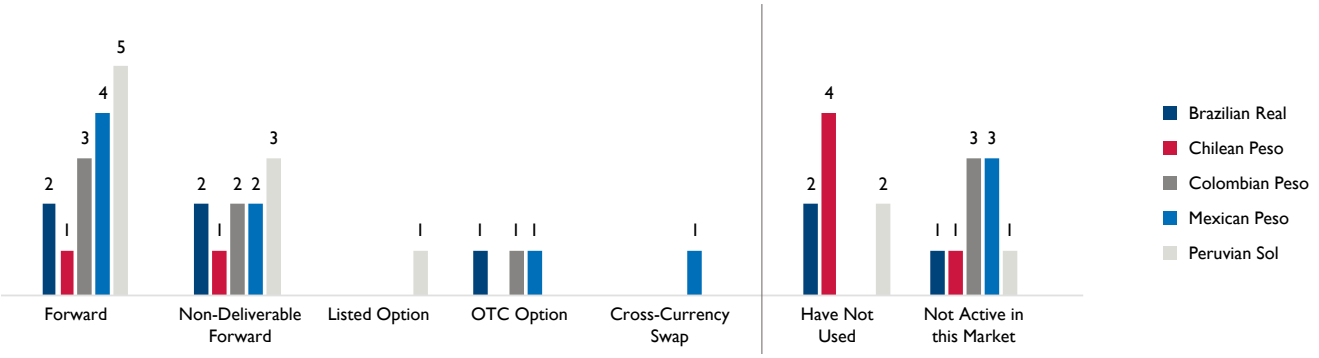
Photo: Bobby Neptune, USAID

Latin America

Latin America is home to the second-most hedged transactions in this survey, with 30 responses in aggregate. This parallels Latin America's position in terms of EM PE deal-making: the region received 717 deals (11% of EM total) and US$16 billion in investment (12% of EM total) between 2012-16, placing it second on the league table behind Emerging Asia.

As with other regions, forward and non-deliverable forward strategies are most prevalent (see Exhibit 12). However, the Latin America sample includes the broadest array of hedges used by strategy, with forward, option, and cross-currency swap strategies in use in at least one of the surveyed markets: Brazil, Chile, Colombia, Mexico and Peru.

Exhibit 12: Hedging instruments used during the holding period in Latin America



Source: EMPEA.

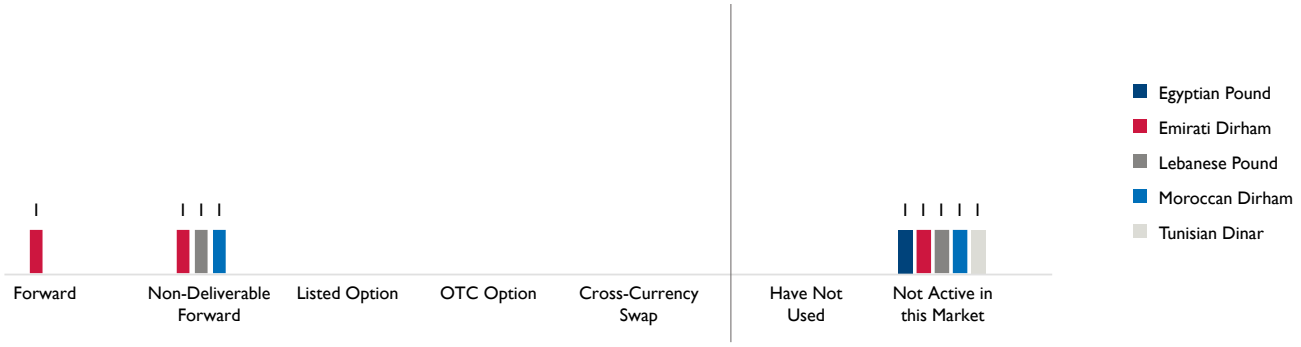
Thomas Cristofoletti, USAID

Middle East and North Africa

Survey respondents have hedged the least transactions for deals in the Middle East and North Africa region. As noted earlier, in large part this may be due to the concentration of countries with currencies pegged to the U.S. dollar; however, it also is likely a function of the relatively limited volumes of private equity deal flow. To wit, only 275 private equity transactions occurred between 2012-16 (4% of EM total), with an aggregate value of US$2.6 billion of private equity capital invested (2% of EM total).

The non-deliverable forward has been used in three markets—the United Arab Emirates, Lebanon and Morocco—while the vanilla forward has been used in the UAE (see Exhibit 13). Survey respondents have neither used option strategies nor cross-currency swaps for deals in the MENA region.

Exhibit 13: Hedging instruments used during the holding period in the MENA region



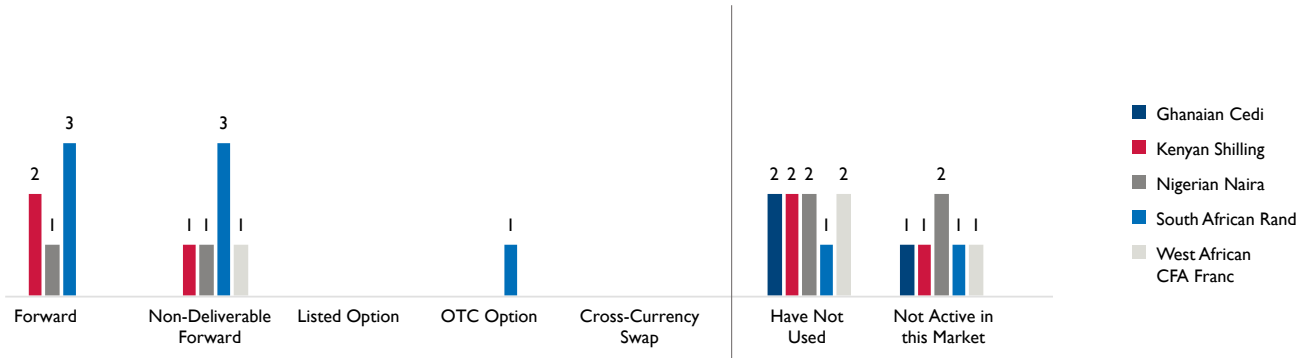
Source: EMPEA.

Photo: Bobby Neptune, USAID

Sub-Saharan Africa

Only 13 instances of hedging have been uncovered for Sub-Saharan African currencies during the holding period of an investment (see Exhibit 14). Notwithstanding that the region has been home to 485 private equity deals (7% of EM total) and US$5.1 billion in capital deployed (4% of EM total) from 2012-16, this is a surprisingly low figure—Sub-Saharan Africa is the second most popular region where survey participants invest (see Appendix I for details). The South African rand has been hedged by the most respondents, which is not a surprising finding given the relative depth and maturity of the country's financial markets. However, the Kenyan shilling, Nigerian naira and West African CFA franc have also been hedged via forwards. One respondent indicates that his/her firm has used an OTC option for South African rand exposure.

Exhibit 14: Hedging instruments used during the holding period in Sub-Saharan Africa



Source: EMPEA.

Photo: MCHIP / Karen Kasmauski


Photo: Kendra Helmer, USAID

Limitations of Hedging Products

It is important to note that just because a GP has used a hedging instrument, it does not mean that said GP has been a satisfied customer. We asked fund manager respondents who hedged during the holding period of an investment about the limitations of the hedging products that have been used. Their answers recount a familiar refrain: five of seven respondents cite the high cost of existing products, while four note the limited duration of currency derivatives, and two highlight the difficulty in finding a broker or investment bank that would offer suitable products.

These findings parallel those from EMPEA's May 2016 *Currency Risk Management Survey*, which revealed that the greatest inhibitors to fund manager hedging during the holding period of an investment were cost, followed by the lack of suitable hedging products and the short tenor of existing products.

> It is important to note that just because a GP has used a hedging instrument, it does not mean that said GP has been a satisfied customer.

Hedging Activities by Institutional Investors

Of the 34 institutional investors surveyed, only two reveal that they have hedged their EM PE commitments. One, a development finance institution, notes that the firm has used forwards to hedge a commitment, while a public pension fund representative remarks, "three years ago we purchased puts on the Brazilian real." It is unclear whether these were used to hedge: (1) the period between a commitment to the fund and a capital call for an investment, (2) the holding period, or (3) the period between the announcement of an exit and its close—and it is also unclear as to whether the underlying asset hedged was pure private equity or another asset type. However, what is clear is that hedging commitments remains a rare phenomenon.

This finding comports with the results from EMPEA's May 2016 *Currency Risk Management Survey*, which revealed that 64% of surveyed LPs never hedge the currency risk attendant with EM PE commitments, while 11% ran an overlay across their entire portfolio.

Demands from an Ideal Hedging Product

The One-Minute Read

- None of the hedging products commercially available today meet the criteria EM PE investors demand.
- Practitioners prefer a product that resembles the mechanics of a put option, effectively establishing a floor on the exchange rate while leaving the owner no obligation to complete the contract should it not wish to do so.
- The majority of respondents (82%) prefer a hedging solution that covers a portion of an investment's notional value, suggesting that investors are willing to absorb a modicum of currency risk.
- Consideration should be given to developing an innovative insurance—or insurance-like—product or solution, which would enable investors to tailor the amount of coverage they wish to purchase given the level and location of their local currency exposures, and their budgetary constraints.
- To achieve the broadest adoption, a hedging solution should be priced no greater than between 2% and 5% of annual returns.


Photo: Zahur Ramji, AKDN

The ultimate purpose of this survey was to collect sentiment data directly from practitioners that could assist with the development of a hedging solution that would meet the demands of the EM PE industry. In the final section of the survey, we sought to identify five key data points:

1. The User: Who is the target customer for a solution?
2. The Product: What type of hedging strategy do practitioners prefer?
3. The Coverage: Do practitioners seek partial or full coverage of currency risk?
4. The Complexity: How involved do practitioners want to be in managing the solution?
5. The Price: At what price would a hedging solution represent good value?

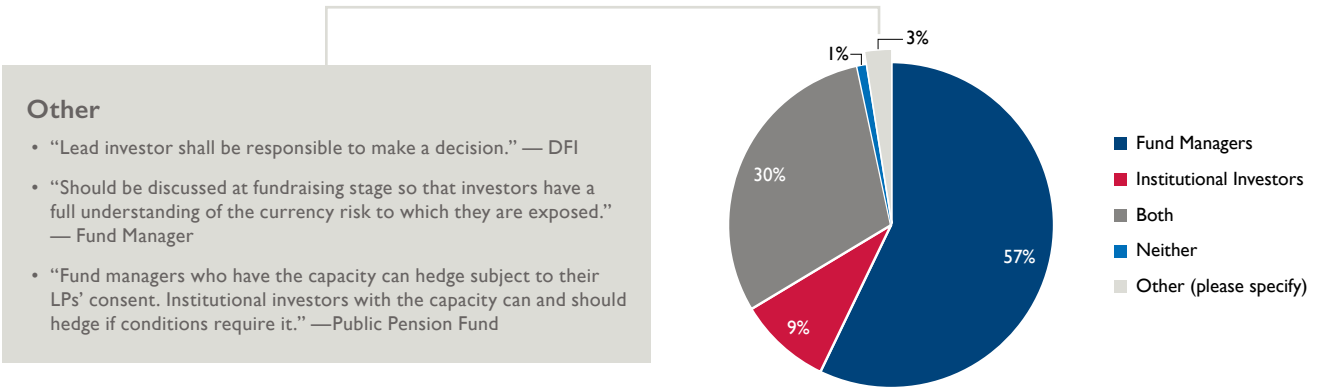
The findings that follow are the starting point for ideational work on the construction of potential solution sets, which will be tested through focus groups with industry professionals. For more on the next steps, please see pages 36-39 (The Road Ahead).

The User

Our first objective was to identify practitioners' views on who the ideal user, or customer, of a hedging solution would be, as the answer could have ramifications for product development and pricing. Across all survey participants, 57% of respondents (and 64% of GPs) believe that fund managers should control the decision regarding whether, when and how to hedge currency risk in emerging markets private equity (see Exhibit 15). Notably, only 11 respondents believe LPs should control this decision (six GPs, two commercial LPs and three DFI / multilateral / government-owned organization representatives).[11]

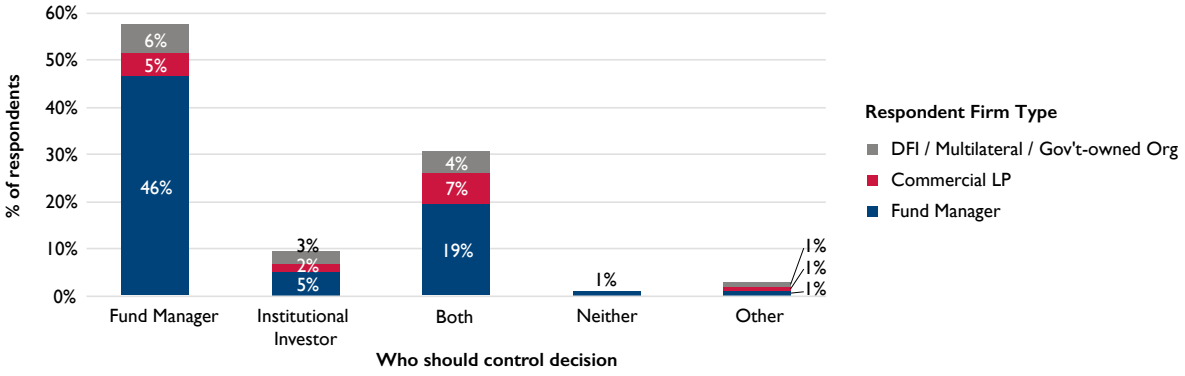
Nearly one-third of respondents indicate that both fund managers and institutional investors should have control over hedging decisions (see Exhibit 16), with 13 institutional investors (39% of LP respondents) and 23 fund managers (27% of GP respondents) selecting this option. However, there is a slight, but interesting, divergence when segmenting LP responses between commercial investors and DFIs / multilaterals / government-owned organizations. A slight majority of commercial LPs indicate a preference for both GPs and LPs to control hedging decisions, while a slight majority of the catalytic investors believe the decision should lie with fund managers.

Exhibit 15: Who should control the decision regarding whether, when, and how to hedge currency risk in EM PE?



Source: EMPEA.

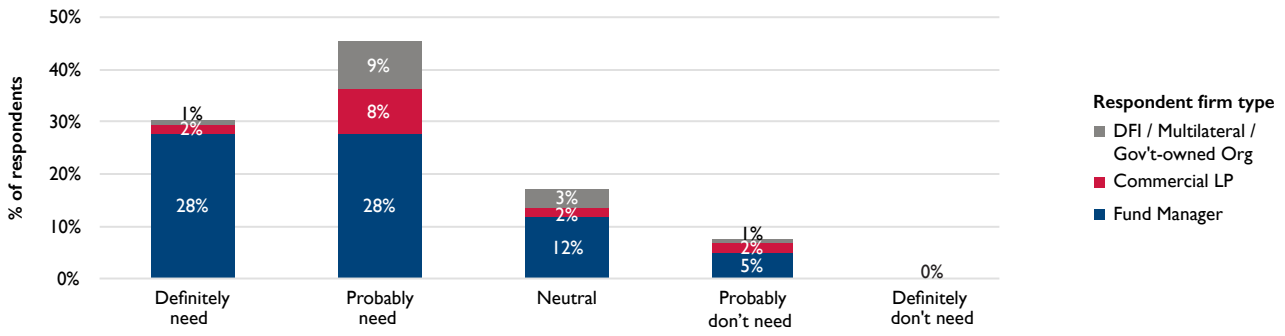
Exhibit 16: Who should control the decision regarding whether, when, and how to hedge FX risk in EM PE?



Source: EMPEA.

11. Note that this refers to industry participants' views on who is best positioned to "own" the decision to hedge currency risk in emerging markets private equity (e.g., should GPs hedge their portfolio company investments, or should LPs hedge their commitments / exposures?). It is not in reference to controlling the decisions of GPs. If an LP were to decide whether, when and how the GP should hedge on an ongoing basis, then it might lose its status as a limited partner.

Exhibit 17: Do you think a hedging product is something your firm needs or doesn't need?



Source: EMPEA.

In addition to determining whom practitioners believe should control the decision, we also sought to gauge respondents' demand for a hedging solution within their own firms. In aggregate, 75% of respondents report that a hedging solution is something they "definitely need" or "probably need," while only 7.5% of respondents believe they probably do not need one, and zero respondents definitively reject the need for a hedging solution (see Exhibit 17). This concentration of approximately 75% of respondents choosing "definitely need" or "probably need" is constant across all firm segments.

> In aggregate, 75% of respondents report that a hedging solution is something they "definitely need" or "probably need,"

Based on anecdotal feedback, the wording of "hedging product" in the question left some respondents with a vague notion of what such a product might look like, and thus they had difficulty answering the question with a definitive yes. Nevertheless, with the distribution of responses clearly clustered toward the "need" end of the spectrum, it is manifest that there is pent-up demand for a hedging solution.

Key takeaway on the user: A hedging solution should be developed to meet the needs of fund managers first, though it should be created with a view toward assisting commercial LPs with their emerging market exposures. There is pent-up demand for a hedging solution.

The Product

The next step in the process was identifying the contours of a product that would meet practitioners' demands. This was a challenge, as existing products in the market make currency risk hedging a tactical decision that requires matching the appropriate instrument with the given exposures and timeframe. Thus, no single solution is appropriate 100% of the time.

To structure the question, we adopted a stylistic approach that forced respondents to weigh three types of currency hedging strategies: a forward strategy, a range forward strategy and a put option strategy (defined below). Respondents were asked to assume that they were either managing (GPs) or participating (LPs) in a U.S. dollar-denominated fund that is investing in Mexican companies (i.e., in Mexican pesos), and to assume further that the spot MXN/USD exchange rate is 20 (i.e., 20 pesos to the dollar). The three types of strategies read as follows:

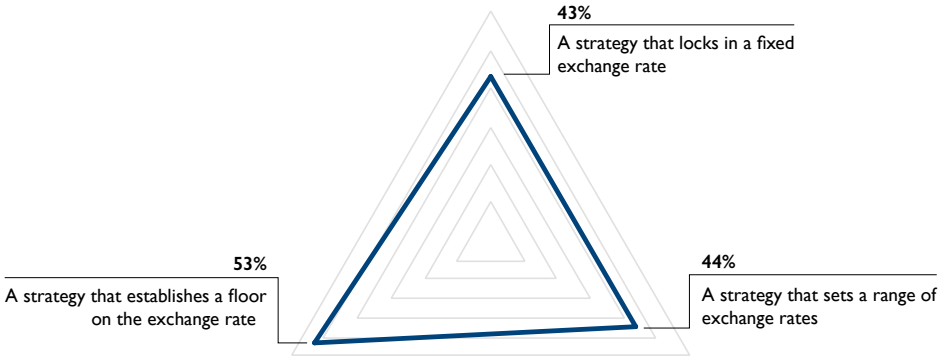
- **Forward strategy** — a strategy that locks in a fixed exchange rate between the local and fund currencies (in this case, the current spot rate of 20 pesos to the dollar).
- **Range forward (collar) strategy** — a strategy that sets a range of exchange rates between the local and fund currencies (for example, a pair of options that covers a 10% appreciation or depreciation of the peso; in this case, a range of 18-22 pesos to the dollar).
- **Put option strategy** — a strategy that establishes a floor on the exchange rate between the local and fund currencies (for example, protecting against a significant depreciation of the peso (i.e., >25%); in this case, setting a floor at 25 pesos to the dollar).

When aggregated across all respondents, industry professionals lean toward favoring a put option strategy that establishes a floor on the exchange rate (see Exhibit 18).

The aggregate figures, however, mask the intensity of demand for each strategy. For example, 48 respondents are "very interested" in the put option strategy (see position 1 on the x-axis in Exhibit 19), with another 46 selecting "interested" (position 2 on the x-axis). This equates to 79% of respondents. The percentages for the forward strategy and range forward (collar) strategy are 60% and 65%, respectively.

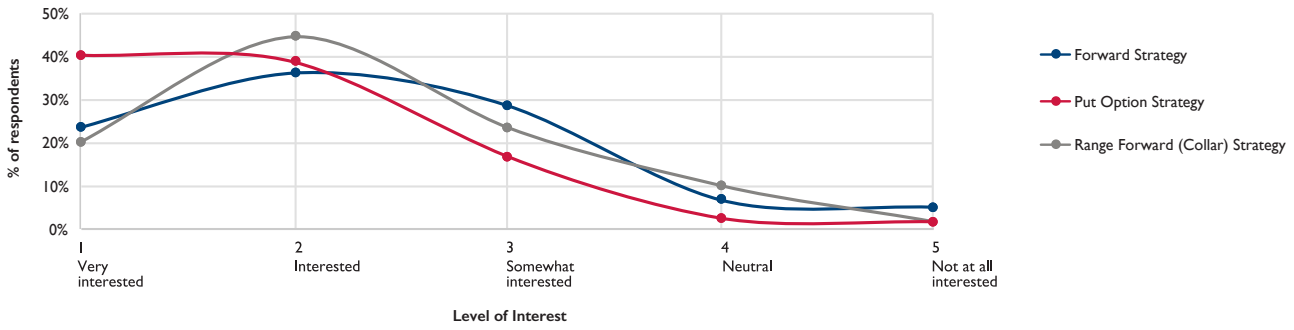
When looking at respondents by segment, the fund managers' distribution of responses parallels that for the full sample, which is not terribly surprising given that they constitute nearly 75% of the survey population (see Exhibit 20). The distribution for commercial LPs is similarly indicative of intense demand for a put option strategy, though demand for forwards and range forwards exhibits a flatter curve than the broader population (see Exhibit 21). Taken together, these findings do give us confidence that a solution that resembles the mechanics of a put option would meet demand from commercial investors in the market.

Exhibit 18: Preferred hedging strategies, as aggregated across all survey respondents



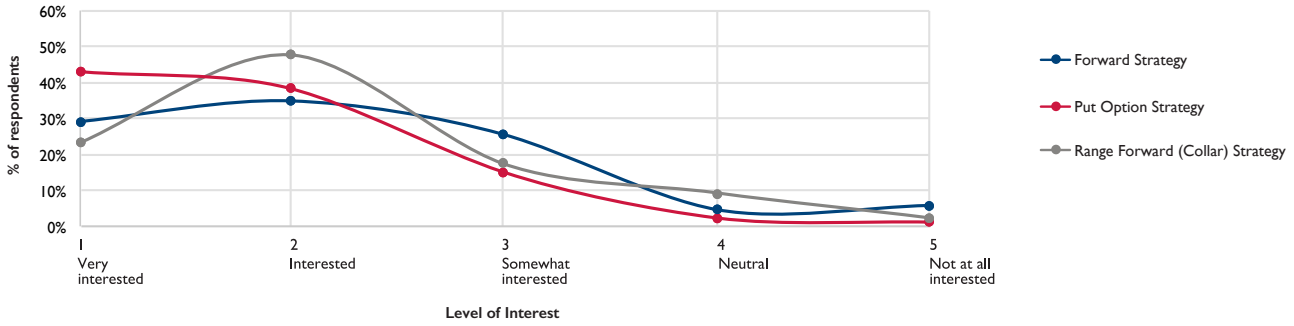
Source: EMPEA.
Note: Respondents were asked to rank each strategy on a five-point scale conveying their level of interest, where 1 signified "Very interested" and 5 "Not at all interested." The scores above are calculated by taking the inverse of the ranking, as averaged across all respondents.

Exhibit 19: Breakdown of respondents' preferred strategy by level of interest



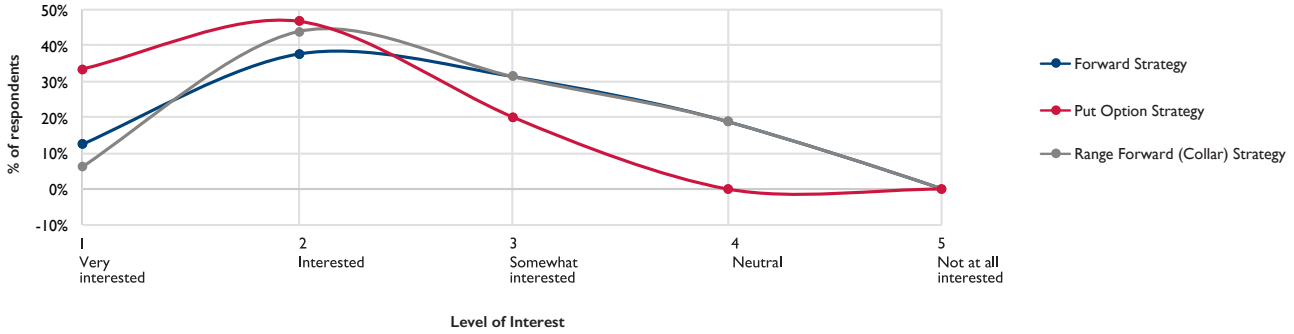
Source: EMPEA.
Note: Each strategy's responses will sum to 100%.

Exhibit 20: Breakdown of GPs' preferred strategy



Source: EMPEA.
Note: Each strategy's responses will sum to 100%. Includes 86 GP responses.

Exhibit 21: Breakdown of commercial LPs' preferred strategy



Source: EMPEA.
Note: Each strategy's responses will sum to 100%. Includes 16 commercial LP responses.

Key takeaway on the product: A possible hedging solution that is likely to meet demand amongst commercial investors in EM PE would either pursue or resemble a put option strategy. In other words, the product should establish a floor on the exchange rate that protects against a significant depreciation of the local currency against the fund currency, while leaving the owner no obligation to complete the contract should it not wish to do so.

The Coverage

Having determined the core users and some attractive mechanics of the product, we then sought to identify whether practitioners are looking for a "perfect" solution that covers the full notional value of their capital deployed into a fund or portfolio company, or a portion of the notional value. This question has a direct bearing on the price of a solution, as full coverage is inherently more expensive than partial coverage.

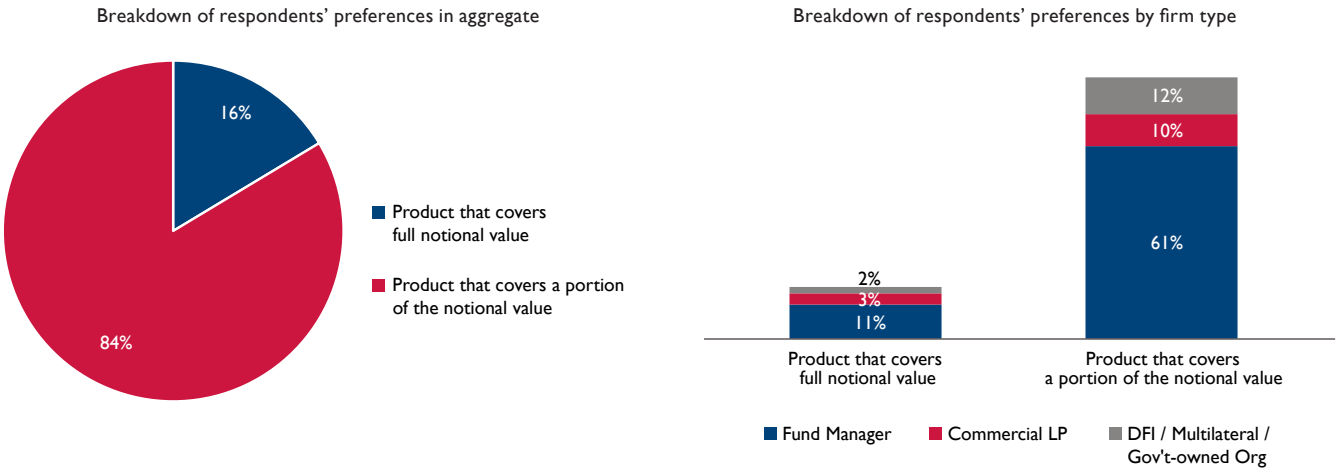
The clear majority (84%) of respondents prefer a product that covers a portion of the notional value of an investment, and this holds across all firm types, suggesting that practitioners are willing to absorb a measure of currency risk themselves, and / or are price sensitive when it comes to hedging solutions (see Exhibit 22).

Fund manager respondents who indicate a preference for a hedge that covers the full notional value represent a diverse array of fund types, including: two global / pan-emerging market firms, several country-dedicated managers in Latin America, two India-focused fund managers and two African regional firms.

The clear majority (84%) of respondents prefer a product that covers a portion of the notional value of an investment, and this holds across all firm types,

Key takeaway on the coverage: Though demand exists for a solution that covers the full notional value of an investment, the greatest market demand across all firm types is for a solution that covers a portion of an investment's notional value. This implies that price is a key driver of market demand, and that investors are willing to absorb a modicum of currency risk.

Exhibit 22: Do practitioners prefer a hedging solution that covers the full notional value or a portion of an investment's notional value?



Source: EMPEA.
Note: Includes 116 responses.

The Complexity

With greater clarity on product design, we wanted to determine the complexity practitioners were willing to embrace to manage the solution. Specifically, we asked respondents to rank three strategies for managing a hedging solution on a five-point scale, where "1" signified "strongly agree" and "5" signified "strongly disagree." The three strategies were placed along a spectrum of resource intensity, from internally managed to fully outsourced; they were:

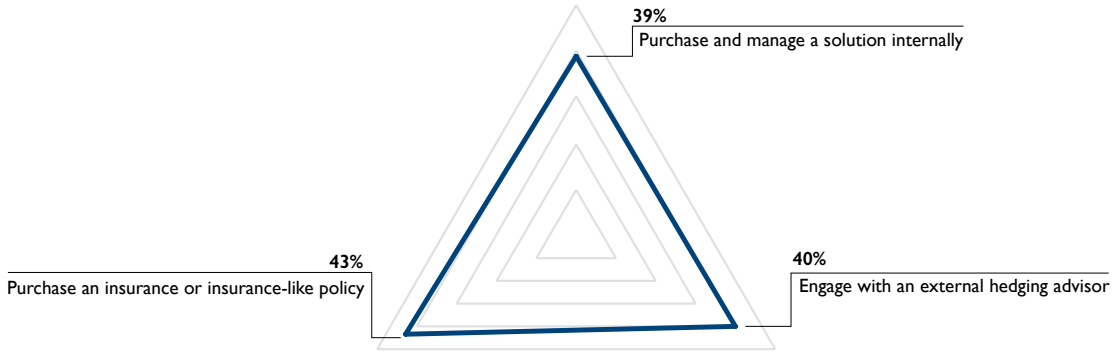
- We would prefer to purchase cost-effective hedging instruments ourselves and manage them internally.
- We would prefer to engage with an external hedging advisor who could develop and manage a cost-effective solution for us.
- We would prefer to purchase a cost-effective insurance policy—or similar type of product—that covers currency risk.

When aggregated across all respondents, there appears to be a slight preference for an insurance or insurance-like policy. However, the weights across all three options were within four percentage points of one another, suggesting that the aggregate level of responses does not allow us to draw a statistically significant conclusion (see Exhibit 23).

Respondents' preferences become clearer when segmented by intensity of demand across strategies. To isolate the level of demand, we netted out the "strongly disagree" responses from the "strongly agree," and the "disagree" from the "agree" responses. For example, 44 respondents indicate that they agree with the statement that they would prefer to manage a hedging solution internally, while 20 disagree with the statement. This leaves us with a net position of 24 agreeing with the proposition, as seen in the leftmost column in Exhibit 24.

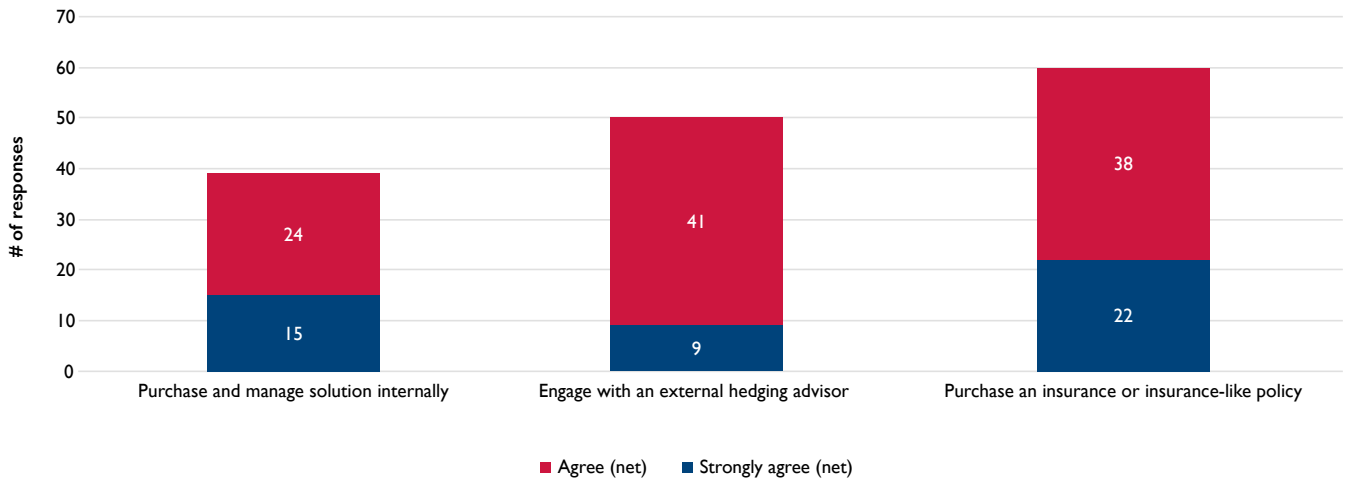
When measured in this manner, respondents evince a clearer preference for adopting an insurance or insurance-like policy. This option received an aggregate of 60 net responses, and the most "strongly agree" responses of all three approaches. In addition to the relative simplicity of purchasing an insurance-type policy, one reason for the receptivity of this approach may be professionals' familiarity with insurance products on offer from multilateral organizations and development finance institutions, such as the Multilateral Investment Guarantee Agency (part of the World Bank Group) and the Overseas Private Investment Corporation, both of which offer political risk insurance to investors in EM PE funds. However, though these political risk policies do cover currency inconvertibility and transfer restrictions, they explicitly do not cover currency depreciation or devaluation.

Exhibit 23: Preferred means of managing hedging solutions, as aggregated across all survey respondents



Source: EMPEA.
Note: Respondents were asked to rank each strategy on a five-point scale conveying their level of interest, where 1 signified "Strongly agree" and 5 "Strongly disagree."
The scores above are calculated by taking the inverse of the ranking, as averaged across all respondents.

Exhibit 24: Net preferences for managing hedging solutions, by strategy



Source: EMPEA.

Notably, there are more "strongly agree" responses for managing hedging solutions internally than working with an external hedging advisor. One explanation for this result is that many of the respondents that "strongly" prefer to manage a solution internally represent either larger firms that manage private equity funds in excess of US$1 billion, or larger institutional investors with deep experience in emerging markets. This suggests that these firms have the financial resources and in-house expertise to manage a hedging solution effectively. Another explanation focuses on the smaller number of respondents who "strongly" prefer working with an external hedging advisor. Though it received the second-most votes, this middle-of-the-road approach does not elicit the same enthusiasm as a solution that firms can control directly, or a fully outsourced one.

Many of the respondents that "strongly" prefer to manage a solution internally represent either larger firms that manage private equity funds in excess of US$1 billion, or larger institutional investors with deep experience in emerging markets.

Key takeaway on the complexity: There is appetite for solutions across the complexity spectrum; however, serious consideration should be given to developing an innovative insurance—or insurance-like—product or solution, which would enable investors to tailor the amount of coverage they wish to purchase given the level and location of their local currency exposures, and their budgetary constraints.

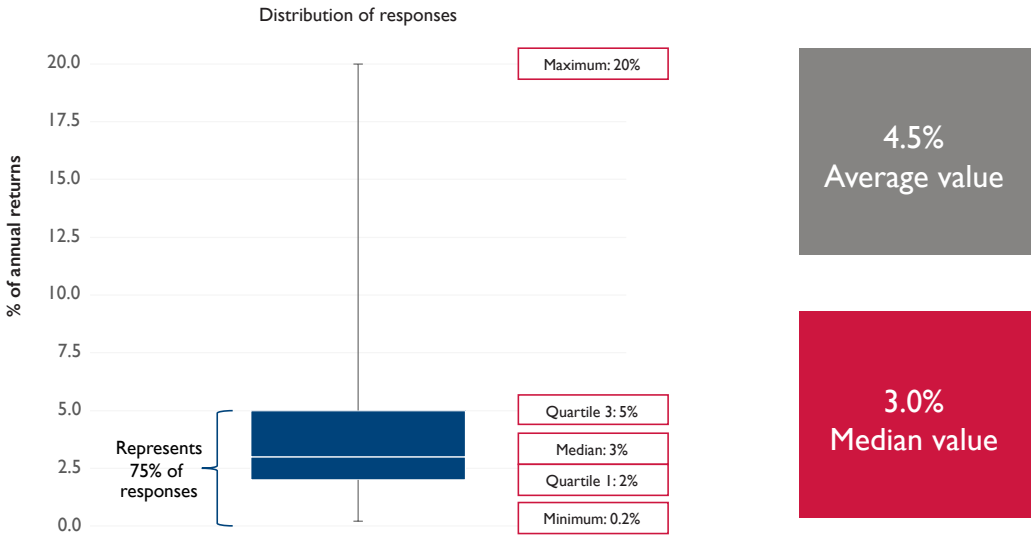
The Price

The excessive cost of hedging instruments has been the primary inhibitor to GP hedging during the holding period of an investment.[12] To assess the financial viability of a potential hedging solution, we sought to identify which price points would represent good value to industry practitioners. To create a consistent pricing figure across firm size and type, we asked respondents to provide the price as a forgone percentage of annual returns. When aggregated across all respondents, we received an average foregone annual return of 4.5% and a median of 3.0%, with a wide range encompassing a minimum of 0.2% and a maximum of 20% (see Exhibit 25).

The picture gets more interesting when the responses are segmented by firm type. Respondents from DFIs, multilateral organizations and government-owned organizations exhibit the broadest range of price points (0.3% to 20%), while commercial LPs exhibit the tightest range (0.2% to 7.6%). However, the median price point for both cohorts is approximately 2.5%, and the middle 50% of respondents select price points between 2% and 5% (see Exhibit 26). As a group, fund managers have a broader range of price points than commercial LPs (0.3% to 15%) and a higher median price of 3.5%. That said, the middle 50% of respondents constitute a tighter grouping than their LP counterparts, with a range of 2.5% to 5% (a 250 basis point spread compared to 300 for LPs).

In addition to these pricing figures, we also sought to identify whether LPs would be willing to have fund managers set aside a percentage of committed capital to finance hedging activities (and if so, how much). In practice this would need to be a percentage of *drawn* capital. However, nearly 80% of LP respondents (27) answered the question and they establish an average of 3.6% of committed capital and a median of 3.0% (see Exhibit 27). There is a wide range of responses—extending from 0% to 10%—though there tends to be a concentration of commercial LPs toward the lower end of the spectrum (e.g., 1% to 2%) and the respondents with the highest values (8%, 10% and 10%) come from two DFIs and a fund of funds, respectively.

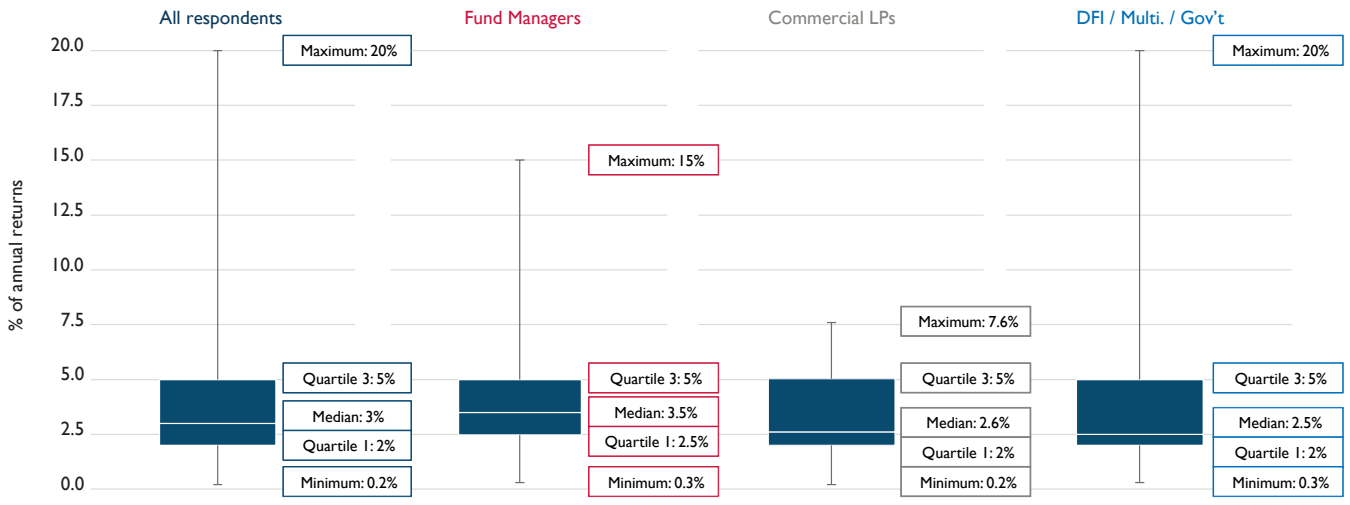
Exhibit 25: Distribution of hedging solution prices representing good value, as aggregated across all respondents



Source: EMPEA.
Note: The responses are broken down into quartiles, such that the two blue boxes represent the middle 50% of responses.

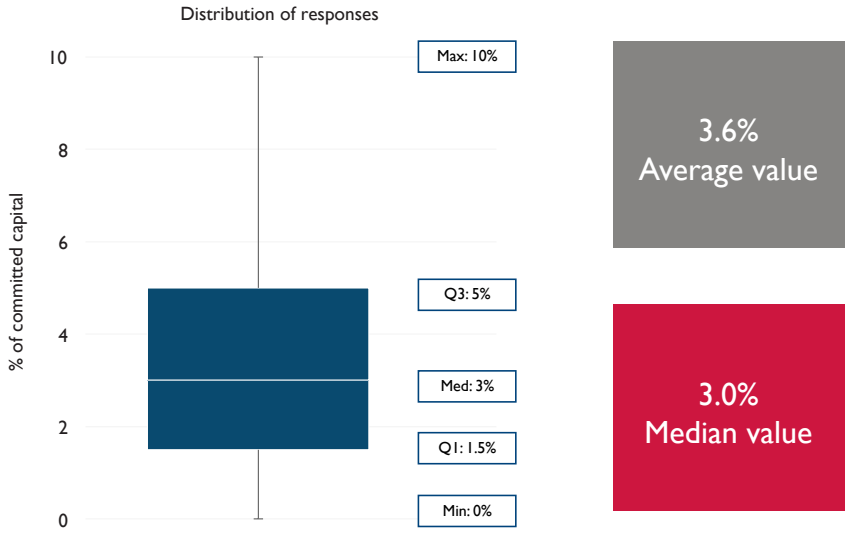
12. See EMPEA, *Currency Risk Management Survey* (May 2016), available at www.empea.org.

Exhibit 26: Distribution of hedging solution prices representing good value, segmented by respondent firm type



Source: EMPEA.
Note: The responses are broken down into quartiles, such that the two blue boxes represent the middle 50% of responses.

Exhibit 27: Percentage of committed capital that LPs are willing to have GPs set aside for hedging purposes



Source: EMPEA.
Note: The responses are broken down into quartiles, such that the two blue boxes represent the middle 50% of responses. Includes 27 LP responses.

Key takeaway on the price: To achieve the broadest adoption, a hedging solution should be priced no greater than between 2% and 5% of annual returns.


Photo: USAID

What the Survey Tells Us about Market Demand

In broad relief, the survey results suggest that an ideal hedging solution—by that we mean one that would gain traction in the market—would have the following characteristics:

- Developed for private equity fund managers, but applicable for LPs;
- Protects against the extreme case (i.e., significant depreciations or devaluations);
- Covers a portion of an investment's notional value;
- Operates like an insurance policy; and,
- Is priced no greater than between 2% to 5% of annual returns.

None of the hedging products commercially available today meet the criteria that EM PE professionals demand. The road ahead requires significant innovation. The donor / development community can play an important role both in the research and development of a solution, and in bringing it to market.

None of the hedging products commercially available today meet the criteria that EM PE professionals demand. The road ahead requires significant innovation.

The Road Ahead

Photo: USAID

Next Steps / The Search for a Solution

As part of this project, "Expanding Institutional Investment into Emerging Markets Via Currency Risk Mitigation," Sarona and its partners have completed extensive consultations with a broad spectrum of relevant market players, including institutional investors and private equity fund managers active in developing countries, hedging entities, development finance institutions, multilateral development banks, insurers and brokers. This also includes EMPEA's survey of 119 institutional investors and private equity fund managers deploying capital into emerging markets regarding currency risk challenges and potential solutions.

By the time this report went to press, Sarona had issued a request for proposals (RFP) soliciting ideas for the purpose of designing and developing a possible new / innovative currency risk mitigation mechanism for private equity investments in developing countries. Key findings from EMPEA's survey, particularly those relating to the demands from an ideal hedging product (pages 25-35), were incorporated in the RFP to ensure that proponents are focused on developing a solution that is relevant to commercially oriented investors in emerging markets.

In soliciting these proposals, Sarona seeks creative approaches and new ideas that can be applied at scale—ideally at a fund or private equity portfolio level, rather than the individual investee company or project level—including solutions that cover broad geographic and / or sectoral scope. In addition, proponents were invited to consider risk-sharing approaches with donor agencies and other public-sector actors, which are seeking ways to leverage additional private sector institutional investment for development.

Exploring Potential Solutions

Following receipt of RFP responses and the selection of one (or more) proponent(s), the project will proceed in two stages. In Stage One, the project team will work with the selected proponents to scope out the parameters of a potential solution / mechanism with a view toward building a proof of concept. The team will then conduct interviews with a focus group consisting of private equity fund managers and institutional investors to validate the proposed solution / mechanism, and assess market demand, uptake and pricing considerations.

At the completion of Stage One, a finalist will be chosen to pilot a solution / mechanism in Stage Two. The proponent will tailor, as necessary, the innovative solution / mechanism for the identified piloting opportunity (e.g., a simulated private equity investment fund portfolio), and then monitor and analyze the pilot solution's effectiveness. The entire project is anticipated to conclude by 30 September 2017.

Open Invitation to Industry Participants

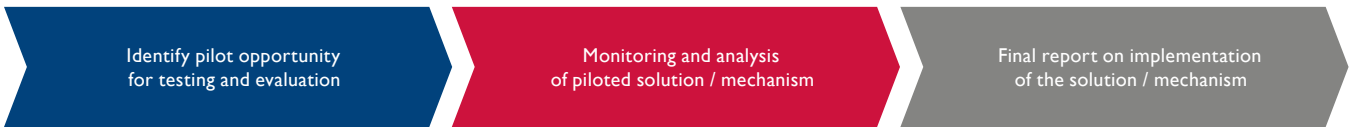
If you are interested in participating in focus group interviews as we test the commercial viability of potential solutions in Stage One, please contact Serge Levert-Chiasson at slevertchiasson@saronafund.com by 31 May 2017.

Stage One: Designing and Developing the Potential Solution / Mechanism (Proof of Concept)

May 2017 — July 2017

Stage Two: Deploying the Solution / Mechanism (Piloting)

July 2017 — September 2017



Roles for the Development Community

Private Equity: A Powerful Catalyst of Economic Development

The development community—including donor agencies and development finance institutions—recognizes that the private sector is a key driver of sustainable socio-economic growth and prosperity in developing and emerging markets. Since private-sector enterprises need capital to grow and flourish, much of the focus is on finding ways to substantially increase the flows of institutional capital into these markets. Private equity plays a key role in this endeavor.

Since 2008, the year EMPEA first began reporting on EM PE investment figures, over US$263 billion in private capital has been deployed into developing economies, with the total number of transactions amounting to nearly 11,000.[13] Private equity funds have been a vital source of growth and expansion capital to firms across the globe—particularly in regions where access to capital remains one of the key inhibitors to entrepreneurship and business growth. More than just financial resources, however, private equity can also bring human resources to the table, empowering management teams with global best practices and enhancing firms' operations.

The United Kingdom's development finance institution, CDC Group plc, conducted an impact assessment of their private equity program in 2015. The findings show that between 2008 and 2012, CDC-supported fund managers invested in 919 businesses that grew revenues by US$41.6 billion, profits by US$4.8 billion and taxes paid by US$2.1 billion.[14] Moreover, during that period, the underlying investee companies in CDC's portfolio created a minimum of 345,000 direct jobs, with 117,300 being generated in South Asia alone.

Meanwhile, donor agencies are seeking new and creative ways of using their grant and (grant-like) funding to mobilize greater private capital for development. This includes strategically deploying donor funding to help adjust the risk-return profile for institutional investors and unlock substantial private capital that would otherwise remain on the sidelines. A recent example is Global

Photo: Manisha Shrestha, NEAT

13. EMPEA Industry Statistics.
14. CDC Group plc, *Development Impact Evaluation Summary Report: What was the impact of CDC's fund investments from 2004 to 2012?* (November 2015).

Affairs Canada's (GAC's) partnering with Sarona Asset Management on Sarona Frontier Markets Fund 2 LP (SFMF2): GAC's contribution of US$15 million served as a first-loss position, which helped catalyze US$150 million in overall capital. Over time, SFMF2 is expected to help mobilize up to US$1.5 billion in local investment, and create or sustain up to 23,000 jobs across the developing world.

For donor agencies in particular, it will be important to consider what roles they can play in helping private equity investors and fund managers mitigate currency risk. As reported earlier in this study (see page 15), the creation of a cost-effective currency hedging mechanism could help mobilize substantial pools of private institutional capital for investment in new and frontier markets.

Creating New Hedging Markets

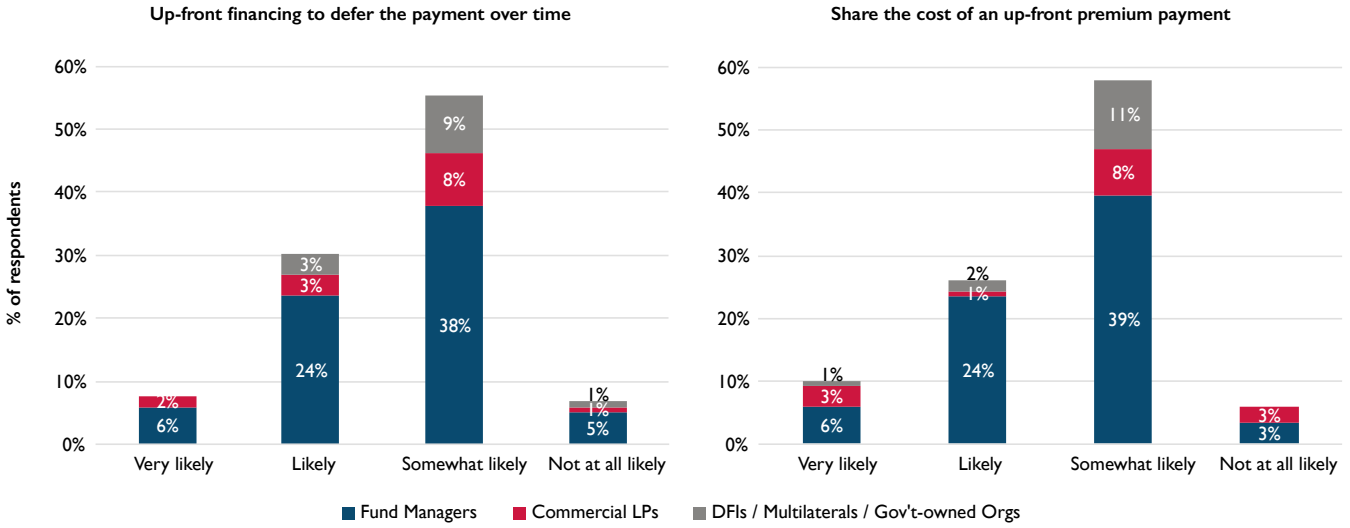
In a response to EMPEA's second currency risk survey, one fund manager active in Emerging Asia, Latin America and Sub-Saharan Africa writes, "I would like to see more liquidity in frontier currency markets (for example, Zambian kwacha, Nigerian naira, Ghanaian cedi, Ethiopian birr, CFA franc). Where a market does not yet exist, or isn't sufficiently liquid (i.e., the cost of hedging is prohibitively expensive), I would like to see the public sector encourage private sector investment by subsidizing the cost of hedging." While providing subsidies may be a less attractive intervention for donor agencies, this fund manager nonetheless highlights a key space where donors could immediately deliver an impact.

Indeed, we surveyed industry professionals to identify whether up-front financing or sharing the cost of a hedging instrument's premium payments would increase firms' likelihood of procuring one. In both instances, the vast majority of respondents believe these measures would increase their likelihood of hedging in emerging markets; only 6% of respondents say that they would not at all be more likely to hedge with these inducements (see Exhibit 28).

On balance, the intensity of demand for these two measures is greatest among the fund manager community, with 41% saying they would be very likely or likely to procure a hedging instrument if they could take advantage of up-front financing or a cost-sharing arrangement. The firms in the "very likely" segment include several regional and pan-emerging market funds, and most of the commercial LP respondents in this category come from fund of funds representatives.

In general, the demand from the LP community seems less intense, with 64% of LPs reporting that they would be somewhat more likely to procure a hedging instrument if up-front financing were made available to defer the cost over time, with a figure of 67% for sharing the cost of an up-front premium payment. The results from the survey suggest that industry participants aren't just simply looking for subsidies, but rather that they are trying to find an optimal solution to one of the most vexing challenges in emerging markets investment. The search is on.

Exhibit 28: Would up-front financing or cost-sharing of premium payments increase the likelihood of procuring a hedging instrument?



Source: EMPEA.
Note: Includes 119 responses.

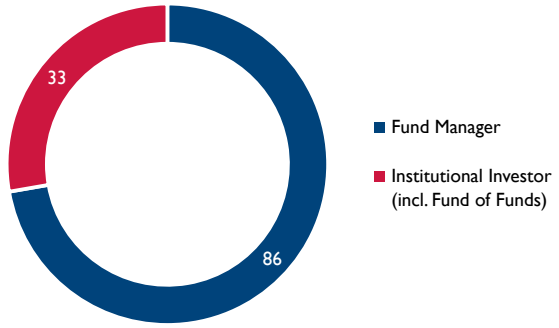
Appendices

Photo: Matthieu Young

Appendix I: Participant Demographics

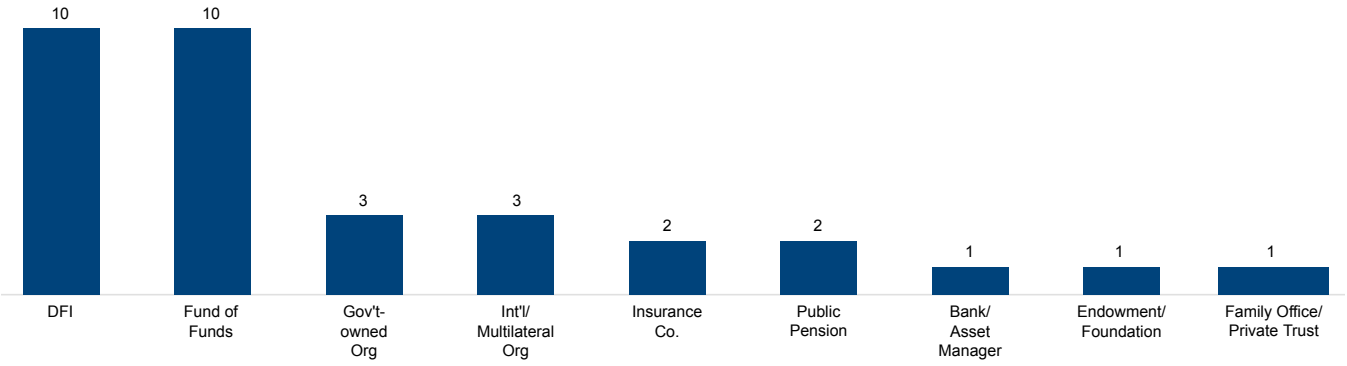
EMPEA conducted a survey of institutional investors and private equity fund managers in January 2017. This study includes responses from 119 practitioners, with an approximate breakdown of 30% institutional investors and 70% fund managers (see Exhibit 29). Within the institutional investor segment (see Exhibit 30), 17 can be classified as commercial LPs (i.e., those that are investing in emerging markets purely for their return and diversification benefits), as distinct from those organizations that are investing in these markets to pursue ancillary objectives (e.g., market development, catalyzing private capital flows, etc.).

Exhibit 29: Survey respondents by firm type



Source: EMPEA.

Exhibit 30: Survey respondents by institution type—LPs



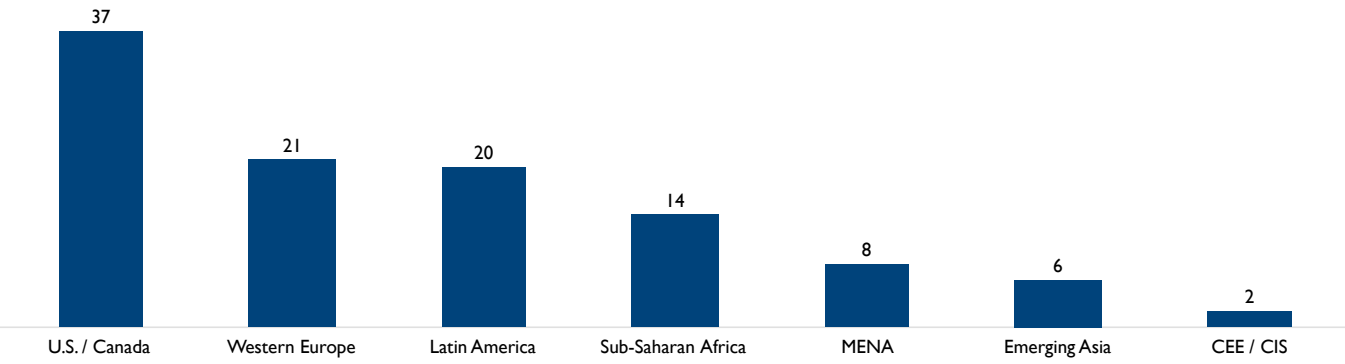
Source: EMPEA.

Geographic Distribution

Nearly half of the respondents to the survey represent institutions headquartered in developed markets (i.e., the United States, Canada and Western Europe; see Exhibit 31), with healthy participation from firms based in Latin America and Sub-Saharan Africa. Emerging Asian and CEE / CIS firms appear less well represented.

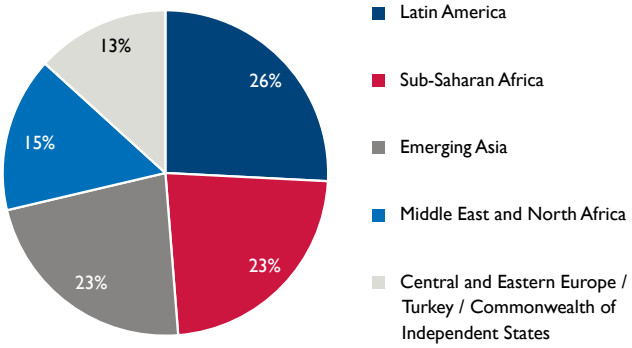
However, the respondents represent institutions covering a broad geographic remit with respect to the destinations where they are investing capital (see Exhibit 32).

Exhibit 31: Respondents by headquarters location (region)



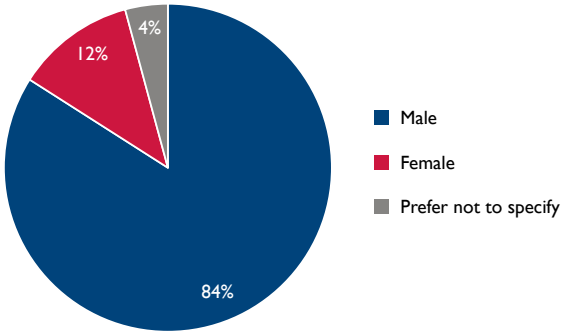
Source: EMPEA.

Exhibit 32: Regions in which respondents invest



Source: EMPEA.
Note: Respondents were asked to select all that apply.

Exhibit 33: : Survey respondents by gender



Appendix II: A Primer on Currency Hedging Derivatives

There are two major categories for financial derivatives: exchange-traded and over-the-counter products.

Exchange-traded Products

Exchange-traded derivatives are publicly listed contracts that offer standardized terms (e.g., contract size, the underlying or reference asset, and period or duration). These derivatives exist for a variety of assets, including stocks, interest rates, commodities and currencies. For the purposes of currency risk management, there are two major instruments: futures and listed options.

Futures

A futures contract grants the owner the right to buy or sell a specified amount of an asset at a specific date, and at a fixed price. With a futures contract, the quantity, asset, and period are all standardized (e.g., 5,000 bushels of corn for delivery on 30 September 2017 at a price of US$3.9075 per bushel). The buyer of a futures contract purchases it from an exchange, and the counterparty is a clearinghouse, which manages its risk of adverse price movements by requiring the buyer to post an initial margin.

The clearinghouse may require the futures buyer to post additional margin payments throughout the life of the contract if and as there are sequential adverse price movements. The prospect of meeting these "margin calls" requires the futures buyer to have a firm grasp of cash management. If a futures buyer fails to meet a margin call, the clearinghouse can liquidate the contract and charge the buyer additional transaction fees.

Listed Options

An option grants the owner the right—but not the obligation—to buy ("call") or sell ("put") an asset or commodity within a particular time period or at a specific date, and at a predetermined price ("strike price"). Unlike the margin requirements with futures contracts, the buyer of an option pays the seller of an option a "premium," and this value constitutes the full capital at risk for the holder of an option (excluding transaction commissions).

Options can be "in the money," "at the money," or "out of the money" depending on the current ("spot") price, and the strike price on the contract.

Option Strategy — Collars

There are several option strategies that blend buying and selling products to take a bullish, bearish, or neutral position on an asset. These can get quite exotic and sophisticated, but it is worth covering one since it appears in this report: the collar, or range-forward strategy.

A collar is a market-neutral strategy that:

1. Sets a floor on the price of an asset (through the purchase of a put option—or, a right to sell an asset at a fixed price at a future point in time); and,
2. Establishes a cap on the price of an asset (through the sale of a call option—for which the seller receives a premium payment).

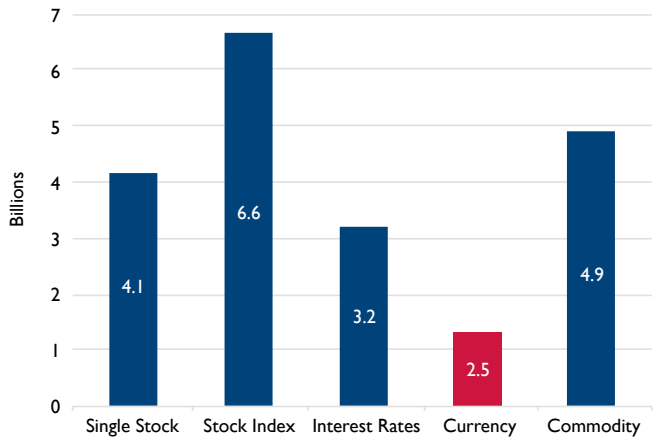
Investors entering a collar can protect themselves at little to no cost by establishing the strike prices for the floor and the cap such that the premium payments received through the sale of a call option cover the purchase price of the put option.

Size of the Exchange-traded Market

In 2015, more than 21 billion listed contracts were traded globally. Currency derivatives constituted 2.5 billion of this total, with a breakout of roughly 80% in futures and 20% in options (see Exhibit 34).

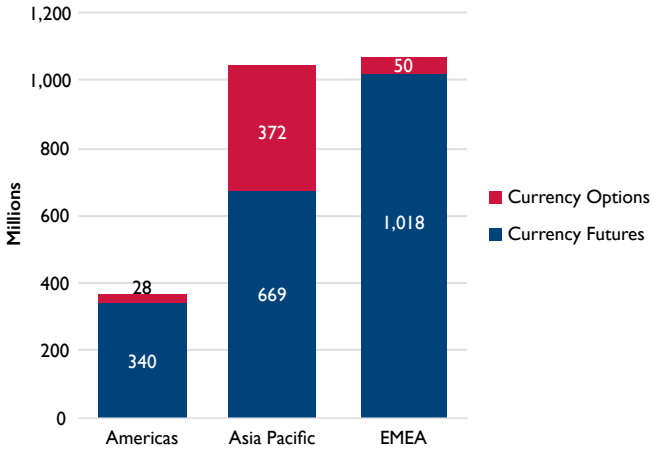
Geographically, 85% of trades took place in the Asia Pacific and EMEA (Europe, Middle East, and Africa) regions, and the Asia Pacific region accounted for more than 80% of currency options trading (see Exhibit 35). Note that irrespective of the region where the trades occurred, the vast majority of these currency derivatives trades would have been for U.S. dollars and other reserve currencies.[15]

Exhibit 34: Options and futures contracts traded in 2015



Source: World Federation of Exchanges, *2015 Market Highlights.*

Exhibit 35: Geographic breakdown of currency derivative contracts traded in 2015



Source: World Federation of Exchanges, *2015 Market Highlights.*

Exchange-traded Products: Takeaways for Private Equity

- The standardized size and duration of exchange-traded products make them an imprecise hedging instrument for private equity practitioners, as oftentimes the sizing and timing of cash flows are unknown in private equity investments.
- Given the margin requirements of futures contracts, they can present liquidity risks to GPs and would incur additional overhead expenses to manage. The use of futures to hedge private equity investments is generally inadvisable.
- Publicly traded options may be more useful as they incur fewer cash management burdens on the GP, and trading strategies such as collars can be pursued at little to no cost. However, given that these are standardized products, the sizing and timing of the instrument may not match the underlying exposures of the private equity investment. Caution is warranted.

Bespoke Products ("Over-the-counter" or OTC Derivatives)

Over-the-counter ("OTC") derivatives are privately negotiated contracts that are customized between the two parties to an agreement. Thus, the size, underlying asset, and duration of the contract all can be tailored to the parties' needs. There are three major types of OTC products: forwards, options and swaps.

Forwards

A forward contract is an agreement between two parties to exchange an asset at a set price at a future date. For example, a private equity fund manager and an investment bank may agree to exchange MXN10 million for US$1 million 90 days from the date of the contract. There is no payment upfront; there is simply an agreement to exchange an asset or funds in the future. Since the future is uncertain and the pricing of forwards is based upon interest rate differentials, the longer a forward contract extends in duration, the more expensive it will be. There will be a larger bid-ask spread. Forwards are commonly agreed to for periods of less than one year.

15. The reserve currencies include the U.S. dollar, Euro, Pound sterling, Japanese yen and (as of 2015) the Chinese yuan.

Non-deliverable Forwards

In addition to a regular, or *outright* forward, parties may enter into a *non-deliverable forward*. With a non-deliverable forward, the parties net out the spot price available in the market at the delivery date and the notional amount agreed to in the contract, and simply pay the difference between the two. This feature of exchanging the net difference and not the total value enables non-deliverable forwards to be used for transactions in countries with exchange controls.

Rollover Forwards

One strategy for hedging currency risk over long periods is to engage in a policy of *rollover forwards*. With this strategy, a firm enters a contract with a short duration, such as a 3-month currency forward to lock in the exchange rate at the time of the transaction. At the end of the 3-month period, the parties may choose to enter into a new 3-month currency forward set at the spot rate available in the market at that time.

For an overly simplified example, assume a private equity fund manager wishes to lock in a Mexican peso to U.S. dollar exchange rate of 10:1.[16] At the end of the three months, assume the peso has lost 10% of its value. The counterparty owes the fund manager the difference of 10 cents, and they agree to roll over the 3-month forward at the spot rate of 11 pesos to the dollar. This overly simplified example demonstrates how the rollover forward can protect the fund manager against a weakening currency: the fund manager is banking the U.S. dollar payments from the counterparty every three months as the local currency depreciates. Of course, if the local currency appreciates, the fund manager would be paying the counterparty.

Deal-contingent Forwards

Deal-contingent forwards are foreign exchange forwards that do not incur premium payments up front, and expire without incurring fees if the transaction does not occur. The bank or counterparty that structures the forward makes money by adjusting the forward exchange rate in the contract such that it is off-market, and sufficiently compensates for the risk of the deal falling through.

Options

In addition to the standardized exchange-traded options discussed previously, two parties can negotiate a customized agreement between themselves (e.g., a private equity firm and a financial institution). With an OTC option, the parties can tailor each of the variables to their specific requirements. Thus, the option's size, strike price and exercise date all can be structured on a bespoke basis. This versatility enables the owner to construct a tailored, insurance-like hedge.

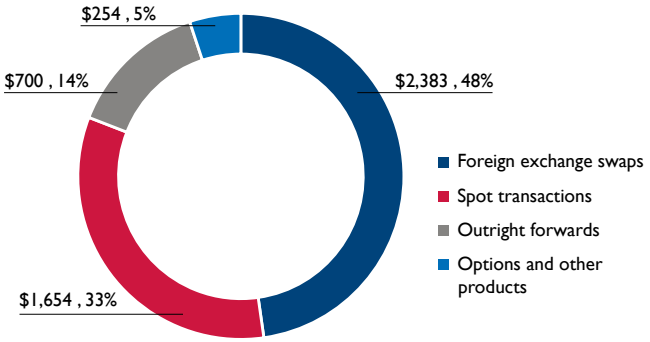
Swaps

A currency swap is a contract in which the two parties agree to exchange streams of interest payments in different currencies for an agreed period of time, and / or to exchange principal amounts in different currencies at a pre-agreed exchange rate at maturity.[17]

Size of the OTC Market

According to data from the Bank for International Settlements, as of April 2016, the daily average of OTC foreign exchange turnover amounted to US$5 trillion.[18] Outright forwards valued at US$700 billion exchanged hands on an average day, constituting about 14% of the total market (see Exhibit 36).

Exhibit 36: Daily average of OTC foreign exchange turnover in April 2016 (US$B, % of total)

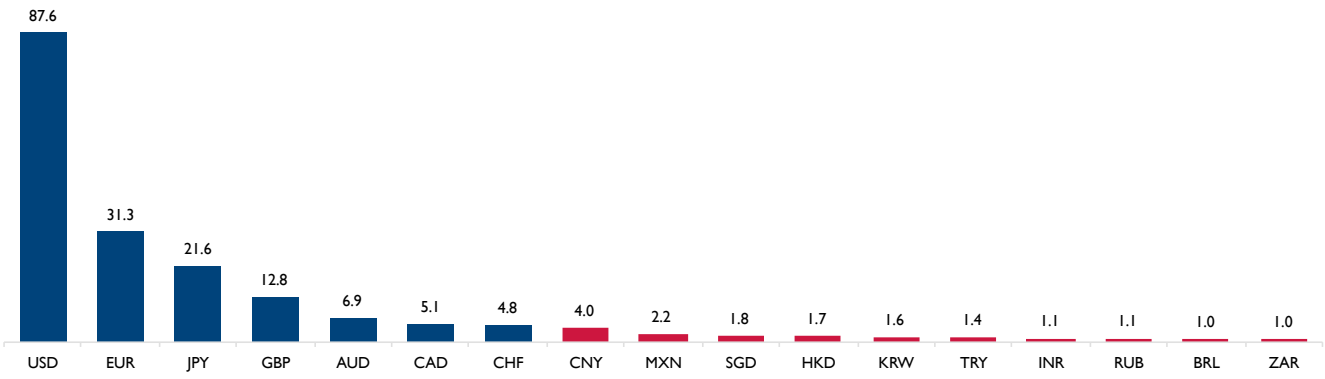


Source: BIS, *Triennial Central Bank Survey: Foreign exchange turnover in April 2016* (September 2016).

16. Note that in these transactions, the cost to the fund manager is embedded in the bid-ask spread, and when it comes to emerging market currencies this spread can be quite large.
17. Bank for International Settlements, *Triennial Central Bank Survey: Foreign exchange turnover in April 2016* (September 2016).
18. Ibid.

The vast majority of these transactions are for the reserve currencies, and particularly for the U.S. dollar. Emerging market currencies constitute a tiny fraction of currency trades (see Exhibit 37).

Exhibit 37: Currency distribution of average daily OTC foreign exchange turnover in April 2016 (% of total)



Source: BIS, *Triennial Central Bank Survey: Foreign exchange turnover in April 2016* (September 2016).
Note: Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200%.

OTC Products: Takeaways for Private Equity

The OTC markets offer private equity practitioners greater ability to tailor their hedging activities, such that they better match the timing and sizing of their foreign exchange exposures. However, since OTC derivatives are privately negotiated, they incur a greater degree of counterparty risk than exchange-traded products.

While forwards offer parties the ability to structure a product for their specific needs, in practice there are some complications:

- While a private equity fund manager may hold a Mexican portfolio company for five years and seek to hedge its exposure to the peso, in practice it will be extremely difficult to find a counterparty willing to absorb the currency risk for that duration, let alone one that can price it affordably.
- The fund manager is bearing substantial counterparty risk itself.

Rollover forwards appear to be a sound strategy—the difficulty is finding counterparties that are willing to bear the currency risk attendant with emerging economies for the life of a private equity fund, and to continue to roll over the forwards if and as adverse currency moves impact the counterparty's balance sheet.

Finally, the reality is that emerging market currencies remain illiquid. The most liquid fully convertible currency is the Mexican peso, which constitutes only 2% of global OTC foreign exchange turnover. The lack of liquidity in emerging market currencies—with the implications on pricing this necessitates—suggests that new concepts may be needed to compensate for a lack of adequate, market-based solutions for hedging currency risk in emerging markets private equity.

Appendix III: Glossary of Terms

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.

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."

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

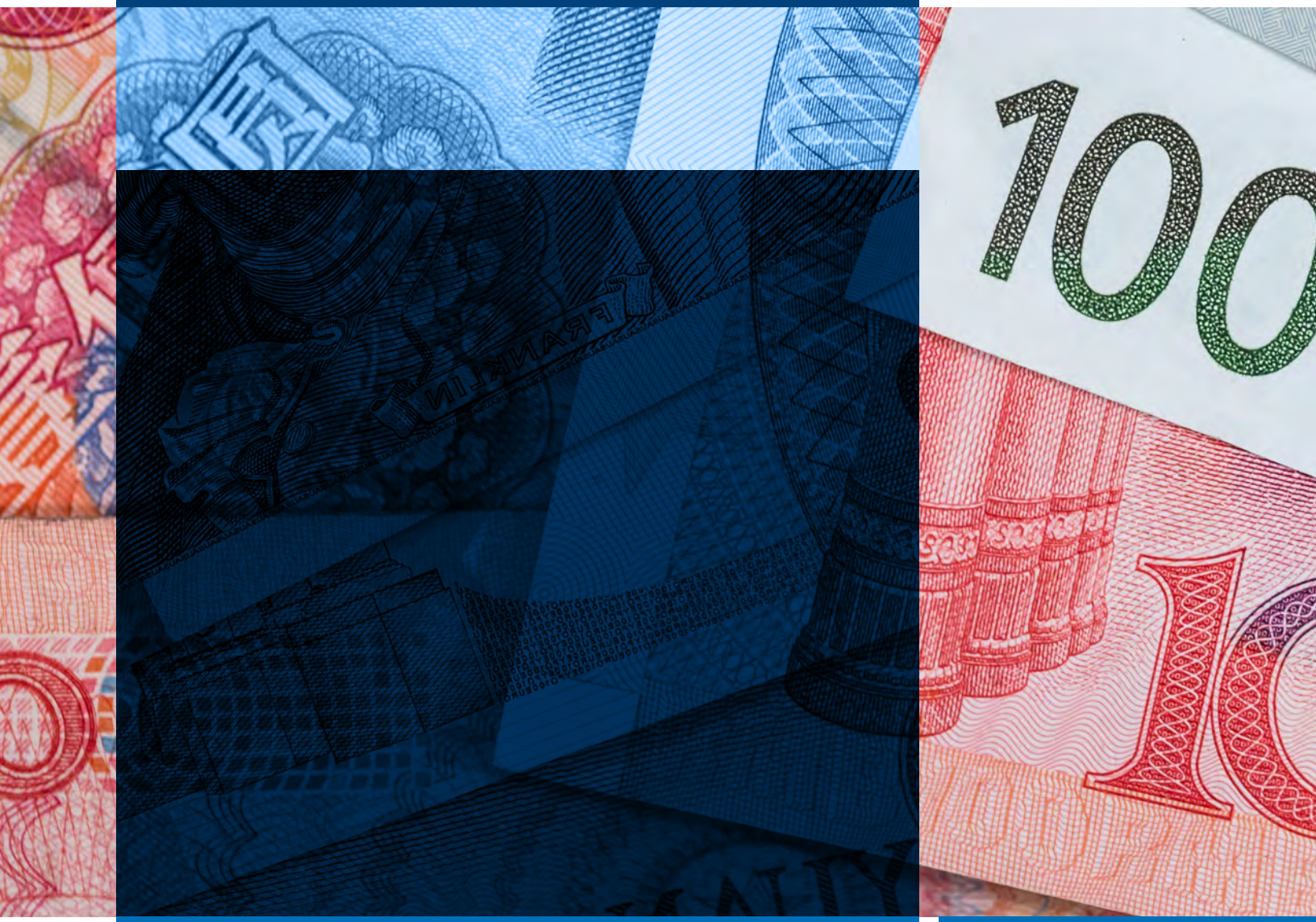
General partners (abbreviated to "GPs") are private equity fund managers.

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

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

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

Photo: Kelly Ramundo, USAID



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