Private Equity Emerging Managers Report

Prepared for CalPERS

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1. Introduction

Crosswater was engaged by CalPERS to review its Private Equity Emerging Manager Program and make recommendations to the program's structure going forward. In executing the assignment, Crosswater was asked by the CalPERS Private Equity Team to perform the following:

- Review the role and status of emerging managers in the Private Equity industry
- Analyze whether there is a consistent definition of emerging manager
- Analyze the Private Equity emerging managers universe, including number of funds and capital raised
- Analyze whether there is a "risk premium" attached to investing in emerging managers
- Analyze whether there was any compelling evidence that emerging managers outperform or underperform established managers
- Analyze CalPERS' Private Equity Emerging Manager Program historical performance database and compare Emerging and Diverse Manager performance against CalPERS' non-emerging managers as well as CalPERS' Private Equity industry benchmark
- Evaluate the various definitions of Emerging Manager within the context of Private Equity and report findings to CalPERS' Private Equity Unit.
- Suggest possible revisions to the current CalPERS Private Equity Emerging Manager Program

1.1 Process

Crosswater interviewed over 20 active participants in the Private Equity emerging managers sector including:

- CalPERS staff members
- Staff at six large domestic public pension funds
- Consultants to large public pension funds

- Fund of Funds managers[1]
- Established Private Equity managers
- Emerging Private Equity managers

All of Crosswater's interviews were "off-the-record" to encourage frankness about the general issue of Private Equity emerging managers and CalPERS' approach to the sector.

While most of the interviewees were open and responsive (some more than others) to the concept of utilizing emerging managers in the Private Equity sector and in sharing their personal views, none would divulge specific information about the returns their employer/institution/clients had experienced with emerging managers. A number of interviewees did not want either their name or employer disclosed in Crosswater's report. It should also be noted, as is usual in such a study, not every request for an interview was accepted.

Crosswater also conducted onsite meetings with members of CalPERS' Private Equity Unit over May 22nd and 23rd to review and evaluate CalPERS' Private Equity Emerging Manager Program performance data. Crosswater met with the following individuals from CalPERS' Private Equity Unit to discuss past performance, future allocation and performance goals, and CalPERS' strategy and approach with regard to emerging managers:

- Christine Gogan
- Sarah Corr
- Amanda Fisk

Finally, Crosswater reviewed a number of recent studies, commentaries and reports on the use of, and performance of, emerging managers in the Private Equity industry.

1.2 Summary of Conclusions

Based on our review, Crosswater concludes the following regarding the Private Equity emerging manager opportunity and CalPERS' Private Equity Emerging Manager Program:

1. There is no standard emerging manager definition in the Private Equity sector. In fact, the variation in definition is quite pronounced (see Appendix A).

[1] For purposes of this report, and unless otherwise stated, Crosswater uses the term "Fund of Funds" to reflect both Fund of Funds and Separate Account Managers in the Private Equity emerging manager world.

2. There is an absence of compelling evidence that emerging managers consistently *outperform or underperform* more established managers. This is consistent with CalPERS' internal conclusions drawn from its Emerging Manager Program performance data. This dearth of reliable industry data is in part due to the lack of a common definition, which precludes an accurate comparison of performance data across studies and programs.

3. There is no evidence that investors seek a "return premium" for investing through emerging managers based on speaking to over 20 participants in the Private Equity market. Although Crosswater does note that emerging managers' performance does seem to be more volatile than that of established private equity managers.

4. There is a consensus in the entire group interviewed—and shared by Crosswater—that there are indeed emerging managers in Private Equity who have great promise and deserve the support of institutional investors. The challenge is how best to identify these managers.

5. Despite the above, there is also a consensus that the emerging manager space can absorb a finite amount of capital given the high degree of difficulty in finding, vetting, and mentoring the very best firms and the inherent risks involved in such programs.

6. CalPERS has a long history with emerging managers and has allocated a significant amount of capital to this sub-sector. Given CalPERS history and established presence in this sub-sector, the emerging manager community has expectations that CalPERS will continue to maintain a leadership role in the emerging manager space.

7. Crosswater believes that CalPERS needs to revise both its emerging manager definition and its implementation program to:

   - Dig deeper into the issue of why some managers perform and others do not, and then

   - Find and fund top performing emerging managers who can produce attractive returns to CalPERS and "graduate" into established, stand-alone managers.

8. Crosswater cautions that, even if CalPERS executes a highly successful revised process to identify the best emerging managers, there will still be (a) many emerging managers who will not be chosen and (b) a reasonable likelihood that not all its "chosen" firms will eventually succeed and "graduate".

9. Finally, given the realities and challenges outlined above, CalPERS should follow a “walk before you run” strategy as it reviews and revises its Private Equity Emerging Manager Program. Crosswater recommends that CalPERS form a multi-disciplinary task force comprised of members of its Private Equity staff as well as outside industry experts to review its Private Equity Emerging Manager Program—its Partnership and Fund of Funds investments as well as the underlying emerging managers. The primary objective of the task force is to provide CalPERS with information and insights, and make recommendations for advancing the Private Equity Emerging Manager Program going forward.

2. Private Equity Emerging Manager Overview

2.1 Emerging Manager Definition

Crosswater found that there is a myriad of definitions for an Emerging Manager in the Private Equity world. While most definitions include some reference to maximum assets under management (AUM) and fund series (e.g., Fund #1, #2, #3, etc.) the details within those frameworks were quite varied. For example, one large public fund defined maximum allowable AUM as $750 million, while another had a cut-off of $10 billion AUM. Some investors focused heavily on fund series, while others primarily focused on ownership by women and minorities.

It is important to note in this context that California State Law (enacted through passage of Proposition 209 in 1996) prohibits State agencies from discriminating against or granting preferential treatment to any individual or group on the basis of race, sex, color, ethnicity or national origin in public contracting. As such, CalPERS cannot establish any investment targets for external managers based on race, sex, color, ethnicity or national origin.

CalPERS' current definition for a Private Equity Emerging Manager is "A firm raising a first or second time Institutional Fund." An Institutional Fund is further defined as "A Fund, which is being raised by a proven team with a demonstrable track record to which at least three institutional investors have made a commitment."

2.2 Private Equity and Emerging Manager Universe

Crosswater was asked by CalPERS to review the Private Equity universe and identify trends in total number of funds and capital raised by both established managers and emerging managers. The lack of a common definition used by institutional investors makes collecting reliable data on the size and performance of the emerging manager sub-sector quite difficult. Due to this "definitional flexibility", using data from multiple sources may result in spurious conclusions. As a result, Crosswater chose to utilize data on the Private Equity universe and emerging manager sub-sector provided to it by Credit-Suisse's CFIG team to ensure consistency in our analysis. We selected CFIG as it is a highly respected manager and has been vetted and retained by CalPERS.

The following is an overview of the Private Equity space using CFIG source data.

2.2.1 Funds and Capital Raised

Exhibits 1-4, below, breakdown Private Equity activity globally and within the U.S. from 2003-2008 by number of funds raised per year, capital raised per year, and average fund size per year. The average fund size per year includes funds across a range of Private Equity strategies. Based on our conversations with CFIG personnel, if Venture Capital funds were broken out from this category, the average Venture Capital fund size per year would be less (in some cases significantly so) than the average fund size per year indicated in Exhibits 1-4. Data from the National Venture Capital Association (NVCA) support this conclusion. According to NVCA data, the average Venture Capital fund size in the U.S. was $89.2 million in 2002 and this increased to $124.1 million in 2012, which is over $180 million less than the average Private Equity fund size in the U.S. in 2012 as shown in Exhibit 4. CFIG indicated that first time Venture Capital funds typically raise less than $100 million.

Global Private Equity

Over the past 10 years global Private Equity fundraising has experienced two distinct periods: a period of significant growth from 2003-2008, and a period of contraction after the Global Financial Crisis, followed by gradual growth beginning in 2011. Between the years 2003 and 2012 the global Private Equity industry raised over $3 trillion dollars. Annual capital raised across all Private Equity funds during this period ranged from a low of $103 billion in 2003 to a high of $525 billion in 2007.

Exhibit 1. Global Fund Raising 2003-2008

Global PE Fundraising by Vintage Year (2003 - 2008)

Fundraising Year	No of Funds	Amount raise in Range (USD Millions)	Average Raised per Fund (USD Millions)
2003	751	$103,135	137
2004	921	$149,776	163
2005	1157	$329,145	284
2006	1237	$419,450	339
2007	1408	$525,584	373
2008	1368	$514,256	376

Source: Thomson Reuters; Credit-Suisse - CFIG. March 11, 2013.

From 2003 to 2008, the number of Private Equity funds and the average fund size increased significantly, with the number of funds nearly doubling from 751 in 2003 to a high of 1,408 in 2007. Average fund size increased nearly 175% from $137 million per

fund in 2003 to $376 million in 2008. The total capital raised across Private Equity funds in 2007 was $525 billion, over 5 times greater than that of 2003.

After the onset of the Global Financial Crisis, the industry experienced a significant decline in size and activity across the board. Total capital raised in 2009 was $182 billion, over a 65% decline from the peak in 2007. Similarly, the number of funds raised in 2009 declined by 33% to 944 funds from the 2007 high of 1,408 funds.

Exhibit 2. Global Fund Raising 2009-2012

Global PE Fundraising by Vintage Year (2009 - 2012)			
Fundraising Year	**No of Funds**	**Amount raise in Range (USD Millions)**	**Average Raised per Fund (USD Millions)**
2009	944	$181,952	193
2010	1019	$190,658	187
2011	1232	$299,696	243
2012	1060	$308,939	291
Source: Thomson Reuters; Credit-Suisse - CFIG. March 11, 2013.			

Recovery in Private Equity fundraising has been gradual, but is showing signs of strength. From 2009 through 2012, the number of funds has averaged slightly over 1,060 per year, still about 25% lower than the peak in 2007. Total capital raised each year has continued to increase steadily from $182 billion in 2009 to $309 billion in 2012. Despite 2012 levels remaining far off from the 2007 high of $525 billion, total capital raised is trending upward.

U.S. Private Equity

Between 2003 and 2012, the U.S. Private Equity market represented approximately 50% of the global Private Equity market in terms of number of funds raised, and 60% to 70% of the global market by total capital raised, resulting in average fund sizes of $30 million to $100 million greater than the global average. Between the years 2003 and 2012 U.S. Private Equity raised over $1.9 trillion dollars. Annual funds raised ranges from a low of $63 billion in 2003 to a high of $365 billion in 2007.

Exhibit 3. U.S. Fund Raising 2003-2008

US PE Fundraising by Vintage Year (2003 - 2008)			
Fundraising Year	**No of Funds**	**Amount raise in Range (USD Millions)**	**Average Raised per Fund (USD Millions)**
2003	374	$63,132	169
2004	499	$108,106	217
2005	623	$206,350	331
2006	606	$264,941	437
2007	744	$365,256	491
2008	638	$309,164	485
Source: Thomson Reuters; Credit-Suisse - CFIG. March 11, 2013.			

The U.S. Private Equity market grew from 374 funds raised in 2003 to 744 funds raised by 2007 and the average fund size increased from $169 million to $491 million over the same period. In 2007 the total annual amount of Private Equity capital raised was $365 billion—nearly 6 times as much as in 2003.

Exhibit 4. U.S. Fund Raising 2009-2012

US PE Fundraising by Vintage Year (2009 - 2012)			
Fundraising Year	**No of Funds**	**Amount raise in Range (USD Millions)**	**Average Raised per Fund (USD Millions)**
2009	457	$122,059	267
2010	523	$110,217	211
2011	659	$164,025	249
2012	640	$198,521	310
Source: Thomson Reuters; Credit-Suisse - CFIG. March 11, 2013.			

Beginning in late 2008 the U.S. Private Equity market began to decline along with the global Private Equity market as the Global Financial Crisis unfolded. In 2009, the U.S. Private Equity market experienced a 38% decline in the number of funds raised from the 2007 high. Likewise, average fund size fell 45% from $491 million in 2007 to $267 million per fund.

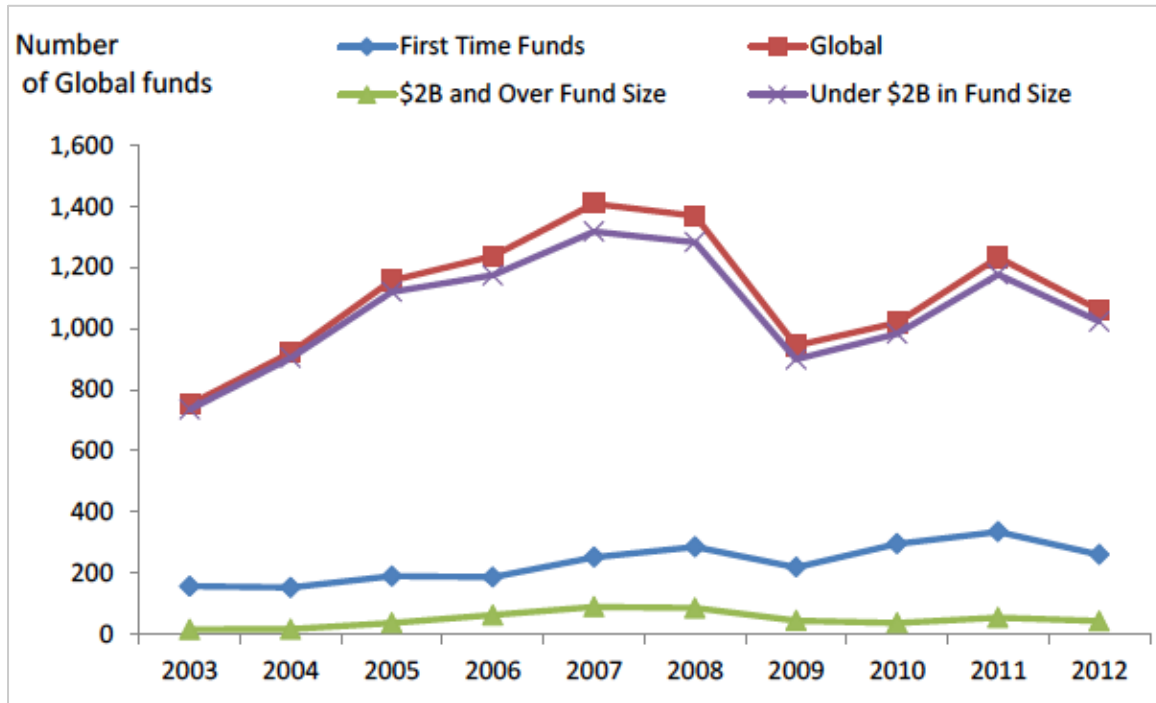
Since 2011, the Private Equity space has shown encouraging signs of increased activity and growth. Capital raised and average fund size continues to increase and is approaching 2005 levels. Nevertheless, the U.S. Private Equity market, by number of

funds and annual capital raised, remains far off of its 2007-2008 highs. The average U.S. fund size in 2012 is approximately $180 million less than the average U.S. fund size in 2007.

Type of Funds Raised

Since 2003 nearly all funds have been under $2 billion in size. First Time Funds (FTFs) have typically accounted for 20-25% of global funds raised each year, as tracked by CFIG. Importantly, FTFs have had continued success raising funds over the past decade despite the Global Financial Crisis. Between 2003 and 2008 FTFs grew from 157 funds to 286 funds or 13.5% annually. FTFs declined by 26% to 219 funds in 2009; however, FTF growth bounced back quickly in 2010 and 2011. The total number of FTFs raised in 2011 was 335. While the number of FTFs declined to 261 in 2012, this remains comparable to the levels reached in 2007 and 2008. The FTF category has demonstrated greater resilience and lower levels of volatility than the broader category of funds under $2 billion. See exhibit 5, below.

Exhibit 5. Global Funds Raised by Fund Type 2003-20012



Source: Credit-Suisse - CFIG. March 11, 2013.

Exhibit 5 tracks the number of funds raised by year across the globe. It breaks out funds according to size (over or under $2 billion). It further breaks out how many of the funds were FTFs. The “Global” data series is the sum of the “$2B and Over Fund Size” and “Under $2B in Fund Size” data for each year. The “First Time Funds” data series reflects

the number of FTFs raised globally each year without delineating whether such funds were smaller or larger than $2 billion.

The demonstrated ability of FTFs to raise capital over the past decade, coupled with the fact that the majority of funds raised over this time period have been less than $2 billion, makes it likely that there is a robust volume of Private Equity emerging managers in the marketplace. This conclusion is supported by the statements made to Crosswater by Fund of Funds managers and other industry actors during our interviews as well as by CFIG, which tracks over 2,200 Small and Emerging Managers in the marketplace.

Overview of Private Equity Funds by Sector

Since 2006, on the whole, the global emerging manager (CFIG defines Emerging Manager as a fund with less than $1 billion AUM) sector has been more equally distributed across major investment sectors (e.g., Buyout, Venture Capital, Distressed Debt, etc.) than the broader Private Equity manager universe. Emerging managers have been more evenly weighted in Buyout, Venture and Fund of Funds, with these three sectors fairly evenly divided year after year and accounting for approximately 80% of total funds. In contrast, global Private Equity funds in 2006 through 2008 were largely comprised of buyout funds (approximately 66%) with venture funds a distant second at less than 15% of total funds.

In addition to the overall decline in funds raised, the two years post 2008 saw a significant decline in Buyout Funds in the global Private Equity market. Buyout Funds declined to 40-50% of total funds. The decline in Buyout Funds in these years was mirrored in the global emerging manager market. In 2011 both the global emerging manager market and global Private Equity market began to form more Buyout Funds; however, the emerging manager market space has remained more equally divided among the three aforementioned sectors (Buyout, Venture and Fund of Funds). The global Private Equity market has returned to overweight Buyout Funds with such funds accounting for 60-65% of the funds being formed in 2012.

Overall, the emerging managers sub-sector is balanced across the spectrum of Private Equity sectors. It appears that investors will be able to achieve a broad exposure to Private Equity sectors through an emerging manager mandate.

2.3 Performance of Emerging Managers

In our review, we encountered myriad opinions on the relative performance of emerging managers against their established counterparts or industry benchmarks. Several interviewees made broad statements such as “emerging managers in the Private Equity world outperformed more established managers” or “beat their benchmarks”. Others

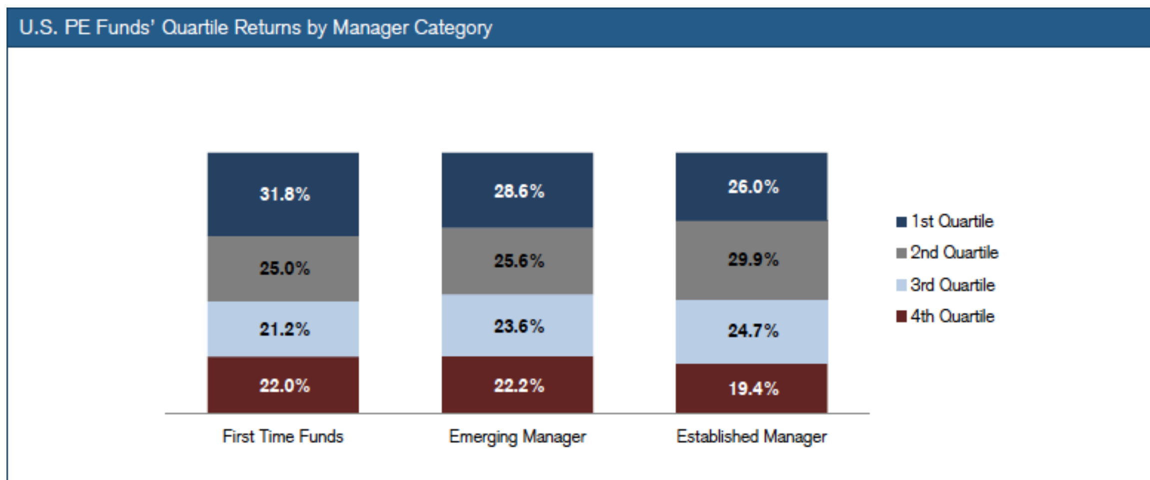
made contrary statements to the effect that "emerging managers rarely outperform established managers". When pressed for convincing supporting details neither camps were able to produce them. (Crosswater found a similar dynamic in its earlier study of the Real Estate emerging manager world.)

Mixed views were also found in the literature Crosswater reviewed. Overall, the literature appears to be "selective" in the data it used. Crosswater notes the conflicting opinions on emerging manager performance is likely in large part due to the discrepancy in data used stemming from the different definitions of emerging manager employed. Results may be further impacted by the choice of vintage year, time horizon, private equity sub-sector (e.g., Buyout, Venture Capital, etc.), and other variables.

2.3.1 CFIG Emerging Manager Performance Data

Based on CFIG data (using its definition of Emerging Manager as a fund with less than $1 billion AUM) on emerging manager funds and the broader private equity universe, emerging manager returns appear to be subject to higher volatility (see Exhibit 6, below). For funds with vintage years from 2001 to 2012, a higher percentage of FTFs and emerging manager funds generated upper quartile returns than established private equity funds. However, a higher percentage of these funds also generated bottom quartile returns than established private equity funds. Based on CFIG data, there is also greater dispersion (as measured by Standard Deviation) of FTFs and emerging manager performance results within the bottom quartile (see Exhibit 7).

Exhibit 6. U.S. Private Equity Returns by Manager Category



Source: Preqin; Credit-Suisse - CFIG. March 11, 2013.
Emerging Manager is defined as first, second, and third time funds under $500 million in size.

Exhibit 7. U.S. Private Equity Return Volatility by Manager Category

	First Time Funds		Emerging Managers		Established Managers	
	Standard Deviation	Avg. Diff. from Benchmark	Standard Deviation	Avg. Diff. from Benchmark	Standard Deviation	Avg. Diff. from Benchmark
Upper Quartile	14	17	15.4	16.8	15.8	15.7
2nd Quartile	8	2.6	7.4	3	6.9	2.9
3rd Quartile	7.5	-4	7.5	-4.2	5.9	-4.1
Lower Quartile	16.5	-17.7	14.9	-17.7	12.2	-15.3

Source: CFIG, Preqin, 2013 (Data in Percentages)

This highlights the importance of manager selection in overall returns and return volatility. Given the persistently high level of volatility in emerging manager returns, Crosswater believes CalPERS should consider whether heightened or additional selection criteria for emerging managers are warranted.

Performance by Emerging Manager Program Structure

The majority of the emerging manager programs reviewed by Crosswater are implemented through Fund of Funds managers instead of direct investment in emerging managers. Data on the success of these programs, the growth rates of emerging managers and the "graduation" rates of emerging managers are private and were not made available to Crosswater by the groups interviewed.

On the whole, however, interviewees remarked there is a substantial variance in performance among emerging managers regardless of whether there is a Fund of Funds manager in place or a partner relationship with the emerging manager. As such, it is important to recognize that, despite its best efforts, there is a reasonable likelihood that not all of the emerging managers that receive an allocation through CalPERS' program may "graduate".

2.3.2 CalPERS Emerging Manager Program Performance Data

In addition to our review of CFIG emerging Manager data, Crosswater reviewed CalPERS' Private Equity Emerging Manager Program performance data as of June 30, 2012. (It is important to note that CFIG data uses a different definition of emerging manager so direct comparisons to CalPERS' data are not possible; however, side-by-side assessment of the two datasets may reveal certain broad trends.)

Based on our review of CalPERS' data we identified the following key findings:

- Consistent with "CalPERS' Emerging & Diverse Manager Data Report", Crosswater confirms that there is a wide range of performance outcomes for Emerging and Diverse Managers in the CalPERS Private Equity portfolio. (Based on the materials reviewed, this conclusion appears to be true with regard to Private Equity's non-emerging managers as well.) This is also consistent with the findings from our analysis of CFIG emerging manager performance data (see 2.3.1, above).

- CalPERS' since inception returns for Private Equity show emerging managers underperformed CalPERS' non-emerging managers by 100 basis points (9.6% IRR vs. 10.6% IRR). Emerging managers reduced overall Private Equity returns to 10.3%.

- Since inception returns by Private Equity Strategy indicate emerging manager's outperformed non-emerging managers in Buyout, Credit Related and Venture strategies but underperformed in Growth/Expansion and Opportunistic strategies.

    - Significant underperformance in since inception returns by emerging managers in Opportunistic (approximately 1,250 basis points below non-emerging managers) appears to be driving the overall underperformance of the emerging managers Portfolio against CalPERS' non-emerging managers Portfolio.

- Current Emerging Manager Performance:[2]

    - CalPERS' Current Partnership and Fund of Funds investments underperformed both CalPERS non-emerging managers and the Private Equity Benchmark[3] in all periods considered: 3-year, 5-year, and inception to-date.

    - Current Underlying Funds in Fund of Funds underperformed against non-emerging managers and the Benchmark in all periods but one – a slight outperformance against the Benchmark for the 5-year period.

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[2] Excludes all funds that have been exited.

[3] CalPERS uses the Cambridge Private Equity Index as its benchmark. All subsequent references to the Benchmark refer to the Cambridge Private Equity Index unless otherwise stated.

- Current Diverse Manager Performance:
  - Current Diverse Partnership and Fund of Funds investments underperformed Non-Diverse Managers and the Benchmark in all periods except one – a slight outperformance against Benchmark for the 5-year period.
    - Note: from inception to-date Diverse Partnership and Fund of Funds investments underperformed the Benchmark by nearly 900 basis points.
  - Current Underlying Funds in Fund of Funds outperformed both Non-Diverse Managers and the Benchmark over all periods.
- Crosswater dug into the Underlying Funds in Fund of Funds for Diverse Managers to account for this outperformance against both CalPERS' Non-Diverse Managers and the Benchmark.
  - Based on the data reviewed, Crosswater found that overall outperformance is a result of two Fund Managers and four underlying funds significantly outperforming the remainder of Diverse Managers. Due to the relatively small amount of capital allocated to Diverse Managers (approximately $340 million), the strong performance of these select Managers positively skews the results for the entire Diverse Manager subset.
- Overall, Crosswater notes that CalPERS' inception to date data indicates a common theme across all Private Equity Managers (Non-Emerging, Emerging, and Diverse). In each instance, there appears to be a couple of stellar performers, a handful of significant underperformers and a majority of average to underperforming Managers.

2.3.3 Risk Premium

The current policy return expectation for CalPERS' Emerging Manager Program with CFIG is a net excess return of 3% over public markets. Crosswater was asked to determine if there is an industry-wide "risk premium" applied to investments with emerging managers.

Based on our interviews and review of available materials, we did not find that investors or managers apply a "risk premium" to emerging manager allocations. Crosswater asked its interviewees whether investors and/or Fund of Funds managers were seeking a return premium for taking on the perceived "emerging manager risk". The consistent response was "No". In addition, Crosswater was not able to identify any quantified risk

premiums applied to emerging manager funds based on a review of publicly available data.

For context, CFIG targets that each of its programs exceed public market benchmarks (e.g., the S&P 500 Index) by 500 basis points. However, actual performance targets vary by client and strategy. Further, Crosswater notes that such performance targets do not necessarily reflect a risk premium and CFIG materials made no explicit reference to seeking a risk premium in its Emerging Manager Program.

Preliminary Conclusion

Emerging manager performance is quite varied. This is consistent with the performance of managers across the Private Equity Industry. Crosswater did not find any compelling evidence in the CFIG data to indicate that emerging managers consistently underperform or outperform established managers or industry benchmarks. Crosswater did note that, based on CFIG data, emerging manager performance may be subject to greater volatility than that of established managers as a greater percentage of emerging managers generated returns in both the upper and bottom quartiles.

CalPERS' emerging manager performance data is largely consistent with this finding. While Crosswater concurs that in general CalPERS' Private Equity emerging managers underperform non-emerging managers, we note that the performance of emerging managers and diverse managers largely mirrors the performance of Partnership and Fund of Funds investments for the Private Equity industry overall. That is, a select group of Managers or Fund of Funds advisors performs very well while the majority of managers underperform and a few dramatically underperform.

In short, we believe the data supports the conclusion that there are emerging managers that are capable of matching or exceeding the performance of non-emerging managers, but may also increase volatility.

This conclusion is supported by our conversation with private equity industry participants. Virtually everyone Crosswater spoke to—both proponents and skeptics—believe that there are, and always will be given the dynamic nature of the industry, new, smaller firms with talented, high energy people and creative ideas who can potentially produce attractive returns for their investors.

The same interviewees also agreed that the greatest challenge facing investors committed to the emerging manager concept is how to find and vet such talented managers and put them on the road to success. Phrases like "finding the needle in the haystack" and "mammoth task of sorting and sifting" were used repeatedly in our interviews. Even the strongest proponents of Private Equity emerging manager

programs acknowledge that the percentage of emerging managers seeking funding and actually getting it from institutional investors is quite low and that, in the end, not all of the "selected" emerging managers will eventually succeed (just as not all established managers are successful).

2.4 Emerging Manager Institutional Investable Universe

Crosswater was asked to evaluate the "quality" or the "investable universe" of emerging managers. Based on our review, we did not encounter any concrete, quantifiable data on the emerging manager investable universe for institutional investors. As mentioned above, there is a strong pipeline of FTFs and the majority of funds being raised are under $2 billion. At first glance, then, the opportunity set for emerging managers, in its broadest sense, appears robust. However, as we noted above, the challenge is in identifying the best and most capable managers within the broader emerging manager space. Vetting emerging managers can be quite difficult and time consuming as emerging managers often have:

- A limited track record
- Uncertain deal attribution
- Limited experience working as a team

Based on our interviews, an extensive filtering process is necessary to identify "investable" emerging managers. As such, while a number of sources indicated a large volume of applicants, it is likely that only a handful of emerging managers will meet the criteria for an allocation. This anecdotal evidence is supported by CFIG operations. CFIG is a large, well-known actor in the industry and maintains an "open door" policy. As such, it receives applications from the vast majority of emerging managers. From 2000 through September 30, 2012, CFIG evaluated over 6,500 funds, but only funded 8% of these.

Crosswater reviewed CFIG performance data for its Small and Emerging Manager Private Equity funds. Based on dollars committed, approximately 58% of CFIG Small and Emerging Manager funds are in the first and second quartile (based on Thomson One quartile rankings). CFIG stated that a large portion of CFIG's third and fourth quartile Small and Emerging Manager funds are early in the J-curve and CFIG expects their performance to improve as the portfolios mature.

3. Emerging Manager Program Considerations

3.1 The Private Equity Space

The Private Equity sector is, Crosswater found, dramatically different from the real estate sector, which was the subject of an earlier emerging manager report it prepared for CalPERS. In real estate, people and firms crossover into different business lines, strategies and property types with great regularity. In the Private Equity world people in one sub-sector (Buy-Out, Special Situations, VC, etc.) tend not to cross over into other sub-sectors and develop very high degrees of specialized knowledge and relationships in their respective space. This presents an additional challenge in creating an emerging manager program in Private Equity as an investor (either directly or via Fund of Funds) must be highly skilled in a wide variety of business lines and know how to vet people in those various sub-specialties.

In addition, as opposed to the real estate world, Private Equity investors tend to rely heavily on Fund of Funds vehicles to find their emerging managers. As one interviewee said: “It’s all about who you know and how well you know them”. Another said: “To access the best deals its all about connections. How good are they and how dependable?”

There is a very wide spread between the top performers and the laggards. Thus as time goes on the (perceived) top performers attract the lion’s share of the capital and are often oversubscribed, while the laggards fight for the rest of the available funds. Gaining access to these best funds/firms is vital to an investor’s success. From an emerging manager’s point of view this means they are competing against the very large firms (and their obvious marketing leverage) and must be able to convince investors that, while new, they have the skills and track record to match the top performers.

3.2 Identifying and Underwriting Promising Emerging Managers

The greatest challenge in finding, vetting and investing in the most talented emerging managers is the sheer number of firms trying to attract institutional capital. If an “open door policy” is followed it means that a Fund of Funds (or pension fund staff, if they invest directly) will likely interview from 150 to 200+ firms per year. Based on our discussions, out of that massive number the average Fund of Funds will select and invest in only 6-10 programs per year—and, importantly, not all of the selected few will eventually prove to be successful (interviewees were reluctant to discuss or quantify their underperforming managers or investments). That is a daunting task that requires significant time and deep skills. The scope and cost of the challenge is a prime reason

many Fund of Funds managers do not pursue emerging managers, often despite their belief in the underlying concept. It also means that institutional investors committed to the emerging manager concept must recognize that their "final selection percentage" may be low and there are likely to be a lot of disappointed managers seeking funding.

Another challenge is underwriting the track records of emerging managers as so often they have spun out of other firms who control the performance information generally required by investors. Given the size and complexity of the Private Equity business, Crosswater was initially skeptical about the ability of investors (direct or through a manager) to appropriately vet newly formed management teams. However, most interviewees (including skeptics about the value of pursuing emerging managers) felt strongly that this was not a serious problem. One called it the "six degrees of separation" issue; that is, given the tight interrelationships in the industry, an experienced investor/manager can usually discover the appropriate level of detail about a person and his/her track record and reputation by contacting other inter-connected individuals in the industry.

3.3 Supporting Emerging Managers

Quite a few interviewees mentioned that there were "natural limits to how many emerging managers a Fund of Funds can effectively work with". They pointed out that in addition to the extremely time-consuming "open door interviewing" process, an effective Fund of Funds manager must spend time on education and mentoring, introducing the emerging manager to "the network", providing them with industry analysis and "basic handholding". These people observed that launching a 1st or 2nd time fund was highly stressful and having "someone to lean on" was an important service Fund of Funds managers need to provide.

Structured and orderly mentoring by the Fund of Funds manager is crucial to any successful emerging manager program. Newly created Private Equity firms invariably do not have the full set of staff and/or skills found in more established firms. Most of these new firms are founded by and composed of younger men and women who are "deal people"—it is that very "Deal DNA" and entrepreneurship that causes them to leave their existing employers and run the risks of going out on their own. Because that background is so dominant in these new firms, the emerging manager often does not understand or appreciate the challenges of being an institutional investment manager, especially when it comes to back office reporting and compliance management. Thus, most emerging managers will need some help in growing their business. It is the responsibility of the Fund of Funds manager to mentor and nurture emerging managers. It is not the responsibility of CalPERS staff as it is inconsistent with CalPERS' status as a Limited Partner.

Whatever the final design of a revised program, CalPERS needs to ensure that its Fund of Funds manager(s) has the ability and willingness to assist chosen emerging managers wherever they might have skill and experience gaps.

3.4 Comments on Credit-Suisse CFIG

Crosswater was impressed by the Credit-Suisse CFIG team, its obvious commitment to finding and mentoring emerging managers and its considerable reach into the world of Private Equity. Everyone Crosswater spoke to, including competitors, had praise for the CFIG team.

While Crosswater was not asked to opine on their performance (and does not in this report) it makes the following observations that may be important in designing a revised CalPERS program.

1. The Credit-Suisse CFIG group that manages the CalPERS program is being sold by its parent. The new buyer has not yet been revealed. As in any such acquisition there will naturally be a transition period while the CFIG team gets used to its new owner and its new owner to the CFIG team. Thus, Crosswater believes that CalPERS needs to monitor the status of the CFIG team and its overall performance.

2. Several interviewees observed that the biggest firms like Credit-Suisse, Bank of America and others—dominate the Private Equity emerging manager Fund of Funds business and thus, *ironically*, it is difficult for smaller Fund of Funds firms (a/k/a/ “emerging”) to win emerging manager mandates.

3.5 Comments Relating to CalPERS

Crosswater gleaned a number of insights through our interviews that we believe are directly relevant to CalPERS broadly as well as its Private Equity Emerging Manager Program.

1. A sizable number of interviewees (including other public pension fund staff) believe that the current CalPERS allocation of $100 million to Credit-Suisse is “too small to move either the programmatic or performance needle”.

2. There was some feedback to Crosswater that the so-called “CalPERS costs” (the various side-letters and reporting packages CalPERS requires and the work-load involved to satisfy those requirements) was a disincentive to successful and/or promising managers given the small allocations Credit-Suisse is working with, as the costs involved may outweigh the revenue benefits.

Emerging managers, by definition, have relatively small AUM and thus limited, if no, economies of scale. Emerging managers are (and should be) highly focused on their cost structure. If an investor imposes costs on an emerging manager that other investors may not require (and Crosswater was told by several people that other major investors do not have requirements similar to the CalPERS requirements), the manager may elect to not conduct business with that particular investor. This is particularly true, if the manager is oversubscribed and can “make choices”. If the allocation from that investor is small and the operating/reporting costs are high, it was reported to Crosswater, that promising emerging managers may decide, “life is too short” to assume such additional responsibilities. In fact, Crosswater was provided specific examples of this occurring.

Crosswater is not arguing that these important CalPERS requirements be abandoned, but suggests that CalPERS be cognizant of this issue when it establishes the minimum/maximum levels of its commitments to the most promising emerging managers.

4. Crosswater Recommendations

Revised Emerging Manager Definition

Based upon our research and comments outlined above, Crosswater suggests that CalPERS utilize the following revised definition of Emerging Manager in executing its Private Equity emerging manager strategy.

"A firm raising its first or second institutional fund where the management team has a verifiable record of success in managing Private Equity investments for institutional investors. Fund size should not exceed $1 billion".

Note that Crosswater would eliminate the current requirement that the new fund have existing commitments from at least three institutional investors. Crosswater believes that CalPERS can and should be the "first mover" on highly promising Private Equity emerging managers with the proviso that the manager obtains 2-3 other institutional commitments before CalPERS funds. It should not have to wait for other institutions to find, vet and fund promising emerging managers before CalPERS commits (with the above proviso). Crosswater recognizes there are certain "delegation of authority" constraints on CalPERS' investments. Crosswater believes, given the unique nature and challenges in emerging manager programs, a special "flexibility" exception for the Emerging Manager Program should be considered.

Credit-Suisse described one "definitional" issue that is worth mentioning. Its mandate from CalPERS restricts it to an emerging manager's first and second funds. If an emerging manager has successful funds #1 and #2 Credit-Suisse cannot invest CalPERS in a new fund #3. If the emerging manager is still too small for a direct allocation from CalPERS, Crosswater believes CalPERS should be creative in resolving this "gap" problem as proven, successful managers should not be allowed to slip away. As discussed in this report, given the challenge and cost of finding and nurturing successful emerging managers, CalPERS should try to not lose the benefits of its earlier support of such a successful emerging manager. Credit-Suisse has suggested several approaches to "fill the gap" and other Fund of Funds managers may also have alternative solutions. CalPERS staff should explore with CFIG means to mitigate this issue.

It's a problem, but a "good" problem for which a solution should be found—perhaps utilizing different solutions for each Fund of Funds manager. Crosswater does not propose eliminating completely the "fund #3" restriction, but does endorse a selective expansion of the definition for only the very best performers.

Multi-Disciplinary Task Force

A key finding from our review of CalPERS' Private Equity Emerging Manager Program is that emerging managers' performance is extremely varied both within and across investment strategies and regardless of whether CalPERS' invested directly through a Partnership or through a Fund of Funds manager. CalPERS has a wealth of data dating back 20+ years in support of this conclusion. The difficulty is in identifying the key variables that cause certain Partnership investments, Fund of Funds managers, and underlying emerging managers to underperform or outperform.

We believe that going forward, CalPERS' Emerging Manager Program could benefit greatly from an effort to "shed light" on the story behind its Private Equity emerging manager raw performance data and institutionalize lessons learned and red flags for future Partnership investment, Fund of Funds and underlying emerging manager selection.

To this end, Crosswater recommends that CalPERS form a multi-disciplinary task force of industry experts to conduct a three-tiered review of its Emerging Manager Program: 1) CalPERS' emerging manager Partnership investment and Fund of Funds managers selection process and criteria; 2) A comparison of Fund of Funds' processes and criteria for selecting underlying emerging managers; and 3) The common characteristics of the emerging managers that led to outperformance or underperformance.

The purpose of the task force is to uncover the "Critical Success Factors" that led to outperformance and those characteristics that led to underperformance by both CalPERS' Partnership investments, the Fund of Funds managers and the underlying emerging managers (against both their emerging manager colleagues and the industry benchmark). The more "cross-pollination" of ideas, insights, and experience between CalPERS' staff, the task force members, and the Fund of Funds managers, the greater the likelihood of success for CalPERS' Private Equity Emerging Manager Program.

We recommend the task force be composed of personnel from CalPERS' Private Equity staff, personnel from an appropriate private equity consultant, and private equity industry experts. Based on our conversations with CalPERS staff we believe its personnel, particularly those with a long tenure in the department, are capable of providing additional knowledge and insights that may not have been previously "mined" or incorporated into the process for vetting, selecting and monitoring managers.

Proposed Task Force Scope of Work

We recommend that the task force hold a preliminary meeting to define its objectives, a final scope of work, milestones and deliverables. As part of the initial meeting the task force should identify a selection of 5-10 emerging manager Fund of Funds managers (it might be helpful to have a mix of large and boutique Fund of Funds managers) and underlying emerging managers (both current and graduated), on which the private equity consultant should prepare in-depth Case Studies.

These Case Studies should be presented to the task force in a "work shop" environment to allow members of the task force to dissect and challenge findings, and seek consensus on best practices, Critical Success Factors, red flags, and other indicators reflecting strong outperformance or underperformance, as well as on how the CalPERS Private Equity Unit can institutionalize lessons learned as they revise and adjust the Emerging Manager Program going forward.

The following is a proposed scope of work to be undertaken by the Private Equity emerging manager task force for each tier identified above. The proposed scope of work is merely indicative. It is not meant to be exhaustive.

Tier 1 – Review of CalPERS' Partnership Investment and Fund of Funds Selection Process

Review the governance, processes, methodology and criteria CalPERS utilizes in selecting Partnership investments and Fund of Funds managers for its Emerging Manager Program. The task force should consider whether the approach is consistently employed for each Partnership investment and Fund of Funds manager and whether the approach itself is adequate or what areas, if any, need to be improved. Areas covered in the review may entail:

- Have CalPERS' processes and approach/criteria changed over time?
- Is CalPERS' governance process applied consistently and is it compatible with and responsive to market opportunities?
- Examine the impact of CalPERS' "delegation of authority" constraints as it relates to investing in emerging managers and consider revisions to this for the Emerging Manager Program
- How were Partnership investments and Fund of Funds managers identified and vetted?
- Track record of the managers (both Partnership investments and Fund of Funds) and their principals
- Organizations from which the manager emerged

- CalPERS' processes and personnel involved in the selection. How is an allocation approved within CalPERS' governmental structure (both within and as it moves beyond the Private Equity Group)?
- Processes, regularity and nature of communication with and reporting to CalPERS
- Ancillary benefits to be derived from selected managers
- How does CalPERS capture and internalize lessons learned and ancillary benefits from its Partnership and Fund of Funds investments?

Tier 2 – The Fund of Funds' Processes for Selecting and Managing Emerging Managers

Review the processes, methodology and criteria CalPERS' Fund of Funds managers utilize when selecting emerging managers. The task force should consider whether the evaluation and management processes and criteria were employed consistently within Fund of Funds managers. The task force should also conduct a comparative analysis of the processes and criteria used by the Fund of Funds managers as well as by CalPERS for its Partnership investments to determine if certain areas can be augmented to increase performance across all funds. Areas covered in the review may entail:

- Fund of Funds organizational structure and investment strategy
- How did Fund of Funds source investment opportunities?
- Process for vetting/underwriting emerging managers
- Selection criteria and rationale used by Fund of Funds managers
- Evaluate whether additional or heightened selection criteria are necessary or warranted given the persistent volatility experienced by emerging managers
- Personnel involved in the selection. Do managers have dedicated staff by strategy or are they diversified across strategies?
- Do Fund of Funds managers excel in particular investment strategies?
- What did mentoring entail and who acted as the mentor? Did the mentor have prior experience in the strategy?
- How often did emerging managers report to the Fund of Funds?
- How do Fund of Funds' selection and managing of emerging managers compare to CalPERS' processes for its Partnership investments?

Tier 3 – Review of Common Characteristics in Outperforming or Underperforming Emerging Managers

Task Force should select a representative sampling of emerging managers from the top quartile and bottom quartile performance results over the last 5-10 years. The review of these managers may entail the following:

- Emerging manager Background and Experience
    - Principals' prior track records. Were these verifiable/attributable?
    - Principals' educational and industry background
    - Did the emerging manager spinout from an established manager?
    - How many years of experience did best Principals have working for others before starting their own funds?

- Emerging manager's Organizational Structure and Investment Strategy
    - What are the manager's governance characteristics?
    - How are investments sourced?
    - Consistent process for identifying and underwriting investments?
    - Manager's ability to bring value-add to its investments (e.g. balance sheet deleveraging, organizational expertise, etc.)
    - Fund Size – Can it support the size and quality of staff required by Institutional Investors? Does a certain size of fund tend to outperform/underperform?
    - Focus and Discipline – Did the manager implement a consistent investment strategy? Did the strategy and investments track closely with Principals' previous experience/expertise? Was a narrow strategy more successful than a more "diversified" approach? What is the target/average investment size?
    - Is the strategy repeatable?

- Common elements of investments that outperformed?
    - Size of allocation to emerging manager
    - Vintage year
    - Investment strategy – which strategies outperformed and when? How important is understanding position in the investment cycle when making an investment?
    - Target investment size by emerging manager
    - Were 1st, 2nd, or 3rd funds raised more successful on a comparative basis? Was there improvement over time or did performance lag, and if so, what factors changed (e.g., turnover, change in investment cycle, etc.).
    - Is there a relationship between active mentorship and performance? If so, in what areas?
    - Where and when do emerging managers require the most assistance?

- Review and interview recent Emerging Manager Program graduates
    - What were their investment strategies, management structures, etc.?
    - What did they find beneficial about the program?
    - What could be adjusted to achieve better results for the Emerging Manager Program going forward?

Appendix A: Defining an Emerging Manager

There is no industry-wide standard definition for an emerging manager. Definitions vary across states, fund managers and limited partners. The criteria that are most frequently used in emerging manager definitions include:

- Assets Under Management
- Number of Funds Raised
- Minority, Women, and Disadvantaged Business Enterprise ownership structure (the inclusion of this criteria appears to be a predominantly U.S.-based definition)

Other, less frequently used, criteria include:

- Years in the business
- Number of employees
- Number of clients
- Investment strategy

Importantly, the thresholds within these criteria also vary. For example, some definitions of an emerging manager require AUM to be less than $1 billion or the number of funds raised to be less than three. As mentioned in the report, CalPERS is forbidden by law to establish investment targets for external managers based on race, sex, color, ethnicity or national origin.