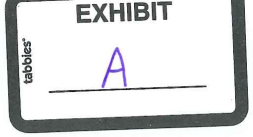
GLOBAL ENDOWMENT MANAGEMENT



The GEM Implied Private Premium (IPP)™

Private Equity Benchmark

an intuitive way of communicating the relative performance of private equity against public benchmarks

The Issues

What additional wealth, if any, did an investor generate by making a private equity commitment and forgoing public equity returns?

How can that be expressed as an annualized excess return percentage?

The Answer

$$\text{PME} = \frac{\text{SUM OF PE \$ DISTRIBUTIONS REINVESTED IN PUBLIC BENCHMARK + UNREALIZED NAV}}{\text{SUM OF PE \$ CONTRIBUTIONS INVESTED IN PUBLIC BENCHMARK}}$$

The Public Market Equivalent (PME) was developed to answer the first question above. It is the ratio of (i) the sum of the future values through the date of calculation of the distributions from a private equity fund (or portfolio of them) reinvested in the selected public benchmark plus its ending unrealized net asset value (NAV) to (ii) the sum of the future values of the related contributions (capital calls) invested in that benchmark when made. As a ratio, PME will show that for each dollar that would otherwise have been invested in the benchmark, the private commitment generated a higher (or lower) dollar amount, say $1.20 (or $0.95). As such, PME is a useful measure of incremental terminal wealth.[1]

However, while private equity practitioners are happy working in the world of multiples of return, such metrics do not satisfy other constituents – say CIOs or clients – who prefer annualized excess return percentages because they better aid in understanding the annual magnitude of relative performance differentials.

1 KAPLAN, S. N. and SCHOAR, A. (2005), Private Equity Performance: Returns, Persistence, and Capital Flows. The Journal of Finance, 60: 1791–1823.

Transforming PME into an annualized excess return

The GEM IMPLIED PRIVATE PREMIUM™ (GEM IPP or IPP) benchmark does this by calculating the annualized rate of excess return to a public market benchmark embedded in a private return stream where a positive (negative) return constant indicates outperformance (underperformance). (Technically, GEM IPP is the incremental return to the public benchmark to produce the same terminal wealth as the private investment.) Our methodology robustly and accurately isolates a manager's value add and elegantly sidesteps the well-known mechanical issues associated with earlier PMEs. Furthermore, our methodology can be easily adapted to incorporate additional sensitivities including beta, a capital charge for unfunded commitments, and NAV adjustments.

To find this positive or negative annualized excess return constant, we goal seek to equalize both sides of the PME ratio (i.e., PME = 1.0). GEM IPP uses annual compounding to be consistent with other reporting methodologies and comparable to IRR.

IPP expressed algebraically

$$d \cdot \left[(1+b)^{\frac{365.242}{f-t_d}} + r_{pp} \right]^{\frac{f-t_d}{365.242}} = c \cdot \left[(1+b)^{\frac{365.242}{f-t_c}} + r_{pp} \right]^{\frac{f-t_c}{365.242}}$$

Where:

d = distribution, including unrealized NAV as the final "distribution"

c = contribution

f = end date of the analysis

b = the total return (in %) of the benchmark from the date of the cash flow (t_d or t_c) to the end date (f)

t = date of the distribution or contribution

r_{pp} = GEM IPP

Once the investor calculates IPP, it is his or her responsibility to determine whether it exceeds the indifference point between available private and public investment opportunities

An illustrative example of GEM IPP™ in Microsoft Excel

We illustrate the computational details of GEM IPP using a simple numerical example. Consider the sample spreadsheet below, where we have tabulated the hypothetical cash flows of a private equity fund in columns A–C. Notice that the final "distribution" (cell C10) should be the current NAV of the fund. We also show in column D the benchmark levels (total return basis) corresponding to each cash flow date. These four columns include all the ingredients we need to compute IPP.

We use a numerical optimizer to obtain the value of IPP so that PME is equal to one. This can be done using Excel's Solver or Goal Seek. For those so inclined, a one-dimensional root-solving algorithm such as the Newton method can be used. Computing IPP using such algorithms is very efficient and a value is typically obtained within 3–4 trials.

	A	B	C	D	E	F	G
		Hypothetical Cash Flows				Future Values	
	Date	Contributions	Distributions	Index	Year Fractions	Contributions	Distributions
1	12/31/2005	100.0	0.0	338.9	8.660	443.299	0.000
2	12/31/2006	25.0	0.0	386.5	7.661	88.936	0.000
3	12/31/2007	50.0	0.0	408.9	6.661	152.801	0.000
4	12/31/2008	0.0	0.0	256.2	5.659	0.000	0.000
5	12/31/2009	0.0	50.0	331.6	4.660	0.000	151.323
6	12/31/2010	0.0	75.0	390.8	3.661	0.000	176.669
7	12/31/2011	0.0	100.0	393.1	2.661	0.000	212.053
8	12/31/2012	25.0	0.0	456.5	1.659	41.827	0.000
9	12/31/2013	0.0	75.0	611.6	0.660	0.000	86.818
10	8/29/2014	0.0	100.0	667.7	0.000	0.000	100.000
11					IPP		10.619%
12					PME		1.0

About Global Endowment Management, LP

Fully Outsourced Chief Investment Officer (OCIO) Solution

GEM actively manages over $5 billion for foundations, endowments, family offices, and sovereign entities.

We assume direct responsibility for asset allocation, manager selection, risk management, reporting and service, accounting, audit, and tax.

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Questions?
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Bloomberg created tools that offer PE investors the ability to easily calculate the GEM's IPP in addition to other public market equivalent benchmarks. Bloomberg subscribers can benchmark against thousands of indices (public or custom) and analyze trends in the underlying financials for each benchmark used.