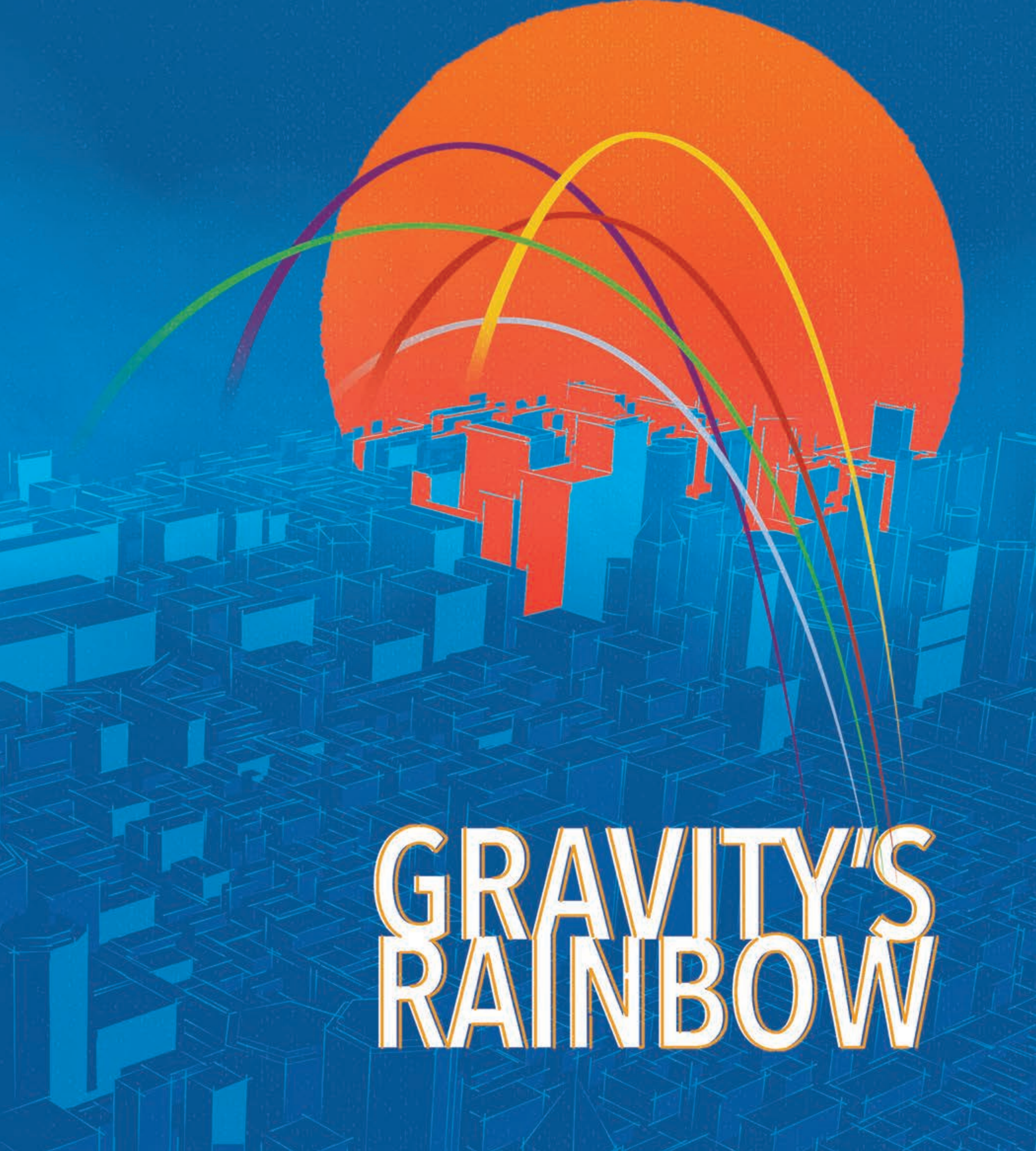
Hamilton Lane®

Market Overview

2018 / 2019



GRAVITY'S RAINBOW

KEEPING CLIENTS IN SIGHT

OUR MISSION AND VALUES

We enrich lives & safeguard futures

- Do the right thing
- Integrity, candor and collaboration
- The pursuit of excellence
- A spirit of competition that inspires innovation

THERE IS A FIFTH DIMENSION, BEYOND THAT WHICH IS KNOWN TO MAN. It is a dimension as vast as space and as timeless as infinity. It is in the middle ground between light and shadow, between science and superstition, and it lies between the pit of man's fears and the summit of his knowledge.

This is the dimension of imagination. It is an area which we call:

THE HAMILTON LANE MARKET OVERVIEW!

THANK YOU, ROD SERLING, for loaning us your introduction to the Twilight Zone to help kick off this year's edition of our annual market overview.

It's a really good one this year if we do say so ourselves. Well, if we're being honest, we happen to think they've all been pretty darn good, but, for this year's in particular, the market is one year closer to a top. Oh, come on, admit it; that's the pronouncement all you closet market timers have been waiting for! That's when we all get to flex our investment chops. That's when we show the world that we can, in fact, predict market turns and act on them with the courage of the greatest investors in history.

So, are we there yet? Is the market top really at hand?

You know us better by now than to think we'd do the great reveal here. Read on, brave souls, and we shall share with you precisely when we think the market top will occur.

But, wait, there's more:

- What is the single most important issue facing the private markets today, particularly private equity? It's an almost existential question challenging the foundation upon which the asset class is based.
- Did you realize that tweeting, which we naively believed was a modern form of communication (and seemingly the only form for a large swath of people), has been used to comment on investing for all of human history? True story. We have unearthed those tweets and will share them with you throughout these pages.
- How many sleepless nights should you spend worrying about dry powder? (For those who think we are talking about an antiperspirant, you have picked this book up by mistake. Please return it to wherever you found it.)
- What are the ingredients for a good martini? (Our counsel is nothing if not diverse.)
- What area of the private markets is poised to change more than any other and perhaps alter the way we invest in the asset class altogether?
- Are the private markets becoming more efficient?
- And, of course, we explore the fan favorite: What is the probability of a recession in 2019?

That's only a hint of what we'll discuss in the pages that follow. And we'll approach this subject matter in a way we hope you have come to expect from us – employing a blend of data, humor, insight, opinion, bluster, bravado, experience and word choices that will rock your world. (Ours is a go big or go home culture at Hamilton Lane....) Ultimately, our goal remains the same: To share what we know in the hope that it leads to a genuine and informed dialogue. We want you all walking away from this overview thinking and arguing (respectfully, of course) and debating.

So, find a comfy spot and settle in, for you are about to embark upon a glorious journey that is:

THE GREATEST SHOW IN THE GALAXY

ONE OF THE 3 GREATEST NOVELS EVER WRITTEN

in the history of literature is "Gravity's Rainbow" by Thomas Pynchon. (We won't give away the other two except to say that one of the authors has a last name that rhymes with "roost.") Among the many brilliant elements of Pynchon's work is the visual and literary image of the title, which (at least by one interpretation) refers to the pattern made by a rocket as it follows a parabolic arc from take-off to impact – a rainbow created by the force of gravity.

An interesting feature of that rainbow shape, a phenomenon produced by physics and one of Newton's laws, is that an object thrown into the air is actually almost out of forward speed as it continues to rise. While we observe it rising and assume it is accelerating, it has lost speed. Near its top-most point, we still see the object rising, and yet it has almost zero forward speed. The object will continue until gravity overwhelms it and creates that curve back down toward earth.

There is a similar feeling that exists between the observed movement up and forward of the financial markets and certain arguments that suggest the speed of that upward movement isn't necessarily what we perceive it to be. In particular, within the private markets, there exist some disconnects that we as industry practitioners need to understand.

These markets feel stressed: lots of money, lots of participants, lots of pressure to perform compared to the public markets. It pains us to admit it, but it's true. Sure, the private markets have performed well historically, but have they done well enough to continue on the upward arc? Some data suggests we need to be more aware of the turn of that arc in the near versus the more distant future. What are those indicators? What's really happening in the private markets?

Let's find out.

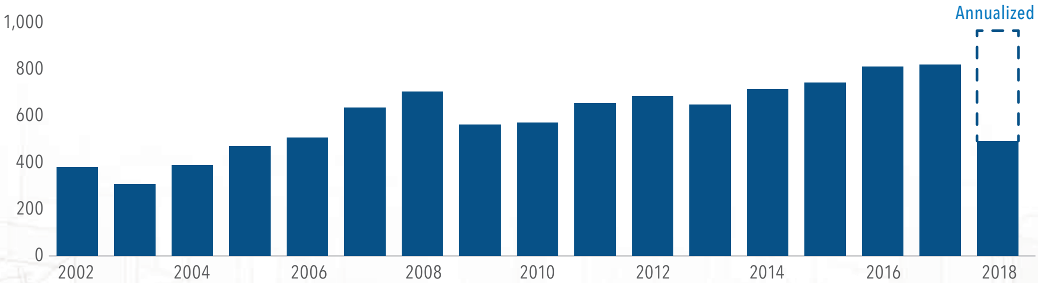
CONTENTS

STATE OF THE PRIVATE MARKETS

FUNDRAISING

We begin our journey into the state of the private markets as we always have – by examining the volume of fund choices we have today.

Chart 1: PPMs Received by Hamilton Lane



Source: Hamilton Lane Diligence (July 2018)

It looks as though 2018 will be another record year for PPMs received by Hamilton Lane (Chart 1), just like 2017, and 2016 before that and just like 2015 was before that. Who knows; this could be the year we might even hit the magical 1,000 PPMs mark. Apart from suggesting that the investment analysts at Hamilton Lane have a heck of a lot of reading to do, what else does this mean? A few things:

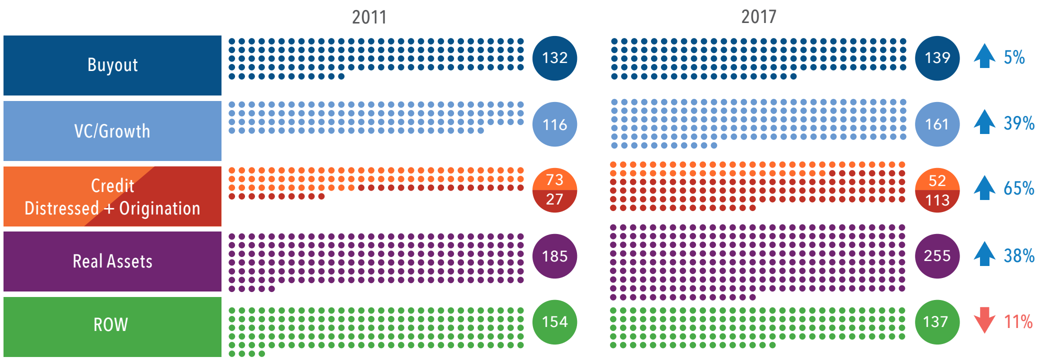
» As an investor, you have a lot of choices. You can have your pick of size, sector, geography or experience. You have more choice than you have ever had before. But, be careful here, as choice in an illiquid asset class is not always your friend.

» The private markets industry continues to grow and mature. The sheer volume of PPMs and the proliferation of fund variety are reflections of that overall growth.

» This asset class remains a very lucrative place to be a GP. (Yes, we realize this one is pretty intuitive.) If there weren't the opportunity to make a lot of money, there wouldn't be so many people out there trying to raise funds. Horace Greeley once declared, "Go West, young man." Today, he might recommend, "Go to private equity, young bucks."

A closer look into where all these PPMs are coming from continues to be a surprising exercise (Chart 2).

Chart 2: PPMs Received by Strategy

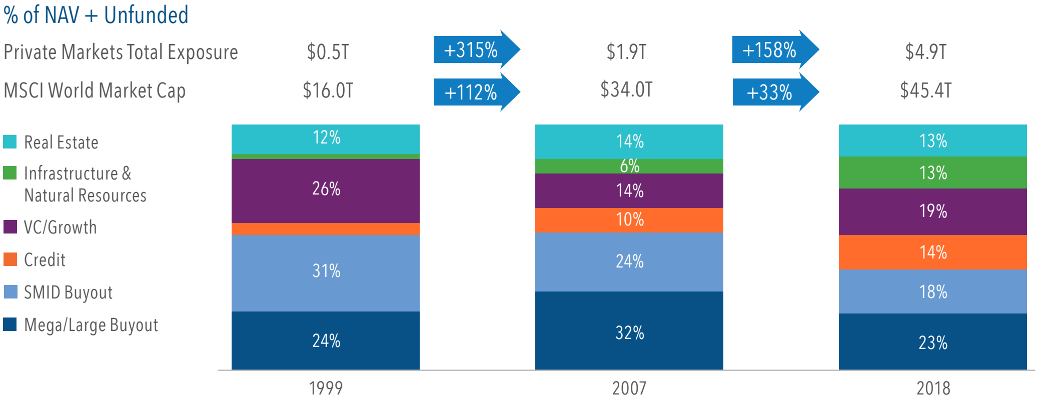


Source: Hamilton Lane Diligence (September 2018)

For all the chatter around there being too many buyout funds and too many new buyout groups forming, buyout hasn't been the primary source of today's growth. Perhaps that area of the market is saturated, but, either way, the buyout world is now just one part of an expanding universe. Over the last 6+ years, growth has come from areas where returns have been strongest (venture capital and growth) and where alternatives have dramatically expanded (credit and real assets). In fact, the only place where the market has shrunk as measured by PPMs is the rest of world (ROW) category. That should give us all hope that the market is indeed rational. If returns aren't what investors expect, funding will be reduced.

Skeptical about the growth of alternatives? Take a look at Chart 3.

Chart 3: Total Exposure by Strategy
% of NAV + Unfunded



Note: Total exposure and market cap as of year end for 1999, 2007. For 2018, as of 3/31/18.
Source: Hamilton Lane Data (July 2018)

Over the last ten years, the growth of all private markets "moderated" to almost tripling in that time frame. On the other hand, the global public markets, as measured by the MSCI World Market Cap, grew only 33% during that same period. Yet, the private markets remain a mere 11% of the size of the public markets.

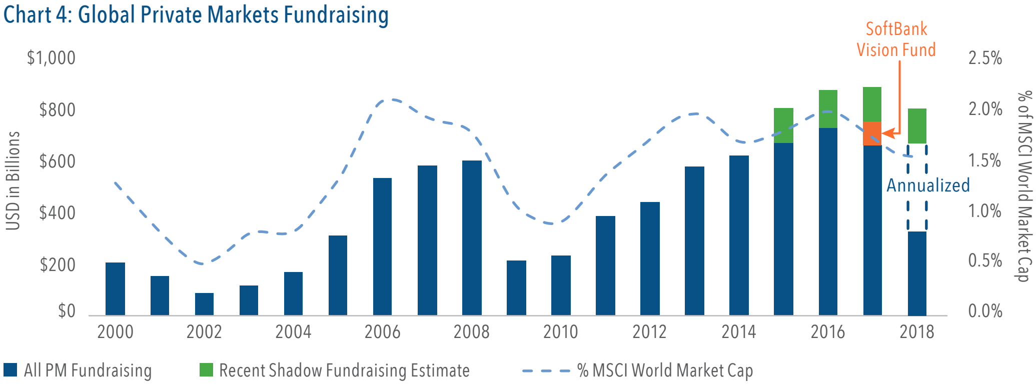
Notice the changes in total private markets exposure over the last ten years. Buyout has grown in absolute terms, but is shrinking in relative terms as other strategies take a larger share of the market. It's the same pattern we observed earlier as we examined the component parts of PPMs being offered over the last few years.

BLINDINGLY OBVIOUS QUESTIONS

As many investors passively invest their public markets holdings and increase private markets investments, just how large will aggregate private markets exposure become? If such trends continue, which sectors of the private markets are scalable to the degree required to meet that investor demand? And, are they so scalable as to have no impact on overall returns?

You're feeling awfully bullish about the private markets now, aren't you? (Unless you are an inveterate curmudgeon, in which case Chart 3 is making you feel bearish and grumpy.) Let's keep mining the data.

Chart 4: Global Private Markets Fundraising



Source: Bison Data via Cobalt, Preqin, Bain, Hamilton Lane Estimates (June 2018)

Now it's getting interesting. Chart 4 offers the first indication of some underlying loss of momentum in the markets. The PPM count may be rising, but fundraising, at least by headline numbers, is not. Take particular note of the dark blue bar; that's what is being reported on in the press. For 2017, the actual amount of capital raised is down. If we exclude the largest fund ever raised – which is, of course, the Softbank Vision Fund coming in at a measly $100 billion – it is down even more than the headline numbers. (OK, so the Vision Fund is technically closer to $93 billion, but what's a few billion among friends?)

So, what's going on here? A few things:

» Investors have figured out that they don't need to chase allocation the way they did in 2006 and 2007. Today's LPs are more disciplined about increasing their target investment amounts and more consistent in their annual commitment pacing. This combined behavior should prevent some of the spikes that were such a prominent part of prior market environments. That's the good news.

» So there's bad news then? Afraid so. Investors have found other means of deploying capital that are not captured in the traditional figures. Bain estimates that shadow capital adds an additional 15-20% to the annual amount committed to alternatives.[1] We tend to think that estimate is low, but there's no way to know the figure with certainty. Add that to the capital being raised from LPs buying secondary stakes directly, as well as in separate accounts, and we believe that fundraising is at record levels. We see the headlines that capital flows into alternatives are slowing. We don't buy it.

[1] Bain & Company Global Private Equity Report 2017

PAUSE FOR A SHAMELESS PLUG

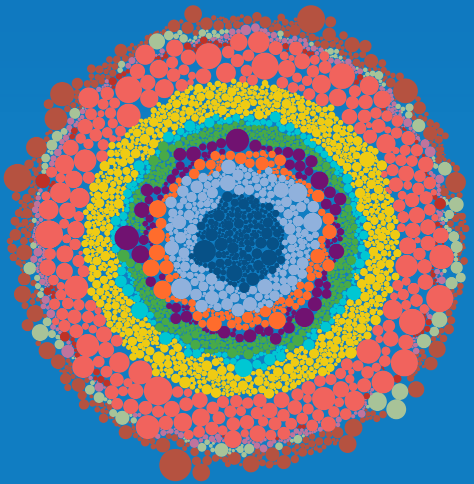
Hopefully it's evident that we spent a good chunk of time putting this book together. In return, we kindly ask that you humor us as we momentarily pause for station identification and inform you that virtually all of the information in this overview is sourced from Hamilton Lane's own database.

Did someone say data? Wha dat? (Insert your own audio clip of Fathead [still one of the great band names of all time] singing that song….)

In order to better understand LPs' aversion to using data, it helps to observe them in their natural habitat—and by that we of course mean attend any industry conference and/or cocktail party. (It shouldn't be hard; at last count, about 1,278 of those take place annually.) Once you've arrived on the scene, start talking about data and verifiable numbers and statistics; then, time just how long it takes for you to find yourself alone in a corner somewhere. This was us doing exactly that at a recent event.

It might not get us voted Most Popular in the class, but we're comfortable admitting that we like data. We like to use it and, more importantly, we like the fact that we actually have it at our disposal.

Hamilton Lane Fund Data Sample
By Strategy



- Origination
- Infrastructure
- SMID Buyout
- Fund-of-Funds
- Distressed
- Venture Capital
- Mega/Large Buyout
- Secondaries
- Natural Resources
- Growth Equity
- Co-Investment
- Real Estate

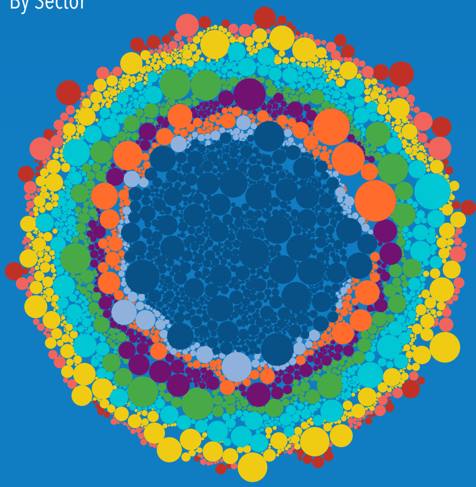
Source: Hamilton Lane Data (July 2018)

$4.6T	4,100+	41
Total Fund Commitments	Unique partnerships from 1,500+ GPs	Vintage Years

Detailed	Institutional
Financials	Quality

Source: Hamilton Lane Data (March, 31 2018)

Hamilton Lane Portfolio Company Data Sample
By Sector



- Consumer Discretionary
- Financials
- IT
- Consumer Staples
- Healthcare
- Materials
- Energy & Utilities
- Industrials
- Telecom

Source: Hamilton Lane Data (July 2018)

12,500+	800+	250+
Deals	Funds	Fund Families

38	F&P
Years of Data	Financials & Performance

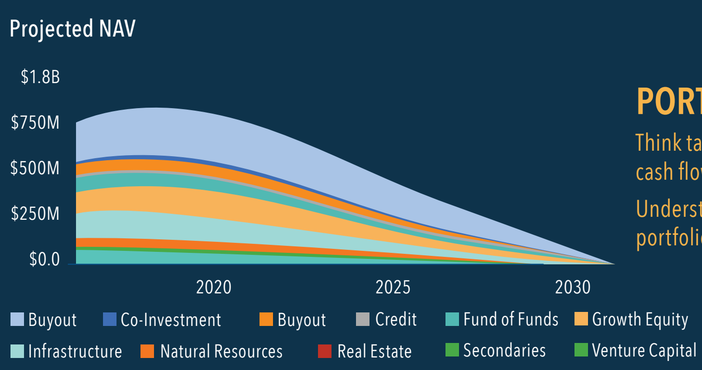
Source: Hamilton Lane Data (March, 31 2018)

Fund data? Got it. Portfolio company data? Check. We gather it, we scrub it, we go to great lengths to confirm that it's accurate rather than, say, self-reported or FOIA-generated. This is what you are seeing on these pages.

But, wait, there's more!

We are developing software that allows investors to stay (start to be??) informed about their portfolios and about the markets in general. Knowledge is power, and this kind of data-driven knowledge at last empowers industry participants to make decisions based on facts rather than endless anecdotes. It's true that gaining access to this data does cost some money, and we're aware of the reaction that typically engenders.

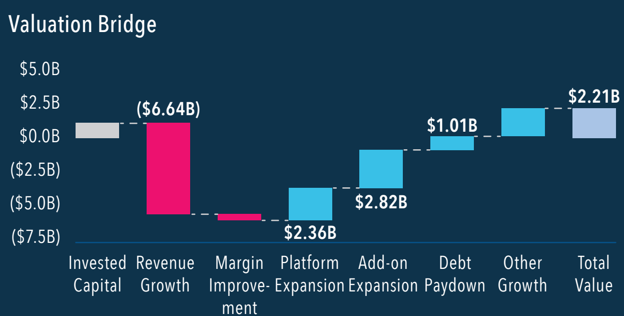
cobalt™



PORTFOLIO INTELLIGENCE

Think tactically about portfolio construction, cash flow forecasting and scenario analysis.

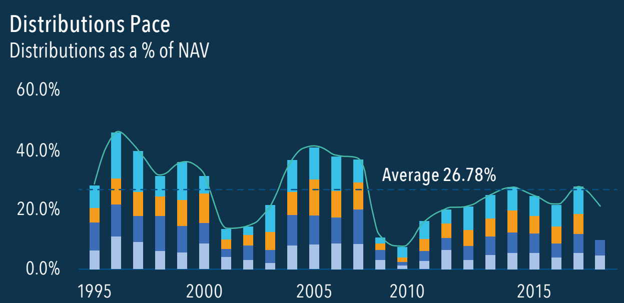
Understand what is driving portfolio performance.



DILIGENCE INTELLIGENCE

Strengthen conviction and streamline decision-making with advanced company level analytics.

Understand how a manager creates value.



MARKET INTELLIGENCE

Educate stakeholders on market trends with timely and unbiased private market data.

Understand your performance versus public and private markets.

Remember our intro letter, where we mentioned there was an area of the private markets poised to change more than any other and perhaps alter the way we invest in the asset class altogether? Well, you're there. This is it. And, here's the prediction about which we have the most confidence: The greatest change in the private markets industry over the next ten years will be the way technology and the use of data will transform the manner in which LPs and GPs construct portfolios and invest in this asset class.

PERFORMANCE

Throughout the annals of history…. (OK, OK, that was a bit overly-dramatic. Let us try again.)

Throughout the course of the private markets' existence, outperformance compared to the public markets has been assumed. Be honest; is it not the single most important premise on which the hassle and expense of investing in the asset class has been justified historically? But, then, what if outperformance waned? Here's where you have to stop, look and consider what Charts 5-7 are saying about performance today and perhaps in the future.

And here you have the great reveal… the charts and section that matter more than any other in this book. You've arrived at the end of the rainbow!

Chart 5: 20-Year Asset Class Risk-Adjusted Performance
Annualized Time-Weighted Return as of 3/31/2018

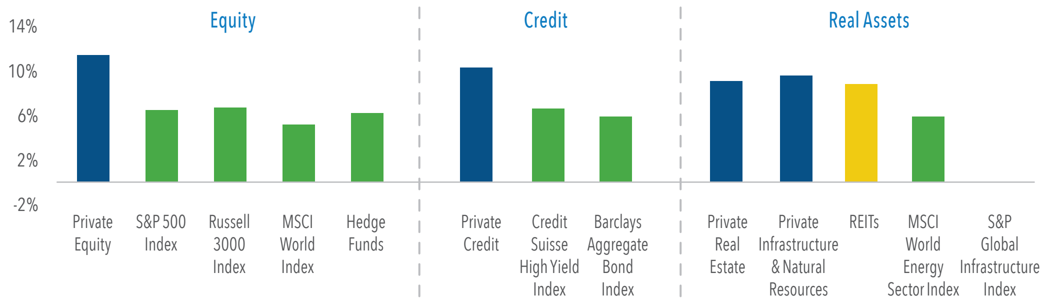


Chart 6: 10-Year Asset Class Risk-Adjusted Performance
Annualized Time-Weighted Return as of 3/31/2018

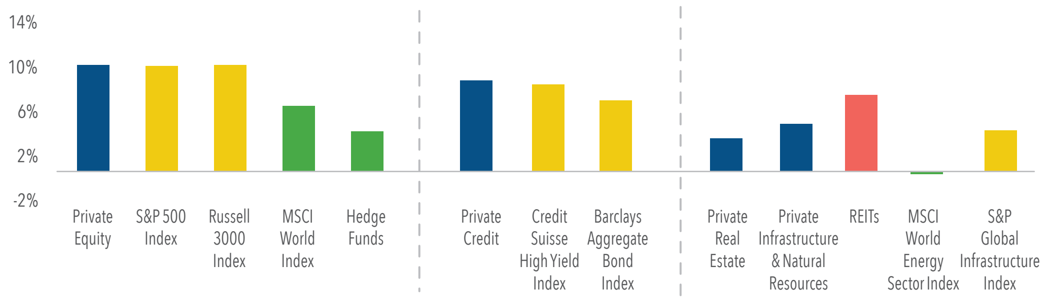
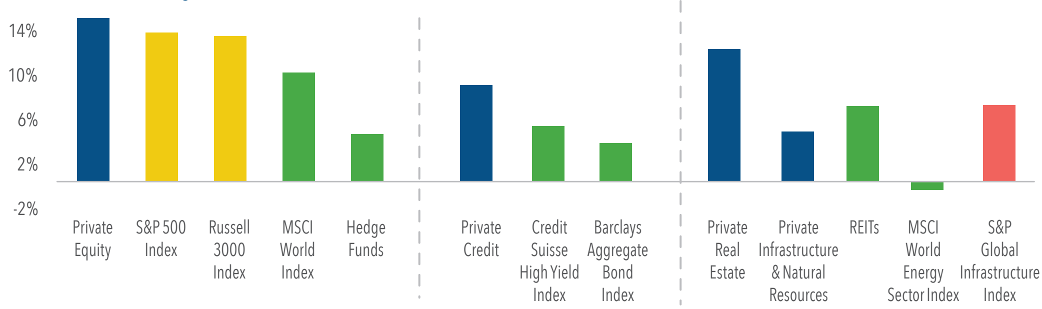


Chart 7: 5-Year Asset Class Risk-Adjusted Performance
Annualized Time-Weighted Return as of 3/31/2018



Private Markets Outperforming by 300+ bps | Private Markets Outperforming by 0–300 bps | Public Markets Outperforming

Please refer to endnotes on last page

Here's how to read these busy charts: If the color code is green, the private markets are outperforming their public market benchmarks by more than 300 basis points. That's the goal and historical promise of investing in the industry. If the color code is yellow, outperformance is somewhere between zero and 300 basis points. Hmmm, not as good as promised, but hope springs eternal. If it's red, well, that's really not good.

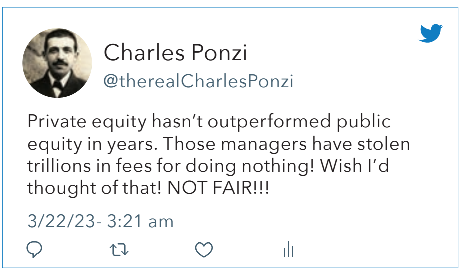
Let's take a closer look at what's happening with the performance figures:

» Private equity, over a 20-year period, was handily outperforming public benchmarks. All green! But look at the 10- and five-year numbers: They're turning yellow across many benchmarks and trending toward narrowing spreads.

» Private credit is trending better, turning all green and easily outperforming.

» Real assets are mixed, depending on the specific sector and the benchmark being employed.

So what's getting the greatest deal of attention these days? That would be private equity and its lack of meaningful outperformance over the last five- and 10-year periods. Of course, the PE haters have been lurking out there for a lot longer than you might have thought. Check out this tweet from the archives:



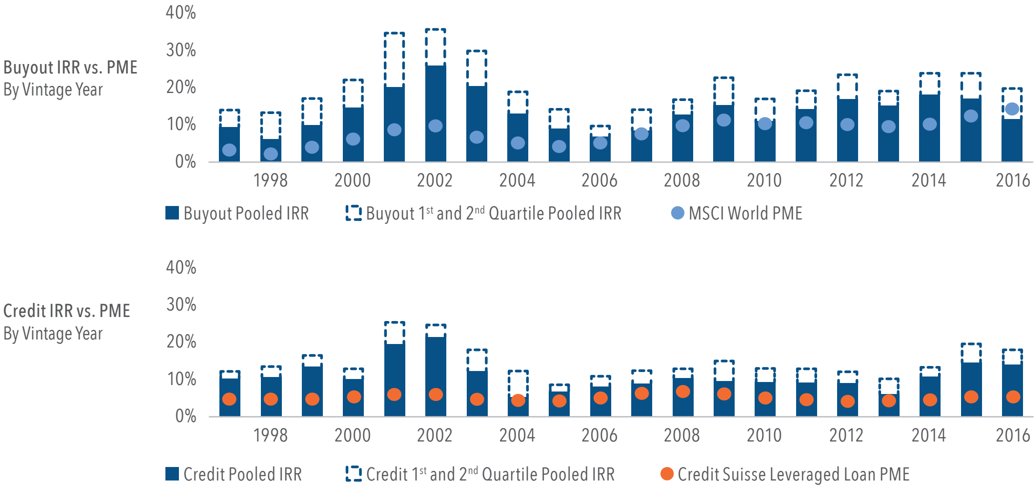
Yes, we have seen this movie before. The debate is being framed against the sub-text that PE is failing to outperform because there is too much money sloshing around. The asset class has grown too large to outperform public markets consistently, and the fees are too expensive (the latter implication being that managers are more concerned with generating fees than performance).

Perhaps.

> "THE PE HATERS HAVE BEEN LURKING OUT THERE FOR A LOT LONGER THAN YOU MIGHT HAVE THOUGHT"

Another "alternative fact" could simply be that the public markets, particularly those in the U.S., have been unusually strong for an unusually long period. And, yet another alternative fact states that, with good selection, the private markets offer the ongoing opportunity to outperform those average returns, as shown in Chart 8.

Chart 8: Pooled Returns by Vintage Year



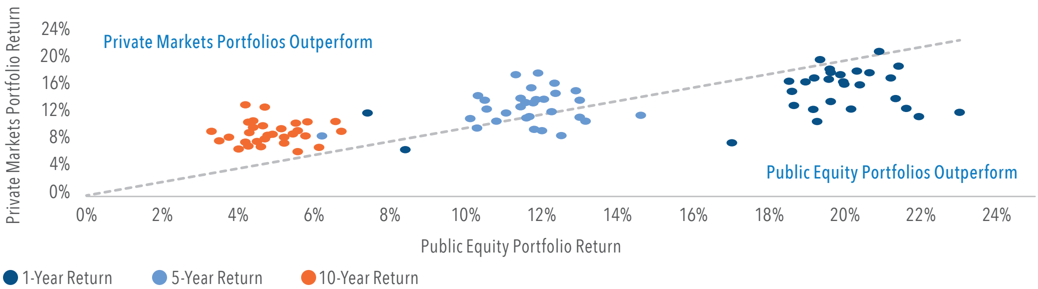
Source: Hamilton Lane Data, Bloomberg (July 2018)

There are two interesting points related to Chart 8: The first is that, if the argument were true that the private markets were not performing as expected because of too much money in a maturing asset class, you would expect to see spreads narrowing among managers. That's not happening. We have a sneaking suspicion that sharing this data won't change minds already made up, but you must admit it is interesting nonetheless. The second point, is that critics argue that investors can't consistently pick top quartile. That is true, but that doesn't mean, as a truism of logic, that the averages can't be beaten.

"WE HAVE A SNEAKING SUSPICION THAT SHARING THIS DATA WON'T CHANGE MINDS ALREADY MADE UP"

Chart 9 illustrates both points, and provides ammunition for all sides of this debate.

Chart 9: Short-Term vs. Long-Term Pension Plan Performance
By Asset Class, Public Pensions With More Than $10B in Assets



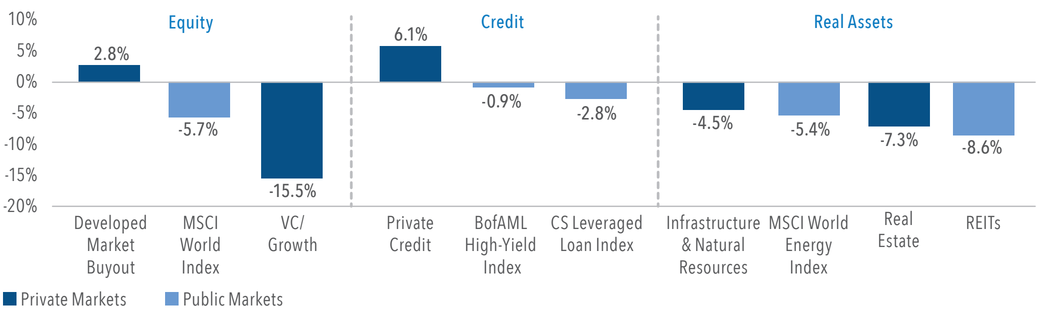
Source: Comprehensive Annual Financial Reports of all U.S. public pensions with at least $10 billion in assets (June 2018)

Look at the diversity of returns among larger public pension plans with more than $10B in assets. Striking. There are clearly investors that can make good choices and outperform both peers and averages. There also are those who fall woefully short. According to this chart, most investors have achieved their private markets investing goals over five- and 10-year periods. Over a one-year period, few have done so and, even over five years, not enough have done so with the spreads they'd like to achieve.

We're circling around the crux of what will surely be a crucial discussion over the next few years. If the private markets – and private equity, in particular – cannot begin to outperform by a healthy premium, the clamor for a change in allocations and/or fee structures will grow louder. Investing in the asset class will become more difficult to justify because the pillar on which the attraction of the entire industry is based – generating outperformance over the public markets – will be called into question.

One oft-ignored aspect of the private markets is just how bad the worst-case scenarios can be. (Spoiler alert: for the most part, they ain't so bad at all.)

Chart 10: Lowest 5-Year Annualized Performance
1992–2018*



*Infrastructure & Natural Resources from 1998–2018

Chart 10 shows the *worst* five-year period for a host of investment choices since 1992. The last 25 years is a hefty time frame that had some cycles to it. This is for the timing dunces in all of us. Notice the private credit and buyout categories; there's no five-year stretch of losses. That just isn't true for any other category, whether private assets or public markets. The risk associated with certain parts of the private markets simply isn't understood or appreciated.

Hold up. Did someone say RISK?

A PAUSE FOR RISK

Remember that LP conference or cocktail party we mentioned earlier? You know, the one where you'd try to bring up the topic of data in the private markets and find yourself standing alone with just the chips & guacamole for company? The truth is, if the data topic didn't scare everyone else away, try broaching the concept of risk instead.

For our part, we've embraced our nerdiness and have gotten pretty comfortable being alone, so we don't shy away from the subject. Heck, we'll even go so far as to bring some risk measures to bear on our analysis. (So are we still nerds? Or, would you say "trendsetters"? Think about it.)

In the public markets, periods of low volatility have generally been good for stocks, while periods of high volatility not so much (Chart 11).

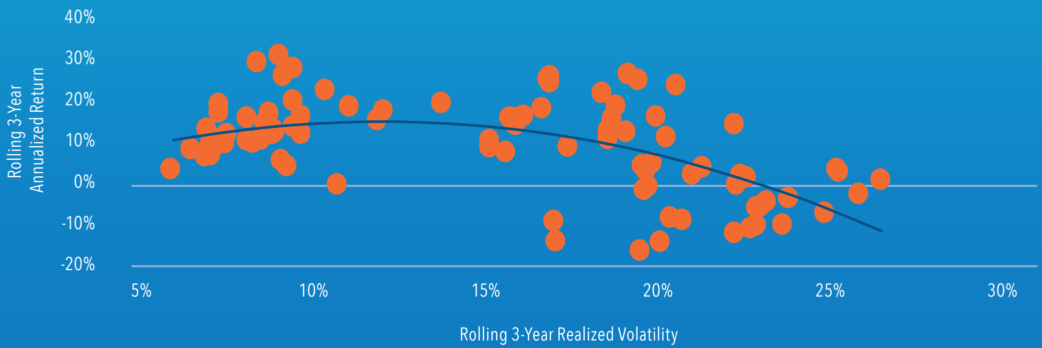
What happens to buyout returns in volatile markets? Unfazed. U.S. buyout outperformance remains consistent during periods of high volatility (Chart 12).

Got it, you say, but can we measure it on a finer basis? Sure, our data is at your command.

Kudos to those who view private markets investments as a counterweight for high volatility periods when stocks are sliding. Buyout strategies handily outperform the public markets in the riskiest public equity environments as measured by volatility (Chart 13).

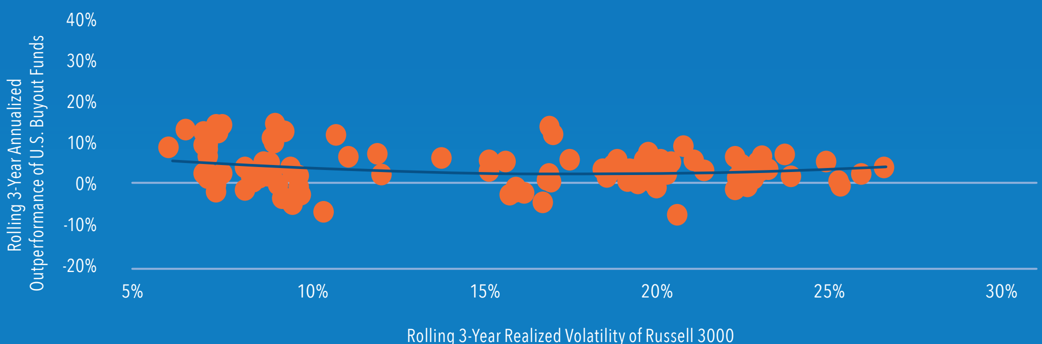
"IF THE DATA TOPIC DIDN'T SCARE EVERYONE ELSE AWAY, TRY BROACHING THE CONCEPT OF RISK INSTEAD"

Chart 11: Russell 3000 Performance vs. Volatility
1990-2018



Note: Return and volatility calculated for rolling three-year periods based on quarterly total returns.
Source: Hamilton Lane Data via Cobalt, Bloomberg (September 2018)

Chart 12: U.S. Buyout Outperformance vs. Russell 3000 Volatility
1990-2018



Note: Return and volatility calculated for rolling three-year periods based on quarterly total returns. U.S. Buyout fund returns net of fees.
Source: Hamilton Lane Data via Cobalt, Bloomberg (September 2018)

Chart 13: Risk Premiums & Volatility Regimes
Based on Rolling 3-Year Periods 1990–2018

Source: Hamilton Lane Data via Cobalt, Bloomberg (September 2018)

OK, END OF RISK PAUSE

Chart 14: Periodic Table of Returns

Pooled IRR by Vintage Year

1999	2000	2001	2002	2003	2004	2005	2006
EU Buyout 14.4%	Real Estate 24.2%	EU Buyout 32.7%	EU Buyout 33.0%	EU Buyout 20.8%	Nat. Resources 23.0%	Growth Equity 19.4%	Distressed Debt 9.6%
Real Estate 13.7%	EU Buyout 20.3%	Distressed Debt 21.4%	Real Estate 24.2%	U.S. SMID 17.8%	EU Buyout 22.8%	U.S. SMID 9.8%	Growth Equity 9.0%
ROW 12.7%	U.S. Mega/Large 16.6%	Real Estate 20.8%	Distressed Debt 22.1%	All PM 15.4%	Real Estate 17.6%	U.S. Mega/Large 9.1%	U.S. SMID 8.0%
Mezzanine 9.8%	Growth Equity 10.5%	All PM 18.3%	All PM 21.5%	Distressed Debt 15.2%	U.S. Mega/Large 12.7%	EU Buyout 8.7%	Mezzanine 7.8%
U.S. SMID 8.3%	Mezzanine 10.4%	ROW 18.1%	U.S. SMID 18.4%	ROW 14.9%	All PM 12.6%	Distressed Debt 8.3%	Multi-Stage VC 6.9%
U.S. Mega/Large 6.9%	U.S. SMID 10.2%	Growth Equity 17.7%	Late-Stage VC 17.2%	Mezzanine 9.9%	ROW 11.1%	ROW 8.1%	U.S. Mega/Large 6.9%
All PM 6.2%	All PM 10.0%	U.S. SMID 17.2%	Mezzanine 13.9%	Real Estate 8.8%	U.S. SMID 10.3%	Infrastructure 7.9%	EU Buyout 6.6%
Late-Stage VC -0.2%	ROW 3.3%	Mezzanine 16.1%	Multi-Stage VC 6.3%	Multi-Stage VC 2.8%	Seed/Early VC 10.1%	All PM 7.2%	Seed/Early VC 6.0%
Multi-Stage VC -3.9%	Multi-Stage VC 2.6%	U.S. Mega/Large 12.8%	Seed/Early VC -2.3%	Seed/Early VC 0.7%	Mezzanine 8.7%	Mezzanine 6.8%	All PM 5.8%
Seed/Early VC -7.1%	Late-Stage VC 1.0%	Multi-Stage VC 2.7%			Multi-Stage VC 7.9%	Multi-Stage VC 6.7%	Infrastructure 4.4%
	Seed/Early VC -2.7%	Seed/Early VC 1.4%			Distressed Debt 3.8%	Seed/Early VC 6.2%	ROW 4.3%
		Late-Stage VC -3.3%				Real Estate -0.7%	Real Estate 0.0%
							Nat. Resources -1.7%

2007	2008	2009	2010	2011	2012	2013	2014	2015
Growth Equity 15.1%	Seed/Early VC 19.1%	U.S. SMID 19.8%	Seed/Early VC 25.0%	Multi-Stage VC 24.5%	Seed/Early VC 20.7%	Multi-Stage VC 24.5%	Multi-Stage VC 21.9%	Seed/Early VC 31.4%
U.S. SMID 11.8%	Growth Equity 17.8%	Multi-Stage VC 15.6%	Multi-Stage VC 16.9%	Seed/Early VC 23.7%	Infrastructure 18.6%	Seed/Early VC 20.9%	EU Buyout 20.3%	Growth Equity 21.3%
Multi-Stage VC 10.8%	U.S. Mega/Large 14.7%	Growth Equity 12.8%	U.S. SMID 13.3%	Real Estate 17.9%	U.S. SMID 18.5%	U.S. Mega/Large 17.3%	U.S. Mega/Large 19.4%	Multi-Stage VC 21.0%
U.S. Mega/Large 10.2%	U.S. SMID 14.2%	Seed/Early VC 12.7%	Mezzanine 10.7%	U.S. SMID 17.2%	U.S. Mega/Large 18.1%	ROW 14.6%	ROW 18.3%	EU Buyout 19.2%
Seed/Early VC 9.4%	Multi-Stage VC 13.4%	EU Buyout 12.2%	EU Buyout 10.5%	U.S. Mega/Large 16.6%	Multi-Stage VC 17.8%	U.S. SMID 14.5%	U.S. SMID 15.3%	U.S. Mega/Large 17.7%
Distressed Debt 9.3%	EU Buyout 12.2%	All PM 11.6%	All PM 8.8%	Growth Equity 16.5%	Growth Equity 16.8%	Real Estate 13.3%	All PM 14.6%	Mezzanine 17.6%
All PM 7.4%	Mezzanine 10.8%	Real Estate 10.9%	Distressed Debt 8.6%	All PM 14.0%	EU Buyout 15.0%	Growth Equity 13.3%	Growth Equity 12.1%	U.S. SMID 16.1%
Mezzanine 6.7%	All PM 10.7%	Distressed Debt 9.5%	ROW 7.4%	EU Buyout 13.9%	All PM 14.4%	EU Buyout 13.0%	Real Estate 11.7%	All PM 15.8%
Nat. Resources 6.4%	Distressed Debt 10.4%	ROW 8.6%	Real Estate 6.2%	ROW 10.6%	ROW 13.9%	All PM 11.6%	Infrastructure 11.6%	Infrastructure 14.2%
Infrastructure 6.2%	Late-Stage VC 10.0%	Infrastructure 6.6%	Nat. Resources -8.1%	Distressed Debt 9.2%	Real Estate 11.0%	Mezzanine 9.7%	Distressed Debt 10.9%	Real Estate 14.2%
ROW 6.2%	Infrastructure 9.0%	Nat. Resources -1.0%		Mezzanine 9.0%	Mezzanine 10.8%	Infrastructure 8.8%	Mezzanine 10.0%	Distressed Debt 13.2%
EU Buyout 4.4%	Real Estate 6.9%			Infrastructure 4.6%	Late-Stage VC 9.7%	Distressed Debt 4.6%	Seed/Early VC 9.9%	ROW 13.0%
Real Estate 1.4%	ROW 6.5%			Nat. Resources 4.3%	Nat. Resources 8.6%	Nat. Resources 2.3%	Nat. Resources 9.9%	Nat. Resources 9.6%
	Nat. Resources 2.2%				Distressed Debt 8.1%		Late-Stage VC 7.5%	

☐ Negative returning strategy

Source: Hamilton Lane Data (July 2018)

Each year we show the periodic table of private markets returns (Chart 14), and each year we find ourselves fascinated by what it reveals:

» A diversified portfolio of funds provides meaningful downside protection. In fact, there are strikingly few instances of loss in any one strategy of the private markets.

» In building a private markets portfolio, it's important to ask yourself how you wish to construct it. For instance, do you aim for the top-performing sectors only? Do you only aim for those sectors that have shown consistent, middle-of-the-pack performance? Do you combine them in some fashion? Nowadays you have all of those choices available to you.

Does the performance picture shift if we look at it in terms of how much money has been returned (Chart 15)?

Chart 15: Periodic Table of Returns
Pooled DPI by Vintage Year

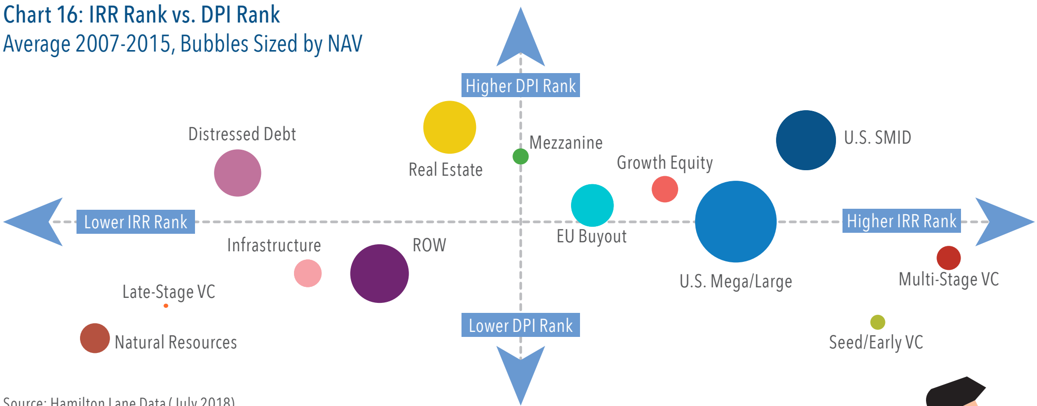
2007	2008	2009	2010	2011	2012	2013	2014	2015
Growth Equity 1.5x	Growth Equity 1.6x	U.S. SMID 1.5x	Seed/Early VC 2.1x	Real Estate 1.1x	Late-Stage VC 1.0x	Real Estate 0.7x	Mezzanine 0.5x	Real Estate 0.3x
U.S. SMID 1.4x	U.S. SMID 1.4x	Real Estate 1.2x	Mezzanine 1.2x	Multi-Stage VC 1.0x	Real Estate 0.8x	Multi-Stage VC 0.5x	Real Estate 0.5x	Infrastructure 0.2x
Distressed Debt 1.3x	EU Buyout 1.3x	Distressed Debt 1.2x	EU Buyout 1.1x	U.S. SMID 1.0x	Distressed Debt 0.8x	All PM 0.4x	Distressed Debt 0.5x	Mezzanine 0.2x
Multi-Stage VC 1.2x	U.S. Mega/Large 1.3x	All PM 1.2x	Real Estate 1.1x	Distressed Debt 0.9x	U.S. SMID 0.8x	Distressed Debt 0.4x	All PM 0.3x	ROW 0.2x
U.S. Mega/Large 1.2x	Mezzanine 1.2x	Growth Equity 1.2x	Distressed Debt 1.1x	Mezzanine 0.8x	Mezzanine 0.7x	Mezzanine 0.4x	U.S. SMID 0.3x	All PM 0.2x
All PM 1.2x	Distressed Debt 1.2x	EU Buyout 1.1x	U.S. SMID 0.9x	All PM 0.8x	Growth Equity 0.7x	U.S. SMID 0.4x	EU Buyout 0.3x	Growth Equity 0.2x
Mezzanine 1.2x	Infrastructure 1.2x	ROW 1.0x	All PM 0.9x	U.S. Mega/Large 0.8x	All PM 0.7x	Nat. Resources 0.4x	ROW 0.3x	U.S. SMID 0.2x
Infrastructure 1.1x	All PM 1.2x	Multi-Stage VC 0.9x	ROW 0.6x	Seed/Early VC 0.7x	U.S. Mega/Large 0.6x	EU Buyout 0.3x	U.S. Mega/Large 0.2x	Nat. Resources 0.2x
EU Buyout 1.1x	Seed/Early VC 1.2x	Seed/Early VC 0.9x	Multi-Stage VC 0.6x	EU Buyout 0.7x	Nat. Resources 0.6x	ROW 0.3x	Infrastructure 0.2x	Distressed Debt 0.2x
ROW 1.0x	Real Estate 1.2x	Infrastructure 0.8x	Nat. Resources 0.4x	Growth Equity 0.6x	EU Buyout 0.6x	U.S. Mega/Large 0.3x	Growth Equity 0.2x	Seed/Early VC 0.1x
Nat. Resources 1.0x	Multi-Stage VC 1.2x	Nat. Resources 0.6x		Nat. Resources 0.5x	ROW 0.6x	Seed/Early VC 0.3x	Nat. Resources 0.2x	U.S. Mega/Large 0.1x
Real Estate 1.0x	ROW 0.9x			Infrastructure 0.4x	Infrastructure 0.5x	Infrastructure 0.3x	Multi-Stage VC 0.2x	EU Buyout 0.1x
Seed/Early VC 0.9x	Late-Stage VC 0.8x			ROW 0.4x	Seed/Early VC 0.4x	Growth Equity 0.2x	Seed/Early VC 0.1x	Multi-Stage VC 0.1x
	Nat. Resources 0.7x				Multi-Stage VC 0.3x		Late-Stage VC 0.0x	

Source: Hamilton Lane Data (July 2018)

"THERE ARE STRIKINGLY FEW INSTANCES OF LOSS IN ANY ONE STRATEGY OF THE PRIVATE MARKETS"

You've likely heard the old cliché that you can't eat IRR—meaning that cash returned is the only real measure of performance. (Just like Philadelphia is the only place you can get a real cheesesteak.) In practice, however, we know that's not true. (Well, except for the cheesesteak part….) Consider every private markets performance report you've ever seen, no matter what the fund geography or investing focus: You see IRR. "DPI," on the other hand, is more often buried somewhere in the footnotes and is a term likely unknown to half the readers of those reports. Look at a scatter chart of DPI and IRR (Chart 16).

Chart 16: IRR Rank vs. DPI Rank
Average 2007-2015, Bubbles Sized by NAV



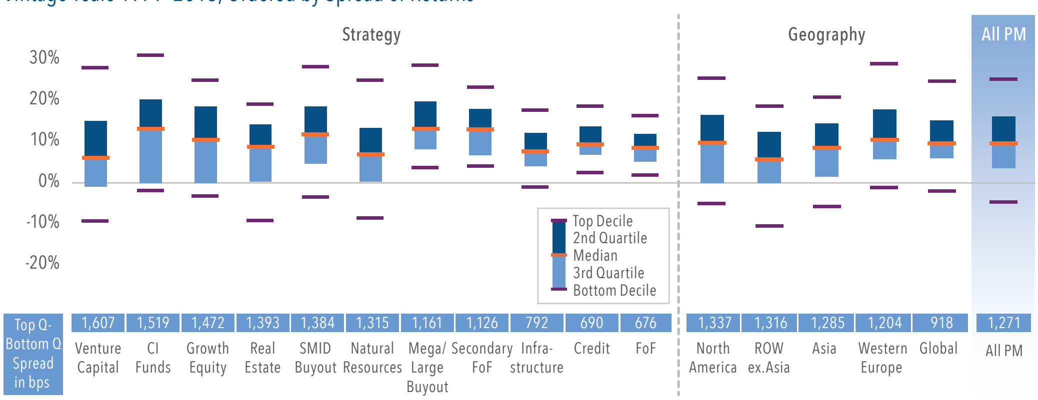
Source: Hamilton Lane Data (July 2018)

MORE BLINDINGLY OBVIOUS QUESTIONS

Does Chart 16 matter for building portfolios? Is IRR really the only measure that counts? Does that answer depend upon your compensation structure? Would it make more sense if compensation schemes were tailored to consider cash returned as opposed to IRR alone?

Those might be obvious questions, but that doesn't mean they have obvious answers. Let's circle back to the risk question again and look at dispersion of returns.

Chart 17: Dispersion of Returns by Strategy & Geography
Vintage Years 1979–2015, Ordered by Spread of Returns



Source: Hamilton Lane Data via Cobalt (September 2018)

The dispersion is quite large among most of the sectors (Chart 17). One of the enduring puzzles in the world of private markets is that, as those markets have grown and capital has flown into those investment areas, the return dispersion remains wide. That is contrary to expectations, as a narrowing of return dispersion would be assumed in a maturing market. Tack this on to the long list of reasons we're bewildered by how few private markets participants appear willing to embrace data the way public market participants do. The notion that data might help investors to achieve the upper band of that dispersion strikes us as a compelling reason to use it. Sure, we get the argument that it's not a perfect science and having the data might not mean that upper band is assured, but is that a compelling enough reason to ignore it entirely?

Let's turn to our trusty dataset once more and take a look at the underlying portfolio company returns. (Why yes, our data can do that. #nerdsrule)

Chart 18: Sector Ranks by Deal Year

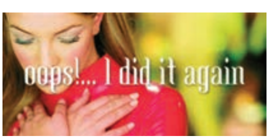
Buyout Deal Median Gross IRR by Deal Year

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Consumer Staples 42.1%	Telecom 19.8%	Healthcare 17.1%	Consumer Staples 29.0%	Materials 47.0%	Telecom 34.0%	Materials 31.8%	Healthcare 34.2%	Healthcare 42.4%	Telecom 28.3%	Consumer Staples 33.7%
Materials 41.5%	Consumer Staples 19.4%	Consumer Staples 13.7%	Materials 22.6%	Telecom 43.7%	Materials 31.2%	IT 30.5%	Materials 30.7%	IT 35.2%	Healthcare 23.6%	Materials 33.6%
Industrials 34.4%	Healthcare 17.2%	IT 9.9%	Healthcare 20.5%	Consumer Staples 40.7%	IT 26.9%	Healthcare 22.7%	Telecom 29.4%	Consumer Staples 32.4%	Consumer Staples 23.3%	IT 23.7%
IT 22.7%	Materials 12.8%	All Deals 7.9%	IT 16.3%	IT 37.3%	Healthcare 21.3%	Consumer Staples 21.2%	Consumer Staples 25.5%	Materials 31.1%	IT 21.0%	Industrials 22.3%
All Deals 19.7%	IT 12.0%	Materials 7.9%	Consumer Discretionary 16.1%	Industrials 27.6%	All Deals 20.9%	Consumer Discretionary 19.9%	IT 23.0%	All Deals 21.6%	Materials 20.8%	Healthcare 20.1%
Healthcare 18.8%	All Deals 10.3%	Consumer Discretionary 5.5%	All Deals 13.2%	All Deals 26.6%	Consumer Staples 19.9%	All Deals 18.2%	Industrials 20.9%	Industrials 17.9%	All Deals 16.3%	All Deals 19.0%
Financials 18.6%	Financials 9.4%	Industrials 3.7%	Financials 11.9%	Consumer Discretionary 24.8%	Industrials 19.7%	Industrials 14.2%	All Deals 20.6%	Financials 17.2%	Industrials 14.2%	Consumer Discretionary 14.6%
Energy & Utilities 12.6%	Industrials 8.5%	Financials 3.0%	Industrials 8.9%	Financials 23.0%	Financials 17.3%	Financials 11.5%	Consumer Discretionary 14.0%	Consumer Discretionary 16.1%	Financials 18.6%	Financials 14.5%
Consumer Discretionary 12.3%	Consumer Discretionary 5.2%	Energy & Utilities -9.1%	Telecom 1.3%	Healthcare 22.3%	Energy & Utilities 14.3%	Telecom 9.9%	Energy & Utilities 12.3%	Energy & Utilities 11.8%	Consumer Discretionary 13.9%	Energy & Utilities 12.6%
Telecom 10.4%	Energy & Utilities 3.3%	Telecom -15.3%	Energy & Utilities -2.4%	Energy & Utilities 3.0%	Consumer Discretionary 14.2%	Energy & Utilities 4.5%	Financials 10.8%	Telecom 8.1%	Energy & Utilities 9.4%	Telecom 11.1%

Source: Hamilton Lane Data (July 2018)

We think this is what makes private markets investing the greatest investment thing since sliced bread, and the invention of finance. Just look at these gross returns (Chart 18). They're eye-popping, even for the most jaded of investors, and I think we can safely assume many reading this overview fall into that camp.

And, for those of you who insist returns have been down in private markets?



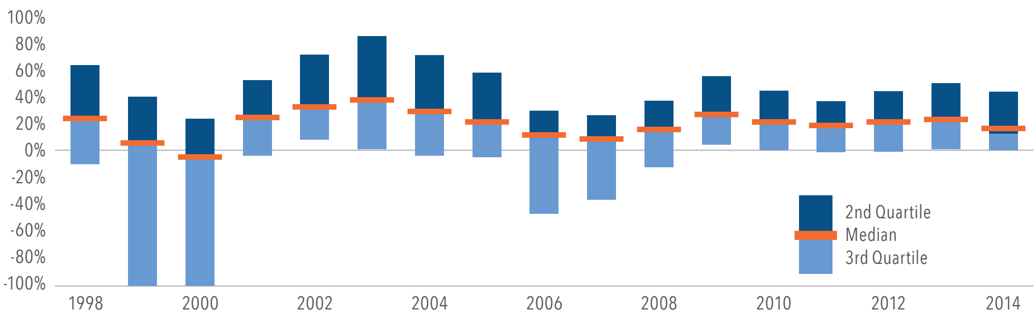
You *did* do it again! You confused anecdote with fact. You went with gut feeling and no data. It's OK, shake it off. But, next time, remember to consult the data before jumping to conclusions about what you think you know about this asset class.

The numbers are clear: Private equity returns, at the deal level, remain very high and have shown no signs of heading down over the last ten years.

Now, these are gross-level returns, and something that makes so many investors crazy is that the net returns are substantially lower. Those fees are going somewhere and, if you're an LP or any outside observer more accustomed to public market fees, they're not going to the right places. We have debated that issue in prior overviews and it continues to be a touchy subject and one that's not going away, particularly as those net private markets returns dip dangerously close to public market levels.

Sure, they may seem wonderful at face value, but deal-level returns come with much higher risk, as demonstrated by the company-level dispersion of returns (Chart 19).

Chart 19: Gross Buyout Deal IRR Quartiles
By Deal Year

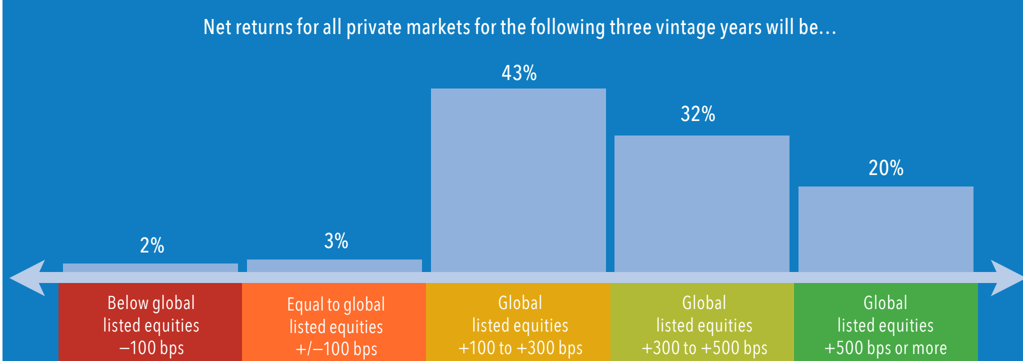


Source: Hamilton Lane Data (July 2018)

This reality shouldn't be all that surprising, but it says something about both vintage year timing of investments and the downside risk. This is particularly important as more LPs develop co-investment exposure in their portfolios. According to our data, about 29% of deals, on average, have been written off or written down over the last 20 years. This varies by vintage year, but it's a stat that should be kept in mind as investors increase exposure to underlying portfolio companies.

What is the GP outlook for future returns?

Chart 20: GP View: Net Returns



Source: Hamilton Lane General Partner Survey 2018 (July 2018)
Please be refer to endnotes on last page

They're an optimistic lot, aren't they? Ninety-five percent expect private markets to continue to outperform public markets, with fully half believing that outperformance will come at more than 300 basis points (Chart 20).

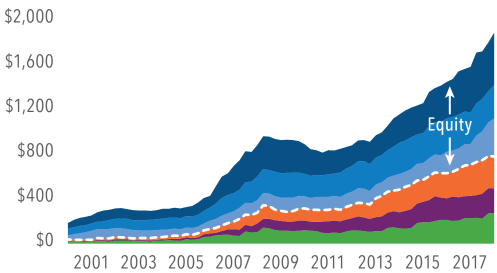
Wait a minute, Hamilton Lane, this data can't be from your database, can it? Why no, it's not, but thank you for asking. Once again, we conducted our annual survey of general partners, and this year received responses from more than one hundred of them. And these are some pretty darn good GPs, in our humble opinion. The group represents a wide swath of sectors, strategies and geographies, and collectively manages more than 625 funds and over $1,000,000,000,000 in reported assets under management. (We confess, we wanted to see how that many zeros would look on the page. It seems so much more impressive than spelling out "one trillion dollars.")

INVESTMENT ACTIVITY

Now we've come to it: the single most discussed topic in the private markets universe today. Probably the topic most discussed throughout the entire history of private markets.

Let's look at that dry powder (Chart 21).

Chart 21: Private Markets Unfunded Capital
USD in Billions



Mega/Large Buyout | SMID Buyout | VC/Growth | Credit | Infrastructure & Natural Resources | Real Estate

Source: Hamilton Lane Data via Cobalt (July 2018)

Scrooge McDuck
@$croogeMcDuck

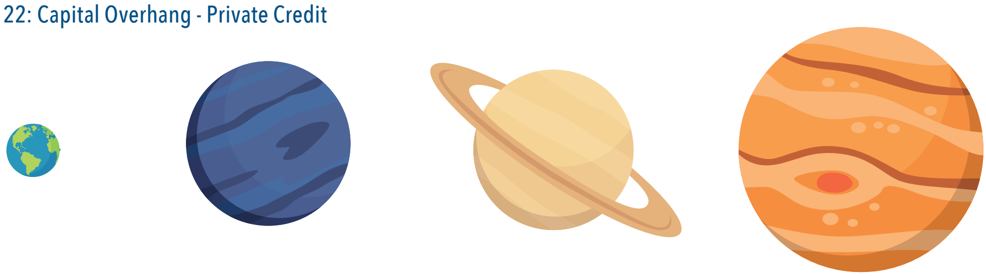
There has never been so much capital in the markets, so much dry powder everywhere. No one is going to make any money. You'd be better off doing what I do: Keep your stash in a vault. SAD!!!

12/25/52- 2:10pm

Just take a deep breath; we promise there's no need to break out the oxygen masks just yet. The amount of industry dry powder has indeed continued to go up, but it's worth noting that a great deal of the overall growth has actually come from non-equity strategies. To really understand what Chart 21 is telling us, it helps to break it down a bit. Private credit has increasingly been the space generating the most chatter about too much capital being raised and deployed. (Maybe we hear this more now since the constant drone about the PE overhang has been non-stop since 2008, and we're simply hearing the chirp of a different bird.)

Context around the dry powder on the origination side of credit is helpful (Chart 22).

Chart 22: Capital Overhang - Private Credit



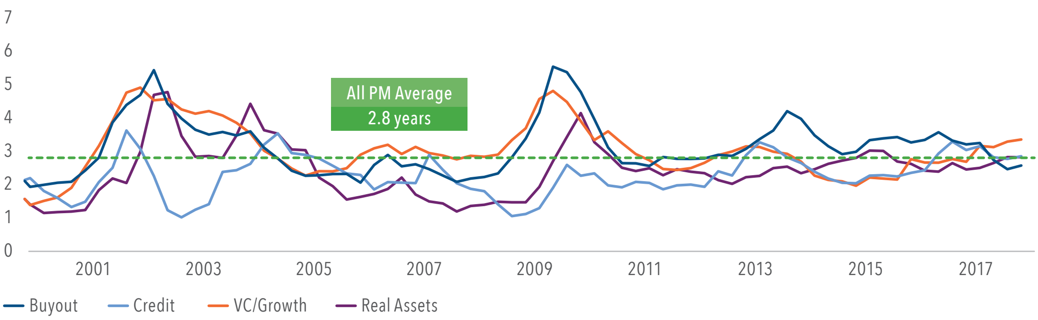
Private Credit Origination Dry Powder	Leveraged Loan Market	Debt Capital to Deploy Buyout Fund Dry Powder	High Yield Bond Market
$128B	$1T	$1.1T	$1.5T

Source: Hamilton Lane Data via Cobalt, S&P LCD (July 2018)

Those so concerned about private credit can be likened to astronomers before Copernicus: They genuinely believe that private credit is Mother Earth and the center of the universe. But, history will prove it's not. No, there are some much bigger planets floating around out there, and suddenly, private credit doesn't look so big when you compare it to the other behemoths of the loan market.

Hopefully by now, your breathing has regulated so we can take a look at capital overhang on the equity side.

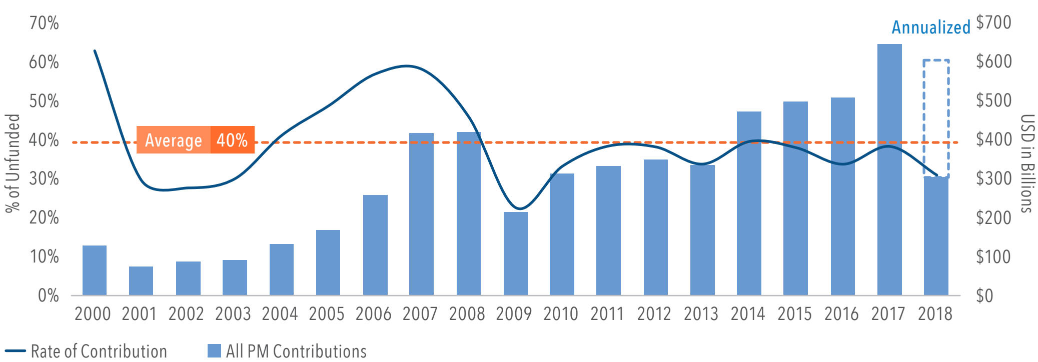
Chart 23: Time to Deploy Capital Overhang
Years at LTM Pace



Source: Hamilton Lane Data via Cobalt (July 2018)

We show Chart 23 every year, despite knowing it obviously has no bearing on this debate. It tells us a few things: The first is that the time to deploy that overhang is at normal levels. There isn't too much capital in the market; rather, we'd argue there is an average amount of capital when you factor in the pace of deployment. (We'll soon point out that deployment pace is also normal, so it's not as though one part of the equation is distorting the result.) The second, counter-intuitive, feature is that when there is too much capital (i.e., when *capital spending* goes down), that's when you want to buy with impunity. Everyone shouting that there is too much dry powder should look at 2002 and 2010 and wish that it really were the case.

Chart 24: Annual Private Markets Contributions



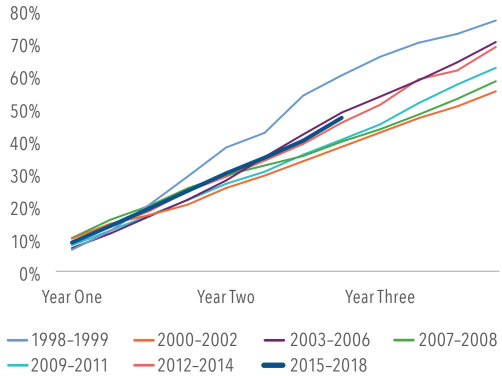
Source: Hamilton Lane Data via Cobalt (July 2018)

Looking specifically at the pace of spending, we see that 2017 was a record year on an absolute basis, but merely average on a relative basis (Chart 24). It looks as though activity will be down in 2018 both on an absolute and relative basis. We hear all the time that this is a reflection of deals that are too expensive and can't be found and, ergo, that's a bad thing. Really? That's so bad? Trust us when we tell you that deals can be found anytime and anywhere. What it really reflects is some discipline by general partners and their unwillingness, thus far at least, to chase prices. As investors, we should all be pretty happy about that development. We also hear that deal activity is at historic lows. Please, scrap the anecdote and check out the data instead.

And what, pray tell, does that data reveal? Recent vintages have been utterly ordinary and average in terms of pace of deployment (Chart 25).

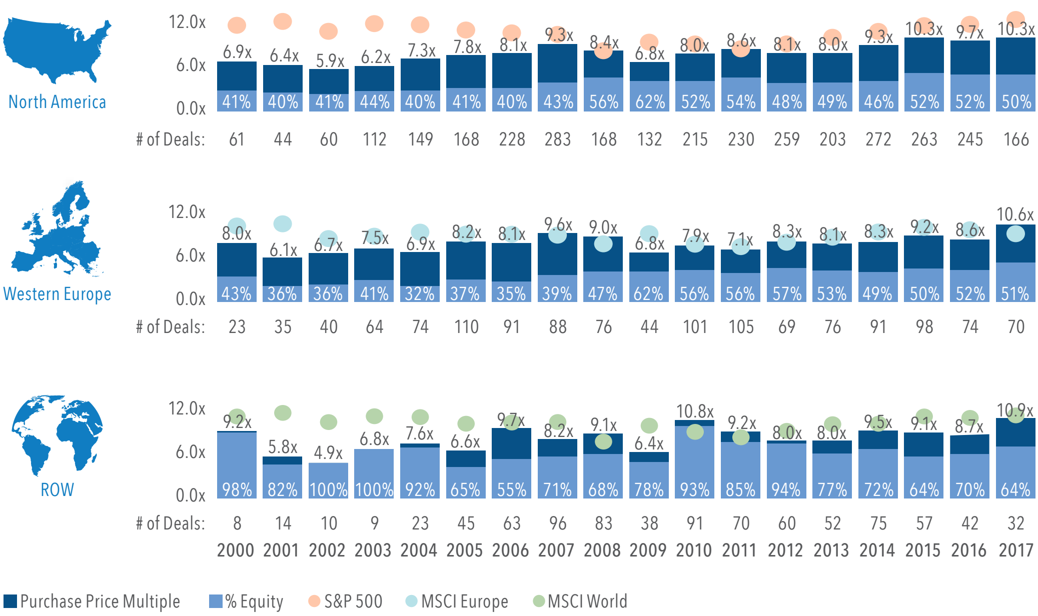
Of course, no discussion of capital overhang would be complete without a shout out to its dance partner, purchase price multiples.

Chart 25: Median Buyout Percent Called by Fund Age
Vintage Years 1998–2018



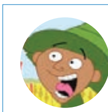
Source: Hamilton Lane Data via Cobalt (July 2018)

Chart 26: Purchase Prices
EV/EBITDA and % Equity, Median by Deal Year



Source: Hamilton Lane Data, Bloomberg (July 2018)

Prices are high. Very high. Chart 26 shows some perspective in terms of prices generally keeping some distance from the comparable public markets. However, while we are not ready to say prices are too high to make any money in the private markets, we are in the camp that's worried enough to be on the lookout for opportunities to reduce risk in the face of steep prices across all assets.

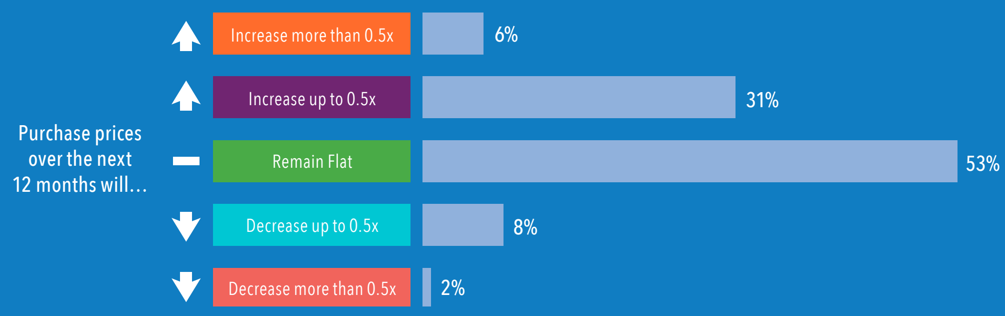


The Boy Who Cried Wolf
@IReallySawAWolf

GPs are paying record prices for everything they buy. This can only end in ruin and disaster. GET OUT NOW!! SELL EVERYTHING!!!

8/21/18 - 7:47 am

Chart 27: GP View: Purchase Prices



Source: Hamilton Lane General Partner Survey 2018 (July 2018)
Please refer to endnotes on last page

What do the GPs think will happen going forward? We hope you weren't looking for relief from their outlook (Chart 27). The vast majority – 90% – believe prices will be either the same or even higher over the next 12 months.

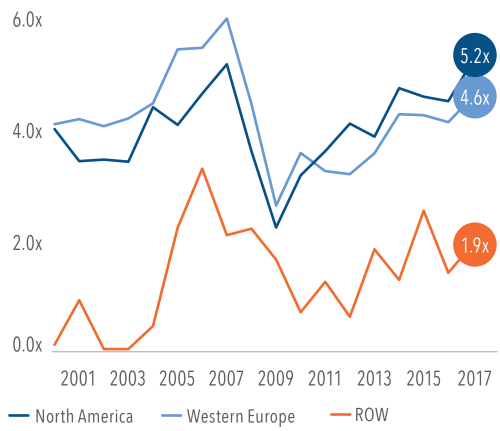
In prior years, we felt reasonably good (or maybe it was closer to indifferent?) about leverage multiples, but those are now creeping up to a more uncomfortable place.

Post GFC, regulators took steps to ensure banks were keeping leverage levels low, which contributed to those levels hovering well below the highs of 2007. More recent de-emphasis by regulators has contributed to leverage levels trending higher and beginning to approach more worrisome levels (Chart 28). Let's add another worrisome trend: GPs can get creative when it comes to defining EBITDA. Very creative. If we were to define EBITDA today the way it typically was defined in 2007, well, let's just say we might be at even more concerning levels.

Any silver lining to be had here?

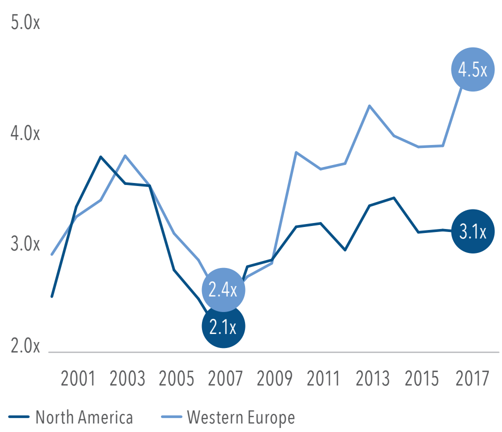
Coverage ratios remain quite strong – a reflection of low interest rates combined with healthy cash flows and economically strong companies being acquired (Chart 29). Prior cycles show that this ratio doesn't fall in the span of a few months as many commentators claim. If history is any guide (and we happen to trust it), this ratio will decline over the duration of a year or two prior to a peak in the private markets.

Chart 28: Leverage Multiples at Acquisition
Net Debt/EBITDA



Source: Hamilton Lane Data (July 2018)

Chart 29: Coverage Ratios at Acquisition
Cash Interest Expense

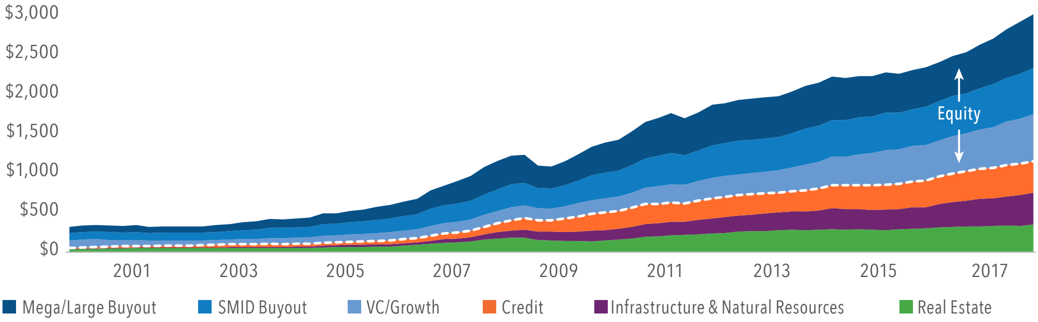


Source: S&P LCD (July 2018)

LIQUIDITY

Remember the reference to purchase multiples as the companion to dry powder? Well, here's the real twin star to dry powder: the asset value of investors' portfolios (Chart 30).

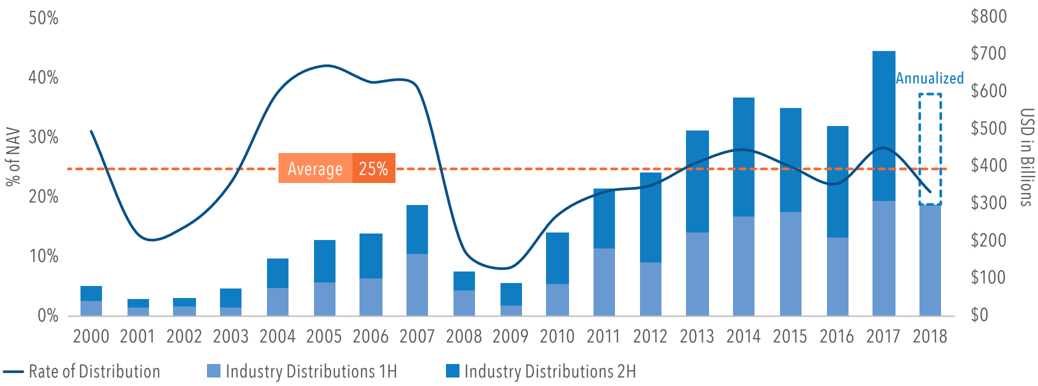
Chart 30: NAV by Strategy
USD in Billions



Source: Hamilton Lane Data via Cobalt (July 2018)

This looks a lot like the dry powder chart shown earlier, and it should. It reflects the same underlying causes after all—that of an expanding set of assets being purchased and increasing in value. That's all positive for investors. But (and stop us if you've heard this before), for most investors, getting money back is important.

Chart 31: Annual Private Markets Distributions

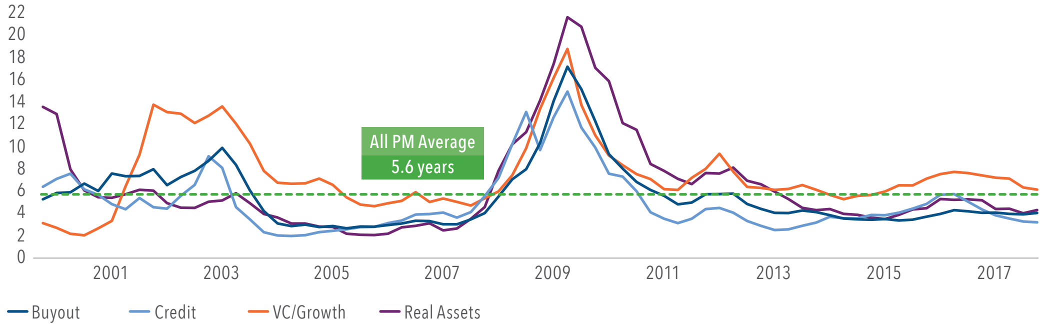


Source: Hamilton Lane Data via Cobalt (July 2018)

While large in absolute numbers, the pace at which capital is being returned to investors has been hovering around average over the last few years (Chart 31). In the first half of 2018, levels were close to the highest ever experienced, and back-half trends would indicate that the full year could feasibly see an eclipse of the record set in 2017. Nevertheless, they remain near average levels considering the overall growth of NAV.

"GPs CAN GET CREATIVE WHEN IT COMES TO DEFINING EBITDA. *VERY CREATIVE.*"

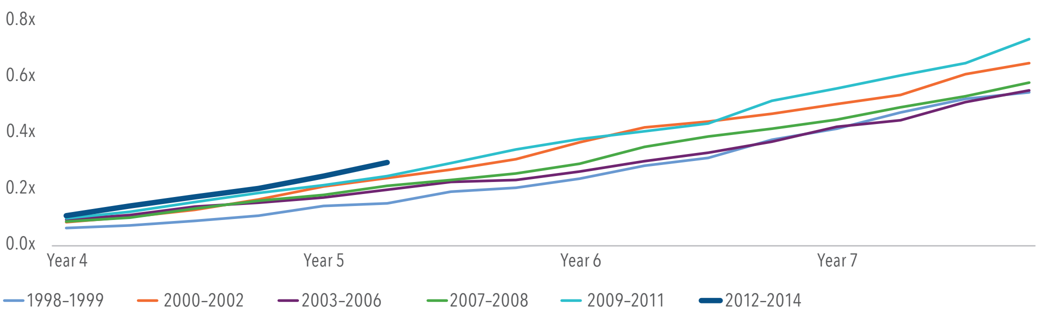
Chart 32: Time to Liquidate NAV
Years at LTM Pace



Source: Hamilton Lane Data via Cobalt (July 2018)

The pace of liquidation has been a little faster than average levels, and that has been true of all areas except VC and growth for a number of years now (Chart 32). This has been a very good market for exit activity and remains that way. In fact, the pace of buyout distribution activity has proven faster in the 2012-2014 vintages than any others over the last 20 years.

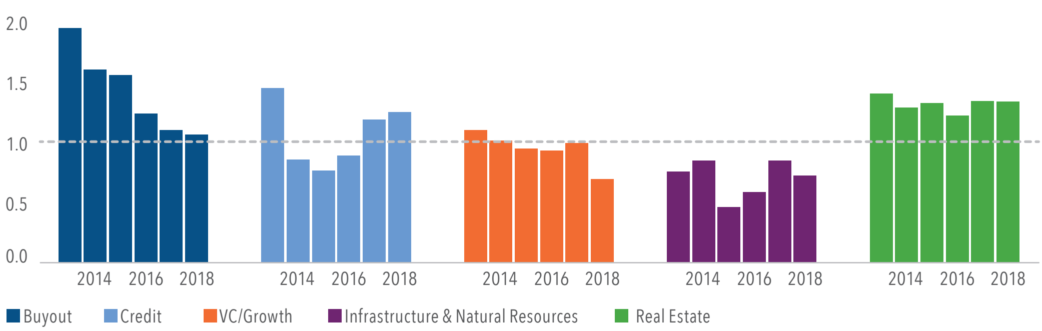
Chart 33: Median Buyout DPI by Fund Age
Vintage Years 1998–2014



Source: Hamilton Lane Data (July 2018)

The liquidity pattern in the various strategies has been consistent with the DPI chart we showed earlier (Chart 33). Buyout and real estate have been generating more liquidity than they have been calling capital for some time. VC/growth, infrastructure and natural resources have been the opposite.

Chart 34: Annual Liquidity Ratio
Distributions/Contributions



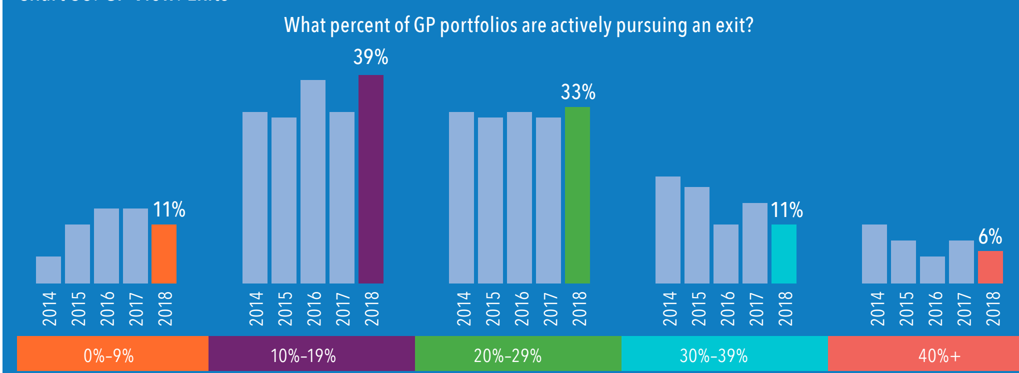
Source: Hamilton Lane Data via Cobalt (July 2018)

And Even More Blindingly Obvious Questions

Do investors *really* even care about money returned? The private markets areas experiencing the most growth – as shown in earlier charts about PPMs, about dry powder, about NAV – are those in which money is being drawn at faster rates than it is being returned (Chart 34). Does it matter? Will it change? Did the tree fall in the forest yet?

What does our general partner group have to say about exit activity?

Chart 35: GP View: Exits

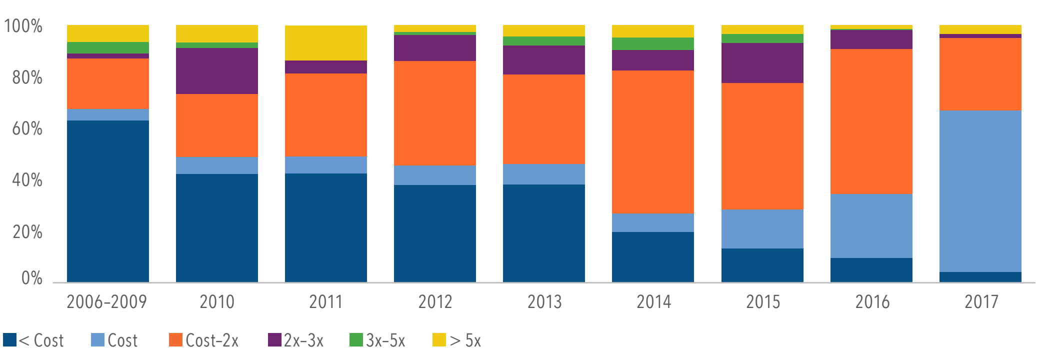


Source: Hamilton Lane General Partner Survey 2018 (July 2018)
Please refer to endnotes on last page

Recall that the average level of distribution activity to NAV is 25%. Roughly half of the GPs we surveyed expect distribution activity to be in the same ballpark, indicating their shared belief that exit activity will remain strong, at or above average levels (Chart 35).

What's sitting in these portfolios anyway?

Chart 36: Unrealized Buyout Deals by MOIC
% of Deals by Year of Investment



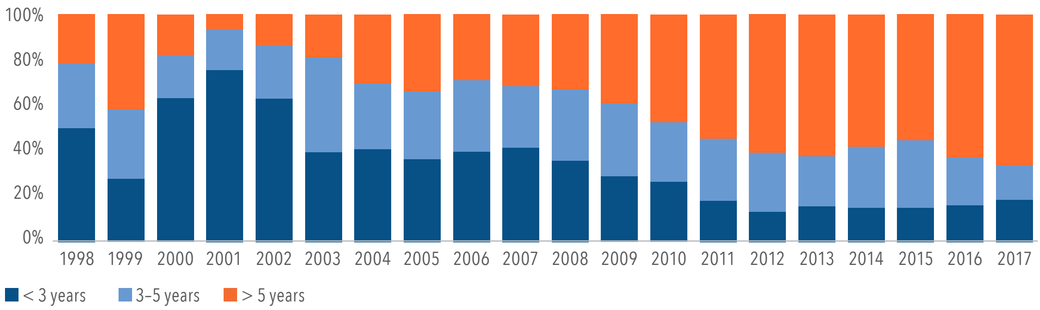
Source: Hamilton Lane Data (July 2018)

Investors are sometimes surprised by the composition of older portfolios. Just look at those 2010 to 2013 numbers (Chart 36). There's still a lot of value in there. There's also a lot of stuff (it's a technical term) that is struggling. What's to happen to it all?

That's a trick question for the time being and a teaser for the section of this overview dedicated to the secondary market. We're weaving a seamless web here. So, please do read on; or, if curiosity gets the best of you, feel free to skip ahead and come back here later. We'll be waiting.

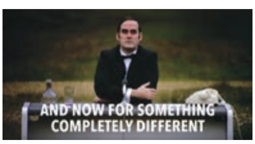
In prior overviews, we've included Chart 37 and claimed it as one of the most important charts in all of private markets.

Chart 37: Holding Period of Exited Buyout Deals
% of Deal Count by Year of Exit



Source: Hamilton Lane Data (July 2018)

Well, we're not backing down from that assertion now. Chart 37 remains one of the most important, as it plainly reveals how this asset class has morphed and evolved over the years. Our data shows that the era of the quick flip is in the rear view mirror. We doubt it will return any time soon. Pair that with the information provided earlier on gross deal returns. Value is still being generated and we fear that's the point so many are missing. Whatever magic elixir that the private markets as an investment discipline bring to a transaction continues to exist even with longer holds. (Make no mistake; they are quite a bit longer, now averaging 6+ years.) Longer holds, however, are likely to reduce net IRRs by the simple math of IRR calculations.



This got us wondering whether top managers could be shown to be different from the average manager across certain metrics, the theory being that top managers most likely didn't hold companies as long, paid less and/or used less leverage. Our anecdotal convictions proved to be:

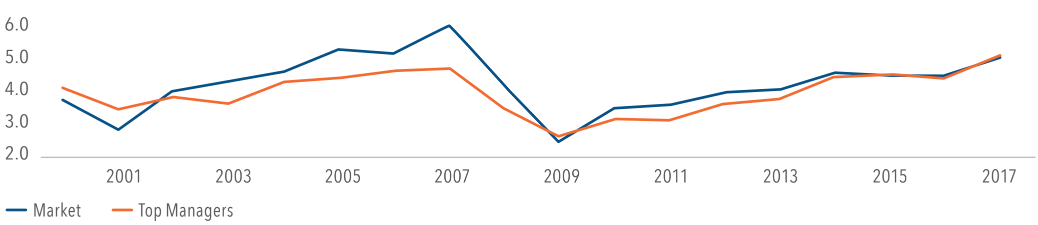
WRONG, WRONG and WRONG again.

Holding periods? Almost exactly the same.

Purchase price multiples? Almost exactly the same.

Leverage? Well, it had been different for a time, but has since converged across all managers.

Chart 38: Leverage Multiples by Manager Quality
Net Debt/EBITDA

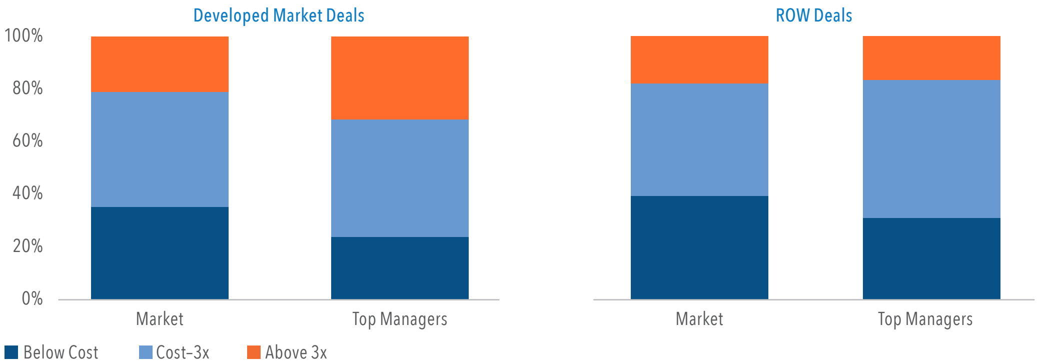


Source: Hamilton Lane Data (July 2018)

"THE ERA OF THE QUICK FLIP IS IN THE REAR VIEW MIRROR. WE DOUBT IT WILL RETURN ANY TIME SOON."

Outside of those particular metrics, did the data reveal any proven differences? Indeed so, and the answer is an interesting one.

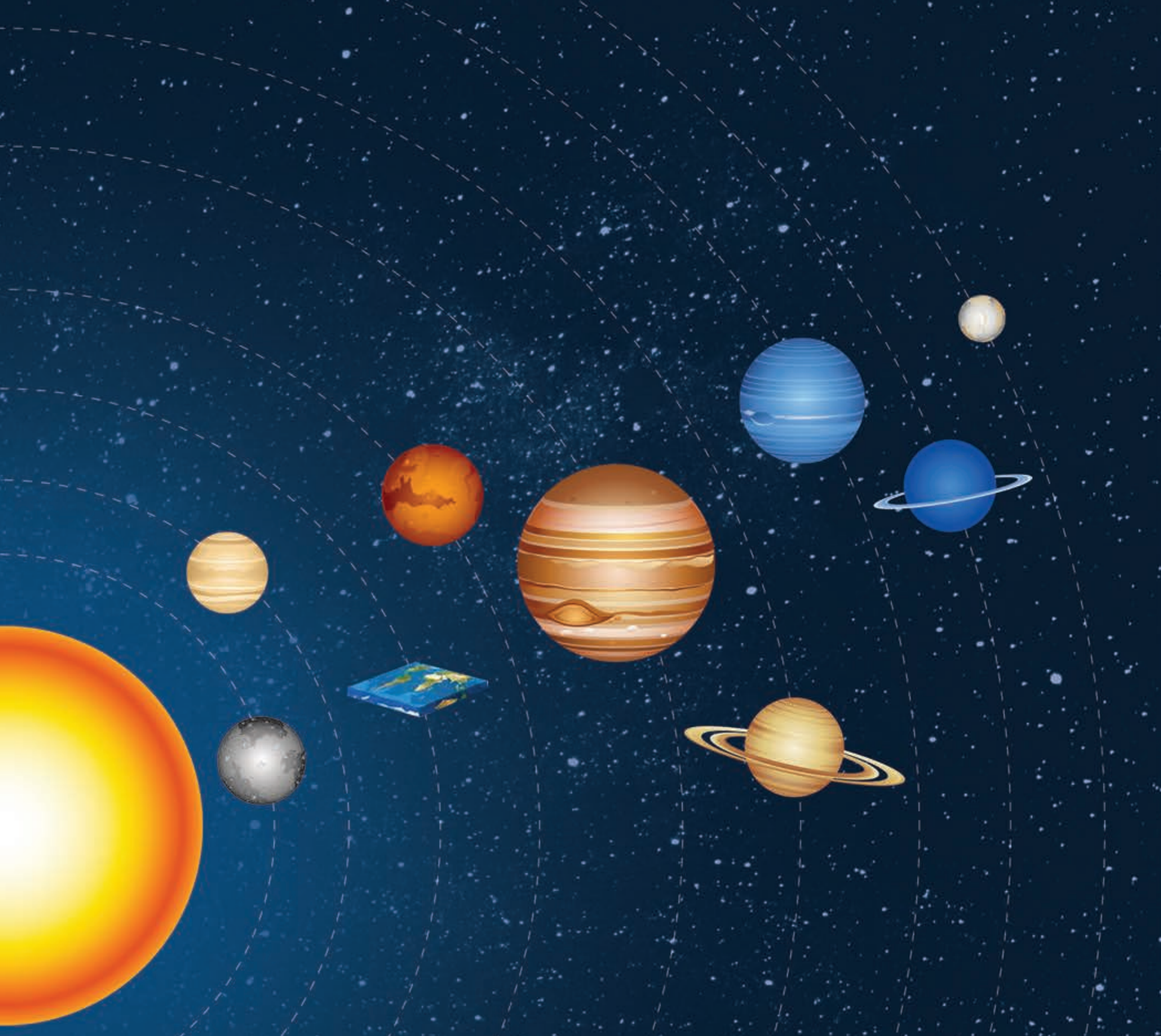
Chart 39: Dispersion of Returns by Manager Quality
Vintage Years 2000-2014



Source: Hamilton Lane Data (July 2018)

In developed markets, top managers capture more upside and dramatically reduce downside risk. In emerging markets, that's only partly true (Chart 39). In those markets, the key to stronger performance is limiting your downside. We hadn't expected those numbers. Did you? It might be worth considering adding that analysis to the diligence tool kit as investors look at key performance attributes.

FLAT EARTH PROCLAMATIONS



PONTIFICATING PROCLAMATIONS FROM THE MINISTRY OF PRIVATE MARKETS MAGIC WING OF THE FLAT EARTH SOCIETY

Throughout the course of the exhaustive research we conducted in preparation for writing this overview, we spent a great deal of time pouring over all literature dealing with the private markets. There is a vast amount out there, filled with erudition and insight. One little-known branch of research responsible for producing much of the available information is a division of the Flat Earth Society: The Ministry of Private Markets Magic. The MPMM has made countless fascinating assertions over the years, and we thought it would be interesting to examine a few of them and provide our own observations.

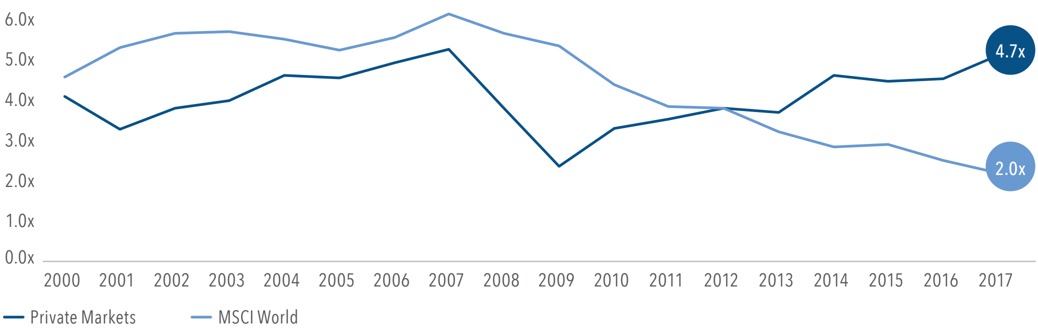
PRIVATE EQUITY IS JUST LEVERED PUBLIC EQUITY

This is a time-honored and treasured bit of folklore that, as far as we can tell, has been around since antiquity.

Let's deconstruct this one. First, it's important to remember that public market companies also are leveraged. Those supporting this school of thought tend to ignore that pesky underlying fact.

> **Caligula**
> @FunWithCaligula
>
> Private equity is nothing but public equity with gobs of leverage. Friends, Romans, fellow citizens, save your fees and follow me: Simply lever up your stocks and drown in money! MAKING INVESTING GREAT AGAIN!!!
>
> 1/20/40AD-

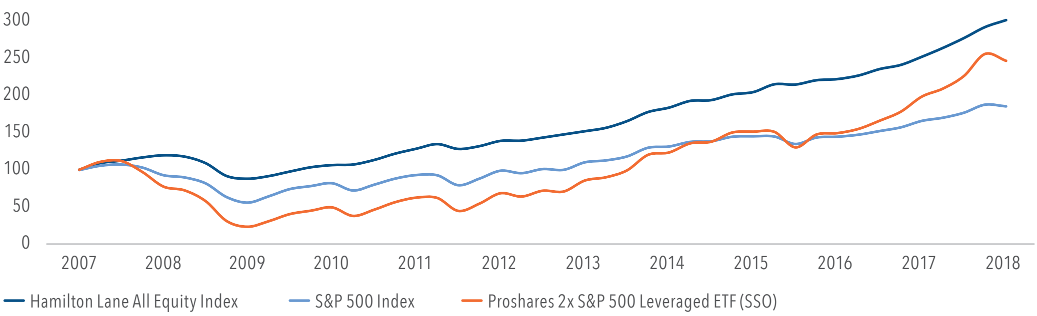
Chart 40: Leverage Multiples in Private and Public Markets
Net Debt/EBITDA



Source: Hamilton Lane Data, Bloomberg (July 2018)

There are two interesting points here (Chart 40). First, *it is only in the last few years that the private markets have been more levered than the MSCI World Index*. Astounding, is it not? For all the years we've heard this, the underlying premise that PE has always been more levered than public equity hasn't even been true! But we'll let bygones be bygones.

Chart 41: Private Equity vs. Leveraged Equity Growth (S&P 500)
Base 100

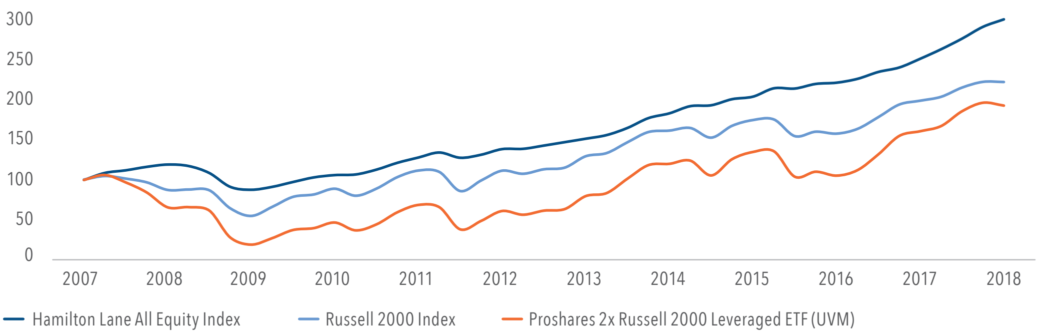


Note: Past performance is not a guarantee of future results
Source: Hamilton Lane Data via Cobalt, Bloomberg (September 2018)

> "THE UNDERLYING PREMISE THAT PE HAS ALWAYS BEEN MORE LEVERED THAN PUBLIC EQUITY HASN'T EVEN BEEN TRUE!"

Next, let's apply leverage to the public markets. Whoops. The levered S&P is catching up, to be certain, but the issue now is that the double leverage is capturing too much downside (Chart 41). What's even more noteworthy is that the leveraged S&P isn't able to catch up to private equity notwithstanding almost 10 years of one of the best bull runs in history. OK, you say, try a different index, then; using the Russell 2000 should capture a fairer comparison with small stocks.

Chart 42: Private Equity vs. Leveraged Equity Growth (Russell 2000)
Base 100



Note: Past performance is not a guarantee of future results
Source: Hamilton Lane Data via Cobalt, Bloomberg (September 2018)

Still no dice. In this scenario, the levered Russell 2000 Index comes up even farther behind during this great bull run (Chart 42). (As a side note, and serving perhaps as explanation for the underperformance relative to the S&P, the Russell 2000 Index components have an embedded leverage ratio that's roughly equal to that of private equity.)

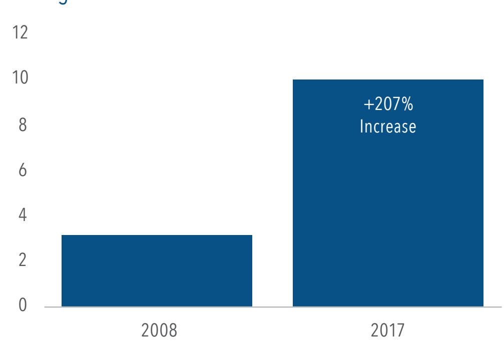
In order to believe that you can outperform private equity by levering public equity, you also need to believe that you can precisely time when public markets will move up and down and time when to apply leverage. If you can do that consistently, stop wasting energy reading this and go focus on investing your money. In fact, if you'd be so kind as to send us an email with your hedge fund subscription agreement, we'll gladly give you all our money too.

MY OPERATING PARTNERS ARE THE KEY TO MY ABILITY TO OUTPERFORM

A more recent pronouncement, this stems from the GP wing of the Ministry. But, just because it's more recent doesn't mean it's any less powerful an assertion.

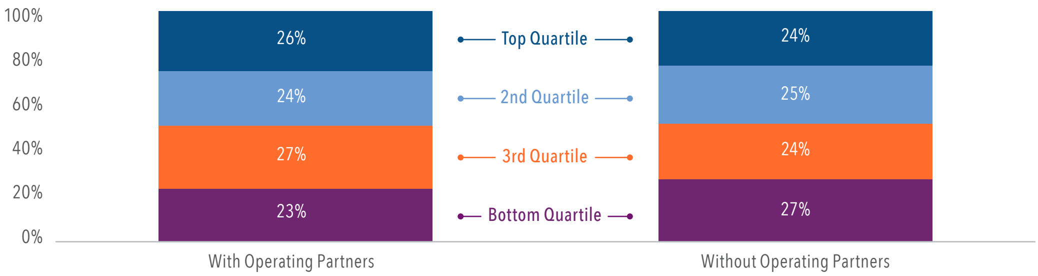
Yowsa! That's a big jump. A two hundred percent increase in the last 10 years suggests this particular proclamation is either true or the mother lode of marketing magic (Chart 43). As we move through each of these analyses to get to the big reveal, we're reminded of the Family Feud catchphrase: "Survey says!" But since our reveals are based on actual data, let's instead go with: "Data says!"

Chart 43: Mentions of "Operating Partners" in PPMs
Average Per PPM



Source: Hamilton Lane Data (May 2018)

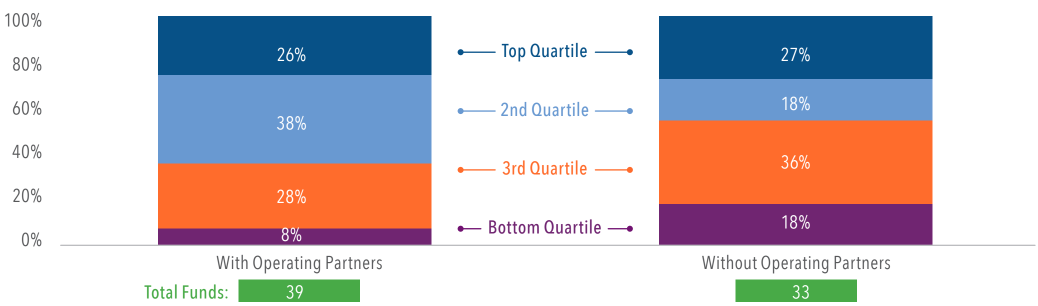
Chart 44: Performance of Funds With Operating Partners
Vintage Years 2008–2015



Source: Hamilton Lane Data (July 2018)

Well that's a bit anti-climactic, isn't it? Performance of funds with and without operating partners looks to be statistically the same (Chart 44). I guess there's no sense in exploring this subject further, right? Wrong! Here's where having an indefatigable group of wildly intelligent and research-oriented people makes all the difference in the world. Using the same quartile metric, we analyzed performance by fund size. Turns out that small- and mid-sized buyout groups using operating partners maintain the same statistical profile as Chart 44. But, what happens at the large and mega end of the market? From dross to gold, my friends.

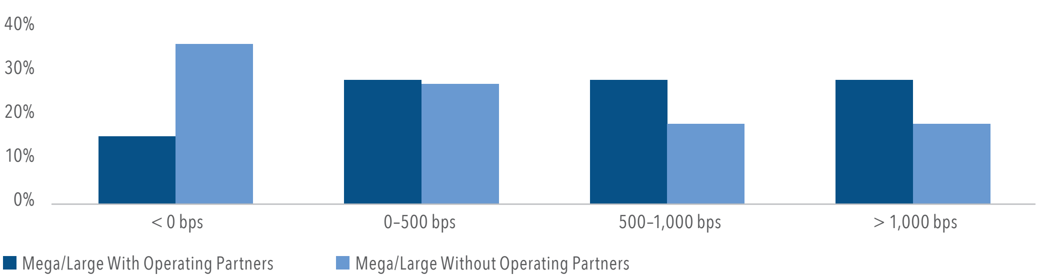
Chart 45: Distribution of Returns for Mega/Large Funds With Operating Partners
Vintage Years 2008–2015



Source: Hamilton Lane Data (July 2018)

This is statistically relevant: sixty-four percent in the first- and second-quartile for those with operating partners and only 45% for those without (Chart 45). And, there's more. Take a look at this dispersion of return at the large and mega end on a PME basis.

Chart 46: Mega/Large Dispersion of PME Outperformance
Vintage Years 2008–2015



Note: MSCI World PME
Source: Hamilton Lane Data (July 2018)

Same pattern, particularly in terms of downside risk being greater in that segment without operating partners (Chart 46). (The small and middle segment showed little statistical difference on the PME metrics.) Why would we see that in one segment and not another? We can offer some explanations:

- Larger GPs tend to have an almost conglomerate effect. That is, they use their scale to create synergies across their full platform of companies, so operational expertise may be more valuable for these larger, more complex groups.
- Operating partners may provide an edge when it comes to deal sourcing outside of the competitive auction process.
- The scale of some of the companies purchased may create opportunities for operating partners to add differentiated analysis and insight.

There may be other reasons, but there does appear to be some validity to valuing operating partners at the large end of the buyout market. This may be more than just an effective marketing tagline.

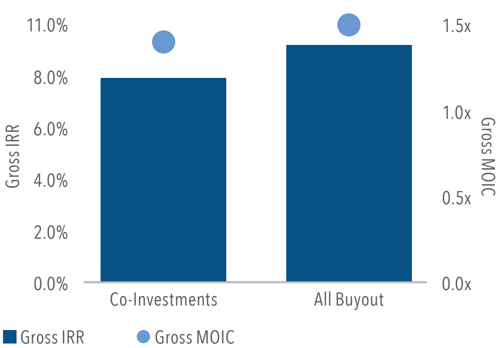
CO-INVESTMENT SUFFERS FROM ADVERSE SELECTION AND THE 2006-2008 DEAL COHORTS WILL PROVE IT

No market segment generates as much passion and debate as co-investments. There are adamant supporters and die-hard critics, and each group is equally certain of its position. The challenge in determining who's right or wrong really boils down to the fact that co-investments have not yet experienced multiple market cycles, and so their behavior can't be anticipated or determined with any statistical certainty.

One period we can look to for reference is that of the Great Financial Crisis and its aftermath. The estimate is that somewhere in the neighborhood of $250-325 billion of co-investment capital was committed in that era. The bad rap on co-investments comes from that experience. But, for the sake of experiment, let's set personal feelings aside and instead take a look at the data. Specifically, we'll address the three great myths upon which this particular assertion is based and see if they prove to be fact or fiction.

#1: Co-Investments from 2006-2008 underperformed buyout deals from that same era

Chart 47: Buyout Deal Performance vs.
CI Deal Performance
2006–2008 Deals



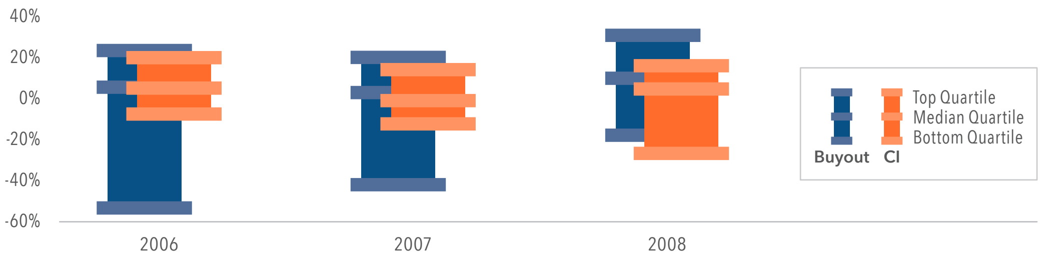
Source: Hamilton Lane Data (July 2018)

It's true. Co-investments performed worse on both an IRR and a multiple basis (Chart 47). So we'll add that one to the fact bucket.

Well, maybe not so fast…. If you assume that co-investments are on a no-fee and no-carry basis, and all buyout returns are gross returns, then, voila, the net return is probably close to the same. We'll still go ahead and call this one confirmed to give all the haters something to hate.

#2: Co-Investments from 2006-2008 were much riskier than other buyout deals from that same era

Chart 48: Co-Investments vs. Buyout Gross Deal IRRs
2006–2008

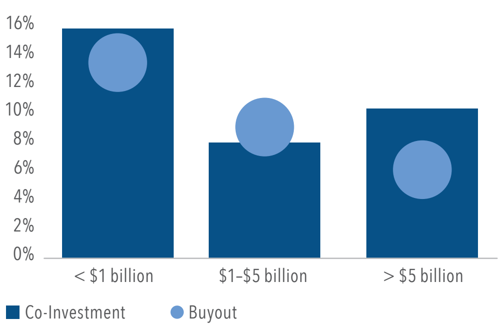


Source: Hamilton Lane Data (July 2018)

Not so much. The downside risk associated with co-investments is far less than what was experienced with buyout deals during the same period (Chart 48). Moreover, a look at loss ratios found virtually no difference. (Here's an odd outcome, albeit based on a statistically small data sample: The loss ratio on CI deals in the U.S. was the same as that of buyout funds in general. In Europe, CI loss ratios were higher and in the ROW, CI loss ratios were lower.)

#3 Co-Investments offered by mega/large managers were the worst-performing investments from 2006-2008

Chart 49: Gross IRR by Deal Size
2006–2008, By Enterprise Value



Source: Hamilton Lane Data (July 2018)

Admit it, you're intrigued by this one.

Co-investments on the largest deals actually outperformed all buyout deals of the same period. Similarly, co-investments on the smallest deals outperformed all buyout deals (Chart 49). Based on those findings, this myth should be good and busted. But it's a little more nuanced than that. (Oh, we get it. You thought us incapable of nuance in favor of bombast and bluster….)

Take a look at the deals in the middle segment, the $1B–$5B range. They certainly didn't outperform all buyout deals across the board. Additionally, more than half of co-investment deals underperformed their associated buyout fund. In the smaller end of the market, that number gets closer to 60%. So, while we think this particular myth is busted (particularly for the oft-maligned "mega" co-investment deals), we are going to have to say, plausible.

One of the most interesting developments in the entire private markets landscape will be how co-investments perform in the next down cycle. There simply isn't enough history to make a truly educated judgment about how that plays out. However, given the volume of co-investments in today's market, we should have enough data as this cycle unfolds to make some assessments that will help fashion portfolio strategies.

THERE'S NO BUSINESS LIKE THE TECH BUSINESS

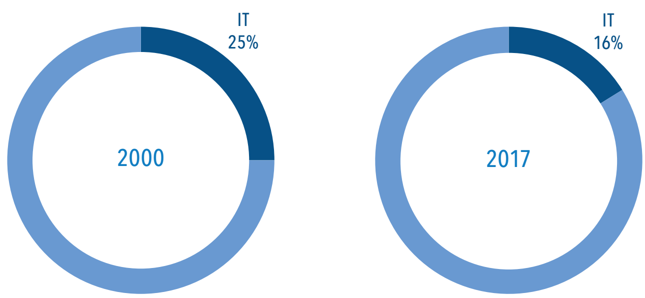
Not unlike co-investments, there is no shortage of passion surrounding this topic. The bull argument is that growth is where returns are made and there's no growth business like tech business. The bear argument counters that we have seen this movie before.

Chart 50: Cumulative Returns for S&P 500 Tech vs. S&P 500

Source: Bloomberg (September 2018)

History may not be the same, but it can rhyme, and Chart 50 illustrates a rhyme on tech outperformance on the public side between now and 2000. Sure, the sizing, scale and composition of the tech space itself are dramatically different. In 1999, Microsoft was the largest cap tech name, at $583 billion. Today, Microsoft would barely crack the top five list of the largest cap names, with Apple's market cap greater than $1,100,000,000,000 (there go all those zeros again). Tech also is a much larger percentage of the overall S&P market cap. Today, the top five tech stocks in the index represent about 16.9%, whereas that number stood at less than 10% in 1999. What's going on in the private equity universe?

Chart 51: Estimated Private Markets IT Exposure



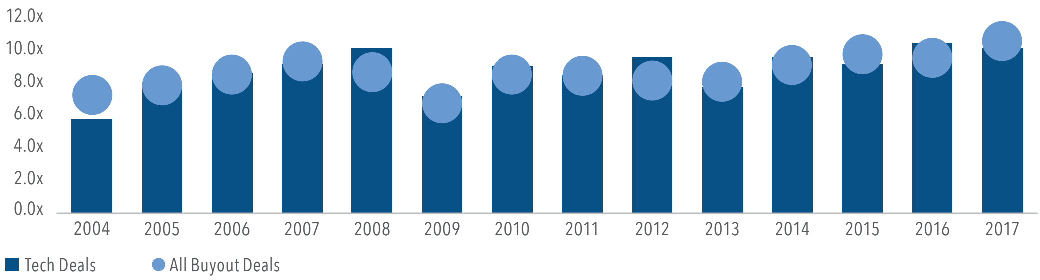
Source: Hamilton Lane Data (August 2018)

Private markets portfolios have not been exposed to technology the way they were in 2000 (Chart 51). (Please spare us from the argument of "well, everything is exposed to technology." We get what you're saying, but we're measuring something different here from that overall risk assessment.) Recall that in 2000, investors were heavily invested in VC and were getting significant technology exposure from the buyout world that was moving into that space.

Two corollary assumed truisms of the PE technology puzzle are, (a) tech multiples are higher than the rest of the PE universe, and (b) tech leverage multiples are lower.

Well, the purchase price assumption is generally wrong. (This surprised us as well.)

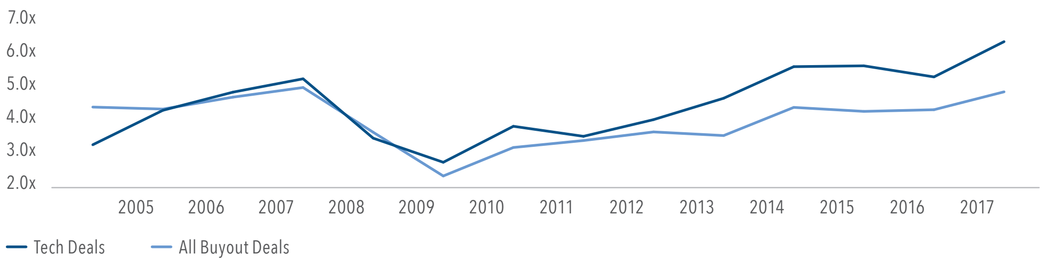
Chart 52: Purchase Prices
EV/EBITDA, Median by Deal Year



Source: Hamilton Lane Data (July 2018)

The leverage multiple assumption also is wrong.

Chart 53: Tech Leverage Multiples at Acquisition
Net Debt/EBITDA

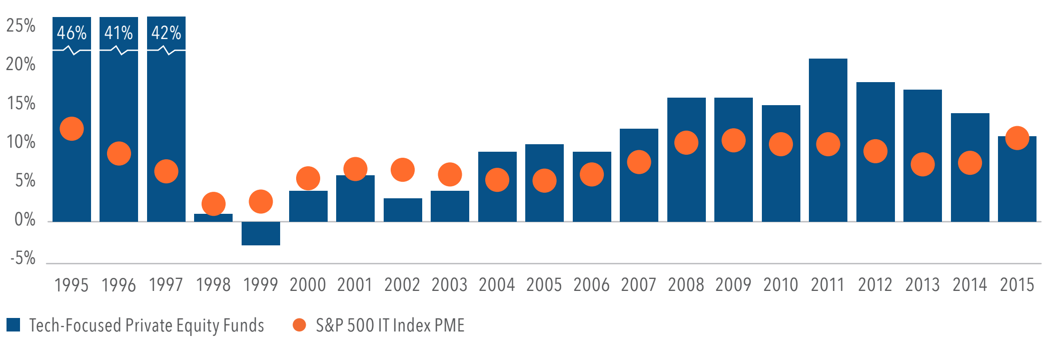


Source: Hamilton Lane Data (July 2018)

Our best guess here is that technology companies being purchased are showing strong cash flow characteristics, and one can lever those more easily than non-tech companies can.

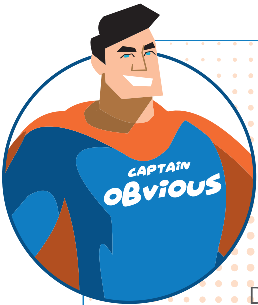
How has tech performed in portfolios?

Chart 54: Tech-Focused Private Equity IRR vs. PME
By Vintage Year



Source: Hamilton Lane Data, Bloomberg (July 2018)

This is a boom and bust cycle. Tech PE experienced a long period of underperformance of the public markets from 1998 to 2003 and then a long period of outperformance from 2004 to 2014 (Chart 54).



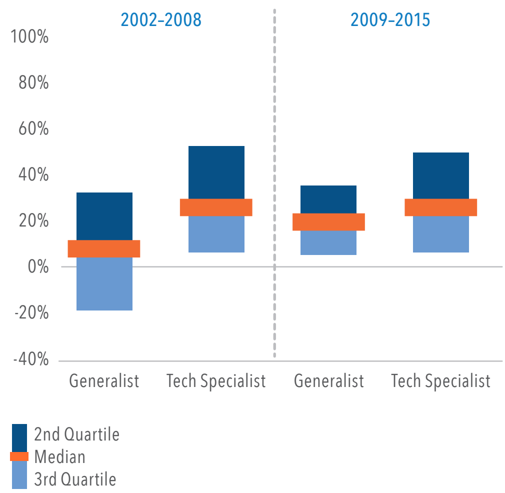
YET MORE BLINDINGLY OBVIOUS QUESTIONS

You know we love patterns – absolutely love them. (Except for horizontal stripes on a shirt – it really does nothing to make one look slimmer.) Look at the pattern on Chart 54. Public markets outperformed tech PE in 1998 even as the public markets prepared to turn down two years later. Is 2016 analogous to 1998? Will we enter a long period of tech underperformance? Does the fact that much of tech investing in the earlier era was concentrated in the VC world make a difference? Does the fact that most later-stage unicorn investing is unavailable to PE investors make this cycle different? Is the fact that technology is not as large a part of PE portfolios as it was in the last tech boom something that will change over the next few years? Would that be a good or bad thing?

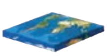
Let's look at whether the kind of GP making the tech investments makes any difference.

Tech specialists have shown consistently better results in both the pre- and post-GFC environments (Chart 55). That pattern is similar if you examine loss ratios where, again, specialists have outperformed generalists. Admittedly, the gap has narrowed since the GFC. Interesting…. Is that because generalists have developed better capabilities or because a rising market makes it harder to distinguish individual expertise from overall market performance? We suspect the latter, but we're not sure. What we are fairly comfortable proclaiming is that, with history as our guide, piling into tech is probably not going to produce the ideal outcome for private markets portfolios.

Chart 55: Gross Tech Deal IRRs
10 Largest Generalists vs. 10 Largest Tech Specialists



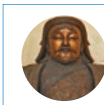
Source: Hamilton Lane Data (July 2018)



YOU ONLY RESTRUCTURE BAD FUNDS
(AND, BY THE WAY, THIS PROVES YOU SHOULD STEER CLEAR OF THE SECONDARY MARKET)

This is one place where believing the earth is flat could lead you to miss some real changes in the private markets landscape.

Perceiving the secondary market as merely the place to buy and sell existing partnership interests means you are probably missing some things going on that stand to impact that market, your portfolio, your GPs and a host of other related topics. Let's start with why fund restructurings are both a growing part of the current market environment and likely to remain one for some time.



Genghis Khan
@TheTrueGenghis Khan

Media reports too much money in secondary markets – that discounts are gone and secondaries are dead. Watch us overwhelm the existing industry structure and blow apart the private equity model. FAKE NEWS!!!!

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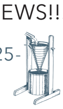
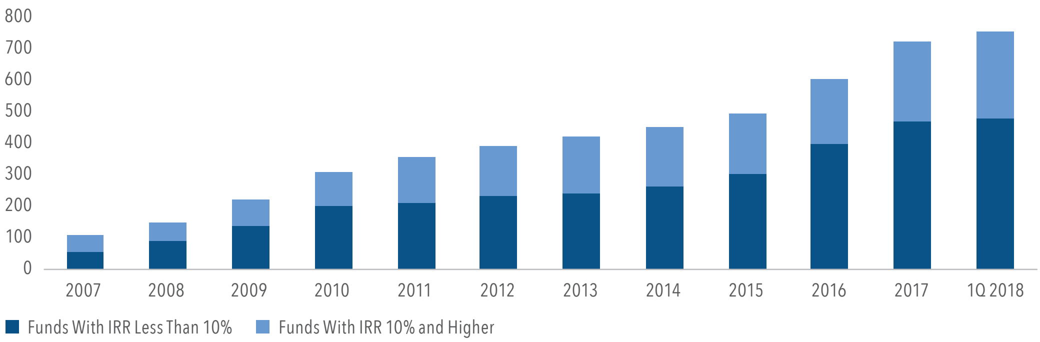


Chart 56: Fund Restructuring Opportunity Set
# of Funds Older than 10 Years, With NAV Greater than $20M



Source: Hamilton Lane Data (August 2018)

Wow. Over seven hundred funds with NAV older than 10 years (Chart 56). As an LP, what do you do with those funds as they continue to accumulate in your portfolio? (Aside from the occasional good cry behind closed doors.) You know there's value left in those funds, but you also need to consider the opportunity cost and the time and effort required to monitor those portfolios. As a GP, you have the same dilemma.

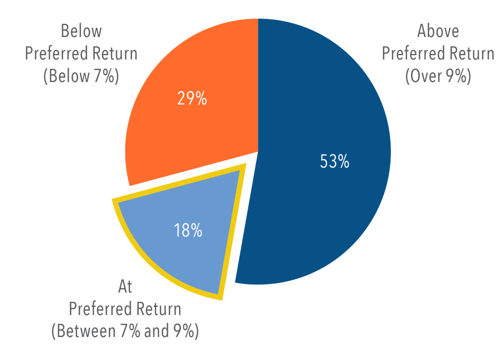
What is also worth noting is that these are not the original zombie funds that populated the restructuring landscape. Those funds had lousy performance, lousy GPs and were deserving of a place in the 8th or 9th of Dante's circles of hell. (Too harsh?) That simply is not the case with the current batch of older funds. One-third are doing reasonably well.

Still, let's be realistic here. No restructuring occurs without the GP wanting one to occur. What might be the motivation? Maybe a picture will help; they say it's worth a thousand words.

Let's take a look at a small set of vintages and some economics.

Half of those funds are at or below the hurdle rate, which is the rate at which GPs get their carried interest (Chart 57). Of course, it's more commonly thought of in the GP universe as the line between heaven and hell. We've done some calculations of the mark-up required in a portfolio near the hurdle rate to pay the GP catch-up. If half the portfolio remains, a 1.3x mark-up is needed; with 5% left, a 3.3x mark-up is required. Hmmm, we're guessing most of those funds don't have the right combination of remaining portfolio NAV and future mark-ups.

Chart 57: 2005–2008 Buyout Fund NAV Remaining By IRR



Source: Hamilton Lane Data (August 2018)

This presents an interesting dilemma. If you're the GP and you are well below the hurdle, then you likely want to restructure as the only realistic way of achieving carry. What about the 18% of funds that are at the hurdle? Now the choices get more interesting. If you're the GP, you might be receiving most of the subsequent cash flows as part of your catch-up. You'd have to calculate how much, when and for how long to determine whether you want a restructure or whether to just wait and get what you can on the catch-up. But, as an LP, you might prefer a restructure to change that near-term cash flow distribution to be more in your favor. This gets complicated…there's real math involved!

If we made this into a metaphor for making a great martini, then the GP motivation around hurdles and carry would be the gin portion. Where will we find the vermouth and olives to complete the cocktail? There are a few places to find the ingredients:

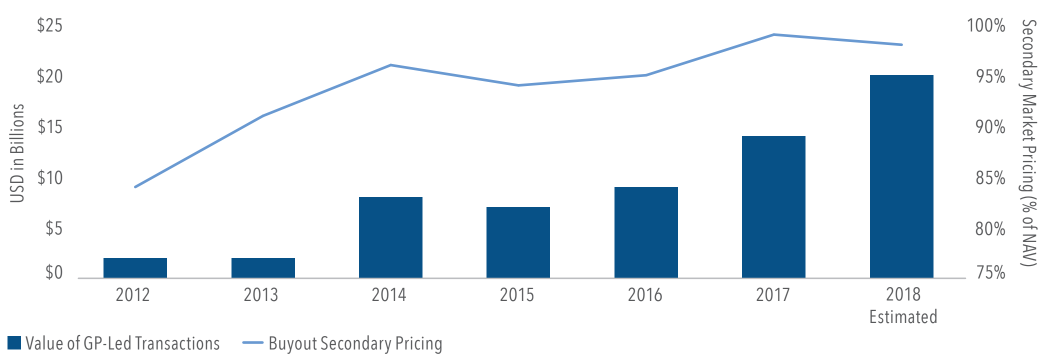
» The general partner, with an obvious economic stake, is a big component. GPs have other motivations as well. A restructuring can help with future fundraising efforts – new LPs, creating liquidity for existing LPs, etc. – and also creates an opportunity for additional capital to be put to work in portfolio companies that might need it.

» Intermediaries are a big part of the mix. Restructurings are complicated and require some negotiating and legal expertise. And, while we'd guess few intermediaries would admit to money being a motivating factor, fees in the restructuring market can be incredibly lucrative.

» The LPs themselves are a crucial ingredient, though we don't drink enough martinis to know if they're more like the vermouth or the olives. Maybe they're the glass that holds it all together. Limited partners are motivated by many reasons. Fatigue may be one of the biggest factors; there's just a whole lot of old NAV that drags on performance, time and attention. We're exhausted just thinking about it. Portfolio rebalancing is another motivator as is reducing exposure to non-core GPs. Plus, it's what LPs are used to doing in their public market portfolios! Finally, odd as it may sound, the more accepted fund restructuring becomes, the easier it is for LPs to participate in one as part of their portfolios.

As those ingredients continue to get combined (shaken, not stirred), the result is not terribly surprising.

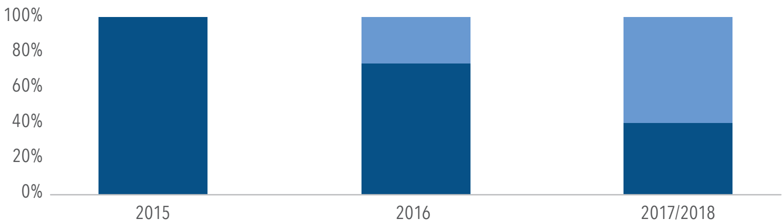
Chart 58: GP-Led Restructuring Volume & Secondary Market Pricing



Source: Greenhill Secondary Market Update & Outlook (January 2018)

Chart 58 illustrates quite a large jump in the number of restructurings. This is still a market figuring out what works and what doesn't, but, for a young market, more than $30 billion in transactions in 2 years is impressive. Cynics will be quick to point out the line that shows how secondary pricing is nearing par for existing LP interests. "See, the only reason restructurings are happening is because pricing is too high for normal secondary transactions. This is the sign of a market blow off and top." Perhaps. While we tend to favor the cynical argument under normal circumstances, we're in the opposite camp here. We believe this is a more secular trend.

Chart 59: Performance Relative to Preferred Return of Funds Being Restructured
By NAV



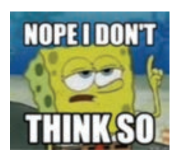
Source: Hamilton Lane Data (May 2018)

What is striking about the data in Chart 59 is that the bulk of restructurings over the last 18 months have not been led by a desire for economic realignment. Instead, the real drivers thus far have been:

1. providing liquidity to existing investors,
2. using that restructuring to help address current fundraising by stapling the transactions together,
3. giving the GP more time and capital to increase the value of portfolio companies, and
4. allowing the GP a chance to eliminate LPs that were unlikely to be part of future fundraises.

The secondary market is undergoing a fundamental shift. Yes, the purchase and sale of GP interests will remain a core and important part of that market. Yes, restructurings are easier to get done when markets are strong and there is a lot of capital. However, what's transpiring in the secondary market is a shift into one where liquidity can more easily be provided in different forms and structures. A market where the line between what classically is called a "secondary" and what commonly is known as a "co-investment" is becoming blurred. A market where participants and motivations are becoming more varied. A market that has traditionally thrived in market downturns, but has evolved to do well in all market environments. We anticipate more changes developing in the secondary market than in any other market segment and suspect we will have more to say on the matter in subsequent overviews.

THIS IS EASY: ROBOTS ARE GOING TO REPLACE US



The robo-investing invasion of the public markets has already begun. It's only a matter of time before it comes to the private markets.

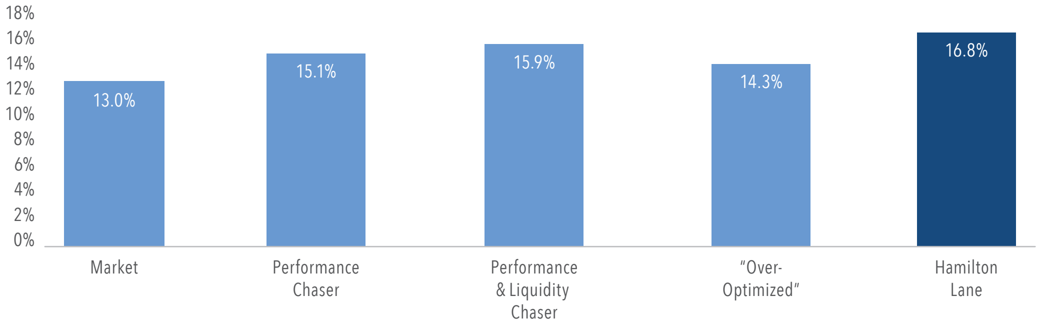
Admittedly, we had some fun with this one and tried out a few different fund selection algorithms.

Chart 60: Fund Selection Algorithms

"Investor"	Selection Criteria
Market	All funds available
Performance Chaser	One of previous two funds must be top quartile
Performance & Liquidity Chaser	One of previous two funds must be top quartile + previous fund must have DPI > 0.3x at time of next fundraise
"Over-Optimized"	One of previous two funds must be top quartile + previous fund must have DPI > 0.3x at time of next fundraise + buyout funds must have operating partner network
Hamilton Lane	Funds we've invested in

So, how did the robots do?

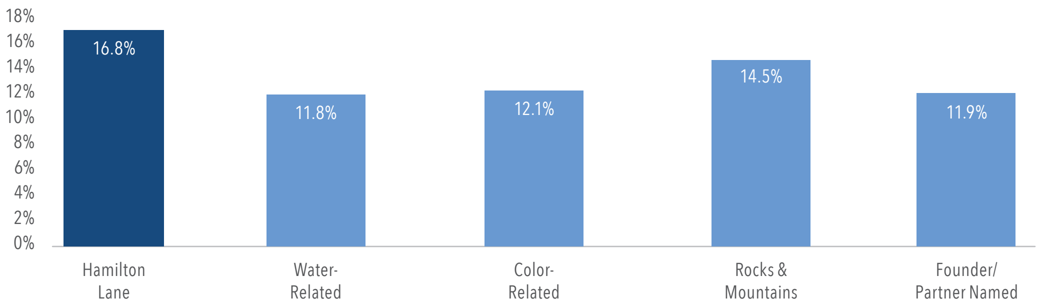
Chart 61: Investor IRRs
Investing $100M/Year Since Vintage Year 2000



Note: All portfolios are net of underlying GP fees and gross of any advisory fees
Source: Hamilton Lane Data (July 2018)

Well, we did better. We also did better on the loss ratios, so our own outperformance was with less risk (Chart 61). We got even more creative (or was it punchy…) and tested some algorithms that were akin to picking winners in sports games based on team colors (Chart 62).

Chart 62: Investor IRRs
Investing $100M/Year Since Vintage Year 2000



Note: All portfolios are net of underlying GP fees and gross of any advisory fees
Source: Hamilton Lane Data (July 2018)

Rocks & Mountains rule!

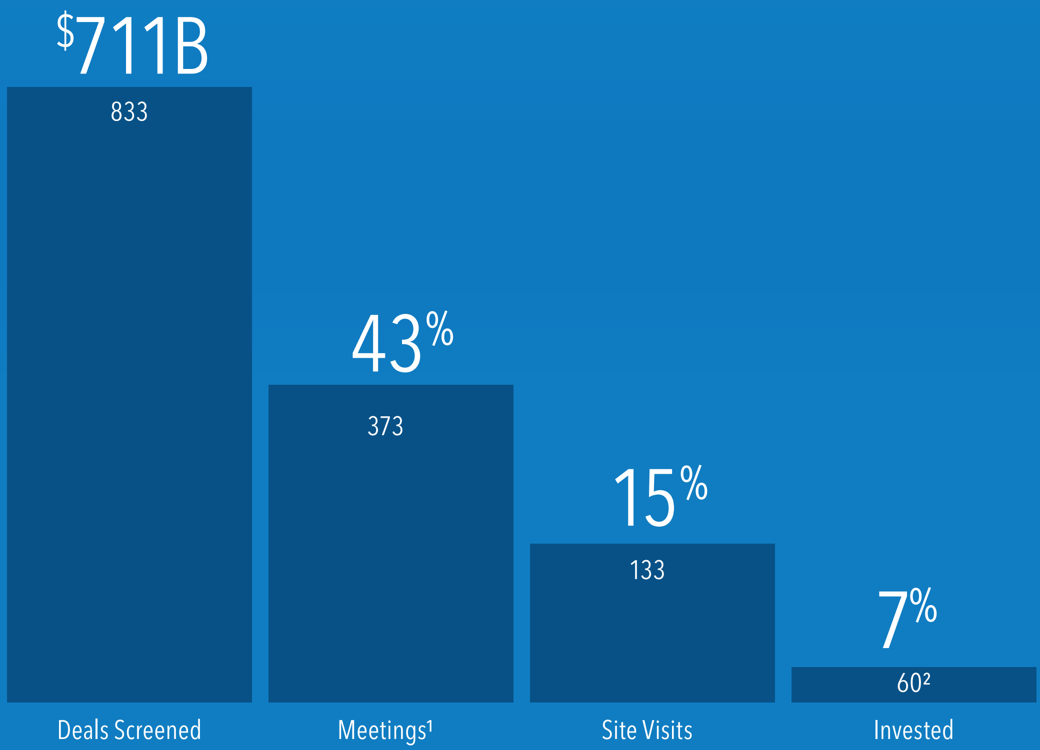
Let's add some important context here. Yes, we outperformed, but we're also fortunate enough to have a large group of people with a great deal of experience conducting a lot of diligence and research on our behalf. If you don't have those resources, perhaps you are better off identifying an algorithm with some combination of return and risk mitigation and use that instead. We doubt the world is at that point today, but the trade-off becomes more of an issue as the algorithms get refined. Part of our data quest will lead us into that world. It is, again, why we are so often dumbfounded at the industry's lack of interest in data and analytics.

It's hard to argue that robots will replace humans completely in picking funds or transactions. What is easy to say is that we will continue to push developments in that area and see where that leads. We are not alone in doing that, and every participant in the private markets needs to understand what that could mean for their portfolios and their place in the future private markets landscape.

HAMILTON LANE BUILDS PORTFOLIOS DESIGNED TO OUTPERFORM

CONCENTRATED

In 2017, Hamilton Lane screened $711B in primary deal flow, yet invested in only 7%



The 2017 capital allocated includes all primary commitments for which Hamilton Lane retains a level of discretion and all advisory client commitments for which Hamilton Lane performed due diligence. This amount excludes secondary and co-investment commitments. (December 31, 2017)

[1] Based on initial meeting date

[2] Represents primary fund investment opportunities that received discretionary commitments from Hamilton Lane

DIVERSIFIED

Investments Across Multiple Sectors

Credit Growth Equity Real Assets SMID

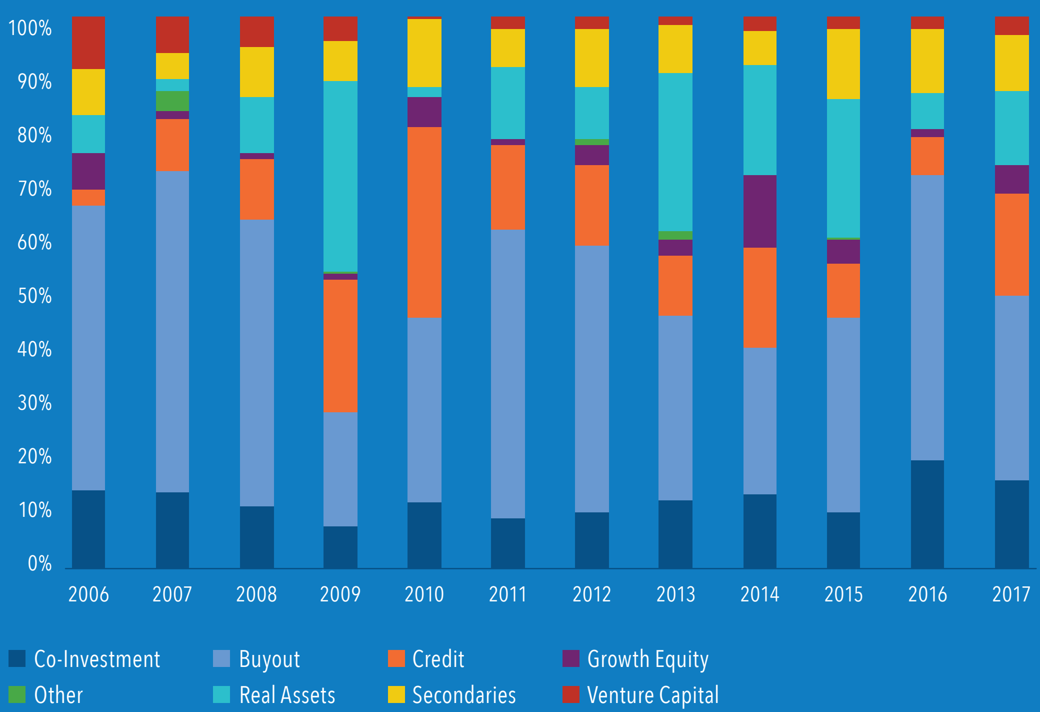
SELECTIVE DEPLOYMENT

Deal Flow by Strategy	Primaries	Secondaries	Co-Investments
# of Opportunities	833[1] Funds	356[1] Transactions	434[1] Companies
Total Dollars	$711B[1]	$62B[1]	$19B[1]
Total Invested	$27.8B[2]	$710M[2]	$1.2B[2]
Investment Rate	4%[3]	1%[3]	6%[3]

¹ Total opportunities reviewed in 2017
² Figures are an approximate amount of total capital invested
³ Invested as a % of total opportunities reviewed

TACTICAL ALLOCATIONS

Hamilton Lane Discretionary Commitments by Type and Vintage



Source: Hamilton Lane Fund Investment Database (June 30, 2018)

WHERE ARE WE NOW?

IT BLOWS US AWAY THAT THE PART OF OUR MARKET OVERVIEW

that attracts the most attention is our annual recession probability prediction. Admittedly, the attention is usually not favorable, bordering on the incredulous.

Given that, we'll take a moment here to brag that we were right the past several years to say there would be no recession, even when consensus, particularly three years ago, was that it was a foregone conclusion.

"OK, so what's your view today of the probability of a recession through 2019?"

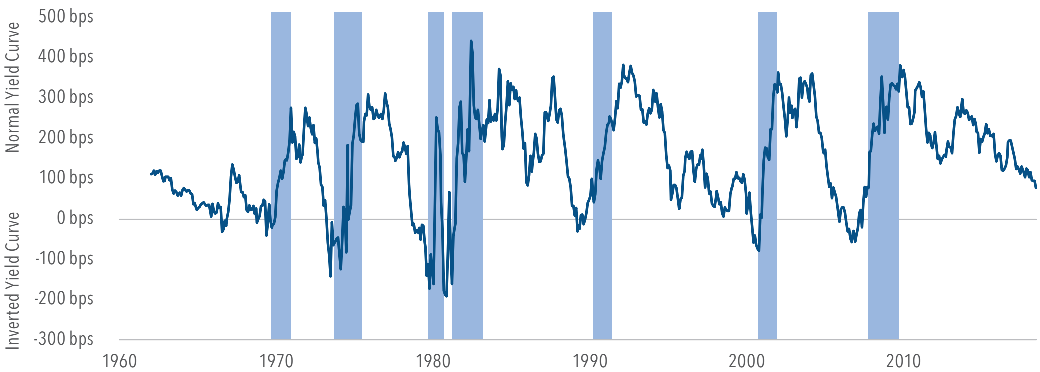
2018 Recession Probability

Source: Hamilton Lane

We're glad you asked, although you might not welcome the answer. We have to admit that we're feeling a little closer to consensus this year. (A position that, generally speaking, does make us a wee bit uncomfortable.) A review of economic forecasts reveals some general agreement that a recession in the U.S. and most of the world is likely to occur no earlier than mid to late 2019.

The yield curve continues to be our source of primary guidance (Chart 63).

Chart 63: 10-Year Treasuries and 3-Month T-Bills Spread



Source: Bloomberg (September 2018)

Not typically viewed as the sexiest of indicators, the yield curve really is becoming the topic du jour. (That means the topic of the day for those who don't speak French.)

Chart 64: Google Trends – Yield Curve Interest Over Time

Note: Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term.
Source: Google (August 2018)

When we first discussed it, we were summarily dismissed for bringing up an indicator that was considered irrelevant in the age of central bank actions. In other words, no one cared. Fast forward to today, and the yield curve is used and abused as the reason recession is imminent. Let us say a few things about our beloved indicator:

- The yield curve does not become irrelevant in light of central bank liquidity actions. Until the indicator fails, it is relevant.

» Much of the debate of imminent inversion focuses on the spread between the two- and 10-year notes. However, the classic yield curve indicator employed by the Fed is the one in Chart 63, between the three-month and the 10-year. We won't go into long explanations of why that is the case.

» In the "normal" yield curve inversion indicator, the inversion should remain in place for 30 days.

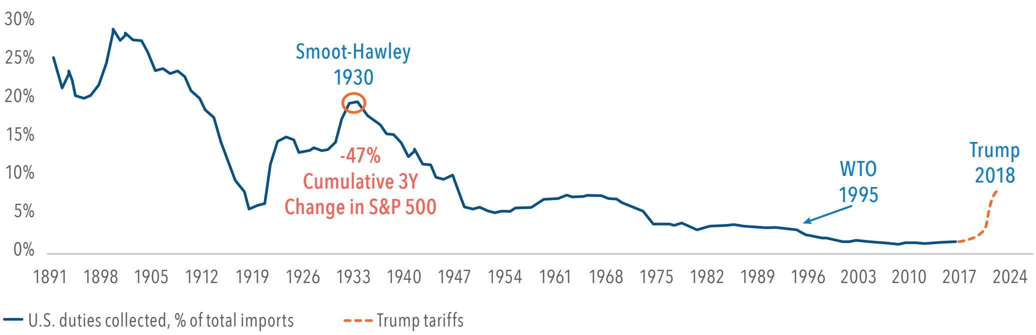
» In the past, recession typically didn't begin for approximately one year.

We remain confident that the chance of a recession through 2019 remains zero. It's worth noting that the Fed's own recession probability indicator, plotted off the shape of the yield curve, was at 13.6% for June 2019. That's the highest it has been since the onset of the Great Recession, but still well below any level that would be considered worrisome.

Alas, there might be something that trumps the yield curve as a canary in the recessionary coal mine.

Sigh, trade wars are indeed easy.

Chart 65: U.S. Protectionism



Note: Assumes stated and potential tariffs implemented
Source: BofA Merrill Lynch Global Investment Strategy, US International Trade Commission 2017 (July 2018)

The last time the U.S. unilaterally imposed tariffs (the increase in the 1960s was due to GATT, a multilateral treaty), the results were not so great either for the U.S. or the rest of the world. Why would it be different this time? Trump, Ross and Navarro apparently hold the keys to that secret, but it's hard to find many other people who share the same belief. Tariffs could very well be one thing that triggers an economic downturn. For example, tariffs might increase inflation by raising the cost of many items, such as TVs or cars, which have had a historically disinflationary impact in the U.S. as foreign trade helped to lower prices. But, tariffs are only one factor to consider. What is more significant is the possibility of unilateral action by one branch of government implementing a bad policy or making an egregious geopolitical mistake, thereby triggering an economic downturn.

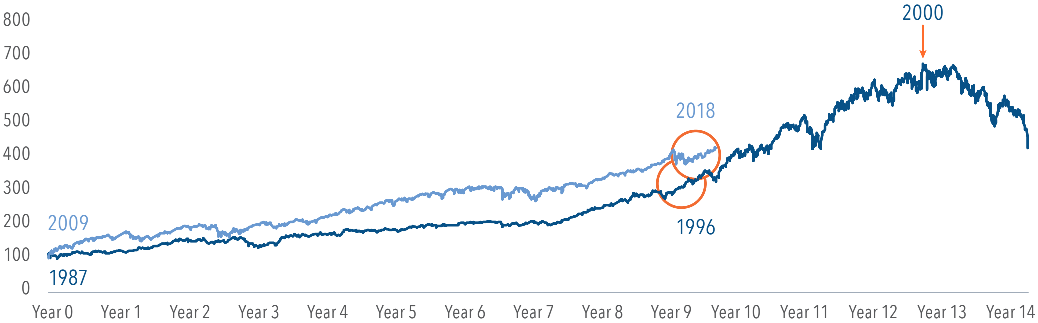
Reluctantly, we feel the need to revise our recession prediction in light of that possibility.

Trump-Adjusted Recession Risk

Source: Hamilton Lane

OK, so that's the recession risk, but where are we now? Our best guess is that we are somewhat analogous to where we were in 1996-1997 in U.S. markets.

Chart 66: S&P 500 Index
1987–2018, Indexed to 100



Source: Bloomberg (September 2018)

With 2018 as the tenth year off the most recent market low, Chart 66 shows how the U.S. public markets might be in a similar place to 1997, which was the tenth year off the 1987 market low. This general sense of where we think the markets are today is similar to the analogy we made about where the tech sector is, or where we view the various private market indicators today. If that is an apt analogy, then we're looking at another two to three years of higher market activity and no recessionary environment.

It might be time to party on the public side, but the same might not be said for the private side. Take a look at how things were at the market peak (Chart 67).

Chart 67: Pooled IRR by Vintage Year
As of Q1 2001

1996	1997	1998	1999	2000
VC/Growth 53.4%	VC/Growth 72.0%	VC/Growth 33.2%	VC/Growth 20.8%	Credit -6.7%
Buyout 14.2%	Real Assets 13.9%	Real Assets 13.4%	Credit 12.9%	Real Assets -6.9%
Credit 8.9%	Credit 10.5%	Credit 8.0%	Real Assets 2.7%	Buyout -14.2%
Real Assets 5.3%	Buyout 7.2%	Buyout 3.2%	Buyout -7.7%	VC/Growth -20.6%

Source: Hamilton Lane Data (August 2018)

Venture was rocking, but buyout was struggling to perform relative to both other private markets strategies and the public markets.

"WE'RE LOOKING AT ANOTHER TWO TO THREE YEARS OF HIGHER MARKET ACTIVITY AND NO RECESSIONARY ENVIRONMENT"

Alas, this is not the place for blindingly obvious questions, but rather for sobering ones:

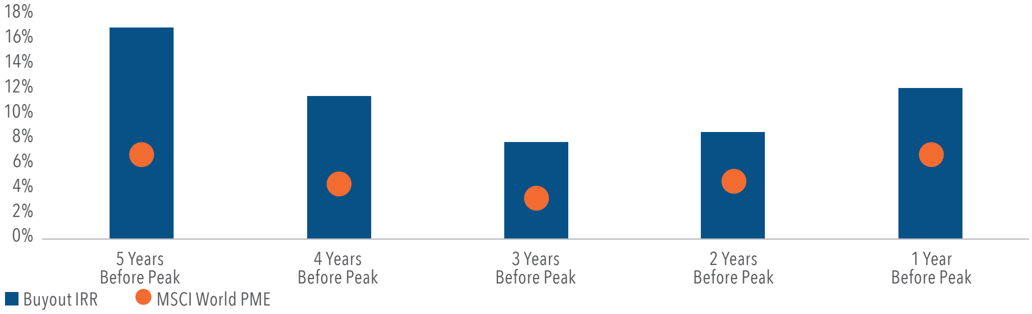
» What will be the perception of the private markets if there are three more years of strong public markets and the kind of buyout performance we saw in the late 1990s?

» If venture and growth are the go-to places to achieve outperformance as they proved to be in the late 1990s, how can you best time your exits? Those areas were decimated after 2000. Will history rhyme again?

» How should portfolios be positioned in that environment?

Where we are on a time line matters a great deal for us as private markets investors, since we don't have the luxury of buying and selling when we want.

Chart 68: IRR by Years from Market Peak



Source: Hamilton Lane Data (June 2018)

While outperformance occurs in all time frames prior to a peak, you need to be most careful two to three years prior to that peak (Chart 68). If our comparison to the 1996/1997 market is remotely correct, that is exactly where we find ourselves today.

CHAPTER 4

SENTIMENT INDICATORS

PRIVATE MARKET INVESTORS PRIDE THEMSELVES ON BEING IMMUNE TO FEAR

and greed because of the long-term nature of the investments. Nothing could be further from the truth. After all, no one is immune from those emotions and the private markets are no exception. We have tried to capture some of those indicators.

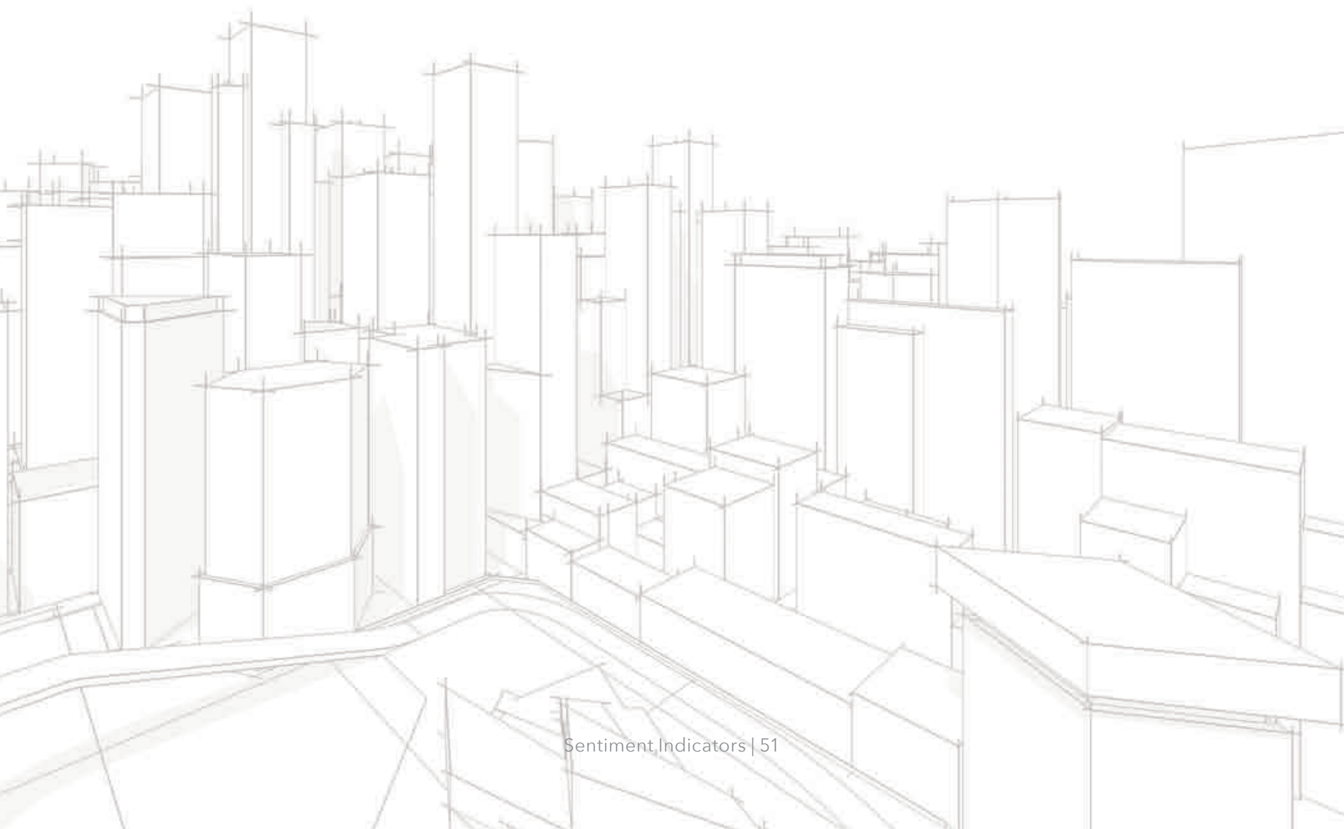
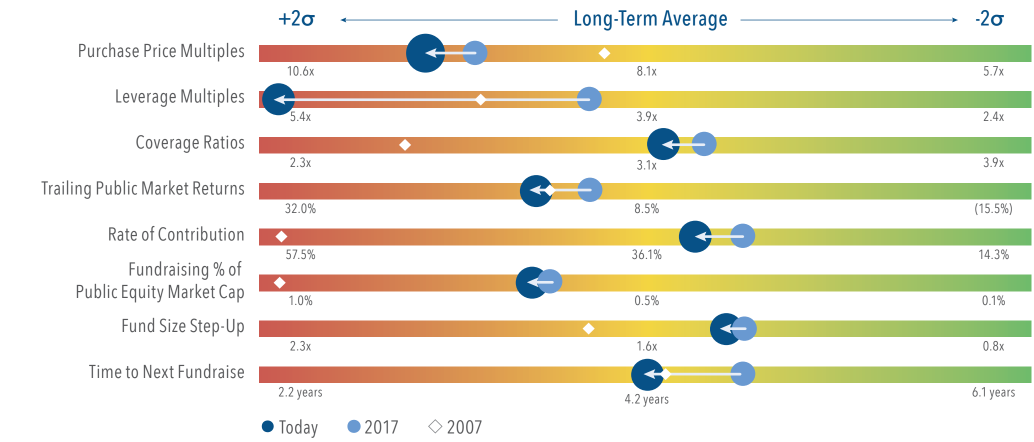
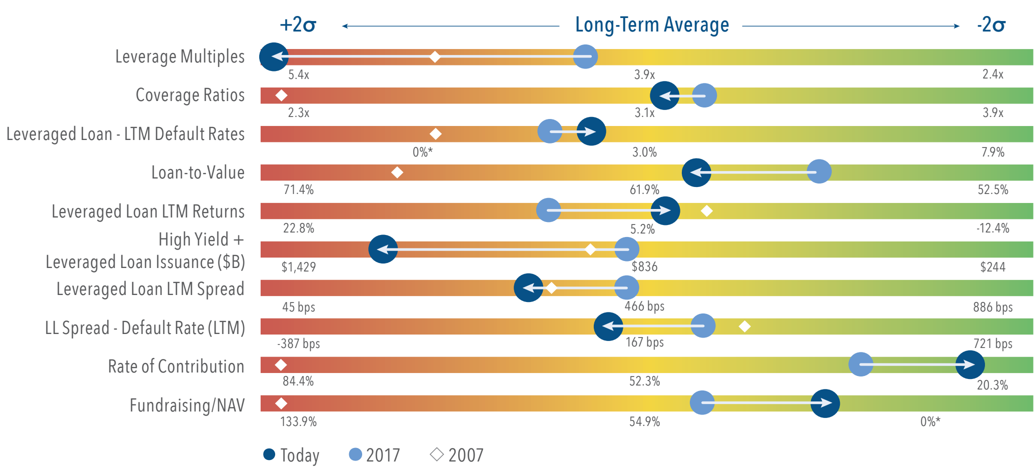


Chart 69: Hamilton Lane Sentiment Indicators: Buyout



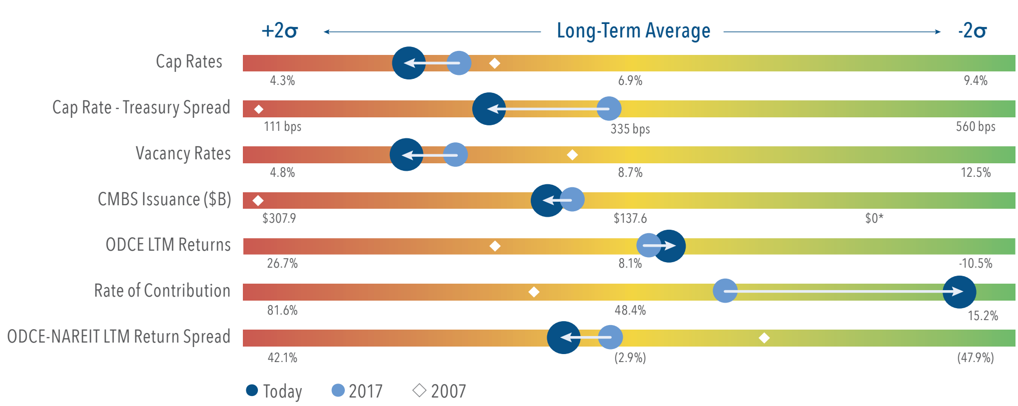
Source: Hamilton Lane Data, Cobalt, Bloomberg, Bison, S&P (July 2018)

Chart 70: Hamilton Lane Sentiment Indicators: Credit



*Asterisk indicates zero used as floor for indicators that cannot be negative
Source: Hamilton Lane Data, Cobalt, S&P (July 2018)

Chart 71: Hamilton Lane Sentiment Indicators: Real Estate

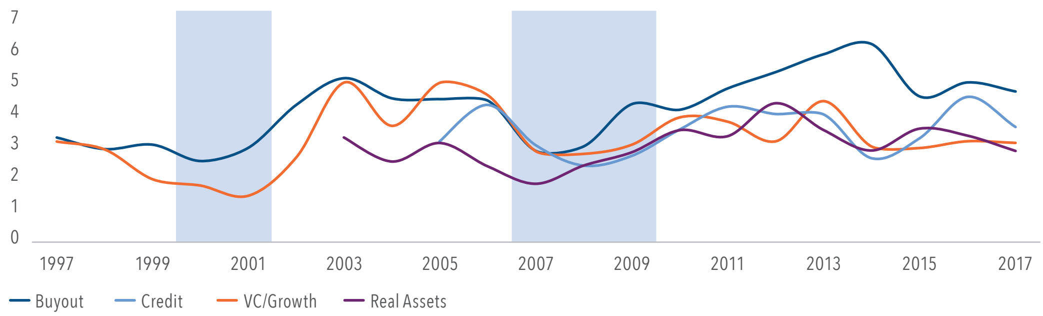


*Asterisk indicates zero used as floor for indicators that cannot be negative
Source: Hamilton Lane Data, Bloomberg, NCREIF (July 2018)

Chart 69 shows the buyout market is, in general, slightly negative, but moving in a more negative direction. Not one indicator trended positive over the last year. Chart 70 shows the credit market is neutral and trended neutral over the last year. Chart 71 shows the real estate market is slightly negative and trended slightly more negative in the last year.

What about our own favorite indicators? Chart 72 – Time Between Funds – measures how quickly money is being spent by GPs. The faster the spend, the closer we are to a market peak.

Chart 72: Time Between Funds by Strategy
Median Time to Next Fund in Years

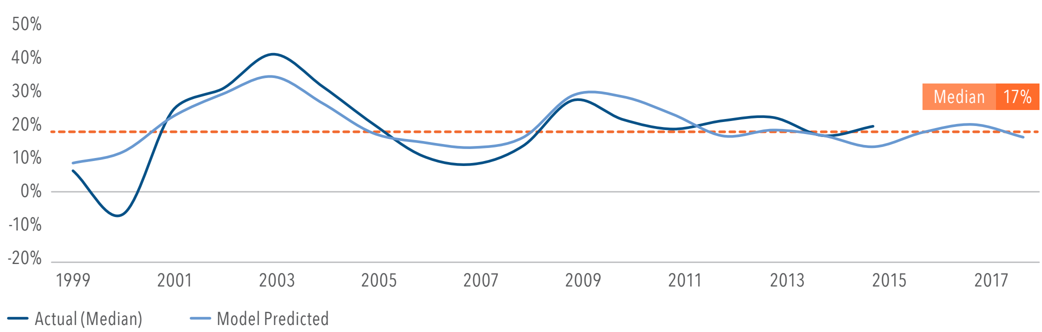


Source: Hamilton Lane Data (July 2018)

While we are trending more negative (as illustrated by faster fundraising), we remain well below any levels that indicate danger.

Finally, our own proprietary indicator of deal-level prediction:

Chart 73: Deal Vintage Year IRR vs. Predictive Model
Provides Indication of Current Cycle's Returns Relative to Average Deal Returns



Source: Hamilton Lane Data, S&P, Bloomberg (July 2018)

Decidedly neutral. Now, neutral is still very good at an average return of 17%, so we need to keep that in mind. More important, however, is the directional indicator, which tells us that the markets today are at neither peak nor trough levels.

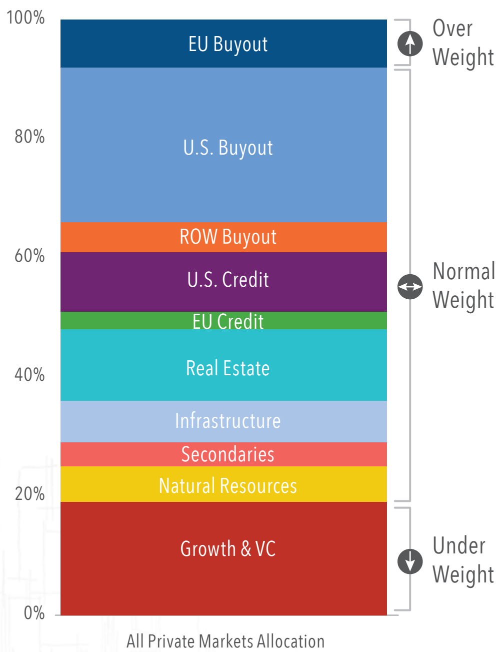
WHERE TO INVEST

YOU KNOW US – OR, IF YOU DIDN'T BEFORE, YOU AT LEAST KNOW US BETTER THAN WHEN YOU FIRST OPENED THIS BOOK.

We have no problem expressing opinions, no problem sharing our views and ideas. (We like that about us; we hope you do too.) Yet, the next chart is one we share with some reluctance. We offer it only as a Back by Popular Demand feature. Both internally and externally, the familiar refrain carries on: Tell us where to invest, Hamilton Lane, and do so preferably in chart form. We hate to disappoint, so we're sharing Chart 74. However, we fear its interpretation as a chart of absolutes – a color by numbers chart of investment choices. "Ah, Hamilton Lane says don't invest in X. Good to know."

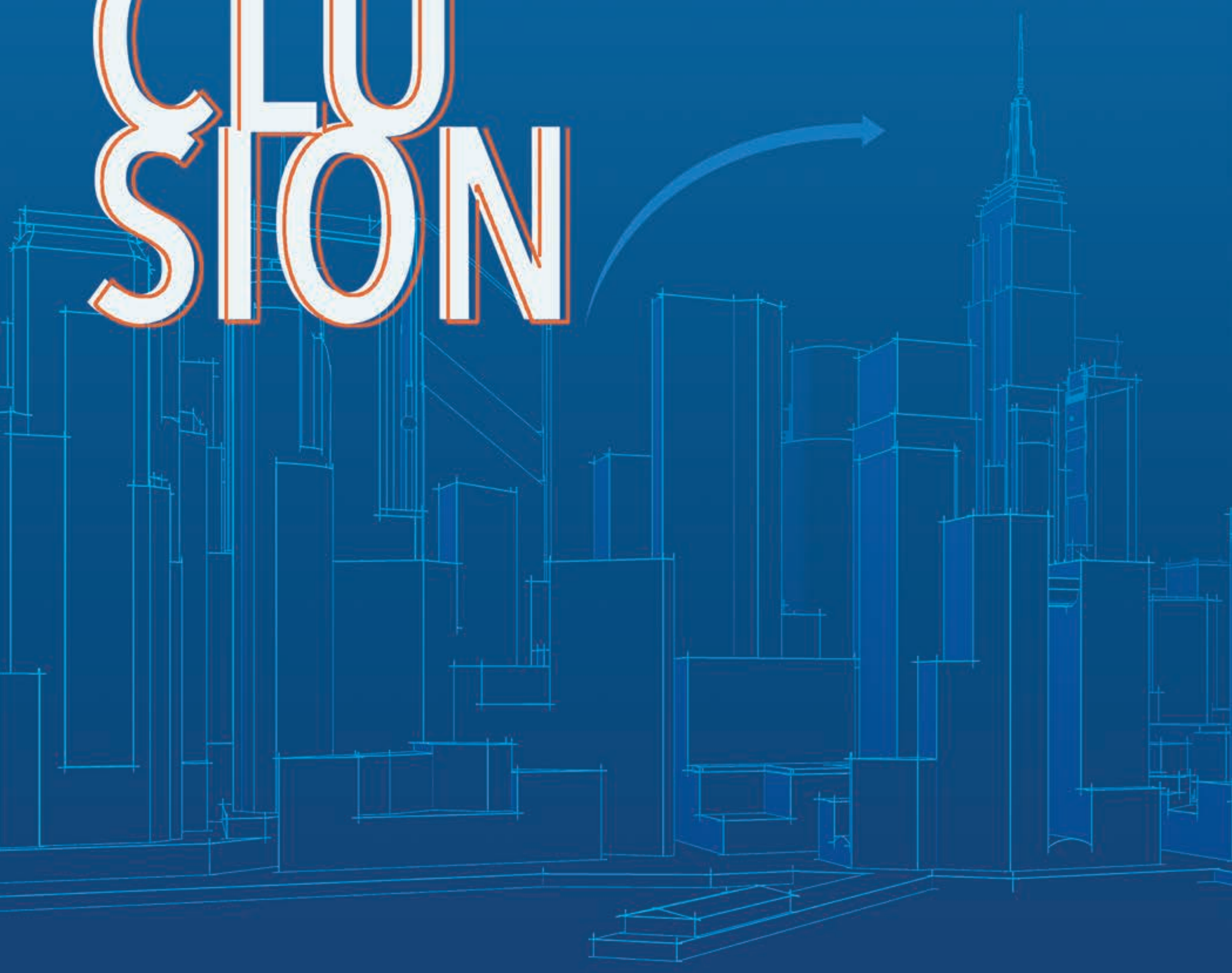
That truly, really, seriously is not what Chart 74 is intended to convey. Rather, it illustrates the *relative* risk and return profiles of each of the major sub-categories in the private markets. That word, "relative," is a big one in this context, and could be read as us saying, "it depends." It depends a great deal on the particular managers chosen within a given segment. It depends a great deal on an investor's particular portfolio construction and particular portfolio objectives. It depends on a lot of things. Use this as a guide for where you might look to put risk on or take risk off the table. Don't use it as a one of those Procrustean Beds on which you will rest – and stretch or chop – your portfolio. (Sidebar: If you ever happen to see one of those beds, call 911 immediately.)

Chart 74: Where to Invest
Sized by Market Total Exposure



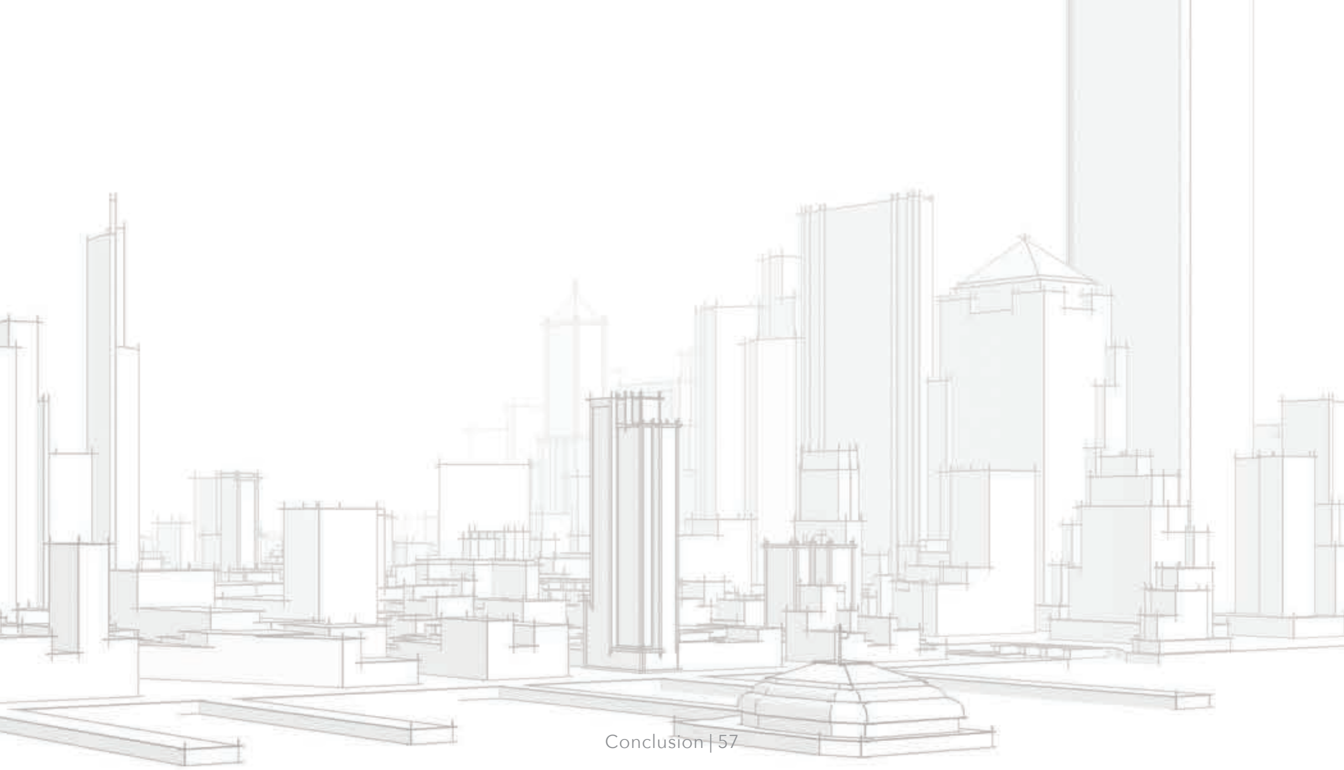
Source: Hamilton Lane Data via Cobalt (August 2018)

CONCLUSION



SO, WHAT DO YOU DO IN TODAY'S MARKET?

We won't leave you completely adrift. Instead, we have outlined Eight Pillars of Wisdom for private markets investing in the year ahead. (We figured we'd go Lawrence of Arabia one better.)



EIGHT PILLARS OF PRIVATE MARKETS WISDOM

DON'T MARKET-TIME

It's been years since we first began touting that little nugget of wisdom and it's as true as ever today. (And will be again tomorrow.) We all want to time the markets. We all believe we can do it; we all believe it works because anecdotal evidence and confirmation bias have us convinced it's possible. It's not. Don't do it. Just say:

SMOOTH PACING

"Smooth pacing" has such a soothing sound, a summer siesta by the surf. Wake up, people, this isn't nap time; it's a call to action!

Take some risk off the table and deploy an investment pacing approach that keeps steady with that of prior years. It is tempting to increase allocation dramatically as assets rise and capital is making its way back from previous private market investments. Again, don't do it. If you increase at all, increase only a little bit. To everything there is a season, and the season to increase investment pacing is when everyone else is decreasing. That season is not today.

LESS IS MORE

For our third pillar, we'll borrow this phrase made famous in the architectural world. (Fun fact: The expression "less is more" actually traces its origins to a work by Victorian poet, Robert Browning, despite the aphorism being more commonly attributed to renowned architects Mies Van der Rohe or Art Vandelay.)

Over the years, we have taken over the administration of many existing portfolios and one of the "tells" in under-performing portfolios tends to be extensive over-diversification. Obviously, what equates to the magic number of funds, co-investments and secondaries in a portfolio depends on the goals for that particular portfolio. However, we're of the (dare we say "informed"?) opinion that, whatever you are planning to do in 2019, you would probably be better off doing 10% less than 10% more in terms of the number of commitments or transactions. (That is, of course, unless you're already Buffet-like and only doing one or two things. If that's the case, bravo; you may now go back to surfing the net.)

LOOK FOR QUALITY MANAGERS WITH PRIOR CYCLE EXPERIENCE

Be careful in manager selection. Stick with managers who have prior cycle experience. No, Hamilton Lane did not just advise you to steer clear of first-time funds. But we don't think it's the best idea to focus a portfolio on managers who haven't invested through a cycle before either.

SECTOR SPECIALISTS: CHOOSE WISELY AND SPARINGLY

(This one really runs contrary to a current trend in private markets….) Scale back the dizzying amount of sector-focused funds you really want to try. It is tempting to pick sectors that are recession-resistant or have wonderful macro trends. And, you may very well pick them correctly, but you are just as likely to pick them incorrectly. In a downturn, having loads of commitments in a single sector that is disproportionately impacted is just asking for trouble.

INVEST IN YOUR OWN INFRASTRUCTURE

You may hear a familiar drumbeat as you read this next one: Get your house in order. Get better about your own portfolio. Spend the money to get some reliable data and the analytical tools needed to mine it; if not that, at least hire some staff to spend time on portfolio strategy and information. Trust us, it is time better spent than attending another annual meeting. (Except for ours, of course. #HamiltonLaneAMRox)

KNOW THYSELF

Nope, we're not offering self-help advice. (Although if you're in the market, we're partial to Dr. Phil.) The world has now lived through ten years of a bull market, and everyone seems pretty smart in that kind of environment. In truth, it's precisely that kind of market that can convince even questionably deserving people and firms of their own brilliance.

Think for a moment. Do you know where the risks are in your portfolios? Geography? Industry? Vintage year? If you're co-investing directly, how do those investments fit within your broader portfolio construction and impact the overall risks? (If you aren't using analytics, then this exercise becomes pretty challenging.) Organizations get sloppy about their real strengths and weaknesses in up markets. They get a little sloppy about their objectives. As investors, it's imperative – and we'd encourage this in any market environment – to spend some time determining what you want from the private markets and what it is you have currently. Figure out how you're best suited to meet your purported objectives and what you need to adjust to be assured of meeting those goals. The time to do that is now. When markets turn, panic makes for a really bad motivational tool to begin making some of those assessments.

BEGIN TO THINK ABOUT THE SHAPE OF THE NEXT DOWNTURN

This is a big one but, full disclosure: We still believe it's too early to determine what that will be with any certainty. Will it be more of a plain vanilla, interest rate hike-induced downturn? (That seems the most likely scenario as of today.) Will it be inflation-led? Caused by imbalances that we can't even perceive from today's vantage point? Will it be led by the U.S., Europe, China or the emerging markets? Each potential outcome creates different portfolio construction considerations. Now isn't the time to make any dramatic changes to portfolios or investing activities. It is time to begin re-orienting to a market dynamic that inevitably is going to shift. Map it out. Think about how you are going to think about it. (Get that?!) Or, at least consciously decide that you aren't going to think about it.

Imagine that all market participants are watching that parabolic arc in the sky, and each of us needs to think about where that point of return might be – and where we want to and should be when that takes place. We are still moving up and might for longer than consensus anticipates, but, unlike in the past few years, now is the time to prepare for gravity's inevitable impact to take hold and for the downward side of the market rainbow to form.

Page 8
Indices used: Hamilton Lane All Private Equity ex. Credit and Real Assets with volatility desmoothed; S&P 500 Index; Russell 3000 Index; MSCI World Index; HFRI Composite Index; Hamilton Lane Private Credit with volatility desmoothed; Credit Suisse High Yield Index; Barclays Aggregate Bond Index; Hamilton Lane Private Real Estate with volatility desmoothed; Hamilton Lane Private Real Assets with volatility desmoothed; FTSE/NAREIT Equity REIT Index; S&P Global Infrastructure Index; MSCI World Energy Sector Index. Geometric mean returns in USD. Assumes risk free rate of 3.6%, representing the average yield of the ten-year treasury over the last twenty years.
Source: Hamilton Lane Data, Bloomberg (July 2018)

Pages 18, 22 and 25
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Index Definitions
Barclays U.S. Corporate Aggregate Index – Tracks the performance of U.S. fixed rate corporate debt rated as investment grade.
BofAML High-Yield Index – The BofAML High Yield Index tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market.
Credit Suisse High Yield Index – The Credit Suisse High Yield index tracks the performance of U.S. sub-investment grade bonds.
Credit Suisse Leveraged Loan Index – The CS Leveraged Loan Index represents tradable, senior-secured, U.S. dollar-denominated non-investment-grade loans.
FTSE/NAREIT Equity REIT Index – The FTSE/NAREIT All Equity REIT Index tracks the performance of U.S. equity REITs.
HFRI Composite Index – The HFRI Composite Index reflects hedge fund industry performance.
MSCI Emerging Markets Index – The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.
MSCI World Energy Sector Index – The MSCI world Energy Sector Index measures the performance of securities classified in the GICS Energy sector.
MSCI World ex U.S. Index – The MSCI World ex U.S. Index tracks large and mid-cap equity performance in developed market countries, excluding the U.S.
MSCI World Index – The MSCI World Index tracks large and mid-cap equity performance in developed market countries.
Russell 3000 Index – The Russell 3000 Index is composed of 3000 large U.S. companies, as determined by market capitalization.
Russell 3000 Net Total Return Index – The Russell 3000 Index is composed of 3000 large U.S. companies, as determined by market capitalization with net dividends reinvested.
S&P 500 Index – The S&P 500 Index tracks the 500 largest companies based on market cap of companies listed on NYSE or NASDAQ.
S&P 500 Information Technology – The S&P 500 Information Technology comprises those companies included in the S&P 500 that are classified as members of the GICS information technology sector.
VIX – The Volatility Index is an index created by the Chicago Board Options Exchange (CBOE) which shows the market's expectation of 30-day volatility.

Strategy Definitions
All Private Markets – Hamilton Lane's definition of "All Private Markets" includes all private commingled funds excluding fund-of-funds, and secondary fund-of-funds.
CI Funds – Any fund that either invests capital in deals alongside a single lead general partner or alongside multiple general partners.
Co/Direct Investment Funds – Any PE fund that primarily invests in deals alongside another financial sponsor that is leading the deal.
Corporate Finance/Buyout – Any PE fund that generally takes a control position by buying a company.
Credit – This strategy focuses on providing debt capital.
Distressed Debt – Includes any PE fund that primarily invests in the debt of distressed companies.
EU Buyout – Any buyout fund primarily investing in the European Union.
Fund-of-Funds (FoF) – A fund that manages a portfolio of investments in other private equity funds.
Growth Equity – Any PE fund that focuses on providing growth capital through an equity investment.
Infrastructure – An investment strategy that invests in physical systems involved in the distribution of people, goods, and resources.
Late Stage VC – A venture capital strategy that provides funding to developed startups.
Mega/Large Buyout – Any buyout fund larger than a certain fund size that depends on the vintage year.
Mezzanine – Includes any PE fund that primarily invests in the mezzanine debt of private companies.
Multi-Management CI – A fund that invests capital in deals alongside a lead general partner. Each deal may have a different lead general partner.
Multi-Stage VC – A venture capital strategy that provides funding to start-ups across many investment stages.
Natural Resources – An investment strategy that invests in companies involved in the extraction, refinement, or distribution of natural resources.
Origination – Includes any PE fund that focuses primarily on providing debt capital directly to private companies, often using the company's assets as collateral.
Private Equity – A broad term used to describe any fund that offers equity capital to private companies.
Real Assets – Real Assets includes any PE fund with a strategy of either Infrastructure or Natural Resources. Real Estate funds are not included.
Real Estate – Any closed-end fund that primarily invests in non-core real estate, excluding separate accounts and joint ventures.
Real Estate Fund-of-Funds – Any fund that primarily invests in other real estate private equity funds.
ROW – Any fund with a geographic focus outside of North America and Western Europe.
ROW Equity – Includes all buyout, growth, and venture capital-focused funds, with a geographic focus outside of North America and Western Europe.
Secondary FoF – A fund that purchases existing stakes in private equity funds on the secondary market.
Seed/Early VC – A venture capital strategy that provides funding to early-stage startups.
Single Manager CI – A fund that invests capital in deals alongside a single lead general partner.
SMID Buyout – Any buyout fund smaller than a certain fund size, dependent on vintage year.
U.S. Mega/Large – Any buyout fund larger than a certain fund size that depends on the vintage year that is primarily investing in the United States.
U.S. SMID – Any buyout fund smaller than a certain fund size, dependent on vintage year that is primarily investing in the United States.
VC/Growth – Includes all funds with a strategy of venture capital or growth equity.
Venture Capital – Venture capital includes any All Private Markets funds focused on any stages of venture capital investing, including seed, early-stage, mid-stage, and late-stage investments.
Venture Debt – A venture capital strategy that provides debt financing to companies, rather than equity.

Other
De-smoothing – A mathematical process to remove serial autocorrelation in the return stream of assets that experience infrequent appraisal pricing, such as private equity. De-smoothed returns may more accurately capture volatility than reported returns. The formula used here for de-smoothing is:

$r_D(t) = (r(t) – r(t-1) * \rho) / (1 - \rho)$ where: rD(t) = the de-smoothed return for period t
r(t) = the return for period t
ρ = the autocorrelation

PME (Public Market Equivalent) – Calculated by taking the fund cash flows and investing them in a relevant index. The fund cash flows are pooled such that capital calls are simulated as index share purchases and distributions as index share sales. Contributions are scaled by a factor such that the ending portfolio balance is equal to the private equity net asset value (equal ending exposures for both portfolios). This seeks to prevent shorting of the public market equivalent portfolio. Distributions are not scaled by this factor. The IRR is calculated based off of these adjusted cash flows.
Sharpe Ratio – The Sharpe Ratio is the average return earned in excess of the risk-free rate per unity of volatility or total risk.
Time-weighted return – Time weighted Return is a measure of compound rate of growth in a portfolio.
Total Exposure – Total Exposure is equal to NAV + Unfunded Commitment.
Volatility – Volatility is a statistical measure of dispersion of return, specifically standard deviation.

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