

# The Pragmatics of Private Markets Investing

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## **Abstract**

The author shares perspectives and lessons learned from four decades experience in private markets investing.

### Key Takeaways:

1. Private markets investing is business investing and you need to focus on the quality of the business approach in creating strategic advantage in the markets served.
2. Private markets investing is a hiring decision and you need to assess the quality of the organization under consideration for a strategy. Management should be expected to demonstrate an ability to not just remain healthy, but grow and improve through the tenure of your relationship with them.
3. Managing cost of fees is important, but not sufficient to ensure success. Alignment of interest across a range of outcomes, not just the upside, should be given paramount importance in partnership structuring.

In this paper I share perspectives about investing in private markets developed during thirty years of private sector experience followed by ten years in an institutional environment.<sup>1</sup> These views incorporate a framework for investment decision making and underwriting of strategies and firms. The process for assessing strategies and firms is unavoidably qualitative and subjective. However, I also present some analytical methods that I think are useful in support of the decision process.

Institutional investors have adopted the use of private markets strategies in their portfolios at a rapidly increasing rate in recent decades. The markets themselves have grown commensurately to multi-trillion size. As the number of listed companies has declined, private markets have become difficult to ignore. This paper does not, however, attempt to justify the decision to invest in these markets or develop an approach to incorporating them in a strategic asset allocation analytical framework. It starts, instead, from a standpoint that those decisions have already been made.

When I need to explain the underwriting process for private markets investing, I use the metaphor of a three legged stool. One leg each for strategy, organization and track record. By strategy, I refer to business strategy. What market are you addressing; what is your competitive advantage and how do you think you will add value? As a critical step in the process, we assess the health of the asset management organization. Do they have the organizational depth and skills to implement the target strategy? Have they created a culture that will allow them to continue to grow and improve over the life of the investment? We examine track record as confirmatory evidence on the first two questions. Track record alone is a weak indicator of likely future success. Finally, we consider the terms of an investment partnership as to the appropriateness of the costs associated with it and the reliability of the alignment of interest of the investor and investment manager.

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<sup>1</sup>I have worked for the Arizona State Retirement System for the last ten years, initially as Head of Private Markets Investing and as CIO for the last 4 years. However, this work and the views it expresses are my own. The policies of ASRS are set in accordance with its governance policy and may be different from what is stated here. Any information about ASRS is drawn from public information readily available on its website.

# STRATEGY

As investors we learn we learn about strategy in the context of strategic asset allocation; i.e. the proportion of assets allocated to risks and associated premia related to equities, rates, credit, real estate and so forth. These decisions are the most important determinant of outcomes, at least after the fact. As important as this is, we are using the word “strategy” in a different way. We are referring to business strategy.

You can think of business strategy as the opposite of luck. It answers the question “how do we earn the profits we make.” You earn them because somebody values what you do and you do it well. Strategy endures. Luck doesn’t.

The history of private markets institutional investing goes back to the 1980s and 1990s. In those days, mere liquidity was a strategy. When the market suffered dislocations, for example in the RTC crisis of the early 90s, private capital seized on opportunities that were wildly mispriced. The RTC saw its mission as rapidly resolving failed S&Ls and they auctioned the assets individually and in pools to a market that simply was not structurally organized to absorb the volume of assets delivered.

The extraordinary returns earned from these times attracted additional capital and a private equity and private credit industry has organized itself globally with trillions of investment capacity. Private capital is now deeply embedded in the structure of capital markets and an effective competitor to public markets. It used to be that once a company reached a billion or so in enterprise value, its only option to raise capital for growth was in public markets. Following various crises of the last thirty years, regulation of public companies and the increasing presence of activist shareholders has increased the cost of going public and the reduced the attractiveness of it. In the meantime, the availability of private capital and the competitiveness of private markets with multiple firms bidding on deals has made it feasible and efficient to finance firms to mid-cap and even large-cap range outside public markets. This is a self-reinforcing cycle leading to continued growth in private capital as investors seek access to these opportunities.

In this context, liquidity and savvy about discerning value and opportunity are still needed but no longer sufficient. The sheer size of private markets ensures competitive bidding for pretty much anything that comes to market. In order to continue to earn excess returns, the best private capital firms have invested in their firms to create ever deeper expertise in the

markets they address. They use this expertise to create strategic advantage to generate or gain access to deals and to formulate and execute business strategy for companies or properties owned. This trend also drove firms to specialize. For all but the very largest firms, there was a need to select which markets they want to address in order to build teams to accomplish their objectives.

Private equity strategies can broadly be categorized as “growth” or “value”. In growth approaches, your goal is to accelerate the top line while optimizing operations to drive down unit costs enhancing profitability or creating a path to it. In value strategies, you rationalize operations in order to harvest cash flow. Practically any market offers opportunities to build businesses and make money. The question for the investor is whether the team you are evaluating is well prepared to tackle the issues presented by the strategy they are pursuing. In order to add value, the skills required will go well beyond financial deal-making skills. In private equity, operations teams are critical. If you are going to actually achieve “synergy” benefits when combining two firms, you need to support the management teams in successfully completing the necessary integration. Specialized industry expertise is often essential, whether it’s marketing and logistics expertise for consumer brands or geologists and engineers who can evaluate “quality of rocks” in oil and gas ventures.

On the other hand, real estate delivers value to consumers through design. Real estate design is the province of architects and urban planners and the best firms incorporate them on their team. These professionals are experts in consumer preference and craft a strategy for building design responsive to location and environmental context that creates a strategic advantage in fulfilling its commercial purpose. Time and time again, we see well designed and operated buildings maintaining high occupancy and earning premium rents in markets and neighborhoods that otherwise would be regarded as highly competitive. Employment trends, the tastes of millenials and impacts of technology are rapidly changing what constitutes good design and risks of obsolescence in real estate are high. Value strategies of investing in older buildings at discount prices need to be evaluated carefully. Unlike other investment categories where scale is usually paramount, the fundamental attractiveness of real estate as an investment category is enhanced by the intensely local nature of markets creating the opportunity for competitive advantage and pricing power with a relatively small business.

Credit strategies achieve their success through their access to deal pipeline

and discipline and diligence in deciding whether or not to make a loan. Credit firms must have sourcing operation with extensive relationships across the industry they serve. Lending decision require deep expertise in credit analysis including industry coverage teams. Once the loan is made, the die is largely cast. Nevertheless, active monitoring is extremely important. Rapid action in addressing a deteriorating credit can improve recovery rates.

The final test of strategy is consumer-centeredness. We started out by saying understanding strategy is similar to a firm grasp of the answer to how a firm earns its profits. If it's lucky or exploitative, it won't be sustainable. Firms have multiple constituencies and as firms mature, they evolve in how they embrace their responsibilities. For asset management firms, the first order customer is the asset owner which has entrusted them with a portion of their capital for management. The issues here are pretty straight-forward – the asset owner wants its money turned into more money together with some niceties like being kept informed on how things are going along the way. More to come on this when we discuss terms in a later section.

To distinguish themselves, firms must serve a broader customer set. Private equity firms serve the management teams of the companies they own. A software industry investor adds value if it has an internal consulting team with expertise in software development and marketing. Such a firm becomes a preferred partner getting a last look in auctions or even having the chance to buy businesses “off market”. A middle market credit firm adds value through its reputation for reliably closing and fair dealing when conditions evolve for better or worse. Such a firm can achieve premium pricing and hold firm on other terms and covenants.

Additionally, these relationships create access to deal flow. A firm must demonstrate an ability to actually deploy capital, timely, in the amount raised and consistent with the parameters of the promised strategy. I am not put off by a firm's aspiration to grow and, realistically, that is a goal for any firm of quality. However, an asset manager should be prepared to demonstrate that their strategy is scalable within the bounds of their fund raising aspirations, without drift or deterioration in underwriting standards.

Every firm has a critical internal customer set in the people who work there. This is the topic of the next section.

## ORGANIZATION

Once you select strategies to pursue, you need to hire teams to implement them. Private markets investing concerns itself principally with this hiring decision. Though we analyze prior investments, it isn't the same as securities analysis. When Warren Buffet drinks a Coca Cola and reads their financial statements and decides he likes it, he then can buy the stock and Coca Cola is what he gets. You can analyze the prior track record of a private equity firm all you want, but you don't get those deals. What you are evaluating is whether they have created a culture and process that adds value and assessing whether you think it is likely they will repeat that success.

You will start evaluating an organization simply by looking at the size and composition of the team. Is it big enough and does it contain the technical specialties necessary to implement the planned strategy. A relevant statistic is firm assets under management divided by employee headcount. From that information, you can calculate an estimate of the recurring revenue per employee. The revenue should be high enough to support the team allowing for continued growth and advancement.

Firm culture will be critical in the success of the firm and its investments. One of the biggest challenges for a private markets investor is dealing with situations where a firm deteriorates because of internal conflict, shifts in focus or unplanned transitions. These situations typically are associated with poor investment results and if you can screen out firms at risk for these outcomes, you will enhance your investment results. Founder leadership style establishes and guides the culture. In building a firm founders make a series of increasingly selfless decisions. The first decision is to found the firm in the first place. The founders have a fire in their belly to pursue something reflecting their unique take on strategy and build something which is their own. This first "at bat" is critical – if you don't have enough early success to attract capital and talent, the firm never really gets off the ground. As the firm progresses, the founders are then faced with the task of transitioning from deal culture to firm culture.

One of the fun things about being an investor in private markets is the opportunity to meet many founders and observe how they manage this journey. The best managers de-emphasize the personalities of the founders in order to build the culture of the firm. Leaders in this style see leadership as service and to a significant degree an antonym to authority. They build a culture reflecting a philosophy and discipline of business practice and then trust the

culture. Decisions and responsibility are increasingly entrusted to the team as their skills and experience grow. The founders don't hold themselves out as final decision makers. Instead they monitor that appropriate discipline was observed in making the decision and that feedback loops are present to appropriately measure the outcome of the decision and learn from those outcomes. Teamwork is emphasized. Every individual understands her role and does not let down her colleagues with substandard, incomplete or tardy work. People learn to trust each other in the integrity and professionalism of their work. Leadership in this context serves the firm, the employees and the culture. The leaders accept financial rewards only after taking care of the team first. They are quick to credit the team for their work.

Compensation and employment terms are important. This is where the rubber hits the road. While it may be the case that employees will be loyal to firms that create a rich employment experience full of challenge, team comraderie and joy from shared experience of success, this only goes so far and the firm will deteriorate if the riches created are not properly shared. Persons in authority who accept rewards for themselves without first taking care of their teams are creating an intrinsically toxic environment. As the firm evolves, it will develop formalized and for more senior personnel contractual arrangements for sharing profit. Careers are emphasized and career conversations about what this job means to each person occur regularly. The uniqueness of individuals is a source of strength for the culture. Succession planning and ownership of the asset management firm need to be addressed well in advance of need both to protect investors and to complete the bond with the next generation of managers who will succeed the founders.

The capital of an asset management firm is human capital. Founders who make the short term sacrifice of building a high quality culture that exists beyond them and will endure after them achieve more for themselves and the markets they serve than those with a narrower view of self interest.

Assessing these things is difficult for an investor, but important. Typical investment arrangements with these firms involve fund lives of ten to fifteen years. One sees firms that ossify or disintegrate in that time frame and contractual protections rarely provide adequate remedies. In my own case, I use a thought experiment to help myself firm is a place I would want them to work. Will they be continuously challenged with projects and duties of increasing complexity as their skills grow? Will they receive regular candid feedback and will they receive financial rewards commensurate with the value of their work? Will they advance in a career path suited to them providing

opportunities for technical excellence or the chance lead a team or a business line? Will the culture, however demanding, avoid hazing rituals and allow them to grow as individuals with interests and relationships beyond work? If it's a good place to work where you'd be proud for your children to be associated with it, then it has a decent chance of surviving and thriving.

## TRACK RECORD

Why do we look at track record? Luck and randomness are everywhere and just because a firm has done well, it is far from certain it will continue to do so. In public markets, there is some evidence that strategies that have recently done well will deteriorate. In private markets, the evidence for persistence of performance is, at best, equivocal.

We understand all that, but care about track record anyway. We care about it because it is the one unfudgeable and unspinnable piece of evidence we have that might help us assess whether the firm has created a quality culture and is pursuing a robust strategy. Track record is evidence of talent and one hopes that talent will be sustained and grow with experience and maturity in the context of a high quality firm. What follows is a somewhat detailed explanation for calculating performance metrics for private equity style investments where investments are illiquid and market timing is determined by an investment manager with a sequence of capital calls and distributions which are non-discretionary for the investor.

## Traditional Methods of Performance Measurement

Time weighted returns are the standard methodology for evaluating and comparing investment performance in liquid markets. They are not appropriate for PE investments which are typically in the form of limited partnership interests and the financial sponsor has the right to control the amount and timing of capital called in to the partnership resulting in an ever changing amount of capital deployed.

The traditional performance metrics for private equity are TVPI and IRR. TVPI is "total value as a percent of invested" and is simply the ratio of value received to investment. IRR refers, of course to internal rate of return. These traditional measures collectively give a good sense of the performance of a particular PE investment and allow you to compare private



equity investments to each other. Data services tracking private equity use a combination of these metrics to rank performance in "quartiles". They customarily group funds to control for market context in "vintages" based on the year the partnership began investing. So, a 2006 vintage fund which invested across the global financial crisis and earned a 10% IRR might be a top quartile performer for that vintage, while the same IRR might be below average for a 2009 vintage.

## Public Market Equivalent methods

Controlling for market context by vintage is useful but still crude because there is a lot of variability of patterns of calling and returning capital from fund to fund. A good method to compare private market IRRs with public markets is what is needed. Steve Kaplan and Antoinette Schoar formulated a method for calculating private equity performance as a "public market equivalent" which we will refer to as KSPME (Kaplan and Schoar 2005). KSPME is calculated as ratio of benefits to costs and a value greater than 1 indicates performance above the opportunity cost benchmark. The calculation is illustrated in the following formulas.

The required data are a time series of capital calls  $C_t$ , a time series distributions  $D_t$ , a final value at time  $n$  of  $V_n$  and a time series of dividend adjusted market indices  $M_t$ . You calculate a future value factor as the ratio of the market index at time  $n$  divided by the index at prior times  $t$  as follows:

$$FV_t = \frac{M_n}{M_t}$$

You then multiply (pair-wise for each of the values) the future value factor times calls and distributions

$$C_{FV} = C_t * FV_t$$

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$$D_{FV} = D_t * FV_t$$

You now have what you need to calculate

$$KSPME = \frac{\sum D_{FV} + V_n}{\sum C_{FV}}$$

KSPME is a wealth measure reflecting how much extra money you have by investing in the private equity fund compared to an alternative public markets investment.

Gredil, Griffiths and Stucke have proposed an additional metric, called "Direct Alpha", which converts KSPME to annual rate (Gredil, Griffiths, and Stucke 2014). KSPME tells you how much extra money you made and Direct Alpha tells the annual rate at which you made it. Direct Alpha is calculated as the IRR of a time series constructed by combining the future value adjusted calls (as negative numbers), distributions and the final value. So, it uses exactly the same data as KSPME but with different calculations to reduce the data to a single measurement.

$$DirectAlpha = \log(1 + IRR(-C_{FV}, D_{FV}, V_n))$$

If you have an IRR of a private equity investment  $IRR_{PE}$  calculated as a discrete annual return, you can then calculate an  $IRR_M$  that you would have earned by investing in a market index with the same timing of investments and withdrawals as the calls and distributions of the private equity investment.

$$\log(1 + IRR_M) = \log(1 + IRR_{PE}) - DirectAlpha$$

KSPME and Direct Alpha supplement the traditional private equity performance measurements with methods that allow you to compare the private returns to public returns. In effect, these methods accurately measure the opportunity cost of public market investments foregone with the allocation to private markets. PME methods are not a magic bullet, but they are very useful. Prior to these methods, it was difficult to benchmark performance. PME methods provide a rigorous tool for assessing performance relative to market which is an essential starting point for assessing the quality of a firm and its strategies.<sup>2</sup>

## Consideration of skewness

One last topic on performance assessment deserves mention. As is well known, stock market returns are skewed with a few outliers contributing

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<sup>2</sup>A detailed explanation with code and sample data demonstrating how to perform PME analysis and other calculations described in this article is found at <https://github.com/karlpolen/pragmatics>

disproportionately to performance. Hank Bessembinder has shown that only 4% of stocks have contributed substantially all the outperformance of the stock market since the great depression (Bessembinder 2019). We'd like to see a similar positive outlier type of skewness in our private markets investments. The data sets are too small in private markets for any pretension of fancy statistics. I prefer something I call a "slugging percentage" which is simply the percentage of deals that have returned 3X or more of the initial investment. We then compare that to the percentage of deals that have lost money and if it's comfortably larger, we have evidence of the sort of skewness we are looking for. In the next section, we will analyze the effect of incentive compensation on the skewness of net returns and you will see that positively gross returns are needed to balance things out for the investor.

## COST AND PARTNERSHIP TERMS

Private equity structures are complicated and difficult to analyze. We present here some approaches to analyze general partner compensation in real estate and private equity partnerships. Real estate and private equity investments are typically owned in a partnership which includes a general partner (the "sponsor") and limited partners ("investors"). The sponsor organizes the investment, recruits the investors and manages the assets. The general partner is typically compensated with an asset management fee and an incentive fee.

The asset management fee is usually stated as a percent per annum of assets under management. This can be either as a percent of "committed" capital or "invested" capital. In the former case, the fee is earned based on the amount the investors commit from the inception of the partnership without regard to when the capital is called. If the asset management fee is based on invested capital, then the fee is calculated only on capital which has been called.

The incentive fee ("carry") is typically stated as a percent of profits. Profits are normally defined as the gross profits of the investments after returning partnership expenses including the asset management fee. Usually, a hurdle rate of return must be achieved before sharing begins. So, a typical deal might be stated as "20% carry over an 8% pref with a 50% catchup". This means that the investor has to earn at least an 8% return after fund

level costs before the sponsor earns any carry. Above an 8% return, the sponsor gets half the profit (i.e. the catchup is 50%) until the ratio of profit split is 20% to sponsor. Thereafter, the profits are split 80% to the investors and 20% to the sponsor. Incentive fees of 20% over an 8% hurdle are nearly universal in private equity. But the catchup is negotiable, with somewhere in the 50% to 100% range being typical.

Figure 1 shows the fee at various gross returns for this structure. Figure 2 shows the share going to sponsor and investor in this structure with a 2% asset management fee.

*Analysis of private equity “20 over 8 with 50% catch up”*

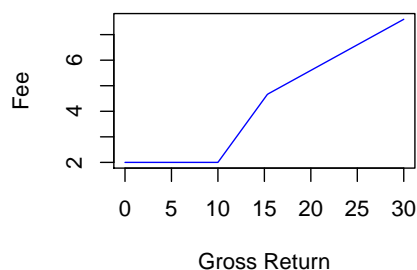


Figure 1: General Partner Fee as Function of Gross Return

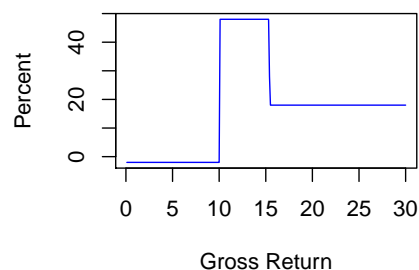


Figure 2: Marginal Share of Return to Sponsor

Real estate deals have greater variation. Many real estate deals have multiple layers, but no catchup. So, a real estate deal might be stated as "20 over 8, 30 over 12 and 50 over 20 with a 2% asset management fee, half of which is deferred until after 8%". Stated this way, sponsor starts sharing 20% of profits once the investor earned an 8% return, switching to 30% of profits once the investor has earned a 12% return and 50% of profits once the investor has earned a 20% return. Only 1% of the asset management fee is paid unconditionally. The remainder is paid once the investor has earned 8%. Figure 3 shows the fee under this structure and figure 4 shows the marginal share of earnings going to the sponsor at various gross returns.

*Analysis of real estate structure “20 over 8, 30 over 12, 50 over 20 with half of asset management deferred until after 8”*

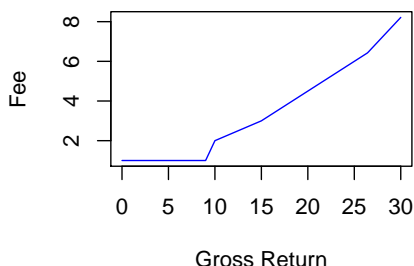


Figure 3: Fees as Function of Gross Return

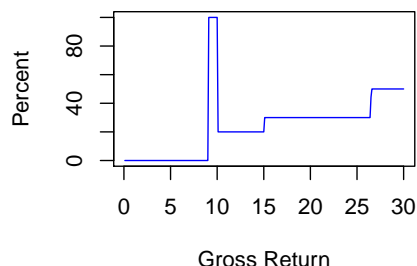


Figure 4: Marginal Share of Return to Sponsor

## Fee Effectiveness

As part of evaluating an investment program, you will inevitably be asked “did you receive value for the fees you paid?” I think the best way to look at this is by considering fees as a percent of excess profits. Let’s revisit the real estate example structure and suppose that we consider 6% to be a reasonable hurdle rate for real estate. Figure 5 shows the fees paid under that structure as a percent of excess return.

## Consideration of skewness

Investment results are skewed by these compensation structures. Investors own all of the downside but share the upside with the sponsor. Suppose we think for a particular investment gross returns are normally distributed, with a mean of 15% and standard deviation of 15%. How are the net returns distributed? Figure 6 shows the skewness of net returns using the multi-tier real estate structure described previously.

Figure 5: Fee Effectiveness for Real Estate Example

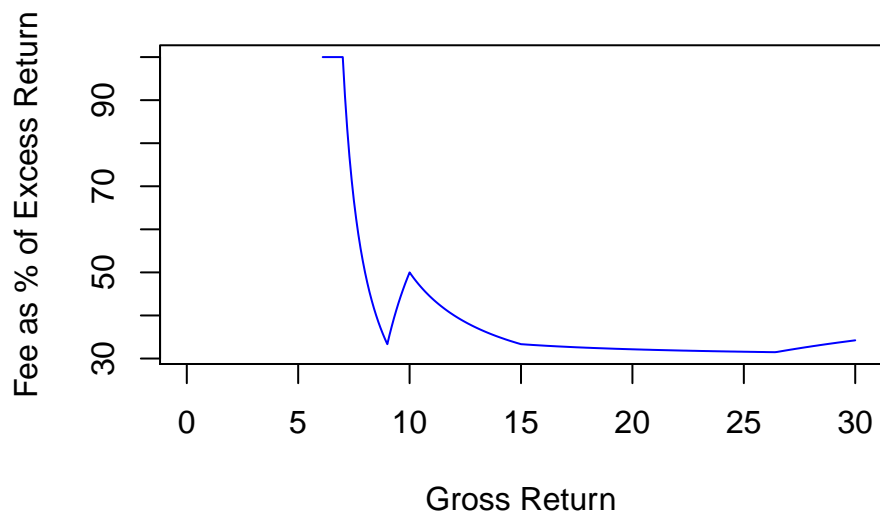
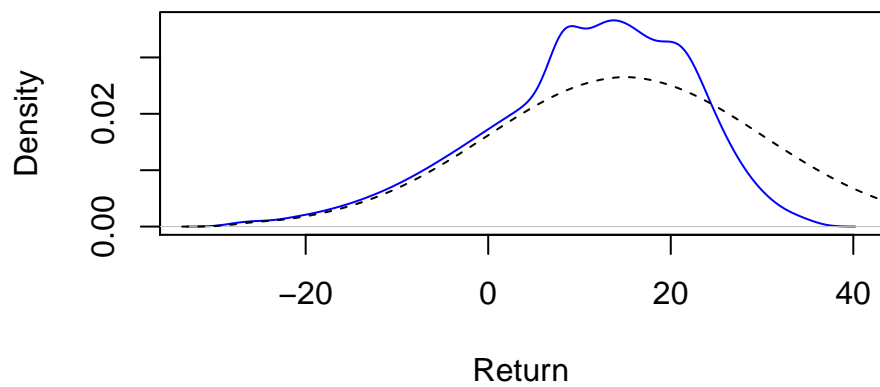


Figure 6: Illustration of Skewness of Net Returns for Real Estate Example



## Negotiating terms to manage cost

The primary fee cost drivers in private equity type investment are the asset management and incentive fees. If you are trying to negotiate and reduce cost, here are some suggestions on where to direct your focus.

Pay close attention to the catch-up provisions. Assuming your incentive fee is 20 over 8 and a reasonably successful investment program, the catchup will add 1.6% per year to the investment cost; i.e. the 20% incentive rate times the 8% hurdle. While this would be considered market standard in many contexts, it may at times be negotiable. The catchup has the biggest impact in the return band of 9% to 12% gross returns, where the catchup is paid. If this is an intermediate return strategy (as many real estate and credit strategies will be) where the expected returns are within that band, you need to consider whether this is acceptable to you. Negotiated solutions might be elimination of the catchup, possibly in consideration for a lower hurdle or the addition of higher incentive structures for exceptional performance as in the real estate structure described above.

Asset management fees are charged on either “committed” or “invested” capital. In the former case you pay a fee on the full amount of capital committed whether or not it has been called. Assuming investments are made ratably over the first three years of the partnership, this adds 1.5 times the annual fee rate over the life of the fund. Assuming an annual fee rate of 1.5% and weighted average duration of investments of eight years, the annual additional cost is a little less than 30bp per year. This is a fraction of the cost of the catchup, but still important. You need to keep in mind the whole picture. If your manager is smaller, they may need the early revenue to support a proper team for your strategy and you might better serve yourself by focusing on other areas for cost savings. But compromises may be available in the form of reduced fees on committed capital or performance based fees that link fees to achieved operational results.

Finally, you should pay careful attention to what services are funded by the asset management fees and what services are charged as additional fund expenses to the partnership or charged to the deals. Read the manager’s “ADV” forms filed with the SEC. There is a lot of useful disclosure here.

## When Alignment of Interest Fails

By sharing profits with an asset manager, you achieve alignment of interest with them. At least while things are going well. The system falls apart with underperforming investments. With underperforming investments there is no incentive for the manager to wrap up the partnership. In fact, the manager is better off avoiding asset sales to continue the asset management fees and for the option value on the incentive fee in case the asset recovers. The investor may well prefer to sell and recover their capital from an underperforming investment in order to move on to the next thing.

The situation is exacerbated when incentive fees are paid on a deal by deal basis. In that case if the manager has sold profitable deals early in the partnership and collected incentive fees for them, they may owe the partnership money for a “clawback” on liquidation of the partnership. This arises when fees initially advanced for early deals are higher than ultimately earned on the partnership as a whole. This provides a powerful additional incentive to delay final liquidation.

For an investor in a program constructed of traditional closed end fund partnership interests there is little defense against these problems other than a well diversified portfolio with multiple managers, strategies and vintages. In that portfolio structure any problems will be mitigated and you can gradually weed out any managers who handle tough situations poorly.

However, if you are a larger investor you may be able to structure investments as large “separate accounts” on custom terms. In those structures, you may be able to negotiate provisions in favor of the investor for discretionary termination of investment periods, custom mandatory investment criteria and ability to direct liquidation of all or part of the assets. This approach is much more management intensive and requires specialized expertise to implement, but can add significant value in reduced cost and reliably aligned interests.

One cautionary remark on larger alternate investment structures is that just being larger and just reducing fees isn’t enough to produce better results. A number of larger investors have pursued “co-invest sidecar” structures where they get investment allocations side by side with a traditional investment fund at reduced or no fees. The criteria for investment allocation vary, but generally larger deals are allocated partly to the co-invest vehicles. Josh Lerner and Antoinette Schoar analyzed a large database of investments in these types of alternate vehicles and concluded that the alternate



structures underperformed the related fund investments for many investors (Lerner et al. 2018). If you are going to pursue alternate and larger structures you will need to mitigate the risk of increased concentration through an appropriate partnership structure with adequate rights to ensure strategy discipline and liquidity rights. Just pursuing a larger relationship in order to negotiate lower fees may not add value.

## Information rights

An area of ongoing frustration for me has been the quality and timeliness of information delivered to investors. Investors often receive information which is partial, not consistently presented from quarter to quarter and heavily spun by the firm's marketing department. Investors should have access to real financial statements for each of the portfolio investments, prepared in accordance with GAAP consistently applied and delivered promptly. Additionally, there should be management discussion including a set of key performance indicators relevant to the deal and compared to initial underwriting expectations. With this information, an investor could know if an investment is going well.

## THE UPSHOT

When I started to write this paper, I thought it was going to be about the quantitative methods. I've written code which I believe could be a minor, but useful addition to the field and made it available on a github repository. It quickly dawned on me that this would create the wrong impression, as though implementing these quantitative tricks would lead to a successful investment program. So, I changed the focus to describe the decision process that the quantitative methods are serving.

The most important determinant of investment success are strategy selection and investment manager hiring decisions. Private markets investing is business investing. Viable strategies exist in every industry and may be growth or value oriented. It's incumbent on the investor to consider the business propositions carefully and assess whether they add value and create strategic advantage in addressing a viable market.

Manager hiring decisions are key to successfully implementing the strategies you have selected. You need to assess the fit of the organization to

the strategy – the organization needs depth and expertise in the industries, products and managerial disciplines needed by the strategy. The organization needs to be healthy with a strong and motivated team. The PME methods discussed here provide a rigorous way to assess whether a manager has in fact added value. But that measurement is only useful in support of your assessment that an organization is well suited to implement a strategy you have chosen to pursue. If you flip the order and conclude something like “the PME was good, the strategy and the firm must be good”, you are (in my opinion) making a mistake.

Negotiation of terms matters. The best way to think about cost is as a percent of excess return and we have presented methods for analyzing and understanding cost. Minimization of cost is not the goal. Indeed, if you are successful in selecting strategies and management teams your absolute cost will be higher because you will pay more in incentive fees. You need to negotiate fees keeping in mind the big picture – you want to encourage and support your partners to build and maintain high quality teams and the fees paid need to be consistent with that. The mix and timing of fees paid needs to be logical for the firm you have chosen as your partner. But when the dust settles, you want the fees to bear a reasonable relationship to excess returns earned. As the investor you are taking essentially all of the risk and need to retain a fair share of the reward.

How has this worked out for ASRS? I’ve consciously said very little about my employer. But I’ve worked at ASRS for ten years mostly as Head of Private Markets Investing and the last four years as CIO. We have built a private markets program consisting of real estate, private equity and credit that now amounts to about 40% of our fund and is targeted to be about 50% of the fund in coming years. Over that ten year period, the private markets investments have exceeded their benchmarks with annual excess returns for the ten year period of 1.7% for private equity, 2.7% for real estate and 5.1% for credit. In the most recent year ended June 30, 2019, the excess returns were 7.5% for private equity, 3.7% for real estate and 2.3% for credit<sup>3</sup>. ASRS has made extensive use of large separate accounts and some direct investments in implementing its real estate and credit program. These alternate structures have outperformed commingled fund vehicles and provide the additional benefit of much closer market engagement providing opportunity for

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<sup>3</sup>The benchmarks are ODCE for real estate, Russell 2000 for private equity and the LSTA leveraged loan index + 250bp for credit.

building greater expertise and honing of skills. These excess returns have added over \$2 billion of value to the ASRS trust fund and contributed to the overall performance of ASRS which has placed it consistently among the top quartile of public pension plans.<sup>4</sup>

I'd like to close with some thoughts about research and potential reform. In the research area, the quantitative research and introduction of techniques (notably PME) is useful. But more organizational oriented research would help. Are there characteristics of firms (such as growth, sharing of carry, management of careers) that can be associated with higher likelihood of success? On the industry side, the near universality of "20 over 8" as an incentive structure should be questioned. Fund sponsors rightly point out that the 8% hurdle may not be appropriate in a 2% treasury world. Incentive compensation linked to excess return relative to market indices may be an improvement and use of PME methods in measuring excess performance appropriate. Reform is needed to improve alignment on underperforming funds. The languishing of out-of-the-money funds is common and creates the appearance they are being exploited for fees. Investors need remedies and structures to address this. Finally, progress in the quality and timeliness of information delivered to investors would be a great boon to them.

Thank you for reading this article! I hope you found it useful.

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<sup>4</sup>Detailed information about ASRS investment performance is found in reports to the board investment committee and posted on the ASRS website at [azasrs.gov/content/board-and-committee-meetings](http://azasrs.gov/content/board-and-committee-meetings)