

The Pragmatics of Private Markets Investing

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KEY FINDINGS

- Private markets investing is business investing, and you need to focus on the quality of the business approach in creating a strategic advantage in the markets served.
- 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 not just to remain healthy but to grow and improve through the tenure of your relationship with them.
- 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.

ABSTRACT: *The author, the chief investment officer at Arizona State Retirement System, shares perspectives and lessons learned from 4 decades of experience in private markets investing.*

TOPIC: *Manager selection**

In this article, I share perspectives about investing in private markets developed during 30 years of private sector experience followed by 10 years in an institutional environment.¹ 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 multitrillion size. As the number of listed companies has declined, private markets have become difficult to ignore. This article does not, however, attempt to justify the decision to invest in these markets or develop an approach to incorporating them into a strategic asset allocation analytical framework. It starts, instead, from the standpoint that those decisions have already been made.

¹I have worked for the Arizona State Retirement System (ASRS) for the last 10 years, initially as head of private markets investing and then as CIO for the past 4 years. However, this article 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.

*All articles are now categorized by topics and subtopics. **View at PM-Research.com.**

When asked to explain the underwriting process for private markets investing, I use the metaphor of a three-legged stool, with 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 regarding the appropriateness of the costs associated with it and the reliability of the alignment of interest of the investor and investment manager.

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 the associated premiums related to equities, rates, credit, real estate, etc.). 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 does not.

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 Resolution Trust Corporation (RTC) crisis of the early 1990s—private capital seized on opportunities that were wildly mispriced. The RTC saw its mission as rapidly resolving failed savings and loans, and it auctioned the assets individually and in pools to a market that simply was not organized to absorb the volume of assets delivered.

The extraordinary returns earned during these times attracted additional capital, and a private capital industry has organized itself globally with trillions in 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 30 years, regulation of public companies and the increasing presence of activist shareholders has increased the cost of going public and reduced its attractiveness. 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 savviness about discerning value and opportunity are still needed but are no longer sufficient by themselves. The sheer size of private markets ensures competitive bidding for pretty much anything that comes to market. 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 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, thus enhancing profitability or creating a path to it. In value strategies, you rationalize operations to harvest cash flow. Practically any market offers opportunities to build businesses and make money. The question for the investor is whether the team under evaluation is well prepared to tackle the issues presented by the strategy they are pursuing. To add value, the skills required 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 is marketing and logistics expertise for consumer brands or having geologists and engineers who can evaluate the 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 into their team. These professionals are experts in consumer preference; they craft a strategy for building design that is responsive to location and environmental context and creates a strategic advantage in fulfilling its commercial purpose. Time and time again, we see well-designed and well-operated buildings maintain high occupancy and earn premium rents in markets and neighborhoods that otherwise would be regarded as highly competitive. Employment trends, the tastes of millennials, 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 in which 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 at relatively small scale.

Credit strategies achieve their success through their access to deal pipelines and discipline and diligence in deciding whether to make a loan. Credit firms must have sourcing operations with extensive relationships across the industry they serve. Lending decisions 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 deteriorating credit can improve recovery rates.

The final test of strategy is consumer centeredness. We started out by saying that understanding strategy is similar to having a firm grasp on the answer to how a firm earns its profits. If the firm is lucky or exploitative, it will not 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 that has entrusted them with a portion of capital for management. The issues here are pretty straightforward: 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 and gets a last look in auctions or even has the chance to buy businesses off market. A middle market credit firm adds value through its reputation for reliable closing and fair dealing when conditions evolve for better or worse. Such a firm can achieve premium pricing and hold steady on other terms and covenants.

Additionally, these relationships create access to deal flow. A firm must demonstrate an ability to actually deploy capital in a timely manner, 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; 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 fundraising 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 is not the same as securities analysis. When Warren Buffett drinks a Coca-Cola and reads the company's 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 do not get those deals. What you are evaluating is whether the firm has created a culture and process that adds value and 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 estimate 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 in which a firm deteriorates because of internal conflict, shifts in focus, or unplanned transitions. These situations typically lead to 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 to build something that is their own. This first “at bat” is critical—if you do not 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 to build the culture of the firm. Leaders in this style see leadership as service and as 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 do not 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. Individuals understand their roles and do not let down colleagues with substandard, incomplete, or tardy work. People learn to trust in the integrity and professionalism of one another’s 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. Although it may be the case that employees will be loyal to firms that create a rich employment experience full of challenge, team camaraderie, 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 must be addressed well in advance of founder retirement, both to protect investors from adverse consequences of unplanned transitions 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 short-term sacrifices to build a high-quality culture that exists beyond them and will endure after they achieve more for themselves and the markets they serve than those with a narrower view of self-interest.

Assessing these things is difficult. In my own case, I use a thought experiment and ask myself if a firm is a place I would want my adult children 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 and providing opportunities for technical excellence or the chance to 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 is a workplace that would make you proud and happy 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 we 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 an explanation of calculating performance metrics for private equity—style investments.

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 private equity investments, which are typically in the form of limited partnership interests in which 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 private equity investment and allow you to compare private equity investments with 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. Thus, a 2006 vintage fund that invested across the global financial crisis and earned a 10% IRR might be a top quartile performer for that vintage, whereas the same IRR might be below average for a 2010 vintage.

Public Market Equivalent Methods

Controlling for market context by vintage is useful but still crude because there is a lot of variability in patterns of calling and returning capital from fund to fund. We need a good method to compare private market IRRs with public markets. Steve Kaplan and Antoinette Schoar formulated a method for calculating private equity performance as a public market equivalent

(PME), which we will refer to as KSPME (Kaplan and Schoar 2005). KSPME is calculated as the 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 , time-series distributions D_t , a final value at time n of V_n , and a time series of dividend adjusted market indexes 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 (pairwise for each of the values) the future value factor times calls and distributions:

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

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

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 will have by investing in the private equity fund compared to an alternative public markets investment.

Gredil, Griffiths, and Stucke (2014) proposed an additional metric, called *direct alpha*, which converts KSPME to annual rate. 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. Therefore, it uses exactly the same data as KSPME but different calculations to reduce the data to a single measurement.

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

If you have the IRR of a private equity investment IRR_{PE} calculated as a discrete annual return, you can then calculate the IRR_M 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.

$$\log(1 + IRR_M) = \log(1 + IRR_{PE}) - \text{Direct alpha}$$

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 forgone 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.²

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 disproportionately to performance. Bessembinder (2019) has shown that only 4% of stocks have contributed nearly all of the outperformance of the stock market since the Great Depression. We would 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 3× or more of the initial investment. We then compare that to the percentage of deals that have lost money; if it is 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 skewed 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 that 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 percentage per annum of assets under management. This can be either as a percentage 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, regardless of when the capital is called. If the asset management fee is based on invested capital, the fee is calculated only on capital that has been called.

The incentive fee (carry) is typically stated as a percentage 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. 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 the 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. The catchup is negotiable, however, with somewhere in the 50% to 100% range being typical.

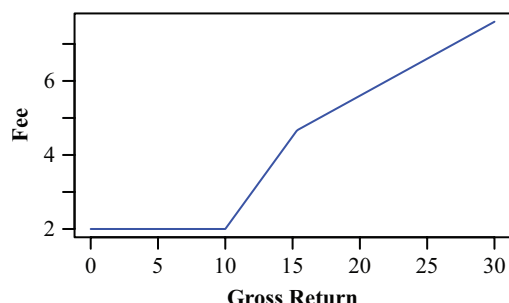
Exhibit 1 shows the fee at various gross returns for this structure. Exhibit 2 shows the share going to the sponsor and investor in this structure with a 2% asset management fee.

Real estate deals have greater variation. Many real estate deals have multiple layers but no catchup. Thus, 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, the sponsor starts sharing 20% of profits once the investor has earned an 8% return and switches 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%. Exhibit 3 shows the fee under this structure, and

²A 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>.

EXHIBIT 1

General Partner Fee as Function of Gross Return



Note: Analysis of private equity 20 over 8 with 50% catchup.

Exhibit 4 shows the marginal share of earnings going to the sponsor at various gross returns.

Fee Effectiveness

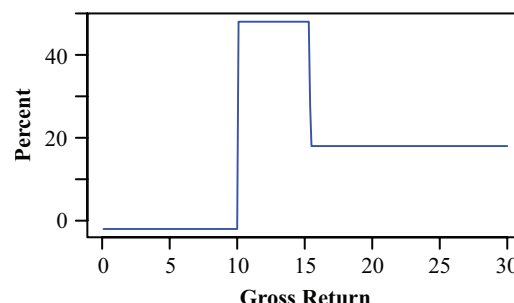
As part of evaluating an investment program, you will inevitably be asked, “Did you receive value for the fees you paid?” I think the best way to look at this is by considering fees as a percentage of excess profits. Let’s revisit the real estate example structure and suppose that we consider 6% to be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

Consideration of Skewness

Investment results are skewed by these compensation structures. Investors own all of the downside but

EXHIBIT 2

Marginal Share of Return to Sponsor



Note: Analysis of private equity 20 over 8 with 50% catchup.

share the upside with the sponsor. Suppose we think that 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? Exhibit 6 shows the skewness of net returns using the multitier real estate structure described previously.

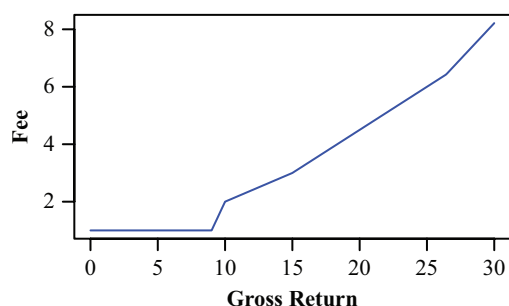
Negotiating Terms to Manage Cost

The primary fee cost drivers in a 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 catchup 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—that is, the 20% incentive rate times the 8% hurdle. Although this would

EXHIBIT 3

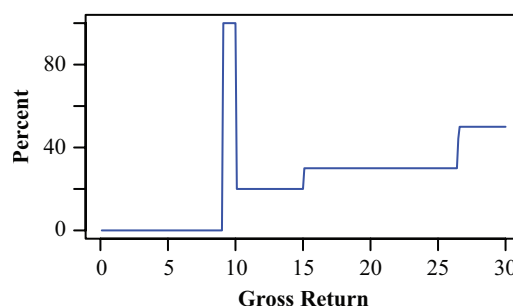
Fees as Function of Gross Return



Note: Analysis of real estate structure 20 over 8, 30 over 12, 50 over 20 with half of asset management deferred until after 8.

EXHIBIT 4

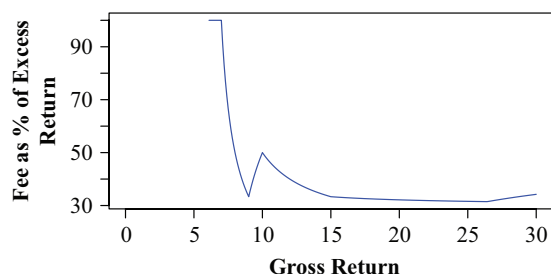
Marginal Share of Return to Sponsor



Note: Analysis of real estate structure 20 over 8, 30 over 12, 50 over 20 with half of asset management deferred until after 8.

EXHIBIT 5

Fee Effectiveness



Note: Further analysis of the 20 over 8, 30 over 12, 50 over 20 with half of asset management deferred until after 8 structure.

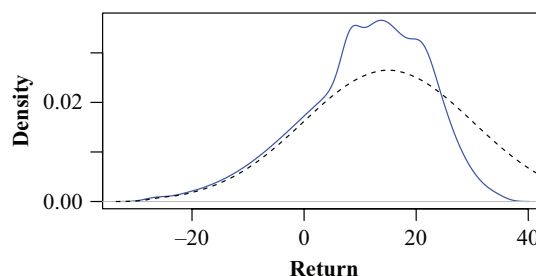
be considered market standard in many contexts, it may at times be negotiable. The catchup has the biggest impact in the return band of 9% to 12% gross returns, where the catchup is paid. If this is an intermediate return strategy (as many real estate and credit strategies will be) in which the expected 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 previously.

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 regardless of whether it has been called. Assuming investments are made ratably over the first 3 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 8 years, the annual additional cost is a little less than 30 bps per year. This is a fraction of the cost of the catchup but still important. You need to keep in mind the big 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. Compromises may be available, however, 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

EXHIBIT 6

Skewness of Net Returns



Note: Further analysis of the 20 over 8, 30 over 12, 50 over 20 with half of asset management deferred until after 8 structure.

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 collecting asset management fees and to have access to the option value on the incentive fee if the asset recovers. Investors may well prefer to sell, recover their capital from an underperforming investment, and 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, the manager 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 it 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 is not enough to produce better results. A number of larger investors have pursued *co-invest sidecar* structures in which 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 colleagues 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 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 that 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 Generally Accepted Accounting Principles consistently applied and delivered promptly. Additionally, there should be management discussion including a set of key performance indicators relevant to the deal and compared with initial underwriting expectations. With this information, an investor could know if an investment is going well.

THE UPSHOT

When I started to write this article, I thought it was going to be about quantitative methods. I have written

code that 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. I therefore changed the focus to describe the decision process that the quantitative methods are serving.

The most important determinants 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 is 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, so 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 percentage 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 high-performing 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. When the dust settles, though, 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 the ASRS? During the 10 years I have worked at ASRS, it has built a private markets program consisting of real estate, private

equity, and credit that now amounts to about 40% of its fund value and is targeted to be about 50% of the fund in coming years. Over that 10-year period, the private markets investments have exceeded their benchmarks with annual excess returns for the 10-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.³ 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 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.⁴

I would 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 (e.g., growth, sharing of carry, and 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 indexes 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.

³The benchmarks are ODCE for real estate, Russell 2000 for private equity, and the LSTA leveraged loan index + 250 bps for credit.

⁴Detailed 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.

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

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ADDITIONAL READING

Asset Owners, Investment Management, and Commitment: An Organizational Framework

GORDON L. CLARK AND ASHBY H. B. MONK

The Journal of Retirement

<https://jor.pm-research.com/content/6/3/9>

ABSTRACT: This article focuses on asset owners, such as pension funds, and their models of investment management and describes the choice between insourcing, outsourcing, and re-intermediation. Drawing on the principal-agent problem and emphasizing the challenges facing asset owners when attempting to realize value from asset managers, the authors identify the dimensions of the management "problem." Implications are drawn for the management practices of asset owners and the implementation of investment strategy combining in-house capabilities with external relationships. The authors also identify a set of metrics of performance that is consistent with superior long-term investment performance metrics to a range of asset owners, large and small.

Superstar Investors

JORDAN BROOKS, SEVERIN TSUJI, AND DANIEL VILLALON

The Journal of Investing

<https://joi.pm-research.com/content/28/1/124>

ABSTRACT: *Many famous investors are outspoken about their investment philosophies and carefully apply them to a select number of securities. In this article, we seek to apply their wisdom systematically to determine whether their philosophies might generate alpha when applied broadly. We show how four very different, extraordinary track records—from Berkshire Hathaway, PIMCO's Total Return Fund in the Gross era, George Soros's Quantum Fund, and Fidelity's Magellan Fund under Peter Lynch—can be viewed as expressions of a handful of systematic styles.*

The Road Not Taken

JOHN C. BOGLE

The Journal of Portfolio Management

<https://jpm.pm-research.com/content/44/1/83>

ABSTRACT: *The index fund revolution has changed the rules of the game for active mutual fund managers. This article offers a range of optimal business strategies for active managers—including management companies owned by financial conglomerates—who are competing in this new environment. The author then contrasts these business strategies for mutual fund managers with optimal fiduciary strategies for mutual fund directors, who are responsible for placing the interests of fund shareholders first.*