Example Research Proposal:
Evaluating the Performance of Growth and
Value Strategies in LBO Funds

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Abstract

As I have not authored a published paper, the purpose of this piece is to demonstrate my ability to deconstruct a debated research topic in contemporary finance and map out a method for rigorously analyzing a specific question based on that topic. Since my research area of interest in finance subsumes issues relating to active management, portfolio theory, data and information analysis, and pricing theory, I chose this specific topic for this piece only because the growth private equity performance question has been one I have been thinking about and actively researching for the past few months; it is not necessarily the only topic I wish to pursue in your PhD program.

I. Introduction

The comparison of private equity investment returns to returns of similarly-sized public equity investments has been analyzed since the 1980s when leveraged buyout (LBO) funds first became a popular alternative investment vehicle for investors in these private funds (LPs). In the 1990s, this asset class gained even more popularity with the explosion of venture capital (VC) funds designed to fuel the entrepreneurial opportunities brought forth by the internet and other technologies. While both types of PE funds took a hit in the Global Financial Crisis due to liquidity and credit risk mismanagement, in 2018, PE funds raised more than $570B from LPs compared to less than $100B raised in 2003 (see McKinsey Global Private Markets Review 2018, Exhibit 3). Furthermore, analysis by Harris, Jenkinson, and Kaplan (2014) has shown that PE funds beat public market benchmarks like the S&P 500 over long time horizons and Sorenson, Wang, and Yang (2014) have shown these funds adequately compensate their LPs for liquidity, credit, market, and commitment risks net of fees and fund management (GP) carry making PE an attractive asset class for endowments and pension funds as well.

Even though PE has become a major asset class in investment portfolios, its performance in both near- and medium-term time horizons remains a focus of academic research as the debate over whether or not PE funds have higher per annum returns than public indices like the S&P 500 is still not settled. For example, over the years 1980-2001, Kaplan and Schoar (2005) show that leveraged buyout (LBO) funds return less on average than the S&P 500 per annum net of fees and carry yet, nearly ten years later, Harris, Jenkinson, and Kaplan (2014) show that, on average, LBO funds surpass the S&P 500's returns over a similar period. One reason for this discrepancy comes from a persistent issue in private investment research: heterogeneous data sets. The 2005 study uses a later-determined-to-be downward-biased data set from Venture Economics while the 2014 study uses three, more-complete sets. There is also discussion around the method by which researchers compare private investments to public ones. Both studies mentioned above use the Kaplan and Schoar (2005) method of finding the public market equivalent (PME) to determine if the funds return more than the market benchmark (represented in their case by the S&P 500) but there are other methods as well, namely the Long Nickels PME method found in Kocis et al (2009). As these papers demonstrate, the maturation of data in the private investment space has enabled researchers to better understand PE's effects on modern portfolio management but more research needs to be done to arrive at unequivocal results.

Only recently, the additional distinction of "growth" PE and "value" PE has come about as GPs have started to blur the lines between what constitutes an LBO fund and what constitutes a VC fund. Traditionally, the objective of an LBO fund was to invest in companies where cheap capital (provided by the fund) and changes in management could turn an ailing, yet extant business around to profitability. This would raise the valuation of the firm and enable the fund to sell the company for more than it was purchased resulting in profit for the fund. This type of strategy in the public markets has been labelled as "value" investing by Dodd and Graham (2009) and has shown to be profitable over time by Fama and French (2007) but distinctions between the returns of this "value" strategy in LBO funds compared to returns from other PE strategies have yet to be empirically measured. Alternatively, GPs of VC funds traditionally take capital from LPs and invest it into new businesses, typically startups, where growth is likely and persistent over a given time horizon. VC funds realize their returns when these startups are either acquired by another firm or made public via an initial public offering (IPO). This is labelled a "growth" strategy since the fund's capital is reinvested into the business to fuel its growth at the expense of dividends or other disbursements designed to distribute retained earnings to shareholders. Section II discusses the technical definitions of "value" and "growth" more deeply but, as they pertain to this proposal, I aim to investigate the frequency and performance of "growth" strategies in LBO funds to determine if they are more profitable than the "value" strategies traditionally deployed.

The purpose of this study is, firstly, to determine if there is enough investment-level data available to classify PE deals as either a "value" investment or a "growth" investment with enough statistical significance to provide insight into an unknown population of PE funds and,

secondly, if there is enough data, to run an analysis of the data to determine the returns, risks, and other attributes of these two PE fund strategies and possible create models for use in practice.

II. Definitions

Similar to how Fama and French (2007) devised a framework for returns in their analysis of public equity, I must devise distinct classifications so points in investment-level data sets of PE fund deal flows can be classified as either "growth", "value", or "neutral". While Fama and French (2007) used the index on which a security trades in combination with its ranking on that index to determine its classification into "value", "growth", and "neutral" classes (they also subclassified securities by capitalization), I will not be able to use that approach as portfolio companies in PE funds are not publicly traded and thus cannot be adequately compared to one another using a ubiquitous, quantitative system. To classify portfolio companies as "growth", "value", or "neutral", I propose the following definitions with knowledge that these could change based on the depth, breadth, and number of homogeneous attributes in the data outlined in Section III.

To classify a portfolio company as a "growth" investment, I propose borrowing two definitions of a qualitative nature and devising a discrete scale with which investments can be qualitatively coded as "growth." The first definition comes from Graham and Dodd (2009) where they describe a "growth" company as one whose "earnings move forward from cycle to cycle", meaning the company's earnings are not too badly affected by market recessions and can rebound to profitably quickly. This can be quantitatively measured by creating a statistic that combines a portfolio company's beta to the market benchmark and the level of profitability over a given time horizon to capture both the variance in profitability and as well as the persistence of profitability. The second definition is borrowed from Fama and French (2007) which looks at the portfolio company's price-to-book (P/B) ratio and determines that, if the P/B ratio is higher than other deals in the PE fund, one could reasonably assume the GP sees growth potential in that portfolio company which justifies the premium paid on the investment. Since the first definition requires firm-level data over a time series which will not be publicly available given the nature of privately-held firms, each firm would have to be researched independently; this could pose a daunting endeavor as the sample size of firms must be sufficient enough to determine inference over an unknown population. The second definition requires investment-level data from the PE fund as well as the present book-value of the portfolio company at the time of investment.

To classify a company as "value", I need only investment-level data from funds in the data set combined with the book value of their respective portfolio companies at the time of investment to create a P/B ratio for each deal. Theoretically, a P/B less than 1, that is a portfolio company that was purchased for less than its book value at the time of investment by the fund, would be a "value" company as, again, I assume the GP is making a rational investment in a firm that she expects to rebound to profitability.

III. Data and Methods

Based on the definitions in Section II, there are two degrees of data needed to adequately derive two classes of investment: homogeneous investment-level data from the funds to capture deal flow and firm-level data to determine the degree to which the funds' portfolio companies fall into either the "growth," "value," or "neutral" classification. Harris, Jenkinson, and Kaplan (2014) show that the investment-level data from Preqin, Burgiss, Cambridge Associates, and Venture Economics could be sufficient to adequately capture and codify PE deal flow, as long as the downward-bias of the Venture Economics data set discovered by Stucke (2011) and confirmed by Harris, Jenkinson, and Kaplan (2014) is kept in mind.

There are two methods by which I plan to adequately determine the performance of "value" and "growth" strategies in LBO PE funds. The first method requires me to look at the performance of the strategies relative to the public market to ensure that they provide enough return to be used in practice. If they do not have this attribute on their own, then it's unlikely that managers will find the evaluation useful enough to implement as public markets would provide better returns with less liquidity, credit, market, and commitment risk. To do this, I propose to use the Schoar and Kaplan (2005) method of PME calculation. This method entails first aggregating the investments by their "growth" or "value" classification then investing (or discounting) all cash distributions and residual (market) value of these aggregate positions into the public market benchmark (the authors used the S&P 500 index). Next, I would compare how each position, private and public, performs over a given time horizon. The IRR from the aggregate position in the fund is then divided by the IRR from the position in the public market and values of this calculation above one – that is a PME of greater than one – show that the "growth" or "value" aggregate position outperformed the public market benchmark. A PME of less than one shows that the "growth" or "value" portfolio companies in that fund underperformed the public market benchmark.

The second method requires me to evaluate each strategy against the other to determine if there is enough distinction between the two to be considered two separate strategies. This can be achieved with inferential hypothesis testing using the aggregate, per-strategy IRRs needed for the PME calculations in the first method. If there is a statistical difference in returns, these would be returned in a table.

IV. Proposal

The objective of this investigation is to find if there is enough data to determine if LBO PE funds are utilizing value and growth strategies and, if they are, what those returns are. Risk assessment - determining the amount of alpha required to compensate investors for the liquidity,

market, credit, and commitment risks inherent in these deals - is outside the scope of this proposal but may be a follow up research topic should this proposal yield reproducible results.

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