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# Master Thesis U.S.E.

Determinants of Serial Acquisition Performance in the Asset Management Industry

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**Abstract**

The focus of this research is to gain insight into the fluctuation of acquisition activity amongst asset management firms leading to industry consolidation. Firms are acquiring more competitors in a shorter span of time which exhibits the characteristics of serial acquirers. Some firms experience more long-term success with this strategy than others. While previous literature exists on acquisition programs and post-acquisition performance, none delve into the nuances of asset management that could improve post-acquisition performance in the industry. Based on extensive analysis of literature and industry expertise, I introduce an empirically founded framework of determinants for serial acquisition performance in the industry. At the foundation, this study examines determinants from a similar industry, banking, and presents determinants specific to asset management, i.e., the development of financial advisors and the incorporation of ETFs into product offerings. Focusing on human capital and product diversity resulted in an improvement of post-acquisition financial performance. Asset management firms may consider including these components into acquisition programs in the future.

*Keywords: asset management; acquisition program; consolidation; serial acquisition*

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## I. INTRODUCTION

Considering the steady consolidation of the asset management industry begs the question: how do firms manage the integration of multiple acquisitions? Increasing pressure from operational costs, stringent regulatory compliance, and a global pandemic prompted asset management firms to find the means to remain competitive in the industry. Moreover, the pandemic invoked an increase of investments which totaled to over \$100 trillion USD in global assets under management in 2020 as reported by Investment Executive (Langton, 2021). The variance in the size of asset management firms, however, ranges from small boutiques to multinational corporations. Subsequently, asset managers addressed the fragmentation of the industry with an elongated wave of consolidation in the form of mergers and acquisitions. As a result, numerous boutique firms are disappearing while larger firms are fostering diversified product offerings and increasing human capital. Industry consolidation certainly benefited some firms more than others as demonstrated through post-acquisition performance.

A saturated and fragmented market is instigating larger firms to acquire smaller firms in an attempt to increase their asset base and, in turn, increase their profitability to offset the loss of margins caused by demand from clients for higher return on investments and lower service fees. A joint annual research study by Thinking Ahead Institute and Pension & Investments 500 found that 221 firms from their list of 500 of the largest asset management firms in 2011 were no longer on the list in 2021 (Wilson Towers Watson, 2021). The industry is currently experiencing a rising number of acquisitions partially stimulated by the need to expand products to cover every type of risk profile clients seek and obtain quality financial advisors who contribute to client retention and attraction. Further investigation demonstrates that some asset management firms are becoming serial acquirers through the acquisition of multiple boutique firms in a short span of time. On the other hand, some firms are aiming for larger transactions by acquiring medium to large firms.

Extensive research exists on mergers and acquisitions as well as the financial sector. A meta-analysis by King et al. (2004) examined post-acquisition performance across multiple industries. Ellis et al. (2011) further

supported these measurements in a study conducted on large acquisitions across consolidating industries. While these studies furthered the discussion on acquisitions and industry consolidation, serial acquisitions were overlooked until Laamanen & Keil (2008). They specifically studied serial acquirers across industries which delineated the importance of frequency patterns on the performance of firms engaging in multiple acquisitions. Their research defined the meaning of a serial acquirer. In this case, it was a firm that performed consecutive and multiple acquisitions in the span of a few years.

While the aforementioned studies focused on acquisitions, these were directed towards multiple industries and constructed as general acquisition programs. However, generalized programs may overlook the nuanced aspects specific to an industry, specifically, banking or asset management. Nguyen, Yung & Sun (2012) researched the types of motives firms exemplify towards acquisitions. They found that the finance sector accounts for a large percentage of mergers and acquisitions which makes identifying factors of post-acquisition performance specific to this industry more relevant. Lastly, Hughes et al. (2003) studied consolidation in the banking industry which encompassed managerial incentives and financial performance – the former affecting the latter. Asset management encompasses similar characteristics to banking, so some factors may overlap when measuring post-acquisition performance.

The nuances specific to each industry, as previously discussed, potentially affects the post-acquisition performance of firms. Asset management is historically a highly fragmented industry comprised of privately and publicly owned firms holding a widespread range of assets under management. The difference in firms helps distinguish specializations in the type of fund management, such as passive or active, advisors conduct along with the variety of products offered to clients. Most firms manage exchange-traded funds (ETFs) and multi-asset funds that can consist of equities, bonds, securities, commodities, or alternatives. The goal of asset managers is to remain competitive in a saturated market and attain more market power. To accomplish this, firms need to diversify product offerings which can be achieved by acquiring another firm and integrating its existing funds. Another

strategy to remain competitive is acquiring human capital. Quality financial advisors tend to build trusting relationships with clients which increases client retention if those advisors remain employed by an acquirer. In turn, adding experienced advisors attracts clients to an acquirer since clients view that as the quality of service increasing. The ability to measure product diversity and the quality of financial advisors could indicate whether the post-acquisition performance of a serial acquiring asset management firm will increase or decrease.

The post-acquisition performance of an asset manager is relevant to investors and firms. If human capital and product offerings have significant effects on future return on assets (ROA), then an increase in both could indicate if investors can expect increased financial performance in a firm after an acquisition. Future ROA is an indicator for long-term investors that may want to increase their shares in the acquiring firm. On the other hand, identifying determinants specific to asset management would help serial acquirers refine acquisition programs and increase the probability of higher post-acquisition performance. Finally, this study could assist future researchers to identify other industry specific determinants that affect the financial performance of acquirers.

Measuring post-acquisition performance for asset management firms, therefore, must incorporate a mixture of the existing, general determinants along with determinants unique to the industry. Multiple studies, as shown by the King et al. (2004) meta-analysis, use ROA at the 1- to 3-year mark post-acquisition as a measure of financial performance for acquiring firms. In the same light, ROA at the 3-year post-acquisition period is a feasible measure for asset management performance. As measured for the financial sector (Rao-Nicholson, Salaber & Cao, 2015), sales margin could be an effective indicator for post-acquisition performance in asset management as well. Industry-specific determinants would be more identifiable if using the proposed serial acquisition program from Laamanen & Keil (2008) as controls. Since asset management is categorized in the same sector as banking (Hughes et al., 2003), I will include the studied determinants for post-acquisition performance in that industry. Next, I will identify characteristics of asset management and develop measurable

determinants to test the effects on post-acquisition performance. Isolating the effects of determinants specific to the industry will better define acquisition programs in asset management.

If diversified products and talented financial advisors attrite and retain clients, then I expect higher post-acquisition performance when resources towards product offerings and advisory services increase. Additionally, I expect similar results in line with previous research conducted for general serial acquisitions (Laamanen & Keil, 2008) as well as the banking industry (Hughes et al., 2003) and financial sector determinants (Rao-Nicholson, Salaber & Cao, 2015). Similar results confirm that post-acquisition performance was effectively measured in those studies and that I was able to efficiently isolate determinants of post-acquisition performance specific to asset management. I hope that more industry determinants will be identified in the future to make acquisition programs more precise especially if further industry consolidation is predicted.

The following sections will discuss previous literature reviewed, the theoretical framework, empirical strategy, results, and implications of this study. The literature review section will analyze previous research along with their respective findings on post-acquisition performance, serial acquisition programs, and specific acquisitions within the banking industry and financial sector. These studies contain applicable theories and framework to measure post-acquisition performance in asset management firms. The theoretical framework will examine the existing causal chain between post-acquisition performance and the variables affecting it which will shape the hypotheses proposed within this study. The empirical strategy section will contain explanations of the dependent, control, and independent variables as well as the accessed sources of information for the data sample. I will list the 6 models constructed and clarify the controls and variables regressed in each. Next, I will present the results found for each model and an interpretation of those results. Lastly, the main conclusion will be reviewed as well as the limitations of this study and my contribution to the discussion.

## I. LITERATURE REVIEW

From single transactions to internal integration programs, a multitude of literature exists focused on the phenomena that occurs during mergers and acquisitions. Some studies question why firms acquire at all. Nguyen et al. (2012) proceeded to identify the motives a firm has leading to acquisition activity by examining historical transactions of firms in the United States. This study classified a couple types: value-increasing and value-decreasing. In order to measure value, the authors used the M/B ratio, ROA, and Tobin's q. Measured against each financial indicator were variables associated with motives of market timing, response to industry or economic shock, and agency or synergy. They discussed the negative effects of agency on the long-term value of an acquirer with agency associated with firms conducting a higher volume of acquisitions – an intrinsic risk as a serial acquirer. Lastly, cash as the method of payment related more to the synergy motive which was categorized as value-increasing. Despite distinguishing the types of motives, findings show that nearly all acquirers hold multiple motives, so acquirers exhibit value-increasing and value-decreasing behavior. Incidentally, the financial sector accounted for a large portion of mergers and acquisitions in that study.

Across the reviewed literature, a common measure of success is the post-acquisition financial performance of an acquirer. Most studies measured multiple financial performance indicators as a proxy for post-acquisition performance with ROA being the common measure of financial performance of an acquirer. King et al. (2004) conducted a meta-analysis of post-acquisition performance by conglomerate firms. This examined nearly 100 empirical studies on post-acquisition performance. While all studies utilized a financial indicator as the measure of performance, the most common were return on assets (ROA) and abnormal returns. Other moderators considered were the event window of the financial indicator, the estimated population, the number of studies, and the sample size. As expected, a positive relationship appeared between acquired and acquiring firm assets which increased the financial performance. The study suggested that multiple measures of financial performance should be included in future research to encompass the full post-acquisition effect on an acquirer. Conversely, the study reported that acquisitions produced a negative effect on the short-term financial performance of an acquirer, and

longer event windows better encapsulate the effects of acquisitions. The authors concluded that researchers may need to consider determinants more specific to industries and the effect on post-acquisition performance since many of the studies using general determinants lacked significance in their results.

As suggested by the meta-analysis from King et al. (2004), all financial performance indicators used an event window from 1 year to 3 years post-acquisition to measure the long-term effects of activity. A few determinants appeared across multiple studies to consider the scope, or target similarity to the acquirer, and the size of the acquirer. Greater success was found when targets were similar to the acquirer but not necessarily within the same industry. The size of the acquirer, often measured with total assets, typically had a negative effect on financial performance. Acquisition experience appeared on multiple occasions in these studies and exhibited a similar negative effect on financial performance. The method of payment was included by some literature as a determinant or a control which demonstrated that transactions with a larger percentage of cash-financing had a positive relationship with financial performance. As recommended by previous literature, my study will incorporate multiple financial measurements as proxies for post-acquisition performance and will view these from a long-term perspective.

Rao-Nicholson, Salaber & Cao (2015) contributed further to the post-acquisition performance discussion by expanding the sample from the United States to ASEAN countries. The financial indicators used were ROA and sales margin against pre-acquisition performance, stock-financed versus cash-financed transactions, industry similarity, relative target size, level of pre-acquisition cash reserves, percentage of target owned after the transaction, type of deal, and presence of a global crisis. While financial performance was not significantly affected by cash-financed or stock-financed acquisitions, the combined method of cash and stock resulted in a positive change. Lastly, a trend of post-acquisition performance decreasing appeared when measured with ROA. My study considers an international sample, so including sales margin as a second measure of post-acquisition performance with ROA may highlight significant differences in the results.



Although the focus on post-acquisition performance remains, some researchers turned towards developing acquisition programs for firms that conduct a higher volume or quicker rate of acquisitions. Ellis et al. (2011) mentioned the persistence of larger deals when industries consolidate and the effects of acquisition routines on performance amongst large transactions in the United States. Again, ROA measured post-acquisition performance while the effects of acquisition experience, bidder-to-target dissimilarity, and process-related factors were considered. The transfer of acquisition routines to a focal acquisition can result in positive, neutral, or negative effects. The results delve into how size-specific experience matters due to transfer effects in large acquisitions. Findings suggest that the more industries consolidate, the trend for larger deals or a higher volume of deals persists which is the area my study focuses on. Post-acquisition performance is shown as an efficient measure for acquisition success since it gives the flexibility to view acquisition success in the short-term or long-term as confirmed by other studies. Mixed results occurred when focusing on the transfer of acquisition routines, or an acquisition program in this case, to a focal acquisition. Prior experience, thus far, has inconclusive results but should be controlled for in the models. Even though this study delivers an in-depth explanation of acquisition programs, the authors only examine single transactions and disregard serial acquisitions.

Shifting to serial acquirers, Laamanen & Keil (2008) published a study on serial acquisition programs which measured acquirer performance with excess market returns over acquirer shareholders for more than 600 firms in the United States. This is regressed against acquisition rate, variability of the acquisition rate, prior acquisition experience, acquirer size, and acquisition program scope. In order to measure the effect of each independent variable, a set of control variables were considered: acquirer-to-target similarity, target-to-target similarity, use of external advisors, method of payment, proportion of international acquisitions, hostile acquisitions, proportion of private targets, and leverage of the acquirer. The study serves as the foundation for serial acquisition programs from a general perspective. In essence, a serial acquisition program was constructed by Laamenan & Keil as a basic template for future serial acquirers. In addition, the importance of frequency and

timing were reiterated by the findings which concluded that prior acquisition experience has a negative, direct effect on acquirer performance, while the acquisition rate and variability provide tangible measurements for frequency patterns that matter when engaging in many acquisitions. However, variability and rate also exhibited a negative relationship with performance along with the expected negative effect of acquirer size on performance. Aside from the negative effects, serial acquirers were found to outperform other firms in the industry that refrain from acquisitions or behave opportunistically.

Relatedness or complementarity of targets to the strategic goal of the acquiring firm is crucial to acquisition program performance since the sample consists of acquiring firms from multiple industries. Furthermore, frequency patterns for engaging in many acquisitions matters for the performance of the firm. Experience is measured by the number of acquisitions for capability or intensity. These had a negative, direct effect but a positive, indirect effect dependent on timing. Acquisitions programs are essentially developed by active acquirers to learn the optimal number of firms to acquire, how to time transactions, and the types of firms to acquire. In other words, a third layer of acquisition capabilities was uncovered which was managing acquisition programs. These determinants will be utilized in my research as controls for a serial acquisition program. The relevance is that serial acquirers in my research are within the same industry and exhibit high acquirer-to-target similarity as well as target-to-target similarity.

Throughout the literature reviewed, there were differing ideas concerning prior acquisition experience. While Ellis et al. (2011) warned of the issues of transferring prior acquisition management to a current transaction, Laamanen & Keil (2008) encouraged acquirers to develop an acquisition program to improve future performance. One difference to remember between both studies is that Laamanen & Keil are appealing to serial acquirers that exhibit consistent behavior towards acquisitions, whereas Ellis et al. consider single acquisitions by firms. Firms that embody the characteristics of a serial acquirer may need to develop a centralized process for acquisitions to efficiently identify and execute future transactions. The studies done by Laamanen & Keil, as well as Ellis et al.,

mentioned the importance of acquisition scope and acquirer-to-target similarity. However, these are already implied when studying serial acquirers within a single industry.

Given the findings gathered from prior studies on mergers and acquisitions, I would agree with the King et al. (2004) meta-analysis that claims researchers need to include determinants specific to an industry to capture post-acquisition performance more effectively. In addition, post-acquisition performance is best measured with multiple financial performance indicators and an elongated event window. Since serial acquirers in the asset management industry remain unstudied, novel determinants will be identified and introduced along with determinants used in the studies of acquirers in the banking industry. The banking industry fluctuates and reacts in a similar manner to asset management which may indicate an overlap of determinants for post-acquisition performance. Additionally, most literature utilized control variables to isolate the effect the chosen determinants had on post-acquisition performance. In studying the asset management industry, it would be beneficial to control for the determinants studied by Laamanen & Keil (2008) along with pre-acquisition performance (Rao-Nicholson, Salaber & Cao, 2015).

At this point, the reviewed literature only considers a general perspective on acquisition programs across all industries until Hughes et al. (2003) who studied acquisitions within the banking industry as well as investigated the tradeoff between value and empire-building. Aspects considered are managerial incentives, industry consolidation, and financial performance. The effects of insider ownership, options granted, outside block-holder ownership, size of the investment opportunity set, assets acquired, assets sold, the number of institutions acquires, and the asset size on bank performance were measured via the shortfall ratio and Tobin's  $q$ . Managerial entrenchment had a significant effect on bank performance and was defined as the percentage of insider ownership bank directors and executives held. In terms of insider ownership, an increase resulted in decreased bank performance which may reflect similarly for the asset management industry. Most banks, conversely, experienced better financial performance when the increase in assets did not stem from acquisitions.

The authors were able to conclude that an increase in the amount of assets acquired is associated with improved performance in banks without managerial entrenchment and worse performance in banks with managerial entrenchment. Lastly, acquisitions increase the total assets of a serial acquirer, so ROA would increase as a result.

Another difference of opinion between the reviewed literature was agency theory applied to acquirers. Nguyen et al. (2012) branded agency as a value-decreasing motive which was characterized partially by the percentage of insider ownership directors and executives held of the acquirer. On the other hand, Hughes et al. (2003) found that insider ownership increased the value of banks only when the investment opportunities were of lower value. The contrast could be explained by the sample each study examined. The first study encompassed the financial sector along with other industries while the second study only sampled the banking industry. The effect of insider ownership may differ per industry and indicates that insider ownership continues to act as a value-decreasing motive specifically in asset management since investment opportunities are higher amongst serial acquirers.

While the literature reviewed provided extensive insight on post-acquisition performance and acquisition programs, the majority of the studies only include firms in the United States or ASEAN countries. One study that considered an international sample measured only risk in the banking industry (Casu et al., 2015) while the other study looking into the banking industry only used firms in the United States (Hughes et al., 2003). The limited studies on acquisitions in the banking industry means the remaining literature reviewed uses a multi-industry sample and, therefore, only posits general findings which this study can build upon. The first determinant specific to asset management focuses on product diversity which can be measured through a proxy – ETFs. Madhavan (2016) writes on how ETFs experienced exponential growth with individual and institutional investors in the last decade. Asset management firms are joining this trend by offering a variety of ETFs as investment products to clients. The study mentioned how the number of existing ETFs offered globally doubled from 2013 to 2015 and

stretched across all asset classes. Therefore, tracking firm ETF memberships could measure product diversity and its effect on post-acquisition performance.

Regarding product diversity, Casu et al. (2015) explored an international sample of close to 300 banks when identifying risk determinants of acquisition activity. The effects of diversification, loan-related risk, profitability, leverage, and size were measured as determinants. Even though banks seek diversification via nonbank activities, firms tend to return to similarity post-acquisition. Diversification ended up not increasing risk for acquirers, but higher absolute size resulted in increased risk for banks post-acquisition. Since asset management and banking are encompassed in the same sector, product diversity and acquirer size may have the same effect on post-acquisition performance.

The second determinant specific to asset management examines the effect human capital has on post-acquisition performance. In a search to locate better financial performance indicators, Crook et al. (2011) created a meta-analysis of nearly 70 empirical studies on human capital. Moderators included a measure of human capital, a measure of firm performance, and a report on the bivariate relationship between the two measures. Expectedly, mergers and acquisitions result in either the retention or reduction in the number of employees from a target to an acquirer. The authors found the relationship between human capital and performance is more significant when human capital is measured specific to the industry as opposed to in general. Firm performance additionally improved when firms retained experienced management and employees while developing and attracting additional human capital. Most asset management clients have a relationship with a financial advisor. Retaining target employees could potentially attract target clients or lead to a loss if those employees leave. Measuring the percentage of advisory services a firm offers indicates resources allocated to developing and retaining talented financial advisors which may determine the post-acquisition performance of an asset management firm.

## II. THEORETICAL FRAMEWORK

In accordance with prior literature, this study measures post-acquisition performance with the following indicators of financial performance: ROA and sales margin. These are measured from a long-term event window post-acquisition. The models additionally control for determinants from previous studies that demonstrated significance in post-acquisition performance. However, this study concentrates on the determinants specific to asset management that affect post-acquisition performance.

Franklin Templeton, an asset management firm headquartered in the United States, presents a unique instance in which a firm performs serial acquisitions and acquires a similar-sized competitor. Over the span of 2018 to 2020, Franklin Templeton acquired the following firms: Random Forest Capital, Edinburgh Partners, Benefit Street Partners, and Legg Mason. In continuance, Franklin Templeton acquired a few additional firms in 2021. However, the most prominent was its acquisition of Legg Mason, a competitor and fellow serial acquirer in the industry. In 2015, Franklin Templeton and Legg Mason each held over \$700 billion USD in assets under management (Willis Towers Watson, 2016). Despite multiple acquisitions in 2016, Legg Mason, unable to sustain growth, was eventually acquired by Franklin Templeton which doubled its assets under management due to the acquisition. Franklin Templeton successfully integrated small and large acquisitions in the long-term which shed light on the process of handling such acquisitions.

In an interview, Jennifer Johnson, president and CEO of Franklin Templeton, was asked how to successfully manage an acquisition and the sequential integration (Byrne, 2021). She advised firms to focus on business growth by diversifying products, and positive net flows as a result, to better sustain an acquisition. Additionally, she emphasized the importance of having a team of talented advisors that clients seek. Other serial acquirers in the industry may already focus on positive net flows, so measuring product diversification and talented advisors could provide further insight on serial acquisition performance specific to asset management.

### **ETF Membership**

A finding by King et al. (2004) was “researchers simply may not be looking at the ‘right’ set of variables as predictors of post-acquisition performance”. In a similar light, industries react differently to economic events or global trends which implies that industries could have specific determinants to measure post-acquisition performance. An increasingly prevalent trend in asset management is the number of ETFs on the market for investors. More people are investing, so firms need to capture these new investors and retain existing ones with the types of products offered. Additionally, product diversification was mentioned as a strategy for sustaining growth in acquiring firms by Franklin Templeton (Byrne, 2021). When an asset management firm acquires another, it can either retain the existing products of the target or launch hybrid products as a newly combined firm. An acquirer may, conversely, choose to drop the products from the target instead which might result in a loss of prospective clients from the target firm. The recent exponential growth of ETFs amongst investors, previously mentioned by Madhavan (2016), indicates the potential for product diversification in asset management firms. A variety of ETFs are currently offered by firms and based on multiple asset classes. Clients are seeking diversity for investment portfolios; ETFs span across risk profiles and, thus, capture a wider client group. Firms that offer a higher percentage of existing ETFs offer clients more product diversity. Each fund is available on a global scale and can address different client risk profiles. Assessing the number of ETF memberships held per firm to the total number of existing ETFs globally at the conclusion of a serial acquisition program would be an effective measurement for product diversification.

*Hypothesis 1: The higher the percentage of ETFs offered by an acquirer, the higher the performance of an acquisition program.*

### **Advisor Services**

Revisiting Crook et al. (2011) gives insight into the effects of human capital on firm performance. Although that study did not focus on acquisitions, it did measure firm performance when human capital was

invested in, developed, or attracted. The authors concluded that firms achieving these tasks with human capital resulted in improved performance. Acquisitions essentially attract or invest in human capital through the retention of employees from the target to the acquirer. Financial advisors are a valuable commodity to asset management firms since they build relationships with clients. Clients are more inclined to trust and remain reliant on financial advisors when they are more experienced or knowledgeable. Due to the relationship most asset management clients have with a financial advisor, this study assumes that retaining and developing financial advisors will retain clients from the target firm or attract clients to the combined firm which would increase the financial performance of the acquirer. Franklin Templeton emphasized the importance of retaining talent in the firm to sustain long-term growth as a serial acquirer (Byrne, 2021). Firms in the financial sector often allocate resources to larger divisions and offer a higher career development budget to employees in client-facing roles. Clients regularly deal with financial advisors and trust them with growing or sustaining assets. Financial advisors are categorized under advisory services in the breakdown of business operations. If advisory services comprises a large percentage of business operations, then it has a higher budget to develop financial advisors, retain experienced financial advisors, or onboard talented financial advisors from the target. Thus, measuring the proportion advisory services has in overall operations would indicate the quantity of human capital that attracts clients an acquirer can retain and the effect it has on post-acquisition performance.

*Hypothesis 2: Acquirers allocating a higher percentage of business operations to advisory services will have better post-acquisition performance.*

### **Insider Ownership**

Industry consolidation may be attributed to hubris due to the turnover of leadership in the industry or agency theory due to management. Hubris and agency can lead to empire-building behavior by firm leadership which indicates managerial entrenchment if acquisitions occur. Hughes et al. (2003) examined the effects of insider ownership on bank performance. Managerial entrenchment in banks is demonstrated by poorer bank



performance when acquisitions occur. Their findings showed that insider ownership above 5% had a negative effect on post-acquisition performance. Many firms in the asset management industry generously award executives with equity-based bonuses. Insider ownership paired with large investment opportunities in the banking industry led to worse performance. Since asset management is experiencing industry consolidation, firms are becoming serial acquirers which implies a large investment opportunity. Insider ownership is already present in the industry. Paired together, asset management firms are at risk of managerial entrenchment which entices leadership to acquire with empire-building behavior instead of with a synergistic approach resulting in worse post-acquisition performance. My research is looking into serial acquirers in the asset management industry, similar to banking, which is also predisposed to insider ownership. The higher the percentage of insider ownership, the more the entrenchment effect, or negative effect, increases. Managerial entrenchment is additionally associated with inefficiency, ergo performance, in firms. Thus, insider ownership would negatively influence acquisition performance in asset management as well. Based on the statistical data on the percentage of insider ownership in firms, a negative effect is expected.

*Hypothesis 3: Acquirers with a higher percentage of insider ownership will perform worse post-acquisition.*

### **Cash-financed Transactions**

To further solidify acquisition performance, King et al. (2004) analyzed studies investigating acquisitions by conglomerate firms, acquisition of related firms, method of payment for acquisitions, and prior acquisition experience of an acquirer. While the financial performance of firms engaging in acquisitive activity remains unexplained, the method of payment indicated the acquiring firms' beliefs of the target firms' overvaluation or undervaluation – either paid in equity or cash. As empire-building motives are related to negative performance, synergistic motives are related to positive performance (Nguyen, Yung & Sun, 2012). In their study, cash payers were associated with synergistic motives which indicates better post-acquisition performance. Lastly, combining

cash-financing and stock-financing were found to improve post-acquisition performance (Rao-Nicholson, Salaber & Cao, 2015). Serial acquirers most likely do not have large enough cash reserves to fully finance all acquisitions in cash, so the likelihood of combined offers increases which increases the chances of better post-acquisition performance.

*Hypothesis 4: Serial acquisition programs using a higher percentage of cash as a method of payment will perform better post-acquisition.*

The culmination of the aforementioned framework identifies the necessary determinants and methods of measurement for each determinant for an acquisition program. A mix of determinants can be tailored to industry-specific acquisitions and serial acquirers. This study attempts to find more efficient measurements to test theoretical effects and events of industry consolidation within asset management, and how each affects acquisition performance for serial acquirers.

### **III. EMPIRICAL STRATEGY**

#### **Data Collection**

Testing these hypotheses required a comprehensive list of asset management firms. Firm information is predominantly secondary data and desktop research collected from a series of databases and publicly available information online. Subsequently, the financial sector is often studied for trends by research institutes and consulting agencies leading to published reports. The Thinking Ahead Institute via Willis Towers Watson releases an annual report on 500 of the largest asset management firms globally. The Thinking Ahead Institute was founded in 2015 and is comprised of over 60 investment organizations. The institute is renowned for its research and innovation within the investment industry. Reports from 2015 until 2021 are available online with which I compiled a database of asset management firms referring to a report on 500 of the largest asset managers globally in 2018 (Willis Towers Watson, 2019).

Due to the nature of the data needed to test the hypotheses, I needed firms with publicly available financial statements which narrowed the sample down to around 200 firms. Publicly listed firms are required to file a series of forms with the SEC while some privately owned firms opt to file as well. I cross-referenced the 200 firms with the SEC website using the EDGAR database to ensure each firm had an assigned CIK code along with 10-K filings dating back to 2013. The CIK codes were gathered and input into the Compustat database via Wharton Research Data Services in which data pertaining to financial statements for each firm was collected. Data on acquisition activity was assembled from the Thomson SDC Platinum database. Based on acquisition activity, I identified serial acquirers, defined by Laamanen & Keil (2008), as firms that conducted greater than 2 consecutive acquisitions within a 4-year event window which, in this case, was 2014 until 2018. The parameters further reduced the sample to 69 firms. **Table 1** summarizes the sample per country by the number of acquirers and the number of acquisitions. Lastly, any missing data and data on funds for each firm were individually searched in FactSet. All contributing databases are commonly used by academics as well as investment professionals.

**Table 1**

*Summary of sample by country*

<b>Country</b>	<b>Number of Firms</b>	<b>Number of Acquisitions</b>
<i>Brazil</i>	2	21
<i>Canada</i>	11	158
<i>Denmark</i>	1	12
<i>France</i>	1	7
<i>India</i>	1	3
<i>Italy</i>	1	9
<i>Japan</i>	3	23
<i>Netherlands</i>	1	8
<i>South Korea</i>	2	45
<i>Spain</i>	1	22
<i>Switzerland</i>	2	20
<i>United Kingdom</i>	4	26
<i>United States</i>	39	572

### Dependent Variables

Pertaining to King et al. (2004), “multiple measures of firm performance” were analyzed by each constructed model to comprehensively record acquisition implications on asset management firms. ROA from a period of 1 to 3 years post-acquisition was a common performance measurement in these studies. In this instance, the dependent variables measure the post-acquisition performance of a serial acquisition program. ROA, the most common post-acquisition performance measure in previous literature, serves as the primary dependent variable with financial performance acting as a proxy for post-acquisition performance. Sales is a large aspect of asset management. There are usually large teams dedicated to obtaining institutional and retail investors. The secondary dependent variable is in line with measures of post-acquisition performance by Rao-Nicholson, Salaber & Cao (2015) who added sales margin as a proxy. Unlike that study, I will refrain from adjusting the variables to the industry since all firms in this sample are within asset management. However, I will control for time since firms commenced and concluded serial acquisition programs in different fiscal years within the event window of 2014 to 2018. Post-acquisition is considered the fiscal year 3 years after serial acquisition program concludes. Data for post-acquisition ROA (*postROA*) and post-acquisition sales margin (*postMargin*) was collected from Compustat and FactSet for each firm.

### Independent Variables

As a proxy for product diversity, I calculated the percentage of ETFs held by a firm using the number of ETF memberships associated with a firm at the conclusion of a serial acquisition program divided by the total numbers of existing ETFs globally at the conclusion of a serial acquisition program to measure the effect on post-acquisition performance. ETF memberships (*ETFIndex*) are published on FactSet by asset class for each firm in the sample. The number of existing ETFs globally per year is available on the Nasdaq website. For the purposes of this study, all percentages were converted to level figures for each firm in **Model V** and **Model VI**.

The percentage by type of business operation, under which advisory services is a category, is available on FactSet per firm and acts as a proxy for the capacity of a serial acquirer to retain or onboard human capital from acquisitions. To measure this determinant (*Advisors*), I isolated the percentage of operations purely dedicated to advisory services for each firm at the conclusion of a serial acquisition program and transformed those percentages into level figures which applies to **Model IV** and **Model VI**.

Since the banking industry and asset management industry are encompassed under the financial sector, I included insider ownership as a determinant for post-acquisition performance. Hughes et al. (2003) measured insider ownership as a percentage. Findings showed insider ownership above 5% had a negative effect on post-acquisition performance. Similar to that study, I collected data on insider ownership as a percentage. The data was found on FactSet and 10-K filings for each firm for the year prior to the serial acquisition program commencing within the event window in 2014 until 2018. A dummy variable was created for each firm coded as 1 for percentages above 5% and 0 for percentages equal to 5% or below. Insider ownership (*Insider*) was regressed in **Model II** and **Model VI**.

The method of payment appeared in previous literature as a determinant or control of post-acquisition performance. Laamanen & Keil (2008) used method of payment as a control and defined it as the percentage paid in cash for an acquisition, whereas Rao-Nicholson, Salaber & Cao (2015) had all cash-financed acquisitions as a dummy variable. Findings indicated that a combination of cash-financed and stock-financed transaction had a positive relation with performance which is why I chose to measure cash-financed transactions as a percentage. Data for method of payment was gathered from Thomson SDC per transaction per firm and the accumulated percentage of cash-financed transactions (*Cash*) for the entire serial acquisition program within the event window of 2014 to 2018 was calculated per firm. The accumulated percentages were transformed into level figures that appear in **Model III** and **Model VI**.

### Control Variables

I controlled for pre-acquisition performance, volume of acquisitions, acquisition rate, variability of acquisition rate, prior acquisition experience, and acquirer size. Each control variable is used in the constructed models. The same approach as Laamanen & Keil (2008) was used to measure acquisition rate, variability of acquisition rate, prior acquisition experience, and acquirer size. Acquisition rate (*Rate*) is the average volume of acquisitions conducted per year within a serial acquisition program per firm. The variability of acquisition rate (*Var*) is the standard deviation of the annual volume of acquisitions within a serial acquisition program per firm. Prior acquisition experience (*Exper*) is the total volume of acquisitions conducted within a 4-year event window prior to the commencement of a serial acquisition program per firm. Acquirer size (*Size*) is the logarithm of total assets at the commencement of a serial acquisition program per firm. I refrained from adding acquisition program scope since this measured the change in the number of digits in the SIC code of the acquirer. The scope for each firm is with asset management, so limited changes appear.

Based on the method used by Rao-Nicholson, Salaber & Cao (2015), I controlled for time with pre-acquisition performance as, depending on the dependent variable, either the ROA or sales margin (*preROA* or *preMargin*) the year prior to the commencement of a serial acquisition program per firm. Lastly, the volume of acquisitions (*Volume*) is measured, similar to Hughes et al. (2003), as the number of acquisitions during a serial acquisition program per firm. With the exception of prior acquisition experience and pre-acquisition performance, the event window is 2014 until 2018 for all controls. All calculations are based on data pulled from Thomson SDC, Compustat, and FactSet. **Model I** regresses only the controls against the dependent variables to check for consistency.

## Data Analysis

**Models I** through **VI** were estimated in STATA 16 using multiple linear regression analysis under ordinary least squares. The cross-sectional data contains the independent variables which were tested separately with the control variables in **Models II** through **V**. **Model VI**, displayed below for each dependent variable regressed, is comprised of all independent variables and control variables.

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$$\begin{aligned} postROA = & \beta_0 + \beta_1(preROA) + \beta_2(Exper) + \beta_3(Volume) + \beta_4(Rate) + \beta_5(Var) + \beta_6 \log(Size) \\ & + \beta_7(Insider) + \beta_8(Cash) + \beta_9(Advisor) + \beta_{10}(ETFIndex) + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} postMargin = & \beta_0 + \beta_1(preMargin) + \beta_2(Exper) + \beta_3(Volume) + \beta_4(Rate) + \beta_5(Var) + \beta_6 \log(Size) \\ & + \beta_7(Insider) + \beta_8(Cash) + \beta_9(Advisor) + \beta_{10}(ETFIndex) + \varepsilon_{it} \end{aligned}$$


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While most independent and control variables contained complete information from the primary data source respective to the variable, I was able to fill in missing data with calculations made using information from the other databases cited or cross-referencing 10-K filings. All variables are level figures apart from the log transformations for acquirer size and the dummy variable for insider ownership to create a more normalized distribution.

## IV. RESULTS AND INTERPRETATION

As depicted below, **Table 2** presents a summary of statistics and correlation matrix for all variables. The matrix additionally exhibits correlations below 0.6000 between all independent variables which lowers the probability of multicollinearity existing in the models. In general, most firms in the sample have a positive post-acquisition ROA. Compared to the pre-acquisition ROA, the statistics for post-acquisition ROA were higher which indicates that, on average, serial acquisitions stimulated growth and profitability in the long-term. The same logic partially applies for the comparison between post-acquisition sales margin and pre-acquisition sales margin. Although the *max* for sales margin decreased, the *mean*, *median*, and *min* increased in the long-term.

Additionally, some firms in the sample did not conduct acquisitions before the event window which indicates the capability, or lack thereof, of those firms to manage acquisitions during the event window of a serial acquisition program. As a serial acquirer was defined as a firm acquiring 3 or more firms consecutively during the designated event window, the statistics for volume of acquisitions were expected. The average number of acquisitions for a firm was around 13 which indicates the level of activity within these serial acquisition programs. On average, firms in the sample conducted close to 3 acquisitions per year within the event window of their respective serial acquisition programs. The variance of the acquisition rate is not significantly large. However, some firms in the sample exhibited greater variance which indicates the amount of time between acquisitions within the program. Based on the statistics for acquirer size, the sample contains a combination of small to large firms which indicates the number of resources a firm can allocate to acquisitions and most likely will deliver a mixed effect in this instance.

The statistics for insider ownership indicate that firms in the sample, on average, had slightly less than 5% ownership amongst executive members at the commencement of their serial acquisition programs which may indicate a minimal negative effect. Most firms allocated more than 50% of business operations to advisory services at the conclusion of their serial acquisition programs which indicates a higher capability to retain or onboard quality financial advisors from acquisitions. The average for method of payment via cash is around 15% which indicates that a combination of cash and stock offerings occurred during the serial acquisition program which is expected to have a positive effect of performance. At the conclusion of a serial acquisition program, the product offering of a firm was comprised, on average, of over 4% of the total number of existing ETFs that same year. Holding a higher market share of ETFs indicates the product diversity a firm offers which is expected to have a positive effect of performance as well.

**Table 3** presents the models estimated for post-acquisition ROA which serves as an indicator for post-acquisition performance. Focusing on R-squared, **Models I** through **VI** explain 53% to 63% of the variability of



the observed data. Supporting *Hypothesis 3* in **Model II**, insider ownership had a negative effect on long-term performance existing at a 5% significance level. **Model III** switches out insider ownership for percentage of cash as a method of payment which had a positive effect on post-acquisition ROA, yet at an insignificant level. This is in line with *Hypothesis 4* which is not fully supported due to the insignificance. **Model IV** replaced cash as a method of payment with percentage of advisory services which resulted in a positive effect at a 10% significance level and supports *Hypothesis 2*. **Model V** estimates the controls with the percentage of ETF memberships a firm holds out of the total number of existing ETFs offered globally. This resulted in a positive effect at a 5% significance level which supports *Hypothesis 1*. The culmination of all controls and independent variables is shown in **Model VI**. For the independent variables, ETF memberships had a positive effect at a 10% significance level, while insider ownership and advisory services were at a 5% significance level with negative and positive effects, respectively. However, the results for **Model VI** are generally inconclusive since this model suffers from overidentification.

**Table 4** displays the results for performance when measured by post-acquisition sales margin as an indicator for post-acquisition performance. **Models I** through **VI** were able to explain around 25% to 30% of the variability of the observed data according to the R-squared for each model. The only independent variable that held significance was percentage cash as a method of payment in **Model III**. The positive effect at 10% significance level supports *Hypothesis 4*. The other independent variables had similar effects as **Table 3** except ETF memberships which changed to a negative effect in **Table 4**. Despite the change, the effects of these independent variables were at insignificant levels.

**Model I** in **Table 3** and **Table 4** test only the control variables against the dependent variables to ensure consistency with the results found by Hughes et al. (2003), Laamanen & Keil (2008), and Rao-Nicholson, Salaber & Cao (2015). In accordance with Laamanen & Keil, negative effects were found in **Table 3** for acquirer size at a 5% significance level and acquisition rate at a 1% significance level. Conversely, **Table 4** shows a positive

effect for acquirer size at a 5% significance level, but consistency with a negative effect for acquisition rate at a 5% significance level. While **Table 3** and **Table 4** contradicted the negative effects found by Laamanen & Keil for variability of the acquisition rate and prior acquisition experience, it was at insignificant levels. On the other hand, **Table 3** and **Table 4** were in agreement with Rao-Nicholson, Salaber & Cao regarding pre-acquisition performance. These had positive effects at 1% and 5% significance levels. Like Hughes et al., the volume of acquisitions resulted in positive effects **Table 3** and **Table 4** at 1% and 10% significance levels, respectively. Overall, the controls resulted in findings consistent with previous literature.

### **Multicollinearity**

Additional tests were run for multicollinearity in the models using the variance inflation factor (VIF). Based on the threshold of 10 imposed by Hair et al. (2006), multicollinearity does not exist between the independent variables. Each variable had a VIF below 10 with the highest VIF being 2.08. Volume of acquisitions and acquisition rate appeared to suffer from multicollinearity. However, this was already addressed due to the high correlation between the two controls along with variability of the acquisition rate.

### **Robustness Checks**

A robustness check was performed on **Models II through V** by remeasuring the dependent variables for each model that an independent variable resulted in significance. I calculated the industry average for ROA and sales margin for the year each firm concluded a serial acquisition program by creating an industry sample of firms on the list of 500 of the largest asset managers globally in 2018 (Willis Towers Watson, 2019). Based on these averages, I recoded *postROA* and *postMargin* as 0 if negative, 1 if positive and below the industry average, and 2 if above the industry average. Each model resulted in a similar R-squared compared to the R-squared using the original method of measurement for the dependent variables. The coefficients for the independent variables resulted in the same sign but with slightly less significance indicating that the models are robust.

**Table 2**  
Descriptive statistics and correlations

	Mean	Median	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1 Post-acquisition ROA	2.98%	1.24%	-10.77%	21.16%	1.0000														
2 Pre-acquisition ROA	2.35%	0.81%	-4.86%	19.87%	0.6569	1.0000													
3 Post-acquisition Sales Margin	38.51%	40.43%	1.24%	89.96%	0.0155	-0.0725	1.0000												
4 Pre-acquisition Sales Margin	24.30%	32.59%	-464.30%	94.04%	0.0783	0.0672	0.2962	1.0000											
5 Prior Acquisition Experience	21.91	11	0	183	0.0076	-0.0657	0.1500	0.1508	1.0000										
6 Volume of Acquisitions <sup>†</sup>	13.42	8	3	78	0.0034	-0.0578	-0.1366	0.0187	0.3573	1.0000									
7 Rate of Acquisitions <sup>†</sup>	2.93	2	0.5	15.6	-0.0221	-0.0486	-0.1674	0.0233	0.3413	0.9914	1.0000								
8 Variability of Acquisition Rate <sup>†</sup>	1.53	1.1	0.5	9.34	-0.0039	-0.0650	-0.0778	-0.0656	0.1936	0.7201	0.7133	1.0000							
9 Acquirer Size (USD)	\$402,667,430,000	\$144,576,000,000	\$252,600,000	\$2,671,318,000,000	-0.4685	-0.4468	0.2915	0.0636	0.1826	-0.0164	-0.0242	-0.0033	1.0000						
10 Insider Ownership	3.36%	0.66%	0.00%	47.78%	-0.0134	0.2175	-0.1500	0.0038	0.1470	0.2760	0.2975	0.2435	-0.2253	1.0000					
11 Advisory Services	56.24%	59.70%	0.00%	100.00%	0.2727	0.2819	0.2496	0.1616	-0.1070	-0.2313	-0.2395	-0.1822	-0.0684	0.2997	1.0000				
13 Cash-financed Transactions <sup>†</sup>	15.82%	8.96%	0.00%	100.00%	0.4786	0.3728	-0.0451	-0.0928	0.1107	0.0778	0.0631	0.0376	-0.4977	-0.0420	0.0260	-0.0724	1.0000		
14 ETF Memberships	4.44%	0.14%	3.00%	2.71%	-0.0308	-0.0085	0.1075	0.0034	0.1945	0.0373	0.0509	0.0094	0.6134	-0.1714	-0.2377	0.2197	0.0898	1.0000	

<sup>†</sup>Event window of 2014-2018

**Table 3**

*Multiple linear regression analysis using cross-sectional data with post-acquisition return on assets as the main dependent variable*

	<b>Model I</b>	<b>Model II</b>	<b>Model III</b>	<b>Model IV</b>	<b>Model V</b>	<b>Model VI</b>
<b>Constant</b>	0.0693 (0.0219)***	0.0747 (0.0214)***	0.0664 (0.0220)***	0.0443 (0.0265)*	0.0863 (0.0225)***	0.0527 (0.0265)**
<b>Pre-acquisition ROA</b>	0.5845 (0.0996)***	0.6164 (0.1024)***	0.5535 (0.1036)***	0.5511 (0.1004)***	0.4965 (0.1042)***	0.4829 (0.1055)***
<b>Prior Experience</b>	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
<b>Volume of Acquisitions</b>	0.0056 (0.0021)***	0.0049 (0.0021)**	0.0055 (0.0021)**	0.0051 (0.0021)**	0.0064 (0.0021)***	0.0046 (0.0021)**
<b>Acquisition Rate</b>	-0.0288 (0.010)***	-0.0246 (0.0103)**	-0.0276 (0.0105)**	-0.0262 (0.0104)**	-0.0331 (0.0103)***	-0.0232 (0.0104)**
<b>Variability of Acquisition Rate</b>	0.0008 (0.0042)	0.0016 (0.0041)	0.0010 (0.0042)	0.0008 (0.0042)	0.0010 (0.0041)	0.0019 (0.0039)
<b>Acquirer Size</b>	-0.0098 (0.0040)**	-0.0111 (0.0040)***	-0.0101 (0.0041)**	-0.0066 (0.0044)*	-0.0179 (0.0054)***	-0.0134 (0.0055)**
<b>Insider Ownership</b>		-0.0230 (0.0108)**				-0.0241 (0.0107)**
<b>Use of Cash Payment</b>			0.0231 (0.0216)			0.0210 (0.0202)
<b>Percentage of Advisory Services</b>				0.0192 (0.0118)*		0.0245 (0.0114)**
<b>Percentage of ETF Memberships</b>					0.9885 (0.4410)**	0.7235 (0.4333)*
Observations	69	69	69	69	69	69
R-squared	0.5348	0.5667	0.5433	0.5540	0.5702	0.6266

\*Significant at 10% level

\*\*Significant at 5% level

\*\*\*Significant at 1% level

**Table 4**

*Multiple linear regression analysis using cross-sectional data with post-acquisition sales margin as the main dependent variable*

	<b>Model I</b>	<b>Model II</b>	<b>Model III</b>	<b>Model IV</b>	<b>Model V</b>	<b>Model VI</b>
<b>Constant</b>	0.2081 (0.1016)**	0.2145 (0.1050)**	0.1558 (0.1047)	0.1267 (0.1403)	0.2030 (0.1036)**	0.0485 (0.1463)
<b>Pre-acquisition Sale Margin</b>	0.0842 (0.0332)**	0.0842 (0.0335)**	0.0738 (0.0333)***	0.0871 (0.0335)**	0.0834 (0.0336)**	0.0737 (0.0340)**
<b>Prior Experience</b>	0.0006 (0.0007)	0.0006 (0.0007)	0.0007 (0.0007)	0.0005 (0.0007)	0.0006 (0.0007)	0.0007 (0.0007)
<b>Volume of Acquisitions</b>	0.0197 (0.0114)*	0.01915 (0.0116)*	0.0184 (0.0112)*	0.0184 (0.0115)*	0.0190 (0.0117)*	0.0133 (0.0121)
<b>Acquisition Rate</b>	-0.1171 (0.0565)**	-0.1140 (0.05804)**	-0.1078 (0.0060)**	-0.1105 (0.0572)**	-0.1135 (0.0580)**	-0.0803 (0.0607)
<b>Variability of Acquisition Rate</b>	0.0140 (0.0229)	0.0145 (0.0232)	0.0142 (0.0225)	0.0142 (0.0230)	0.0137 (0.0231)	0.0151 (0.0229)
<b>Acquirer Size</b>	0.0411 (0.0196)**	0.0397 (0.0204)**	0.0438 (0.0194)**	0.0516 (0.0233)**	0.0459 (0.0250)*	0.0680 (0.0289)**
<b>Insider Ownership</b>		-0.0165 (0.060)				-0.0402 (0.0615)
<b>Use of Cash Payment</b>			0.1910 (0.1126)*			0.2150 (0.1170)*
<b>Percentage of Advisory Services</b>				0.0539 (0.0639)		0.0672 (0.0657)
<b>Percentage of ETF Memberships</b>					-0.7297 (2.3065)	-2.125 (2.379)
Observations	69	69	69	69	69	69
R-squared	0.2518	0.2528	0.2856	0.2605	0.2531	0.3064

\*Significant at 10% level

\*\*Significant at 5% level

\*\*\*Significant at 1% level

## V. DISCUSSION AND CONCLUSION

The determinants of the performance of acquisitions programs expands throughout industries and firms. Although post-acquisition performance in the banking industry was explored (Hughes et al., 2003), serial acquirers in the financial sector remained untouched. However, serial acquirers across multiple industries were studied and found to have a general set of determinants that influence post-acquisition performance (Laamanen & Keil, 2008). While financial firms were incorporated into the sample, that study lacked determinants specific to the industry which could further improve performance. Delving deeper, the financial sector branches into numerous industries including asset management. Despite the similarities in the cycles of industries under the financial sector, firms in each industry operate within specialized functions which is why specialized determinants should be identified for each. With the increasing consolidation of the asset management industry over the last decade, serial acquisitions are becoming a favored practice amongst firms. Identifying determinants that improve the post-acquisition performance of asset management firms may advance existing serial acquisition programs or encourage firms to develop a serial acquisition program to remain competitive in the market.

Referring to long-term financial performance as a proxy for post-acquisition performance, this study examined ROA and sales margin in line with previous literature (Rao-Nicholson, Salaber & Cao, 2015). Each financial indicator was analyzed at the 3-year mark after the final acquisition was closed for each firm within the event window of a serial acquisition program which is a more effective benchmark according to meta-analyses conducted on post-acquisition performance (King et al., 2004). In this study, the models better emulated the effects of the controls and determinants on ROA than on sales margin since more variable significance was found and a higher percentage of variability in the data was explained with ROA. Sales margins in asset management may also be affected for reasons external to serial acquisitions, such as interest rates or fund management fees. ROA measures how firm allocate assets to generate profit which acquisitions affect more directly than sales.

Similar to the banking industry, asset management awards executives with equity-based bonuses which leads to a certain percentage of insider ownership that may influence the decision to acquire multiple competitors in a shorter amount of time. The negative effect insider ownership had on post-acquisition performance confirms the findings of Hughes et al. (2003). In that study, insider ownership was linked to acquisitions in the banking industry being fueled by agency or hubris due to executives holding a certain percentage of equity in the firm. The same finding appeared for asset management in that post-acquisition performance is negatively affected if synergy is neglected in the decision to pursue acquisitions.

Cash as a method of payment for acquisitions is an applicable determinant across industries (Rao-Nicholson, Salaber & Cao, 2015). However, it proved to have a significant positive effect only when post-acquisition performance was measured with sales margin. Although cash-financed transactions had a positive effect for both types of financial indicators, it did not have significance when regressed on ROA and, therefore, does not serve as an effective determinant for post-acquisition performance amongst asset management firms. One reason may be that the serial acquirers perform a higher volume of acquisitions, so the value-increasing properties of cash-financed transactions are dampened.

As a proxy for the capability of retaining and onboarding human capital in asset management firms, advisory services consist of financial advisors that provide investment guidance unique to clients. Typically, larger divisions in firms have more resources allocated to career development and training which improves current talent or attracts new talent to the firm (Crook et al., 2011). This was found to improve firm performance which also applies to asset management firms that allocate a larger percentage of business operations to advisory services. Firms that invest more resources into advisory services experience better post-acquisition performance. One reason may be having the ability to onboard more financial advisors from the target firm or the incentive for advisors from the target firm to stay with the acquirer due to career development opportunities.

Product diversity and growth is important in an industry that continues to consolidate because of fragmentation. With the increasing number of investors globally, a firm needs to offer more products that differentiate it from competitors. ETFs are a more recent and popular option added to investment strategies. Firms that offer more ETFs can capture a wider client group since this strategy spans across every asset class and sector (Madhavan, 2016). Numerous ETFs are launched on a yearly basis, so firms that hold a higher percentage of ETF memberships can offer more types of ETFs to clients. Therefore, firms with a higher percentage of ETF memberships, were found to perform better post-acquisition. Better performance may stem from the acquirer onboarding existing ETFs from the target or launching new ETFs as a combined entity post-acquisition since the acquirer furnished more resources to manage additional funds. A more diverse product base is able to represent the different risk profiles clients seek.

While some findings from this study may be significant, there are limitations that need to be addressed. Since the asset management industry is fragmented, many firms are private and provided limited or no access to financial statements. Without financial statements, the data analysis required by this study is not feasible. Future researchers may be able to access financials for private and boutique firms to expand the sample size. This study was created with a smaller sample size, so findings may have varied significance when the sample is larger. Due to time limitations and sample size, ROA and sales margin were the chosen financial proxies for post-acquisition performance. Researchers could calculate or access information to compile data on Tobin's  $q$  as a financial proxy which was used in past literature within the banking industry. Although the sample is comprised of international and public firms, it may be beneficial to see if findings remain consistent when focused on specific geographic regions since post-acquisition effects varied per region in past studies.

More effective methods to measure human capital and product diversity on post-acquisition performance could be implemented for the asset management industry. It would be beneficial to compare ETF memberships per firm from the commencement to the conclusion of a serial acquisition program. That method can show how



many ETFs were acquired or created from the acquisition. However, I only had access to ETF memberships from 2016 until 2022 while some serial acquisition programs began in 2014. Another is having access to the number of licensed financial advisors per firm. Only several firms published the number of licensed advisors in annual reports, so future researchers may have better access to the Chartered Financial Analyst (CFA) Institute to collect that data. Showing the numbers of CFAs in a firm would be a more effective measurement of retaining human capital from acquisitions.

From the perspective of asset management firms, my results from this study suggest that serial acquisitions will continue to occur in the industry especially amongst small- to medium-sized firms seeking to remain competitive. Leadership should be wary of the synergy of an acquisition before pursuing the transaction. Additionally, the firm should allocate more resources to internal career development amongst financial advisors and prepare to expand product offerings to clients before an acquisition commences to have the ability to onboard target employees and products. In terms of future studies, academics and researchers should continue to identify proxies and measurements specific to the asset management industry that lead to improved post-acquisition performance. While my findings were not as significant as desired, I hope that those with expertise in the industry can build off this study and create a more efficient serial acquisition program that inspires the development of similar programs in other industries experiencing consolidation.

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## Appendices

### Appendix A

#### Summary of literature review

Authors	Year	Journal	Method	Sample	Variables	Findings
1 Hughes, Lang, Mester, Moon & Pagano	2003	Journal of Banking & Finance	Quantitative	169 highest-level bank holding companies in the U.S. during 1992 until 1994 via Compact Disclosure and Federal Reserve System	<p><i>Dependent:</i> Tobin's q ratio, shortfall ratio</p> <p><i>Independent:</i> insider ownership, options granted, outside blockholder ownership, size of investment opportunity set, assets acquired, assets sold, number of institutions acquired, number of institutions sold, asset size</p>	<p>"Managerial entrenchment effect increases with insider ownership and strongest among banks with better investment opportunities."</p> <p>"Increase in assets not obtained via acquisition is associated with better financial performance at most banks."</p> <p>"Benefits of acquired assets accrues in banks without entrenched insiders."</p>
2 King, Dalton, Dan, Daily & Covin	2004	Strategic Management Journal	Meta-analysis	93 empirical studies during 1921 until 2002 via computer-aided keyword searches and manual searches of academic journals	<p><i>Dependent:</i> abnormal returns, ROA, ROE, ROS</p> <p><i>Moderation:</i> event window, estimated population, number of studies, sample size</p>	<p>"Complementary resources imply that a positive interaction exists between acquired and acquiring firm resources."</p> <p>"[M]ultiple measures of firm performance should be employed in post-acquisition performance research to better document the complete performance implications of M&amp;A activity."</p> <p>"Researchers simply may not be looking at the 'right' set of variables as determinants of post-acquisition performance."</p>
3 Laamanen & Keil	2008	Strategic Management Journal	Quantitative	611 public acquirers in the U.S. during 1990 until 1999 via Thomson SDC Platinum database, Compustat, and CRSP	<p><i>Dependent:</i> excess market returns to acquirer shareholders</p> <p><i>Independent:</i> acquisition rate, variability of the acquisition rate, acquisition experience, acquirer size, acquisition program scope</p> <p><i>Control:</i> acquirer-to-target similarity, target-to-target similarity, use of external advisors, method of payment, proportion of international acquisitions, hostile acquisitions, proportion of private targets, acquirer's leverage</p>	<p>Acquisition experience shows a "significant direct negative effect" on performance.</p> <p>Acquisition rate and variability "exhibit negative relationship" with performance.</p> <p>Product terms demonstrated positive relationships with performance.</p> <p>Direct negative effect of acquirer size was expected.</p> <p>"Serial acquirers, which over time accumulate their acquisition experiences and gradually grow their acquisition capacity, tend to outperform acquirers that perform acquisitions more opportunistically or do not perform acquisitions at all."</p>

4	Crook, Todd, Combs & Woehr	2011	Journal of Applied Psychology	Meta-analysis	66 empirical studies from 1991 onward via computer-aided keyword searches	<i>Moderation:</i> measure of human capital, measure of performance, and report bivariate relationship	"[T]o improve performance, firms not only should attract, invest in, and develop human capital but should also retain experienced managers and employees, because doing so pays off handsomely." "[T]he link between human capital and performance is stronger when human capital is firm specific rather than general."
5	Ellis, Reus, Lamont & Ranft	2011	The Academy of Management Journal	Qualitative	305 domestic acquisitions in the U.S. in excess of \$100 million USD during 1995 until 1998 via Thomson SDC Platinum database and Compustat	<i>Dependent:</i> ROA <i>Independent:</i> acquisition experience, bidder-to-target dissimilarity, process-related factors <i>Control:</i> target firm's prior performance, relatedness, transaction value, relative size, simultaneous acquisitions, average industry profitability	"Perceptions of similarities in organizational cultures also magnified the negative effects of prior experience in small acquisitions." "[T]ransfer of acquisition routines to a focal acquisition can result in positive, neutral, or negative effects."
6	Nguyen, Yung & Sun	2012	Journal of Business Finance & Accounting	Quantitative	3,520 completed M&A deals by publicly traded U.S. acquirers exceeding \$10 million USD during 1984 until 2004 via Thomson One M&A database and CRSP	<i>Dependent:</i> M/B ratio, ROA, Tobin's Q <i>Independent:</i> market timing motives, response to industry or economic shock motives, agency, or synergy motives	"Firms that are more acquisitive are likely to be associated with higher levels of agency problems." "Cash payers are more likely to be related to the synergy motive." "[C]orporate acquisitions are most likely intertwined with multiple motives such as market timing, managerial self-interest, synergy and hubris."
7	Casu, Dontis-Charitos, Staikouras & Williams	2015	European Financial Management	Quantitative	218 bank-insurance deals and 54 bank-securities deals during 1991 until 2012 via Thomson One Banker M&A database	<i>Dependent:</i> risk <i>Independent:</i> diversification, loan-related risk, profitability, leverage, size	"[B]anks self-select to diversify into particular nonbank activities but become more alike after deals." "[I]ncreased risk in both types of bank-insurance combination relates not to diversification in the form of a larger non-interest income share arising from insurance activities per se but emanates from other factors like absolute size."
8	Rao-Nicholson, Salaber & Cao	2015	Research in International Business and Finance	Quantitative	57 M&A deals in ASEAN countries during 2001 until 2012 via Thomson SDC Platinum and OSIRIS databases	<i>Dependent:</i> ROA, sales margin <i>Independent:</i> pre-M&A performance, stock-financed, cash-financed, same industry, relative target size, level of pre-M&A cash reserves, percentage of target owned, friendly deal, global crisis	"[W]e find, on average, a deterioration of post-M&A performance of the combined firms as measured by the return on assets." "[A]djusted profitability does not differ significantly between cash-financed and stock-financed M&As." "[C]ombined offer of cash and stock is associated with significantly positive changes in performance."

## Appendix B

## Concept matrix of post-acquisition performance measures

<b>Authors</b>	<b>Year</b>	<b>Tobin's Q</b>	<b>Shortfall Ratio</b>	<b>Excess Returns</b>	<b>ROA</b>	<b>M/B Ratio</b>	<b>Sales Margin</b>
1 Hughes, Lang, Mester, Moon & Pagano	2003	X	X				
2 Laamanen & Keil	2008			X			
3 Ellis, Reus, Lamont & Ranft	2011				X		
4 Nguyen, Yung & Sun	2012	X			X	X	
5 Rao-Nicholson, Salaber & Cao	2015				X		X

## Appendix C

## Multicollinearity matrix of controls and independent variables

	<b>VIF</b>	
	<i>Post-acquisition ROA</i>	<i>Post-acquisition Sales Margin</i>
<i>Pre-acquisition ROA</i>	1.65	-
<i>Pre-acquisition Sales Margin</i>	-	1.10
<i>Prior Acquisition Experience</i>	1.30	1.34
<i>Volume of Acquisitions</i> <sup>†</sup>	69.50	69.76
<i>Rate of Acquisitions</i> <sup>†</sup>	68.81	69.21
<i>Variability of Acquisition Rate</i> <sup>†</sup>	2.12	2.14
<i>Acquirer Size (USD)</i>	2.80	2.28
<i>Insider Ownership</i>	1.34	1.31
<i>Advisory Services</i>	1.58	1.56
<i>Cash-financed Transactions</i> <sup>†</sup>	1.18	1.17
<i>ETF Memberships</i>	2.08	1.85

<sup>†</sup>Event window of 2014-2018

## Appendix D

## Multiple linear regression analysis for robustness checks

	Coded postROA			Coded postMargin
	Model II	Model IV	Model V	Model III
<b>Constant</b>	1.8119 (0.2779) <sup>***</sup>	1.5426 (0.3430) <sup>***</sup>	1.9277 (0.2922) <sup>***</sup>	0.3422 (0.2693)
<b>Pre-acquisition ROA</b>	6.5756 (1.2727) <sup>***</sup>	5.9783 (1.2980) <sup>***</sup>	5.401 (1.3533) <sup>***</sup>	0.2269 (0.0857) <sup>***</sup>
<b>Prior Experience</b>	-0.0005 (0.0016)	-0.0012 (0.0016)	-0.0011 (0.0016)	0.0009 (0.0017)
<b>Volume of Acquisitions</b>	0.0277 (0.0269)	0.03015 (0.0271)	0.0425 (0.0268)	0.0475 (0.0289) <sup>*</sup>
<b>Acquisition Rate</b>	-0.1034 (0.1341)	-0.1208 (0.1347)	-0.1861 (0.1336)	-0.2547 (0.1438) <sup>*</sup>
<b>Variability of Acquisition Rate</b>	0.0025 (0.0534)	-0.0055 (0.0538)	-0.0034 (0.0531)	-0.0135 (0.0581)
<b>Acquirer Size</b>	-0.1496 (0.0518) <sup>***</sup>	-0.1092 (0.0574) <sup>**</sup>	-0.2168 (0.0694) <sup>***</sup>	0.1835 (0.0499) <sup>***</sup>
<b>Insider Ownership</b>	-0.2210 (0.1404) <sup>*</sup>			
<b>Use of Cash Payment</b>				0.2514 (0.2895)
<b>Percentage of Advisory Services</b>		0.1664 (0.1526)		
<b>Percentage of ETF Memberships</b>			9.7324 (5.7293) <sup>*</sup>	
Observations	69	69	69	69
R-squared	0.5016	0.4913	0.5048	0.3379