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THE GAME CHANGERS OF THE ASSET MANAGEMENT INDUSTRY

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The Asset Management industry is experiencing a transformative period full of significant challenges and new advancements that is disrupting the industry. This thesis aims to provide an overview of the most important trends that are present in the industry and the main focus will concentrate on the rise of Alternatives and Passives. This thesis will challenge and define the significance of this moment in time for the Asset Management industry and will reiterate the importance for managers to position themselves correctly in order to take advantage of the opportunities that these new trends create.

Keywords: Asset Management, Alternatives, Passives, Margins, Environmental, Social, Governance, Emerging Markets, Technology, Low Rates, Political Uncertainty, Geopolitics, Global Growth

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1. Introduction

This thesis is focused on the Asset Management industry and in specific, how new trends are shaping it nowadays. The objective is to introduce the dynamics of the industry and analyze two important trends: the rise of Alternatives in terms of asset allocation and the rise of passive instruments. One of the resulting financial implications from these trends, namely the pressure on margins, will also be presented.

This thesis is structured as follows:

The first part of the thesis will be devoted to a description of the Asset Management industry and how it has developed in the last hundred years into the so-called "Birth of Modern Investing". A brief picture will be given in terms of Assets under Management (hereof, AuM) across geographies, different approaches to investing and distinctions of the client base. Afterwards the economic landscape will be presented, highlighting the current period with very low interest rates, accommodating monetary policies, geopolitical tensions and resulting in slow global growth. Analyzing the economic landscape is of the utmost importance as it allows us to properly understand how an investor behaves, and in specific, why, and how the aggregated Asset Management industry is changing.

After having analyzed the Asset Management industry and the economic context worldwide, the analysis will focus on the challenges that the industry is facing nowadays. A brief overview of several important trends will be provided; however, this thesis is focused on two main developments which are considered by the author to have a relatively larger importance on the industry. These two main developments are the rise of Alternatives as an asset class and the rise of passive instruments such as Exchange Traded Funds (hereof, ETFs). Then, the analysis will shift to one of the financial implications of these changing patterns: the pressure on margins experienced by many investment companies nowadays.

Finally, the thesis will be concluded with the main discussion points resulting from the analysis part.

2. The Asset Management Industry

2.1. *Brief History of Modern Investing*

The Asset Management industry is a very long-standing one, where one can trace back its roots to around 4,000 years ago (Goetzmann, 2017). However, due to the lack of precise information about the Pre-Modern History of Asset Management, the following paragraphs will introduce a brief history of the last approximately 100 years.

The period after the Stock Market Crash in 1929 until today has been marked by large advances to the understanding of investing and the introduction of key ideas that have helped the Asset Management industry to evolve to the industry it is today, with USD 89 trillion assets worldwide as of 2019 (Heredia *et al.*, 2020).

Systematic investing approaches were facilitated by the stringent disclosures of financial statements and new regulations that were put in place after the Stock Market Crash of 1929 and the resulting Great Depression, whereby investors gained access to important information about possible investment opportunities. In 1934, Benjamin Graham and David Dodd published *Security Analysis*, which encouraged rigorous investment analysis and provided a framework to security analysis. In 1939, *The Theory of Investment Value* was introduced by John Burr Williams, who introduced an important idea that Modigliani and Miller formalized in 1958. Williams also propelled the utilization of refined arithmetic in understanding investment. The ideas behind the two books mentioned above are considered to have set the stage for what is called today Modern Portfolio Theory (Kahn, 2018).

Modern Portfolio Theory was developed by Harry Markowitz in 1952, who introduced mathematical analysis into the area with a precise definition of risk, which was computed as the standard deviation of return. He remarkably changed the Asset Management industry by introducing the *Efficient Frontier*, which translates mathematical analysis into a plot of a frontier consisting of a set of portfolios that minimize risk for any given return or conversely, maximize return for any given level of risk, thus making the trade-off between risk and return as *efficient* as possible. He showed that different investors have different risk aversions (i.e., different risk preferences), and therefore may choose different efficient portfolios. Even though the model has its limitations, it is fair to say that Markowitz shaped Portfolio Analysis in a significant way.

Years later, in 1963, William Sharpe, developed a model of asset returns to put Markowitz' portfolio construction into practice. Sharpe introduced the Capital Asset Pricing Model (CAPM), which focused on the excess return (i.e., returns above the risk-free return), consisting of idiosyncratic (i.e., independent of the market) and systematic component. He introduced the concept of *beta*, which measures an asset's exposure to the market. With the introduction of the CAPM, Sharpe introduced the first theory of asset pricing that had risk as a central component of his model. A few years later, in 1970, Eugene Fama introduced the Efficient Market Hypothesis (EMH) with its three forms of market efficiency: weak, semi-strong and strong. The final significant milestone in this "Modern Portfolio Theory" period was in 1971 with the introduction of the first Index Fund, launched by Wells Fargo. With technological advancements it was finally possible to materialize all the ideas from academia into an actual, real product or vehicle. It was an equally weighted portfolio of 1,500 stocks traded on the New York Stock Exchange (NYSE) which proved very successful, becoming a large part of Blackrock.

However, the years after that, the actual practice of investing was active management. In 1974, Black and Scholes made a few important contributions, introducing the Black-Scholes Model, which is essentially an option pricing formula that provides a theoretical value for the price of European-style options. In that same year, Barr Rosenberg developed a factor model that helped to understand risk better, generalizing on Sharpe's market model. In those same lines, Stephen Ross generalized the CAPM, introducing the Arbitrage Pricing Theory (APT), whose goal was to connect expected returns to risk (the theory was grounded on Financial Economics). Daniel Kahneman and Amos Tversky then introduced a new concept which was based on psychology: the fact that humans are *systematically* irrational (and not only irrational), which in other words means that humans make repeatable and predictable mistakes. As a matter of fact, by studying Behavioral Finance, we can improve our understanding of how humans interact in financial markets (Kahn, 2018).

Over the past 100 years, investment management has changed dramatically, whereby investing has shifted from analysis based on poor or non-existing data, to an investing dominated by theory, large amounts of data and new technological advances that have transformed investing into a highly dynamic, ever-changing activity.

2.2. Main characteristics

Today, this area of finance can be found in many different dimensions and marketplaces, such as a branch in an Investment Bank or as a specialized investment management company that devotes all its resources to fulfilling clients' needs. In this industry, especially trained Investment Professionals manage third parties' money and invest these funds across a broad spectrum of asset classes, from publicly traded stocks, bonds, Alternatives, managed funds, and many other instruments based on available information. It is important to note that eventual losses are not the liabilities of investors' third parties' funds, but liabilities of the people that entrusted the capital to it. In this way, asset managers act on a *fiduciary* basis, as agents on behalf of their clients, which includes a duty of loyalty and a duty of care (Laby, 2017).

The investment management approach can be active, passive or a combination of both. In active management, the asset manager actively allocates funds in order to beat a given Benchmark, therefore generating *alpha*, or in other words, excess return over a given

Benchmark, for the client. The main goal of active management is fulfilling the clients' desired investing goals, devoting all efforts to maximize return and beat the market. Passive investing is, as its own word indicates, a passive approach whereby the funds are usually allocated to an Index Fund, which replicates a given market (e.g., S&P 500), with minimal trading in the market. In this approach, the fund will hold the stocks in the same proportion that they represent in the given Index.

It is evident that the passive approach requires per se much less effort since the investor usually follows a Buy-and-Hold strategy (e.g., buying an Index and holding the position for the long-term) and thus this approach does not involve that many research or transaction costs due to low trading volume. In contrast, active management usually incurs higher costs: the active investor needs to conduct loads of research to identify investment opportunities, such as understanding which stocks are undervalued or will rise the most in value. Therefore, active investing is accompanied by a higher fee charged to the client as a compensation of active efforts to potentially create future excess returns and outperform a given Benchmark.

However, there has been a lot of debate in the past decades about whether an active or a passive approach is preferred when it comes to investing, and in an indirect way, whether the higher fees involved in active management are justified by a higher performance. Even though it is true that active management funds have substantial fixed costs, the percentage that these fixed costs represent should theoretically decrease as the fund itself grows in assets and consequently, fund management fees should fall as a percent of the fund's assets. However, Malkiel (2013) exhibited that in the past, fees have risen substantially as a percentage of the assets managed, despite of the economies of scale that asset management companies usually enjoy. In his study, the author showed that between the period of 1980 and 2010, the asset-weighted expense ratio for Domestic Equity Funds in the US excluding Index Funds and ETFs, went from 0.66 percent to 0.91 percent, while total assets went from USD 25.7 to USD 2,474 billion. Put in another way, the total expenses paid by individual investors to fund managers increased 132 times, while AuM experienced an increase of 96 times. Moreover, active management fees have increased over time not only for individual investors, but also for institutional investors, being this probably one of the underlying reasons for the growth in the financial services industry since 1980. It is therefore important to understand if the increase in the fees is justified by the value added to investors, however, the author showed that during the same time period, there was little persistence in superior performance of active management. In this way, the author suggested that investors look at fund fees not as a percentage of assets, but as a percentage of the excess return, in other words, the *alpha* that the fund generates. This is an interesting perspective that could probably give investors a more accurate view of how much fees they are paying to fund managers and thus can be used as a framework that facilitates a comparison when choosing between different fund managers.

In line with this, Sharpe (2013) arrived at a similar conclusion. In his research, the author made a comparison between two possible investments, one with low expenses and the other one with high expenses, and in two different contexts, one in which a single investment is done and held for several years and another where recurring investments are made over several years. He found that in any of the above-mentioned cases, low investment costs were critical for investment success: passive Index Funds, compared with the more costly active funds, could improve an investor's retirement savings by more than 20%. While he concluded that this does not mean there are not any active managers that generate enough excess return to offset costs, he argued that these managers are usually very hard to find, and that compared to the passive option, fees are incredibly high.

Having set the stage for the active and passive debate, the distinction between these two approaches does not necessarily mean that it is a black-or-white decision for neither individuals nor investment managers. As a matter of fact, many asset management companies usually combine both approaches in order to reap benefits from both types of investing. There is a continuum of exposures and different degrees of transparency into the portfolio that make up the investment strategies. For instance, Blackrock, the largest investment company in the world in terms of AuM, believes that "both active and passive investment strategies can be complementary to each other and are frequently used together by investors" (*Active and Passive Investing*, 2020). The company is involved in both actively managed funds and passive funds such as ETFs through its platform *iShares*.

The clients of the Asset Management industry, in other words, the holders of the assets entrusted to investment companies, can be very different. The main clients can range from institutional clients, endowments and foundations, pension funds, insurance companies to High-Net-Worth Individuals (HNWI). Retail clients are a rarer case of the active part of Asset Management, since there is usually a minimum capital to be invested that may well be above the average worth of a retail individual. However, they may well be one of the largest client bases in passive investing.

Different asset owners may have different preferences in terms of time horizon, investment objectives, constraints, and risk tolerances. For instance, pension funds or insurance companies usually have a long-time horizon in order to meet their investment objective, which is to generate sufficient income to meet future liabilities. Similarly, endowments and foundations usually look after the preservation of capital ("principal") with a likewise long-term horizon. Instead, there can be other type of investors which may have a specific need to grow their money for a project in the near future and so may opt to invest with a short-term mentality. Important to note is that these two types of investment horizons are related to different products, in other words, the assets of the short-term investor will be invested in instruments such as money markets or ultra-short-term bonds, while investors with a longer investment horizon will see their assets be allocated to other type of products such as stocks, bonds or derivatives, amongst others (Corporate Finance Institute, 2020).

According to Heredia *et al.* (2020), worldwide AuM totaled USD 89 trillion as of 2019. PWC's prediction is that this figure will rise to around USD 102 trillion by 2020, which translates into a compound annual growth rate (CAGR) of almost 6 percent (PricewaterhouseCoopers, 2020). This trend is partly facilitated by a worldwide increasing wealth creation. According to data used in *The Wealth Report*, the number of Ultra-High-Net-Worth Individuals (UHNWI), which own net assets of USD 30 million, is predicted to increase by 22 percent from 2018 to 2023, compared to the 18 percent during the five years before 2018. This accelerated expansion of wealth across the world partly explains the "dry powder" in terms of assets to be deployed in finding investment opportunities (*Global UHNWI population forecast to grow by 22% over the next five years*, 2019).

Since the industry was created, the largest market for the Asset Management industry has been and is still North America, which managed USD 37.4 trillion in 2017, experiencing a growth of 13 percent versus 2016. It is therefore no surprise that the largest players in this industry are American companies. The ranking is led by the investment giant Blackrock, who manages USD 6.52 trillion, followed by Vanguard Group (USD 5.6 trillion). From the top 10 investment firms worldwide, only two are non-American, namely UBS (Switzerland) in the third position with USD 3.26 trillion and PIMCO, the North American based company owned by insurer giant Allianz Group with USD 2.36 trillion (*Largest Asset Managers Globally by AuM 2019*, 2020). Europe is the second largest geography in terms of AuM with USD 22.2 trillion in 2017, with (even if it is among the slowest) a growth of 7 percent versus 2016. Asian countries have seen its importance in this industry grow steadily since the Great Financial Crisis in 2007-2008, especially China who saw its AuM grow by 22 percent in 2017 (Heredia *et al.*, 2020), partly driven by high household savings rate and regulatory reforms that have motivated pension funds and insurers to provide funds to asset managers. China Mainland managed USD 4.2 trillion in 2017.

In the past two decades, the industry has been changing rapidly for several reasons. It can nowadays be considered one of the most dynamic areas in the finance sphere, and it is a decisive moment for investment companies to adapt in the best possible way to these new challenges and turn the pressures imposed into opportunities and competitive advantages rather than obstacles to growth and profitability. The industry is undergoing several significant shifts and changes that have the potential to shape the future of the investment landscape. It is facing a situation of an increase in pools of capital to be managed but faces pressures in many areas, including significant disruptions to navigate. One example illustrating this is that CEO turnover has been rising recently, with at least 37 US and European investment managers changing CEOs from 2017 to August 2019 (Dannemiller and Collins, 2019), suggesting that investment companies are experiencing a complex landscape that requires constant changes and the redesign of past business models.

3. Economic Environment

In order to better understand why the Asset Management industry is changing, it is very important to understand the economic environment and thus at what stage the economy finds itself nowadays. The Asset Management industry and the macro economic sphere are very closely related since the actors in the industry meticulously watch the dynamics of the market to make decisions on the portfolio and the asset allocation. One could thus argue that the industry is heavily macro-driven, at least in the active management space. The gathering, analyzing and subsequent forecasting of market trends is a fundamental part of the asset allocation and hence also of portfolio management. For instance, when put simple, in a situation with a large amount of uncertainty in the economy and markets, the usual strategy of an investor is to be more conservative, i.e., a more defensive positioning called “risk-off”; instead, in the case the market offers a degree of certainty and thus lower volatility, the usual strategy would be relatively aggressive, i.e., a more offensive positioning called “risk-on”.

The global economy is about to enter a period of vulnerability, as described by PIMCO (Fels and Balls, 2019). Economic and downside risks are increasingly mounting, which only add to financial markets’ vulnerability. The most important factors in the global economy that help understand how and why investors and hence, the Asset Management industry is changing its behavior, are presented below.

3.1. Period of very low interest rates

First, it is very important to mention that during current times, the economy is experiencing very low interest rates, which are encouraged by further accommodating policies from Central Banks, one example of which resulted after the vertiginous plunge in bond yields in August 2019. Monetary and fiscal policies are very big swing factors that are having a large impact, delivering easing and reducing recession risk. They were first introduced after the Great

Financial Crisis to revive the economy (Dannemiller and Collins, 2019). For example, the Federal Reserve in the United States has cut interest rates three times during 2019. Other Central Banks including the European Central Bank and the Central Bank in China and in other Emerging Markets have shifted to far more accommodative policies.

On the one hand, this approach could be a reason for positive returns in credit and equity markets since it is incentivizing governments to become more proactive in supporting growth. On the other hand, these accommodating policies are pushing investors to look for potentially higher yields by allocating funds to alternative instruments or products that are considered non-traditional, far from the typical bonds and equities. This becomes even more evident when one considers that in January 2020, about 30 percent of the Investment Grade bond universe was trading at negative yields, meaning that an investor who buys the bond and holds it to maturity would be incurring a loss (Mariathasan, 2020).

One could therefore assume that some investors may have to lower their expectations on returns if maintaining the same investment habits, while others are seeing themselves forced to take on relatively more risk than in the past to reach the desired return on their investments. This phenomenon, known as "reaching for yield" is supported by the work of Lian *et al.* (2018), who studied the behavioral perspective on low interest rates and risk taking in financial markets. The authors ran randomized experiments among diverse populations and asset allocation choices by individual investors and found that low interest rates indeed push investors to heighten their appetite for risk taking. In their paper, they presented robust evidence to the fact that not only do investors allocate more capital to riskier assets in a low interest rate environment than in a high interest rate one, but also that this phenomenon is exacerbated when interest rates are low relative to historic levels.

In the analysis part of this thesis, it will be shown how investors are looking for more profitable investments that potentially provide more yield, especially Fixed Income investors who see themselves the most affected by the very low interest rate environment. In the case of Fixed Income, yields are so low today that investors are exposed to the risk of significant price underperformance if yields rise, which is a scenario that should not be ruled out due to the low interest rate levels nowadays.

3.2. Geopolitical Tensions and Political Uncertainty

Moreover, political polarization and geopolitical issues such as the trade tension between the US and China or the rise of populism in Europe are amongst other additional reasons why there is an elevated political uncertainty. On the one hand, the Phase One of the Trade Deal between US and China has been signed, which is a relief for the economy, however, how it will continue remains uncertain. The heightened uncertainty that came along with trade barriers depressed investors' confidence, consequently damaging world trade and investment (Ioannou, 2020).

Additionally, political populism has gained significant importance in the last years, with movements such as Brexit that exemplify it: from the Referendum in the United Kingdom in June 2016 to the numerous negotiations with the European Union during more than three years until the 31st of January 2020, when the United Kingdom formally left the EU. Events like Brexit have heightened political tensions, which have translated into high volatility in the markets. Even though the critical part, namely the exiting, has been completed, the transition period will still impose significant uncertainties in terms of agreements on such things as a new free trade agreement, since the UK will abandon the Single Market and Customs Union at the end of the transition period.

According to UN Secretary General Antonio Guterres (*Geopolitical Tensions at Their Highest Level This Century: UN Chief amid US-Iran Tensions*, 2020), "geopolitical tensions are at their highest levels this century and this turbulence is escalating". This evidently represents a major factor that translates into higher volatility and larger vulnerability in markets, again, significantly influencing how investors respond to these challenges.

In general terms, geopolitics is an issue that can carry all kinds of opportunities and risks into the market, being these both small and big. Even though forecasting any major geopolitical shocks on the market is almost impossible, investors should treat geopolitics and political uncertainty as an important subject to bear in mind when formulating investment strategies. Since geopolitics can have a deep impact on these strategies, being prepared (for instance, through scenario planning) is of the utmost importance, and could lead asset managers to benefit from market events if properly positioned (Malmgren, 2015).

3.3. Slowing Global Growth

According to Zumbrun (2019), the global economy on course is showing the weakest growth since the Great Financial Crisis because of the tensions and uncertainty factors described above, which is made evident by the slowing down of international trade to almost a standstill. Even though the forecasted growth in 2020 is different for different institutions (The International Monetary Fund estimates a 3.3 percent growth while the World Bank projects a 2.5 percent growth), it becomes evident that the global economy is moving at stall speed. Examples of countries that are experiencing a slowing growth are for instance the US whose GDP growth is expected to slow to 1 percent (down from 3 percent last year) and Germany, which is experiencing a technical recession due to three consecutive negative growth quarters. Important to note, however, is that these numbers were estimated at a pre-Covid-19 phase. The Covid-19 pandemic undoubtedly has affected economies all over the world and represents one of the biggest disruptors from the last decades, however, the effect of Covid-19 is out of the scope of this paper.

The slowing global growth issue described above is exacerbated when paired with aging demographics (i.e., longer life expectancy) and slower population growth, which as a result is limiting growth in the working-age population (Manyika *et al.*, 2019). This is a very important factor that influences how the actors of the market respond. With a slowing global growth, investors may be willing to risk less and see themselves transferring their assets into safer havens.

As one can expect, there are several more economic and market factors than the ones described above that are affecting the investment industry. However, it becomes evident with the economic environment analyzed above that the global economy is going through a period of increased fragility, high volatility, and lack of clarity in many dimensions, which obliges asset managers to be flexible and take the resulting challenges as opportunities. It is therefore interesting to analyze the trends that the Asset Management industry is facing, which will be presented in the following part.

4. The Game Changers of the Asset Management industry

As mentioned in previous sections, the Asset Management industry is going through a period of new advancements and trends, partly driven by the economic landscape pushing investors to find new ways to achieve past returns. The time, the strategies taken and the resources to be devoted to accommodating new trends are amongst other things that will define how successful investment companies will be in the future. It is an opportunity for firms to reaffirm themselves and the market share they hold, by taking the necessary steps to turn these new trends into favorable circumstances rather than into obstacles.

In this section, an overview of several trends will be given to provide a more complete picture of how defining this moment is for the investment management industry. However only two trends, namely the rise of Alternatives as an asset class and the expansion of passive instruments will be described in full detail, while an extensive analysis of the rest is out of the scope of this thesis and therefore, will be illustrated only by a brief description. These two trends were not chosen randomly, rather it is considered by the author to have a larger impact at a global level on the Asset Management industry than the other trends. The most important financial implication considered by the author will follow, since analyzing the financial impact of these trends on the industry is crucial to attain a full picture.

4.1. Overview

Due to a heightened volatile period and uncertainty in the economy, investors are constantly adapting their strategies according to new certainties, which makes it very hard to identify all the trends present in the industry. However, some of the most important ones are listed below and briefly illustrated thereafter:

1. China as the Main Driver of Emerging Markets Growth
2. The Increased Adoption of Environmental Social Governance (ESG) practices
3. The Disruption of Technology

4. The Rise of Alternatives - *described in detail* -
5. The Rise of Passive Instruments - *described in detail* -

4.1.1. China as the Main Driver of Emerging Markets Growth

As mentioned in the section describing the Asset Management industry, the leader has been the United States since the very beginnings of the industry creation, followed by the Old Continent Europe in terms of AuM, client base, number of funds etc. Emerging Markets have historically been too risky for some investors due to all the potential risks involved that span from political, currency, economic to social ones. Therefore, Emerging Markets have not played a significant role up until a few years ago, when some countries started to experience structural and regulatory changes that have led them to make up a large proportion of the industry's largest players nowadays.

The numbers reflect the tremendous growth of Emerging Markets and in specific, China, in this terrain: According to Dahl *et al.* (2018), Asia is the world's fastest-growing asset management market, capturing about 45 percent of global flows over the past five years. AuM across Asia jumped by 11 percent year-on-year to a record USD 16 trillion in 2017, a significant increase from USD 7 trillion a decade ago. Asia now represents about 18 percent of the total global AuM of USD 89 trillion, and revenue pools among asset managers currently amount to USD 66 billion, up 188 percent from 2007.

According to Cheng (2019), at the end of 2018, China was the second largest global fund management region, only after the United States. There are many reasons for the steady growth of China in this industry. Firstly, the fast economic development (in 2018 China's GDP growth was 6.6 percent) and the significant increase in the number of High-Net-Worth Individuals (HNWI), which stood at 1.3 million in 2017 (an increase of 11 percent since 2016), facilitate disposable wealth for this industry. Secondly, China had the third highest savings rate in the world in 2017, which can be seen as an important indicator of wealth. This combined with very low rates on savings which stand at around 1.5 percent for a 12-month deposit, the Chinese retail segment is encouraged to shift from saving to investment, thus helping the Chinese Asset Management industry to attract more and more market share of the global AuM (*China's asset management market*, 2019).

4.1.2. The increased adoption of Environmental Social Governance practices

We are currently living in a world where sustainability and environmental issues are increasingly gaining importance. Companies worldwide in very different sectors are realizing that it is an urgency to act, change behaviors and nuance business models that are not aligned with proper environmental, social and governance practices. One of the numerous examples of companies that are adopting new approaches are investment companies. The Asset Management industry has recognized that committing to sustainability is not "a good-to-have" element anymore, but rather a "must-have", consequently integrating ESG into the core of investing, namely portfolio construction, allocation to asset classes and the adaptation of different investment strategies.

Asset management companies are now involved in gathering and analyzing data that have become available only in the recent years, fueled by the increasing number of public companies that have been disclosing ESG information to the general public, which went from less than 20 in the beginning of the 1990s to 8,500 by 2014. In addition to this, more and more investors are becoming Signatories of the Principles for Responsible Investment (PRI), an UN-backed framework aimed at encouraging investors to behave in accordance with a set of principles for responsible investment when allocating capital in portfolios. By 2016, more than 1,400 institutional investors totaling USD 60 trillion had become Signatories (Kotsantonis *et al.*, 2016).

One example that shows the increase of ESG investing in asset managers' activities is Pacific Investment Company Co. (PIMCO), a California based investment company that has been at the forefront of promoting sustainability and which has implemented a three-step mechanism directed at sustainable investing in 2017. Through its "Exclude, Evaluate & Engage" system, it not only limits investment in issuers that are misaligned with proper practices (e.g., tobacco or coal activities) but also evaluates and collaborates with top ESG issuers, developing a framework and a culture among them to promote sustainability and proper conduct. Additionally, in 2020, the company launched the Climate Bond Fund, a dedicated fund that is designed to fight climate change's related risk issues.

Another example that illustrates the great importance that is given to ESG is Blackrock's commitment to the trend. In January 2020, Blackrock announced a series of significant changes in order to position itself as the leader in sustainable investing. The firm promised to double the number of sustainability-focused ETFs to 150 funds and will exclude companies from its actively managed portfolios that derive at least one quarter of all revenues from thermal coal business. In this way, Blackrock wants to increase sustainability assets 10 times, from USD 90 billion to USD 1 trillion within ten years (Henderson *et al.*, 2020).

It is probably too early to conclude since ESG investing is quite a recent trend and there are no long-established metrics that support it, but there have been studies showing that investing in ESG has a "win-win" effect, meaning that not only it is good from an ethical and moral standpoint to positively contribute to climate-related risks, but it may also benefit the asset manager itself by being able to mitigate reputational, financial and operational risks. In this way, the Asset Management industry can "do good, while doing well", achieving both a positive environmental and financial impact. This is supported by a study conducted by Kaiser (2020), whose findings show that against the notion that investing in ESG means sacrificing returns, portfolios of style and momentum achieve a higher risk-adjusted return with the inclusion of

ESG. Furthermore, the study reveals that including ESG criteria when allocating capital in a portfolio results in a reduction of portfolio risk. Interestingly, the author makes a distinction between Europe and the US, suggesting that European firms' prices already include sustainability performance in contrast to the US, where the attention to ESG appears to be lower and whose firms' market values do not seem to have fully absorbed the sustainability factor.

It becomes evident that climate change and environmental issues are Game Changers of the Asset Management industry. The urgency of adapting, changing business models, and aligning investing to contribute to these fundamental causes have deeply impacted the industry and should be considered as a huge opportunity for investment companies to achieve positive return in terms of societal contribution and a favorable bottom-line.

4.1.3. The Technological Disruption

As it happens with sustainability, technology is deeply impacting numerous industries and the Asset Management industry is no exception. Technology is nowadays a fundamental and integral part of the AM industry, touching upon numerous investment aspects in the process chain: trading, operations, risk management and client account management. Technology is disrupting the industry at all levels, from the massive availability of data that facilitates the core of investing to introducing Artificial Intelligence (AI) into relationships with the end-user client.

Technology has also heightened investor expectations in terms of customer journey, pressuring asset managers to customize client relationships as much as possible. Asset managers need to embrace new technologies in the way they work to strive for the best returns for their clients and differentiate against their competitors. This disruption could also create a structural change by the potential entry of new competitors from the technology sector that may offer asset management services. According to PricewaterhouseCoopers (2020), there have recently been appointments in top AM firms of Chief Digital Officers (CDO) to lead strategic technology activities. Technology could be used by firms to get access to behavioral information (for instance, through data mining) with the aim of an improved understanding of client needs and thus, creation of new products and services.

Technology also helps professionals in data gathering and processing; having an integrated technology ruling through departments is of the utmost importance for quick processing of large volumes of data and facilitates better risk management and decision-making. Blackrock's technology platform called *Aladdin* is an example of the massive importance of technology in the industry. It manages USD 18 trillion in assets on the platform, has over 20,000 users and over 200 financial firms as clients that use the platform independently. It accomplishes a quarter-million trades daily and billions of forecasts weekly (Gara, 2017). In general terms, since investment companies deal with massive data volume, it is crucial for them to ensure that information exchanges between different parties both within and outside the investment firm are efficient. According to Jovellanos (2020), in order to maximize the *alpha* inherent in an investment strategy, portfolio managers need to address any inefficiencies in portfolio implementations by ensuring that the information workflow is optimal.

4.2. The Rise of Alternatives

It is important to understand that there is no universal and uniform definition of this asset class because there is a constant evolution of existing and new products and consequently, different securities may enter or exit the category of this asset class. In its broadest definition, the alternative asset class are all the securities not defined as *traditional*, such as stocks, bonds, and cash. At the present time, one can consider Private Capital Markets (e.g., Private Lending), Real Assets (including Real Estate and Infrastructure), Private Equity, Commodities and Hedge Funds as the main alternative assets. Throughout time, the list of these main Alternatives has expanded, and some also consider other investable assets such as art and other collectibles (e.g., rare coins or stamps), Catastrophe Bonds, Emerging Markets, cryptocurrencies etc. as Alternatives. High Yield Bonds, which are the bonds issued categorized as Non-Investment Grade, may also count as Alternatives for some, even though the underlying instrument, Fixed Income, is defined as a conventional one. In this sense, the concept of an alternative asset is highly flexible, being it an investment strategy such as Hedge Funds or Private Equity, a geographical sector such as Emerging Markets or a physical asset such as Real Estate or Infrastructure (Chambers *et al.*, 2018). In order to improve one's understanding of the huge shift of investors' allocations away from traditional asset classes to alternative ones, the fundamental characteristics of Alternatives will be presented below.

4.2.1. Characteristics of Alternatives

Firstly, the underlying return of alternative asset classes is distinctive to the traditional asset classes, being it stocks, bonds, and cash. They may include illiquidity premia since they are usually less liquid than traditional ones and they are rarely exchange traded. For instance, Real Estate usually involves hard, tangible assets that are difficult to turn into cash. Private Equity is another example of an illiquid investment, since capital in companies is usually "locked up" for five or six years and usually some difficulty in exiting the companies is involved. In other words, investing in Alternatives requires a longer investment horizon (except for commodity trading). Also, the fact that alternative asset classes have usually been accessed through Private Capital Markets have made this asset class less accessible to invest in and therefore also less liquid to trade. This illiquidity feature compensates investors for the resulting higher risk by including the illiquidity premia mentioned above, thus increasing the yield offered. In other words, investors allocating capital to Alternatives usually sacrifice liquidity in exchange for yield (Chambers *et al.*, 2018).

Secondly, the returns of alternative investments are driven by exposures to underlying assets whose cash flows are non-traditional. Put simple, alternative investments are funded by sources that are not traditional, unlike operating firms that would rather finance traditional investments. For instance, in Venture Capital, which is a form of Private Equity, specialized funds (in this sense, a non-traditional source) provide financing to firms that are in their very initial stage such as startups or very small businesses that have positive future growth potential (Chambers *et al.*, 2018).

Thirdly, not only the instruments underlying this asset class are non-traditional, but also the strategies used for investing are usually considered alternative. In this sense, Alternatives may present different risk characteristics not found in traditional payouts. Hedge Funds for instance are vehicles that use complex and relatively aggressive strategies to achieve high risk-adjusted returns; strategies may include extreme leverage, short-selling and the use of derivatives. Here, one of the main objectives is to generate as much potential *alpha* by the Hedge Fund manager, betting on risk premia offered by the alternative instrument. In a traditional setting, the strategy would rather be a long-only, non-leveraged approach to investing. The point is that the instruments invested in are traditional ones, however, the approach or the strategy can be alternative (Kat and Brooks, 2001). In line with the rise in popularity of the general alternative asset class, in the last years, the number of Hedge Funds has increased dramatically. By 2017, this number had almost reached 10,000 (Fernando, 2021).

4.2.2. Advantages and Disadvantages of Investing in Alternatives

The underlying features of Alternatives mentioned above implicitly show that their purpose may be distinct to that in traditional investing. Because their underlying cash flows are considered to be non-traditional and therefore, very little correlated with the ones in traditional instruments, Alternatives offer a good diversification potential and thus may reduce the level of risk contained on a portfolio-basis without needing to compromise on returns. Rather than being correlated with stocks and bonds, their performance is correlated with the underlying asset itself (Skidmore, 2010). Due to this diversification potential, or also seen as "the only free lunch there exists in investments", it may be very useful for the investor to think of this asset class as a complement rather than as a competitive element to his or her existing portfolio of traditional instruments. By introducing this asset class, investors are broadening up the spectrum of securities and products they are investing in and hence diversifying the sources of potential risk.

Another reason why investors are increasingly shifting their focus to the alternative asset class is the expectation of generating *alpha*, which, as described in previous sections, means excess return over a given Benchmark in the world of investing. Studies have shown that assets such as Private Equity or Hedge Funds have offered *alpha* in the past years, something that given the difficulty in beating the market is quite impressive. As a matter of fact, the Sharpe Ratio, which is an absolute measure of the trade-off between risk and return and one of the most common risk measures worldwide, was higher for Alternatives than for stocks and very similar to bonds for the period 1999-2018 (*6 Reasons to Own Alternatives*, n.d.).

Additionally, the investor that identifies opportunities within this asset class may be able to profit from a "first-mover advantage". It is true that Alternatives are becoming more mainstream with time, but there is evidence that shows that there are still opportunities to be taken. An example of this is Private Equity, whose business is to first invest in companies that offer room for improvement (acquiring a significant stake to transform the company in many ways) and then to exit the investment by generating a profit for both the fund and for the investors that committed the capital. By being amongst the first ones in investing in these assets, an investor may have the opportunity to gain the potential premia included in this asset class before it becomes too mainstream and thus so liquid it starts providing lower yield.

However, since Alternatives have not been able to be accessed by many investors since it was restricted to only institutional investors for many years, there is less data, and if there is, of questionable credibility. Moreover, Alternatives are less transparent than publicly accessible assets due to their rather private nature, making them also more complex to trade. Alternatives may therefore experience both a greater asymmetry of information and less scale than traditional assets that do not experience such capacity constraints. It is therefore very important that investors are aware of the risks that are involved in alternative investing. However, on a positive note, Alternatives are becoming more mainstream with time, and asset managers are increasingly becoming more familiar with the risks involved in this type of transactions.

4.2.3. Evolution of Alternatives

As mentioned previously, Alternatives have existed for several decades, but it has been rather in the past few ones that it has grown in popularity. In this sense, this asset class is not "new", but rather the adoption has been widening in the last years. From 1996 to 2016, the number of US public companies halved, partly driven by a growing demand for Private Capital Markets (Rasmussen, 2017). Companies realized that they were able to access financial markets without the need of being public and therefore, not needing to comply to costly regulation and rigorous disclosures.

During the beginning of the 20th century, investments were rather evaluated on a stand-alone basis with a larger focus on preservation of income until Modern Portfolio Theory in the 1950s and 1960s illustrated the added benefits of diversification. It showed that investing in several assets in one's portfolio translated into a decrease in risk due to the elimination of diversifiable risk. In the 1980s and the years after, the analysis of investments was based on a holistic view, so institutional investors began allocating capital to products that were considered rather uncommon, such as small-company stocks, low-quality bonds and international stocks, which fell under the alternative category at that point, and have unsurprisingly become mainstream nowadays. Investors realized that the added "risk" underlying these instruments could be partly eliminated due to their diversification potential, and equally important, they could enjoy enhanced risk-adjusted returns due to the premia provided by this unique asset class (Chambers *et al.*, 2018).

Alternatives had its *Golden Age* before the Financial Crisis, in the years 2001-2007, because of many factors. One of the events that was crucial for the rise of this asset class was when David Swensen, who is Yale's Chief Investment Officer (CIO) since 1985, illustrated in his book *Pioneering Portfolio Management* the benefit of adding Alternatives to a diversified portfolio and boost returns. The so-called *Yale Model*, which encouraged blending Alternatives into portfolios of listed securities, was rapidly adopted by many institutions and HNWIs. Between 2005 and 2007, global AuM of Alternatives went from USD 2.9 trillion to USD 5.7 trillion, which corresponds to an approximate increase of 97 percent (Erzan *et al.*, 2012).

However, during the Great Financial Crisis, the alternative asset class failed to deliver the promised high risk-adjusted returns. Investors began selling almost all non-cash products, including alternative assets, to protect themselves and generate cash they needed for the aftermath. After the crisis, Central Banks introduced Quantitative Easing (QE) and other monetary policies aimed at boosting the economy out of the deep economic crisis. Central Banks started to buy bonds both from governments and corporations. Its result was increased prices in equities, bonds, commodities etc., however at the same time yield levels fell. In 2008, alternative AuM stood at USD 3.1 trillion, while in 2017, almost a decade later, AuM totaled USD 8.8 trillion, translated into an approximate 180 percent increase. It is estimated that by 2023, this figure will grow to USD 14 trillion (FTAdviser, 2019). Not only did the monetary policies adopted by Central Banks trigger the rise of Alternatives but they were complemented by an increase in investment trusts that facilitated the access of managers to this rather niche sector. Pension funds in Australia, Canada, Germany, Japan, South Korea, Switzerland, and the UK now allocate an average of more than 30 percent to alternative assets (*The Rise of Alternatives*, 2017).

4.2.4. Implications for the Industry

The environment of very low interest rates, and even in negative terrain in some countries, has pushed investors to seek the yield that they achieved in the past in unconventional instruments in the hope of generating again those past returns. This is especially true with investors that have yield-related liabilities, such as life insurers or defined benefit pension funds who have promised long-term guarantees to their clients, such as for instance making sure that a retiree has enough money at the time of retirement or paying a fixed lump sum if someone passes away during the policy term. As suggested by Kräussl *et al.* (2017), lower interest rates affect these investors negatively in two ways: one the one hand, their liabilities increase since the future amount to be paid is discounted at a lower rate, and, on the other hand, the expectation of the return on their assets is lower. On these lines, according to a study conducted by Andonov *et al.* (2017), US public funds increasingly allocated to riskier assets when interest rates declined. More specifically, the authors found that a five-percentage-point decline in ten-year Treasury Notes from 1994 to 2012 triggered US public funds to increase their allocation to riskier assets by fifteen-percentage-points.

In general terms, the economic and structural situation has transformed alternative investing into a stable trend (*The Rise of Alternatives*, 2017). There has been a huge shift to Alternatives, which, as mentioned previously, offers potential risk and illiquidity premia, and enhanced returns due to a solid diversification potential. It is unclear if the trend will continue, and as in many other things, only time will tell. However, the scenario of very low yields, which is especially predominant in the bond market, has been the main driver of investors to look for new income. Equities would be able to achieve a relatively higher yield (equities have always been the highest yielding asset class), however, in current times there is fear that stock prices in general are overvalued since key indices have reached highs. Another factor is that equities and bonds are correlated, and especially in crisis times, which makes equities less attractive for investors looking for yield.

Another implication, which will be more evident in the following section describing the rise of Passives is that the increasing attractiveness of Alternatives may compensate the effects of the rise in Passives. Active asset managers who have seen themselves affected by lower inflow of capital due to investors' shift to passive instruments such as Exchange Traded Funds can see the rise in Alternatives as a relief to their margin. Since investors are realizing the attractiveness of this asset class, capital is flowing into this active management section (*The Rise of Alternatives*, 2017). However, only asset managers that enjoy a decent scale and resources may be able to exploit this opportunity as opposed to smaller investment companies that do not have the resources to access this rather private market.

The debate is to know whether this asset class is here to stay for the longer-term or is just a mere temporary trend. It is nearly impossible to answer with certainty but looking at the market one can get an idea of the direction of the trend. Global bond yields are expected to remain low partly due to very low interest rates. Geopolitical tensions and political uncertainty remain and are unlikely to cool off in the next months. Slowing global growth (also partly due to the demographic issue of an ageing population) makes investors be more reluctant to invest heavily in equities.

Alternatives, which due to the *alpha* potential described in the previous pages is very important in the active management sphere and an increasing key part of active strategies, is thus compensating the rise of passive instruments. If active management adapts to the new trends shaping the industry as fast and efficient as possible, it may reap many benefits by investing into Alternatives. In this regard, active management may not only profit from Alternatives in terms of a new source of income offering attractive margins, but also in terms of client relationship. Alternatives combine an attractive enhanced yield which achieves the clients' financial goals and the fact of bringing a new, innovative product to their clients. Clients' expectation of new, innovative products in their portfolios can be achieved by the inclusion of Alternatives.

Similarly, some alternative asset classes such as Hedge Funds benefit from lower regulation levels and do not need to disclose as much as other mutual funds. This is advantageous in many ways, such as having a higher degree of freedom to invest in products that may not be accessible to other investors, making it more exclusive. The lower disclosure would also prevent the Hedge Fund investment strategy to be imitated by other investment firms and retaining in this way a competitive advantage (Skidmore, 2010).

When asset managers want to adapt to this new wave, there are however, some potential risks that they need to be aware of. Investing in Alternatives requires complex technical skillset and sometimes, the adaptation of the operating model. Apart from the advancements that investment companies need to make, probably at least as important is to be very aware of the risks involved that include liquidity, credit, and operational risk, especially in a severe crisis. Understanding and accurately assessing and pricing this risk is complicated and may require extensive research. Liquidity's effects are like a coin, on the one side, the premia derived from lack of liquidity in these instruments makes the yield be more attractive, however, on the other side, liquidity is one of the most important aspects of a portfolio in moments of stress. Being aware of the lower level of marketability of these products is of the utmost importance. Similarly, being able to correctly price credit risk in private markets requires rigorous research and analysis and a consequence of not pricing it correctly can have disastrous effects in a downturn. Operational risk in terms of the complex structure of some Alternatives needs to be considered as well. Therefore, asset managers need to conduct a rigorous and sound due diligence due to the extra risks that are involved (Merrill Lynch *et al.*, 2015). In general terms, choosing the right asset manager is very important, however when it comes to the Alternatives space, it becomes crucial to choose one that has the adequate knowledge and proper solid risk management systems in place to deal with these highly specialized products and strategies (Geczy, 2014).

On another note, alternative asset classes are generally not cheap; their fees are higher than for equity or bonds. For instance, the fee structure in Private Equity and in Hedge Funds, is usually governed by a 2/20 framework, not only requiring a 2 percent of management fee in terms of AuM, but also a 20 percent share of earned profits.

4.3. The Rise of Passive Investing

Another significant trend considered a Game Changer of the Asset Management industry due to its far-reaching impact is the popularity of passive investing. Even though it was briefly introduced in the first part of this thesis when distinguishing between active and passive approaches, this section will deepen on its characteristics, its evolution through time, and its advantages that derive in its attractiveness but also its potential negative impact. Implications for the industry will finalize this section.

4.3.1. Characteristics of Passives

A passive investment is slightly different from an Index Fund, although these two terms are usually intertwined. Index Fund investing is the most common strategy of the broader term of passive investments. According to Schramm (2019), the goal of passive investing is "to replicate the return earned by a part of the market"; in contrast to active management's goal of beating the market by identifying opportunities that will perform the best. Passive investing is about buying and holding that investment for a longer period, without necessarily making any adjustments or changes.

In this way, it is supposed to benefit an investor about the usual upward trend of the market, and it eliminates transaction costs. There are generally two strategies that can be adopted in passive investments, namely investments through Index Mutual Funds and Exchange Traded Funds (ETFs). Index Mutual Funds are vehicles that put together pools of money from investors to invest across several asset classes such as stocks and bonds on behalf of investors. ETFs are similar in terms of objectives since they are aimed to mimic the market. However, no money is pooled, but rather the investor can buy the shares of an ETF in the market, without pooling any money with other investors. In other words, it is an investment vehicle that trades intraday (Sushko and Turner, 2018). In this regard, both mutual funds and ETFs are technically different, but they pursue the same goal, which at the same time minimizes the expense ratio (Fichtner *et al.*, 2017). The value of a mutual fund is more commonly referred to as Net Asset Value (NAV) and is calculated as the ratio between the value of the assets that are owned by the fund divided by the shares outstanding. Funds manage third parties' money, and therefore do not make money themselves. In exchange, they charge their investors an annual fee calculated as a percentage of the AuM that the fund manages.

The top three asset companies that are heavily adopting passive approaches are Blackrock, Vanguard, and State Street. They have been buying significant shares of capital of publicly listed companies in the past years, both in the US and internationally, emphasizing the concentration of corporate ownership from these three investment firms (Fichtner *et al.*, 2017).

4.3.2. Advantages and Disadvantages of Passives

Like any investment approach, passive investing involves advantages as well as disadvantages, so there is no real answer to whether passive investing is altogether more or less profitable. It depends heavily on the investor, his or her preferences, risk aversion, investment goals and time horizon and it will depend on these factors which strategy will be more beneficial. However, a general understanding of advantages and disadvantages of this "relatively new way" of investing is very important and is presented below.

One of the most obvious advantages of Passives is that they usually involve low risk, or at least, theoretically lower risk than active strategies. Since the strategy is to replicate and follow the market, which usually enjoys a steady growth, the risk of losing one's invested assets is relatively low in the long-term, providing investors (and especially those with high risk aversion) sufficient safety.

Another important factor that makes this approach very attractive and is perhaps one of the most pronounced reasons why this investment method has gained in popularity is the low-cost factor. Investing in Passives involves a long-term mentality, with infrequent buying and selling and thus infrequent transaction fees, resulting in low fees charged to the investors under this approach. Put in another way, since the fund is not producing any "original" strategy to beat the market, but rather follows the market, there is much less costs involved for the fund, which translates in relatively low fees for the investor.

In addition to low risk and cost, transparency has also been a key driver for the tremendous rise of passive investing. Because a person that invests in a passive vehicle is "holding the market", it is always clear which assets are in an Index Fund or an ETF, since the information about the market is public. Thus, at any time, in real time, passive investors profit from a high level of transparency, knowing the holdings that they have in the portfolio.

Additionally, since professional firms such as Blackrock or Vanguard overlook these instruments, the investor reaps other very important benefits such as professional management without needing to be financially educated to invest. Another very attractive feature of passive investing is that funds are diversified across many securities, being it stocks, bonds, or other products.

On the disadvantage side, since they involve lower risk than active strategies, they usually also offer lower returns. Moreover, since passive investing is a hands-off approach where portfolios are usually under the jurisdiction of fund managers, investors have little saying or discretion about the portfolio. This could potentially induce investors to think that they are not participating enough, or not involved in the management of their capital, deeming the approach to not being flexible and customized enough (Thompson, 2020).

4.3.3. Evolution of Passives

Before the existence of Passives, investors could track the market by buying all the shares from an Index, for instance the S&P500. However, since buying a fraction of a share is not possible, this was a very expensive option for an investor, and especially if one considers the rebalancing of the market (when the Index is changing the composition and the weighting of the stocks of the different companies included in the Index). This would mean that the investor needed to, first, buy a very large number of shares, and second, pay fees for every change made in the market portfolio.

The idea of passive investing had not been very popular historically and was often viewed from a skeptical point of view from investors. However, there are several historical developments that have contributed to this new phenomenon. The Efficient Market Hypothesis put into question the role that active management could play, by recommending investors to hold the market portfolio (Anadu *et al.*, 2020). Also, the CAPM was a development in academic finance that supported the concept of passive investing. But it was not until the late 1970s that this investment approach was available to the average investor (Swinsburg, 2019). As mentioned in the first part of this thesis, Wells Fargo was the first to successfully launch an Index Fund in 1971.

At the beginning, investors did not embrace these innovations brought to the market, since high fees and commissions by the active management sector was the norm. However, investors slowly realized that it was a very practical and cheap option for retail investors and hence the popularity of these vehicles started to grow. Also, in the last past decades, there has been evidence that active management has not beaten the market consistently and it was shown that the average active manager underperformed (Kahn, 2018). In 1973, Burton Malkiel, an economist of Princeton University, wrote *A Random Walk Down Wall Street*, where he described his experiment of letting a blindfolded monkey select stocks to invest in, and the result was that the monkey outperformed active managers in selecting stocks.

Passives have grown in popularity in the last years and represent now a significant portion of the investment funds worldwide. Its popularity grew significantly after the 2008 Crisis left investors' portfolios damaged (Waite *et al.*, 2019), and the years after the Great Financial Crisis brought a massive shift of capital allocated away from active managed funds to passive funds, being it mutual funds or ETFs. Its rise has thus been to the detriment of active managed funds, whereby Index Funds have been very successful in gathering assets. The growth from passive investing comes primarily from the innovation that ETFs offer, which can even access regions and sectors that were unavailable to the public a few years ago, such as Alternatives and Fixed Income products.

Passive funds have risen in market share from 4 percent of total equity mutual fund assets in 1995 to 16 percent in 2005. From 2005 to 2015, Index Funds doubled their market share to 34 percent (Fichtner *et al.*, 2017). In the years from 2008 to 2015, investors pulled out the equity investments of mutual funds, which aggregated USD 800 billion and bought passive holdings for approximate USD 1 trillion. In the US, assets in mutual funds and ETFs grew from USD 220 billion twenty years ago to USD 7 trillion in 2017 (Anadu *et al.*, 2020).

4.3.4. Implications for the Industry

The huge active-to-passive shift has brought with itself several implications and discussions about how this trend shaping the industry enormously will affect different parties. In this section, several implications widely discussed will be exposed.

One of the most evident questions that the large and ever-increasing allocation to passive approaches implies is whether it will leave out the active management investing approach. Even though most investment firms nowadays employ both active and passive dynamics, there are still several companies that rely solely on the active management model. Will these firms survive to the threat of Passives? How active management firms will respond to this threat is especially important because the rising popularity of Passives is and could continue to be at the expense of capital allocated to active funds.

Firstly, as discussed above, before Passives surged up in popularity, investors accepted the high fees that active managers imposed, even though there is evidence that there were periods where they underperformed markets. It was something investors accepted since it had been the rule for many decades, and there was no innovation in the market that could serve as an alternative. In this way, passive investing poses a real competitive factor to them, and therefore it could push active management to seek out for *alpha* more aggressively if they want to continue to attract funds. One could think that Passives are introducing in this way a natural element of competition. Following this reasoning, one could argue that active management should not seek to be replaced by passive investing, but rather should be seen as an opportunity to act as a complement to their investment strategy.

Secondly, for individual investors or investment firms, it is important that they realize what purpose and roles both active and passive management play. For instance, investors, even the ones that have always relied on active funds, should educate themselves on Passives as well in order to get a picture of what the aims are of these two distinct investment strategies. Asset management companies should explore at the same time what distinguishes an active approach from a passive one and try to leverage on that distinction. It is evident that active and passive investing have very distinct structures and investment approaches, but what may be important to know is whether they both play a distinct role and if there is a need for both of them. That will be the key to understanding if there is a common playing ground in which using both approaches can lead to an effective equilibrium.

So far, the implications mentioned above are more from an individual investor's perspective. However, the rapid adoption of passive investing has widely opened discussions about how it will affect the market of securities in general, and more specific, whether it will affect security prices, fund flows and aggregate price dynamics. Implications from a corporate governance perspective will follow.

Passive investing decisions are taken on a portfolio-based level and therefore place emphasis on common, systematic factors that will affect the portfolio as a whole, such as inflation, macro-economic factors, and expectations about monetary policies. In this sense, managers of passive funds do not thoroughly focus on each security that makes up the Index, and more specifically, on the idiosyncratic, firm-specific information within each security. In this sense, they are "free-riding" on the information of active investors, which in contrast devote much time and resources to finding security-specific information to value different securities. Thus, an increasing share of passive portfolios might reduce the amount of information that is embedded in prices, resulting in a misallocation of capital and pricing inefficiency. Prices can also be affected, when passive managers receive large inflows or outflows, whereby they buy and sell the entire basket of the Index securities, potentially triggering higher co-movement in the prices of these. In addition, it may widen the pricing differences between the securities both included and not included in the Index. Interestingly, this effect can be counterbalanced, because a greater anomaly found in a security's price will make active trading gain, and thus push for more active investment strategies (Sushko and Turner, 2018).

There has been a lot of debate as well towards whether passive investing is a stabilizing or destabilizing factor on aggregate prices. On the one hand, in the absence of fund inflows and outflows, a passive manager does not need to trade since the passive portfolio is automatically aligned with the Index. In contrast, active funds, which do not mimic the market, adjust portfolios in a discretionary manner to respond to events in the market. In this way, passive portfolios can counterbalance any tendency of active funds to magnify fluctuations in an economic cycle. On the other hand, when passive funds experience large flows, they could potentially emphasize investment trends since Indices are typically market weighted and the share of securities that are overvalued tends to increase in a rising market and decline in a falling one. Therefore, the impact that passive funds will have on aggregate price dynamics will depend on firstly, how passive vehicles influence fund flows from an end investor and secondly, how strong the influence of investor flows and trading will be on security prices (Sushko and Turner, 2018).

The rise in passive investing has also created controversy around corporate governance issues. As mentioned in a previous section, the top three investment companies engaged in passive investing are Blackrock, Vanguard and State Street, which are generally referred to as the *Big Three* Index Fund managers. According to Bebchuk and Hirst (2019), their average combined stake in S&P 500 companies went from 5.2 percent in 1998 to 20.5 percent in 2017, an increase of roughly four times. Another way to illustrate the large growth of the *Big Three* is to look at the number of companies at which these three companies hold positions of 5 percent or more, since this is generally considered as highly influential. The results presented by the authors were very significant: this total number increased more than fivefold, from 221 in 2007 to 1,118 ten years later.

This hints towards the importance of understanding the implications of this growing ownership concentration of a small number of institutional investors, who could become a “de facto permanent governing board” (Fichtner *et al.*, 2017). Specifically, the rise in passive investing has caused debate over the potential shareholder power of these companies and their ability to influence corporate decision-making outcomes through different mechanisms, being it through votes attached to their investments or through direct engagements with management. In a paper published by Griffin (2020), results revealed that the *Big Three* have indeed substantial power to determine voting outcomes, and especially in those issues that are most controversial. Since these companies play a decisive role in most of the largest companies in the US, it is crucial to make sure that the interests behind their power are well aligned with investor preferences and do not lead to conflicts of interest.

4.4. Pressure on Margins

4.4.1. Context

Undoubtedly, the Asset Management industry is undergoing a revolution, full of trends representing continuous challenges. Many managers are realizing that the models that they had been using in the past may not be enough to differentiate themselves, or what is more, even survive in this ever-changing environment. Not only do managers need to deal with some of the challenges described in the analysis part of this paper, but they also need to deal with the financial implications resulting from these, the most important one being the increasing pressure on fees managers are experiencing nowadays.

As mentioned in the introduction part of this thesis, the amount of AuM has increased in the last years; however, the amount has increased faster than revenues, pushing managers to experience sustained pressure on the fees. In certain parts of the world this pressure is already being felt, while in other regions this impact will be felt in the years ahead. Even firms that have been reporting net inflows and positive returns have seen their profit margins shrinking since revenues have not been able to keep pace with AuM (Wallis, 2019). Some numbers can illustrate this: in 2017, global AuM reached USD 98 trillion, an increase of 53.7 percent from 2012. At the same time, the overall revenue pool increased by 38.5 percent, showing a significant decoupling between growth of AuM and revenue during the same period (PricewaterhouseCoopers, 2018).

The main driver of this prediction of falling revenue to AuM comes from declining mutual fund fees, which PricewaterhouseCoopers (2018) predicts to decline by almost 20 percent by 2025, reaching 0.36 percent globally, down from 0.44 percent in 2017. From 2017 to 2025, active fees are predicted to fall from 0.54 to 0.44 percent, while passive fees (which include mutual funds and ETFs) are expected to decline from 0.15 to 0.12 percent. Reasons for this forecasted decline are numerous, but amongst others, the most important ones are the shift of investors from active to passive investing, the increasing regulation and compliance such as the entrenchment in Markets in Financial Instruments Directive II (MiFID II) and the rise of investor scrutiny (Wallis, 2019). For instance, in the UK, between 2012 and 2017, the introduction of the Retail Distribution Review (RDR) in 2012, which aimed to provide greater transparency and thus reduce fund fees, actually caused passive equity funds to cut fees by 28 percent, compared to 18 percent for active equity funds (Fitzpatrick, 2018).

4.4.2. Implications for the Industry

This threat to operating viability due to the pressure on margins puts managers under a difficult situation. The implications can be very impactful not only to asset managers individually, but also on an industry-level. Managers that have not driven significant changes to their operating models should do so, not only to differentiate themselves but also in order to survive in the longer-term, especially when there are downturns in the market and managers usually experience large outflows (Wallis, 2019). So how can asset managers build a model that protects profitability and their operating viability going forward in a situation where they experience structurally lower income and higher costs?

Probably the most obvious answer to the question lies in cost management that has become one of the last levers for protecting profitability (Schaffer, 2019). Cost management may deal with different sources. On the one hand, asset managers may need to incorporate technological advancements even more into their business models, which according to Schaffer (2019) could cut an estimated 6.5 to 17 percent of base costs. Automating, streamlining data and advanced analytics can be ways to cut costs and enjoy higher revenue streams, while reinvigorating *alpha*. Technology, as seen in previous sections, is playing an increasingly important role in the industry, and may well be a way to relief asset managers from continuing pressure on margins. They have the potential to create efficiencies by both enhancing the investment process and cutting costs. On the other hand, asset managers may feel forced to optimize their team structures and compensation plans more effectively, meaning that, even though one of the most dramatic cost-cutting measures there is, they may see the need to cut unnecessary resources. The Casey Quirk study concluded that by optimizing team structures, between 3.5 and 11.5 percent could be saved (Schaffer, 2019).

Another implication of the persistent pressure on margins is related to strategic positioning. In other words, asset managers need to make sure that the products and services they offer are properly aligned with the interests of their clients. Therefore, it is a question of whether they will want to play in a more niche space or whether they will rather consider operating based on scale. They may see themselves forced to focus on the areas of investing where they are the best at, where they can bring in more added value and where they can profit from deep expertise. In other words, asset managers may need to become increasingly specialist in what they are best at and leave behind those products or services that are sub performing, therefore consolidating product lines. It is very probable that the low fee environment will not vanish away in the years ahead, so asset managers that will not focus on strategic positioning plans will more likely see themselves falling behind (PricewaterhouseCoopers, 2018).

A third implication of this high pressure on profitability may be that asset managers will need to develop services off the beaten track and expand their geographical footprint, particularly in the Asia-Pacific (APAC) region and in some Latin American and African countries, which are considered to be the new “goldmine” in terms of AuM opportunity and growth, thus a potential way to relief pressures. As already pointed out in previous sections, China and other Emerging Markets have been increasingly becoming larger over the past years, gaining more market share, and attracting more funds. In Deloitte´s survey, most of the survey participants rated Asia as the most attractive region. Especially for internationally present asset managers, Asia presents great opportunities to enter or to expand (maybe through some mergers). APAC enjoys high growth and rapid development, and the continued strong growth will help further drive developments in the Asset Management industry (Deloitte, 2019).

Even with increasing AuM, the pressure on fees along with the other trends described in this paper represent impactful challenges that lie ahead of asset managers, but these create excellent opportunities as well for competitive, focused, and resilient managers in order to thrive in this extremely disrupted environment. They will need to redesign their operating models to adapt to these new changing times.

5. Discussion and Conclusions

The aim of this thesis was to give a well-rounded picture of the Asset Management industry and in specific, how it is being shaped nowadays by the appearance of different disruptive trends.

This paper introduced a short overview of the past of the industry, highlighting the different phases that it went through in the last 100 years, largely influenced by the Stock Market Crash in 1929 and the resulting Great Depression period thereafter. Investing legends such as Benjamin Graham, David Dodd and John Burr Williams published important literature that set the stage for the so-called Modern Portfolio Theory, developed by Harry Markowitz in the mid 60's. He introduced the concept of the *Efficient Frontier*, giving investors a framework with an opportunity set to choose from depending on the desired risk and return. Other developments changed asset management in a remarkable way, for instance the introduction of models such as CAPM and the EMH. The first Index Fund launched by Wells Fargo in 1971 was another important milestone in the history of investing. Further models such as the APT and the analysis of more in-depth Behavioral Finance have been of great importance as well.

The thesis then shifted to the main characteristics of the industry, describing that asset management activities can be found both as a branch in Investment Banks or as separate company whose key business is the managing of assets. It then introduced different investment approaches: passive, active or a combination of both. Passive investing refers to a Buy-and-Hold strategy, which replicates a given Index and thus holds the same securities as the Index itself. Thus, conceptually, there is no *alpha* generation since the fund follows the market and does not produce any original idea. On the contrary, active investing is a strategy, in which investors look for opportunities that can create attractive return, potentially generating excess return over a given Benchmark. This approach is hence more costly than the passive one, which charges a much lower fee. Many investment firms do however use a combination of both, which can complement each other well to achieve different return profiles. The paper then focused on the most common clients of this industry, which can range from institutional clients, endowments and foundations, pension funds, insurance companies to High-Net-Worth Individuals (HNWI). Here the thesis hoped to highlight the fact that different clients may well require different strategies, since they may differ in investment horizon, risk aversion and other type of requirements. It then listed the largest asset managers worldwide in terms of AuM, which are mostly North American companies, supported by the fact that North America is the largest market in this terrain.

As the industry is heavily macro-driven in the sense that markets and the economic environment play a fundamental role in understanding the different investment strategies taken on by asset managers, a brief overview of the economic context was presented. In most of the markets worldwide, very low interest rate levels prevail. Central Banks in many countries are adopting accommodative and expansionary policies, cutting rates to stimulate the economy, which was dominated by slow growth already before the Covid-19 crisis. The fact that interest rates are so low nowadays is changing investors' behavior who in the past could find the returns that they expected. However, due to low interest rates, some are now taking on significantly more risk than their risk aversion would represent to meet those return expectations. They may also be investing in asset classes that possess more risk, because these usually involve the highest yields. Another important market trend are the continuous geopolitical tensions and political uncertainties all around the globe, which only add to the fragility of the market and are significantly shaping investors' behavior. The third factor that was presented was the slowing global growth, which is emphasized by an aging demographics problem and therefore slower population growth. Evidently, Covid-19 has disrupted the economic environment in a significant way and only adds uncertainty to the landscape.

The paper then shifted to the analysis part, which introduced the topic of the trends that are shaping the industry nowadays. It pointed out that it is a crucial time for asset managers to adapt to these new trends in the best possible way, because they will probably create some winners and losers. It is time for them to turn these challenges into opportunities and reaffirm their market share.

The first trend described was the emergence of Emerging Markets and in specific, China as an increasingly important player in the industry. China is significantly growing its AuM, pushed by very high savings rates among its population, a high growth and low rate levels on savings, therefore encouraging the shift from savings to investing. The second trend illustrated was the increased adoption of ESG practices in portfolio allocation: investment managers nowadays are realizing that they need to be flexible to include environmentally friendly investments into their portfolios, not only because it is a necessary step to take to fight climate related issues, but also because fund holders increasingly want their assets to be allocated to good causes. Some examples were introduced to illustrate this, such as an investment framework to exclude investments into tobacco or coal, or the launch of a Climate Bond Fund to explicitly address climate related issues. The third trend introduced was the disruption of technology in the Asset Management industry. This trend is seen across many industries, and investment management is no exception. It can be taken advantage of to get a better picture of the clients' needs and for the creation of products and services customizable to the client. It can also speed up and make forecasts more accurate.

The focus then shifted to the analysis of Alternatives as an asset class, which has significantly risen in popularity in the past years. The asset class was described as all the securities not defined as traditional, such as stocks, bonds, and cash. Since there is no uniform definition of this asset class, it has a highly flexible meaning, thus it may come in form of an investment strategy such as Hedge Funds, a geographical sector such as Emerging Markets or a physical asset class such as Real Estate. Then, the three main characteristics of Alternatives were described. Firstly, the underlying return is distinctive to the traditional asset class one, because it is driven by the illiquidity premia they hold. Secondly, not only the underlying returns are distinctive, but also, they are driven by exposures to underlying assets whose cash flows are non-traditional. Thirdly, not only the instruments underlying are non-traditional, but also the strategies used to invest are considered alternative, offering different risk characteristics not found in traditional payouts.

The advantages and disadvantages were then introduced: since the underlying cash flows of Alternatives are little correlated with the ones in traditional instruments, Alternatives offer a good diversification potential, thereby reducing portfolio risk without needing to sacrifice return. This diversification advantage makes Alternatives suitable to complement more traditional instruments. Another advantage is the expectation of generating *alpha* since these investments offer higher yields due to the illiquidity premia and the resulting risk mentioned above. Additionally, an advantage of investing in this asset class may be the fact that it is still less known and popular than traditional instruments, so an investor may reap benefits from the so-called "first-mover advantage". Looking at the disadvantages of Alternatives, they are less transparent than publicly accessible assets due to the rather private nature, which makes them also complex to trade. The fact that there is less data about this asset class may also result in a greater asymmetry of information.

Pushed by the period of very low interest rates and by the hope to generate higher returns, investors are investing more and more into Alternatives as their new source of income. It may also compensate for the effects of the rise in passive investing, potentially giving the pressure on margins of active asset managers a breath. Additionally, investing in Alternatives may also enhance clients' relationships, since they offer a way for clients to achieve financial goals by combining it with a new, innovative way of investing. On a different note, however, the implications of investing in Alternatives may be more complex than for traditional instruments, because the investor will need a different technical skillset, and a deep knowledge and expertise for this asset class. Investors need to be aware of the illiquidity effects of this asset class since liquidity is one of the most important aspects of a portfolio in moments of stress. Therefore, being able to correctly price risk in private markets is of the utmost importance.

The other topic that was described in detail was the rise of passive investing, which was defined as having the goal of replicating the return earned by a part of the market. There are two ways in passive investing, namely investing through an Index Mutual Fund and through an ETF. A distinction between these two was made, pointing out the major difference, which is that in an Index Mutual Fund, money is pooled and on the contrary, in an ETF it is not. The top three asset companies heavily adopting passive approaches were then briefly mentioned, namely Blackrock, Vanguard, and State Street.

Analogously to the Alternatives' analysis, advantages and disadvantages of Passives were introduced. One of the main favorable arguments for investing in Passives is that they involve little risk, since the strategy is to mimic the market. A closely related advantage is then of course the lower cost that going passive entails since there are little transaction and research costs involved in this strategy. The downside of Passives is that investors have little say about the portfolio since it is a hands-off approach and maybe induces them to think that the portfolio is not customized enough or that they are not participating in the management of their capital.

Historically, the idea of passive investing had not been very popular, but several historical developments such as the EMH put into question the role that active management could play. In a similar fashion, the CAPM also supported the idea of passive investing. This combined with evidence in the past decades that has shown that active management did not consistently beat the market, made Passives grow in popularity. This trend was exacerbated in the GFC and in its Aftermath, in which investors saw their portfolio seriously damaged. The wide access to ETFs made Passives even more popular in the last decade.

One of the largest implications of the rise of passive investing is the growing debate whether it will leave out active management in the future. In other words, passive investing poses a real competition factor to the active management space, which active managers should be aware of. Additionally, the widespread of passive instruments is pushing investors to understand better what roles and structures both play. The thesis then touched upon the implications of the rise in Passives on the overall market and price dynamics. It suggested that an increasing share of passive portfolios may reduce the amount of information included in prices, thus creating pricing inefficiency. It discussed the situations in which passive instruments can be a stabilizing or destabilizing factor on aggregate price dynamics. The last implication described was the corporate governance issue that may arise from the increasing power of the three largest asset management companies investing in Passives due to their ability to influence corporate decision-making outcomes through their large ownership in public companies.

The last section of the analysis part dealt with the pressure on margins that asset management companies are nowadays experiencing. Even though revenues have increased, they have done so in a slower fashion than AuM and thus, managers have seen their profit margins shrink. The main driver behind this is a declining trend of mutual fund fees, driven by the active-to-passive shift and increasing regulation and investor scrutiny. Managers need to realize that they need to undertake proper cost management to protect profitability, for instance through the integration of more technological developments or optimization of team structures. It may also push managers to rethink their strategic positioning, whether it is focusing on niche areas where they are the best at or rather operating on scale. Another way for asset management companies to relieve the pressure on their margins could be to develop services and expand the business into new geographical areas such as APAC, which currently enjoys high growth.

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