



## **The Empirical Study Of The Financial Performance Of Investment Funds And Suitable Investment Strategies: Case Study J. P. Morgan**

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### **Abstract**

*The entire study is based on the evaluation of the financial performance of investment fund and has as a case study, one of the influential financial companies in the world J. P. Morgan. It will be observed that mutual funds are the most critical investment instruments for investors, and its performance is mainly affected by their characteristics such as net expenses, the number of portfolio managers and their accumulated experience, investment age, and asset size. The highest priority for the investors is to understand the relationship between the performance of the fund and these properties. This research will conclude that since the market can be unpredictable over short periods, investors should acknowledge their risk tolerance for investment risks, and that more risk could generate higher returns but could also lead to more significant losses.*

**Keywords:** Financial, performance, investment, investors, relationship, benchmarks, strategies, investment risks, diversified portfolio

### **Introduction**

Investments play an essential role in the economy, and nowadays, every company is committed to investing money or other resources expecting in return future benefits. The



word investment implies the allocation of money in exchange for a return that could be a profit or a loss, and it is composed of any change in the value of the investment and cash flows which the investor receives from the investment such as interest payments or dividends. At this point in history, the key that brings the financial institutions to survive and succeed is being able to cultivate strategic partnerships that allow them to be competitive and offer various services to consumers (Mayes, 2006). In fact, the most essential aspect in order to survive in the financial industry is both understanding the needs and expectations of the clients and also providing customer service tailored to meet those of the customers. In particular, this research will focus on the investment market that has changed during the years from a partnership firm focused on subsidising security issuance to providing a full-service range, including investment management.

International investing has a very long history in particular in Europe where foreign participation in the fixed income and equity markets has been very active for three centuries and with the increasing globalisation of capital markets over the last several decades, the American and Asian investors have gained more access to international markets (Elton, Gruber, Brown & Goetzmann, 2014). Cross-border investment declined during the middle of the twentieth century with the effect of World War II, and geopolitical barriers to foreign investing, and it is only in the late twentieth-century that international capital markets began to revive.

The financial services industry is one place where change is a constant factor. This is why the most challenging thing for any person or organization in this field, is to ensure that they are always on top of their game, adapting and evolving to the various changes. One of the most critical tasks is to ensure that a financial services company must provide innovative services to respond perfectly to the needs of its customers, and one of the most influential financial services holdings is J. P. Morgan. According to *The Financial*



*Times* (2019), it is one of the most prominent banks in terms of total advisory fees for the year 2019 with 6,329.31 (\$m) and the most valuable bank of the world in terms of market capitalization.

It is essential to underline the fact that financial markets have become more efficient in providing more favourable solutions to the investors; in this connection, investment funds have made their own market. This way of investing money is advantageous for many reasons such as it is possible to benefit from economies of scale, hire professional investment managers that can provide better returns and at the same time proper risk management and also, increase the asset diversification in order to reduce some unsystematic risk. The objective of reducing the total risk of a portfolio is all about diversification; it is widespread to have mutual funds and exchange-traded funds as a part of the diversified portfolio. As a consequence, mutual funds have become a vital investment vehicle for both individual and institutional investors, given the possibility for investors to seek not only diversification in their asset portfolios but also to become aware of the performance of the funds in which they invested their money (Solnik & McLeavey, 2004).

The measure of the performance of the investments draws in a notable interest in economic and financial literature. The overall purpose of performance measurement is to help to select an investment and provide enough information about how this specific investment is doing in order to make right decisions about what to do in the future not only as an investor, but also as a portfolio manager. It is essential also because it summarises the rate of return achieved, estimates the risk taken, and measure the skill evidenced by the efficient use of risk. Together the measure of the return, the factors that influence the return and the risk involved help the investors to monitor if the progress of their savings are making towards their goals, to select and evaluate the work of the



investment managers and provide inputs for future asset allocation and manager selection decisions (Feibel, 2003).

### Objectives of the research

The objectives of the research are as follows:

1. To critically evaluate the current investment funds of J. P. Morgan and their management
2. To explore and critically analyse which variables might impact the performance of the investment funds available to J. P. Morgan
3. To assess the risk and return of the investment funds looking at their financial performance and set strategies for investor's decision making

### The Rationale Of The Research

The rationale for selecting this topic is based on the importance and the impact that financial institutions have currently in the economy. Citizens of the countries with a developed economy need the services of a financial institution and undertake an action that helps a company to put the money to work in order to raise future revenue with the goal to increase their value over time. The mechanism of investment is crucial for a financial company; in finance, common investments include stocks, bonds, real estate, and mutual funds. J. P. Morgan is an investment bank and financial services holding company that provides a diversity of services devised to assist a business or an individual in increasing connected wealth. There are various investment funds that a company



holds; the most important are going to be analysed in particular their objectives, the investment process, the policies, and the main risk associated.

## Literature Review

### Investment Philosophies

Investment is an essential process as it allows individuals to construct a portfolio of assets designed to meet specified financial goals. In order to be successful with any investment strategy, it is important to underline some principles that every investor should consider and those are introduced by the famous economist and investor mentor Benjamin Graham (2006) and include first of all the fact that everyone should always invest with a margin of safety.

Another principle is expecting volatility and profit from the investment. The market is very unpredictable, and it will sometimes fluctuate but rather than be afraid of the volatility, it should be used to investor's advantage in order to get bargains in the market or to sell out the contents of the investment portfolio when they become overvalued. The last principle that Graham (2006) underlines is about knowing in which group operating in the stock market investors belong to. The active investors purchase investments and monitor their activity without interruption in order to take advantage of advantageous conditions, whereas passive investors purchase a typical benchmark and hold it for a long time (Kochard & Rittereriser, 2008).

Investors should define an investment portfolio conforming to their risk tolerance and investment objectives. Once a portfolio has been established, it is updated by selling existing securities or using the profit to buy new ones, by investing additional funds or selling securities decreasing in this way the size of the portfolio (Bodie, Kane & Marcus,



2017). Their role is to study the current economic and financial conditions and forecasts future trends; in fact, the financial market expectations and the needs of the investors reflected in the policy statement will jointly determine the investment strategy (Reilly & Brown, 2012). Another step involves the construction of the portfolio that minimise the risks of the investor and at the same time, meet the needs specified in the policy statement.

The last step of the portfolio management process is the continual monitoring of the needs of the investor and the market conditions as economies are very dynamic, and they can be affected by many industry struggles, politics, social attitudes and changing demographics for this reason the investment funds require constant monitoring and updating to reflect changes in financial market expectations. Based on all those steps, the investment strategy is modified accordingly (Project Management Institute, 2013).

#### Investment strategies

It is imperative to have an investment strategy that helps to avoid a scattered portfolio of individual investments without any theme or objectives. An investment strategy can be defined as the kind of decisions guide the investors based on factors like goals, risk tolerance, and the most important one future needs for capital (Gannon, 2010). In some investment strategies, the investor might need to focus on wealth protection following a low-risk strategy or on capital appreciation seeking in this way a rapid growth. Nowadays, markets are very competitive, and the ability of a company to succeed in highly competitive markets depends to a considerable extent on its aptitude to revive itself through the creation of wealth capital investment decisions congruent with the business strategy (Pike, Neale, Linsley & Akbar, 2018). Investment strategies could also be used as a guide for selecting profitable investment portfolios and are adopted at different levels, such as organisational, industry, and market (Fama & French, 1992).



There are two major approaches to portfolio construction and management, and they are top-down and bottom-up investing. The top-down managers focus more on the actual weights in the portfolio in reflection to the economic and general market conditions, including general earnings forecasts and interest rate expectations. In contrast, bottom-up managers arrive at their portfolio asset allocations based more on individual security fundamentals rather than macroeconomic considerations (Gallagher, 2003).

There are two main financial investment strategies that an investor or an investment fund manager adopt, active and passive management strategy (Staneyr, 2008). In the passive management or passive investing doesn't require any forecasting, the idea is to minimise investing fees and avoid the unpleasant of being unsuccessful correctly anticipating the future. Passive management tends to be less costly than active management, utilising a passive management approach provides broad market diversification and low internal expense ratios since passive portfolios do not require that managers spend so many resources searching the market or selecting stocks (Loistl & Petrag, 2003). In the active management, managers are actively making investment decisions for the fund, for this reason, it tends to have high fees because of the close attention to the market trends, shifts in the economy, changes to the political landscape and other factors that might affect specific companies. According to active managers, this kind of process will boost the returns, since the objective is to defeat the market and not only imitate the stocks or other securities listed in a particular index (Schoenfeld, 2004).

Finally, there is a high risk-averse or income investment strategy that refers to investors that are averse of risk, so they will prefer lower risk even if they suffer a disadvantage on higher rates of return (Gregoriou, 2009).



## Broad overview of the Investment funds

The way investment fund managers analyse, buy, and sell stocks is very important because it will affect the performance of the funds (Satchell, 2016). There are many types of investment funds and, in particular, in this study will be taken into consideration the most important one from the official website of J. P. Morgan company, including mutual funds, exchange-traded funds, and money market funds.

## Mutual funds

Mutual funds are very accessible resources of investing money, and their industry has increased noticeably over the last 30 years in the USA and UK (Cuthbertson, Nitzsche & O'Sullivan, 2010). A mutual fund pools money received from an individual to make a significant investment fund, and the money is governed by a professional fund manager with an extensive understanding of investing. The money can then be invested in either stocks or bonds; the first one corresponds to shares in the ownership of companies, and if the value of the company grows, so does the value of the stocks. On the other hand, bonds correspond to the money that has been borrowed by a company, and once the loan is repaid, the owner of the bond gets the money back with interest. Most mutual funds are actively managed, which means that most funds have managers who select which stock to buy and sell, and when to do this according to their own judgments (Haslem, 2010).

Investing in a mutual fund entails some advantages but also some disadvantages. One of the most important advantages is diversification because investors can spread their investments into different securities for the purpose of reducing the risk and avoiding a significant hit if investment performs poorly, enhancing in this way a portfolio's return (Jones, 2003). There are some professional investment managers that manage the





portfolios of the investors using prudent research and skilful trading, for this reason, the benefit for the investors from the securities all depend on the wise selection by the fund manager (Gremillion, 2005). Mutual funds have drawbacks too, like fluctuating return because of many other kinds of investments without a positive return, there will always be the possibility that the value of the fund will depreciate. Every type of investment carries risk; mutual funds, in particular, involve risk in fund management and risk in the changes in the market, but this kind of investment aims to strike a balance between risk and return (Jasmine & Basariya, 2018).

### Exchange-traded funds (ETF)

Exchange-traded funds have become a popular investment vehicle in the financial markets and are a powerful investment tool; the demand has increased considerably in the United States from the end of the year 2003 to the year 2014 the total net assets has risen from \$151 billion to \$1.8 trillion, and the number of ETFs has grown from 119 to 1364 (Antoniewicz & Heinrichs, 2014). Each share of this fund represents a proportional piece of the portfolio of stocks as mutual funds that can be bought or sold on a stock exchange throughout the day at a market-determined price. In contrast to mutual funds, exchange-traded funds are passively managed, this means that investors know exactly which stocks are in the fund, and when that portfolio is planned to change (Appel, 2009). The flexibility of ETFs has prompted a broad range of investors to utilise them, also because in contrast with mutual funds, ETFs trade on exchanges, so the performance of this particular fund is not weighted down by transaction costs (Gastineau, 2013).

### Money market funds

Money market funds offer high liquidity with a shallow level of risk and low return investment, in addition, generate income but very little capital appreciation and are not appropriate for long-term investment goals (Levinson, 2006). The primary purpose of the money market fund is to allow the investors to invest in very easily accessible, safe, and



extremely liquid assets using small amounts of investment. Money market funds aim to never lose money, so they seek a stable net asset value (assets of an entity minus its liabilities) per share that is usually \$1.00 in the United States. It can happen that the investments do poorly, and this brings the Net Asset Value (NAV) to fall below \$1.00, if this happens, it is said that the fund “broke the buck,” this is because the value of the money market fund is dependent on the interest rate (Bodie, Kane & Marcus, 2017).

## Methods of measuring the performance of investment funds

### Modern Portfolio Theory

The Modern Portfolio Theory was established in 1952 by Harry Markowitz and is the most popular method in arranging strategies and building portfolios that help risk-averse investors to maximise expected returns based on a specified level of market risk (Fabozzi, Gupta & Markowitz, 2002). This theory presumes that investors are risk-averse, and between two portfolios that offer the same expected return, investors will prefer the one that is less risky. A higher risk will be taken by investors only if compensated by higher returns because higher returns imply higher risk. (Ross, Westerfield & Jaffe, 2019). Markowitz underlines the fact that any amount of diversification cannot eliminate all risks because, as discussed upon, investors have to deal with systematic and unsystematic risk or diversifiable risk (Frantz & Payne, 2009), (Mangram, 2013).

### Capital Asset Pricing Model

Capital Asset Pricing Model is the expansion of the Modern Portfolio Theory developed by William Sharpe in 1964 and is a model used to delineate a theoretically appropriate rate required rate of return of an asset in order to make decisions about adding assets to a well-diversified portfolio. This model provides an essential developmental step in the theory of capital markets equilibrium in order to enable investors to value securities



keeping in mind the systematic risk (Mangram, 2013). This model started with the idea that individual investments enclose systematic and unsystematic risk but evolved as a way to measure the systematic risk or market risk represented with beta ( $\beta$ ) in the financial industry. According to the CAPM, beta is the only appropriate measure of the risk of a stock, it measures its volatility and shows how much the price of a particular stock jumps up and down in comparison with the entire stock market. The market, by definition, gets a  $\beta$  by 1; this means that if  $\beta$  is higher than one, the stock is riskier than the market if  $\beta$  is less than one, it is assumed that the risk of a portfolio it will be reduced (Cuthbertson & Nitzsche, 2004), (Levy, 2004), (Rossi, 2016). The version of the CAPM due to Sharpe (1964) and Lintner (1965) has never been an empirical success (Fama & French, 2004). Empirical work on the model consistently finds that the relation between average return and market beta is flatter (the risk premium per unit of market beta is lower) than predicted by the model, and this problem is serious enough to invalidate most applications of the model.

#### Arbitrage Pricing Theory

The unrealistic nature needed to derive the assumptions of the CAPM put this model in doubt about its validity for this reason Ross (1976) developed an alternative derivation of risk-return relationship known as the Arbitrage Pricing Theory (APT). In contrast to the CAPM where it is assumed that markets are perfectly efficient, the APT assumes that markets underestimate securities. Even if this theory is more flexible than the CAPM, it is also more complex because it entails not only the market risk, but its formula entails multiple factors that can be grouped into two macroeconomic and company-related factors (Sun & Zhang, 2001), (Roll & Ross, 1995). The simple economic argument underlines what is already known, more return can be obtained by coping with more risk, and risk-taking investors will take advantage of the differences in expected and real return on the asset by using arbitrage. Arbitrage is a practice that is related to the concurrent purchase and sale of an asset taking advantage of pricing discrepancies; in fact, temporarily mispriced securities represent a short-term opportunity for an arbitrageur that



will profit. However, market action should correct the situation and move the price back to its fair market value (Vishwanath, 2007).

#### Performance evaluation of investment funds

Performance measurement and comparison of funds have become an important issue for both managers and investors in the finance industry, and hence there is a pressing need for a credible measure for assessing and ranking the performance of these funds (DeFusco, McLeavey, Pinto & Runkle, 2007). The evaluation of the performance of a fund includes some related components that consist of measuring the absolute return, adjusting the return for risk, and measuring the relative returns. Absolute returns are the returns achieved over a certain period, do not consider the risk of the investment but indicate the performance of a security over an exact period specified by the holding-period return that measure the gain or loss of the security that the investors achieve over the specified period of time compared with the investment at the beginning of the period. Two sources define the return over the holding period and are respectively, the changes in the price and income referred to dividends or interests (Amenc & Le Sourd, 2003). Furthermore, investors want to get as much return as possible from their investments for a small amount of risk, so on a risk-adjusted basis if two investments have the same holding-period return, but one of them less risky than the other investors will prefer the one with less risk than the other (Loistl & Petrag, 2006).

Risk can take different forms; investment risk can be measured considering the variability or volatility of returns, and a very typical measure of variability is the standard deviation. This measure reveals the variability of returns around the average return, and the higher the standard deviation, the higher the variability of returns and the risk will be. Many investors take into consideration the standard deviation of past returns because it could show how variable returns could be in the future, but volatility can change gradually, and there is no certainty that future returns will behave like the past returns. Another reason



why investors take into consideration the standard deviation of past returns is that it can influence the objectives of the investors; investors plan could be obstructed if they invest in a fund where returns vary importantly over time (Travers, 2004).

(Sharpe, 1964). In contrast, the Treynor Ratio, suggested by Treynor (1965), is a metric that measure returns in excess of what could have been earned on a riskless investment per unit of market risk, in other words, it points out how much return an investment such as a mutual fund or exchange-traded fund have earned for the amount of risk the investment have assumed (Smart, Gitman & Joehnk, 2017), (Lückoff, 2011).

### **Research Methodology**

This research study has evaluated the performances that investment funds have during a certain time focusing the attention on the most influential multinational in the world J. P. Morgan. (Sapsford & Jupp, 2006).The researcher uses positivism as a research philosophy where it is possible to observe the reality because only the phenomena that can be observed will lead to the production of plausible data. The existing theories will help to develop hypotheses that will lead to a broad collection of facts that will provide the basis for the following hypothesis. The research undertaken is not value-free, this means that it is not free from criteria imposed by subjective standards as is important on this stage of the study to evaluate the data through subjectivism and objectivism processing the data stated on the official website of the organisation through an in-depth analysis of the results (Saunders, Lewis & Thornhill, 2009).

The research has adopted a deductive approach since it coincides with positivism philosophy and offers the possibility to explain the relationship between concepts and variables (Locke, 2007).As stated by Yin (2003) and Saunders et al. (2009), there are different research strategies with enormous overlaps among them; therefore, it is important to select the most beneficial for the research study. Some of the most commonly ones used in business and management are experiment, survey, case study, action



research, grounded theory, ethnography, and archival research (Easterby-Smith et al., 2013; Collis and Hussey, 2009; Saunders et al., 2009). The appropriate strategy for this research is a case study aiming to investigate a contemporary phenomenon within its real-life context. Furthermore, the case study deals with multiple sources of evidence in order to guide data collection and analysis which makes it suitable for this research (Yin, 2003; Gerring & McDermott, 2007).

### Research design

Research design is the conceptual blueprint within which the research is conducted, and the action plan needs to be prepared as a fundamental constituent for the measurement and analysis of data (Leedy, 1997). Furthermore, for Durrheim et al. (2006), it is a strategic framework of actions that serves to implement the research strategy. The researcher adopts an exploratory research design, specifying the general nature of the variables related.

### Research methods of data collection

In choosing the research methods, the researcher can choose to use a single data collection technique and procedure of analysis, also called mono method or more than one data collection technique and analysis procedure, also called multi-method (Curran and Blackburn, 2001). There is also a mixed methods research that combines both quantitative and qualitative data,

The researcher finds suitable for this study secondary data collection, using both qualitative and quantitative analysis through the use of charts and tables and the use of a multi regression analysis evaluation to compare different variables numerically, including numerical data. Using both qualitative and quantitative methods of data analysis is positive for the researcher as it helps the study to be more reliable and objective and at the same time to test theories and hypotheses with the recognition of subjectivity.



### Research ethics

Research ethics provide some guidelines for the trustworthy conduct of the research, respect for the intellectual property is at the base of a good research. The data that the researcher uses are published data and results, always giving credit where credit is due. In quantitative research, this is achieved through the measurement of validity and reliability (Fendler, 2016). According to Wilson (2010), reliability issues are always associated with subjectivity; to avoid this, the researcher adopts an objective approach to the study, avoiding compromising the level of reliability. Furthermore, Oliver (2010) instead considers validity as a required need for all types of study, in which the requirements of the research method have to be followed during the process of generating research findings.

### Research limitations

The outcome of the research can be affected by the study limitations that are those characteristics of design and methodology that impact or influence the interpretations of the findings from the research. The researcher has faced a lot of significant limitations during the study, such as constraints of the applications of the data to practice since quantitative analysis requires an extensive statistical analysis based on scientific discipline that is difficult to perform. Furthermore, the limitation of time is another constraint of good work, it requires a lot of time to expand the discussion of the results and the development in depth of different views and perspectives.

### Data Presentation and Analysis

#### Data analysis

This case study is going to analyse ten selected mutual funds through a regression analysis of the information, comparing the relationship of the performance of mutual funds chosen with other variables. The data available from the official website of the company is wide, but the main aim of the analysis is based on the performance in relation to its benchmark. Many variables might influence the performance of the funds, and those are the net expenses, the number of portfolio managers and their accumulated experience,



the age of the fund depending on the class launch year, and the fund assets. The multi regression analysis will let the researcher evaluate how the dependent variables influence the independent variable represented by the performance of the fund. Besides the evaluation of the variables that might affect the performance of a fund, it is also important to know the risk related to each fund studied. In order to consider the investment strategies adopted by the managers who manage the fund, it is crucial to base the evaluation not only on the yearly return on a fund but also on how much risk it is involved.

### Mutual funds analysis

J. P. Morgan presents a huge number of different types of mutual funds in relation also with the different asset class and share class. The case study in question ten randomly mutual funds has been selected belonging to share class A that is the most advantageous ones as investors who own these types of shares get more voting rights than investors that own other classes of shares. A company may issue different classes of shares for different reasons as every share offers different levels of voting rights, access to dividends, and more. As follows a table with the most important data related to the study will be presented, including the name and category of the mutual funds that the researcher intends to examine, the years going from 2009 to 2018, and based on the information presented in the official website, the fund returns with its related benchmark that is the standard against which the return of a mutual fund can be measured. In addition, information about the net expenses of the fund category, the number of portfolio managers, and their related accumulated experience with the investment age that corresponds to the years since the funds have been launch and the fund assets expressed in billion.

**Table 1.** Variables to analyse





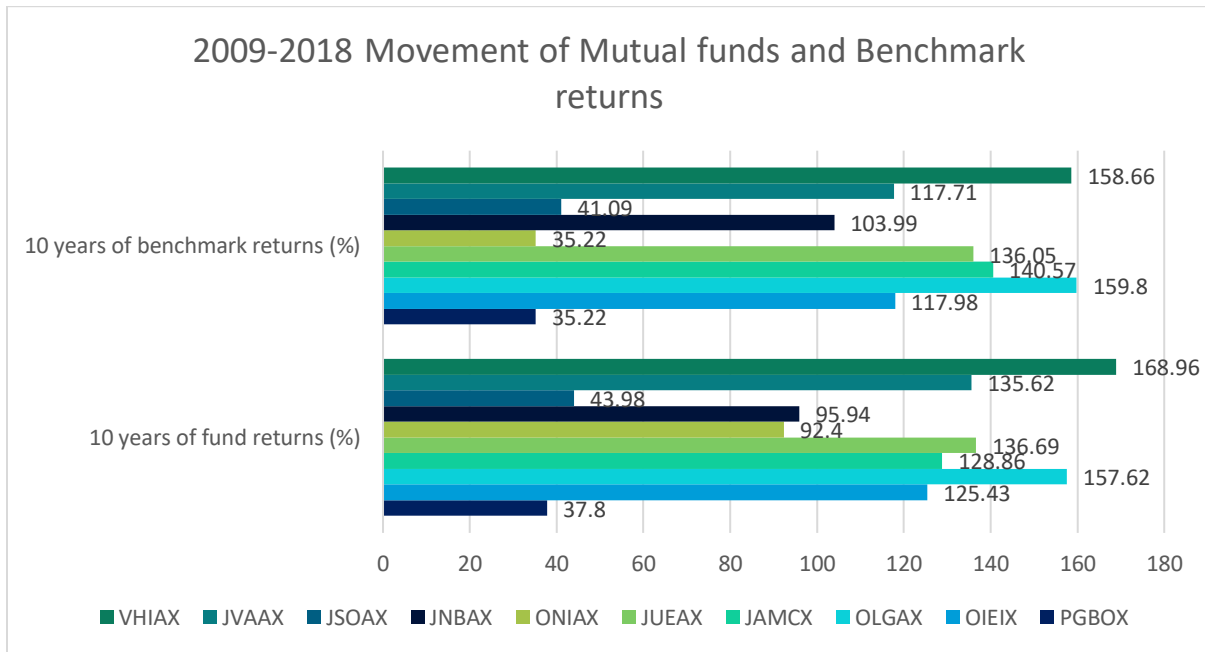
Name	Category	Year	10 year of fund return s (%)	10 years of bench mark return s (%)	Net expen ses %	No. Portfo lio mana ger	Accumul ated experien ce	Invest ment age	Fund ass ets (in billio n)
PGB OX	Core bond fund	200 9- 201 8	37.8 0	35.22	0.75	3	87	26	31.5 3
OIEI X	Equity income fund	200 9- 201 8	125. 43	117.98	1.01	2	66	26	26.7 2
OLG AX	Large Cap Growth Fund	200 9- 201 8	157. 62	159.80	0.94	1	27	24	15.8 0
JAM CX	Mid Cap Value Fund	200 9- 201 8	128. 86	140.57	1.24	2	65	17	16.7 8
JUE AX	U. S. Equity Fund	200 9- 201 8	136. 69	136.05	0.94	3	63	17	14.6 7
ONIA X	Core Plus	200 9- 201 8	92.4 0	35.22	0.75	3	83	25	15.4 2

	Bond Fund	2018							
JNB AX	Income Builder Fund	2009-2018	95.94	103.99	0.75	4	90	11	13.33
JSO AX	Strategic Income Opportunities Fund	2009-2018	43.98	41.09	1.04	3	70	10	12.51
JVAA X	Value Advantage Fund	2009-2018	135.62	117.71	1.14	2	65	13	10.71
VHIA X	Growth Advantage Fund	2009-2018	168.96	158.66	1.14	1	33	19	8.97

Source: (J. P. Morgan official website, 2020)

Return attribution interprets how fund managers achieve their performance and is an indicator of how much value it is added to the fund, in order to determine success these managers seek to outperform their returns as regards to a benchmark. The graph below will show how ten years fund returns have performed with respect to the related benchmark.

**Chart 1.** Ten years of variance between the returns of the mutual funds examined and their related benchmark



Source: Author's own work

Financial planners suggest that the returns of mutual funds should not be looked in isolation but in comparison to a benchmark to understand the real performance. The returns of a fund are considered over extended time frames, and in the actively managed fund, usually, managers deliver returns in line with the benchmark, but it is always better to overperform the relative benchmark as indicate consistency in performance. In addition, benchmark performance is a way to choose a fund, but it is not the only factor; investors need to understand their risk profile and evaluate their needs before making an investment decision.

Additional information that is helpful for the evaluation is the change in the sale of the company and change in profitability presented in the official reports of the company from the year 2009 to the year 2018.

**Table 2.** Ten years changes in the sale and the profitability of J. P. Morgan

Years	Change in the sale of J. P. Morgan (in millions)	Change in the profitability of J. P. Morgan (in millions)
2009	100,434	11,728
2010	102,694	17,370
2011	97,234	18,976
2012	97,031	21,284
2013	96,606	17,923
2014	94,205	21,762
2015	93,543	24,442
2016	96,569	24,733
2017	100,705	24,441
2018	109,029	32,474

Source: (J. P. Morgan official annual report, 2009-2018)

The variable's total net revenue, and net income are useful in determining the financial strength of a company. Investors might consider the total net revenue as a factor that shows the ability of the business to generate sales and potential growth; on the other hand, net income tells, to the investors, if a company is profitable and is very important to review it in a historical context.

### Multi regression analysis

In order to analyse and identify the relationship between the variables taken into consideration will be adopted a multiple linear regression analysis useful to investigate in deep the impact of the independent variables on the dependent variable. In addition, the



use of this statistical model will help the researcher to measure the level of dependency between them, identifying the strength of the effect that the independent variables have on the return of the funds.

**Summary output**

<i>Regression Statistics</i>	
Multiple R	0.683717162
R Square	0.467469158
Adjusted R Square	0.426950507
Standard Error	9.31765561
Observations	100

**Regression  
analysis output:  
ANOVA**

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	7	7011.474102	1001.63916	11.5371353	1.94284E-10
Residual	92	7987.320957	86.8187061		
Total	99	14998.79506			

**Regression analysis output: coefficients**

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>
Intercept	-15.02451166	28.36860267	-0.529617614	0.597652831	-71.36700525	41.31798193
Net Expenses	26.36333515	12.34276961	2.135933505	0.035340167	1.849529313	50.87714098
Portfolio manager	6.891482873	4.355148297	1.582376168	0.116995592	-1.758217568	15.54118331
Accumulated experience	-0.260808481	0.144902583	-1.799888421	0.055156067	-0.548597519	0.026980556
Class launch (Investment Age)	0.853796917	0.380299253	2.245065989	0.027159889	0.098489776	1.609104059
Fund Assets (In billion)	-0.379370809	0.241351089	-1.571862844	0.119415343	-0.858714904	0.099973286
Change in the Sale of JP Morgan (in millions)	0.000352668	0.000225381	1.564762253	0.121072048	-9.49586E-05	0.000800295
Change in the profitability of JP	-0.001859019	0.000270107	-6.882538228	7.03378E-10	-0.002395474	-0.001322564



Morgan (in millions)					
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Source: Author's own work

Multiple linear regression analysis shows the impact of the independent variables represented by net expenses, portfolio managers, their accumulated experience, the investment age, the fund assets, the sale and profitability of the company against its dependent variable represented by fund returns. In the table of summary output different information are presented. Multiple R is the correlation coefficient that measures the strength of the relationship between the variables; its value is 0.68 showing that there is a positive relationship between the variables even if it is not strong. R Square represents the coefficient of determination which is essential for the evaluation as it indicates the goodness of fit. However, since there are multiple independent variables in the analysis, it is essential to take into consideration the Adjusted R Square as it is the R Square but adjusted for inflation when performing multiple regression. Adjusted R Square is 0.43; this means that 43% of our values fit the regression analysis model, in other words, 43% of the dependent variable (y -values) is explained by the independent variables (x -values). The higher the R Square, the better the model fits the data, the percentage resulted from the data evaluated means that the model give a good explanation of the variation in the response variable. Another goodness of fit is represented by the Standard Error that shows the precision of the regression analysis; in this case, it is 9.32 that is adequate considering that the smaller is the number more certain is the regression equation. In the end, the total number of observations in the model are 100, calculated based on ten funds for ten years of analysis.

The second part of the regression analysis output is the analysis of the variance or ANOVA, which is a statistical model used to predict an outcome based on one or more



predictor variables. It gives information about the variability within the regression model and includes the number of the degrees of freedom (df) associated with the sources of variance, the sum of squares (SS) that is divided in residual and total, as the data show the residual SS is smaller than the total SS which means that the model fits the data. Another important information is the mean square (MS), the F statistic, and the Significance F that is the P-value of F.

The last section of the regression analysis output provides some specific information about the components that have been analysed, in particular looking at the coefficients and the p-value show, which relationship in the model is statistically significant and its nature. The coefficients underline the fact that changes in the independent variables are associated with changes in the dependent variable, but it is the p-value that helps to determine whether the relationship observed exists. A measure of the strength of the evidence is the significance level that is usually 0.05 if the p-value of the independent variables is less than the significance level, their effects are statistically significant. The data show that the independent variables that have an effect on the dependent variable are the net expenses, the accumulated experience of the managers, and the investment age of the funds.

Overall, it is possible to assert that different variables might influence the return of a fund, and the level of return on investments is an essential aspect of investment decisions. Every investor seeks to evaluate the variables that might increase their investment returns, but there is one more aspect to consider and is the risk factor. The amount of risk determines the degree of return. In the next section will be examined the risk involved in the mutual funds that the researcher has selected.

### Risk evaluation

There is a relationship between the return and the risk of a mutual fund; the return of a fund is related to how much risk investors are willing to tolerate. Different investments or a combination of investments have different levels of uncertainty associated. There are



different kinds of measures used to evaluate the risk of a fund, for the analysis will be included the standard deviation and beta coefficient.

**Table 3.** Return and risk measures

<b>10 years (2009- 2018)</b>	PGBO X	OIEI X	OLGA X	JAMC X	JUEA X	ONIA X	JNBA X	JSOA X	JVAA X	VHIA X
Relative return %	2.58	7.45	-2.18	-11.71	0.64	17.67	-8.05	2.89	17.91	10.30
Average return %	3.78	12.54	15.76	12.89	13.67	5.29	9.59	4.40	13.56	16.90
Standard deviation	3.63	10.47	14.93	13.57	13.88	5.04	12.52	6.16	14.46	16.87
Beta coefficien t	1.06	0.82	1.05	0.84	1.18	1.23	0.77	0.93	1.09	1.20

Source: Author's own work

Investors can use diverse benchmarks combined with risk metrics for analysing and understanding the market environment and diversified investment opportunities; for this reason, the relative return is an important component for the evaluation. The data presented from the table above aim to show a complete overview of the relative return, also called alpha, the average return, and the two measures of the volatility of the mutual funds.

The relative return is referred to the return that a mutual fund achieved over a period of time compared to a benchmark and is expressed by the difference between the fund's return and the return of the relative benchmark. Relative return is known as alpha in the circumstances of active portfolio management. In order to measure the performance of an actively managed fund, it is important to know the relative return, which has to be positive to show that the fund earns a return better than the market (Jones & Sharpe, 2008). Negative relative return is a sign of the fund underperforming the benchmark, based on the mutual fund examined there the major part outperform the market during the ten years analysis. Investors should look at the performance of the fund in a long-



term view; when selecting a mutual fund, the average return is a very valuable guide for measuring the long-term performance of a fund. A good average return annualised for a period of ten years in this case should be from 4% to 10%. Our study demonstrates that there is only one mutual fund that has a low average return; on the other side, the others have a very high average return, which means that investors have a positive gain over the investment. To better understand the percentages, it is also opportune to consider the risk factor represented by the standard deviation and beta measures.

One of the most frequent methods to determine the risk of an investment is standard deviation also indicating the volatility of the market comparing it among mutual funds (Arnold, 2014). The smaller the standard deviation, the less risky the investment; on the other hand, the larger the standard deviation the riskier the investment will be. The data available shows that the riskier mutual fund is VHIAx but also one of the best relative return; instead, the less risky mutual fund is PGBOX even if its return is not significant. Another coefficient to measure the level of risk of a fund is the beta coefficient that corresponds to the risk of the particular fund that, in statistical terms, represents the slope of the line through a regression of data based on the return of the individual fund against the return of the market (Banks, 2010). It measures the volatility or systematic risk of a single investment fund with the unsystematic risk of the market benchmark. In essence, beta clearly states the trade-off between minimising risk and maximising the return. Beta is fundamental as every investor needs to have a good knowledge of their risk tolerance and an understanding of which kind of investment matches their risk preferences. Investors that are more risk-averse invest in funds with low betas, instead investors that are willing to take more risk might want to invest in funds with higher betas. Substantially a beta coefficient of more than 1 denotes more volatility compared to the benchmark; whereas, a beta below 1 indicates low volatility. Conservative investors that want to maintain capital will focus on funds with a lower beta, while investors disposed to take more risk in exchange for more return will look for higher beta investments (Thomsett, 2010).



## Results and Discussions

It summarises the findings, evaluating the results, and delve into the meaning, importance, and relevance of the research. It will focus on explaining and interpreting the significance of the analysis that has been done, explaining any new understanding or insights that emerged from the last results

### Factors that influence the return of the investment funds

Investors always face the dilemma of choosing the right fund in which to invest their money from a wide range of possible mutual funds available in the market. Mutual funds are a purely American creation, quite cheap, very convenient, generally diversified, professionally managed, and tightly regulated (Graham, 2006). The variables analysed in the study orbit around the factors that might influence the return of a mutual fund and emerged that the drivers of return earned on a fund are mainly the net expenses, the accumulated experience of the managers involved in the fund, and the investment age.

Mutual funds provide to the investors many advantages such as efficient diversification, low transaction costs, benchmark tracking, and accurate record-keeping. On the other hand, they bear costs that take different forms and the most general form is the expense ratio.

The expense ratio, also called the management expense ratio, is the amount that companies charge investors to manage a mutual fund or more into the specific how much money out of a fund is used both for operating expenses and administrative costs.

In particular, in this study, the net expense ratio has been taken into consideration as a factor that might reduce the return of a fund; as a consequence, a difference in the expense ratio can cost money to the investors in the long run. The return of an investment is always calculated net of expenses, the fees charged to investors to cover the operating costs are deducted from investment returns before they are given to investors. The actively managed fund has a higher expense ratio than the passively managed fund, but



mutual funds are actively managed because investors prefer to delegate the responsibility to professional investment managers that research, develop and implement investment strategies. It is important for the investors to use the information derived from the analysis to monitor the progress of strategies making toward the goals, evaluate the work of investment managers, and provide inputs for future manager selection decisions. In the analysis, another factor that influences the return of a fund is the accumulated experience of the managers involved in managing the fund. The active portfolio managers who can deliver great excess return and beat a specified benchmark are crucial for good fund management (Knight & Satchell, 2007). The importance of their role is to be able to generate a better return than the market using some investment strategies that reflect the goals, objectives, and future need for the capital of the investors. As emerged from the analyses, in the funds that outperformed the market the accumulated experience in years of the fund managers is high, the results depended on the mutual funds studied but does not allow to affirm that if a manager has performed well one year is more likely to perform well the following year than a manager that has performed poorly.

The results of the study also verified the assumption that fund age is significantly related to the fund return; older funds seems to perform better than the most recent one as are more attentive to investment opportunities. It is essential for this evaluation to underline the theory that everyone should know, past performance is not an indicator of future returns (Christopherson, Cariño & Ferson, 2009). Many investors are attracted by the promise of new opportunity into the new funds, and even if require little more work by the managers to scrutinise all the latest opportunities a new fund may require extra due diligence and a jump of faith it can pay off during the years. Despite that, the research suggests that there is a relationship between the age of a fund and the return, as much the years for which the mutual fund has been in existence better the returns.

On the other hand, factors that are not directly related to the return of a mutual fund are fund assets, the change in sale and profitability of the company. As the regression



analysis output table shows, there is no evidence that the change in the sale of the company might influence the return of a fund, and there is no evidence that the change of profitability is positively linked to mutual fund return.

A lot of investors believe that the size of a mutual fund, represented by the fund assets, is important as if the size of a fund increases the assets in a fund increase in value. It emerged from the evaluation of the data that the size of a fund does not influence the return of a mutual fund and even if investors tend to be attracted by large-sized funds believing that these could deliver better returns it is suggested that prudent investors should put their money in a fund that is neither too small nor too big. In conclusion, even if the changes in sales and profitability of the company do not influence the return of a mutual fund, investors often consider both of them separately to determine the health of a business and its future growth. The two components play a huge role in deciding whether an investor should or not invest in the company, and a useful document is the income statement which helps investors to determine the profitability of a company over time.

#### Risk related strategy for investor's decision making

In every kind of investment, it is affirmed that the potential return rises with an increase in risk, so the invested money can render higher profits only if the investors accept a higher possibility of losses. In this context, it is assumed that what is essential to the decision-making is, first, the past performance of the mutual fund, and, second, how it has performed against its benchmark. A way to understand how the investments are performing in relation to the diverse kind of market benchmark is measured by the relative return. In this specific analysis, as the Chart 1 illustrates, only a few mutual funds have underperformed the market, while for the others, there is evidence of the value added by the managers over the period. The relative return gives only a single dimension of the performance of an investment; to reach a meaningful conclusion as to the success or failure of an investment strategy, it is essential to consider other dimensions like the risk taken in the course of earning those returns. Risk is a dependent scenario because if a



fund is considered risky depends on the requirements and constraints presented by the situation of an investor. The goal of the manager of an active strategy is to perform well over time and produce returns above the benchmark, but it is limited by the risk tolerance specified by the investors. Investors communicate their risk tolerance via the setting of the benchmark, and managers will be judged based on the efficient use of the benchmark relative risk in order to achieve value-added (Feibel, 2003). In addition, risk postures might change as the manager's strategy evolve; for this reason, in order to do reliable considerations, it is important to underline the fact that backward-looking risk informs the forward-looking risk. A good analysis is to quantify the past history of investment, including the volatility experienced by an investor in the fund during the period measured. A great measure of the volatility of a fund over time is the standard deviation and beta coefficient in relation to the benchmark (Arnold, 2014). In particular standard deviation is a statistical measure of spread used to a large extent, which basically reports the volatility of a fund over a certain period. It includes both systematic and unsystematic risk; higher standard deviation is associated with higher risk and lower standard deviation yield modest returns with less risk involved. Based on those assumptions, it is supposed that better return means good investments and higher risk involved, but some investments that are too risky might attains negative returns as a high-risk investment is one for which there is either a large percentage of loss of capital or underperformance. Looking at the analysis carried, it could be said that there are funds that, even if the risk involved is very high, the returns are negative; this means that investors might accomplish better returns by cutting risk than by increasing it over the long term.

Another measure of the volatility of a fund is the beta coefficient, which differs from standard deviation as it aims to it measures how volatile a fund has been in comparison with a relevant benchmark (Hirschey, 2001). This coefficient is significant because measures the systematic risk that corresponds to the risk of an investment that cannot be reduced by diversification. The market itself has a beta of 1 by definition, a beta greater than one means greater volatility than the overall market, while a beta that is below one accounts for less volatility. The lower the beta, the less the risk to investments, and the



higher the beta the higher the returns of a fund. Furthermore, this measure is used to rank the desirability of an investment with the idea that if two investments have the same returns, investors will prefer the one that is less volatile. From the results emerged from the table 3, a low beta for a fund does not necessarily imply that the fund has a low level of volatility but signifies only that the benchmark's related risk of the fund is low. The beta statistic has some limitations as it is calculated using historical data it becomes less meaningful for investors looking to predict the future of a fund movement. In addition, it is not useful for long-term investments because the volatility of a fund can change significantly from year to year, depending on the growth of a company and other factors.

#### Conclusion and Recommendations

This research has been undertaken to do an empirical study of the financial performance of investment funds and, in particular, mutual funds of the most influential company in the world, J. P. Morgan. The fast-changing environment of today's financial services has gained significant attention from individuals and attracted many people to make investments in different funds in order to acquire extra earnings and incomes. The research critically evaluated the most crucial investment funds available to the company and discovered that investments in mutual funds are for a long-term period of time and, most importantly, should be managed by professional fund managers that look for growth and help the investors to gain major rate of return. Investors always face the dilemma of choosing the right fund in which invests their money from a wide range of possible mutual funds available in the market, so, for this reason, the measure of the return and the variables that impact those returns can be seen as an accurate information provider. The most prominent finding emerged from this study is that this topic is very dynamic, and its importance grows along with the increasing number of investors and the strategies that they might employ, and it is an essential component of the body of knowledge for everyone that is involved in investing. Furthermore, this study has shown that risk tolerance affects the investment decisions of the investors, as the investors who take high risks expect higher returns that are associated with their investments.



In this study a multiple regression analysis has been used to examine the relation between the mutual funds and the variables that might influence their investment decisions. The analysis of the variables helped the researcher to show a clear evaluation of the data also because of the wide availability of information. The significance of the evaluation is reflected on the fact that on one hand it provides the information to the investors on the effectiveness of the mutual fund management, and on the other hand it informs the managers about the strengths and weaknesses of the constructed fund. This added advantages to the investors and the managers who have complete information to make a comprehensive decision as well as to perform market analysis. The results serve also as a guidance for further actions of mutual fund portfolio managers to choose the right securities taking into consideration the risk tolerance of the investors. The measure of the risk it is an important component as help investors to assess existing or potential investments. Risk can be considered as a divergence form an expected outcome, it can be expressed in relation to a relative benchmark, besides can be positive or negative. The level of volatility depends on the risk tolerance of the investors, if they want to achieve considerable returns on an investment in the long-term, they need to be open to sustain losses in the short-term. An investor can improve risk-adjusted returns by adjusting their stock position by the volatility in the market.

#### Recommendations

The evidence from this study suggests that the conclusive knowledge present a lack in the data because the results are not going in the same direction, although it provides a solid support for the decision making in mutual funds investment. Moreover, if the evaluation of the data could enable accurate aggregate data that can be calculated, and some comparative return information can be made in a timely manner. This can be of considerable value to the fund managers seeking to perform against a peer group benchmark. Furthermore, in order to upgrade the status of the research, it is essential to conduct the study on a large scale, considering all the mutual funds and the asset classes involved. It is recommended also to make opportune analysis involving the most important risk-adjusted ratio in order to help investors to evaluate diverse potential investments.





This should be able to confer awareness in investor about their investment approach, and the manager who manage the investment fund to select the best combination of funds with the analysis of all the parameters of risk-return position, economic conditions, and future forecast of economic conditions.

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