Challenges faced by the Brazilian Government to Restore Individual Investor Confidence Following the Pandemic

Research dissertation presented in partial fulfilment of the requirements for the degree of MSc in Accounting and Finance Management

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Dedication

This dissertation is dedicated primarily to the greatest example of a man whom I had the honour of calling my father. He was present in all my achievements and supported me whenever I needed it throughout my life. It is thanks to my amazing father that I was able to complete this master's degree. Even being in another country and not being able to read this dissertation in English he always encouraged me not to give up. Unfortunately, I won't be able to call him and share the news that of my achievement as God took him only two days before I submit this dissertation. However, he left me a strong will to continue giving him great pride and I am sure he will continue to accompany me on the other side. I will love you forever and I am so grateful to have him in my life.

This dissertation is also dedicated to my mother, my sister, my brother, and my partner. They supported and encouraged me in this challenge of completing my master's degree especially as it is not in my native language. It was a very difficult road with many obstacles, one which I could only finish by having such special people at my side.

Abstract

Challenges faced by the Brazilian government to restore individual investor confidence following the pandemic.

Izabelle A. Marcelino

The this dissertation explores the effects on the Brazilian stock market that has been seen since March 2020 as a result of the Covid-19 pandemic. Stock market volatility in Brazil was furthered by the Brazilian government enforcing social restrictions to prevent the spread of the virus. The Brazilian government faced many challenges in maintaining a balance between the economy and the protection of their citizen´s health. The social restrictions imposed to protect citizens resulted in decreased profits and in some cases permanent closures of businesses. This volatility affect investor confidence in the Brazilian market. The negative economic outlook has forced individual and institutional investors to rethink their portfolio strategies.

This dissertation is focused on exploring the correlation between the Brazilian government policies and individual investors' confidence in the stock market with particular reference to the fashion retail industry. The main philosophy related to this study was positivism and the deductive approach. The primary data was conducted via an online survey, where the target audience consisted of individuals that invested in the Brazilian stock market based on the research question and conceptual framework. The survey was distributed via social media and completed by 64 respondents. In this study it was shown that the primary data rejected the hypothesis of a significant correlation between the Brazilian government's decisions during the pandemic and individual investors' exposure to the equity market.

The research showed that individual investors increased their exposure to equity investments during the pandemic as an opportunity for potential future returns. Recommendations for future research are made in order to cover other stock market industries and variables that could affect individual investors' confidence to protect their portfolios.

SUMMARY

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INTRODUCTION

1.1 Overview

The interest in researching the impact on investor confidence came from the stock market crash in 2020. After the World Health Organization (WHO) characterised Covid-19 as a global pandemic on 11 March 2020, it became clear that there would be far-reaching economic effects and that investor confidence would be significantly affected. As a result, the stock market decreased immediately between 9 and 16 March 2020, caused by investors' concerns about the pandemic´s impacts on the economy. Furthermore, unlike the 2008 financial crisis, the Government faced an additional issue of not allowing businesses to open for employees and customers to prevent the spread of the Covid-19 virus. This limits the governments' effectiveness in stimulating growth.

The fashion retail industry was one of the most affected industries by the pandemic due to the restrictions implemented by authorities. Fashion retail businesses had to implement safety protocols and adapted their businesses following government guidelines to protect customers and workers. Public health authorities encouraged the individuals to avoid indoor shopping and stay home, as many businesses went into liquidation caused by significant profit reduction and high debts. (Gottfried, 2020)

Fashion brands and retailers were significantly impacted by the pandemic, which resulted in many companies' bankruptcy and large losses on sales. For example, the luxury fashion conglomerate Capri Holdings Limited, which owns the brands Michael Kors, Versace and Jimmy Choo that operated 1,271 stores worldwide in March 2020, had 70 percent sales declined between October and December 2020. The multinational company Nike, a major manufacturer of sports equipment, had a loss of US$790 million in sales during the first three months of the pandemic, between March and May 2020. (Ilchi, 2020)

1.2 Research Purpose

The research aims to identify the Brazilian government's role in the crisis and analyse its impact on the fashion retail stock market. Further, it will analyse fashion retail stock market volatility in the short term and investigate the effects of Brazilian government decisions on individual investor portfolios.

In 2020 stock market volatility increased significantly due to the Covid-19 pandemic. This affected investors' risk-taking behaviour because of the uncertainty for future business

profits. According to Nosić and Weber (2010), lack of confidence or excessive pessimism substantially affects investors' risk behaviour, impacting portfolio decisions. Moreover, in crises situations, individuals reallocate their portfolios to more secure investments to reduce the risk of capital losses.

This research proposal identifies Brazilian individual investors' behaviour during the global pandemic concerning portfolio allocation. Further, it seeks to evaluate if the Brazilian governments' role in dealing with the global pandemic, such as movement restrictions, vaccine programs, stimulus packages and interest rate changes, affected investors' portfolio allocations in the fashion retail stock market.

1.3 Background

Government officials worldwide had imposed lockdown restrictions to stop the Covid-19 virus from spreading after WHO declared a pandemic on 11 March 2020, forcing customer-facing businesses to close and making it impossible for employees to go to work. The stock market reacted negatively to the restrictions imposed by governments and stock indexes fell. The uncertain conditions for the year made stock exchanges such as the New York Stock Exchange (NYSE), the largest stock exchange globally, lose 13% in a single day on 16 March 2020. They suspended trading several times during the same week after massive selling caused by the shareholders' panic. (Frazier, 2021)

To contain the damages caused by Covid-19, the World Bank Group (2020) approved a project to facilitate loans for public health intervention, expecting to provide loans of $160 billion over 15 months before July 2021 to support the emerging countries. In addition, International Finance Corporation (IFC) sought to provide $47 billion to help the private sector sustain employment during a pandemic, extend business credit and purchase medical equipment in order to provide safe conditions for businesses to operate. IFC provided US$100 million of long term loan for the mid-sized Brazilian bank Daycoval to support bank loans for small and medium-sized businesses.

However, the stimulus package to support the business was not enough. Confidence increases when it can be demonstrated that the virus is under control. Therefore, many governments invested in assisting pharmaceutical companies to develop a vaccine to contain the Covid-19 virus. Nine months after the WHO declared a pandemic, in December 2020, the Pfizer/BioNTech Covid-19 vaccine was the first vaccine approved by the US Department of

Health - Food and Drug Administration (FDA) (2021), causing a market upturn with the expectation of reduced governments restriction in the near future.

Following Pfizer/BioNTech, other pharmaceutical companies had their vaccines approved within a few months. However, the demand across the world was much higher than the supply, challenging governments to develop an efficient strategy to buy and distribute the vaccines. In March 2021, Israel led the vaccinating by forming a partnership with Pfizer/BioNTech paying more to guarantee the vaccines. More than 50% of the population got at least one dose in the first three months, offering a safe environment for businesses to open and the economy to grow. (Rosen *et al*., 2021)

Brazil faced challenges and delays in receiving and distributing the vaccine after its introduction in late 2020, with high bureaucracy and political implications to refuse vaccine purchases contracts. Therefore, Brazilian States could not manage vaccination supplies unilaterally and rely on agreed distribution channels with the national Health Minister. Without national lockdowns and inefficient leadership increased health expenses and created new virus variants, forcing regional authorities to implement local lockdowns to contain the deaths and avoid the health system's collapse. (Rivers, 2021)

Due to the volatile stock market, institutional and private investors have needed to reassess the risk factor in their portfolio holdings and, in some cases, reallocate their portfolios away from economic sectors hardest hit by the pandemic. In March 2020, the Central Bank of Brazil announced US$227 billion in liquidity credit and US$30 billion in fiscal stimulus to support the sectors most badly affected by the pandemic and those affected by the resulting increase in unemployment. (Alpert, 2021)

For older individual investors, more consideration is given to retirement plans and therefore companies that pay dividends that generate regular income are more preferable. However, the pandemic in 2020 showed that dividend income is not a guarantee. Many companies stopped paying dividends to shareholders to increase their available cash flow. This decision made many investors sell their shares and move a considerable part of the portfolio to cash, believing that a prolonged economic crisis was coming. (Dyson, 2020)

The market remains volatile, usually decreasing with negative news and reacting positively with the expectation of increases in growth in the future. The share price of Pfizer Inc. demonstrates this volatility after the approval of the vaccine. Between 05 February 2020 and 24 March 2020, its share price had dropped 21%. However, with the report of the vaccines' development and positive test results, the share price increased 47% between 24 March to 12 August, having better results than before the pandemic. (Nasdaq, 2021)

Pfizer Inc. shares are sold on the New York Stock Exchange. The US is considered a developed market and open to foreign investors. According to the World Federation of Exchange (2021), the NYSE and Nasdaq, the two biggest US stock exchanges, had 5,860 listed companies in January 2021. However, emerging markets such as Brazil have more volatility on their stock exchanges. Brazil had only 349 listed companies in January 2021. Some of the largest of these are government-owned organisations such as Petrobras, where market volatility is increased by political intervention.

1.4 Justification

The significant drop in the worldwide stock market with the global pandemic created substantial opportunities for high-risk individual investors taking advantage of the market crash to buy shares at a lower price. High volatility in the Brazilian stock market, concerns of business profits with the pandemic and reduced interest rate increased the Brazilian individual investor took advantage to invest in developing market to protect their portfolio. Individual investors reallocated holdings from businesses most negatively impacted and unprepared in favour of companies that had adopted their business activities for the global pandemic. (Dyson, 2020)

Worldwide economies created stimulus packages and incentivised the pharmaceutical industry to develop an effective vaccine to protect the population and contain the spread of the Covid-19 virus. Support was also required for the sectors most badly affected by the pandemic and prevent unemployment increases. These measures were a way to stimulate consumption during a global pandemic and consequently increase investors´ confidence to keep investing their portfolios in a volatile market.

1.5 Objectives and Research Question

This dissertation aims to achieve the following objectives:

- Analyse the fashion retail stock market decline in 2020 and the impact of Brazilian government decisions to restore investor's confidence in the fashion retail industry.
- Gather data on how the Brazilian government plan stimulates growth and supports the fashion retail industry badly affected by the pandemic.
- Describe the investor challenges to reduce the risks in their portfolio with fashion retail shares during the global pandemic.

This study aims to answer the following question:

- How Brazilian government decisions affected individual investor's fashion retail portfolios following the pandemic?

1.6 Structure of the Study

The dissertation is divided into five sections to develop and answer the research question. This section presented an overview of the research, defined the objectives of the exploratory study and demonstrated how the study would be conducted. The second section evaluated the literature review of government stimulus, fashion retail industry, portfolio allocation and investor confidence. Literature review based on peer-reviewed articles and books critically examined to comprehend theories and concepts related to various fields mentioned in this project.

The end of the literature review provided a conceptual framework that linked the literature review with the research question and defined the data guidelines. Followed by research strategy and methodology would clarify the approach used to collect primary data. This project takes quantitative method as primary data, with an online survey sent to individuals investing in stock exchanges to evaluate the pandemic impact on the fashion retail industry.

The Findings and discussion section demonstrate the data gathered from quantitative data and analyse the results collected from primary and secondary data. Represent statistical data the results to answer the research question. The final section is the conclusion, presenting a summary of the findings to answer the research question discussed previously, limitations of the study and recommendations for future researches in the same field.

3. LITERATURE REVIEW

3.1 Overview

The purpose of the literature review is to access previous research to develop a conceptual framework for the exploratory study on the Brazilian government's influence on the fashion retail industry and impact on individual investor portfolios. This section explores the government policies to contain the Covid-19 virus spread and reduce negative impact on the economy, customer behaviour, and to minimise losses for retail investor portfolios.

The economic causes for concern related to the pandemic are still in progress during this study which pose a significant challenge to explore the pandemic's impact on the market. The research will address the gaps in the Brazilian government's response to the pandemic and attempts to stimulate consumption while protecting the population. Further, it will seek to provide a better understanding to individual investors who continue to hold equities in the fashion retail industry which has been significantly impacted by the pandemic.

The following are the key themes of the literature review:

- Government Policies
- Fashion Retail Industry
- Portfolio Allocation
- Individual Investor Confidence

3.2 Government Policies

On 31 December 2019, the WHO received the first report of a new coronavirus subsequently called Covid-19. The new virus detected in China spread quickly to different countries and caused thousands of deaths worldwide in the first two months. The rapid spread and significant deaths caused the WHO to declare Covid-19 a global pandemic, forcing the authorities to take aggressive action to contain the virus and protect national populations. (Brammer *et al*., 2020)

Authorities and healthcare systems faced major challenges in dealing with the pandemic. The WHO recommended social distancing measures and for national governments to impose lockdowns, allowing only essential services open to the customers and asked the population to leave home only for crucial activities (Baker *et al*., 2020). The Brazilian President, Jair Bolsonaro refused to follow WHO recommendations and implement a national lockdown. Rather, he discouraged the population from implementing these measures in an effort to reduce economic damage. (Pontes and Lima, 2020).

Mexico, the second largest Latin American economy followed WHO recommendation and implemented national lockdown in April and May 2020. Doing so caused a significant reduction in Covid-19 infections and deaths. However, two months of lockdown was insufficient to contain the Covid-19 virus spread. The authorities ended the lockdown gradually to reduce the economic impact, with an increase in unemployment and informal jobs (McDonald, 2020).

The Brazilian government followed a different strategy and distributed US$5.6 billion to support the health system and did not impose lockdowns or air travel bans. Pontes and Lima (2020) believe the Brazilian policy of not implementing lockdown might not cause significant negative results. However, according to International Monetary Fund (2021), Brazil registered 9% of the population infected by Covid-19 (18.5 million people) and 3% fatality cases against 2% of the Mexican population infected by Covid-19 (2.6 million people) and 0.2% fatality cases as of June 2021. This demonstrates that the Mexican policy to contain the virus is more successful than the Brazilian policy.

The lack of information on when lockdown will end and non-essential businesses will resume resulted in massive layoffs and business liquidations (Baker *et al*., 2020). The Brazilian government intervened to contain the significant business failures, creating a stimulus package in March 2020 of US$150 billion to support the vulnerable population, maintain jobs and support industries significantly impacted. In April 2020 the Brazilian Federal Government worked with private banks on a relief plan of at least US$9.6 billion. This provided companies with loan finance particularly in highly impacted sectors such as the airline industry, energy and retail sectors. (Riddell *et al*., 2020)

Economists have debated for decades on the best course of action to respond to an economic crisis. The theories of John Maynard Keynes and Friedrich Hayek gained attention in 1929 during the great depression. John Maynard Keynes proposed that national governments should stimulate the economy through fiscal injection, easing bank loan conditions and tax reliefs to prevent an increase in unemployment in the short term. However, Hayek believed that government intervention destabilised the financial system in the long term, increased inflation and caused unsustainable public debt. (Spantig, 2014)

Keynesian theory causes short-term relief but long private sector debt recovery, caused by significant government deficit increase (Keen, 2015). Economic history shows that Keynesian fiscal measures predominate in past financial crises. Government intervention by monetary and fiscal policies with an increase in public debt became an alternative in the short term to stabilise the financial sector and maintain consumption (Spantig, 2014). Brazilian authorities announced a series of fiscal measures, following Keynesian theory to mitigate the impact of Covid-19.

The Brazilian fiscal measures to contain the economic damages caused by the pandemic includes a reduction of the interest rates, public banks expand credit lines, the Federal Reserve Bank provided US$60 billion to the central bank through swap facility, and central bank intervention on real/dollar currency exchange rates to contain high volatility. Mexico

authorities follow the same policies, create fiscal measures, reduce the interest rates, and used US$60 billion swap line with the Federal Reserve to support businesses, the population, and the health system. (International Monetary Fund, 2021)

In the pandemic, the authorities faced new challenges to manage the financial and health concerns. Lack of effective treatment and previous experience with influenza epidemics, such as H1N1 influenza and respiratory syndrome (SARS), caused health authorities worldwide to take extreme measures to contain hundreds of thousands of deaths (Nicolaides *et al*., 2020). Governments worldwide did not respond as a uniform policy caused by significant business impact and lack of resources to support businesses and individuals most affected by government policies. Uncertain conditions created by government-imposed restrictions made evaluating future sales and estimating business budgets difficult (Phan and Narayan, 2020)

The Covid-19 vaccine is another important measure to control the pandemic and stimulate the economy. The United States FDA approved in December 2020 the first Covid-19 vaccine worldwide, challenge the authorities to develop an efficient strategy for purchase enough vaccines for their population (Rosen *et al*., 2021). Latin American countries faced vaccine delays, as in June 2021, only 14% (29.5 million) Brazilians and 16% (20.4 million) of Mexicans are fully vaccinated, protected against Covid-19. Compared to developing countries, 48% (158 million) of the United States and 51% (34 million) of the United Kingdom are fully vaccinated against Covid-19 (Ritchie *et al*., 2020).

Government health policies are key to raise awareness of individuals the importance of following the roles to avoid significant damages and resume the economy as soon as possible (Nicolaides *et al*., 2020). Despite Brazilian stimulus, the economy presented an overall contract of 4.4% in 2020 but slow domestic growth in the last quarter of 2020. The start of vaccination offers hope for the economy, bring more customer and business confidence. However, the slow vaccination and increased Covid-19 infections in early 2021 pressure the currency Brazilian real fall 22.9% and 6.9% of Mexico's peso against the United States dollar between February 2020 and February 2021. (Barua and Samaddar, 2021)

3.3 Fashion Retail Industry

A key sales strategy in fashion retail is to attract customers by window displays. Window displays are an effective strategy to attract customers in a highly competitive market with similar stores next which other. The external impression provides an idea of store interior (Cardoso Scussel *et al*., 2020). However, the government restrictions forced the fashion retail

industry to reduce operating hours of their physical stores to contain the virus spread, and the uncertainty from the restrictions as well as an increase in employees working from home reduced clothing consumption. (Magyar, 2021)

Fashion retail is a competitive sector with similar products and services, such as clothes, footwear, cosmetics, accessories and home textiles. Traditional fashion retail businesses with physical stores had to adapt to a digital age over the past decade with increased online services (Nault and Rahman, 2019). Online sales in many sectors increased more than expected during the pandemic, caused by the difficulty of attending physical stores and avoid contact with other customers and employees. (Magyar, 2021)

Many customers preferred buying in a physical store with customer interaction, branding and receiving advice (Nault and Rahman, 2019). Covid-19 impacted lifestyles and consumer behaviour that was already changing. For example, ethnocentric customers are those who prefer do not purchase foreign products by believing that imported products reduce the consumption in local stores. Consequently increase unemployment and affect the domestic economy (Verma and Naveen, 2021). In emerging and developing economies, the customers tend to be non-ethnocentric, where customers prefer imported brands as self-identification with global customers and associate the product with high quality. (Cardoso Scussel *et al*., 2020)

Consumer nationalism became stronger in a pandemic, with customers trying to support local businesses that were significantly impacted by government policies (Verma and Naveen, 2021). Before the pandemic, Brazil and Mexico had significant growth in the foreign luxury brands market. However, with the pandemic, personal luxury goods market contracted in 2020, caused by shopping mall closures and increased prices due to local currency volatility, especially when compared to US Dollars and the Euro. (Martini, 2020)

Covid-19 changed customers' purchasing behaviour, preferring domestic products to reduce the dependency on other countries. However, long lockdowns with physical stores closed changed customer behaviour adapting purchasing to online sales, consequently search for foreign companies that provide low prices and diversify products (Verma and Naveen, 2021). To compete with online sales, shopping centres launched new services with digital catalogues and the interaction between customers and personal shoppers. This service reduced the sales drop of international brands during the pandemic (Martini, 2020).

Purchase online had a significant disadvantage of difficulty returning the product in case of not meeting expectations. Challenges of refunds are reduced in a physical store with the facility to negotiate directly. In addition, fashion products composed of clothes, footwear and makeup are more suitable to sell in physical stores to access sales assistants and fitting

rooms to test the product before buying (Nault and Rahman, 2019). However, with Brazilian authorities implemented restrictions caused by Covid-19, increased online shopping with the majority of customers choose online to reduce the risk of contamination. (Sato, 2020)

Globalisation makes it difficult for fashion businesses to differentiate from their competitors, caused by low production cost, large distribution to department stores and constantly change the products to follow the trends. Physical stores play a key role in offering a unique experience, providing direct availability and developing customer loyalty (Cardoso Scussel *et al*., 2020). However, the Millennials generation individuals born between 1980 and 2001 represent most customers in 2021, grew up in a digital age, tend to choose services that use smart in-store technologies, unlike Baby Boomer generation (born between 1946 – 1964) that prefer physical store and assesses product quality rather than following trends. (Rese *et al*., 2019)

Windows displays attract many customers to visit the interior store after catching the attention with the combination of products and customers' style, projecting the mannequin product in their body. Customers tend to look for fashion trends available, product quality, style and variety. In addition, price and payment condition, with the possibility of dividing the payment in credit card for months, are the key to determine the buy decision. Considering price as a key determining buying decision, e-commerce growth significantly in the last decade, providing better prices than in-store. (Cardoso Scussel *et al*., 2020)

The majority of customers are open to new trends but are susceptible to emotional value from stores' environments. Despite the emotional value, physical stores are looking for innovative services to attract customers, such as interactive fitting rooms enabling request different clothes from the fitting room and 3D body scanners provide the correct clothes size of a specific brand or product (Rese *et al*., 2019). Online stores provide detailed information about their products and improve returned shipping if they request a refund, opening picked up/returned locations and provide free voucher returns. Free returns and short delivery are key roles of online stores to attract traditional customers that prefer to buy in a physical store. (Nault and Rahman, 2019)

In 2020 physical stores had a new challenge to compete with online services. Governments' restrictions to control virus spread and customers' fear increased the search for online products and forced traditional businesses to adapt to the new reality (Sato, 2020). The necessity for social distance and fast delivery increased the click-and-collect services, where the customer buys online and collects the product in a physical store without extra fee. (Gielens *et al*., 2021)

Click-and-collect becomes an alternative to reduce customers' shopping time. This service can be divided into three forms. The first form store worker pick-and-pack the items ordered and makes them available in a physical store. In the second form, customers pick the items inside stores. In the third form, customers collect the items into their cars in a drive-thru located near a retail store or warehouse (Gielens *et al*., 2021). Consider all online possibilities, customers over 55 years still prefer to purchase in physical stores. The high risk of Covid-19 infection did not encourage 25% of the elderly to buy online in 2020, according to Sato's (2020) research.

Fashion trends constantly changed with customers buying new products by an impulse to follow the market. However, the click-and-collect service reduces impulse buying in-store, with customers not check the store's showroom to see the trends and new designs (Gielens *et al*., 2021). Fashion retail shops expand their businesses by investing in software, diversify catalogues and online personal shoppers to stimulate customers to visit their website to order more products. (Martini, 2020).

The pandemic created significant demand for home delivery and click-and-collect in the fashion retail industry. High demand increased the risk of out-of-stocks on store shelves, with a late update of available items in inventory, increasing the necessity to replace the items or refund the customer. Fashion Retail businesses with the strategy of providing only physical stores were significantly impacted by online fashion retailers for the difficulty to adapt and maintain the price of their products. (Gielens *et al*., 2021)

3.4 Portfolio Allocation

High uncertainty in crises results in declined risk tolerance of investors. The financial crisis in 2008 resulted in a significant drop in asset price with high asset returns volatility, which resulted in investors with low-risk tolerance became more conservative, changed the equity portfolio by investments with fewer volatility classes such as bonds (Marsh and Pfleiderer, 2013). However, investors with high-risk tolerance increased their exposure as a prospective to increase their returns. (Sotiropoulos and Rutterford, 2019)

Harry Markowitz introduced the modern portfolio theory in 1952, describes investors' behaviour and regards the relationship between the deviation of returns and variance risk (Sotiropoulos and Rutterford, 2019). Portfolio refers to the combination of assets held by investors, diversifying a portfolio into shares, bonds, cash, and alternatives investments like

property and commodities. Bank deposit is considered a stable and risk-free return; furthermore, stocks have high risk and instability. (Moradpour, 2021)

Markowitz optimisation believed the balance between risk and return, with rebalance assets from different sectors weighting over time. Rebalancing the portfolio is complex to apply; however, following the buy and hold strategy with diversifying assets, individuals investors rebalance gradually with spread acquisitions over time (Sotiropoulos and Rutterford, 2019). The pandemic generated a large drop on the Brazilian stock exchange B3 between February and March 2020, which depreciated 52% in dollars, considering market panic and the depreciation of the real against the dollar. (Moura, 2020)

Individual investors who follow buy and hold strategy maintain the long term assets, independent market volatility in the short term. Only replace companies' share when the performance is affected by corporate actions, going concerns, and risks bankruptcy (Sotiropoulos and Rutterford, 2019). The fear caused by the pandemic and local Brazilian authorities closed nonessential services, caused a large drop in the stock market before listed companies' financial statements demonstrate the pandemic impact. For example, Lojas Renner SA, the largest Brazilian fast-fashion retailer with 93% of stores located in shopping malls, between 21 February and 3 April 2020, the company lost 46% share value. (Mello, 2020)

The long-term stock returns are partially predictable, with an autocorrelated risk premium, where two consecutive bad stock market years tend to follow by a good stock market year. The market risk premium grows with up and down of stock price in the short term but is generally offset by subsequent gains. Individual investors usually predict the stock market using three variables. Evaluate the earning-price ratio at the end of the quarter year, verify the average dividend yield of the previous year, and calculates the expected market risk premium, represented by the expected rate of return subtracted risk-free interest rate. Dividends and returns are accessible data that listed companies need to disclose and present a better measure than historical information. (Rich and Reichenstein, 1993)

Small companies present higher risk-adjusted returns for the difficult to identify price-to-earnings ratio. Individual investors are concerned with the after-tax rate of return, which measures the financial ratio dividend yield represented by the company's dividend payment each year related to stock price. A high dividend yield is associated with a high-risk return to compensate investors for investing in the business (Homaifar and Fayissa, 1987). However, the dividend yield is desired by many shareholders, making the demand for those companies to pay a high dividend increase, resulting in a low rate of return. (Sotiropoulos and Rutterford, 2019)

High returns caused by dividend yield resulted in low price-to-earnings per share, with the increase in share price caused by high investors' demand. Listed companies that pay dividends try to maximize their profits constantly to increase the price-to-earnings to attract more shareholders (Mangala and Dhanda, 2018). Stock's price corresponds to the current company's value or market value agreed by seller and buyer. The intrinsic value is a company's actual worth informed on financial statements report released to the public, determine how much cash flow the company can generate in the future. (Homaifar and Fayissa, 1987)

Stock volatility immediately impacts the stock price but not necessarily the stock value, in order to the financial statements were not affected by the changes of the share price (Sotiropoulos and Rutterford, 2019). Investors should define to target a particular level of return from their portfolio to reduce capital risk, choosing more securities assets whether the tolerance to volatility and return is low. Investment in uncorrelated industries assets may offset which industry may be affected by external factors and the losses in the portfolio, increasing the security. (Massahi *et al*., 2020)

A well-diversified portfolio reduces the risk to investors and helps to achieve the expected returns. Strategic asset allocation considers the return and risk objectives, and the exact portfolio balance must assess the risk tolerance (Massahi *et al*., 2020). This is often connected with their age, for example, Generation Z and Millennials born between 1980 and 2001 are more risk-preferring than the Baby Boomer generation (born between 1946 – 1964) as the assets held by younger investors should recover overtime when they reduce in value. (Solnik and McLeavey, 2014)

International diversification increases security with investment in different domestic markets. Obtain more varieties of assets, balance risks against geographical distribution and influence other authorities each one of hold the companies. International investments improve the actual performance and optimise the portfolio with the access of more products and rebalance the inflation of their current economy, especially with assets in a different currency. (Sotiropoulos and Rutterford, 2019)

Foreign securities significantly reduce portfolio risk in emerging markets, with high volatility and dependence on developed markets Sotiropoulos and Rutterford, 2019). The Asian crisis in 1997 and the United States terrorist attacks on 11 September 2001 had significantly impacted the Brazilian stock market, but the Brazilian crisis in 1999 affected only internally. Interdependence increases the volatility to countries with high commodity export that the global market influences the price. However, diversification benefits decrease during global crises, considered worldwide high volatility period. (Freitas Cardoso *et al*., 2020)

3.5 Individual Investor Confidence

Investors' risk profile affects the stock market's volatility based on the perception of risk and return (Massahi *et al*., 2020). Optimism in a market causes the share prices to increase as the number of individuals and institutions buying shares exceeds those selling. Additionally, when government bonds have low interest rates, it stimulates individuals and institutions to change the investment holdings towards higher risk/reward investments to increase the returns (Nosić and Weber, 2010).

Predicted future cash flow and dividend policy are methods for investors to evaluate the returns and reduce the risk of loss in an investment decision. Companies that distribute higher dividends tend to have less volatility in their share price. They are typically considered as safer for maintaining consistent returns (Homaifar and Fayissa, 1987). Furthermore, the company's location influences how the analysis is performed, particularly compared to other companies in the same industry. Developing economies with high volatility tend to have higher pay-out ratios on dividends to encourage investment in the company despite future earnings risk. (Bradley *et al*., 1998)

Some analysis of expected returns considers historical measures, especially dividend payments. However, historical returns do not guarantee future gains. Likewise, historical volatility does not necessarily imply future volatility. Considering the constant changes in the environment and market, investors consider more subjective methods taking account of new technology and product changes over historical measures to determine the investment risk. (Nosić and Weber, 2010)

Risk aversion presents the different levels with different factors impacting investors' behaviour. Risk-preferring accepts the risk of losing the capital invested but with the possibility of significantly increasing returns in the short term. Risk-neutral investors expect consistency in returns by investing in conservative investments to avoid losses. Risk-averse investors tend to choose investments with less volatility, accepting reduced profits to avoid a high-risk, high-reward scenario. (Said, 2020)

Investors' risk aversion or tolerance level is characterised by different factors, such as employment, financial knowledge, marital status and gender (Said, 2020). The risk tolerance tends to decrease with a change in marital status due to financial responsibilities with another dependent on their earnings. It is also affected by age (especially during retirement), with less time to recover from potential loss for those at an advanced age. Investors who do not depend on the investment returns tend to accept more risks on investments, with the possibility of

supplementing gains from their portfolio with extra income from employment. (Meziani and Noma, 2018)

Men are observed to take more risks and explore more opportunities considering potential future returns in a volatile environment, more open accepted financial advisers to diversify their portfolios (Meziani and Noma, 2018). Analysts and financial advisers offer recommendations to structure investment portfolios in stock companies with a high potential to enhance yield and less volatility. Advise how investors achieve expected yield levels, reduce capital risk by rebalancing the portfolio with equities uncorrelated from different sectors and exposed globally. (Sotiropoulos and Rutterford, 2019)

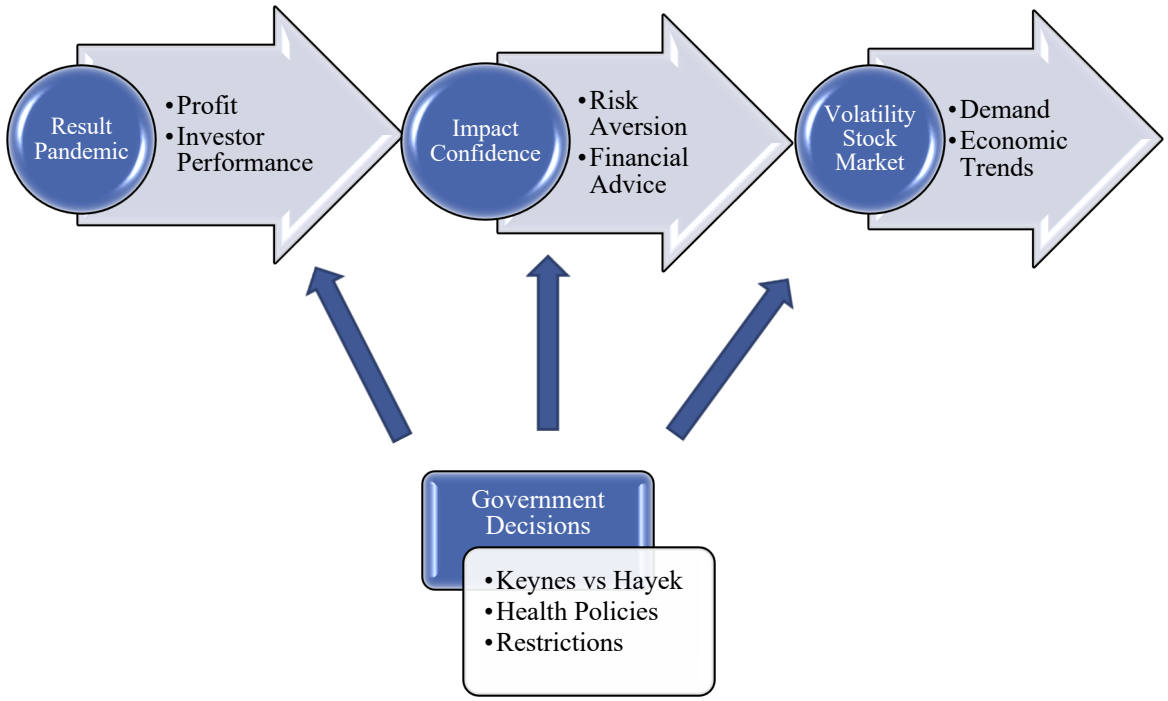
Individual investors with low financial knowledge are more acceptable in taking financial advisers' recommendations to improve their decision making. Advised portfolios are associated with high diversification, included equities from different sectors, mutual funds, more asset classes and less dependence on domestic equity (Sotiropoulos and Rutterford, 2019). Furthermore, the Baby Boomer generation is more acceptable to take advisers caused by little financial knowledge. However, institution advisers tend to offer mutual funds managed by themselves, prioritizing the financial institutions' benefits instead of investors. (Kramer, 2012)

The majority of assets classes advised are domestic and foreign equities, bonds, and real estate corresponded almost 90% self-directed portfolios and advised. Self-directed represent the investor decided not to accept advice in their portfolios (Said, 2020). Individual investors who seek financial advice are typically risk-averse investors with more mutual funds than domestic equity to reduce risk. Furthermore, indicate no significant return effects of advisory intervention between self-directed and advised investors. (Kramer, 2012)

The Covid-19 pandemic demonstrates the difficulty of estimating future returns. In 2019 analysts were expecting growth in the global economy for the coming years (Dyson, 2020). The global pandemic of March 2020 caused by Covid-19 and restrictions imposed for the governments to reduce the virus spread on the community forced companies to reduce their budgets and stabilise falling revenues. Instead of a profit gain for the year, many industries reported losses on their financial statements. (Baker *et al*., 2020)

3.6 Conceptual Framework

Based on the events of 2020 and the literature review above, the conceptual framework will follow the cause and effect model. This will demonstrate the various factors that influence investors when building a portfolio. (Fisher and Buglear, 2010)



The first factor that influenced investors to change their portfolio in 2020 was when the Covid-19 pandemic first declared in March 2020. The global pandemic resulted in many restrictions worldwide with the closure of retail stores. Consequently, fashion retailers had a reduction in profit and laid-off workers. The customers felt more uncertainty with the stability of their jobs and changes in the work environment.

Individual investor's performance will be analysed considering financial knowledge of the investors, age and gender presented in section 2.4. This data will be gathered as a primary sources via respondents of a questionnaire targeted at those who invest in stock market and may have reallocated their equity assets during the pandemic to more stable assets.

Risk aversion presented in section 2.4 will also be answered by primary data. Analysing if investors changed the equity portfolio during the pandemic, replacing companies more affected by Covid-19, such as fashion retail, is indicated in section 2.3. Influence of age on risk aversion, according to section 2.4, demonstrating if Generation Z and Millennials tend to take more risk investing more in volatile companies, such as industries with a significant loss on stock price believing in a potential growth with a high return in the long term.

Economic trends demonstrated in section 2.1 will be answered by primary and secondary sources. Analysing the changes in the Brazilian national interest rate during the pandemic and how individual investors reacted to the interest rate reduction. Further it will analyse if Brazilian government policies to contain the virus impacted individual investors' investment decisions and consider if the restrictions on fashion retail industry in Brazil impacted the share price.

The Brazilian government decisions during the pandemic, presented in section 2.1, will be examined employing primary sources. It will demonstrate if the investors increased their equity holdings after the government reduced interest rates and announced stimulus measures to incentivise consumption, reduced lockdown restrictions and increased uptake of vaccines among the general population.

3.7 Conclusion

The literature review section consisted of a detailed overview to explore previous studies to support the research objectives and answer the research question. Conducting extensive research into government policies, fashion retail industry, portfolio allocation and individual investors' confidence further described in order to create a conceptual framework. The previous studies in this section presented a gap in relation to significant variables that affect investors' confidence. The following section will consist of the research design in order to conduct the research and collect primary data to answer the research question.

4. METHODOLOGY

4.1 Overview

The methodology and research section outline the philosophy and strategy to conduct the results, which contributes to direct the appropriate approach to explore primary data. The research objective explores whether the decisions made by the Brazilian government in the pandemic influence individuals investors' portfolios, reducing the exposure on the stock exchange and increasing investments with less volatility.

This section aims to design and explain the chosen methodology, demonstrate how to conduct the research and collect data. The data collection approach used in this study was the quantitative method, where the primary data will be collected by survey, distributed online to

individuals with investment on the Brazilian stock exchange to measure the influence of the Brazilian government on individuals' portfolios.

4.2 Research Paradigm

Research philosophies and paradigms are developed under framework guidelines presented by Saunders *et al*. (2019). The research question of this study is to identify the relationship between the decisions of the Brazilian government and changes to individual investor's portfolios during the global pandemic.

The main philosophy related to this study is positivism which focuses on measurable facts. Positivist research uses existing approaches to developing hypotheses. In this case, the stock market volatility of previous financial crises will be used to assess whether the stimulus measures created by the Brazilian government were successful in restoring investor confidence in this crisis. Further, I will evaluate the impact of Brazilian government restrictions and health policies on individual investor portfolios.

Following the positivism philosophy, I will be using a deductive approach, the conclusion derived from a premisses theory. In previous crises, individual investors reduced holdings in securities to contain their losses and reallocated their holdings to bonds and cash. However, following Keynes's theory, the government's decision to expand stimulus packages incentivised the population to raise consumption. This study will analyse if the premise approach of increasing consumption in the fashion retail industry will restore investors' confidence, generating higher stock prices.

To address the objectives of this study I will be using the quantitative method by applying a questionnaire. The questionnaire will be directed to individuals that invest in the Brazilian stock exchange. The questionnaire will demonstrate if the investors consider government decisions when choosing to make new investments or in the reallocation of current investment holdings due to government decisions in relation to the Covid-19 pandemic.

The theoretical framework and hypotheses will provide for the positivism and deduction results. The causes of the global pandemic are new and there is not much debate on the Covid-19 consequences. However, previous crises provided a wealth of literature demonstrating how individual investors and the Brazilian government have dealt with recovery from recessions. Previous financial crisis literature will enable the creation of hypotheses that can define the possibilities of recovery from the global pandemic, predicting confidence in the market.

4.3 Research Strategy

Quantitative research using a survey is the most suitable approach. A quantitative design is linked with positivism to determine the data collection techniques. The strategy used to guide the collection of data will be applying a questionnaire to collect investor opinions based on facts presented in the literature review. The questionnaire enables the researcher to understand the facts which have individual lead investors to choose their investment holdings on the Brazilian stock exchange. (Saunders *et al*., 2019).

Historical analysis and a wealth of literature demonstrated the importance of diversifying investments to reduce the risks. (Rutterford and Sotiropoulos, 2016). However, with many investment platforms and the facility to allocate resources in equity assets, it is unclear in literature if the investors apply the risk-return techniques when choosing assets. Conducting a questionnaire in this study will demonstrate if the Brazilian individual investors considered external factors not directly connected to the invested company.

The main indirect factor that affected investors' portfolios is the government role. The pandemic impacted the stock market significantly even before companies presented negative earnings reports. This demonstrated a loss of investor confidence, particularly in industries such as the fashion retail industry, without consideration to business strategy to contain the damages caused by Covid-19. The data collected will analyse this lack of information related to the portfolio changes during the pandemic.

4.4 Methods for Collecting and Sources of Data

As explained in the Overall Approach section, this research will adopt the mono method quantitative techniques. Data collection includes primary and secondary data to support the research. The primary data will be collected through an online survey that enables the researcher to obtain a large sample of respondents providing answers that could contrast with other research. The respondents could express controversial ideas without feeling judged by not given the opinion directly to the interviewer and respondents can maintain their anonymity.

Primary data sources consist of individuals that invest in the Brazilian stock market. Due to time restrictions, the data collection will be done through a questionnaire to achieve a higher number of respondents instead of a qualitative approach with interviews. The respondents will be contacted through Brazilian social media groups of investment, where the researcher will send individual messages to the market audience with the survey link.

Secondary data consists of financial data to evaluate the stock market and support the respondent's answer. The data sources used in this study consist of the Brasil, Bolsa, Balcão ("B3") reports, the Brazilian stock market. In addition, I will analyse the annual financial report from the large fashion retail companies listed on B3 and government publications from Brazil to verify the global pandemic impact. Economic data is fundamental to support the knowledge and findings collected by questionnaires.

This study will attempt to achieve a reasonable level of representativeness, considering the limitations of the information. The questionnaire will provide precise questions to answer the main objectives presented in section 2. However, there is a possibility of bias, considering the limitation of respondents and connection with the author network. To mitigate the risk of bias and achieve a large sample of respondents will be asked to complete a clear and concise questionnaire. To mitigate the misinterpretation of questions, a pilot study will be used with individuals not connected with this study to give their opinion about the questions and correct potential misinterpretations.

4.5 Nature of Data

As already described, the main objectives presented in section 2 will be achieved through analysis of the questionnaire data as the primary source. The secondary source data from financial statements of listed fashion retail companies and Brazilian government publications will also then be analysed to support the primary source data. The respondents' answers will provide information about the challenges in reducing portfolio losses with equity investments during the pandemic. The main theme questions presented in the questionnaire will involve some scenarios to evaluate if the government impacted investors' decisions to change portfolio their holdings.

The researcher may ask the respondents the following questions detailed below, complete survey present in appendix 1.

- What is the purpose of their investment portfolio.
- If the respondents replaced shares in companies badly affected by the pandemic.
- Due to Government restrictions, if the respondents reduced their exposure to the stock market
- The respondents decreased stock market investments following the reduction of the national interest rate in 2020.

- The respondents are optimistic about the Brazilian stock market (B3) over the next two years.

4.6 Access and research Ethics Issues

Access to the appropriate primary and secondary data source is fundamental to develop and answer the research study correctly. Secondary data consist of information made available by regulated entities to the public. Primary data consist of survey responses with voluntary involvement and the respondents may withdraw from the research at any time. The respondents will indirectly benefit from gaining new knowledge that will enable them to improve their understanding of how decisions not directly connected with the businesses in which they hold shares could affect performance and therefore influence allocation decisions.

The researcher will use contacts with popular Brazilian investors on social media to gather respondents. Before the respondents respond to the survey, the researcher will briefly explain the research topic, the target audience and get formal consent from the respondents before data is collected. Considering the researcher is living abroad and studying the Brazilian market, the respondents invited to this study will consist of individuals who invest in the Brazilian stock exchange, which consists of foreign individuals related to the place where the study is presented.

Regarding ethical issues, all respondents have the right to remain anonymous and answers in the survey will be treated as confidential. In compliance with General Data Protection Regulation (GDPR), the survey data will be destroyed on completion of the researcher's master's degree following the Griffith College ethics code.

4.7 Analysis Techniques

Primary data will use categorical data techniques while secondary data will use numerical techniques that can be counted and grouped to explore how the Brazilian government decisions impact individual investor's portfolios.

Categorical ordinal data is a group of non-parametric variables that will identify the relationship of themes presented in the data collected, enabling it to correlate with the research question. Investigation of the respondents' opinions, including rating scale will be used to identify the facts that influence their decision before investing in a new company or changing their portfolio.

Secondary data will use the numerical technique of ratio data to evaluate the stock market. Ratio data calculate the relative difference between data values for a variable. In this case, exploring the variance of stock indexes and fashion retail companies' value during specific times to determine the individual investors' portfolio allocation. This will estimate whether the Brazilian government's actions could impact the stock market after the pandemic.

The investor confidence will test considering the multiple regression method. This method is a statistical technique used to predict outcomes, evaluate how strong the relationship between a dependent variable and multiple independent variables. The multiple regression method is used to predict the relationship between the individuals' investors' portfolios changes with the government decisions, such as restrictions guidelines and interest rate. Further, it will set some hypotheses presented in the literature review to explore if the risk aversion conditions apply to the respondents, such as if the gender effect on risk aversion.

4.8 Conclusion

This research aims to contribute to previous researches and existing knowledge of the causes of high volatility on the stock market in uncertain periods. Demonstrate the impact of facts not connect directly with the companies listed on the stock market can influence the share price. This study considers the deductive approach to relate the stock market volatility with an uncertain period, such as financial crises in 2008 that highly impact worldwide. The primary data explore quantitative method, where individuals could anonymously express their opinion.

5. FINDINGS AND DISCUSSIONS

5.1 Overview

The information gathered for this research was generated through the online survey with individual investors that invest in the Brazilian stock exchange. Based on the research objectives, it analysed the Brazilian government's influence on individual investors on the Brazil stock exchange in the context of the Covid-19 pandemic. The findings were collected using the research design mentioned in the previous section. The findings are presented starting with the share price volatility of the Brazilian listed fashion retail companies and proceeds with the survey results of the individual investors to demonstrate results from data collected and the outcome of the research objective.

As presented in previous sections, the pandemic brings much uncertainty to the global market in the short term and consequently impacted the stock market. By analysing the fashion retail companies listed on the Brazilian stock market, we notice a variance in the share price after the WHO declared Covid-19 as a pandemic. For example, Lojas Renner is the largest Brazilian clothing department store, with more than 600 stores located in Brazil; Uruguay and Argentina suffered a large drop in share price in 2020. (B3, 2021)

Lojas Renner's share price is listed on the B3 exchange, the only stock exchange in Brazil and one of the largest worldwide. Between 24 January 2020 and 03 April 2020, Lojas Renner's share price dropped 49%. In the same period Brazil registered the first cases of Covid-19. Simultaneously, other fashion retail companies listed on the B3 stock exchange had their shares devalued. The leading jewellery and accessories company Vivara had a share price drop of 56%. Further, the Brazilian cosmetic company Natura with operations in North America and Europe, had the share drop of 52% between 24 January and 03 April 2020. (B3, 2021)

5.2 The Government does not Shape the Stock Market

The drop in the share prices during the same period Brazil registered the first cases of Covid-19 caused instability and uncertainty to the market in the short term. The findings will demonstrate if the drop in the Brazilian stock market is related to government decisions. The survey consists of 64 respondents with investments in the Brazilian market, in which 52% of respondents have investments only in the Brazilian market and 48% of respondents with investments in Brazil and abroad.

As presented in section 2, stock market volatility is caused for many different factors. This study concentrates on the changes in the stock market caused by the Brazilian government's decisions during 2020. The findings are presented through the respondents' answers to the survey regarding their portfolio changes since March 2020 when the WHO declared Covid-19 as a pandemic. The primary data results will be used to answer the research question.

By analysing the correlation between the Brazilian government's efforts to contain the spread Covid-19 virus and stimulate the economy with the individual investor portfolio changes since March 2020. The analysis consists of the multiple regression method, based on the hypothesis that individual investors' portfolio changes are related to Brazilian government decisions.

The multiple regression analysis was made considering the dependent variable of the respondent's change in their positions on the relevant listed companies since March 2020, when WHO declared Covid-19 as a pandemic. The first independent variable is if the Brazilian government restriction affected respondent's exposure to the stock market and the second independent variable is if the reduction of the national interest rate also made the respondents reduce their investments in the stock market.

As demonstrated below, the multiple regression analysis presented significant results, as the value below 0.05 (p = 0.032). A significant reliable result is represented for a value below 0.05, indicating that have a chance of more than 95% that an extension of the population will give the same result. Complete analysis present in appendix 2, section 2.1.

Table 1. Model Summary - Changes Individual Investors' Portfolio

										Durbin-Watson		
Model	**R**	**R²**	**Adjusted R²**	**RMSE**	**R² Change**	**F Change**	**df1**	**df2**	**p**	**Autocorrelation**	**Statistic**	**p**
H_0	0.000	0.000	0.000	2.100	0.000		0	63		0.007	1.939	0.807
H_1	0.327	0.107	0.077	2.017	0.107	3.644	2	61	0.032	0.047	1.842	0.491

Source: Prepared by the author.

The results demonstrate a non-significant correlation between the changes in individual investors' portfolios with regard to government restrictions and national interest rate changes. Only 10.7% of individual investors' changed on their portfolios are correlated by the independent variables of government restrictions and interest rates. The Adjusted R-squared reduces the correlation to 7.7%, demonstrating that adding a new independent variable will reduce the correlation between individual investors portfolio' changes and government decisions, a nonsignificant correlation between the variables.

Considering the independent variables separately, the government restrictions do not demonstrate a significant unique predictor of individual investors variance, which presents a significance level of 24.6%. However, the interest rate demonstrates a significant unique predictor of investors variance with significant reliability. This means that for every one-point the individual investors increases their shares there is an increase in the interest rate of 0.497 point.

Table 2. Coefficients – Individual investors Portfolio

							Collinearity Statistics	
Model		**Unstandardized**	**Standard Error**	**Standardized**	**t**	**p**	**Tolerance**	**VIF**
H_0	(Intercept)	3.031	0.263		11.545	< .001		
H_1	(Intercept)	2.188	0.481		4.551	< .001		
	Restrictions	-0.068	0.216	-0.047	-0.315	0.754	0.644	1.553
	Interest rate	0.497	0.212	0.353	2.340	0.023	0.644	1.553

Source: Prepared by the author.

5.2.1 Controversial Results

The findings presented controversial results in comparison with the literature review. The studies of Rich and Reichenstein (1993), Nosić and Weber (2010) determined the individual investors tend to reduce their exposure to the stock market with the government's reduction of the interest rate. The results from the previous authors in section 2 indicated that individual investors tend to move their investments from equities to bonds and real estate when the government increases interest rates.

However, the primary data rejected this hypothesis presented in the literature review and with results contrary to expected. The results demonstrated that changes in the interest rate, with the Brazilian Government reducing the interest rate to contain economic damages caused by the pandemic, did not significantly encourage investors to increase their equity investments.

The second independent variable allocated to the multiple regression method was rejected as well. As mentioned by Baker *et al*. (2020), the restrictions implemented by the Brazilian government to contain the spread of Covid-19 caused large uncertainty to the market. Consequently made the individual investor reduce the exposure in high-risk investments to avoid losses. Moreover, the survey results follow Meziani and Noma's (2018) results where the individual investors considered the drop in the stock market as an opportunity to increase their investments predicting a future return in their portfolios.

5.3 The Uncertainty of Fashion Retail Industry

As mentioned in previous sections, the fashion retail industry was seriously affected by the pandemic. The Brazilian government implemented restrictions to contain the Covid-19 virus spread and advised the population to avoid nonessential activity. Consequently, it resulted in uncertainty for the industry with the prediction of a reduction in profit, which caused a significant drop in share prices between January and April 2020. The share price drop on listed Brazilian fashion retailer companies encourages this study to analyse if the decline on Brazilian stock market since the WHO declared Covid-19 as a pandemic is related to government decisions.

The findings were analysed using the multiple regression method. With reference to the hypothesis that individual investors decreased their exposure in the fashion retail industry as a result of the government's efforts to support the industry and optimism about the Brazilian stock market for the next two years. The multiple regression results presented significant

reliable results, as demonstrated in the table below and the complete results are informed in appendix 2, section 2.2.

Table 3. Model Summary - Changes Exposure of Fashion Retail Companies

Model	R	R^2	Adjusted R^2	RMSE	R^2 Change	F Change	df1	df2	p	Durbin-Watson Autocorrelation	Durbin-Watson Statistic	Durbin-Watson p
H_0	0.000	0.000	0.000	2.100	0.000		0	63		0.007	1.939	0.807
H_1	0.481	0.232	0.206	1.871	0.232	9.190	2	61	< .001	0.114	1.714	0.247

Source: Prepared by the author.

The multiple regression test presented significant reliable results, enabling the analysis of the correlation between the individual investors' changes on their portfolio with the government efforts and optimism with the Brazilian stock exchange (B3) for the next two years. The R-squared (R^2) indicated that government efforts and optimism predict 23.2% of the individual changes on their fashion retail portfolio with the B3 for the next two years. The Adjusted R^2 reduces the correlation to 20.6%, demonstrating adjustments to the variables correlate to the number of predictor independent variables and total sample size.

The coefficients presented in the table below demonstrate the correlation between the dependent variable (individuals' changes in fashion retail portfolio) and the independent variables separately.

Table 4. Coefficients Fashion Retail Exposure

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics Tolerance	Collinearity Statistics VIF
H_0	(Intercept)	3.031	0.263		11.545	< .001		
H_1	(Intercept)	1.853	1.015		1.826	0.073		
	Government Efforts	-0.299	0.277	-0.123	-1.082	0.284	0.972	1.029
	Optimistic next 2 years	0.910	0.213	0.486	4.271	< .001	0.972	1.029

Source: Prepared by the author.

5.3.1 Controversial Results

Even though the Anova statistic result, presented in Appendix 2 section 2.2, shows the model to be reliable significant results, the independent variable "government efforts" presented a nonsignificant unique predictor of individual investors' variance. It is not feasible to analyse the correlation between the changes in the investment portfolio and the government

efforts individually. The independent variable “optimism for the next two years” demonstrated a significant unique predictor of individuals’ change fashion retail portfolio variance, indicating that the individual investors optimism impact significantly on the individual investors fashion retail exposure portfolio.

The respondents’ optimism about the Brazilian stock exchange over the next two years is a significantly unique predictor for increased investors’ exposure to the fashion retail industry. The independent optimism variable demonstrates that for each one-point increase of individuals’ exposure to the fashion retail shares, there is an increase of 0.91 in optimism in the Brazilian stock market for the next two years.

This correlation follows Sotiropoulos and Rutterford (2019), where individual investors follow the buy and hold strategy indicated in section 2.4. Demonstrating that despite the uncertainty in a market in the short term, the individual investors maintained or increased their exposure in an industry badly affected by the pandemic thinking it is a temporary loss but an opportunity in the long term. It was indicated by the recovery by the sector, as the studies of Gielens *et al*. (2021) and Sato (2020) reported the fashion retail industry changed its strategies to improve the market.

As demonstrated in section 2.3, the pandemic changed customer’s purchasing behaviour by increasing online and click-and-collect sales. This should indicate that the respondents are optimistic about the industry with the increase in sales and the companies keeping profits despite reducing consumption in physical stores. Although it was presented in section 2.2 by Spantig (2014), the respondents did not consider the Brazilian government’s efforts to stimulate consumption as a significant variable to increase their exposure in the fashion retail market.

5.3.2 Nonsignificant Variable

The respondents did not consider the Brazilian government’s effort to support the industries badly affected by the pandemic as a significant variable. Even though investors have increased their stock market exposure, the respondents did not consider fiscal measures to contain the economic damages, informed in section 2, as a significant variable in their decisions. The results demonstrated the individuals consider the drop in the stock market as an opportunity to increase their exposure to the fashion retail industry, where the respondents considered the companies’ efforts more than the external efforts of government.

5.4 External Variables

The findings based on the survey demonstrate a non-significant correlation between individuals investors' portfolios and the Brazilian Government decision. The next hypothesis is validated if the drop in the stock market is related to risk aversion. These analyses consist of T-tests and the Anova methods, based on the hypothesis that their age, gender and purpose for investing are significant variables when individual investors evaluate their portfolios.

The analysis considers replacements of shares in companies badly affected by the pandemic as a dependent variable with the first group variable which is gender. The T-test table shows a reach statistical significance between the individual investors' shares replacements and gender, $t(62) = 2.136$, $p = 0.037$.

Table 5. Correlation Between Replace Shares & Gender

	t	df	p	Mean Difference	SE Difference
Replace shares	2.136	62	0.037 [a]	1.067	0.499

Note. Student's t-test.

[a] Levene's test is significant ($p < .05$), suggesting a violation of the equal variance assumption

5.4.1 Gender Variable

The T-test results are in accordance with Meziane and Noma's (2018) studies demonstrated in section 3.5, in which men tend to take more risk in the stock market. In this context, men replaced their shares less in companies badly affected by the pandemic than women. The studies presented in the literature review indicate men's risk tolerance level is higher than women's, indicating a tendency to choose investments with high volatility in the short term as a possibility to greater returns in the short term.

The pandemic resulted in high market volatility, creating an opportunity to risk-preferring individuals. As demonstrated in the survey, the respondents took more risk in the short term, increasing their exposure in the stock market. Also, all the respondents that follow financial advisers' recommendations are typically men, as presented in Sotiropoulos and Rutterford's (2019) studies, women are more resistant to accepting recommendations from a third person preferring to do their research before making a decision.

As presented in section 2, other variables that impact individual risk aversion are age and investment purpose. This indicates the Generation Z and Millennials, individuals between 20 and 41 years, tend to take more risks in their investments than Baby Boomers, individuals between 57 and 75. As a consequence of less time to recover from potential losses, Baby

Boomers allocate the investments as retirement planning. These variables were analysed using the multiple regression method to validate the correlation between share replacements as a dependent variable. Independent variables considered respondents' age and the purpose of their investments.

Table 6. Model Summary - Replace shares & Risk Aversion

										Durbin-Watson		
Model	**R**	**R²**	**Adjusted R²**	**RMSE**	**R² Change**	**F Change**	**df1**	**df2**	**p**	**Autocorrelation**	**Statistic**	**p**
H_0	0.000	0.000	0.000	1.491	0.000		0	63		-0.055	2.079	0.752
H_1	0.185	0.034	0.002	1.489	0.034	1.076	2	61	0.347	-0.034	2.021	0.896

Source: Prepared by the author.

The multiple regression test demonstrated a non-significant correlation between respondents' replacement of investments in companies badly affected by the pandemic with their investment purpose and age. The Anova table presented in appendix 2, section 2.3, shows a reach statistical not significant between the individual investors' shares replacement and the purpose of individual investors' portfolio. The test result is Anova $F(63, 61) = 2.079$, $p = 0.347$.

Table 7. Coefficients - Replace shares & Risk Aversion

							Collinearity Statistics	
Model		**Unstandardized**	**Standard Error**	**Standardized**	**t**	**p**	**Tolerance**	**VIF**
H_0	(Intercept)	2.500	0.186		13.416	< .001		
H_1	(Intercept)	2.845	1.066		2.668	0.010		
	Purpose	-0.277	0.189	-0.184	-1.460	0.149	0.998	1.002
	Age	0.070	0.322	0.027	0.217	0.829	0.998	1.002

Source: Prepared by the author.

The analysis of the variables individually demonstrated that respondents' age and portfolio purpose are not unique predictors to significantly impact the individual investors' share replacements from companies badly affected by the pandemic. The primary data results are divergent from those reported in the literature review, as demonstrated in Rese *et al*. (2019) and Cardoso Scussel *et al*. (2020) studies. Further, the linear regression using age as a dependent variable and purpose as an independent variable reported a non-significant correlation between the variables.

Rese *et al*. (2019) and Cardoso Scussel *et al*. (2020) studies reported a significant correlation between an individual's generation and the purpose of their investments, the older generation Baby Boomer tend to take less risk building their portfolio as their purpose is typically retirement planning. Consequently, it would be expected that the survey reported that

Generations X (individuals between 41 and 56) and Baby Boomers (individuals between 57 and 74) replaced their investments in companies badly affected by the pandemic expecting high results in the short term.

Non-significant results in the primary data in the correlation between generation and portfolio propose could be explained by the fact that the target group for the survey was contacted via social media platforms. Most of the participants belong to the Millennial generation that grew up in a digital age and is consequently is more present on social media where the survey was applied. As demonstrated in the survey, Millennials tend to follow the risk-preferring method investing in more volatile instruments which can be held over the long term to recover from possible losses.

Consequently, as demonstrated by the survey, the individual investors did not replace the equity investments in companies that reported a significant drop in share prices and used the large drop as an opportunity to increase their exposure for a lower price. A significant number of respondents in the survey increased their equity portfolio since March 2020, when Brazil and the worldwide stock markets recorded a large drop in the overall share prices between January and April 2020.

After the initial drop, the Brazilian fashion retail companies started to increase their share price, returning to the price before the pandemic. The retail clothing company Hering had its share price increased 145% between 01 April 2020 and 23 July 2021 (B3, 2021). At the same time, the Brazilian authorities increased the restrictions on the population. This demonstrated that the individual investors did not consider the government decisions as a significant variable to determine their investments.

According to B3 (2021) reports, following Hering other listed Brazilian fashion retail companies increased share price during the pandemic. The global personal care cosmetic company Natura had a share price on 23 July 2021 which was higher than share price than 24 January 2020 before Covid-19 had spread significantly across the world. This is a sign that despite the Brazilian government seemingly not controlling the pandemic as expected, with rising unemployment, an increase of inflation and a large number of deaths caused by Covid-19, the individuals investors believed in the imminent recovery of the economy.

5.5 Conclusion

5.5.1 Exposure in Equity Investments

The primary data provided different results than expected, with a non-significant correlation between the Brazilian government efforts in the pandemic and the individual investors' portfolios changes. The findings demonstrated that despite the large decline on stock market between January and April 2020, the respondents did not reduced their exposure in equity investments. The literature review indicated the fear caused by the uncertainty of the future resulted in more investors selling the stock share from companies significantly impacted by the pandemic. However the respondents increased their exposure in industries badly affected by the implementation of Brazilian government restrictions.

Most of the respondents were male from the Millennial generation, half with investments only in Brazilian stock market and another half with investments in Brazil and abroad. The technology and facility to search for investments worldwide increased the number of individual investors with equity shares in different countries as an alternative to protect their portfolio. The United States stock market is the most sought after by individual investors worldwide to diversify and protect their portfolios.

As presented in the survey, the individual investor prefers to make their own decisions instead of following financial advisers' recommendations, choosing listed companies according to their necessities. Half of the respondents from the Millennial generation have their equity investments as retirement planning and another half as income. Despite the contradictory results of the purpose of their investments, the survey showed significant results that respondents used the pandemic as an opportunity to increase their exposure to risky investments believing in potential future returns.

5.5.2 Correlation Between Exposure and Interest Rate

The survey presented a non-significant correlation between the Brazilian government's decisions to control the damages caused by the pandemic and individual investors' exposure to the equity market. However, the results showed the interest rate had a significant unique correlation, impacting the individual investors' decisions. The survey rejected the hypothesis of a significant correlation between an increase the exposure equity investments with decreased interest rates informed in the literature review.

In relation to investments in fashion retail listed companies, the results were positive. Despite the losses, concerns and drops in fashion retail companies' share prices caused by the

pandemic, the respondents increased their investments in the industry. Considering the large drop in share price as an opportunity, believing in the long term recovery. The respondents were generally optimistic about the results from the Brazilian stock market over the next two years.

6. CONCLUSION

6.1 Overview

This study discussed the findings of the challenges faced by the Brazilian government to restore individual investors' confidence following the pandemic. The objectives were to analyse the impact of the Brazilian government efforts on stock prices in the fashion retail industry after the WHO declared Covid-19 as a pandemic, to gather data of the Brazilian government's plan to support the fashion retail industry and to analyse individual investors' challenges to reduce the risk on their portfolios.

In March 2020, the WHO declared Covid-19 a pandemic and consequently brought fear and uncertainty to the stock market. The Brazilian authorities and health system implemented restrictions to control the Covid-19 spread. The Brazilian government created fiscal measures, such as public bank credit lines and through the Brazilian Central Bank swap facilities to contain high currency volatility. They also reduced interest rates to control the increase in unemployment and avoid further business liquidations.

The pandemic badly affected the fashion retail industry with the Brazilian local authorities forcing companies to reduce operating hours in physical stores or close temporarily. As an alternative and to reduce the losses, the fashion retail industry invested in online and click-and-collected sales to increase demand from the customers that could not attend physical stores. The stock price of fashion retail companies listed on the Brazilian stock exchange had largely declined between January and April 2020. However, the fashion retail industry noticed a recovery during the pandemic, with the listed companies like Natura and Alpargatas' stock prices valued higher than before the pandemic.

The relationship between the Brazilian government decisions and the volatility of fashion retail listed companies was analysed following the positivism research philosophy and deductive approach. Tested hypotheses relate the stock market volatility with financial crises implications. The primary data was explored using a survey, where 64 respondents took part

in the study by using an online questionnaire with the target audience being individuals that invest in the Brazilian stock exchange.

6.2 Implications of Findings for the Research

As discussed in the previous section, the results of the quantitative data had a significant impact on the research question. The hypothesis set out was disproved, demonstrating a nonsignificant correlation between the Brazilian government decisions and the fashion retail market volatility.

The findings demonstrated that individual investors increased their exposure to the stock market during the pandemic indicating they view the volatility as an opportunity for potential future returns, as presented in the study of Meziani and Noma (2018) and Sotiropoulos and Rutterford (2019). As individual investors follow the buy-and-hold strategy, in which individual investors planned for the long term, they did not demonstrate concerns about the decline in their portfolios in the short term and maintained the portfolio's exposure to risky assets.

The findings agreed with the literature review, considering the studies of Spating (2014), Sato (2020) and Gielens *et al*. (2021), indicating that despite the losses in the market, especially the fashion retail industry, the respondents believe in a recovery in the sector over the next two years. The optimism is related to the companies' efforts to grow the market and opportunities which followed previous crises. After a significant decline in stock price, the market tends to increase with an increase in consumption.

The findings disagree with the studies of Rich and Reichenstein (1993), Nosić and Weber (2010), and Baker *et al*. (2020). The authors indicated in their studies that individual investors tend to reduce their exposure to the stock market in crises, reallocating their portfolios to more stable investments like bonds and real estate. However, the findings indicated that instead of the respondents reallocating their investments to less volatile investments, they increased their equity investments. The uncertainties caused by the pandemic and reduction of interest rates did not indicate a significant correlation with individual investors' portfolio decisions.

The findings found gaps not explored in the literature review, such as if the individual investors analyse listed companies' financial statements before taking the decision in which company they will invest. Internal variables might impact respondents' decisions more than the market, with constant volatility in the short term. Also, the Brazilian government may have

significant impact on individual investors exploring equity investments in different countries, with half of the respondents investing in Brazil and stock markets abroad.

The findings answered the research and met the objectives, with respondents answering that the fiscal measures created by the Brazilian government to support the fashion retail industry did not impacted their decisions. The respondents did not replace their investments from industries badly affected by the pandemic. This indicates that the government measures to control virus spread such as implementing restrictions in operating time did not impact individual investors decisions. The reduction of interest rate demonstrated a significant unique variable correlated to respondents' increase in equity portfolios. However, overall the Brazilian government efforts did not demonstrate a significant correlation and did not affect investors' decisions significantly.

6.3 Limitations of the Research

The access of primary data was done via an online survey, with most of the respondents from the Millennials generation. Consequently, it is difficult to analyse the correlation between replacements of equity investments and the reduction of the stock market across other generations. The Baby Boomers tend to reduce their exposure to high-risk investments due to high volatility, using the investments as income and see less time to recover from potential losses.

The limited number of participants created a small sample size to correlate with the research question, in which the multiple regression method used to analyse the findings requests at least 50 answers. Consequently, a singular answer could result in a significant impact on the correlation statistics. Other limits include the survey applied by the researcher network and personal bias of the misinterpretation of the questions as the survey consisted only of multiple-choice questions.

6.4 Recommendation for Future Research

The study focused on the Brazilian stock market and the fashion retail industry. Further research should be conducted on other stock markets to analyse how governments from different parts of the world responded to contain the pandemic and support their economies. This could verify if stricter measures and more benefits provided to the industries badly affected by the pandemic significantly impacted individual investors' decision making. Also,

analysis of other industries that presented positive results with the government restrictions could be explored.

Further research should also be conducted on different investments that protect individual investors' portfolios. The increase in inflation might result in a shift from national equity investments to foreign equity and alternative investments. This could potentially provide more insights if the increase in respondents' equity investments during the pandemic included foreign investments to protect against inflation and the national currency loss of purchase power comparing to major currencies such as the US Dollar and Euro.

6.5 Final Conclusion and Reflection

The previous sections examined how the findings answered the research question and provided valuable insights into future researches. As recommended, this research could be extended into different variables that might affect individual investors' decisions more significantly. The investigation into investors reallocating their portfolios to foreign equity investments is also recommended. This study captured that individual investors research before they invest and do not outsource the responsibility of their portfolio to a third person. This indicates that respondents did not follow the market, selling their equities with the decline of the share price.

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APPENDIX

Appendix 1 – Survey Questionnaire Design

1- What is your age category?
   - Under 18
   - 18-24
   - 25-40
   - 41-56
   - 57-74
   - Over 75

2- What is your gender?
   - Female
   - Male
   - Prefer not to say

3- Where is the location of your investments?
   - Brazil
   - Abroad
   - Brazil and abroad

4- How do you make investment decisions?
   - I do research and make my own decision
   - I follow financial advisers recommendations
   - A third party manages my portfolio
   - Other

5- What is the purpose of your investment portfolio?
   - Income
   - Savings
   - Retirement planning
   - Other

6- Since March 2020 I replaced shares in companies badly affected by the pandemic.
   Please answer the following question in relation to your own portfolio.
   - Strongly Disagree
   - Disagree
   - Agree
   - Strongly Agree
   - Does not apply

7- Due to Government restrictions I reduced my exposure to the stock market.
   Please answer the following question in relation to your own portfolio.
   - Strongly Disagree
   - Disagree
   - Agree
   - Strongly Agree
   - Does not apply

8- I decreased stock market investments following the reduction of the national interest rate (taxa Selic) in 2020.
   Please answer the following question in relation to your own portfolio.
   - Strongly Disagree
   - Disagree
   - Agree
   - Strongly Agree
   - Does not apply

9- I am more optimistic about the performance of my portfolio following the Government efforts to support Brazilian companies (e.g. extension of credit lines, reduction of federal taxes, support for specific industries, etc)
Strongly agree
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

10- Do you invest in any of the following companies (Cia Hering, Lojas Renner, Vivara, Alpargatas, Grendene or Natura)?
Please answer the following question in relation to your own portfolio.
- Yes
- No

11- Since March 2020, have you changed your position on the companies listed?
Please answer the following question in relation to your own portfolio.
- Increase Shareholding
- Decrease Shareholding
- Not changed
- Does not apply

12- I am optimistic about the Brazilian stock market (B3) over the next 2 years.
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Appendix 2 – Multiple Regression Results

2.1 Changes Individuals Portfolio Correlate Restrictions and Interest Rate

Model Summary - Changes Individual Investors' Portfolio

										Durbin-Watson		
Model	**R**	**R²**	**Adjusted R²**	**RMSE**	**R² Change**	**F Change**	**df1**	**df2**	**p**	**Autocorrelation**	**Statistic**	**p**
H_0	0.000	0.000	0.000	2.100	0.000		0	63		0.007	1.939	0.807
H_1	0.327	0.107	0.077	2.017	0.107	3.644	2	61	0.032	0.047	1.842	0.491

ANOVA

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**p**
H_1	Regression	29.661	2	14.830	3.644	0.032
	Residual	248.277	61	4.070		
	Total	277.938	63			

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H_0	(Intercept)	3.031	0.263		11.545	< .001		
H_1	(Intercept)	2.188	0.481		4.551	< .001		
	Restrictions	-0.068	0.216	-0.047	-0.315	0.754	0.644	1.553
	Interest rate	0.497	0.212	0.353	2.340	0.023	0.644	1.553

Descriptive

	N	Mean	SD	SE
Changes Fashion Retail Co	64	3.031	2.100	0.263
Restrictions	64	2.219	1.464	0.183
Interest rate	64	2.000	1.491	0.186

Part And Partial Correlations

Model		Partial	Part
H_1	Restrictions	-0.040	-0.038
	Interest rate	0.287	0.283

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Collinearity Diagnostics

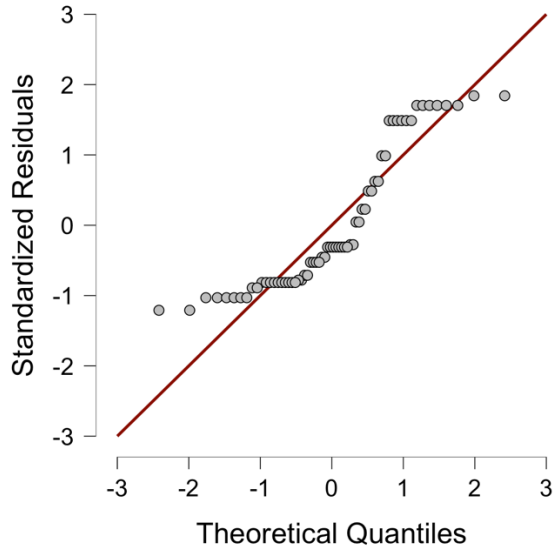
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Intercept)	Restrictions	Interest rate
H_1	1	2.672	1.000	0.033	0.025	0.028
	2	0.200	3.652	0.857	0.037	0.383
	3	0.128	4.577	0.110	0.938	0.588

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Case wise Diagnostics

Case Number	Std. Residual	Q11 - Changes Fashion Retail Co	Predicted Value	Residual	Cook's Distance
.	.	.	.	.	.

Q-Q Plot Standardized Residuals



2.2 Fashion Retail Correlate Optimism on B3 and Government support

Model Summary - Changes Fashion Retail Portfolio

Model	R	R^2	Adjusted R^2	RMSE	R^2 Change	F Change	df1	df2	p	Durbin-Watson Autocorrelation	Durbin-Watson Statistic	Durbin-Watson p
H_0	0.000	0.000	0.000	2.100	0.000		0	63		0.007	1.939	0.807
H_1	0.481	0.232	0.206	1.871	0.232	9.190	2	61	< .001	0.114	1.714	0.247

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H_1	Regression	64.356	2	32.178	9.190	< .001
	Residual	213.582	61	3.501		
	Total	277.938	63			

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics Tolerance	Collinearity Statistics VIF
H_0	(Intercept)	3.031	0.263		11.545	< .001		
H_1	(Intercept)	1.853	1.015		1.826	0.073		
	Government Support	-0.299	0.277	-0.123	-1.082	0.284	0.972	1.029
	Optimistic next 2 years	0.910	0.213	0.486	4.271	< .001	0.972	1.029

Descriptive

	N	Mean	SD	SE
Changes Fashion Retail Co	64	3.031	2.100	0.263
Government Support	64	3.375	0.864	0.108
Optimistic next 2 years	64	2.406	1.123	0.140

Part And Partial Correlations

Model		Partial	Part
H_1	Government Support	-0.137	-0.121
	Optimistic next 2 years	0.480	0.479

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Collinearity Diagnostics

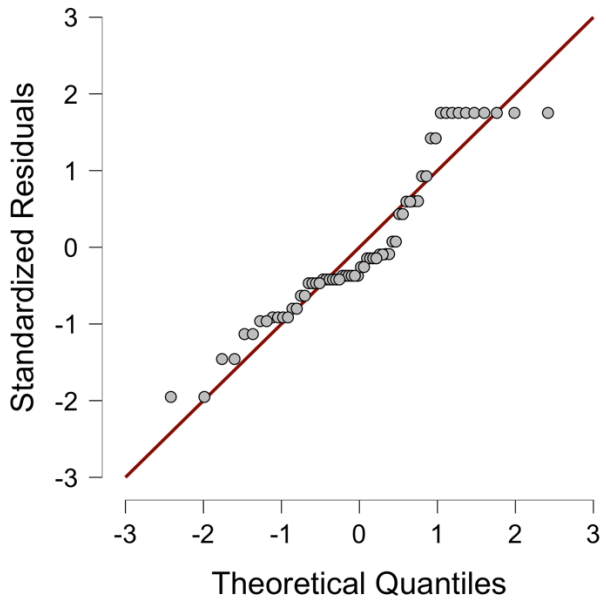
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Intercept)	Variance Proportions Q9 - Government Support	Variance Proportions Q12 - Optimistic next 2 years
H_1	1	2.849	1.000	0.006	0.007	0.019
	2	0.120	4.868	0.055	0.099	0.962
	3	0.030	9.693	0.939	0.894	0.019

NOTE. The intercept model is omitted, as no meaningful information can be shown.

Case wise Diagnostics

Case Number	Std. Residual	Q11 - Changes Fashion Retail Co	Predicted Value	Residual	Cook's Distance
.	.	.	.	.	.

Q-Q Plot Standardized Residuals



2.3 Replace Stock Shares & Risk Aversion

Model Summary - Replace shares

Model	R	R²	Adjusted R²	RMSE	R² Change	F Change	df1	df2	p	Durbin-Watson Autocorrelation	Statistic	p
H₀	0.000	0.000	0.000	1.491	0.000		0	63		-0.055	2.079	0.752
H₁	0.185	0.034	0.002	1.489	0.034	1.076	2	61	0.347	-0.034	2.021	0.896

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H₁	Regression	4.771	2	2.385	1.076	0.347
	Residual	135.229	61	2.217		
	Total	140.000	63			

Note. The intercept model is omitted, as no meaningful information can be shown.

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics Tolerance	VIF
H₀	(Intercept)	2.500	0.186		13.416	< .001		
H₁	(Intercept)	2.845	1.066		2.668	0.010		
	Purpose	-0.277	0.189	-0.184	-1.460	0.149	0.998	1.002
	Age	0.070	0.322	0.027	0.217	0.829	0.998	1.002

Descriptive

	N	Mean	SD	SE
Replace shares	64	2.500	1.491	0.186
Purpose	64	2.031	0.992	0.124
Age	64	3.094	0.583	0.073

Part And Partial Correlations

Model		Partial	Part
H_1	Purpose	-0.184	-0.184
	Age	0.028	0.027

Note. The intercept model is omitted, as no meaningful information can be shown.

Collinearity Diagnostics

				Variance Proportions		
Model	Dimension	Eigenvalue	Condition Index	(Intercept)	Purpose	Age
H_1	1	2.848	1.000	0.004	0.021	0.004
	2	0.135	4.594	0.029	0.953	0.048
	3	0.017	13.071	0.967	0.025	0.948

Note. The intercept model is omitted, as no meaningful information can be shown.

Q-Q Plot Standardized Residuals