THEORETICAL STUDY OF RELATIONSHIP: MACROECONOMY AND COMPANIES

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Abstract: This article, which is of a theoretical nature, aims to highlight the relationship between the macroeconomy and companies, by focusing mainly on their financial statements and shareholder returns. The research is of a theoretical nature, with emphasis on the relationship on a domestic as well as on an international level. Various studies regarding the relationship and causality between company share returns and macroeconomic variables are unveiled. However, there are few studies on the relationship between macroeconomic variables and the components of company financial statements, and thus the need arises for new research that is intrinsic to the approach.

Keywords: Macroeconomy; Companies; Relationship.

1. INTRODUCTION

Macroeconomics can be understood as the study of economic variables in conjunction, or the product of the economy as a whole, unlike microeconomics, which studies production and prices in a specific market (BLANCHARD, 2011). Taking the macroeconomic environment into account, private and public economic agents are real-time decision makers, requiring precise and timely information regarding macroeconomic activity (ARUOBA; DIEBOLD, 2010).

Environments with more rigid monetary conditions can result in an increase in financing costs and also in a reduction in levels of investment (JIMÉNEZ ET AL, 2012). Blanchard (2011) claims that in an ever more integrated global economy, the situation of commercial partners is of the upmost importance for a country’s economy, and could result in lower levels of exports, weakening in its balance of trade, as well as a reduction in internal commercial activity.

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On the other hand, companies need to pay attention to the macroeconomic environment in which they operate, aiming to take decisions with regards to investments or disinvestments (PRITRAMANI; SHOME; SINGAL, 2004). Brito, Corrar and Batistela (2007) add that a company’s economic-financial position can be impacted upon by the macroeconomic environment.

Similarly, Ross, Westerfield, and Jordan (2008) agree with the possibility of market interference in company forecasts and also highlight the opposite, in which investment expectations reported by companies have an impact on the market. Brahamasrene and Jiranyakul (2007) highlight the relationship between macroeconomic variables and share returns.

Soll (2014), in turn, indicates that capitalism emerged from the links between financial traditions, accounting, and profit involving religion, ethics, art, history, and politics. Studying the relationship between accounting and the economic environment helped in the development of economic management in the Netherlands and England, for example, and the development reported in Venice in the Renaissance resulted in the need for improvements in company and government controls, in which accounting had to evolve to accompany mutations in the economic environment (SOLL, 2009).

It is also possible to verify that relationships can arise between the business environment and the macroeconomy, whether these are correlations or causalities (GHIRONI; MELITZ, 2004). In light of the information reported with regards to companies and the macroeconomy, this paper aims to highlight the relationship between the macroeconomy and companies, by mainly focusing on their financial statements and share returns.

2. RELATIONSHIP BETWEEN MACROECONOMY AND COMPANIES

Vasconcelos (2011) claims that macroeconomic policies are based on targets such as high levels of employment, stable prices, socially just income distribution, as well as economic growth. According to the author, the aims are not independent and give rise to dilemmas which result in uncertainties that are intrinsic to the environment.
Fischer (1991) outlines that controlling inflation and fiscal deficits is fundamental to good economic policy and reducing uncertainty. In this context of uncertainties, Callado et al. (2010) claim that identifying macroeconomic factors that interfere with company share returns and financial statements is a challenge for professionals, as well as researchers who operate in the area of finance. This challenge is explained by the fact that companies operate in the market based on different drivers related to the macroeconomic environment, such as interest rates, exchange rates, inflation, industrial production, and the balance of trade, which, according to previous researchers, are related with share returns (CALLADO et al, 2010).

Ross, Westerfield, and Jordan (2008) agree, claiming that risks of movements in exchange and interest rates and political risks can directly or indirectly influence companies in different countries. To better understand the impacts between companies and macroeconomic variables in terms of positive or negative relationships, as well as causality, the topic was subdivided into variables that are indicated in the literature as being relevant, along with the causality relationship. It only considers the main macroeconomic variables presented in the literature, which are: the interest rate, the exchange rate, the variation in Gross Domestic Product (GDP), and inflation. The analysis was initially carried out with regards to business impacts, on share returns and subsequently on financial statements.

2.1. Interest Rate

The interest rate is of the upmost importance for the economy of a particular country, with economic agents seeking to make investment or disinvestment decisions based on variations in it (ASSAF NETO, 2003). Katechos (2011) contributes in claiming that in times of crisis low-interest rates compared with other economies can lead to an appreciation in the currency, with a negative effect on exports.

Blanchard (2011) claims that in times of economic crises developing countries suffer from increasing the interest rate in order to maintain company investments, which leads to a reduction in confidence and results in a decrease in demand as well as production.
Thus, various studies have been carried out in the search for the relationship between the interest rate macroeconomic variable and companies, via their share returns or alterations in their financial statements. With regards to share returns, Solnik (1987) found a negative relationship between domestic interest rates and real share returns.

In another similar study, Araújo and Bastos (2009) researched the relationship between macroeconomic variables and share returns, finding a relevant relationship with interest rates in Latin American countries, but without discovering a relevant relationship with other variables (economic activity and inflation).

With regards to financial statements, companies need to continuously adapt their decisions to interest rate variations, whether via financial discounts, stock policies, or how they pay suppliers (ASSAF NETO, 2003). Klemperer (1995) emphasized, in his study, that the adoption of higher or lower prices by companies depends on interest rates, which is explained by the expectations they have with regards to their consumers.

Thus, according to Gertler, Hubbard, and Kashyap (1991), an increase in the risk-free interest rate can have an inverse impact on company equity value. Reiterando, Li, Richardson, and Tuna (2014) claim that company profit can also be affected by returns on sovereign bonds. Also, Bhargava (2014) claims that macroeconomic variables are fundamental for company investment policies and share prices, and that a reduction in the market interest rate would result in an increase in share returns and investments. The literature presented is characterized by an inverse relationship between interest rates and financial statements and company share returns. This demonstrates the need to verify the causality relationship with the interest rate variable and whether this moves in the direction of company financial statements or the opposite.

It is important to highlight that the previously presented review does not include the banking sector. In this case, interest rates are a fundamental variable in this sector’s performance (ENGLISH et al, 2012, or example).

2.2. Exchange Rate

The exchange rate can have an impact on company production costs (TAYLOR, 2000). Fixed exchange rates result in a greater degree of certainty for
international trade, which is explained by it setting future currency values (ASSAF NETO, 2003). Klemperer (1995) explains that the prices that companies set for products or services not only depend on interest rates, but also on exchange rate expectations.

In some developed countries, Solnik (1987) found a weak positive relationship between real share returns and variations in the real exchange rate.

In Brazil, the study from Silva, Coronel, and Vieira (2014) identified a negative relationship between the exchange rate and the Ibovespa. The relationship, whether positive or negative, depends on the characteristics of the currencies addressed and of the country being studied (KATECHOS, 2011).

The paper from Kandir (2008) stands out, as it verifies possible macroeconomic variables that affect share returns. The paper found interference by interest rates as well as exchange rates on share returns. Industrial production and the price of petroleum did not present any significant relationship.

With regards to financial statements, Kim, Lee, and Kim (2011) claim that the exchange rate macroeconomic variable is an important mechanism for verifying companies’ financial situations, in that variations in financial indicators may reflect a relationship with variations in this macroeconomic variable. The paper from Medeiros (2009) establishes a relationship between the components of the financial statements of Petrobras (Petróleo Brasileiro S.A.), in function of certain market variables, finding evidence of the relationship between variables of an accounting nature with exogenous variables of a macroeconomic nature, with an emphasis on the exchange rate as well as on international petroleum prices and income levels.

In turn, Levy-Yeyati and Sturzenegger (2003) studied the relationship between exchange rate regimes and company economic growth, denoting that in developing countries, a less flexible exchange rate system is associated with greater volatility in industrial production and slower economic growth, unlike what is observed in industrialized countries.

Berman et al (2012) analyzed exchange rate changes in French companies and how high-performance companies react to devaluation, altering prices and volumes exported. Bartram et al (2010) indicated that companies use operational and financial hedges to compensate for exchange rate changes, but that they pass
exposure to risk on to clients. Chatterjee et al (2013) study the effects of changes on companies with more than one product, providing a theoretical approach to show how they adjust prices, quantities, scope, and sales distribution with exchange rate fluctuations. The approach is consistent with Brazilian companies in the period between 1997 and 2006.

Based on the studies reported, it is possible to find a relationship between exchange rates and share returns, with this relationship being inverse in Brazil and positive in developed countries. With regards to developed countries, the significant existence of a relationship between the interest rate and company financial statements cannot be affirmed, unlike in the domestic level research presented.

2.3. Variation in GDP

Economic growth measured by variations in GDP is used in various studies with regards to share returns as well as the relationship with variations in company financial statements.

In contexts of growth, companies tend to respond by diversifying their portfolios of products; thus, firms end up adapting their strategic orientation based on macroeconomic changes (HAUTZ, MAYER; STADLER, 2014).

It is worth highlighting that macroeconomic variables are related, and increases in risk-free interest rates, in particular, can have an inverse impact on GDP (GERTLER; HUBBARD; KASHYAP, 1991). In this context, Ray (2012) studied the impact of macroeconomic variables on returns on Indian shares, reporting a positive relationship with economic growth, while inflation does not present any significant relationship with share returns. With regards to this relationship with companies in terms of share returns, Nunes, Costa Junior, and Seabra (2003) carried out research on a domestic level and did not find any relationship with GDP. Subsequently, Silva, Coronel, and Vieira (2014) reported the presence of a positive relationship between the Ibovespa and GDP, unlike in the paper from Nunes, Costa Junior, and Seabra (2003). A possible explanation for this different conclusion may be the data periods adopted for carrying out the studies.

In relation to the macroeconomic variable’s impact on financial statements, Jiménez et al. (2012) emphasize that lower economic growth together with more rigid
monetary conditions can result in a reduction in levels of investment due to credit restrictions.

Bastos, Nakamura, and Basso (2009) carried out a study on how macroeconomic factors such as economic growth, inflation, representativeness, and how developed a country’s capital market is affecting company debt in developing countries, reporting economic growth as the statistically most important variable, with it having a negative relationship with total debt.

In contrast, the paper from Terra (2007) on Latin American companies from 1986 to 2000 suggests that macroeconomic factors, although significant in explaining the capital structure, do not appear to be very important for decisions with regards to leverage, reporting intrinsic company factors as the main determinants.

Klein and Marquardt (2006) claim that accounting losses have a negative relationship with variations in GDP, with the authors emphasizing that losses have a relationship not only with accounting factors (conservatism in the study) but also with macroeconomic factors. A greater impact on small companies compared with large companies can also be verified in the study.

It is important to highlight the intense debate that has occurred in accounting after the 2008 crisis. This involves questions such as the role of accounting in causing the crisis or the need to take economic cycles into account (LAUX, 2012), as a result of the use of fair value as a measurement criterion (for example, KOTHARI, S; LESTER, R, 2012) or the relationship between fair value measures and financial institutions’ exposure to risk and information on deteriorating financial situations (for example, LINSMEIER, 2011; LAUX; LEUZ, 2010).

According to most of the research presented, it is possible to detect the importance of GDP variations in company share returns, which is characterized by a positive relationship. With regards to financial statements, it is possible to find an important relationship with GDP variations in developed countries.

2.4. Inflation

Prices are constantly being disturbed by inflationary or deflationary pressures, which results in economic agents taking actions aimed at adapting to changes in relative prices (LOPES, 1985). Akerlof et al. (1996) explain that certain economists and politicians believe that central banks need to work with zero inflation
targets, based on a natural rate of employment. Konchitchki (2011) indicates the fact that non-recognition of gains or losses from inflation has significant economic consequences, even when this is relatively low, for future cash-flow forecasts.

Taylor (2000) emphasizes the relevance of macroeconomic factors, highlighting the importance of a low inflation environment, which reduces pass-through via company pricing power, in contrast with a high inflation environment. Balduzzi (1995) demonstrated a negative correlation between inflation and share returns. Silva, Coronel, and Vieira (2014) carried out a similar test, finding a negative correlation between inflation and the Ibovespa.

Regarding the macroeconomic variable and financial statements, the study carried out by Bastos, Nakamura, and Basso (2009) sought to indicate an inverse relationship between inflation and total company debt, and did not find any significant relationship between the variables in Latin American countries. In his research, Martinez (2004) reports inflation as an important mechanism that can affect forecasts of company activity, with it being reflected in reported profits.

Thus, there is a relationship between the inflation variable and companies, with this relationship being inverse with regards to share returns, though no specific relationship can be found with regards to financial statements, where it depends on other macroeconomic fundamentals affecting companies.

2.5. Causality of macroeconomic variables

Various studies present a positive or negative relationship between companies and particular macroeconomic variables. There is a clear need to present the results from work related to causality, whether from macroeconomic variables in the direction of companies, in terms of share returns or financial statements, or the opposite.

Thus, the paper form Ajayi, Friedman, and Mehdian (1999) explains the causality relationship between share returns and changes in exchange rates, reaching the conclusion that share returns cause changes in the exchange rate only in developed countries. Regarding emerging economies, the causality relationship between the variables is not confirmed, with there being mixed results, possibly explained by the differences in structure and characteristics present in the emerging Asian market. In turn, Nunes, Costa Junior, and Seabra (2003) carried out a study of
macroeconomic indicators such as GDP and exchange rate to verify the explanatory power for variations in Brazilian company share returns. The result obtained was a one directional causality from the Ibovespa in the direction of the exchange rate, with them not reporting causality with regards to Gross Domestic Product (GDP), and rejecting that the stock market is a signaler of variations in macroeconomic activities. In contrast, Bernardelli and Bernardelli (2016) found a very large influence of fluctuations in macroeconomic variables on the Ibovespa.

Subsequently, a study of the relationship between share returns and macroeconomic variables in Thailand reported positive causality of the money supply for stock market returns (BRAHMASRENE; JIRANYAKUL, 2007). The authors used the macroeconomic variables industrial production, money supply, inflation rate, exchange rate, long-term interest rate, and petroleum price.

Silva, Coronel, and Vieira (2014) reported a relationship between the Ibovespa and the macroeconomic variables exchange rate, interest rate, inflation, and industrial production, resulting in positive cointegration between GDP and the Ibovespa and negative cointegration between the exchange rate and inflation and the Bovespa Index. The authors observed a one-directional causality relationship between the Bovespa Index and the country risk, GDP, exchange rate, and interest rate variables.

Maysami, Howe, and Hamzah (2004), in turn, found different levels of causality between macroeconomic variables and share returns by economic sector. The research presented related share returns with company financial and macroeconomic indicators in emerging and developed countries, as well as on a domestic level.

On the other hand, considering only financial statements or macroeconomic factors, Kruger, Flach, and Petri (2015), for example, demonstrated that variables such as profitability explain the future behavior of the capital structure. In turn, Fratzscher, Schneider, and Van Robays (2014) verified the causality relationship between macroeconomic variables, finding a strong negative and rising correlation between the price of petroleum and the dollar since the beginning of 2000.

Research related to the components of financial statements and macroeconomic indicators simultaneously present little evolution. Konchitchki and
Patatoukas (2014) indicate a causality relationship between accounting profit and GDP, in which errors in GDP forecasts can be explained by accounting profit.

Verifying the possibility of companies from the industrial or commercial sector presenting causality in the direction of certain macroeconomic variables, and subsequent macroeconomic variables having an impact on commercial and even industrial companies, are important foundations for better understanding of companies in the macroeconomic context.

The causality relationship is of the upmost importance for economic decision-making by public entities as well as private companies. With regards to countries, this involves deciding on stimuli for economic growth and monetary conditions. With regards to company decisions, this involves capital structure relationships, and the need for fixed assets and working capital, among other fundamentals.

3. FINAL REMARKS

Economic development, originating from a greater and more complex number of commercial transactions, results in the market having a greater need for information. Accounting follows the evolution of the global economy, using a more coherent information to meet the informational needs of users in general.

Greater company competitiveness, whether on a domestic or international level, results in better management for organizational continuity, with accounting being an efficient mechanism for better allocating financial resources and improving information for decision-making processes in the economic field.

The aim was to verify the relationship between the macroeconomy and companies, via their financial statements and share returns. In few studies, the relationship between macroeconomic variables and components of company financial statements is evident, especially company profit. There is thus the need for research relating other components of financial statements, such as current assets, liabilities, and net equity.

With regards to sharing returns, various studies have been carried out, finding a relationship with macroeconomic variables, especially in studies focused on the causality of share returns in the direction of macroeconomic variables, and the reverse.
The literature presents a vast number of studies, mainly relating company share returns to profit, cash flows, or macroeconomic variables, mostly on a domestic level. These studies reflect the better explanatory power for share returns obtained by investors, verifying the efficiency or inefficiency of capital markets.

However, in light of the studies addressed, there is the need to provide further details of the relationship between the effects of macroeconomic variations and variations in components of company financial statements. Specific studies are required regarding causality, whether for macroeconomic variables in the direction of components of financial statements or components of financial statements in the direction of macroeconomic variables, considering companies from different sectors of the economy.

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Submetido: 14 de outubro de 2016
Aceito: 04 de agosto de 2017