

The 8th International Conference on Economics and Social Sciences
Exploring Global Perspectives:
The Future of Economics and Social Sciences
June 5-6, 2025
Bucharest University of Economic Studies, Romania

**The Impact of Public Indebtedness
on Financial Stability**

Ada Cristina MARINESCU¹

DOI: 10.24818/ICESS/2025/025

Abstract

We will analyse in this paper the impact of increasing public borrowing on the evolution of financial stability. We will choose for our analysis the group of emerging and developing economies with the purpose of distinguishing whether the Global Financial Crisis or the pandemic crisis have produced important changes in the structure of public debt and consequently how the accumulation in debt and loss of sustainability of fiscal positions will affect financial stability. We utilise a vector autoregressive model with variables such as public debt, stock market capitalisation, and the ratio of economic growth, to analyse how a shock produced to debt will impact the functioning of financial markets. Our results confirm the importance of preserving sustainable fiscal positions to avoid large output losses or an increase in systemic risk, which can have important consequences for financial stability, resulting in a rise in risk premium.

Keywords: public debt, financial stability, institutional investors.

1. Introduction

The accumulation of high levels of public debt and deficits, especially in the aftermath of the Global Financial Crisis and the pandemic crisis, have contributed significantly to financial market imbalances. Public debt build-up represents an important concern in relation to financial stability, as high levels of indebtedness are difficult to roll over in countries with unsustainable fiscal positions. We will choose for our analysis the group of emerging markets and developing economies to analyse potential spillovers from the fiscal stance to financial market stability. To ensure public debt sustainability, it is important to monitor a complex system of indicators including the level of economic development and the fiscal space of the economy, to reduce high budgetary deficits which can determine an increase in governmental borrowing or impede economic growth.

¹ Romanian Academy, Bucharest, Romania, adacmarinescu@gmail.com.

Financial stability represents an important concern for both policymakers and economists, as the functioning of financial markets is an important concern for ensuring economic stability by preserving public debt and deficits within sustainable limits. The evolution of governmental indebtedness should be kept within sustainability limits to prevent financial market turbulences which can produce contagion effects or macroeconomic imbalances, such as default or incapacity of payment for public debt.

Any increase in governmental borrowing which does not comply with the limits established within debt sustainability analysis can contribute to severe market failures. Debt build-up is closely related to financial stability concerns, as rising indebtedness can produce panic in case of institutional investors, which can decide to relocate their portfolios of assets towards safer assets. Unexpected portfolio relocation decisions can contribute to additional financial market disturbances and are based on the herding behaviour of institutional investors.

Therefore, it is important to consider several factors when analysing the relations between financial market vulnerabilities and the structure of public debt. A higher share of debt denominated in foreign currency or of debt held by domestic or non-domestic residents in the structure of public debt can contribute to an increase of the risk associated with public debt and thus affect financial stability.

Ensuring the resilience of the financial system supposes the implementation of debt management strategies. The banking system and capital markets of EDME countries are not enough developed to cope with significant increases in debt and to react to negative output losses by taking into consideration that an efficient functioning of financial markets can smooth negative shocks to output. Macroeconomic stability is closely related to the efficient functioning of financial markets, and during periods of crisis financial markets can experience unexpected turbulence, which can cause liquidity concerns since institutional investors relocate their assets to reduce risk exposure. The herding behaviour of institutional investors, when investors withdraw large amounts of liquidity from the market in the form of financial assets they hold, can prove a serious concern for financial stability.

Herding behaviour results in accentuating macroeconomic vulnerabilities and reducing the resilience of the economy to negative output shocks. Financial turbulence is associated with significant modifications in investment strategies of institutional investors, resulting in funds withdrawal and asset reallocation reorienting towards less risky assets. The relocation of important financial assets in the short term can have destabilising economic effects and therefore the necessity for institutional investors to devise long-term strategies. Countercyclical action from institutional investors could represent a factor which reduces volatility in the markets and ensures the stability of financial markets during periods of accentuated marked stress or collapse. The function of shock absorbers of institutional investors is extremely important, as it can ensure financial stability.

Our paper investigates the relations between the functioning of financial markets and the sustainability of fiscal positions, using public debt and stock market capitalisation as indicators for the analysis of fiscal and financial soundness at the

level of EMDE countries. We utilise in this paper a vector autoregressive model with the following variables: gross domestic product growth rate, public debt, and market capitalisation of listed domestic companies. All data are extracted from the International Monetary Fund World Outlook database and World Bank databases for Emerging and Developing Market Economies, with annual frequency, with data from 1993 until 2024.

We utilise impulse-response functions for the relationships between variables, so that a shock produced to one of the variables included in the structural vector autoregressive model will impact the other variables included in the model. Our results confirm that there is an important effect from increasing public indebtedness on financial stability, as high levels of public debt can produce a significant effect on the functioning of financial markets. Financial markets stability is ensured at low levels of government debt, while any public debt increase can influence the efficient functioning of financial markets.

The remainder of the article is organised as follows. The next section presents a review of the literature regarding the effects of rising indebtedness on financial markets stability, including the role of institutional investors in preserving growth through their investment decisions. The next section of the article describes the methodology, a structural vector autoregressive model used for analysing the relationships between the main variables: public debt, market capitalisation of listed domestic companies and gross domestic product growth ratio, and the results of impulse-response functions. The final section concludes.

2. Problem Statement

The impact of deteriorating fiscal conditions on the efficient functioning of financial markets should be analysed taking into consideration several aspects which refer to the limits for contracting public debt and to the implementation of financial stability regulations which can ensure an increased resilience to crisis.

The relation between public finance and financial market stability is symmetric during an economic cycle. During periods of economic growth, government bonds have reduced default and liquidity risks, while contractions are associated with the importance to maintain the quality of assets of governmental liabilities to contain negative developments in the real and financial sectors (Das et al., 2010).

Institutional investors have an important role in ensuring macroeconomic stability as they are important factors influencing financial markets and they can contribute to restoring growth during periods of market stress. Institutional investors can ensure liquidity to stabilise financial markets and smooth negative output shocks during the crisis. Institutional investors play a complex role regarding the efficient functioning of financial markets as they hold diversified portfolios of assets and manage their investments in accordance with long-term investment strategies. The herding behaviour of institutional investors has an important impact on financial stability in EMDE countries, with a significant effect on restoring growth rates following economic contractions. The Global Financial Crisis and the COVID-19 pandemic have shown that actual regulations on financial markets cannot

prevent the outburst of unexpected GDP shocks and that it is necessary to intervene in case of serious downturns with massive government liquidity injections to stabilise the economy.

Institutional investors represent a category of investors which have an important role in the functioning of financial markets. Access to liquidity, especially during periods of crisis, represents a prerequisite for preventing significant output losses and the increase of systemic risk. Institutional investors utilise the funds from domestic savers based on investment strategies to increase the value of their assets. During periods of financial turbulence institutional investors represent important actors as they can act to stabilise fluctuations in the financial markets. Institutional investors have important roles in supporting economic growth and financial market stability.

Financial market regulations to prevent herding behaviour can help to cushion asymmetric shocks to GDP, which can produce destabilising consequences on the functioning of the economy. Institutional investors are important actors on the financial market, as they hold large portfolios of assets accumulating the savings of households and providing alternative financing sources to the banking system or issuing of sovereign bonds by governments.

The recent crisis has shown that there are many regulatory aspects of institutional investors which require substantial improvement: herd behaviour, strategies on long-term for investing in portfolios of assets as investment decisions based on unexpected portfolio relocations can lead to large funds reversals on financial markets.

The relation between financial stability and institutional investors is twofold. Thus, extreme market price volatility can arise after expectations shift and portfolios of assets are being relocated to safer investments. Another type of financial turbulence can be caused by the behaviour of institutional investors, which involves one-way-selling which can cause market liquidity collapse (Davis, 2003).

Institutional investors should be more preoccupied with long-term investment performance, as they are supposed to hold their portfolio of shares in the long term. Institutional investors should also behave in a countercyclical manner, by making investments in risky assets and by looking for investment opportunities in periods of financial turbulence (Della Croce et al., 2011).

Institutional investors contribute to the increase of domestic savings rates, but their herd behaviour can add to the volatility of capital flights during crisis. They can hold long-term assets in accordance with their strategies of long-term investment. Risk diversification through institutional investors is related to the fact that they can shift risks outside the banking sector, as they are less exposed to contagion, do not face insolvency risks as they have fewer liquid liabilities, and they are not involved in systems of payment (Lescrauwaet, 2006).

Financial deepening is related to structural changes in the financial system, characterised by a rise in non-monetary assets and leverage (Houben et al., 2004). The financial system tendency towards procyclicality arises from several factors, such as: the insufficient assessment of liquidity needs, principal-agent issues,

accounting cycles, and improper techniques for risk identification and measurement (Papaioannou et al., 2013).

There exists a nonlinear relationship between financial development and economic growth, economic growth takes place when financial development is above the threshold, while the value of the threshold is higher in case of industrialised economies (Ruiz, 2018).

The influence of institutional investors on the capital market takes place through several channels: the increase in savings supply, the influence on the portfolio distribution of domestic households (bank deposits, securities), or by impacting the portfolio structure of the institutional sector (OECD, 1998).

3. Methodology

We will use in this paper a vector autoregressive model to take into consideration the relationships between economic growth rate, public debt, and the market capitalisation of listed domestic companies. All data are extracted from the International Monetary Fund World Outlook database and World Bank databases for Emerging and Developing Market Economies, with annual frequency, with data from 1993 until 2024.

We will use an econometric specification to analyse the relationship between the variables in the model, a Vector Autoregressive Model which analyses several macroeconomic variables: the economic growth rate, public debt, and the stock market capitalisation of listed domestic companies. The VAR model assumes the existence of a relationship between the variables, according to the following formula:

$$Y_t = A_0 + A_1 y_{t-1} + \dots + A_p y_{t-p} + B_1 x_{t-1} + \dots + B_s x_{t-s} + \varepsilon_t \quad (1)$$

In the first stage of the analysis, we will check whether the variables used are integrated by order 1, respectively the stationarity of the time series used. We will also determine the optimal lag for the model. The results of the ADF Dickey-Fuller test confirm that the time series are stationary by order 1, requiring a transformation of 1st order difference of the series to reach stationarity. The series are stationary at first difference, the results of the ADF test show that the series must be differentiated to satisfy the stationarity condition.

To estimate the VAR model, we will perform several tests to determine the optimal lag to use for parameter estimation. The most used tests are the Hannan–Quinn (HQIC) and Schwarz Bayesian (SBIC) tests, which show the optimal number of lags to use in this model. We perform several impulse-response functions to analyse the variables: economic growth rate, public debt, and stock market capitalisation, to investigate how a shock produced to one of the variables included in the model will affect the other variables.

4. Findings

The results of the vector autoregressive model confirm that a shock to public debt will produce significant fluctuations in the economic growth rate, a moderate increase for 2 quarters, followed by rises and decreases in the GDP growth rate. A shock to public debt will not produce a significant impact on the stock market capitalisation of listed domestic companies for a period of 2 years, but it will cause significant fluctuations after the first 8 quarters for capital market stability.

A shock to the growth rate of gross domestic product will produce an increase in public debt after a period of 8 quarters, followed by fluctuations in public debt, which will reach a maximum peak after 4 years. A shock to the growth rate will also cause fluctuations in stock market capitalisation, a significant decrease after approximately 4 years, followed by a resumption of the growth rate after 5 years.

A shock to stock market capitalisation will result in fluctuations in public debt, which will reach a maximum level after 4 years, followed by a significant decline after a period of 5 years. A shock to stock market capitalisation will produce significant variations in the ratio of economic growth, respectively a decline after the first 2 quarters, and a return to a growth rate that will reach the highest level after 3 years (Figure 1).

Emerging and developing market economies have faced a significant debt crisis during 1990 and 2000, and they are confronted with important issues related to holding excessive governmental borrowing. Therefore, EMDE countries enforce strict monitoring procedures for keeping budgetary indicators within sustainability limits. Prudent fiscal management is necessary to avoid the accumulation of governmental borrowing, which will reduce fiscal space and the capacity of governments to intervene during contractions with discretionary fiscal stimulus to stabilise the economy.

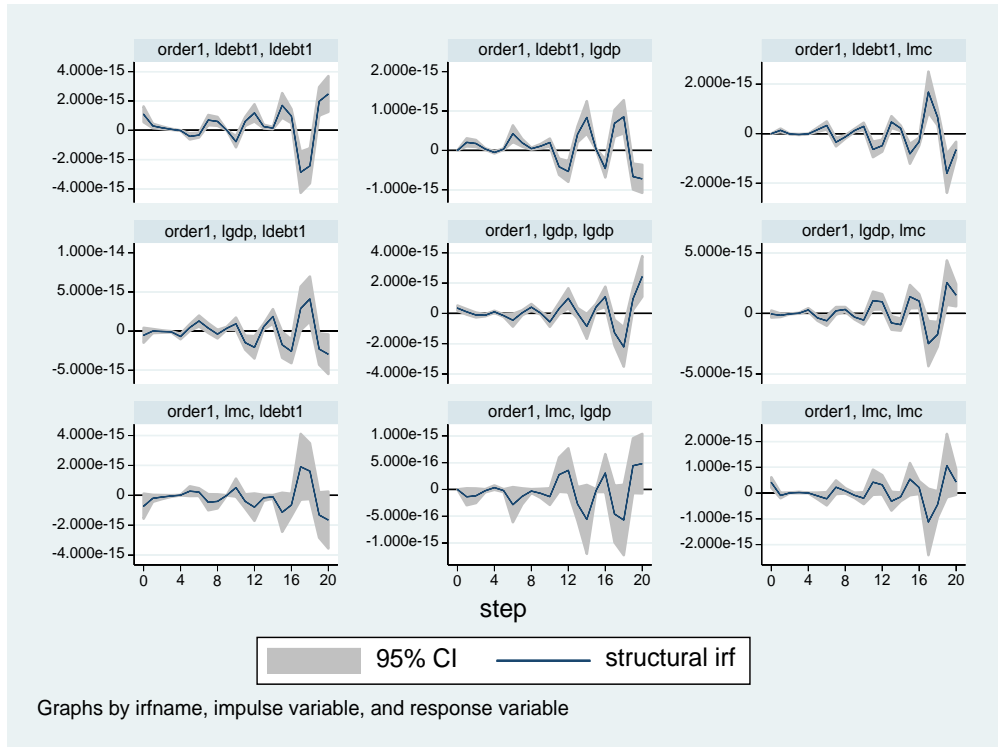
EMDE countries are also characterised by poor macroeconomic fundamentals, as they do not benefit from strong macroeconomic positions and therefore any excess debt can endanger both macroeconomic and financial stability. Fiscal sustainability and financial market stability are deeply related, as any excess public debt can produce unexpected reactions on financial markets, withdrawal of investors and loss of access to finance for governments, which can produce serious economic crisis and raise the cost for contracting further or even produce a spiral of contagion, while the loss of access to finance can result in severe macroeconomic imbalances.

The volatility of financial markets is highly accentuated during periods of economic contractions and institutional investors can contribute to financial market stability. The last financial crisis showed that the reaction of financial markets in the event of unexpected losses in output or downturns can add to existing volatility and intensify the consequences of the crisis. Institutional investors represent important actors in the financial markets of EMDE countries as they contribute to market stability through their investment strategies based on holding a significant portfolio of assets and generating market liquidity. The countercyclical investment behaviour of institutional investors can stabilise markets during periods of financial turbulence,

smoothing negative shocks to output. The investment strategies of investors should be based on risk diversification to ensure financial stability.

Therefore, economic growth is closely related to proper fiscal management and the efficient regulations of financial markets, to prevent financial market disbalances in case of high stocks of debt. A proper regulation of budgetary indicators requires that the evolution of public debt and deficits in EMDE countries are kept within debt sustainability analysis frameworks, so that governments benefit from enough fiscal space to implement countercyclical policies to support the economy during periods of contractions. Financial markets should also ensure the financing sources, from the capital markets and domestic and external banking sectors for public debt, reducing risks related to holding excessive borrowing or arising from the structure or composition of public debt in EMDE countries.

Figure 1. Results for impulse-response functions for the relations between economic growth, public debt, stock market capitalisation of listed domestic companies, EMDE countries, 1993-2024



Source: author's calculations.

5. Conclusions

We have tried in this paper to analyse the relationship between economic growth rate, public debt as an indicator for the fiscal soundness of a country and stock market capitalisation of listed domestic companies as an indicator for financial stability. The role of capital markets is extremely important in smoothing negative GDP shocks and in ensuring macroeconomic stability. Financial market instruments represent important tools for governments to stabilise economic contractions which could produce contagion effects and result in deeper economic crisis.

The regulation of financial market instruments is necessary in the actual context characterised by an important lack of fiscal space, as the recent crisis has put increasing pressure on public budgets and reduced governmental resources, negatively impacting the sustainability of fiscal positions. The impressive accumulation in debt and deficits during the last decades makes the enforcement of expansionary fiscal stimulus a difficult task for governments, therefore the utilisation of capital market instruments contributes to ensuring macroeconomic stability and reacting to negative output shocks.

Financial stability is strongly related to a proper regulation of financial markets, which can produce important turbulences in case of unexpected contractions. Institutional investors play an important role in ensuring the stabilising function of capital markets, as they are important players on the financial market, investing their assets according to an investment strategy based on reducing risk exposure and increasing the value of their holdings.

Therefore, the countercyclical role of the fiscal policy should be developed in relation to financial market proper regulation, especially during periods of market stress. Systemic risk is highly dependent on the efficient functioning of financial markets. Financial markets are characterised by a high degree of complexity due to the inherent lack of full information regarding asset prices and also as financial sectors have become increasingly interrelated, while the functioning of financial markets still lacks complete regulations necessary to increase financial sector efficiency.

The public debt in EMDE countries has several problems regarding the composition and the maturity structure of debt. Thus, EMDE countries lack the capacity to issue debt denominated in foreign currency, and they rely more on internal financing for their debt.

Consequently, there are multiple risks arising from the debt exposure of EMDE countries, which might impact severely their performance on financial markets, which penalize severely any excess debt and loss of budgetary sustainability. EMDE countries confront with risks related to the stock of debt they held in foreign currency. The evolution of interest rates will impact significantly the dynamics of public debt, as any sudden rise in interest rates will produce an increase of the financing costs for public debt, putting severe pressure on the ability of governments to ensure additional financing sources for the debt service. Solvency and liquidity are also affected in case the government borrowing does not comply with sustainability indicators and debt roll-over becomes more difficult, with the potential

of producing incapacity of payment or even default for countries which cannot ensure their debt obligations.

Declaration of Generative AI and AI-assisted technologies in the writing process: During the preparation of this work the author has not used Generative AI and AI-assisted technologies.

References

- [1] Das, S.M., Guilherme, P., Papapioannou, A., Surti, J. (2010). Managing Public Debt and Its Financial Stability Implications. IMF Working Paper WP/10/280. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2010/wp10280.pdf>.
- [2] Davis, E.P. (2003). Institutional investors, financial market efficiency, and financial stability. EIB Papers, European Investment Bank (EIB), Luxembourg, 8(1), 77-107.
- [3] Della Croce, R., Stewart, F., Yermo, J. (2011). Promoting Longer-Term Investment by Institutional Investors: Selected Issues and Policies. OECD Journal: Financial Market Trends, 2011(1), 1-20.
- [4] Houben, A., Kakes, J., Schinasi, G. (2004). Toward a Framework for Safeguarding Financial Stability. IMF Working Paper WP/04/101. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2004/wp04101.pdf>.
- [5] Lescrauwaet, P. (2006). Links between institutional investors and banks. National Bank of Belgium. Retrieved from <https://www.bis.org/publ/wgpapers/cgfs27lescrauwaet.pdf>.
- [6] OECD (1998). Institutional Investors in the New Financial Landscape, OECD Publishing. Retrieved from https://www.oecd.org/content/dam/oecd/en/publications/reports/1998/06/institutional-investors-in-the-new-financial-landscape_g1ghgadf/9789264163065-en.pdf.
- [7] Papaioannou, M.G., Park, J., Pihlman, J., van der Hoorn, H. (2013). Procyclical Behavior of Institutional Investors During the Recent Financial Crisis: Causes, Impacts, and Challenges. International Monetary Fund WP/13/193. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2013/wp13193.pdf>.
- [8] Ruiz, J.L. (2018). Financial development, institutional investors, and economic growth. International Review of Economics and Finance, 54, 218-224. <https://doi.org/10.1016/j.iref.2017.08.009>.