

BANK LENDING TO NON-FINANCIAL CORPORATIONS IN ROMANIA DURING 2016-2025

Andrei RĂDULESCU, PhD*

Abstract

Bank lending to non-financial corporations has long been an important source of financing investments in the real economy, especially in European countries. However, following the outbreak of the Global Financial Crisis 2007-2009, the share of lending to non-financial corporations in GDP has diminished, at least in the Eurozone (the central component of the EU), according to the latest data from the European Central Bank. This paper focuses on assessing banking loans to non-financial corporations in Romania during the period 2016 – 2025 using standard analytical and econometric tools. In this article, an econometric model is built to identify the relationships between the evolution of banking loans to non-financial corporations (in real terms, after adjusting for inflation) in Romania and several structural indicators (international and domestic). Our estimates indicate a direct relationship between loans to non-financial corporations in Romania and the confidence indicator for the Eurozone industry. On the other hand, we identify an inverse relationship between loans to non-financial corporations in Romania and several indicators, including the short-term real interest rate, the real effective exchange rate of the RON, and US stock market sentiment (as measured by the equity risk premium).

Keywords: non-government loans, Romania, ordinary least squares, real interest rate, risk premium

JEL Classification: C21, E32, E44, E51, G21

DOI: <https://doi.org/10.65672/fs.2026.2.2>

1. Introduction

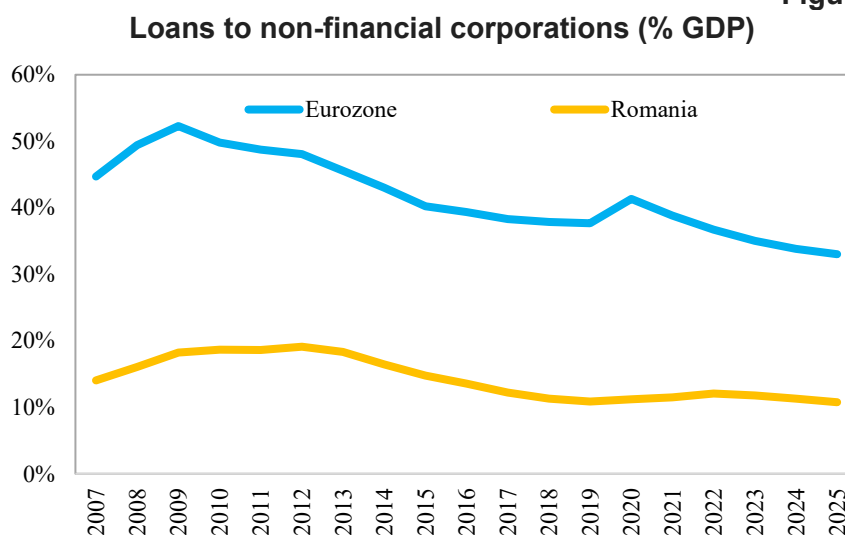
Banks have always played a fundamental role in financing investments in the real economy, especially in Europe. However, this

**Institute for World Economy, Romanian Academy, Romania. ORCID: <https://orcid.org/0009-0000-4121-1910>. Corresponding author, e-mail: iemradulescu@gmail.com*

role has deteriorated following the outbreak of the Global Financial Crisis 2007-2009 (the most severe world economic and financial crisis since the end of World War II). For instance, the share of the bank lending to non-financial corporations in GDP declined in the Eurozone from above 52% in 2009 to 33% in 2025, according to the figures estimated by using the databases of the European Central Bank (ECB, 2026) and Eurostat (2026), represented in Figure 1.

However, in Romania, the role of bank lending has been significantly lower in the past decades. The share of bank lending to non-financial corporations never exceeded 20% of GDP. Based on the databases of the National Bank of Romania (NBR, 2026) and Eurostat (2026), the weight of non-government loans to non-financial corporations in GDP declined from above 18% in 2009 to around 11% in 2025, as shown in Figure 1.

Figure 1



Source: representation of the author based on the estimates using the data of Eurostat (2026), European Central Bank (2026) and National Bank of Romania (2026)

Furthermore, we point out the unfavourable development in Romania in 2025, as reflected by the contraction of the real lending (nominal lending after adjusting for inflation) to non-financial corporations for the fifth month in a row in December last year (the longest streak of decline since 2018), by the most severe annual rate

since September 2016, according to our estimates, based on the data of the National Bank of Romania (NBR, 2026) and Eurostat (2026).

This paper applies standard analytical and econometric tools (the Hodrick-Prescott filter and the OLS regression) in order to assess the evolution of bank lending to non-financial corporations after adjusting for inflation in Romania during the period 2009 – 2025. The main aim of this research is to build an econometric model to identify the structural factors (international and domestic) that influence the evolution of real lending. The databases of the National Bank of Romania (NBR, 2026), Eurostat (2026), European Commission (2026), Damodaran (2026), and the Bank for International Settlements (BIS, 2026) were used.

The rest of the paper has the following structure: Section 2 focuses on the literature review related to the bank lending to non-financial corporations; the methodology is briefly presented in Section 3; the main results are discussed in Section 4; the conclusions are mentioned in Section 5.

2. Literature review

The role of the banking sector in financing the real side of the economy has been well documented by many researchers and bankers in the past decades.

For instance, the former Governor of the Bank of England pointed out that banks had a contribution of almost 50% to the financing of companies in the 1960s in the United Kingdom (Richardson, 1981). Furthermore, the role of the banks in financing the British economy intensified in the following decade, dominated by high levels of inflation, volatility, and instability, after the dismantlement of the Bretton-Woods agreement, as emphasised by Escriva et al. (2009).

The deregulation started in the 1980s in the United States, shortly followed by Western European countries, supporting innovation in the banking sector in market economies, with consequences in terms of competitiveness, but also risks. According to Bertrand et al. (2007), the deregulation in the French banking sector in the 1980s had consequences in terms of efficiency, either for the banks or for the companies, leading to the decline of concentration in the industries.

At the same time, the deregulation trend in the financial sector started in the 1980s, the intensifying globalisation (following the fall of the Berlin Wall in 1989), and the development of the internet, leading

to the flourishing of derivatives, transformed the banking sector. For instance, the share of banks in the business debt of the United States declined significantly, from over 35% in the mid of the 1980s to less than 25% in the first half of the 2000s, as documented by Covas and Dionis (2022).

On the flipside, the deregulation contributed to the increase in instability in the banking sector, as emphasised by Cunha (2021).

However, the outbreak of the Global Financial Crisis 2007-2009 determined the change of the paradigm in terms of regulation in the banking sector, through the implementation of Basel III (BIS, 2017).

The main consequence of the post-crisis regulation in the banking sector was the significant increase in the non-banking financing of non-financial corporations. This, in turn, has had important effects in terms of the transmission of the monetary policy, according to the European Central Bank (2016).

As regards the factors with an impact on the bank lending for non-financial corporations, the research of the European Central Bank (2004) on the developments in the Eurozone pointed out the business cycle position, the real cost of financing, the corporate profitability, and the development of non-monetary financial institutions.

Researching the banking lending to companies in Spain, Barreira et al. (2022) distinguished between the demand-side factors and the supply-side factors. In the former, the authors underlined the precautionary liquidity buffers, the differentiated impact of the coronavirus pandemic across the sectors in the economy, and the replacement of the banking lending with securities issuance. In the latter, the capital ratios of the banks were taken into account.

3. Methodology

In this paper, we analyse the developments of the real bank lending to non-financial corporations in Romania in the past decade (January 2016 – December 2025) by implementing standard econometric tools.

The main aim is to identify the macroeconomic indicators that impact the annual rate of real bank lending to non-financial corporations.

First of all, we estimated the annual rate of the bank lending to non-financial corporations in Romania by considering the annual pace

of the nominal lending and the dynamics of the consumer prices (HICP – Harmonised Index of Consumer Prices).

Afterwards, we took into account several macroeconomic indicators, international and domestic. As regards the international indicators, we considered the equity risk premium in the United States, the largest economy in the world, with a nominal GDP of over USD 31 trillion in the 3Q of 2025, according to the estimates of the Bureau for Economic Analysis (BEA, 2026). This is an important barometer for the risk perception in the global financial markets, with an impact on the cost of financing in the emerging economies, according to several studies, including the Goldman Sachs Integrated Model developed by Mariscal and Lee (1993), and the article by Boyer et al. (2017).

We used the estimates of Damodaran (2026) for the equity risk premium in the United States, based on monthly observations.

Furthermore, we also took into account the confidence in the Eurozone industry, as estimated every month by the European Commission (2026). This is a very important indicator for the economic activity in Romania, a country that is highly integrated with the Eurozone (the main component of the European Union, with a contribution of 84% to the GDP in 2025, according to Eurostat (2026)), in terms of economic, financial, and investment flows. On the other hand, from the domestic perspective, we opted for the real interest rate in the short run and for the real effective exchange rate of the RON. In our view, the real interest rate in the short run represents an important benchmark for the real costs of financing, with an impact on the investment decisions of the companies. Normally, a decline in the real cost of financing is positive for the investments of the companies. At the same time, the real effective exchange rate is a barometer for international competitiveness. An improvement in international competitiveness is positive for the investment plans of the companies.

As regards the short-term real interest rate, it was estimated using Eurostat (2026) data on the 1-month nominal interest rate and annual inflation.

Overall, we worked with four independent variables, with a balanced distribution in terms of international and domestic, real and financial sides of the economy.

In our analysis, we worked with monthly observations. Therefore, we could not introduce other domestic macroeconomic variables, which are reported on a quarterly basis, such as the annual pace of GDP, for instance. However, we introduced in the analysis the

confidence in industry in the Eurozone (an important leading indicator for the economic activity in this region). In this respect, we point out that the developments in terms of GDP in Romania are strongly dependent on the macroeconomic climate in the Eurozone.

We estimated the following OLS (Ordinary Least Squares) regression using the econometric software EViews:

$$\begin{aligned} LOANSNFC = & C(1) + C(2) * REALINTRATETR + C(3)RONREER \\ & + C(4) * ERPUSA + C(5) * EUROCONFIND + C(6) \\ & * LOANSNFC(-1) \end{aligned} \quad (1)$$

where LOANSNFC represents the annual rate of the real bank lending to non-financial corporations, REALINTRATETR is the estimated trend component for the short-term real interest rate, RONREER is the real effective exchange rate of the RON, ERPUSA represents the equity risk premium in the United States, while EUROCONFIND is the indicator measuring the confidence in the industry in the Eurozone.

We also considered the lagged dependent variable in the regression (LOANSNFC(-1)), to counter the risk of autocorrelation. C(1) is the intercept, while C(2), C(3), C(4), C(5), and C(6) are the estimated coefficients for the independent variables.

We point out that for the real interest rate in the short run, we considered in the regression the trend component, estimated by implementing the econometric filter developed by Hodrick-Prescott (1997), which is based on the following relation:

$$Min \sum_{t=1}^T (\ln Y_t - \ln Y_t^*)^2 + \lambda \sum_{t=2}^{T-1} ((\ln Y_{t+1}^* - \ln Y_t^*) - (\ln Y_t^* - \ln Y_{t-1}^*))^2 \quad (2)$$

where Y_t , Y_t^* , and λ represent the real interest rate in the short-run, its trend component, and a smoothness parameter, for which we considered a value of 14,400, the same used by the authors when working with monthly observations.

In this paper we worked with monthly data, from January 2016 to December 2025, from different sources: the National Bank of Romania (NBR, 2026) for the loans to non-financial corporations, Eurostat (2026) for the nominal interest rate and inflation, European Commission (EC, 2026) for the confidence in the Eurozone industry, Bank for International Settlements (BIS, 2026) for the real effective exchange rate of the RON, and Damodaran (2026) for the equity risk premium in the United States.

4. Interpretation of the results

Table 1 presents the estimates from the OLS regression.

On the one hand, it is clear that all estimated coefficients are statistically significant at the 10% level. On the other hand, the R-squared is very good, above 92%. In other words, the independent variables explain to a large extent the development of the dependent variable.

Table 1
The results of the OLS estimated regression (1)

Dependent Variable: LOANSNFC				
Method: Least Squares				
Date: 02/05/26 Time: 17:05				
Sample(adjusted): 2016:04 2025:07				
Included observations: 112 after adjusting endpoints				
LOANSNFC = C(1)+C(2)*REALINTRATETR(-1)+C(3)*RONREER(+1) +C(4)*ERPUSA(-3)+C(5)*EUROCONFIND(+5)+C(6)*LOANSNFC(-1)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	8.962387	4.144311	2.162576	0.0328
C(2)	-0.422464	0.159232	-2.653133	0.0092
C(3)	-0.056080	0.030952	-1.811813	0.0728
C(4)	-0.702300	0.300556	-2.336669	0.0213
C(5)	0.027761	0.015753	1.762307	0.0809
C(6)	0.855489	0.043334	19.74172	0.0000
R-squared	0.925344	Mean dependent var	2.722370	
Adjusted R-squared	0.921823	S.D. dependent var	4.355050	
S.E. of regression	1.217681	Akaike info criterion	3.283856	
Sum squared resid	157.1711	Schwarz criterion	3.429490	
Log likelihood	-177.8959	Durbin-Watson stat	1.663668	

Source: econometric estimates in EViews, 2026

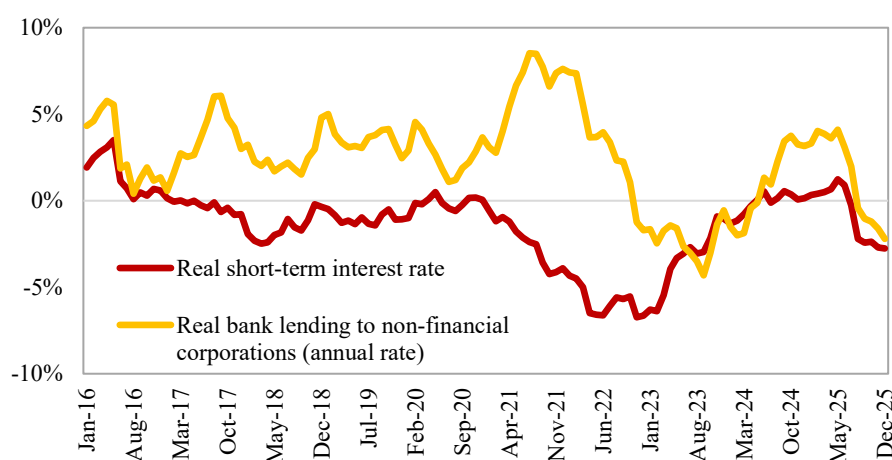
The results of the econometric analysis point out a direct relationship between bank lending to non-financial corporations in real terms (after adjusting for inflation) in Romania and the confidence in the Eurozone industry, with an estimated coefficient of 0.028 for the period January 2016 – December 2025. In other words, the increase in the confidence indicator in the Eurozone industry by 1 point determined the improvement of the annual rate of bank lending to non-financial corporations in real terms in Romania by 0.028 percentage points in the past decade.

This output is normal, as the Romanian economy is integrated within the EU economic flows, being highly dependent on the trade, financial, and investment flows with the countries in the Eurozone.

In our view, this low level of the coefficient can be explained by several factors, among which we mention: the high dependence of multinational companies active in Romania on the financing sources from abroad; the difficult access of small and medium companies to banking loans; the increasing role of EU funds.

On the other hand, we identified an inverse relationship between the bank lending to non-financial corporations and the short-term real interest rate in Romania. This negative relationship has been underlined in many papers, including that of Ahnert et al. (2023). The estimated coefficient was -0.422 for the analysed period. In other words, a 1% decline in the short-term real interest rate contributed to a 0.422 pps improvement in the annual rate of bank lending to non-financial corporations in real terms during January 2016 – December 2025. This result is normal, as the increase in the real cost of financing has a negative impact on the investment plans of the companies. This inverse relationship is also represented in Figure 2.

Figure 2
The real short-term interest rate and the real bank lending to non-financial corporations in Romania



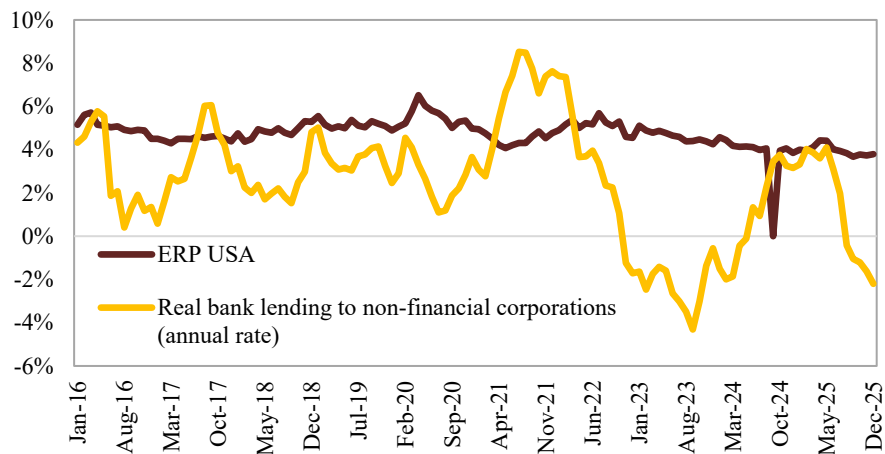
Source: Author's work, based on the estimates using the databases of NBR (2026), and Eurostat (2026)

At the same time, the econometric estimates indicate an inverse relationship between the real bank lending to non-financial corporations and the real effective exchange rate (a barometer of international competitiveness) in Romania during January 2016 –

December 2025. The estimated coefficient was -0.056. An increase in the index of the real effective exchange rate of the RON by 1 point determined the deterioration of the annual rate of the real bank lending to non-financial corporations by 0.056pps in the analysed period. In other words, a deterioration in the international competitiveness of the economy has harmed the real corporate lending in Romania in the past decade. This confirms the fact that the deterioration of international competitiveness has a negative impact on the investments of the companies.

Last, but not least, we identified an inverse relationship between the real bank lending to non-financial companies in Romania and the equity risk premium on the stock market in the USA, which probably represents the most important indicator for the risk perception in the global financial markets and in the world economy. The estimated coefficient was -0.702 during January 2016 – December 2025. In other words, a 1 pp increase in the equity risk premium in the USA was associated with a 0.702 pp deterioration in the annual rate of real banking lending in Romania during the period January 2016 – December 2025. This relationship is represented in Figure 3.

Figure 3
The equity risk premium (ERP) in the USA and the real bank lending to non-financial corporations in Romania



Source: Author's work, based on the estimates of Damodaran (2026) and on our estimates using the databases of the National Bank of Romania (NBR, 2026) and Eurostat (2026)

5. Conclusions

This paper estimated the relationships between the evolution of real bank lending to non-financial corporations in Romania and several macroeconomic indicators during the period January 2016 – December 2025. This represents a relevant contribution to the literature, as it identifies several important factors (international and domestic) that influence the development of real bank lending to non-financial corporations in Romania, an economy with strong annual rates of growth and development over the past decades (mainly determined by the integration within the European Union).

The results of the econometric analysis indicate a direct relationship between real bank lending to non-financial corporations in Romania and confidence in the Eurozone industry. However, an inverse relationship was identified between the real bank lending to non-financial corporations in Romania, on the one hand, and the real short-term interest rate, the RON effective exchange rates, and the climate in the US stock market, on the other hand.

Our results are important for the future development of the banking sector in Romania, in a period dominated by the intensifying competition from the non-banking financial institutions. In our view, the banking sector in Romania should implement proactive measures in order to change the downward trend for the share of lending to non-financial corporations in the GDP. In this respect we point out the high level of probability for this trend to continue in 2026, as the real short-term interest rate in Romania is forecasted to increase in the second half of the year (after the fading out of the impact of the liberalisation of electricity prices, and of the increase in the VAT and excise duties), while the equity risk premium in the United States is going to increase this year, after reaching in 2025 the lowest level since 2006, according to Damodaran (2026).

Last but not least, the results of this paper may also be useful to policymakers in Romania. The country needs to accelerate structural reforms to improve the economy's international competitiveness. That, in turn, would have a positive impact on real bank lending. At the same time, new reforms are needed to develop domestic financial markets, with a focus on increasing liquidity, financial education, and investment instruments. On the other hand, structural reforms are needed in order to improve access to credit for small and medium-sized companies.

At the end of this paper, we point out that, unless the reforms are accelerated, the role of bank lending to finance companies would continue to decline in the coming years, transforming the banking sector into a low-relevance actor in the economy. This, in turn, would determine the accumulation of risks and challenges for the transmission of the monetary policy, with unprecedented consequences in the scenario of Romania becoming a member of the Eurozone in the future.

References

1. Ahnert, T., Anand, K., & König, P.J. (2023). Real Interest Rates, Bank Borrowing, and Fragility. *Journal of Money, Credit and Banking*, 56(6), pp. 1545-1571. <https://doi.org/10.1111/jmcb.13033>
2. BIS (2017). Basel III: Finalising post-crisis reforms. *Basel Committee on Banking Supervision, December*. Available at <https://www.bis.org/bcbs/publ/d424.pdf>
3. Barreira, R., Mayordomo, S., Roibas, I., & Ruiz-García, M. (2022). Recent developments in lending to non-financial corporations: supply and demand factors. *Banco de España Economic Bulletin*, 1/2022.
4. Bertrand, M., Schoar, A., & Thesmar, D. (2007). Banking Deregulation and Industry Structure: Evidence from the French Banking Reforms of 1985. *CEPR Discussion Paper*, 4488. <https://doi.org/10.1111/j.1540-6261.2007.01218.x>
5. Boyer, B., Lim, R., & Lyons, B. (2017). Estimating the cost of equity in emerging markets. A case study, *American Journal of Management*, 17(2), pp. 58-64.
6. Covas, F., & Dionis, G.F. (2022). Assessing the Decline in Bank Lending to Businesses. *Bank Policy Institute*, 14 September. Available at <https://bpi.com/assessing-the-decline-in-bank-lending-to-businesses/>
7. Cunha, J.R. (2021). The Advent of a New Banking System in the U.S.: Financial Deregulation in the 1980s. In A. Drach, & Y. Cassis (Eds), *Financial Deregulation: A Historical Perspective*, pp. 24-46. Oxford University Press. <https://doi.org/10.1093/oso/9780198856955.003.0002>
8. Escriva, J.L., Garcia-Herrero, A., Nuno, G., & Vial, J. (2009). After Bretton Woods II. *BBVA Working Papers*, 0806. <https://dx.doi.org/10.2139/ssrn.1458765>
9. ECB (2004). Recent developments in loans to non-financial corporations, *ECB Economic Bulletin*, 6(June). pp. 20-21.

10. ECB (2016). Trends in the external financing structure of euro area non-financial corporations. *ECB Economic Bulletin*, 5(August). pp. 29-32.
11. Hodrick, R.J., & Prescott, E.C. (1997). Postwar U.S. Business Cycles: An Empirical Investigation, *Journal of Money, Credit and Banking*, 29(1), pp. 1-16. <https://doi.org/10.2307/2953682>
12. Mariscal, J.O., & Lee, R.M. (1993). The valuation of Mexican stocks: An extension of the capital asset pricing model to emerging markets. *Goldman Sachs Latin American Research*, 18 June, Available at: https://people.duke.edu/~charvey/Teaching/BA456_2006/GS_The_valuation_of_mexican_stocks.pdf
13. Richardson, G. (1981). *The banks' role in financing industry*, Bank of England Quarterly Bulletin. Available at <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/1981/the-banks-role-in-financing-industry.pdf>

Data sources:

- Bank for International Settlements (BIS) (2026). Effective exchange rates database. Available at <https://data.bis.org/topics/EER/data>.
- Bureau of Economic Analysis (BEA) (2026). Gross Domestic Product. Available at <https://www.bea.gov/data/gdp/gross-domestic-product>.
- Damodaran (2026). Equity Risk Premiums (Data, Updates, and Papers). Available at <https://pages.stern.nyu.edu/~adamodar/>.
- European Central Bank (ECB) (2026). Debt securities and loans of Non-financial corporations, ratio of GDP, Euro area 20, Quarterly. Available at https://data.ecb.europa.eu/data/datasets/QSA/QSA.Q.N.I9.W0.S11.S1.C.L.LE.F3T4.T._Z.XDC_R_B1GQ_CY._T.S.V.N._T.
- European Commission (2026). Business and consumer survey, Time series. Available at https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/business-and-consumer-surveys/download-business-and-consumer-survey-data/time-series_en.
- Eurostat (2026). Database. Available at <https://ec.europa.eu/eurostat/web/main/data/database>.
- National Bank of Romania (NBR) (2026). Monetary indicators – December 2025. Available at <https://www.bnr.ro/en/25247-2026-01-27-monetary-indicators-december-2025>