

# **Impact of Bank Credits on Economic Growth and Inflation**

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## **Abstract**

Economic functioning will be realized non-problematically to an extent that countries can achieve financial deepening. Financial deepening will provide an important role for particularly transferring funds that are created by banks to real sector. Whether domestic credits created by banking sector have any effect on macro-economic variables such as inflation and economic growth for 10 chosen European countries was tested via panel data analysis. Annual data for 2006-2012 were used. As a result of panel data analysis, it was proved that domestic credits created by banking sector for 10 European countries did not affect inflation but did affect economic growth.

**Jel classification numbers:** E51, C53,O47,G21,E31

**Keywords:** Bank Credits, Inflation, Economic Growth.

## **1 Introduction**

In history of economics, banking emerged with development of exchanger stores in the 15<sup>th</sup> and 16<sup>th</sup> centuries. Banks demonstrated development within historical process and became institutions that were assistant to economic and commercial activities and even more regulatory institutions for them in the 19<sup>th</sup> century. Existence of a smoothly operating and non-fragile financial structure in developing countries is one of the most crucial indicators for economic growth. So, banks that are present in this financial structure appear as institutions which facilitate economic life. Banks are institutions that conduct operations on money, capital and credits and fulfill every need of natural and juridical persons, state and businesses in this field. Among primary functions of banks, collecting deposits from clients, preserving them and lending some part of their collected deposits in exchange for a certain price can be counted. In general, banks assume an

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intermediary role between the ones who want to let others to use money and the ones who need money. Thus, banks appear in economy mostly as service businesses.

The main function of banks in economic sense is to facilitate operation of fund lending as much as possible in order to increase investments in economy. Because, development of a country in economic sense depends on increasing investments. Banks assume an important intermediary role in providing increase of investments. When banks contract credits that they let use, they can cause economic stagnation and for some sectors to go through a difficult period. Banks can also ensure effective distribution of resources in economy by transferring resources that they have collected to certain regions and sectors in need. Role of savings is also important for investments that ensure economic growth. A sufficient increase in savings cannot be witnessed in developing countries. Therefore, an advanced financial system is really important at this point. A well-functioning financial system accelerates information flow between borrower and lender, thereby making it possible to diversify risks for both saving and investing entrepreneurs. So, this ensures more effective operation of credit system. Another risk in economy is lack of control on inflation. If inflation is not under control, as an effective economic structure cannot emerge, and also development of banking sector will be hindered and bank credits will not be expected to increase investments. Inflation should always be kept under control by following an effective monetary policy and banking system should be strengthened.

## **2 Literature Review**

### **2.1 Impact of Bank Credits on Inflation**

Movements that occur in value of money in time directly influence differences among active and passive banks in terms of exchange rate, interest rate and term structure, and positions that they possess. Financial instruments and assets used by banking sector vulnerable to fluctuations in money value or purchasing power led by inflation can display a rapid change in an inflationist environment. While banks, which are characterized as establishments of reputation, create trust with equities that they have, inflation can cause liquefying equities (Bilgin and Kartal, 2009: 67). Yet, there are a number of reasons why developments in credit markets, particularly in bank lending markets, may play a crucial role in the economy. For instance, there is a long tradition in economic theory that investigates the interaction between real and financial variables and, as a result, between credit developments and business cycle fluctuations. In addition, recent advances in the literature on information asymmetries in credit markets have emphasized the importance of a “credit channel” for the transmission of monetary policy. Furthermore, several studies have found empirical evidence of a link between excessive credit growth and the emergence of asset price misalignments that may, ultimately, lead to macroeconomic instability. More generally, the developments in bank credit may contain substantial information about the state of the economy, particularly about the strength of inflationary pressures (Calza et al., 2006: 211-12). Figure 1 below presents a simple graphical framework for thinking about macro-financial linkages (Bayoumi and Melander, 2008: 5).

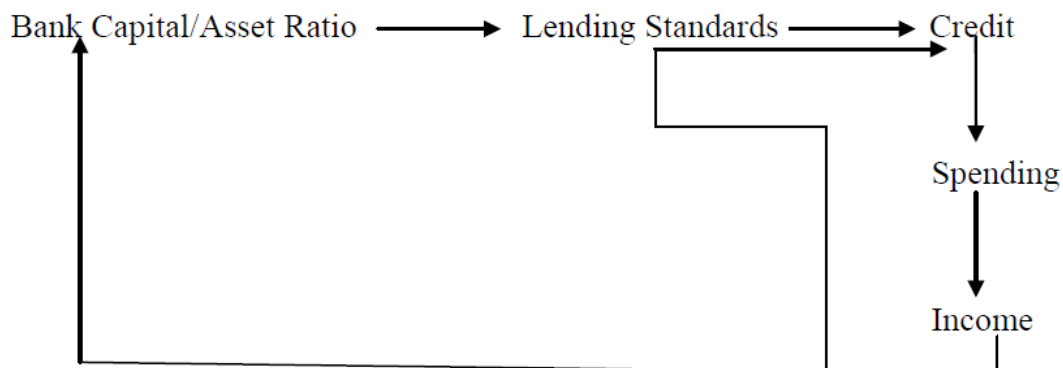


Figure 1: Macro-financial Linkages

The first link is from the CAR to lending standards. Capital requirements on banks are imposed by regulators and/or market discipline, so a negative shock constrains the capacity for lending. Thus banks are induced to tighten their lending standards in order to reduce the quantity of credit and restore the CAR. Lending standards are non-price loan terms, which reflect credit availability. A tightening of loan standards causes a decrease in the quantity of credit, as shown in the second link. They investigate separately the impact on consumer credit, mortgage credit and business credit. In the estimation, we also include other variables which affect credit, such as income and interest rates. When credit availability falls, there is a direct effect on spending due to credit constraints. For each of the credit categories, they estimate the effect of credit on the corresponding measure of spending (consumption, residential investment, and business fixed and inventory investment, respectively). A positive correlation between credit and spending does not necessarily reflect causality from credit to spending. Instead, it could be due to reverse causality from spending to credit. If households and firms choose to borrow in order to finance their spending, then the variables will move together even in the absence of credit constraints. To avoid an upward bias in the estimated effect of credit on spending due to reverse causality, we use instrumental variables with lagged variables as instruments. The final link is the feedback loop from income through balance sheets of banks, firms and households. The feedback takes place through two different channels. The first channel works through the effect of an economic slowdown on bank balance sheets. As spending and income fall, loan losses gradually increase and the CAR deteriorates further. In Figure 1, this channel is represented by the arrow from Income to Bank Capital/Asset Ratio. The second feedback channel is due to deterioration of incomes and balance sheets for households and firms, which has a further adverse financial-accelerator effect on credit availability. In Figure 1, this channel is represented by the arrow from Income to Credit. Taking these feedback mechanisms into account, the final effect of a CAR shock on aggregate economic activity is larger than the direct effect. Eventually, as bank credit declines the capital/asset ratio starts to improve. Bank deleveraging causes a decrease in the denominator of the capital/asset ratio, which increases the ratio.

The restrictive monetary and credit policies included in stabilization packages affect investment in two ways: they raise the real cost of bank credit; and, by raising interest rates, they increase the opportunity cost of retained earnings. Both mechanisms raise the user cost of capital and lead to a reduction in investment (Serven and Solimano, 1992: 100). Credit restrictions do reduce effective supply in the real world (e.g. through investment). And if these effects are bigger than the effects of tight credit on demand,

inflationary pressures will result (Blinder, 1987: 334). Higher inflation and interest rates may depress the demand for bank deposits, causing banks to restrict the supply of credit and thereby inducing declines in spending (Kamin and Roger, 2000: 92). High inflation has adverse effects on economic performance either by creating distortions, encouraging rent seeking activity, or by raising risk premia, one would expect central bank independence to improve economic performance (Alesina and Summers, 1993: 152). Higher inflation implies less long-run financial activity. In economies with high inflation, intermediaries will lend less and allocate capital less effectively, and equity markets will be smaller and less liquid (Boyd et al., 2001: 223).

Tang (2001) paper estimates inflation models for Malaysia by considering the influence of bank lending. The unrestricted error-correction model (UECM) proposed in Pesaran et al. (2000) was employed as being appropriate for small sample analysis such as the present study which covered annual data from 1973 to 1997. The results of 'bounds' tests confirmed a long-run equilibrium relationship between inflation and its determinants, namely import price, money supply (M3), bank credit and real income. The estimated UECMs revealed that the important factors in the Malaysian inflation process are import price and real-income variables. Unlike some previous studies, monetary variables money supply and bank credit, are found to be insignificant but the existence of a co-moving relationship reveals an indirect effect on inflation. The findings have some profound implications for fiscal policies in curbing inflationary pressure since they offer an alternative to monetary targeting (M3 and bank credit) with comparable direct effects on inflation. Smith's paper (2001) empirically examines the hypothesis that income distribution exerts an independent effect on private saving rates across countries, and tests particular channels for income inequality to affect private saving rates. Cross-sectional and panel regression results show that inequality has a robust, positive effect on private saving rates that depends on financial market development and credit available to the private sector. Goodhart and Hofmann (2008) paper assesses the links between money, credit, house prices, and economic activity in industrialized countries over the last three decades. The analysis is based on a fixed-effects panel vector autoregression, estimated using quarterly data for 17 industrialized countries spanning the period 1970–2006. The main results of the analysis are the following. There is evidence of a significant multidirectional link between house prices, monetary variables, and the macroeconomy. The effects of shocks to money and credit are found to be stronger when house prices are booming. Antonios (2010) study investigated that it is obvious from the above cointegrated vector that inflation has a negative effect on credit market development in the long-run. According to the signs of the vector cointegration components and based on the basis of economic theory the above relationship can be used as an error correction mechanism in a VAR model for Ireland respectively. The results of the estimated vector error correction model suggested that a short-run increase of consumer price index per 1% induces a decrease of bank credits per 1.36% for Ireland. Eslamloueyan and Darvishi (2007) use an unrestricted error correction model and the bounds testing approach proposed by Pesaran, Shin, and Smith (2001) to study the short- and long- run effects of bank credit on inflation in Iran, a country with some history of interest-free banking system. The approach used in this paper is capable of testing the existence of long run relations regardless of whether the underlying variables are stationary, integrated, or mutually cointegrated. The result indicates that there exists a long-run relationship between inflation and its main determinants, namely, bank credit, import price, real GNP, and black market exchange rate. However, bank credit has no short-run effect on price

level movement in Iran. Abbey study (2012) examined the impact of inflation on financial development in Ghana using quarterly timeseries data (1990-2008). The study therefore made use of the Cointegration Approach the Granger Causality testing procedure suggested and the Conditional Least Squares technique to address these issues for the case of Ghana. Pair-wise correlation analysis established a negative association between the two variables. In contrast, conflicting results were produced with regression analysis: the relationship between the two variables in the short run was established to be positive, while no relationship at all was established in the long run. Furthermore, a unidirectional causal link was established to be running from inflation to financial development; when the ratio of private sector credit to GDP and the market capitalization ratio were used as indicators for financial development. Additionally, it was recommended that the country should promote financial sector policies in a more holistic approach, as financial development does not granger cause inflation or inflationary pressures. Akosah (2013) study investigated the dynamic link between inflation and financial development in Ghana using annual time series from 1964-2012. The most preferred financial intermediary development measure is Private Credit (scaled by GDP) which assesses the extent to which banking institutions channel credit to private sector activities. Specifically, the paper assessed whether the direction of causality between the two differs in the short and long run. In the short run, the paper established a dual negative relationship between the two, while a unidirectional negative effect of inflation on financial development was detected in the long run using sequence of econometric techniques. Inflationary effect was much stronger on Private Credit/GDP than on M2/GDP, while the dampening effect of financial development on inflation largely originated from Private Credit/GDP. Arsène and Guy-Paulin work (2013) is centered on bringing out the link between credit to the private sector, inflation and economic growth. When lending to the economy is insufficient, it poses a problem of slow growth and when credit to the economy is too high, it poses a problem of hyper-inflation. Using data from world development indicators, it employs a Vector auto regressive model involving a system of three equations, testing for the direction of causality amongst the variables using the VAR Granger causality block exogeneity Wald Tests. The results obtained shows that inflation has a positive and significant effect on growth, economic growth has a positive and significant effect on credit to the economy and credit to the economy has a negative and significant effect on inflation. Inflation granger causes economic growth, economic growth granger causes credit to the private sector and credit to the private sector granger causes inflation.

## **2.2 Impact of Bank Credits on Economic Growth**

Since the 19<sup>th</sup> century, many economists have argued that bank-based systems are better at mobilizing savings, identifying good investments, and exerting sound corporate control, particularly during the early stages of economic development and in weak institutional environments. Others, however, emphasize the advantages of markets in allocating capital, providing risk management tools, and mitigating the problems associated with excessively powerful banks. Economists have constructed a vast number of theoretical insights into the comparative advantages of different financial systems. The bank-based view highlights the positive role of banks in (i) acquiring information about firms and managers and thereby improving capital allocation and corporate governance (ii) managing cross-sectional, intertemporal, and liquidity risk and thereby enhancing

investment efficiency and economic growth and (iii) mobilizing capital to exploit economies of scale. The bank-based view also stresses the shortcomings of market-based systems. In contrast, the market-based view highlights the growth enhancing role of well-functioning markets in (i) fostering greater incentives to research firms since it is easier to profit from this information by trading in big, liquid markets, (ii) enhancing corporate governance by easing takeovers and making it easier to tie managerial compensation to firm performance, and (iii) facilitating risk management. Moreover, the market-based view stresses problems with banks (Levine, 2002: 399-400). Proponents of market-based systems focus on the weaknesses of bank-based systems, arguing that: (i) large banks tend to encourage firms to undertake very conservative investment projects, and extract large rents from firms, leaving them with low profits and little incentive to engage in new and innovative products; and (ii) shareholders have little oversight over bank managers who control not only banks but also, indirectly through financing, the firms. Furthermore, the advocates of market-based systems claim that the latter provide a richer set of financial instruments that allows greater customization of risk management techniques than in a more standardized bank-based system (Khan and Semlali, 2000: 6-7).

Hamilton (1781) argued that "banks were the happiest engines that ever were invented" for spurring economic growth. Others, however, question whether finance boosts growth. Adams (1819) asserted that banks harm the "morality, tranquility, and even wealth" of nations. Economic theories mirror these divisions. Some models show that economic agents create debt contracts and financial intermediaries to ameliorate the economic consequences of informational asymmetries, with beneficial implications for resource allocation and economic activity. However, other models note that higher returns from better resource allocation may depress saving rates enough such that overall growth rates actually slow with enhanced financial development (Levine et al., 2000: 32)

Levine and Zervos (1998) paper studied the empirical relationship between various measures of stock market development, banking development, and long-run economic growth. They find that, even after controlling for many factors associated with growth, stock market liquidity and banking development are both positively and robustly correlated with contemporaneous and future rates of economic growth, capital accumulation, and productivity growth. The paper also finds that stock market size, volatility, and international integration are not robustly linked with growth, and that none of the financial indicators is closely associated with private saving rates. Dritsaki and Dritsaki-Bargiota (2005) paper examines empirically the causal relationship among financial development, credit market and economic growth by using a trivariate autoregressive VAR model in Greece for the examined period 1988:1–2002:12. The results of cointegration analysis suggested that there is one cointegrated vector among the functions of stock market, the banking sector development and economic growth. Granger causality tests have shown that there is a bilateral causal relationship between banking sector development and economic growth and a unidirectional causality between economic growth and stock market development whereas there is no causal relationship between the stock market and banking sector development. Furqani and Mulyany (2009) have found the relationship between Islamic banking and economic growth in the long run. They use co-integration technique and VECM. Their results generally show that in the long-run, Islamic bank financing is positively and significantly correlated with economic growth and capital accumulation of Malaysia. Pradhan paper (2009) examines the causal nexus between financial development and economic growth in India in a multivariate VAR model. The empirical analysis is based on cointegration and causality

test. The cointegration test finds the presence of long run equilibrium relationship between financial development and economic growth. The Granger causality test finds the existence of bidirectional causality between money supply and economic growth, bank credit and economic growth, Money supply and foreign trade, and market capitalization and foreign trade. It also confirms the unidirectional causality from bank credit to market capitalization, and money supply to bank credit. Ghosh (2010) has used data on Indian banks for 1996–2008, the article examines the interconnection among credit growth, bank soundness and financial fragility. The analysis appears to indicate that higher credit growth amplifies bank fragility. Besides, the results point to the fact that sounder banks increase loan supply. Coming to bank ownership, the evidence testifies that credit growth has been rapid in State-owned and de novo private banks. In terms of policy implications, the analysis appears to suggest the need for giving priority to risk-based supervision as a way to contain the potential risks associated with rapid credit growth. Akpansung and Babalola (2011) investigate the relationship between banking sector credit and economic growth in Nigeria over the period 1970-2008. The causal links between the pairs of variables of interest were established using Granger causality test while a Two-Stage Least Squares (TSLS) estimation technique was used for the regression models. The results of Granger causality test show evidence of unidirectional causal relationship from GDP to private sector credit (PSC) and from industrial production index (IND) to GDP. Estimated regression models indicate that private sector credit impacts positively on economic growth over the period of coverage in this study. However, lending (interest) rate impedes economic growth. Over and above, the paper recommends the need for more financial market development that favours more credit to the private sector with minimal interest rate to stimulate economic growth. Rahimzadeh paper (2012), using data related to the Middle East and North Africa in the period 1990-2011, the role and importance of stock market and the banking sector on improving production have been studied with panel data. First, stationarity of variables has been tested, and then cointegration of model variables has been surveyed with Kao panel data cointegration test. Study results show that the banking sector has positive and significant effect on countries production. One percent increase in domestic credits granted to the private sector, as a symbol of the banking sector development, causes production levels increase between 0.10-0.142 percent. Leitão's study (2012) examines the link between bank lending and economic growth for European Union (EU-27) for the period 1990 to 2010. We apply a dynamic panel data (GMM-system estimator). This estimator permits to solve the problems of serial correlation, heteroskedasticity and endogeneity for some explanatory variables. As the results show, savings promotes growth. The inflation and bank credit have a negative impact on economic growth as previous studies. Anthony's study (2012) investigated the determinants of bank savings in Nigeria as well as examined the impact of bank savings and bank credits on Nigeria's economic growth from 1970-2006. We adopted two impact models; Distributed Lag-Error Correction Model (DL-ECM) and Distributed Model. The empirical results showed a positive influence of values of GDP per capita (PCY) on the size of private domestic savings. Also a positive relationship exists between the lagged values of total private savings, private sector credit, public sector credit, interest rate spread, exchange rates and economic growth. Were et al. (2012) paper investigates the impact of access to bank credit on the economic performance of key economic sectors using sectoral panel data for Kenya. They find a positive and significant impact of credit on sectoral gross domestic product measured as real value added. However, the magnitude of the impact is smaller once factors such as the labour employed and past

economic performance of the sectors are taken into account. Policies aimed at financial sector deepening and increasing access to credit are of essence to enhancing economic performance. Such policies should, however, be complemented with strategies that enhance efficiency of the key sectors of economy. Fenta study (2012) empirically examines the causal relationship between bank credit and economic growth in Ethiopia. It can be one of the country specific (time series) evidence concerning the relationship between bank credit and economic growth. The study covers quarterly data from the period 1998 to 2010 which are about 52 observations. In this examination, Granger causality with VECM methodology along with impulse response and variance decomposition analyses are carried out by using selected bank credit and economic growth indicators. The variables are the natural logarithm of real gross domestic product (LRGDP), the natural logarithm of domestic credit (LDC), the natural logarithm of private sector credit (LPRC) and the natural logarithm of public sector credit (LPUC). Stationary tests, selection of optimal lag length and Cointegration tests are also undertaken before the estimation of the models. It can be concluded from the results of the analysis that there is a causal relationship directed from economic growth to bank credit in the long run.

### 3 Data and Methodology

In this study, it was analyzed whether or not bank credit had effect on macro variables economic growth (GDP) and inflation for 10 randomly-selected European countries (Spain, Finland, France, Germany, Greece, Hungary, Italy, Poland, Turkey and United Kingdom) by using the annual data of 2006-2012.

Domestic credit provided by banking sector (% of GDP): Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The banking sector includes monetary authorities and deposit money banks, as well as other banking institutions where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other banking institutions are savings and mortgage loan institutions and building and loan associations.

GDP definition is used annual growth rates (%): Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Credit and gdp data were taken from World Bank website.

Inflation ( $\pi$ ) was defined as the consumer price index (2010=100). Inflation data was taken from OECD website.

I use panel data analysis. The fundamental advantage of a panel data set over a cross section is that it will allow the researcher great flexibility in modeling differences in behavior across individuals. The basic framework for this discussion is a regression model of the form (Greene, 2010)



$$\begin{aligned}
 y_{it} &= x'_{it}\beta + z'_i\alpha + \varepsilon_{it} \\
 &= x'_{it}\beta + c_i + \varepsilon_{it}
 \end{aligned}
 \tag{1}$$

There are  $K$  regressors in  $x_{it}$ , not including a constant term. The heterogeneity, or individual effect is  $z'_i\alpha$  where  $z_i$  contains a constant term and a set of individual or group-specific variables, which may be observed, such as race, sex, location, and so on, or unobserved, such as family specific characteristics, individual heterogeneity in skill or preferences, and so on, all of which are taken to be constant over time  $t$ . As it stands, this model is a classical regression model. If  $z_i$  is observed for all individuals, then the entire model can be treated as an ordinary linear model and fit by least squares. The complications arise when  $c_i$  is unobserved, which will be the case in most applications.

Before proceeding to forecasts, for the purpose of enabling forecasts to give correct results and avoiding misleading regression, it was analyzed whether or not the variables were stationary. First, unit root tests were conducted according to the Levin–Lin–Chu test. Levin–Lin–Chu unit root test results are shown in Table 1.

Table 1: Levin-Lin-Chu Unit Root Test

Variables	Intrinsic Correlation Delay	pValue	Test Result(*)
BC	1	0.000	There is no unit root
$\pi$ (HICPs)	1	0.995	There is unit root
$\Delta\pi$	1	0.000	There is no unit root
GDP	1	0.000	There is no unit root

\*As a result of the Levin-Lin-Chu unit root test, it was decided that there was a unit root when the p value was found to be above 5%. In other case, it was decided that there was no unit root.

According to results in Table 1, bank credits and GDP series became stationary at level and series of inflation became stationary in its first difference.

In order to make sure whether or not the variables in the model had a unit root, unit root tests were performed according to the PP-Fisher Chi-square test in addition to the Levin–Lin–Chu test. The results are given in Table 2.

Table 2: PP-Fisher Chi-square Unit Root Test

Variables	Intrinsic Correlation Delay	p Value	Test Result(*)
BC	0	0.016	There is no unit root
$\pi$ (HICPs)	01.000		There is unit root
$\Delta\pi$	0	0.000	There is no unit root
GDP	00.008		There is no unit root

\* As a result of the Im-Pesaran-Shin unit root test, it was decided that there was a unit root when the p value was found to be above 5%. In other case, it was decided that there was no unit root.

As seen in Table 2, while bank credits and economic growth were stationary at level, inflation data became stationary in its first difference as in Table 1. I use the Breusch and

Pagan Lagrangian Multiplier test to learn whether our model is a pool model or a random effect model.

According to the BP LM test, probability (p) value was found as 0.000. On the grounds that the probability value is below 5%,  $H_0$  hypothesis is rejected. It is acknowledged that random impacts are present. Since the hypothesis  $H_0$  was not accepted, the Hausman test should be checked. It is used for making a selection between fixed and random-effect models. The most evident attribute between fixed and random models is whether unit effect is associated with independent variables. It measures whether there is a correlation between error term and exploratory variables due to unit effect, in other words whether random-effect model is suitable. If it is observed that there is no correlation between error term and independent variables, random-effect model is valid. If error term is associated to independent variables, then this time fixed-effect model should be used (Tari, 2011: 492).

$H_0$  = There are random effects

$H_1$  = There are no random effects

Probability value was found 0.017 as a result of the Hausman test. Since probability value is smaller than 5%, the hypothesis  $H_0$  is rejected. In other words, I can say that there are no random effects. However, there may be fixed effects in the model. A type of panel model would have constant slopes but intercepts that differ according to the cross-sectional (group) unit-for example, the country. Although there are no significant temporal effects, there are significant differences among countries in this type of model. While the intercept is cross-section (group) specific and in this case differs from country to country, it may or may not differ over time. These models are called fixed effects models (Yaffee, 2003).

$H_0$ =Pool model

$H_1$ =Random effects

Hausman test was conducted with the intent of testing the presence of fixed effects. When I performed the Hausman test, probability value was found as 0.017. On the grounds that this value is below 5%,  $H_0$  hypothesis, which gives the statement of pooled, is rejected. The alternative hypothesis which indicates that there are fixed effects is accepted. At the next stage, it was evaluated whether or not the model had autocorrelation or changing variance.  $H_0$  hypothesis, which shows that there is no autocorrelation, is accepted because the probability value is 0.338 according to the Wooldridge autocorrelation test and consequently the probability value is above 5%. In the heteroscedasticity test, probability value was found as 0.341. On the grounds that this value is above 5%,  $H_0$  hypothesis, which shows that there is no heteroscedasticity, is accepted. Whether there is a problem of multiple-linear correlation was tested. The mean VIF value was found 1.11. Since it is smaller than 5%, it is seen that there is no problem of multiple correlation.

Upon eliminating all problems, the results of  $BC = \beta_0 + \beta_1 \Delta\pi + \beta_3 \text{GDP} + u_t$  of my model, which was analyzed with fixed effects, are shown in Table 3.

Table 3: Panel Results for 10 European Countries

Variables	Coefficient	p Value
$\Delta\pi$ (HICPs)	1.983	0.155
GDP	-1.2890	0.006
Constant (C)		120.684
		0.000

According to the results in Table 3, it is seen that the variable of GDP is 5% statistically significant for 10 European countries while the variable of inflation is insignificant. While domestic credits created by banking sector influence economic growth for 10 European countries, it has no effect on inflation.

#### **4 Conclusion**

Development of financial markets is an indicator that a country is strong in economic sense. The more diversity of instruments used in financial markets and the more common these instruments are used, it can be said that it ensures financial development of that country. Its activation of national and international savings is an important indicator in developmental criterion of financial markets. Financial deepening and financial deregulation are crucial for a country to achieve its economic growth in a globalizing world. Resorting to deregulation in other words considerably lessening interferences and supervisions provide positive contribution to financial development. Financial freedom brought along financial deepening as well. Financial deepening play a great role in transferring created funds to real sector. If majority of these created funds is transferred to real sector, economic growth will increase. If a small portion of created funds is transferred to real sector, in this case economic growth will occur in lower ratios due to lack of resources in real sector.

If savings accumulated in economic structure return to economy as investments by using them to a great extent, they will provide important contribution to development of economy. If majority of these savings is not used, economic growth will slow down. Increasing savings will also support capital accumulation. Savings are used via banks, which are one of financial establishments. As demand for goods and services produced in economy will increase with an increase in bank credits, another economic problem to wit inflation can be encountered. If inflation happened in a country's economy and there is also a volatility of interest, this time the crowding out effect might occur in that economy. Experiencing such situation will seriously and negatively affect credit market. If a country's domestic debt requirement is provided by banks, credit supply of banks will contract and a decline will occur in total fund supply of that economy. Its reflection on economy will decrease conversion rate of deposit to credit, which is one of indicators that display developmental level of countries.

Panel data analysis was performed to see whether domestic credits created by banks for 10 chosen European countries have influenced economic growth and inflation variables of these countries. Annual data that incorporates 2006-2012 were used. While bank credits and economic growth were stationary at level, inflation data became stationary in its first difference. As a result of conducted tests, it was concluded that there were no problems of heteroscedasticity, multiple correlation and auto-correlation. As a result of panel data analysis, it was proved that domestic credits created by banking sector for 10 European countries did not affect inflation but did affect economic growth.

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