"Local and international dimensions of credit provision by commercial banks in Kenya"

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LOCAL AND INTERNATIONAL DIMENSIONS OF CREDIT PROVISION BY COMMERCIAL BANKS IN KENYA

Abstract

Although considerable research has focused on the determinants of credit to the private sector, the issue still remains controversial, particularly with respect to the role of foreign banks in emerging markets. This study sought to understand the factors that affect lending of commercial bank loans both in form of foreign and local loans. It used panel data methods on quarterly bank-specific data covering the period from 2000 to 2013. In general, the results reveal that the ownership structure, housing variable and the size of the bank are the main determinants of aggregate commercial bank lending. This conclusion is maintained even when the determinants of foreign loans and local loans are specifically examined separately. However, the role of the liquidity measure is in not consistent in the different specifications while the role of interest rates is largely in line with expectation in most of the specifications. Implicitly, the results seem to suggest a need for mergers of small banks, policy focus on incentives for more local bank ownership and continued efforts on minimization of interest rate spread, which not only promote mortgage financing and home ownership, but also overall credit growth.

Keywords	foreign loans, local loans, credit growth, Kenya
JEL Classification	C5, E5, G21

INTRODUCTION

The Kenyan financial system has been evolving rapidly both in terms of institutional set up and financial products. Facilitated by an equally developing information technology, new financial products and models such as mobile financial services, agency banks, among others, have transformed the financial structure in Kenya. The improved technology has enabled banks to process data/information faster and efficiently; and has also led to increasingly cashless society with rapid growth in the use of plastic money. Despite these developments, structural rigidities, evidenced by high interest rate spread, remain a major impediment to the banking sector growth. The banking market remains segmented and constrained with few credit lines. Large banks preferably lend and borrow from each other in the interbank market, while small banks have limited credit because of perceived risk or non-existence of credit lines. Growth of credit to the private sector in Kenya has thus been relatively sluggish compared to other African countries such as Mauritius and South Africa whose growth of private sector credit to GDP ratios is in triple digits. On average, growth of credit to the private sector as a ratio of GDP in Kenya increased from 33.6 percent in 2010 to an average of 38 percent in the period 2011–2013. This sluggish growth and some of the observed bottlenecks to credit growth need an interrogation of the commercial bank lending behavior in Kenya using micro data.

Credit provision in Kenya is largely driven by the commercial banks that dominate the financial system. Banks mobilize deposits in both local and foreign currencies and use them to advance credit in similar currencies. Prior to liberalization of the financial system, loans were largely denominated in local currency, however, following financial sector liberalization, foreign denominated loans have been rising rapidly. This would be explained, among other factors, by the relatively low foreign interest rate spread compared to the local interest rate spread, which sometimes results in substitution of local currency loans for foreign currency loans, particularly when the exchange rate is also conducive. This changing structure of the banking sector has implications for commercial bank lending behavior and therefore warrants further analysis and understanding. For example, as noted in Haas et al. (2010), if domestic banks and foreign banks have access to different sorts of client information and process this information differently, they may focus on different customer types. In this case, local banks make decisions based on soft information, while foreign banks that lack local knowledge may use standard quantitative methods to assess creditworthiness of clients. This may lead to general decline on aggregate credit growth. On the other hand, some studies in the literature contrastingly contend that foreign banks that acquire local banks may adopt new lending technologies to collect and process information that may facilitate increased credit flows to initially opaque entities (Torre et al., 2010; Claeys & Hainz, 2007).

Although some research on determinants of credit growth exists, little is known of the factors that affect the two components of credit growth, separately, in the form of foreign and local loans. This study is therefore critical for Kenya in view of the lack of consensus in the literature concerning the role of foreign banks or foreign loans in enhancing credit growth and the rapid growth of foreign loans in Kenya in the recent past.

Moreover, the evolution in the financial structure has opened investment opportunities in the property market, which has also been rapidly evolving, particularly in the last five years. This also implies that the number of home owners as opposed to renters has grown and, with it, enhanced creditworthiness of consumers and households with possible implications on commercial bank credit behavior to tap the new market that is relatively not constrained with collateral requirements. These changes characterizing the banking sector in Kenya as diversified in terms of ownership and size need further analysis.

It is against this background that this study seeks to understand the determinants of bank credit growth over the last decade. This study is distinct from other studies in three aspects. First, it disaggregates loans into local and foreign currency denominations. Second, it investigates the ownership structure and loan provisions to understand whether international affiliation matter when it comes to credit provision. Third, the study incorporates the mortgage market credit, proxied for by the housing price index developed by Hass Consultant.

The next section provides the trends of credit growth over time while section two and three provide the literature review and methodology, respectively. Discussion of the results and conclusions are presented in section four and last section, respectively.

1. ANALYSIS OF INDICATORS OF COMMERCIAL BANK CREDIT PROVISION

The provision of credit in Kenya has been mainly through the commercial banks, which provide credit in both foreign and local denominations. Figure 1 shows the trends in growth rates for private sector credit (PSC), foreign denominated credit (FC) and real Gross Domestic Product (GDP) for the period 2001–2014. From Figure 1, economic growth seems to follow credit growth, but with some lag as expected. The general growth rate trend for PSC, FC and GDP is on the rise growing from annual average growth of -7.4 percent, 8.1 percent and 3.8 percent in 2000 to an annual average of 14.4 percent, 20.5 percent and 5.7 percent, respectively, in 2013.
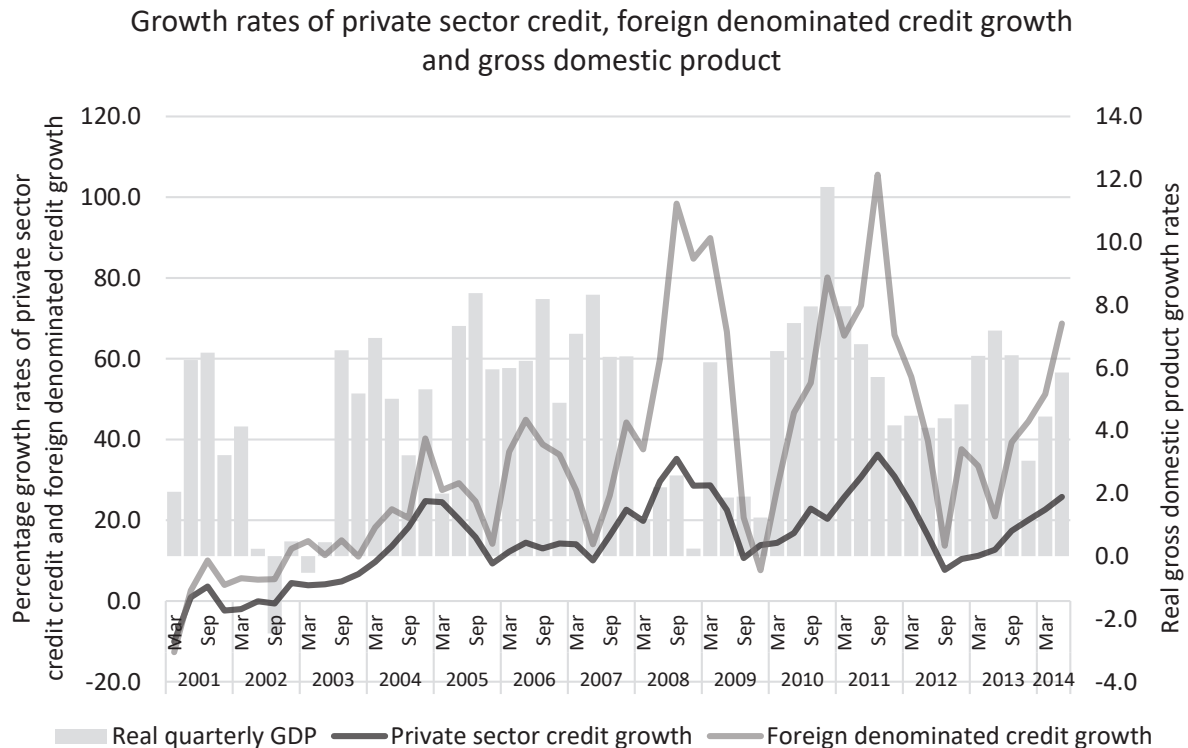
Figure 1. Growth rates of private sector credit (PSC), foreign denominated credit (FC) and real Gross Domestic Product (GDP)
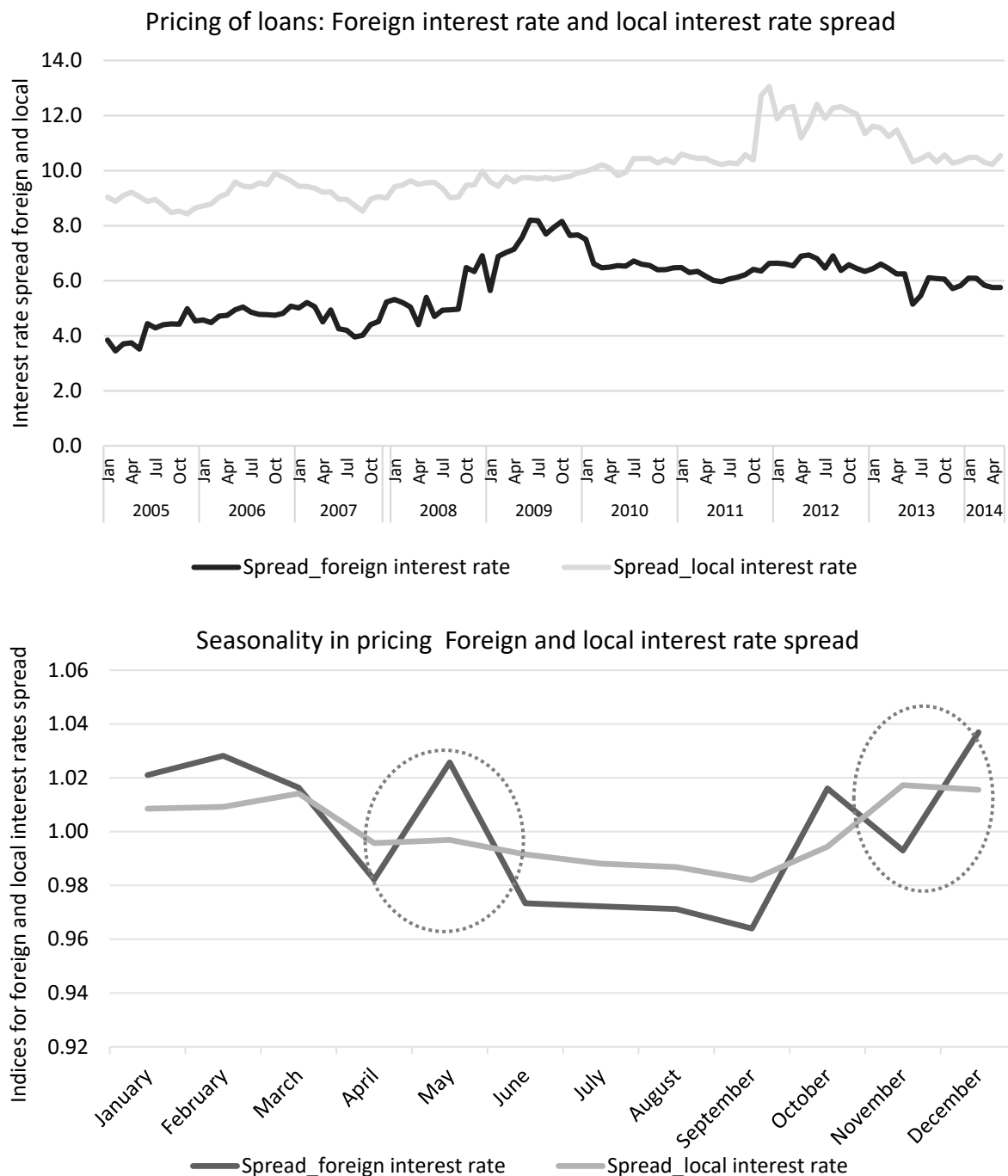
The pricing of credit determines the demand and supply of credit in Kenya. Thus, in Figure 2, a review of the trends of local and foreign interest rate spreads shows high interest rate spreads for local denominated loans as compared to the foreign denominated loans, which have generally been lower as shown in panel 1 of Figure 2. Commercial banks arrive at the interest rates they charge on loans by taking into consideration a number of factors; cost of funds, credit risk, interest rate regime and competition in the sector. The difference between the interest rates on loans and deposits gives the interest rate spread.

In panel 2 of Figure 2, seasonality pattern is observed in the foreign denominated interest spreads in April, May and December during the seasons of dividends payout and festivities. The local denominated interest rate spread deviates marginally from month to month.

In addition to pricing of loans, it matters where credit is channeled to for it to contribute to economic growth. Credit channeled to household consumption would have less multiplier ef-

fect on economic output as compared to credit channeled to productive sectors of the economy such as agriculture and manufacturing. Figure 3 below shows credit to various selected sectors of the economy denominated in local currency with generally increasing growth trends after 2007.

This study also considers the development of capital markets as a source of capital to finance borrowing. Figure 4 shows the development of the stock market and the housing index in Kenya. Housing index is considered as a key variable in this study, as it has significantly risen in the last few years. The housing index increased significantly over time from 100 to 300 points indicating significant development in the housing market. The housing market remained resilient to the 2008 global financial crisis and grew progressively over the years. Kenya's capital market has also progressively grown over the years as indicated in Figure 4 below. The Nairobi Stock Index (NSEI) stood at 4800 points in June 2013 from 1800 points in 2000 reflecting development of capital market as a borrowing option for companies and individuals.

Pricing of loans: Foreign interest rate and local interest rate spread

### Seasonality in pricing Foreign and local interest rate spread

Figure 2. Pricing of loans: local and foreign denominated interest rate spreads

2. LITERATURE REVIEW

The theories on bank lending behavior are diverse and evolutional depending on the macroeconomic circumstances prevailing at a given point in time. The more traditional theories embedded on the role of monetary policy on credit growth focused on the 'bank lending view'; 'bank capi-

tal channel' hypothesis and information asymmetry/financial accelerator and credit rationing theories, while the more recent theories have incorporated the country experiences such as the crisis, presence of foreign banks and the differences in supply and demand sides of bank lending behavior, as well as a blend of various traditional theories. In this section, we provide a brief
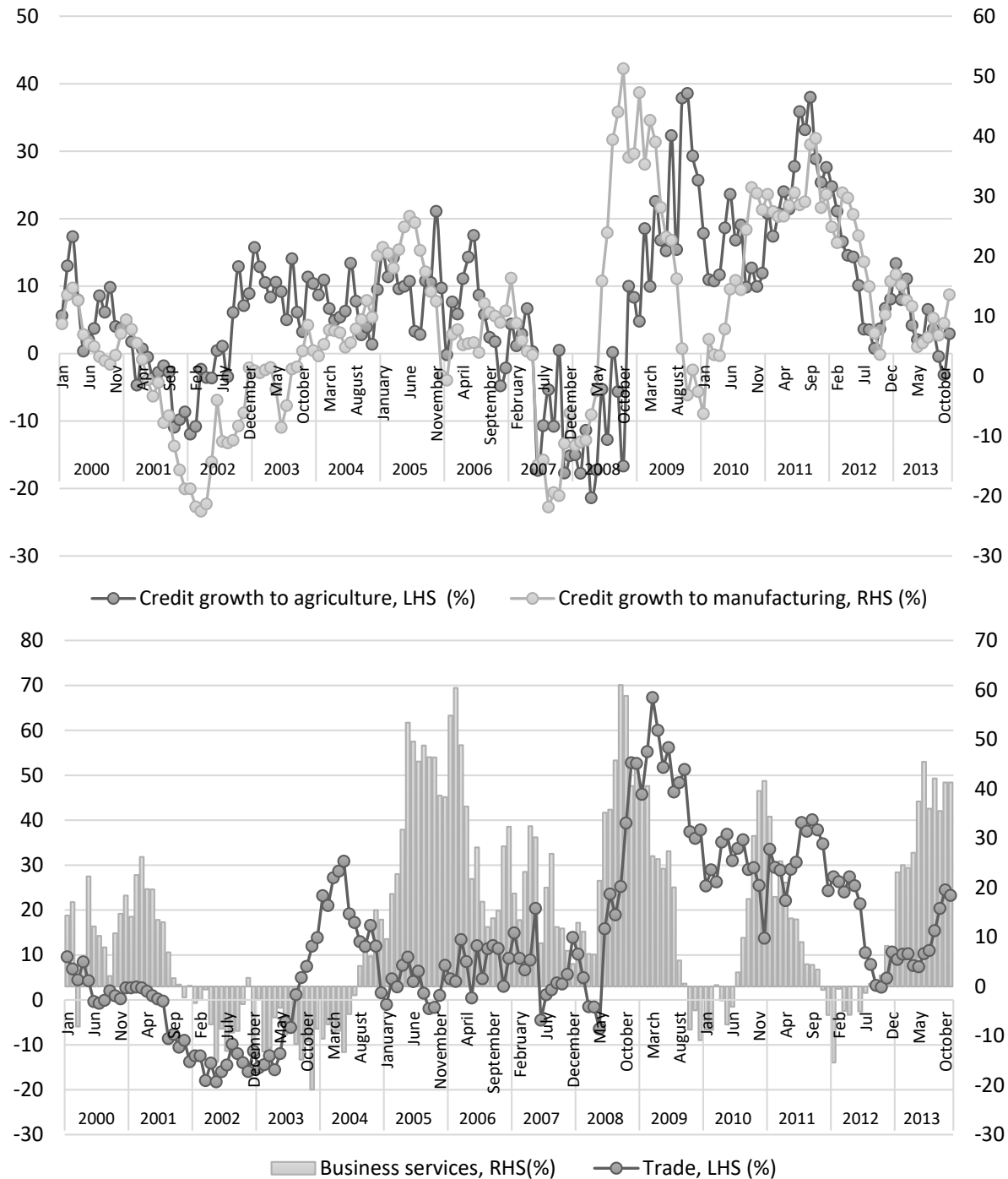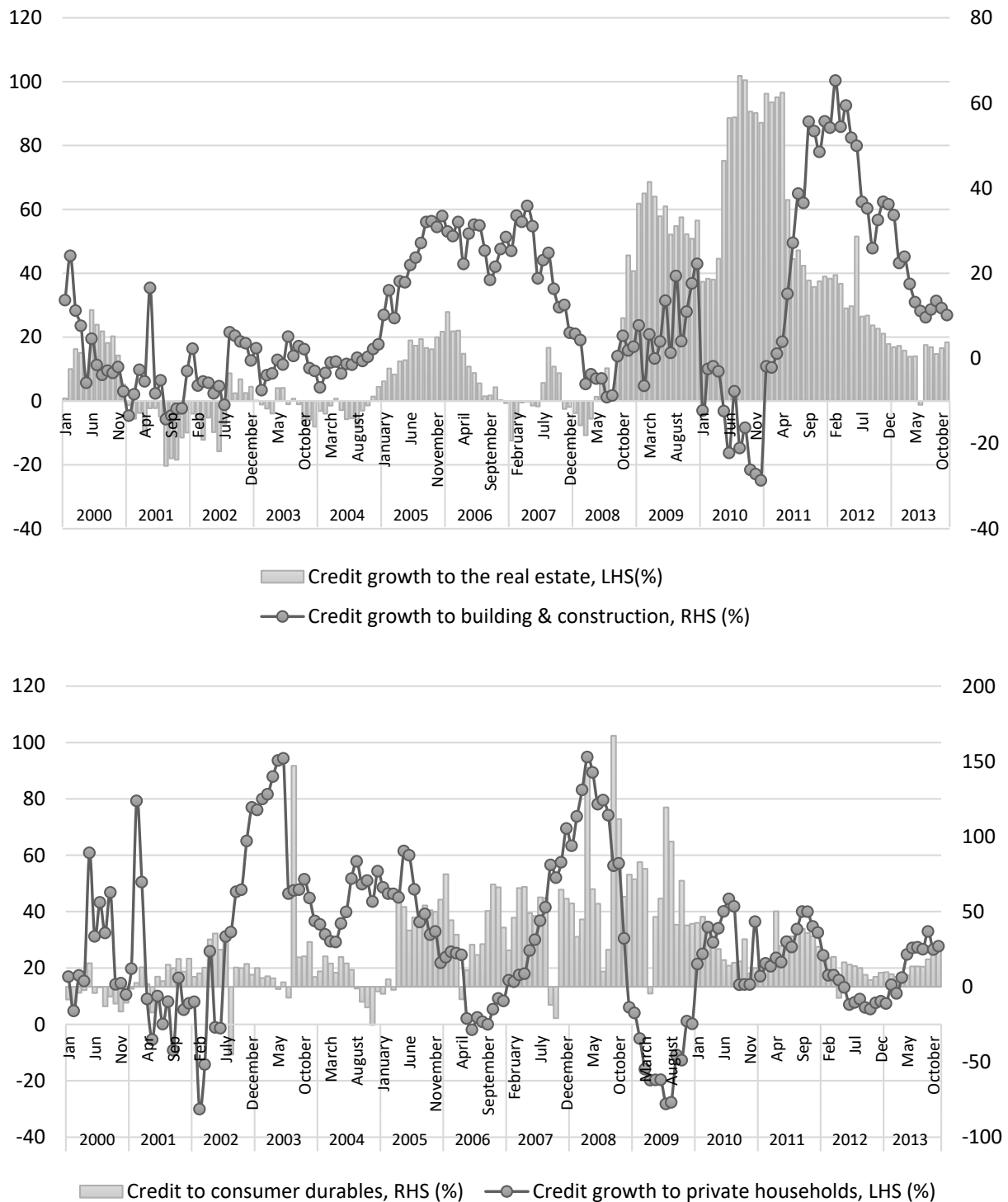
Figure 3a. Private sector credit by sector in the economy

overview of most of these theories that form the basis for formulation of our hypothesis.

Most theories on the bank lending behavior derive from the failure of the once highly celebrated Modigliani-Miller (MM) irrelevance theorem of capital structure in 1958. According to the MM theory, under an environment of

perfect markets, symmetric information and absence of taxes, a firm's total market value is independent of its capital structure (Modigliani & Miller, 1958). The validity of the MM model has been extensively discussed resulting in many alternative models such as the trade-off approach and the pecking order model. The alternative approaches relax the extreme assump-

Figure 3b. Private sector credit by sector in the economy

tions in MM by incorporating, at least one of the following elements: taxes, transaction costs, bankruptcy costs, agency conflicts, asymmetric information, among other considerations (for details, see Kashyap & Luigi, 2010; Luigi & Sorin, 2009).

Heuvel (2002) builds on the failure of the MM theory in explaining the bank capital channel thesis, by incorporating risk-based capital requirements of the Basel Accord and an imperfect market for bank equity. Under this approach, bank lending depends on its financial structure, lending oppor-
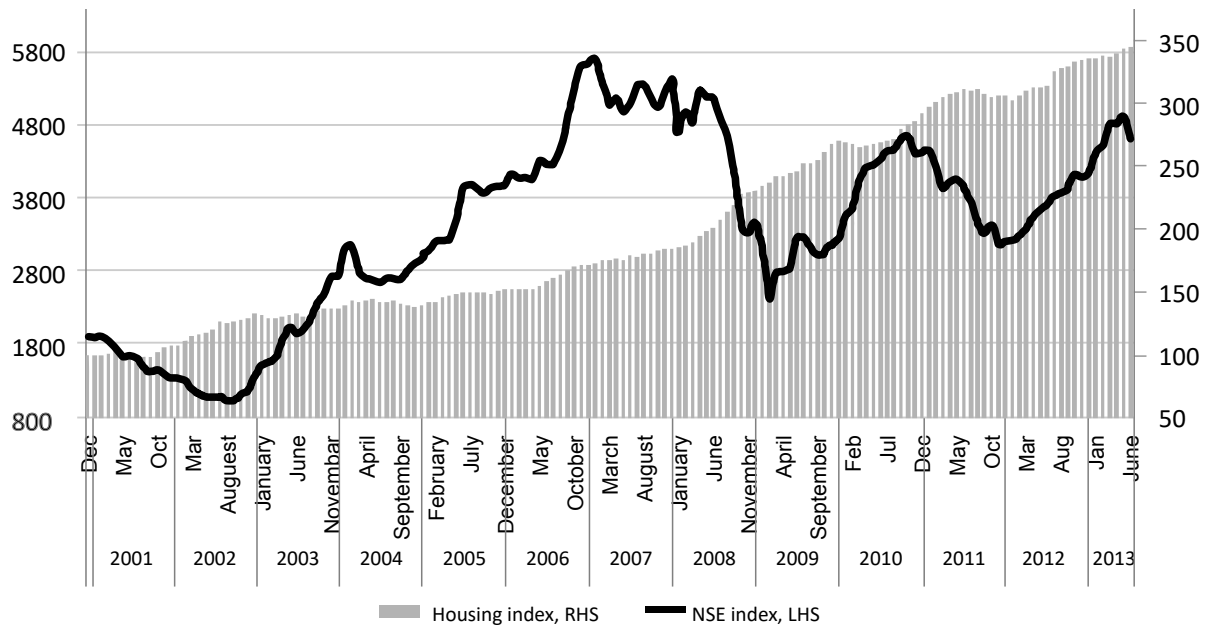
Figure 4. Development of Nairobi Stock Index and Housing index

tunities and market interest rates. When equity is sufficiently low because of loan losses or some other adverse shock, the bank will reduce lending because of capital requirements and the cost of issuing new equity. Even when the capital requirement is not binding, the author shows that a low capital bank may optimally forego profitable lending opportunities now in order to lower the risk of future capital adequacy. In a similar line of thinking, Jose and Rochelle (2010) contend that a well-capitalized bank or a bank with additional sources of capital will be able to accommodate capital losses without reducing its assets and hence, lending. At the same time, banks can actively manage their assets to maintain a constant equity-capital-to-assets ratio, because they cannot raise equity to offset declines in their capital.

However, the literature also shows that in the presence of information asymmetries in credit markets, firms and households face borrowing constraints and their borrowing capacity depends on their net worth or value of their collateral. In such cases, the cost of external finance is higher relative to the cost of internal finance, which affects the borrowing capacity of wealth constrained entrepreneurs/borrowers and households resulting in reduced investment. Borrowers net worth is pro-cyclical in the sense that the borrowing capacity increases in economic upswings and decreases in downswings. An increase in credit availability stimulates economic activity

and vice versa, which, in turn, boosts borrower's net worth. The mutually reinforcing interaction between credit and economic activity is referred to as 'financial accelerator' (Hammersland & Bolstad, 2014; Hirakata et al., 2013; Coric, 2011; Hofmann, 2004; Bernanke et al., 1999; Kiyotaki & Moore, 1997; Bernanke & Gertler, 1989). Proponents of the financial accelerator theory contend that the agency costs of undertaking physical investment are inversely related to the borrower's net worth, in this case, the greater the level of net worth of the potential borrower, the less the expected agency costs implied by optimal financial contracts. This suggests therefore that the lower the borrower's net worth, the greater the divergence of interests between the lender and the borrower and thus the higher the interest rate or the lower the credit available.

In the literature, credit growth is not only discussed in aggregate terms, but also in disaggregated components of foreign currency loans and domestic currency loans. Under this line of reasoning, some studies, notably Brzoza-Brzezina et al. (2010) contend that the role of central bank on total loans is limited in countries with foreign currency loans, since it only affects domestic credit and cannot prevent lending in foreign currency. According to the findings of these authors, whereas interest rate negatively affects domestic currency loans, it positively affects foreign currency loans thus facilitating substitution between the two loan sources.

Based on some of the discussed theories, the empirical literature has focused on two perspectives of credit growth, the demand side and the supply side. On the demand side, credit growth is affected based on demand for it from firms and individuals, in this case, GDP and interest rates are the common explanatory variables. On the other hand, the supply side is viewed from the financial intermediaries' perspective. In this case, credit channel models consider how changes in the financial position of banks and borrowers affect the availability of credit in the economy. Relevant variables on the supply side include: bank equity, total assets, deposits and cost of external financing, capital position, cost of alternative bank portfolio choices, competition from other banks and risk perception (Brissimis et al., 2014; Imran & Nishat, 2013; Balazs et al., 2007).

More recently, following the global financial crisis, in a bid to understand why credit growth contract during crises periods, some literature contends that increase in information asymmetry spawns ex ante a cumulative risk of adverse selection and produces expost a proliferation in moral hazard, which is managed by limiting credit to financial intermediaries. As asymmetries of information are ubiquitous in financial markets, any crisis that escalates the asymmetries of information, e.g., impairing of banking or non-banking intermediaries' balance sheets, escalating interest rates and fall in asset prices cause curtailment of credit (see Swamy & Sreejesh, 2012).

It is clear from the brief foregoing literature review that African countries are not only excluded in theoretical analysis, but also in the empirical studies (Tomak, 2013; Castro & Santos, 2010; Nieto, 2009; Vodova, 2008; Swain, 2007; Hoffman, 2004; Manrique & Ojah, 2004; Panagopoulos & Spiliotis, 1998).

3. MODEL AND ESTIMATION METHOD

In line with previous studies, we specify our model as follows (Allen et al., 2013; Djiogap & Ngomsi, 2012; Bogoev, 2010):

$$
\begin{aligned}
TL_{it} = {} & \beta_0 + \beta_1 \cdot SIZE_{it} + \beta_1 \cdot NPL_{it} + \\
& + \beta_3 \cdot Liquidity_{it} + \beta_4 \cdot GDP_{it} + \\
& + \beta_5 \cdot Inflation_{it} + \beta_6 \cdot Interest_{it} + \\
& + \beta_7 \cdot X_{it} + \varepsilon_{it}.
\end{aligned}
\tag{1}
$$

The dependent variable is the percentage of real growth in loans of bank i in year t. Loans here refer to three types of loans, namely, the aggregate loans, the foreign loans and local loans, which will be separately considered as dependent variables. These dependent variables are each separately used as a proxy for credit growth. We include both bank specific (size of the bank; non-performing loans and liquidity) and macro variables (GDP; inflation; interest rate). X refers to the new variables for the case of Kenya to the standard model. These are mainly the ownership variable that distinguishes the banks into foreign and locally owned and the property index/housing index to capture the rapidly developing mortgage market.

Liquidity represents cash balances to total assets for bank i in year t. The apriori sign for this variable is positive, because, as pointed out in Bogoen (2010), in periods of tightened monetary policy when banks face a withdrawal of deposits, those banks with more liquid assets can more easily offset the withdrawal of deposits. Bank size is measured by the bank assets. Apriori, a positive sign is expected between bank size and credit growth/loans, since larger banks are more diversified, have larger pool of funds available, have access to larger and more credit worthy corporate borrowers and have more resources for the development of advanced credit risk management and evaluation systems (Djiogap & Ngomsi, 2012; Jose & Rochelle, 2010). Non-performing loans is not only used as a measure of the quality of the bank business loan portfolio, but it can also be used to represent bank's risk preferences. Higher non-performing loans signal riskier bank lending practices. Apriori, a negative sign is expected for this variable.

Following Bogoev (2010), we include GDP and inflation rate to account for the macroeconomic environment and also to capture the loan demand side. The apriori sign of the GDP-credit growth link is ambiguous. The state of economic activity traceable to the permanent income model have a positive ef-

fect on consumption and investment demand, thus, on economic activity. Proponents of arguments negatively linking GDP and credit growth, as summarized in Calza et al (2003), contend that an increase in contemporary as opposed to expected productivity leads to a rise in output, ultimately, profits. Thus, during expansionary periods, companies might prefer to rely more on internal sources of finance and reduce the relative proportion of external financing. Households too may opt to reduce their debt levels during booming phases and vice versa.

Apriori, a negative sign is expected between bank credit and inflation, since it is assumed that higher inflation is associated with lower productivity levels, which, in turn, reduces the demand for labor (Amadu, 2006). But the sign can also be positive since a rise in inflation may result in higher demand for nominal credit (Tan, 2012; Guo & Stepanyan, 2011). We separately include the interbank rate to capture the monetary policy stance and the lending interest rate to capture the cost of capital with expected negative signs apriori.

Property affects private sector's borrowing capacity since it is commonly used as collateral. Property prices are, therefore, likely to affect the value of the loans secured. Moreover, as Balazs et al. (2007) point out, first, increases in housing prices result in a rise in the total amount which has to be spent to purchase a given residential or commercial property, which is reflected in an increase in demand for credit. Second, rising house prices may generate a rise in credit demand of homeowners as higher housing prices increase lifetime wealth according to Modigliani's life-cycle theory, which, in turn, leads to consumption smoothening by means of more borrowing.

The ownership variable here is defined as a dummy represented by 1 for a foreign bank and zero otherwise. The presence of foreign banks can increase access to financial services, enhance the financial and economic performance of borrowers and generally lower the cost of financial intermediation in the host country. These benefits accrue, since foreign banks increase competition, product, technology and know-how spillovers. However, at the same time, foreign banks can be a channel through which shocks are transmitted across borders with negative implications on credit supply (Feyen et al., 2014; Claessens & Horen, 2013;

Burcu, 2008). Foreign banks may also displace local lenders thereby tightening firms' overall access to credit (Bruno & Hauswald, 2008). The apriori sign is therefore ambiguous.

The study uses two stage least squares (2SLS), a methodology that is not only appropriate for this kind of study but also solves problems of endogeneity prevalent in the variables used in the model.

4. DISCUSSION OF RESULTS

In this section, we present results in which we separately use three different dependent variables (all loans of commercial banks, foreign loans and local loans) but with similar independent variables. In Table 1, column 2, we present the results of the basic model of variables that have been established in the literature as the determinants of loans from commercial banks, while, in the subsequent columns, we separately include the housing variable, the ownership variable and both of the variables in the same model. The results show that, although liquidity and non-performing loans bear the expected signs, they are not significant in explaining demand for commercial bank loans. In all the models, lending interest rate, output growth and the size of the commercial banks are significant in explaining demand for commercial bank loans. Inflation, on the other hand, bears a positive sign in all the models but is significant in only two of the models.

The relationship between ownership and commercial bank loans is consistently negative and significant, while the relationship between the housing and commercial bank loans is consistently positive and significant. The negative and significant relationship between ownership and commercial bank loans supports the theories that foreign banks can be a channel through which shocks in one country are transmitted thus affecting the supply of credit in another country. Moreover, foreign banks may select only best customers leaving domestic banks with a worsening credit pool, which can hurt their profitability and ability to lend (see Claessens & Horen, 2013). It also supports the arguments in the literature that foreign banks use 'hard' information which is based on standard and quantitative

Table 1. The dependent variable is all loans of commercial banks

Independent variables	Model without ownership and housing variables	Model without housing	Model without ownership	Model with both housing and ownership
Liquidity	0.162(1.30)	0.067(0.71)	0.016(0.16)	0.038(0.39)
NPLs	−0.016(−0.10)	−0.109(−0.705)	0.009(0.68)	−0.045(−0.30)
GDPG	0.249(2.20)**	0.153(1.61)*	0.086(1.91)**	0.172(1.84)*
Inflation	1.490(4.01)***	0.727(2.82)***	0.374(1.40)	0.475(1.24)
Lending	−0.435(−2.74)***	−0.261(−2.31)**	−0.195(−1.66)*	−0.216(1.90)**
Size	0.986(7.67)***	1.131(8.51)***	0.936(9.20)***	1.100(7.62)***
Ownership	–	−0.409(−2.38)***	–	−0.350(−2.10)**
Housing	–	–	0.014(5.43)***	0.011(4.68)***
R^2	0.43	0.61	0.90	0.88
Observations	195	218	202	178

methods to assess creditworthiness as opposed to local banks that complement such methods with qualitative information. Consequently, foreign banks tend to focus on transparent and large firms, which may lead to a decline in aggregate credit as opaque businesses see a disproportional decline in bank lending (Haas et al., 2010). The positive relationship between housing and commercial bank lending signifies the increasing role of the mortgage market in Kenya not only in terms of increased home ownership, but also usage of homes as collateral for loans for other economic activities.

In Table 2, we replaced all commercial loans with foreign loans as the dependent variable but with similar explanatory variables. In general, the results reveal some considerable differences to the results in Table 1. The negative and significant result of the liquidity measure is the most surprising. Apriori, a positive sign is expected between liquidity and foreign loans.

The negative sign is perhaps a reflection of the conservative nature of foreign banks of building high liquidity buffers rather than lending. It is also possible that the high liquidity does not necessarily end up in foreign loans, but is allocated to other portfolio investments. Low demand of foreign loans due to weak investment growth even with high liquidity and the volatility of the exchange rate may further explain the negative sign. Since the liquidity measure also reflects liquidity in local currency, it is possible that most of it is allocated in local rather than foreign loans.

The results further show that GDP growth and lending interest rates, though bearing the expected signs are not significant in explaining foreign loans. This result is the opposite of what was observed in Table 1. It is possible that increase in GDP reflected in increase in people's income is only relevant in increasing domestic deposits in local currency and this is not converted to lending in foreign currency thus its in-

Table 2. The dependent variable is foreign loans of commercial banks

Independent variables	Model without ownership and housing variables	Model without housing	Model without ownership	Model with both housing and ownership
Liquidity	−0.505(−3.41)***	−0.874(−3.65)***	−0.666(−2.97)***	−0.842(−4.46)***
NPLs	−0.091(−0.46)	−0.029(−008)	−0.205(−0.84)	−0.349(−1.83)*
GDPG	0.161(1.12)	0.263(1.73)*	0.060(0.44)	0.013(0.16)
Inflation	1.238(2.60)***	1.385(4.18)***	0.985(1.78)*	−0.040(−1.51)
Lending	−0.108(−0.603)	−0.042(−0.32)	−0.042(−0.21)	−0.208(−2.75)***
Size	1.264(6.38)***	1.281(4.20)***	1.318(6.16)***	1.506(9.36)***
Ownership		−0.235(−0.59)	–	−0.930(−2.51)***
Housing			0.006(1.80)*	0.019(7.44)***
R^2	0.46	0.41	0.49	0.59
Observations	167	190	171	172

Table 3. The dependent variable is local loans of commercial banks

Independent variables	Model without ownership and housing variables	Model without housing	Model without ownership	Model with both housing and ownership
Liquidity	0.099(2.48)***	0.216(3.02)***	0.157(3.29)***	0.132(2.48)***
NPLs	0.051(1.24)	−0.090(−0.97)	0.061(1.24)	0.096(1.17)
GDPG	0.214(4.38)***	0.056(1.42)	0.073(2.75)***	0.010(0.41)
Inflation	−1.004(−3.65)***	0.259(3.26)***	−0.103(−1.24)	0.004(0.36)
Lending	−0.139(−1.83)*	−0.108(−2.48)***	−0.026(−0.70)	−0.035(−1.69)*
Size	0.895(23.7)***	1.114(12.95)***	0.928(22.49)***	0.922(18.65)***
Ownership		−0.525(−4.08)***	−	−0.302(−3.73)***
Housing			0.008(7.10)***	0.007(12.6)***
R^2	0.93	0.78	0.90	0.93
Observations	73	179	202	189

crease is not important in determining the level of foreign loans. However, the fact that foreign loans are not sensitive to lending rates is rather strange. The interpretation of the results for the house, ownership and size variables is the same as in Table 1.

In Table 3, we used local loans as the dependent variable. In this case, we also observe significant differences to Table 2, but almost similar results to Table 1 safe for the liquidity and inflation variables. In this case, the liquidity measure bears the expected positive sign and is highly significant in all the models. This is in line with the theory that banks with liquidity stress may constrain lending and vice versa.

The coefficient of GDP growth is significant in two of the four models, complementing Table 1 and in contrast to Table 2. The other results are similar for the three tables except inflation whose relationship is inconsistent. Ownership and the house variable are significant with negative and positive signs, respectively. The coefficient for size and lending interest rates also bear the expected signs and are significant.

In Table 4, we used the same dependent variable as in Table 1, but replaced the lending interest rate with the interbank interest rate. Usage of interbank measure does not significantly alter our results. They are largely similar to those obtained in Table 1 except the liquidity and non-performing loans measures which are significant in Table 4. The coefficient of the interbank interest rate is negative and significant signaling some sensitivity of private sector credit to monetary policy. The fact that the lending rate is also consistently negative and significant in Tables 3 and 1 would signal a sensitivity of private sector credit to the cost of capital and by implication reflects some level of policy transmission to the intermediate stage of monetary policy transmission.

Table 4. The dependent variable is all commercial bank loans but with interbank rate

Independent variables	Model without ownership and housing variables	Model without housing	Model without ownership	Model with both housing and ownership
Liquidity	0.150(1.76)*	0.775(1.67)*	0.104(1.55)	0.103(1.95)**
NPLs	−0.227(−2.54)***	−0.041(−0.24)	−0.024(−0.43)	−0.146(−2.70)***
GDPG	0.229(4.01)***	0.326(3.08)***	0.176(2.02)**	0.030(0.80)
Inflation	0.217(0.92)	0.774(1.72)*	0.596(2.15)**	0.016(1.76)*
Interbank	−0.207(−5.37)***	−0.227(−4.04)***	−0.064(−1.93)**	−0.035(−0.84)
Size	1.129(12.84)***	1.082(7.62)***	1.003(16.9)***	1.141(21.3)***
Ownership		−0.177(−1.02)		−0.301(−3.31)***
Housing	−	−	0.013(5.55)***	0.006(4.28)***
R^2	0.62	0.74	0.85	0.90
Observations	197	222	202	199

CONCLUSION AND POLICY IMPLICATIONS

The study sought to understand the factors that affect lending of commercial bank loans both in form of foreign and local loans. It used panel data methods on quarterly bank-specific data covering the period 2000 to 2013.

To address its objectives, the study considered all commercial bank loans, foreign loans and local loans separately as dependent variables, but with similar independent variables. In general, ownership structure of the banks and housing variable are important in explaining credit growth regardless of the dependent variable used. However, there are considerable differences in the other explanatory factors used in the models. Lending interest rates, size of banks, ownership of banks, housing variable and GDP growth are found to be the main determinants of credit growth, while non-performing loans and liquidity are not important when all commercial bank loans are used as the dependent variable. Replacing the lending rates with interbank interest rates does not significantly alter the results.

However, when we use foreign loans as the dependent variable, the results differ significantly in some explanatory variables. In this case, the coefficient of liquidity is surprisingly negative and significant. We attribute this to the possibility that part of the liquidity is allocated to other portfolio investments besides foreign loans, a lower demand for foreign loans and volatility of the exchange rate. The results also reveal that GDP growth, lending interest rates and non-performing loans are not important in explaining foreign loans, while inflation, size, ownership and housing variables are significant in explaining foreign loans.

The results are also different in some variables when we use local loans as the dependent variable. The liquidity measure is positive and highly significant in all the models as expected, while the results of the inflation measure are mixed. Lending interest rates, size, ownership and housing are the other significant variables in majority of the models under this specification.

In terms of policy implications, first, the positive and significant results of size of banks in all the specifications suggest that mergers of small banks would be beneficial for credit growth. Second, the significant and negative effect of ownership imply that for credit growth, policy should focus in providing incentives for local ownership of banks and mobilization of domestic deposit base rather than foreign ownership. Third, the consistently positive effect of housing variable on credit growth regardless of the dependent variable used signals the importance of mortgage market in determining credit growth not only as a form of enhancing credit worthiness of consumers, but also in boosting home ownership. Together with the significant negative effect of lending interest rate, it seems that continued policy efforts to minimize interest rate spreads are in order.

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