



Munich Personal RePEc Archive

The Impact of Public Sector Lending on Financial Stability in Central Africa

Kouam, H and Kouam, S

Economist Intelligence Unit., Superior State Audit, Cameroon.

9 May 2022

Online at <https://mpra.ub.uni-muenchen.de/116481/>
MPRA Paper No. 116481, posted 10 Mar 2023 14:23 UTC

The Impact of Public Sector Lending on Financial Stability in Central Africa

Mr. Henri Kouam.

Economist, Economist Intelligence Unit

hnrkouam@gmail.com | | henri.kouam@primamfi.com

&

Mrs. Sonia Kouam

Civil Administrator, Superior State Control (Republic of Cameroon)

Abstract: Investments by the private and public sectors have formed the basis for economic growth in developing economies. The creation of goods and services for consumption hinges on the ability of market actors to lend from financial institutions. The process of credit creation is, therefore, central to economic activity, output, employment, productivity, and wage growth. Nevertheless, it is not clear that crowding out of investment occurs via lending to state entities, whose ability to repay credit is contingent on oil prices and domestic economic activity. This paper finds that the impact of the public sector on per capita GDP is weaker (1.6%), while the impact of private credit is significantly larger (2.6%). Greater linkages between commercial banks and the public sector increase financial stability risks as weaker oil prices affect the ability of the public sector to repay its loans to Cameroon's commercial banks. In order to bolster financial stability, commercial banks should make targeted investments in high-growth and scalable sectors that will reduce the uncertainty on their profits stemming from uncertain oil prices and late repayments by state-owned entities. Not only will a climate-centric and diversified portfolio insulate bank profits over the medium-long run, they will also reduce the exposure of their asset and liquidity positions to uncertain commodity prices.

Introduction

The ability of economies to grow is contingent on the availability of credit, provided by domestic and, sometimes, foreign financial institutions. Economic growth relies on the allocation of capital via investments to generate economic opportunity, create employment, boost output and productivity, and cause wages for employees to rise. The ability of businesses and entrepreneurs to borrow is central to the process of value creation, while banks rely on interest payments from such entities to remain profitable. However, an overleveraged financial system can lead to a banking or currency crisis, due to financial institutions having little liquidity whether a macroeconomic or financial shock. Shocks originate from sudden increases in risk premiums – which cause borrowing costs for banks to rise, thereby reducing the amount of capital available for lending. Petersen and Rajan (1995) find that imperfections are acutely important for small firms, while Fazzari et al. (1998) find that investment is sensitive to current cash flows for new and small firms. The uncertainty of banks' ability to perform vital functions such as credit, savings, and insurance raises risks to financial stability. Shocks originating in financial markets appear to be important in determining the global business cycle, especially during periods of global recessions. However, for developing economies such as those in the CEMAC region, credit flows to government entities affect bank profitability and, therefore, credit growth. This paper investigates the implications of higher sovereign links to domestic financial institutions, noting its impact on per capita GDP. It attempts to redress the structural mismatch between short-term lending and short-term interest payments from such institutions, whose revenues are particularly exposed to volatile oil prices.

Credit shocks on their account for a significant cumulative loss of global GDP. Financial stability as a precautionary motive seeks to alleviate, or at very best, lessen the adverse effects of banking sector stress. As such, financial institutions play an indispensable role in providing vital deposits, savings, and insurance services. However, the prevalence of a sovereign doom-loop is not uncharacteristic of the banking sector in the CEMAC region as domestic banks lend

to sovereigns whose revenues are susceptible to uncertain outcomes in oil prices (Besso & Feubi (2016), Omolade, Ngalawa & Kutu (2019) and Assoumou-Ella (2019)). The banking sector relies on short-term liquidity payments from borrowing parties and attempts to balance short and long-term liabilities by ensuring sufficient cash flow, profitability, and interest- payments.

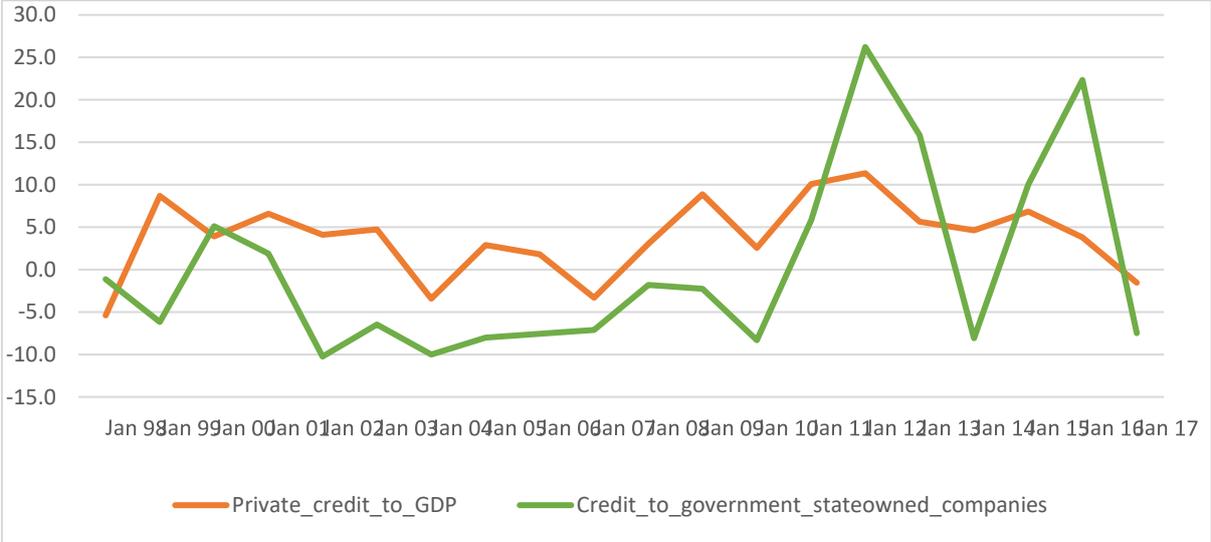
In that regard, it is important to investigate the relationship between credit issuances and banking sector profitability as the latter forms the basis of financial stability over the medium term. In other words, the claim on the banks' assets from deposit holders is contingent on the prevalence of liquidity, at once ensured by liquidity requirements and favorable ratios as well as profitability.

Whilst capital and liquidity requirements serve to bolster financial stability, they do not account for the cyclical nature of profits that are at once driven by the economic cycle and the ability of debtors to repay their loans. For banks that lend to governments in the CEMAC region, the erratic and uncertain nature of oil prices can lessen the ability of governments to service short-term debt and therefore heighten cyclical trends in bank earnings.

Given the supply side of finance can by itself be a source of shocks and propagation, leading to specific macroeconomic linkages, investigating the extent of sovereign links in financial stability can enable more targeted prudential policies that at once seek to ensure financial stability and stem the structural origins of such a shock. In the chart below I chart the private credit growth and credit to state-owned companies, in other to understand whether both indicators are in sync. The chart illustrates a noticeable relationship between private credit growth and lending to state-owned companies, and they tend to rise and fall synchronously. This illustrates that banks and private sector actors are equally exposed to financial conditions, but credit to government state-owned companies reacts to changes in global macroeconomic conditions with a lag. It is equally important to note that commercial banks provide less credit to the public sector, except for 2011 and 2016, when oil prices were gradually recovering and

interest rates were significantly lower or negative in advanced economies such as the United States, Britain, the Euro Area and Japan (BoE (2020), ECB (2020), FED (2020), BoJ (2020)). It is likely that when oil prices are high, the government has more fiscal room to borrow from commercial banks that are confident of the Government’s ability to repay its debt. Even so, in the most recent Article IV consultation, the IMF continues to note that late repayments remain an issue in Cameroon. Not only does this reduce the government’s creditworthiness, but changes in the value of commodities also exacerbate an already fragile risk profile and increase the cost of borrowing in international capital markets.

Figure 1: Credit to the public sector tends to operate with a lag in comparison to private credit to GDP.



Source: World Bank

Domestic financial institutions lend to both corporations and private sector actors, but one group tends to have a greater impact on balance sheets, creditworthiness, and borrowing costs on financial markets than the others. When the government faces higher risks of default due to lower oil prices, a weaker currency, and domestic macroeconomic fundamentals, its ability to repay commercial banks tends to come under strain. As such, banking sector profitability tends to suffer during these periods, and their ability to borrow money from financial markets is substantially affected by higher credit spreads.

The novel Coronavirus is a case in point; the Union Bank of Africa has been downgraded by Moody's (REF), reflecting broader sovereign credit ratings in the CEMAC region. Why there are no indications that bank sovereign ratings are directly linked to the risk of defaults across the CEMAC region, their ability to access global capital markets, and their profitability in the near term is determined by the ability of governments to achieve interest payments.

Credit plays an indispensable role in supporting economic growth, between 1998 – 2007 and 1999 – 2017, real GDP has averaged 4.1%, even as the ratio of private credit to GDP has risen by 3.4% in the previous 20 years. In the same period, the total liabilities as a percentage of GDP fell by 1.8%, while bank assets rose, mimicking the rise in the number of loans issued to market actors in the private sector and the public sector. Table 1 includes a summary of figures that shed some light on the effectiveness of credit in supporting economic growth. Despite rising by 500% in the previous 20 years, government spending has not supported real GDP, which suggests that government spending has, perhaps, not trickled sufficiently into the real economy. i.e. there has not been sufficient job creation, which will in turn cause wages to rise and people to spend.

Table 1: Credit growth to state-owned companies and governments has not caused sustained real GDP growth.

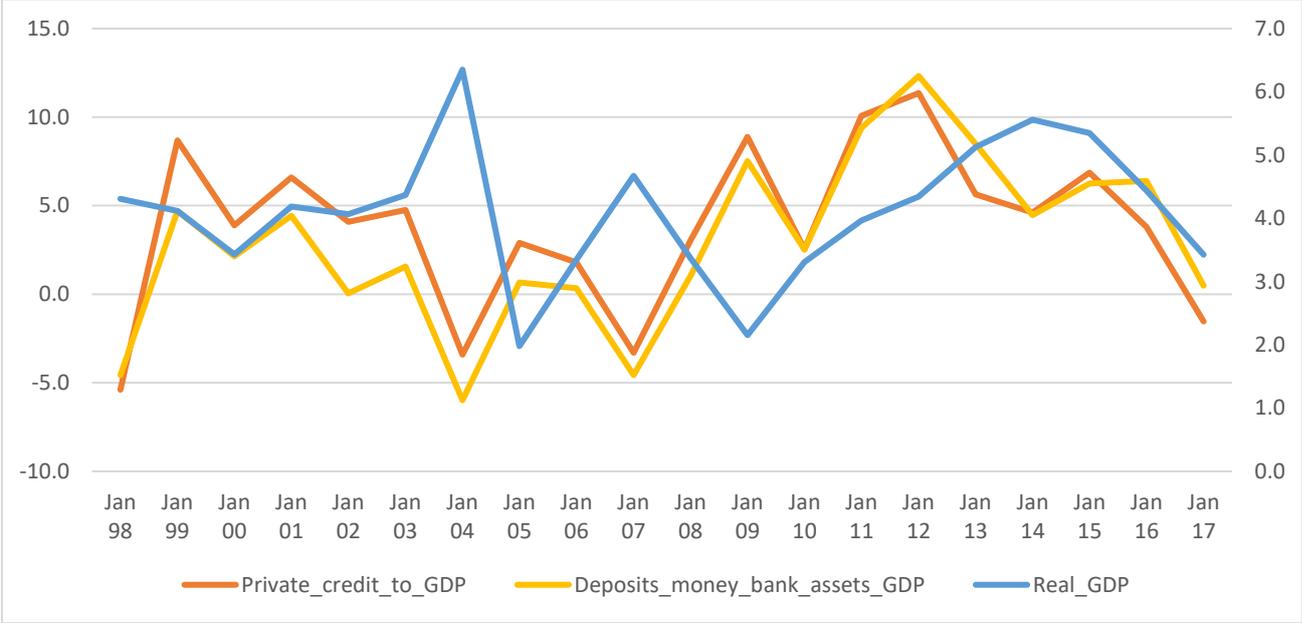
| | <i>Real GDP</i> | <i>Private crédit to GDP</i> | <i>Liabilities to GDP</i> | <i>Bank assets to GDP</i> | <i>Bank deposits to GDP</i> | <i>Credit to Stateowned companies</i> |
|---------|-----------------|------------------------------|---------------------------|---------------------------|-----------------------------|---------------------------------------|
| 98 - 07 | 4,1 | 2,1 | 3,6 | -0,1 | 3,9 | -5,0 |
| 99 - 17 | 4,1 | 5,5 | 1,8 | 5,9 | 1,2 | 5,2 |

Source: World Bank, Institute National de Statistique.

Since the late nineties, the amount of credit provided by commercial banks to individuals and the public sector has risen exponentially. As illustrated in Table 1, the private credit to GDP ratio rose from 2.1% to 5.5%, a 61% increase in the last decade, supported by accommodative financial conditions and a search for yield for domestic banks. According to Akon (2012), domestic banks are less capitalized than foreign-owned banks in Cameroon; in the last two decades, these banks have sought to diversify their loan portfolios in other to compensate for the uncertainty of government payments in the medium term.

The risk emanating from governments can be termed “sovereign risk”, which has become inexorably linked to bank balance sheets and profit margins for the best part of the last decade.

Figure 2: Real GDP growth tends to track changes in the amount of credit provided by commercial banks



Source: World Bank

The financial sector is an important engine for growth in developing economies such as Cameroon, as they provide credit to entrepreneurs, private companies, and government-backed companies in order to facilitate economic expansion. This includes, but is not limited to, extending product and service lines to hiring new employees to improve the value-added at such companies.

Nevertheless, Figure 2 clearly shows that increases in the levels of private credit-to-GDP cause a resounding increase in the levels of real economic growth. This suggests that the amount of credit injected into the economy has been put into productive use, creating employment and causing the productive capacity of the economy to rise. While private credit-to-GDP causes the economy to grow at a faster pace, thereby increasing per capita GDP, it tends to do so with a lag as Figure 1 illustrates. For example, when private credit fell in January 2013, real GDP only fell in January 2015 even as these could have been equally precipitated by the oil price slump of 2014 (Ella, 2017). Even so, previous

trends between 2004 – 2005 suggest that private credit does affect real GDP growth with a lag. Even after oil prices recovered gradually in 2015, real GDP growth continued to fall as the credit provided to the private sector was likely to use to compensate for budget shortfalls caused by weaker oil prices and higher debt servicing costs caused by a weaker currency. The empirical framework for this paper reads as follows;

$$R_{GDP_{t+1}} = BA_{t+1} + \delta_{cr_{t+1}} + \delta_{crg_{t+1}} \dots\dots\dots (1)$$

Where $BA_{t+1} = (Eq_{t+1} + \theta_{t+1} + Re_{t+1})$

$$(Eq_{t+1} + \theta_{t+1} + Re_{t+1} < 1) \dots \delta_{cr_{t+1}} = BA_{t+1} (1 - \delta_{crg_{t+1}}) \dots\dots (2)$$

$$(Eq_{t+1} + \theta_{t+1} + Re_{t+1} > 1) \dots \delta_{cr_{t+1}} = BA_{t+1} (1 - \Delta\delta_{crg_{t+1}}) \dots\dots(3)$$

$$\uparrow \delta_{cr_{t+1}} = (1 - \delta_{crg_{t+1}}) \dots\dots\dots (4)$$

$$\downarrow \delta_{cr_{t+1}} = (1 - (\delta_{crg_{t+1}})^{-1}) \dots\dots\dots (5)$$

$$(R_{gdp_{t+1}})^{\pm 1} = \left(\frac{\pm 1 - \delta_{crg_{t+1}}}{\pm 1 - (\delta_{crg_{t+1}})^{-1}} \right)$$

Where $\theta_{t+1} = (\delta_{cr_{t+1}} + \delta_{crg_{t+1}})$

$$\theta_{t+1} = (\partial_{cr_{t+1}}^i + \partial_{crg_{t+1}}^i) \dots\dots\dots (7)$$

Substituting eq (7) in eq (1)

$$R_{gdp_{t+1}} = BA_{t+1} + (1 - \delta_{crg_{t+1}}^i) + \delta_{cr_{t+1}} \dots\dots\dots (8)$$

Where $\Delta i = \theta(\delta_{crg_{t+1}}) = 1 + \delta_{cr_{t+1}}$

In other to measure the effect of credit variables on GDP outcomes, we ran an ordinary least square regression on python, and the algorithm was designed to reflect the presence of possible multicollinearity across the sample size, equally adjusting for bi-directionality in variable outcomes.

Whilst the model is significant as illustrated by an F-statistic higher than the overall P-values. The results from the regression show that a 1-point increase in private credit to GDP increases per capita GDP by 2.6%, while a 1-point increase in credit to the government or state-owned companies causes real GDP to rise by 1.7%. This suggests that the private sector is more adept at allocating resources and causes the economy to grow at a faster pace than the public sector. This is not surprising as SONARA, a state-owned company's debt is currently worth 3.5% of GDP. What is peculiar are bank assets to GDP, which are negatively correlated to per capita GDP.

| OLS Regression Results | | | | | | |
|---|--------------------------|------------------------------|---------|-------|---------|--------|
| Dep. Variable: | Dom_credit_by_fin_sector | R-squared (uncentered): | 0.774 | | | |
| Model: | OLS | Adj. R-squared (uncentered): | 0.677 | | | |
| Method: | Least Squares | F-statistic: | 7.974 | | | |
| Date: | Sat, 20 Jun 2020 | Prob (F-statistic): | 0.0117 | | | |
| Time: | 17:19:16 | Log-Likelihood: | -38.881 | | | |
| No. Observations: | 10 | AIC: | 83.76 | | | |
| Df Residuals: | 7 | BIC: | 84.67 | | | |
| Df Model: | 3 | | | | | |
| Covariance Type: | nonrobust | | | | | |
| | coef | std err | t | P> t | [0.025 | 0.975] |
| Private_credit_to_GDP | 2.5666 | 6.738 | 0.381 | 0.715 | -13.366 | 18.499 |
| Deposits_money_bank_assets_GDP | -2.9087 | 7.945 | -0.366 | 0.725 | -21.696 | 15.879 |
| Credit_to_government_stateowned_companies | 1.6526 | 1.070 | 1.545 | 0.166 | -0.877 | 4.182 |
| Omnibus: | 15.698 | Durbin-Watson: | 2.101 | | | |
| Prob(Omnibus): | 0.000 | Jarque-Bera (JB): | 8.229 | | | |
| Skew: | -1.865 | Prob(JB): | 0.0163 | | | |
| Kurtosis: | 5.415 | Cond. No. | 47.5 | | | |

This reduces the potential growth rate of the economy as the government spends more on repaying debt rather than investing in vital infrastructures such as wind and solar farms, grid improvements, hospitals, schools, waste, and water treatment plants. As one would expect, credit to the public and private sectors are closely correlated, which suggests a dependence on credit from commercial banks.

This paper sought to investigate the impact of credit to the public and private sectors on per capita GDP growth. In Cameroon, domestic banks provide a great deal of credit to the government, whose ability to repay is contingent on oil prices. As such, commercial banks that are more fragile should prioritize long-term investments in key sectors that can increase their dividends over the long run and reduce the negative effects of uncertain interest payments from the public sector. Conversely, credit to the private sector appears to be more productive use, causing per capita GDP outcomes to rise at a faster pace. It is,

therefore, logical to view the private sector in Cameroon as the engine of growth even as the public sector is equally bloated.

Recommendations for domestic commercial banks

In other to increase profitability over the long run, domestic banks need to prioritize investments in key sectors such as energy and health care. The energy sector in Cameroon is underinvested, off-grid wind and solar energy will improve access to energy for both households and businesses and boost economic growth on a sustained basis. Not only will this lessen the structural vulnerabilities that have latched on to commercial banks' balance sheets due to higher lending from the public sector, but it will also increase the value of dividends over the long run.

Also, the creditworthiness of said banks will see substantial improvements over the medium term, increasing their ability to tap international debt markets without paying exorbitantly high-interest rates. This will ensure that commercial banks remain well-capitalized during oil price shocks or other macroeconomic slumps; these are essential for the Cameroonian banking system whose interest payments from the public sector are affected by weaker oil prices. Furthermore, when commodity prices depreciate, the currency becomes weaker and causes debt servicing costs to rise exponentially. Given the dollar-denominated liabilities of the financial system remain high, diversifying the sources of interest payments over the medium to long run will bolster resilience and financial stability.

Finally, the composition of assets in Banks' loan books can equally be affected by weaker oil prices or postponed government payments. For example, if interest payments rise while the equity holdings of the bank fall in value, there are negative effects on the banks' capital positions and ability to tap debt markets. Meanwhile, the ability of said banks to repay loans from other financial institutions can come under strain during such periods. This can cause a contagion to spread across the financial system, increase financial stability risks, and increase the cost of monetary policy.

Meanwhile, the central bank should communicate the need for commercial banks to make smarter investments that will at once insulate their profit margins and support dividends over the long run. In a discussion with OMFIF, FED Dudley, the President of the Reserve Bank of New York said that the

central bank can use its cheap financing and market interventions to incentivize commercial banks to make targeted investments in sectors such as renewable energy, advanced manufacturing, infrastructure, health care, and Research and development. Not only is this consistent with Article 25, which asks BEAC to ensure conditions for economic growth, but it will also improve the stability across the banking sector and reduce financial stability risks significantly.

Conclusion

Cameroon's financial system is made up of 16 commercial banks (Swift, 2020), which lend to the private and public sectors in order to support economic activity. This paper investigates the impact of credit on the private and public sectors on per capita GDP. It finds a greater contribution from credit to the private sector, which suggests that the sector is better able to allocate capital towards productive activities. This reduces the negative effect of deferred payment from the public sector to commercial banks, thereby hurting profit margins.

The paper finds that credit growth is indispensable to economic growth and tends to affect per capita GDP with a lag. In other, for banks to improve their creditworthiness and cash-flow positions, they should prioritize investing in long-term projects that equally create a social dividend. This will increase the uptake of such goods or services, insulate profits over the long run and reduce the negative effects of lower oil prices on commercial banks.

In an attempt to reduce the negative effects of increased sovereign risks – which could precipitate financial stability risks – commercial banks should prioritize long-term investments in renewable energy, services, and advanced manufacturing that will insulate dividend payments and reduce the negative effects of postponed government payments and lower commodity prices.

The issue of sovereign risk has come to the fore as COVID-19 has increased the risk of defaults for African countries with unsustainable debt, even as Cameroon does not fall within this category. In order to lessen funding constraints, the central bank cut policy rates by 25 bps and injected 500 million into capital markets (Kouam (2020), BEAC (2020)). Due to the exposure of commercial banks to lower oil prices and higher borrowing costs, sovereign links have become increasingly salient in the debate for

financial stability. The banking sector for cash-strapped commercial banks is usually driven by sub-optimal investment decisions and increased lending to the public sector. In other, for these banks to diversify their asset portfolios, the central bank should ensure targeted communications and incentives via liquidity infusions support the transition towards investment strategies that reduce reliance on central bank liquidity and bolster financial stability.

References

- 1) Akon. G. A. (2012). A critical Look at Banking Sector Regulations in Cameroon. Development Finance Workshop. Available [here](#)
- 2) Assoumou-Ella. G. (2019). Forecasting CEMAC's foreign exchange reserves in presence of unanticipated changes in oil prices: an interrupted time series modelling. Journal of Central Banking Theory and Practice, Vol. 2, Pg. 65-83
- 3) Bank of England. (2020). Bank Rate maintained at 0.1% - June 2020. Monetary Policy Summary and minutes of the Monetary Policy Committee meeting. Available [here](#)
- 4) Bank of Japan. (June 2020). Statement on Monetary Policy. Available [here](#)
- 5) Besso. C. R. and Feubi. P.E.P. (2016). Oil price shock and economic growth: Experience of CEMAC countries. MPRA Paper No. 76034.
- 6) Ella. G. A. (2017). Should We Fear a Crisis of the CFA Franc? SSRN Electronic Journal, DOI: 10.2139/ssrn.3072464
- 7) European Central Bank. (2020). The ECB's negative interest rate. Available [here](#)
- 8) Fazzari. S.M., Hubbard. R.G. and Petersen. B. C. (1998). Financing Constraints and Corporate Investment, Brookings Papers on Economic Activity, Vol. 1998. No. 1. Pg. 141 – 206.

- 9) Federal Reserve Bank. (June 2020). Federal Reserve issues FOMC statement. Available [here](#)
- 10) Kouam. H. (2020). Monetary Policy and COVID-19: Are We Out of the Woods Yet? Available at <http://dx.doi.org/10.2139/ssrn.3635440>
- 11) Omolade. A., Ngalawa. H. & Kutu. A. (2019). Crude oil price shocks and macroeconomic performance in Africa's oil-producing countries. Cogent Economics and Finance, Vol. 7.
- 12) Peterson, M. A. and Rajan, R.J. (1995). The Effect of Credit Market Competition on Lending Relationships. Quarterly Journal of Economics, Vol. (110), No. 2, Pg. 407 – 443.
- 13) Swift. (2020). List of Banks in Cameroon. Available [here](#)

Appendix

