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Highlights

- A small homogenous panel of 10 Asian markets including India, China and East Asia
- A System GMM analysis of GDP growth in high growth emerging markets
- Bank stocks create 0.22% of GDP growth for every 1 SD excess return
- Government ownership and close monitoring of banks is a positive for the economy

Abstract

The paper aims to recover the critical role of banks in defining the relationship between Financial Development and growth. We hypothesize that Banks can positively motivate templatized GDP growth. A System GMM estimation of GDP growth in a sample of high growth emerging markets from Asia investigates if bank stocks contain information beyond the monetary and banking aggregates.

In a sample of emerging markets with 5% GDP growth, bank stocks create 0.22% of GDP growth for every 1 SD excess return in a weighted portfolio of bank stocks. The chosen emerging markets are homogenous based on WGI Indicators from World Bank. This coefficient is much higher than the recovered relationship presented by Cole, Moshirian and Wu (2008). Government ownership of banks and close monitoring of banks is found to be a positive for the overall economy while the market index is found to be not so informative about economic growth.

A relook at a GMM system study from Cole, Moshirian and Wu (2008) shows better growth for emerging market investors without compromising quality. The research establishes the advantages of selecting emerging markets portfolios that reward better governance. A set of homogenized emerging markets can engender higher causative effects between banks and GDP growth allowing investors to focus on investment opportunity.

Keywords: Banks, Economic Growth, Asia, Emerging Markets, GMM system, 2-step GMM

JEL: C23; F02; G21; G02; G14

1. Introduction and Motivation

The recent financial crisis has polarized opinions about the banking sector and its contribution to economic growth. Empirical research has established their significant contribution to economic growth at firm, industry and country levels. A pre-crisis evaluation by Cole et al (2008) utilized specific bank stock returns to move away from aggregate macroeconomic measures in quantifying financial sector influence on future economic growth. Such an analysis combines the study of economic growth with conventional asset pricing theory with a focused investigation of the specific information content of individual bank stock returns independent of the information presented in market indices. This obviates the need for measuring financial market contribution in terms of indices and provides us with a greater level of detail. The differing nature of Institutional frameworks in Asia and its continuing growth memes reflect in an urgency to complete our understanding of growth mechanics in this region. Banks significantly contribute to economic growth and we show that this is not limited to the growth of private sector credit or money supply measures (Badaruddin, Ariff and Khalid, 2011) with its concomitant negative effects of overt or excess financialization.

Do Bank stocks even lead economic growth? While a study of macroeconomic factors shows the contribution of the financial sector in pushing economic growth, the study of stock markets is generally limited to a study of the relationship between economic growth and stock indices.

Cole et al (2008) studies 36 markets -- 18 developed markets and 18 emerging markets are included in the sample. It is one of the rare research studies in the literature that move away from macroeconomic aggregates of bank credit and financial markets representations by a general index to study the determinants of economic growth. While *ibid.* presents a positive relation between bank stocks and economic growth, Moshirian and Wu (2012) complete the

analysis using the same dataset documenting the negative relationship of economic growth with bank stock volatility. Both the studies affirm the direct impact of country specific Institutional, legal and regulatory frameworks including insider trading, government ownership and accounting disclosure standards. Macroeconomic aggregates and Financial sector development relating banking performance to growth in panels across both highly developed and developing countries (Al-Moulani and Alexio, 2017; Wallis, 2017; Diallo, 2017; Diallo and Koch, 2017; Fufa and Kim, 2017; Issahaku, Abor and Harvey, 2017) or country specific examples (Arize, Kalu and Nkwor, 2017; Pan and Mishra, 2018; Diallo and Zhang, 2017; Banerjee, Ahmed and Hossain, 2017; Kapingura, 2017). Some studies use these empirical results to build theoretical frameworks around bank models (Hamada, Kanako and Yanagihara, 2017; He and Niu, 2017) or trace the motivations of Foreign banks and their performance (Claessens and Horen, 2016; Bongini et al, 2017). Mishra and Narayan (2015) use Linear Panel data models to confirm the significant effect of Market capitalization and stock prices on the GDP.

This paper contributes to the literature in analyzing the bank stock returns' contribution to the GDP growth in a meaningful way in a sample of high GDP growth countries. We undertake a GMM estimator-based analysis of dynamic panel data using GDP growth rates and specific bank stock returns to isolate the growth effects of banks in ten emerging market economies, considered homogenous from a descriptive analysis of World Bank Governance indicators and geographically similar. We also find significant state monitoring in the banking sector in these ten regimes and factor in regulatory effectiveness as well as state ownership of banks. A contemporaneous data generating process underlies opportunity generation, identification, analysis and information enrichment as well as decision making and financing of growth. This data generating process along with common information processes feeds market information and macroeconomic aggregates. Banks possess superior private information on the economic

opportunity universe and an analysis of specific bank stock portfolio returns shows banks' contribution to the processes that lead to generation of growth. However, this also explains an almost total lack of contemporaneous correlation as tested by us in a Structural VAR analysis available on request from the authors. (Pairwise correlations are reported in Table 3)

Our paper also contributes to the current findings in the literature about the lack of information in market indices in relation to GDP growth. Our sample includes Asian economies in India, China, Singapore, Hongkong, Taiwan, Korea, Malaysia, Indonesia, Philippines and Thailand. While we expect bank stocks in general to explain more about future growth expectations, we cannot neglect the effects of the global financial crisis in changing these expectations about growth materially. It can be seen that banks reacted differently and more intensely to the crisis, but stocks healed well to regulatory pronouncements and may have led the economy back with a bigger coefficient for their effect on economic growth during the crisis years compared with a negative effect of banks in the developed markets in the crisis period. We find that Asian stock market indices are not in tune with GDP growth measures allowing bank stocks to carry most of the GDP growth specific information in these countries. However, other studies with recent data have confirmed that the stock market index is no longer a significant informant or determinant of GDP growth memes. As found earlier in an 18-country emerging market sample by Cole, Moshirian and Wu (2008) a market capitalization weighted index of bank stocks in these countries contributes much higher though there is a limited bi-directional causality between bank stocks and GDP growth. We expect this to be the import of a contemporaneous data generating process which is enhanced by banks' using their private information. Given the systemically critical role of banks we find that while Stock Market indices do not specify GDP growth, there is a direct effect of bank portfolio returns on the high mean GDP growth.

We present literature that helps strengthen our understanding and revisit some other papers that have a different view of the interaction between bank and stock market in their contribution to economic development (Deidda and Fattouh, 2008).

We extend the analysis to ten countries in Asia that have retained growth memes. Average GDP growth in the sample is over 5% (Table 2). 3-month Treasury Bill rates in each domestic regime are utilized to compute excess returns from quarterly returns to regress against quarterly GDP growth and its immediate lag. While economic aggregates and banking sector specific aggregates including Private sector credit are usually studied for bi-directional causality with GDP growth, we isolate the effective nature of government ownership of banks found in 7 of the 10 regimes studied. Also, we found that the ongoing global crisis only dented GDP growth by 30-40 basis points while bank stocks specify a higher than 2% contribution to GDP growth for 1% excess returns. We expect to also isolate the effects of bank mergers and bank stock volatility in a separate research to supplement these results.

Our research uncovers the critical interplay between Government ownership and effectiveness of government based on the relevant dimension indices in the World Bank WGI Indicators. Instead of Insider trading Law and Accounting disclosure standards we employ a rule of law indicator and a Government effectiveness indicator (Accountability) also from another dimensional index of the World Bank WGI indicators. As all sub-indices of the World Governance indicators are highly correlated, we chose just the two sub-indices for our specific purposes in decomposing GDP growth.

The insignificance of market indices might denote the stable expectations of GDP growth marginalizing market indices' overall role in tracking GDP growth, while excess returns in the Bank sample retain significant information contribution to GDP growth over and above

measures of Private sector credit, liquidity and the size of banking assets in relation to the central bank balance sheet.

This research explores relevant literature in Section 2. Section 3 presents the hypothesis development. Sections 4 and 5 present the empirical analysis. We end with our main results and present some conclusions in Section 6.

2. Literature Review

There is a rich recent literature around bank equity and Financial development as well as delineation of the recent Global Financial crisis. Gibson, Hall and Tavlas (2016) review the modeling of bank equity prices during the crisis deploying a three-equation model in Panel GMM (log-level of Prices) to recover a recursive impact of the crisis between sovereigns and banks. Our study of the crisis in Asia shows that such a recursive relationship was instrumental in extending the crisis in Asian markets. Allegret, Raymond and Rharrabti (2017) do a similar analysis and justify the period of extended crisis in Europe using an endogenous definition of crisis periods. They also point to delayed connections across sovereign swaps and bank equity markets.

Other considered estimators that connects Financial sector variables and GDP growth include mixed frequency sampling or MIDAS regressions. These are likely to measure banking sector growth as part of economic aggregates as in the macroeconomic literature. Fufa and Kim (2017) look at some homogenous panels, continuing in the tradition of using Panel GMM to measure financial sector aggregates against economic development in high income and low-income countries.

Our research relates more to the literature corresponding to causation in individual bank level governance as well as regulation and growth. Diallo (2017) recovers the important effect of better Corporate Governance levels at a country level on 34 external finance dependent manufacturing sectors, moderating the effect of bank concentration and economic growth. Mishkin (2009) points to the advantages of financial globalization and the critical role of property rights and a well-directed financial system to achieving high economic growth in emerging markets. Williams (2014) analyses the influence of national governance on bank level risk in Asia.

Beck and Levine (2004) established a dynamic panel and produced the first recent robust evidence that stock markets and banks influence economic growth controlling for omitted variables and unobserved country specific effects. They take into consideration various theories expecting financial development to harm growth and stability and explaining the role of banks in easing information frictions. Prior studies before them model aggregate variables like M3/GDP to model financial sector's impact on GDP growth but do not consider any enhancing role of the stock markets. Mishra and Narayan (2015) use a non-parametric model to match np financial system variables in measuring Economic growth and use Private Credit and Domestic credit to represent the Financial system and alternate with Market Capitalization(significant) and Volume of Stocks traded (insignificant). Ductor and Grechyna (2015) establish the relationship between financial development and growth as non-linear heightening the chances of a negative relationship when credit does not translate into growth in real output. Goes (2016) shows that institutional quality improvement by 1% leads to a 1.7% increase in GDP per capita. Thus, we analyze the impact of our domestic institutions on bank growth directly through their stock returns on growth memes. We find that the selected characteristics describe salience of the selected sample of countries along governance parameters and perceptible superior returns

in weighted bank stock portfolios reflecting the advantage of private information of the growth generating processes.

However, Ma and Wohar (2014) caution against the indiscriminate specification of VAR models and use of expected returns in valuation models and also show the value impact of operating cash flow measures. We may incorporate later research using cash flows as well.

Du et al (2016) use a recent sample spanning the GFC in 37 countries to measure the information content in bank stock prices, resolving how banks with higher information disclosures reduce extreme negative returns, extending our results to the positive nature of transparent disclosure requirements in bank supervision regimes. Umar and Sun (2017) study the different impact of leverage on stock liquidity for large (positive) and small (negative) banks in a BRICS sample. We however do not consider stock liquidity in our research. Similarly, Banerjee et al (2016) show the risk impact of off-balance sheet derivatives, primarily rate swaps while reflecting the impact of size, interest spreads and capital ratios. Shezaad and Haan (2013) show the quick bounce back of bank stocks in emerging markets due to the crisis and continuing lower prices of banks in the developed world. Managerial efficiency and loan quality continue to be effective measures of value in the GFC and large bank stocks were more underpriced in the developed world during the crisis. Badaruddin et al (2011) use bank stock returns to support the endogeneity theory of money supply and the effect of money supply on stock prices.

Effects of international central bank cooperation and other expected spillovers from international markets, may be significantly transmitted by banks' stock prices to growth or vice versa. (Andries et al, 2017). The crisis also affected public discussions on bank stock ratings (Salvador, 2017) and meaningfully impacted bank stock returns as well as GDP growth. We do analysis to heighten any structure and magnitude differences during the crisis in the chosen

financial markets. Allegret et al (2017) do a similar analysis limited to the sovereign debt crisis period in Europe using a four-factor model enhanced with sovereign risk.

Bank governance issues reflect an important endpoint for readers of this research in affecting investor attractiveness. Pathan and Faff(2013) show the effect of important governance variables in recent data. Masulis and Zhang(2017), Banerjee, Masulis and Upadhyay(2018) and Liu et al (2017) represent a leading body of corporate governance literature closely examining issues of corporate governance and institutions.

3. Hypothesis Development

A quickly deployed VAR system (available with the authors) specifying the inter relationships between bank stock portfolios, stock index and GDP growth shows no relationship between the three variables because of a contemporaneous interplay of all three through investors, experts and industry on one hand and traders, investors and bankers on the other hand, as well as firm, sector and industry specific unobserved heterogeneity at play. Our intuition suggests banks possess superior private information about macroeconomic and microeconomic factors as well as the specific skills with entrepreneurs that can be gainfully employed in a given economic opportunity universe. Banks can harness this private information and will likely be rewarded for the same notwithstanding selfish motives of managers and other losses on the way to information production and consequent GDP growth based on real production and value added in the economy.

Beck and Levine (2004) summarize the early literature causally establishing the relationship between financial intermediaries and markets fostering efficient resource allocation and generating faster long-run growth. Ductor and Grechnya (2015) also reemphasize the conflicting theoretical explanations linking financial development and economic growth. It has

also been established that financialization can be detrimental to such growth. Ibid. also emphasize the superior role of banks vis-a-vis markets. While macroeconomic aggregates like bank development measured in systemic liquidity (M2/GDP) and Private sector credit show such a relationship exists, they do not consider the information role of intermediaries reflected in bank stocks portfolios as added in Cole, Moshirian and Wu(2008) and considered recently in Fufa and Kim(2018). The information role of markets is different and is considered thru the movements of the market index (Rm). The information role of specific bank stock portfolios (Du, Song and Wu, 2016; Blau, Brough and Griffith, 2017;Chen and Vashishtha, 2017) also depends of legal and accounting structure (Cole, Moshirian and Wu, 2008) and we expect the relationship to be positively increasing with increase in transparency, regulation and better overall corporate governance environment. The relation found in Cole, Moshirian and Wu (2008) was significant for both market indices and bank stock portfolios. However, a random panel of 18 Developed and 18 emerging countries (probably limited by availability of data) has stunted the results. Post-crisis literature revisits the relationship (Ferrara and Marsilli, 2013) and suggests tightening (increasing) global index correlations creating a lessened economy specific role of market indices. We hypothesize that for the added parameters chosen from the World Governance Indicators one can choose a more homogenous panel of emerging markets to elicit the correct informational role of the bank development parameters, private information additionally elicited from bank stock portfolio returns and the market indices of this smaller, tighter panel. This informational role can be elicited in bank stocks portfolios and Bank development and liquidity parameters overcoming simultaneity, omitted variables and unobserved country specific effects.

Hypothesis 1: Banks will produce superior market returns because of their private information and these superior returns will lead consequent economic growth and this will be better visible in a homogenous panel of emerging countries.

As GDP growth is higher in emerging markets, the likely relation of GDP growth to bank stock portfolios will be higher and consequent in choosing bank portfolios for superior returns in these markets. (Cole, Moshirian and Wu, 2008). While aggregate bank parameters from these markets continue to be informative in the presence of bank stock returns the superiority of banks' information will be revealed in the leading role of bank stocks' portfolio returns. Yet bank stocks' and markets are no longer jointly significant in determining GDP growth.

Hypothesis 2: Markets proxied by stock indices will be unable to produce superior market returns because of their inability to reach bank specific private information.

Prima facie, this may be because industrials without unlisted Private equity / Venture Capital investments and apart from expert private information in banks, no longer possess any contemporaneous information advantages that lead GDP growth and rely on announcements and public information and may thus lag GDP growth. Pan and Mishra (2018) and Banerjee, Ahmed and Hossain (2017) find that stock markets have a limited role as providers of capital. Also increasing global correlations in equity markets imply a weaker economy specific information component. Post crisis analysis in the literature provides deeper insight into the relationship between Financial intermediaries' performance and economic growth.

The Sub Prime Crisis deepened by Lehman Brothers buckling down in September 2008 and subsequently extended by the Sovereign debt crisis in Europe led to a large whipsaw of liquidity in India, China and East Asia. Allegret, Raymond and Rharrabti (2017) show a region-specific difference in impact of each leg of the extended crisis from 2007 to 2012. Post crisis impact

globally (Claessens and Horen, 2016), Europe (Gibson, Hall and Tavlas, 2016) and in emerging markets in Eastern Europe (Bongini et al., 2017), Africa (Kapingura, 2013) and Asia (Soedarmano, Sitorus and Tarazi, 2017) suggests a variable region specific impact yet global investors found the resilience of East Asia to be a reason to target investments in the right avenues in these growth markets of the future.

Hypothesis 3: An extended 14 quarter crisis period in the Emerging Asia sample is possibly significant in the GDP growth process, even though the higher growth in the sample precludes from the development of outright recessionary conditions and institutions in the sample set were continuing to stabilize a growth period during and after the crisis.

Allegret, Raymond and Rharrabti(2017) defend the endogenous extension of the crisis. while Gibson, Hall and Tavlas (2016) show how banks are critically impacted by a crisis in the sovereign sector. This lends us the motivation to hypothesize for the critical nature of the crisis period in determining the panel's GDP growth. The extended crisis is also significant in determining the GDP growth of the period and despite the extended nature has a significant negative impact on GDP growth in the homogenous panel of higher average 5 percent GDP growth countries.

Hypothesis 4a: The effective control of state in the banks is likely to impact GDP growth positively.

Mishkin (2009), Williams (2014) and Claessens and Horens (2016) affirm the integrated role of government and banks in the GDP growth process. The stability granted by directed ownership of banks may offset the agency motives introduced by the presence of a sovereign guarantee and the too big to fail role of banks, especially in a higher growth environment in

key emerging markets. We measure level of bank regulation also from this measure of government ownership of banks in the available data.

Diallo (2017) and Mishkin (2009) critically assess the importance of national governance quality in determining the effectiveness and stability of the growth paradigm for the beneficial impact of financial globalization to hold.

Hypothesis 4b: The Rule of Law and Accountability parameters of World Governance Indicators maybe important moderating influences in the GDP growth process as they represent critical and consistent measurements of the national institutions' role in building better governance.

As indicated, improved data quality with respect to global emerging markets makes it simpler to measure this role of corporate governance institutions at a country level. Goes (2016) also shows the criticality of institutional development in the GDP growth process.

4. Experiment Design: Data and Methodology

We select quarterly bank stock returns as well as market capitalization of each included bank and retrieve the quarterly data for GDP growth for the selected panel countries from Reuters Datastream. The portfolio of banks included in each of the 10 markets include at least the banks included in the broad-based market index in each domestic stock market and those engaged in transactions in the markets for corporate control. The resulting bank stock portfolio is thus weighted by the Market Capitalization and is not an equal weighted index. The market factor is retrieved from the broad-based market index's quarterly returns. We consider both IFS data from the IMF and the World Bank data for interest rates and GDP growth, However, primarily

the data resides in Datastream and is consistent and regularized (seasonally adjusted, Constant growth). Table 1 presents descriptions of all the variables in our analysis. We construct excess returns directly from the three-month risk free rate as in Cole et al (2008).

We then construct a structural model in the specification

$g(t) = a + \lambda.g(t-1) + \beta_1.r_m(t)+\beta_2.r_b(t) + \beta_3.X(t) + \eta_i + \varepsilon_{it}$ where $r_b(t) = \Sigma r_i(t)/n$

for each of the n banks included in the domestic market analyzed.

[Insert Table 1 here]

The selected variables define the universe of independent and correlated effects on GDP growth from the literature.

Credit growth relates the role of private sector credit and hence has always been primary since Beck and Levine(2004) for identification of Bank development in the GDP growth process.

Money supply relates the counterbalancing role of liquidity and one or both variables may also integrate the role of overt financialization in the specification.

The ratio of Commercial Bank assets to total banking assets completes the set of Financial and Bank development variables. They reliably point to the macroeconomic processes that relate banks to the process of GDP growth.

While these macroeconomic aggregates define the dominant role of banks in these jurisdictions, they still do not account for the role of banks and markets in utilizing contemporaneous information of the future economic growth prospects at industry and region level and creating and engendering new growth. Thus The market returns and Bank stock returns together specify

these processes and the significance, as hypothesized, for banks and markets in the GDP growth process.

We further enrich the specification with the use of reliable Institutional characteristics to account for the role of institutional development in the GDP growth process. An examination of the surveys used to collate the six index dimensions indicates the suitability of rule of law index values for identification over any other congruent construction of dummy variables or indices.

Similarly, the Government effectiveness parameter is critical to analyzing the role of good governance in accelerating / defeating growth mechanics. Inter correlations between the two chosen Institutional development variables are further mitigated in the use of Instrumental Variable regressions using 2SLS.

The period under consideration also included the twin effects of the Global Financial crisis precipitated by Lehman Brothers failure in September 2008 and the European Sovereign debt crisis soon after in 2010. As growth was still dominant in the second half of 2008, we consider the beginning of 2009 as the start of the crisis in the region and continue till the end of the European debt crisis in 2012, when reliable reports of growth were filed again in the second half of 2012.

The large endogeneity in the interrelationships of the variables creates the criticality of the choice of methodology to back the identification and engender the right consistent results to validate the hypotheses. Endogeneity is created because of three overarching problems: simultaneity, omitted variables and heterogeneity.

We employ Arellano Bond (1991) GMM estimators using Dynamic panel data as in Cole (2008) but discover that only the System GMM estimator performs to expectations. The Difference GMM estimator fails because of the magnitude differences between the level and difference-based instrumentation requiring us to depend on the System GMM estimator.

We also find that robustness tests employing the exogenous Instrumentation variables in a 2SLS GMM and the panel OLS estimation confirm our results using the System GMM estimator. Gippel, Smith and Zhu (2015) review GMM estimators in resolving endogeneity.

We create the dataset relying on Difference GMM and system GMM estimators for Dynamic panel data. To motivate the GMM Panel analysis we employ country specific impulse response functions (IRF) and a SVAR framework to discover the limitations of VAR frameworks in eliciting contemporaneous constructs. The same is available with the authors on request.

We determine the importance of the underlying data generating process in missing correlations between bank stock portfolios and GDP growth and use GMM estimators in Dynamic Panel Estimation to isolate the coefficient of weighted bank stock portfolios on economic growth to establish a baseline for these countries and compare with the global environment, given the structural isolation of the developed world in USA and Europe as well as the various longer lasting influences of the crisis on emerging markets.

The limited nature of correlations between the bank portfolio returns and GDP growth processes strengthens our belief in a common data generating process reliant on the banks' own private information. GMM estimation resolves the problem of endogeneity caused by the high

persistence of macroeconomic and aggregate bank sector data and the dynamic nature of the underlying processes.

Instrumental regression in the GMM specification uses highly correlated memes like Private Credit and Money supply as well as Government effectiveness and rule of law. Alternate instrumental variables and panel regression designs were employed using robust and newey west errors for comparison. The results of two step Dynamic panel data estimations are robust with the instrumental 2SLS design. The 2SLS design and other robustness tests compensate for the overidentification problem in the original formulation with 10 country panels and 71 time series observations.

The GMM Difference specification of the Arellano Bond estimators used in Cole et al (2008) suffers from the problem of larger instruments using only the differences as instruments. The GMM System estimator can recover robust estimates using both the level and differences as instruments (Bond et al., 2001). The resulting overidentification as indicated in the Sargan test is mitigated by using instrumental variable regression for the same specifications and the other outlined robustness tests.

Additional variables and removal of various macroeconomic aggregates loads the Government's role in GDP growth in the bank ownership parameter, thus underlining the importance of robust legal regulatory and Institutional frameworks in the homogenous sample selected by ourselves. This is especially true when panel regressions are attempted without the lag GDP growth variable. However, VAR analysis shows the structural measurement of GDP growth to be a near certainty and the same is retained. Bond and Söderbom (2009) elicits more information in structurally modelled parameters and GMM estimation. Stationarity restrictions

are maintained in the model. Endogeneity between the variables is considered carefully in the use of Arellano and Bond estimators as the specification implies macroeconomic data generation processes raises issues of simultaneity, heterogeneity and omitted variables.

As an example, our selection of governance indicators seems to be ceding a large magnitude of the effect to Government ownership of banks as the residual cause of regulatory governance in the GDP growth generation process.

World Bank Data provides a comprehensive six-dimensional index of World Governance indicators which are highly correlated, but each sub index measures a different dimension of Governance standards at the country level. The use of WGI indicators are therefore beneficial to the formulation and we replace rule of law dimension scores and Government effectiveness (Accountability) dimension scores from the WGI data in the original Cole et al (2008) formulation for insider trading law and accounting changes.

We consider a single panel of all the ten markets. The average growth rate for GDP is positive and expected market risk factors are in line for growth markets. The average bank excess return mapped to the Cole et al (2008) methodology is largely positive. The correlation between GDP and bank stock returns is less than 0.15. We experiment with other control variables to regress with weighted bank stock portfolio returns and include it in the vector of Xi (where only lagged returns are considered in the base specification as instruments).

Bank stocks may not reflect their true valuations because of the larger private information associated with sophisticated bank managers. Blau et al (2017) show this opacity adversely

affects banks' stock prices in delays and market inefficiency, yet we expect our analysis of stock prices to be more informative of banks' effects on GDP growth than macroeconomic measures of credit and/or deposits.

In the robustness tests we use the endogeneity theory of money supply and the seeming relation between Rule of Law and Government effectiveness (observed correlations of 70%) Trade and FDI impact on the variables were not required in the control set but may be grounds for future research especially for active investment professionals along with causation from higher moments including skew and kurtosis.

5. Results and Discussion

The entire data series extends from 1999q1-2017q3 resulting in 71 observations for each country in the sample. 10 portfolios are constructed from individual banks using data from Reuters Datastream(Eikon). The series of banks is selected from Datastream , already adjusted for survivor bias till 1995. The corresponding macroeconomic aggregates are retrieved on a quarterly basis as Financial development measures including ratios of *Private credit*(Priv) to GDP and *Commercial-Central Bank*(CCB) asset ratios. The *Money supply aggregate ratios* (M2Liq) are directly retrieved from the World Bank data series. As emerging market data is available in depth as of 2018, this seems to be a doable task for any homogenous group of countries or in determining such a group of homogenous countries. We apply World Bank Governance indicators to verify the homogeneity of the group of countries as macroeconomic aggregate data from the group has different outliers in each series. Two out of the six WGI indicators, namely *Rule of Law* (Law) and *Government effectiveness*(Geff) are used in line with the research design and we drop Insider trading law and Bank accounting disclosure variables

for the same. The *Dummy crisis indicator* (Dcris) is deployed as 1 for the period in 2009q1-2012q2 in line with our analysis reflecting a late incidence of crisis in the emerging markets (The MSCI EM Index returns for 2008 are upwards of 35%) and the extensive overlap with the European sovereign debt crisis in 2011. The World Bank survey data on banks has three data points on bank ownership by the state, (*Govt).*

As in Cole(2008) our experiment shows that one standard deviation change in bank stock returns would increase economic growth by 10-15 basis points on average , and much higher for higher growth dispensations. The market factor may have a higher effect, but this also includes the growth effects engendered by the bank relationships and the bank equity returns' contribution is over and above the contribution from the market factor. However even the bank equity factor excludes cash flows to unlisted sectors /privately held firms that is increasing with the rise of venture capital and private equity funded service economy firms. Banks are significant harbingers of growth in emerging markets driven by growth. We find substantial contribution of public sector banks in the specification for India led by the State Bank of India. Serial acquirers such as ICICI Bank and Kotak are also significant contributors. Similarly, active acquirers are found to be significant in the sample in China, India and Singapore among others.

[Insert Table 2 here]

Table 2 presents the descriptive statistics of the sample. GDP growth in the chosen sample is a high 5.1% on average and government ownership of banks is a high 28%. The sample countries are homogenous on World Governance Indicators with Singapore and Hongkong city states, nearly 100% in both Rule of Law and Government Effectiveness. The mean for the sample is 71.7% rank in Rule of Law and 63.2% in Government effectiveness. In the chosen sample countries, we have chosen a contiguous period of the Global Financial Crisis and the European Sovereign Debt crisis in consultation with the various literature foregoing extensive Crises database references considering the extensive impact of the twin crises on the global economy. The crisis impacted the region late, incident from 2009 Q1 and lasted till mid 2012 (2012 Q2) lasting 14 quarters. The Market index returns may have been attenuated because of the higher short-term rates prevalent in the region, with a mean of just 0.56%. 213 banks contributed to bank portfolios from Datastream and quarterly Rb averages 2%.

(The Kuala Lumpur index data is only available from 2009 and similar restrictions reduce the data at the country level from the 71 quarters)

[Insert Table 3 here]

We deploy the GMM System estimator recommended in Cole , Moshirian and Wu (2008). The pairwise correlations (Table 3) also provide hints to motivate a well- formed response in Panel GMM estimation when Rm and Rb are considered endogenous in the specification.

[Insert Table 4 here]

Panel GMM results are shown in Table 4 for the complete specification in Model 6. Wald test holds for more sparse specifications wherein we found effective results for the unbalanced panel with just Rm and Rb , and consequently with the addition of each exogenous variable with quarterly of annual series data. The Sargan test shows overidentification as expected and we step on to the 2SLS to show the same results in an exactly identified specification. A high degree of heterogeneity is confirmed in the data, eliciting the most important cause for heterogeneity. The Hausman test confirms use of fixed effects in light of the heterogeneity. Government effectiveness may be highly correlated to Rule of Law and are also used in the alternate instrument variable specification, but the result is likely robust given the adopted methodology.

[Insert Table 5 here]

Bank stocks seem to contain contemporaneous information regarding macroeconomic success beyond banking aggregates in high growth emerging markets. This superior information in bank stock performance outperforms the market index which does not contain any valuable information regarding the expectedly high economic growth. A one SD shock to Bank stock returns can create a positive GDP growth shock of a further 22 basis points in the countries in the sample. The results also suggest increases in the Rule of Law variable and continued government ownership of banks create positive growth momentum in the region rewarding good governance. SVAR results available with the authors do show a significant variance component of Bank stock returns to GDP growth in Singapore, Malaysia and Hongkong where banks are privately owned. However, the economies of the area have largely benefitted from the closer monitoring of the banking sector and the capitalization/ ownership of banks by governments and in regressions without the lagged variables or Macroeconomic aggregates, *Govt* (Government ownership by banks) loads the coefficients showing its importance in the formulation and consequently lack of availability in the instrumentation. Table 5 presents the System GMM specification without the constant, confirming the same results. We find the crisis effect damped when t_qtr* is directly used in the specification but primary variables retain their significance and direction of effect.

5.2 Robustness

Table 6 presents alternate robustness tests using instrumentation in endogenous supply of money (*Priv* and *M2Liq*) and the correlations between sub-indices of WGI in *Law* and *Geff*. The appendix includes other specifications using ordinary regression (cluster) panel instrumental regression, and other instrumental variable regressions. They all reflect the superiority of the GMM Panel specification in mitigating endogeneity, thereby emphasizing

the impact of the Crisis even in emerging country panels and sometimes eliciting false effects especially of Commercial credit and overall market indices (reduced by the uniform higher risk-free rates in the region)

[Insert Table 6 here]

5.3 Other significant results

Al-Moulani and Alexiou(2017) use GMM estimators for Dynamic panel data models used here to investigate the overall relationship between banking sector depth and economic growth in 194 countries confirming some of our findings and providing insight into the negative relation between Private Credit measures and GDP growth. The negative effect of Private credit is uniform in the sample based on the observed inflection point of 80-100% ratio of Private sector credit to GDP.

Soedarmano, Sitorus and Tarazi (2017) point out significant deterioration in bank systemic risk from abnormal loan growth using credit standards during a crisis. This partly explains the important effects of Governance and resulting premium on sustained GDP growth that can be further improved with increase in governance standards.

We also expect stock market returns to be consistently motivated by the same data generating process as the GDP growth and based in generated private information on the state of the economy and opportunities and avenues for investment and growth including external finance dependent firms that do well in crises, the bank stocks easily outperform the market index and provide such additional information through prices of bank equities. Though restricted to single non-representative stock markets Pan and Mishra(2018) and Banerjee, Ahmed and Hossain

(2017) also confirm that stock market indices do not contain similar information thus negating earlier results till the early 2000s.

6. Conclusions

Bank stocks are significant determinants of GDP growth in strong emerging market economies and stronger institutional characteristics shown by acquisition active firms and stronger corporate governance banks can lead to deepening and consistency of growth memes for the broader industry and the larger public economy in these markets. Even during the crises GDP growth and bank stock returns remain highly positive for these economies. None of the selected economies is significantly affected by dollarization. Risk and Investment managers can significantly extract value from the away shares of their portfolios and gainfully achieve the objectives of meaningfully increasing the away share of larger closed and open-ended funds by choosing emerging markets with better and consistent governance memes. An investment in national bank portfolios can gainfully mark entry into unknown investment destinations if supported by minimum institutional frameworks. The analysis establishes that portfolio managers can extract benefits intelligently by grouping similar country sets on better governance and parameters available in contemporary data for a large set of emerging markets. This may follow both geographically contiguous outlines or noncontiguous country sets defined by similar institutional frameworks.

Stock returns of banks can meaningfully predict vital economic growth and markets for corporate control significantly impact this growth accretion positively.

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TABLE 1

Table 1:Definitions and sources of all variables

VARIABLES	DEFINITIONS
Dependent Variable	
Growth (Dyg)	Dyg = log (GDP_t/GDP_{t-1}). i denotes each country in the 10-country panel and t denotes time. Growth is measured as the log difference of GDP_{it} measured every quarter(t) and available in the seasonally adjusted series in Reuters Datastream. IFS data is taken for Philippines where data are missing.
Independent Variable	
Market index Returns (Rm)	Rm = log (M_{it}/M_{it-1}) - R_f. Rm is the excess market return on the market index in country i for period t (quarter). Price of Market Index (M_{it}) is retrieved for each quarter end. R_f is retrieved from Worldstream as the three-month rate available for all the countries in the specification. Other smaller period alternatives such as the 15 day rate or the 30 day rate are also available.
Bank Portfolio Returns (Rb)	Rb = $\sum_{j\in i} w_{jit} R_{jit}$ - R_{fit} where $w_{jit} = MC_{ji(t-1)}/\sum_{j\in i} MC_{ji(t-1)}$ and $R_{jit} = \log (P_{jit}/P_{ji(t-1)})$ Subscript i denotes country i and subscript j denotes each individual bank j in country i. R_{jit} is the portfolio return of the banks available in Datastream already selected to eliminate survivorship bias since 1995 and available for the entire panel period of 71 quarters. R_{fit} is the three-month risk free rate. Weights are based on lagged Market Capitalization, as a fraction of the total Market

	Capitalization of listed banks in that country/jurisdiction. The data is available in Datastream.
Institutional Characteristics and Macroeconomic aggregates (Bank development/ Financial Development)	
Crisis Dummy (Dcris)	The Crisis dummy takes the value of 1 from 2009q1 to 2012q2 and is 0 otherwise. It reflects the extended crisis period in the Asian markets in response to the twin Global Financial Crisis and the European Sovereign Debt Crisis.
Govt ownership of banks (Govt)	The value is the decimal denoting the percentage of bank sector ownership as retrieved from the regular BRSS survey conducted by the World Bank. Four editions of the survey are available in Datastream and cover the panel period of 71 quarters. BRSS provides comparable data for 160 jurisdictions based on invited submissions from the participating Central banks. The latest edition of the survey was administered in 2017 and is available from 2019 (not included in the panel period)
Private Credit (Priv)	The value of credit issued by banks and financial institution in each country/jurisdiction divided by the GDP of the same quarter. The data are available in Datastream.
Money Supply (M2Liq)	The value of M2 money supply measure available in Datastream as the ratio of the GDP of the country/jurisdiction also available in Datastream. For Philippines, the IFS data is used already available as percentage of GDP.
Commercial-Central Bank (CCB)	The ratio of Commercial banks' domestic assets divided by the total domestic assets of the commercial bank and central bank of each country /

	jurisdiction. The data is available in Datastream and is adjusted for capital changes as provided.
Rule of Law (Law)	This variable replaces the constructed insider trading law in earlier studies like Cole, Moshirian and Wu (2008) on the strength of availability of a consistent World Governance Indicator database developed from a synthesis of all available governance surveys across more than 200 countries. Rule of Law is one of the six dimensions scored and is taken directly as the decimal /percentage value scored by each country in the given year across the four quarters of the year.
Governance Effectiveness (Geff)	This variable replaces the constructed Accounting disclosure index in earlier studies like Cole, Moshirian and Wu (2008) with Government effectiveness scores from the similarly named dimension of the World Governance Indicators, based on the survey data used to calculate this dimension. The decimal/percentage score for the dimension is used directly for each country in the given year across the four quarters of the year.

TABLE 2

Table 2: Descriptive Statistics of Performance and control variables.

The entire data series extends from 1999q1-2017q3 resulting in 71 observations for each country in the sample. 10 portfolios are constructed from individual banks using data from Reuters Datastream for India, China, Hongkong, Taiwan, Korea, Singapore, Malaysia, Thailand, Indonesia and the Philippines. Control measures (Financial Development) are used as ratios of GDP (Priv, M2Liq) and Central Bank assets (CCB). Measures also include institutional characteristics from World Bank Governance Indicators (Law, Geff) and Govt ownership of banks (Govt) while the Crisis Dummy is binary 0 or 1. The Quarterly returns of the Market index in each case is netted by the three-month Risk-free rate. All data is referenced from Reuters Eikon/Datastream including the IMF Economic Series. Annual data from World Bank Statistics is used where aggregate data is required only as an exogenous regressor as the series does not have any missing data. World Governance Indictors series provide data for Rule of Law (Law) and Government effectiveness (Geff) from among the six dimensions available for these indicators.

VARIABLES	(1) N	(2) Mean	(3) Sd	(4) Min	(5) max	(6) Var	(7) skewness	(8) kurtosis	(9) p25	(10) p75
Growth (Dyg)	624	0.0510	0.0352	-0.0946	0.249	0.00124	0.0269	6.490	0.0315	0.0687
Market index Returns (Rm)	624	0.00568	0.118	-0.466	0.419	0.0140	-0.281	4.321	-0.0474	0.0741
Bank Portfolio Returns (Rb)	624	0.0211	0.141	-0.470	0.637	0.0200	0.320	5.631	-0.0503	0.0924
Crisis Dummy (Dcris)	624	0.212	0.409	0	1	0.167	1.413	2.996	0	0
Govt ownership of banks (Govt)	624	0.284	0.294	0	1	0.0862	1.079	3.131	0	0.385
Private Credit (Priv)	624	1.499	1.654	0.182	6.338	2.735	2.051	5.907	0.446	1.417

Money Supply (M2Liq)	624	2.286	2.686	0.196	10.29	7.213	1.758	4.821	0.655	2.517
Commercial-Central Bank (CCB)	624	3.165	4.937	0.146	28.05	24.38	2.958	11.97	1.001	2.670
Rule of Law (Law)	624	0.717	0.186	0.382	1	0.0345	0.0687	1.640	0.555	0.877
Governance Effectiveness (Geff)	624	0.632	0.227	0.198	0.962	0.0517	-0.0848	1.533	0.407	0.841

TABLE 3

Table 3: Correlation between the three primary variables, GDP growth, Returns to market Index (Rm) and Returns to Bank portfolios (Rb) and the exogenous regressors in the control variables. As expected, institutional characteristics are significantly correlated with financial development parameters as well as growth. Money supply is highly correlated with Private Credit in line with the endogenous money supply theory allowing us a ready instrumentation variation. Similarly, the two dimensions of the Country level Governance indices are also highly correlated with each other.

	Dyg	**Rm**	**Rb**	**Govt**	**Dcris**	**Geff**	**Law**	**CCB**	**Priv**	**M2Liq**
Dyg	1									
Rm	0.0478	1								
Rb	0.0939*	0.713***	1							
Govt	0.373***	0.0225	0.0936*	1						
Dcris	-0.0146	0.132***	0.0976*	0.0303	1					
Geff	-0.243***	-0.0286	-0.0786*	-0.541***	-0.0278	1				
Law	-0.232***	-0.0336	-0.0962*	-0.599***	-0.00384	0.949***	1			
CCB	-0.158***	-0.0505	-0.0653	-0.403***	-0.0546	0.460***	0.474***	1		
Priv	-0.204***	-0.0291	-0.0610	-0.155***	-0.0127	0.451***	0.430***	0.0671	1	
M2Liq	-0.189***	-0.0251	-0.0601	-0.204***	-0.00109	0.437***	0.425***	0.141***	0.941***	1

* p<0.05, ** p<0.01, *** p<0.001

TABLE 4

Table 4:Dynamic panel data using System GMM estimators.

The final specification confirming the use of all control variables is in Model 6. The Difference GMM specification is inadequate because of the size of the differences. Overidentification in the variables is ameliorated with the use of alternate specifications in Tables 5 and 6. The Market Returns are not significant in any of the specifications. Even with the use of the contant term Bank portfolio returns are significant at 95% in the final specification (Model 6). We repeat the decomposition without constant in Table 5 and improve the same foregoing the constant. Private credit and Money Supply have opposing effects. Similarly Rule of Law and Government effectiveness (Accountability) have opposing effects. High baseline GDP growth imperatives also result in a significant constant that is adequately absorbed into the various institutional and bank development variables in the full specification. Table 5 repeats the tests without the constant. Endogenous GDP growth always accounts for 70-75% of the variation with the first lag term and the coefficient is not displayed here as the same is not material to the analysis.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market Index returns	-0.00966	0.00231	0.00166	0.00121	0.000961	0.000311
(Rm)	(0.00800)	(0.00794)	(0.00792)	(0.00794)	(0.00797)	(0.00794)
Bank Portfolio	0.0277***	0.0109	0.0115*	0.0129*	0.0141**	0.0134**
returns (Rb)	(0.00671)	(0.00667)	(0.00665)	(0.00667)	(0.00670)	(0.00667)
Dummy variable for		-0.00278*	-0.00301*	-0.00308*	-0.00357**	-0.00395**
crisis (Dcris)		(0.00161)	(0.00161)	(0.00161)	(0.00162)	(0.00162)
Govt ownership of		0.0416***	0.0431***	0.0462***	0.0481***	0.0475***
banks (Govt)		(0.00226)	(0.00229)	(0.00284)	(0.00283)	(0.00290)
Private Credit to GDP		-0.00314***	-0.00741***	-0.00386***	-0.00345***	-0.00842***
(Priv)		(0.000400)	(0.00118)	(0.000447)	(0.000448)	(0.00125)
Commercial-Central				-0.000253		-0.000423***
Bank (CCB)				(0.000154)		(0.000162)
Rule of law(Law)				0.0186***	0.0672***	0.0634***
				(0.00518)	(0.0118)	(0.0121)
Money supply to GDP			0.00282***			0.00321***

(M2Liq)			(0.000731)			(0.000752)
Government effectiveness (Geff)					-0.0443*** (0.00928)	-0.0393*** (0.00945)
Constant	0.0505*** (0.000671)	0.0443*** (0.00119)	0.0438*** (0.00120)	0.0315*** (0.00390)	0.0229*** (0.00436)	0.0241*** (0.00448)
Observations	624	624	624	624	624	624
Number of ctry	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The lag GDP term is included in all specifications but suppressed (the coefficient is always more than 70-75%)

TABLE 5

Table 5: Dynamic panel data using System GMM estimators.

The specifications below refit the system without the constant growth which is shown to be improbable in Table 4. The final specification confirming the use of all control variables is in Model 7. The Difference GMM specification is inadequate because of the size of the differences (changes) in each of the chosen dependent, independent, institutional and bank development variables. Market Returns become significant without the use of constant in Model 2 but the stepwise introduction of the rest of the variables shows that Market returns are not significant. Bank Portfolio returns are significant in all specifications. Private credit and Money supply have opposing effects. Rule of Law and Government effectiveness similarly have opposing effects because of high correlation between the variables. Endogenous GDP growth always accounts for 70-75% of the current GDP growth with the first lag term and the coefficient is not displayed here as the same is not material to the analysis.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Market Index returns	-0.00966	-0.0561***	-0.00920	-0.0102	-0.000620	-0.000227	-0.00136
(Rm)	(0.00800)	(0.00965)	(0.00816)	(0.00812)	(0.00796)	(0.00800)	(0.00797)
Bank Portfolio	0.0277***	0.110***	0.0250***	0.0258***	0.0153**	0.0163**	0.0169**
returns (Rb)	(0.00671)	(0.00801)	(0.00685)	(0.00682)	(0.00668)	(0.00671)	(0.00668)
Dummy variable for			0.0133***	0.0126***	-0.00241	-0.00344**	-0.00392**
crisis (Dcris)			(0.00160)	(0.00159)	(0.00162)	(0.00163)	(0.00163)
Govt ownership of			0.0917***	0.0937***	0.0618***	0.0580***	0.0581***
banks (Govt)			(0.00187)	(0.00188)	(0.00210)	(0.00211)	(0.00221)
Private Credit to GDP			0.00562***	-0.00259**	-0.00478***	-0.00379***	-0.00915***
(Priv)			(0.000332)	(0.00120)	(0.000433)	(0.000445)	(0.00125)
Commercial-Central				0.00531***			0.00339***
Bank (CCB)				(0.000747)			(0.000753)
Rule of law(Law)					-0.000435***		-0.000420***

					(0.000153)		(0.000159)
Money supply to GDP					0.0577***	0.115***	0.112***
(M2Liq)					(0.00187)	(0.00763)	(0.00764)
Government effectiveness (Geff)						-0.0668***	-0.0610***
						(0.00827)	(0.00837)
Constant	0.0505***						
	(0.000671)						
Observations	624	624	624	624	624	624	624
No.of ctry	10	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The lag GDP term is included in all specifications but suppressed (the coefficient is always more than 70-75%)

TABLE 6

Table 6: Dynamic panel data using System GMM estimators.

The specifications below refit the system without the constant growth which is shown to be improbable in Table 4. Models 6 and 7 represent the 2sls using endogeneity on supply of money and Private credit. The alternate specifications included here ameliorate the risk of overidentification in the system GMM specification. The use of OLS and various Instrumental Variable specifications in each of the model validates the results of the System GMM specification as consistent and reliable. Also, it shows that the panel countries are homogenous to the extent, vindicating the selection of the countries for the panel. The use of the panel time variable (t_qtr) is only shown as an alternate specification. The two included IV specifications instrument the growth of money supply/ private credit on private credit/ money supply and alternately use the National level Governance indices for Rule of Law instrumented with accountability (Government effectiveness). Other alternate specifications are available but not shown here keeping in mind reader interest and space constraints.

VARIABLES	(1) Model 1 OLS Cluster Id	(2) Model 2 Newey Geff=Law	(3) Model 6 IV 2SLS Geff = Law	(4) Model 8 IV 2SLS Geff= Law robust	(5) Model 9 IV 2SLS M2Liq = Priv + CCB, robust	(6) Model 6 IV 2SLS GMM M2Liq=Priv	(7) Model 7 IV 2SLS GMM Priv=M2Liq	(8) Model 8 IV 2SLS GMM Law=Geff	(9) Model 9 IV 2SLS GMM Geff=Law
Rm	0.0129*	-0.00286	0.0132**	0.0132**	0.0135**	0.0137	0.0137	0.0130	0.0132
	(0.00649)	(0.0202)	(0.00659)	(0.00659)	(0.00596)	(0.0107)	(0.0107)	(0.0103)	(0.0107)
Rb	0.0202***	0.0164	0.0200***	0.0200***	0.0199***	0.0194**	0.0195**	0.0203**	0.0200**
	(0.00571)	(0.0169)	(0.00574)	(0.00574)	(0.00512)	(0.00877)	(0.00875)	(0.00864)	(0.00878)
Dcris	0.00140	-0.00177	0.00187**	0.00187**	0.00155	0.00155	0.00153	0.00168	0.00187
	(0.00116)	(0.00498)	(0.000868)	(0.000868)	(0.00110)	(0.00239)	(0.00239)	(0.00209)	(0.00242)
Geff	-0.00459	0.0659***	0.0150***	0.0150***	-0.00479	-0.000463	-0.000901		0.0150***
	(0.0101)	(0.00606)	(0.00409)	(0.00409)	(0.00981)	(0.0152)	(0.0151)		(0.00453)
Law	0.0146				0.0102	0.00281	0.00233	0.0130***	
	(0.00913)				(0.0103)	(0.0192)	(0.0192)	(0.00301)	
Govt	0.0121***	0.0677***	0.0143***	0.0143***	0.0108***	0.00884**	0.00889**	0.0136***	0.0143***

	(0.00336)	(0.00595)	(0.00178)	(0.00178)	(0.00303)	(0.00382)	(0.00385)	(0.00321)	(0.00474)
L.Dyg	0.754***		0.763***	0.763***	0.759***	0.755***	0.756***	0.759***	0.763***
	(0.0436)		(0.0411)	(0.0411)	(0.0409)	(0.0582)	(0.0581)	(0.0264)	(0.0551)
M2Liq	0.00124*	0.00453***		-0.000566***	-0.000612***	-0.000551		0.00138	0.00151***
	(0.000552)	(0.000993)		(0.000205)	(0.000213)	(0.000465)		(0.000982)	(0.000560)
Priv	-0.00289**	-0.0126***	-0.00360***	-0.00360***			-0.000571	-0.00315*	-0.00360***
	(0.000897)	(0.00209)	(0.000786)	(0.000786)			(0.000714)	(0.00163)	(0.00125)
CCB	-0.000242**	-0.000789*	-0.000326***	-0.000326***		-0.000144	-0.000154	-0.000262	-0.000326*
	(9.67e-05)	(0.000476)	(0.000123)	(0.000123)		(0.000184)	(0.000187)	(0.000209)	(0.000187)
t_qtr	1.27e-05				2.52e-05				
	(1.94e-05)				(1.72e-05)				
Constant						0.00883*	0.00902*		
						(0.00494)	(0.00501)		
Observations	614	624	614	614	614	614	614	614	614
R-squared	0.885					0.645	0.646	0.885	0.884

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The lag GDP term is included in all specifications but suppressed (the coefficient is always more than 70-75%), shown in this table as L_Dyg