The missing link: the finance-growth nexus and the Guyanese growth stagnation

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ABSTRACT

This paper argues that the liberalization of the Guyanese financial system did not lead to the growth as postulated by the theory that underpins the reform agenda. The paper posits that the oligopolistic nature of the banking system is the key omission of the theory. Oligopoly banks will seek to mark-up the loan rate and contract credit to private agents when those agents cannot pay the minimum mark-up rate. Empirical validation of the mark-up loan rate comes from an excess liquidity preference curve that is horizontal at a very high loan rate. The flat curve signifies that non-remunerative excess liquidity and interest paying loans are perfect substitutes at a very high loan rate. After banks restrict loans, they will either hold excess reserves and/or foreign assets. Such investment behaviour presents a developmental bottleneck, and therefore a key explanation for the growth stagnation after the liberalization. The paper also argues that indirect monetary policy, a cornerstone of financial liberalization, is ineffective at the high minimum mark-up rate. Monetary policy can only be effective at higher interest rates, which are detrimental to growth and employment creation.

KEY WORDS: finance-growth nexus, oligopoly banking, monetary policy, Guyana

JEL CODES: E52, O11, O16

1. INTRODUCTION

Recently several international analysts have sought to explain the factors that cause the dramatic decline in the rate of growth of the Guyanese economy after a period of impressive expansion from 1991

to 1997. The respected local daily newspaper, the Stabroek News, recently proclaimed that policy makers are puzzled in light of the southern movement of growth. The Stabroek News was reporting the findings of a recent IMF working paper which sought to unravel the reasons for the post-1997 growth stagnation.

This author is familiar with two very recent substantial academic studies on the determinants of economic growth in Guyana. The first study by Weisman (2003) attributes such variables as the terms of trade, the macroeconomic policy environment, labour, capital, and the real exchange rate as the key determinants of growth in the Guyanese context. The second study – on which the Stabroek News reported and was alluded to above – was conducted by Staritz, Atoyan and Gold (2007). That paper proffers that the growth stagnation results from the low rates of private investment, negligible inflow of foreign investments, and political instability and crimes. Both papers also tried to estimate the impact of productivity growth, using the Solow residual, on economic growth. The data problems notwithstanding, they found that productivity growth exerts significant influence on economic growth, although the influence tends to vary from one time period to the next.

Professor Clive Thomas, the respected Guyanese economist, also wrote several informative articles in the Stabroek News recently on the issue of economic growth. Professor Thomas underscored the

importance of productivity growth. However, he went one step further in identifying several institutional shortcomings that restrict the contribution of productivity to economic growth. In particular he emphasized the poor choice and execution of government projects, which would have had negligible contributions to growth.

Surprisingly, the studies cited above have omitted the key issue of finance. There is an immense literature in economics which focuses on the relationship between finance and economic growth. This paper argues that a key reason for the weak growth performance has to do with the investment choices of private oligopoly banks. Hence, the "Missing link" term in the title. The Guyanese financial system is dominated by commercial banks, which tend to hold portfolios that are high in excess liquidity and foreign assets. These liquid assets are unproductive since they do not lead to capital accumulation or business investments.

Banks are free to choose any combination of liquid versus productive assets since Guyana has removed the previous restrictions on interest rates and bank investment choices since the early 1990s. Prior to the early 1990s, the Guyana government wielded significant control over the activities of the financial sector. Such controls are known as financial repression and typically include policies such as: (i) channelling credit to priority sectors; (ii) controlling interest rates

(especially the deposit and loan rates); (iii) maintaining high reserve requirements; and (iv) erecting foreign exchange controls.

The process of removing restrictions from banking activities is known as financial liberalization (FL), which is often seen as the better alternative to financial repression (see Fry 1997). In addition to jettisoning the restrictions listed above, the proponents of FL usually emphasize privatization of state-owned banks. A major argument for liberalizing the financial sector is the positive contribution these policies should make to economic growth (see section 2). Therefore, the stagnation of economic growth in spite of significant strides in financial sector reform warrants an explanation.

This paper does exactly that by postulating that the stagnation after FL is explained, to a large extent, by the investment choices that profit-maximizing private oligopoly banks will make. The key hypothesis holds that commercial banks mark-up interest rates exogenously rather than set interest rates endogenously by responding to central bank monetary policy shocks (monetary policy shocks within the context of indirect monetary policy involve changes in the level of excess reserves through open market operations). Banks can mark up interest rates, of course, because they possess oligopoly power in the loan market and oligopsony power in the Treasury bill market. The mark-up interest rates can be proven to be

mathematically consistent with profit-maximization (see Khemraj 2006; Freixas and Rochet 1999).

Therefore, when a marginal borrower is unable or unwilling to pay the mark-up loan rate, the bank simply accumulates excess reserves instead of investing in the new loan. And if the bank, instead, can find the hard currency it will decrease excess reserves and hold more foreign assets. The stylized facts presented later in the paper (see section 5) are very consistent with this kind of investment behaviour. The proponents of FL, therefore, seem to have omitted the issue of bank investment behaviour in uncompetitive banking structures. Consequently, Guyana appears to have moved from a regime of government financial repression to private oligopoly stagnation.

This paper, however, does not deny the other key determinants of economic growth. Instead, it seeks to draw attention to an important omission in the literature that focuses on the finance-growth nexus. While the paper focuses on Guyana as a case study, the arguments presented herein are very applicable to other small open developing countries around the world. Moreover, it is hoped that the findings would be of some use to policy makers who might also be grappling with the domestic financing bottleneck.

2. THE THEORETICAL FINANCE-GROWTH NEXUS

Before the wave of FL that started in the mid-1980s, many developing countries, including Guyana, intervened heavily in their domestic financial systems in order to ensure that the necessary finance was available for priority areas identified in their development plans. Fry (1982) documents the main interventions as nominal interest rate ceilings for deposit and loan rates, directed credit to particular industries, and the expropriation by government of seigniorage by the use of high cash and liquid asset requirements and obligatory holding of government securities. Such policies were inspired by the view that money and physical capital are substitutes, a viewpoint that emanated from the monetary growth models (Fry 1995, pp 15-17). Physical capital accumulation requires policies that would increase the rate of return on capital vis-à-vis money; hence, reducing the return on money induces economic agents to invest in physical capital, thereby augmenting the capital-labour ratio and per capita incomes.

The practice of imposing government restrictions on the financial system – known as financial repression – was seriously challenged by McKinnon (1973) and Shaw (1973), both of whom propose the notion that such restrictions cause low savings and investments, low quality investments, and credit rationing. McKinnon (1973) in particular emphasizes that investment expenditures are

lumpier than consumption and that investors must first accumulate money balances before investing. The relative lumpiness of investment implies that aggregate demand for money will be positively related to physical capital, hence McKinnon's complementarity hypothesis.

Shaw (1973) highlights the importance of financial institutions in providing intermediation between savers and investors. Financial intermediaries are critical for economic growth because they perform several important roles when they channel funds from savers to investors – they are able to use their expertise to efficiently allocate the higher quantity of investible funds among competing uses. Without any repression, financial institutions will be able to offer savers higher rates of return on their savings and they are able to make investments more efficient by accommodating liquidity preferences, diversifying risks, reaping economies of scale, and lowering information costs (Fry 1995).

Much earlier, Gurley and Shaw (1955) stressed the important role that financial intermediaries play in economic development. Economic growth is retarded, according to the two authors, when deficit spending units must rely on self-finance and direct finance. When financial intermediaries enter the picture, the accumulation of financial assets by surplus spending units continues to equal the

accumulation of debt by deficit units; growth takes place as a result of this symbiotic relationship.

Endogenous growth models are also used to make the case for FL. Financial liberalization enhances steady-state growth by altering the rate of technological innovation (Levine 1997). Endogenous growth models provide the analytical framework by which to model the positive effects of finance on productivity. The financial system augments productivity by performing functions like processing information in order to discern the best investment projects and thus optimal resource allocation; and also by providing a way for investors to diversify and hedge risks, thereby permitting investors to invest in riskier projects with higher rates of return. To the extent intermediaries augment capital accumulation – which exerts a positive externality effect on society – they are likely to expand steady-state growth.

Also within the tradition of the endogenous growth model, Bencivenga and Smith (1991) demonstrate that *competitive* intermediaries (banks) eliminate the need for agents to self-finance and hold unproductive liquid assets. Therefore, competitive financial intermediaries alter the composition of savings in favour of capital accumulation. To the extent capital accumulation has an externality effect, according to these two authors, higher equilibrium growth

rates will be observed in economies with banks versus economies with financial autarky.

This paper argues that the channels outlined above through which finance can positively augment growth are broken. The McKinnon-Shaw channel is broken because higher savings from increasing the interest rate (a key policy recommendation of the FL school) does not mean that those savings will be channelled to productive investments. As will be demonstrated later, Guyanese banks have increased the percentage of foreign assets and excess liquidity in total assets. It is also difficult to see how the productivity enhancing channel of endogenous growth theory is relevant to an economy where the banking sector dominates the financial system; and where, moreover, that banking sector does not invest in a manner consistent with economic development. In other words, excess liquidity and foreign assets cannot exert positive externality effects on growth. Ironically, this paper demonstrates – unlike what Bencivenga and Smith (1991) proffered – that the financial intermediaries themselves demand liquid and unproductive portfolios.

The primary reason why the postulated positive benefits are not forthcoming is because the FL thesis is based on the assumption of a competitive financial system (here is an example of the peril of applying assumptions meant for the United States to Guyana-type economies). If the financial system is oligopolistic – as is the case with

the Guyanese banking system and most of the third world's banking system for that matter – the growth benefits will not necessarily materialize. Therefore, if the financing of private sector development is left only to private oligopoly commercial banks, as is the case in Guyana, then a large percentage of that sector will never obtain financing in an environment of mark-up interest rates. If policy makers, therefore, are serious about addressing the development of a vibrant indigenous business sector, then they must address this key financial bottleneck and market failure.

Other authors have focused extensively on the tendency for FL to generate financial crises, which in turn retard economic growth. For instance, Kaminsky and Reinhart (1999) discover a link between banking crises and balance of payments crises. They note that there was no apparent linkage during the 1970s – when markets were highly regulated – between banking and balance of payments crises. However, in the 1980s, following the liberalization of financial markets in many countries, banking and balance of payments problems were closely entwined. Arestis, Nissanke and Stein (2005) also document the tendency for FL to provoke financial crises. They also cite a large literature that makes the connection between liberalization and financial crisis.

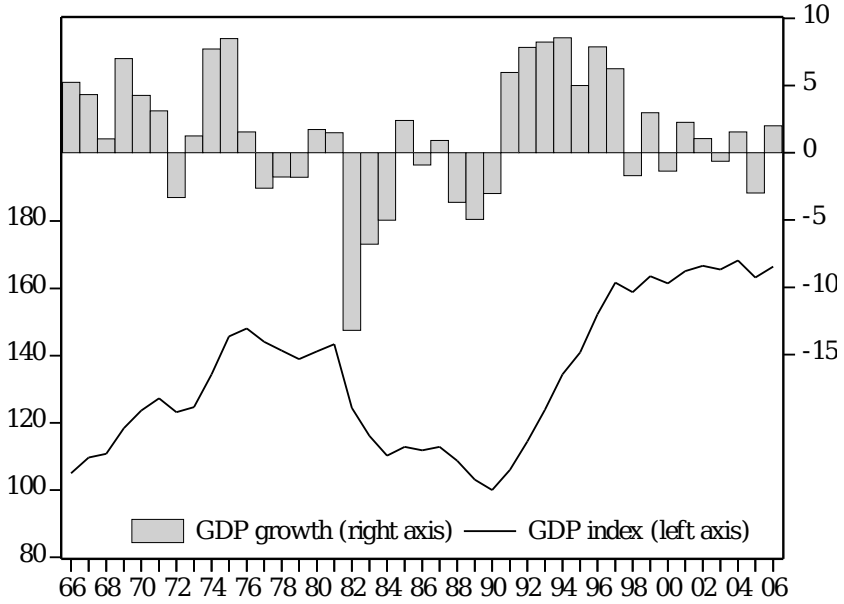
However, the approach of this paper is different; and therefore it extends the literature of the finance-growth nexus. The paper

examines a case study, Guyana, which has never experienced a banking crisis or a more widespread financial crisis, yet growth was not sustained after the liberalization exercise. The paper postulates that the stagnation after FL can, to a large extent, be explained by the way non-regulated oligopoly profit-maximizing banks will invest.

3. BACKGROUND INFORMATION

Figure 1 illustrates three main phases of economic history since Guyana's independence form Britain in 1966. In the first phase, 1966 to 1975, real GDP expanded at an annual average rate of 3.9 percent. Three important events worth mentioning took place during this period. Firstly, there was the first oil price shock. Secondly, in 1970 economic policy shifted towards Socialist planning. The government nationalized all major production entities, including the bauxite and sugar industries in 1971 and 1973, respectively. Thirdly, in 1974 and 1975 Guyana benefited from a major increase in world sugar price and as a result there were recorded growth rates of 7.7 and 8.4 percent, respectively.

Figure 1. Real GDP growth and the GDP level index (1990 =100), 1966-2006



Source: IMF, International Financial Statistics; author's calculations

A protracted downturn in the level of real GDP occurred during the second period from 1976 to 1988. Real GDP contracted by an average rate of -2.1 percent over the entire period. State control intensified with the nationalization of foreign-owned banks; the implementation of an exchange control scheme in an effort to ration foreign exchange; and the imposition of price controls. An important development in the second period is the rise of the underground economy, which was estimated by Faal (2003) to be around 62.7 percent of official GDP. Faal's estimates show a significant pick-up in underground activities over the period 1982 to 1988, during which time the estimated size was approximately 82.5 percent of the official economy. Thomas (1989), using different methods, also estimates the

size of the unofficial sector during the period 1982 to 1986; his estimates vary between 22 to 99 percent of the official level of GDP.

The underground economy over the period of protracted economic contraction was the largest and may provide an explanation for the fall in the level of GDP as agents sought to circumvent the many restrictions imposed by government during that period. However, over the period 1970 to 1975, which coincides with part of the first period, the average size was 38.4 percent of the official economy (Faal 2003). During the period 1989 to 2000, which overlaps with part of the post-reform period, Faal estimates the size to be 51.6 percent; however, the estimate drops to 35.3 percent for the period 1995 to 2000.

By the end of 1988 the government launched the Economic Recovery Programmed (ERP) in an effort to address the significant downturn in aggregate production. Consequently, a major scheme of economic liberalization commenced in early 1989. A 2.5 percent economic growth – which was lower than the 3.9 percent pre-reform average of the first phase – was recorded for the period 1989 to 2005. However, there are two important sub-periods: 1991 to 1997 and 1998 to 2006. Over the first sub-period the average economic growth was 7.1 percent, while over the second sub-period growth plummeted to 0.1 percent. However, not all growth over the post-1988 period can be explained by new economic enterprises; as explained above, the

substantial decline in the underground economy over the 1990s meant many agents were willing to produce under the purview of the official economy, something that can be explained by the abandonment of many stifling government restrictions on businesses.

4. FINANCIAL LIBERALIZATION POLICIES

As explained earlier, the policy of financial liberalization is premised on the thesis that a competitive, deep and well functioning financial system will engender economic growth. To harness the growth-augmenting potential of finance, the liberalization of the financial system was an important component of the post-1988 reform agenda. Since the Guyanese financial system is dominated by the commercial banking sector, the reform measures had to pay considerable attention to this sub-sector. Ganga (1998) situates the reform measures under three broad categories: (i) policies to improve the efficiency and competition in the financial sector; (ii) policies to strengthen the prudential framework and bank supervision; and (iii) policies to develop and deepen financial markets.

The first category of policy comprised of dismantling of interest rate controls on deposits and loans, jettisoning of directed credit schemes to priority sectors, encouraging privatization of state-owned financial institutions, allowing the entry of foreign banks, adopting a flexible exchange rate regime by merging the black market exchange rate with the official rate, and using indirect instruments of monetary

policy. A major turning point in monetary policy operations took place in June 1991 with the adoption of indirect instruments. A competitive bidding system for Treasury bills was instituted, first on a monthly basis, then biweekly in June 1994, and finally weekly in February 1996 (Das and Ganga 1997; Egoume-Bossogo *et al* 2003). Buyers, mainly institutional investors, bid for the instruments, which are usually sold to the lowest bidders, thus determining the rate of interest through the market. Specifically, the rate of interest on 91-day Treasury bills is seen as the anchor rate of the banking system which determines the bank rate, the deposit rate, and the prime-lending rate (Bank of Guyana 2005, p. 44)[1].

With respect to the external sector, efforts were made to abolish the exchange control system and to establish a market-based system to determine the exchange rate. In 1990, both commercial banks and other non-bank dealers were licensed to trade foreign currencies in the cambio market. For a brief period the cambios co-existed with the official market until when the two were merged in February 1991. In 1993 the central bank instituted the inter-bank cambio market

[1] However, if the commercial banks possess some influence over the Guyanese Treasury bill rate, that rate is not likely to be a good one to signal the monetary policy stance of the central bank as it will not respond quickly to liquidity conditions. Since the purchase of government securities is dominated by a few large institutional investors, namely commercial banks, it is expected that the banks would not take the government security rate as given, but rather they face an upward sloping supply curve. In such a case the classic theory of the banking firm – as outlined for instance by Klein (1971) and applied by Agenor, Aizenman, and Hoffmaister (2004) – cannot be exactly replicated to developing countries with non-competitive government bond markets.

operations in order to facilitate the integration of the two markets. The Exchange Control Act was abolished in 1995, thus removing the limit on the repatriation or inflow of foreign currencies.

Reducing the role of the State in the financial sector was seen as necessary to enhance efficiency and competition. As a result, government sold its shares in the two largest commercial banks and the biggest state-owned bank was sold in 2003. Steps were also taken to reform the payments system in order to automate the clearing of checks.

The second category of policies included measures to strengthen prudential regulations and bank supervision. In this regard, the Financial Institutions Act (FIA) was enacted in 1995. The legislation gives the Bank of Guyana the right to license and supervise all financial institutions undertaking banking businesses. Ganga (1998, p. 153) notes the "FIA also addresses issues of large exposures, limits investments in non-bank companies, liquidity ratio, minimum capital for setting up a bank, licensing of new banks, insider lending, prohibited operations, loan classification, and other regulations that would limit risk and concentration of ownership of financial institutions." In addition to the FIA, the Bank of Guyana Act, which seeks among other things to preserve the independence of the central bank, was enacted in 1998.

The third category of policies was intended to facilitate the development and deepening of financial markets. The first step towards the development of financial markets was to promote the money market. Measures were put in place to facilitate the weekly auctioning of Treasury bills to manage liquidity conditions and a rediscounting policy was commissioned to encourage trading of the bills in order to enhance their liquidity. However, the secondary market for these securities has remained inactive. The central bank has also sought to encourage an interbank market by proposing the interbank transfer system. However, this market has not fully developed today because of the persistence of excess reserves; consequently, the overnight rate is powerless as a monetary policy instrument.

A main step towards the development of the capital markets occurred in 2003 when the Guyana Association of Securities Companies and Intermediaries Inc., (GASCI) a self-regulating organization, was registered to operate the Guyana Stock Exchange. Its members, the stockbrokers who compete against each other to trade shares, own GASCI. Since the official launching not many Guyanese firms have signed on, partly because family businesses are unwilling to divulge certain information and they are also afraid to lose controlling stake.

The monetary policy framework

As was explained above, a key component of the reform agenda was the adoption of indirect monetary policy instruments. The indirect or market-based monetary policy focuses on the reserve position of the banking system since excess reserves are assumed to engender changes in bank credit. The operating framework is the reserve money programmed (RMP) that is itself rooted in the IMF's financial programming model (Khemraj 2007). The RMP takes into consideration the fact that commercial bank reserves provide the link between the balance sheet of the central bank and that of the consolidated commercial banking system. Given this linkage, therefore, the central bank can influence the quantity of bank reserves by varying the stock of government securities it holds when it conducts open market operations or when it intervenes in the foreign exchange market. Unlike direct monetary policy that places restrictions on commercial banks' balance sheet; market-based monetary policy seeks to operate on the reserve position of the banking system. It is assumed that an excess of non-remunerative excess reserves will encourage banks to lend more or intensify investments in foreign assets; a shortage, in contrast, will cause banks to curtail lending and hold fewer foreign assets.

The RMP is essentially a monetary targeting framework in which the central bank tries to obtain an optimal target for reserve money (or base money) that is consistent with the macroeconomic

objectives. First, the central bank defines the ultimate macroeconomic objectives which are output growth, inflation and import cover. Second, broad money growth (or growth of M2) – which is the intermediate target – is then projected to be consistent with the macroeconomic objectives bearing in mind the assumption for velocity. And thirdly, the growth of reserve money (or base money) is then projected to be in line with that of broad money that is itself dependent on the targeted macroeconomic objectives. The programmed is based on three important assumptions: (i) the reserve position of banks determine their ability to extend credit to the economy; (ii) the money multiplier is stable or at least predictable; and (iii) the balance of payment is a monetary phenomenon (meaning the excess of money supply over desired money balances will lead to a deterioration of the current account).

The factors that affect the supply of reserve money can be divided into two categories: (i) autonomous or non-discretionary factors that are not under the control of the central bank; and (ii) policy factors driven by the discretionary actions of the monetary authority, example changes in reserve requirements or open market operations. The monetary policy stance is determined by the gap between actual reserve money and the desired or forecasted level. Monetary policy is tightened if actual reserve money is above the desired level; and it is eased when actual reserve money is below the

desired amount; there is a neutral stance when the desired amount is equal to the actual amount. Guyana's case is peculiar because the system always finds itself with a reserve surplus; hence the monetary authority is always anxious – because excess reserves are seen as a potential determinant of domestic prices – to mop up the excess by selling Treasury bills. The central bank, therefore, persistently tries to transform excess reserves into secondary reserves or excess liquid assets.

The latter implies there is a domestic debt side to the policy of mopping up excess reserves. Table 1 summarizes the securities issued and the interest cost associated with the policy of persistent sterilization. The interest cost has declined mainly because the interest rates on various denominations have fallen since 1994. However, if the Guyana dollar interest cost is converted into US dollars it can be seen that the policy of mopping up excess reserves has cost the government US$ 236.2 million since 1994. The figure represents a substantial amount for an economy that is both small and poor.

Table 1. The interest cost of sterilization (G$ mill.)

	Treasury bills issued				Interest cost			
	Total	91-day	182-day	364-day	Total	91-day	182-day	364-day
1993	22173	13673	4000	4500	na	na	na	na
1994	23939	19088	2640	2211	4057	2599	765	693
1995	22788	17745	2250	2794	4423	3626	449	348
1996	27535	6763	3156	17616	3168	2336	350	482
1997	25678	4569	4406	16703	2652	348	350	1954
1998	25930	2700	4700	18530	2185	322	410	1453
1999	35207	4303	4952	25952	2787	450	632	1705
2000	44013	4947	8453	30613	4625	432	789	3404
2001	48090	3640	7600	36850	4568	373	882	3313
2002	49892	2973	10189	36730	4147	207	520	3420
2003	75121	5251	16617	53253	2521	100	202	2219
2004	68075	16480	17764	33830	1967	125	317	1525
2005	73468	14955	19267	39246	1979	160	407	1412

Source: Bank of Guyana Annual Reports

The RMP is problematic mainly because it is difficult to forecast the autonomous components, especially when government finances its fiscal deficits by creating reserve money. However, in a typical IMF stabilization programmed the government is not allowed to do so. Even with this impediment withdrawn, it is still difficult to anticipate liquidity levels when the banking system holds excess reserves for structural reasons. For example, commercial banks might desire a minimum rate of return on any asset because of the presence of market power that gives rise to mark-up pricing behaviour (Khemraj, 2006).

5. THE BROKEN NEXUS

This section provides some important stylized facts regarding the behaviour of the aggregate commercial banking sector. Figure 2 plots the aggregate level of non-remunerative excess reserves against

the average loan rate. The reason for doing this is to extract the aggregate banking sector's liquidity preference curve (or excess liquidity demand curve) vis-à-vis the loan interest rate. The liquidity preference curve is fitted using a technique known as locally weighted regressions (LOESS)[2]. Figure 2 shows a fitted liquidity preference that is steep at high interest rates and then becomes flat (or perfectly elastic) as the loan rate falls. The curve tends to become horizontal at approximately sixteen percent; implying that banks view non-remunerative excess reserves and interest paying loans to private agents as perfect substitutes at a rate of interest significantly above zero. This clearly presents a developmental problem.

The flat curve at a very high interest rate further underscores the fact that banks mark-up the loan rate. The flat section of the curve occurs at the minimum mark-up interest rate. Khemraj (2006) demonstrates that the minimum rate is consistent with a Cournot profit-maximizing oligopoly model of the banking firm. The minimum rate is a mark-up over the marginal transaction costs (prevalent in the loan market), a borrower-specific risk premium, and a suitable foreign interest rate. The foreign interest rate is important (because of

[2] The term local regression is used because only a subset of observations within a neighbourhood of the point to fit the curve is utilized. The regression is weighted so that observations further from the given data point are given less weight. Cleveland (1979) introduced the technique and it was and further developed by Cleveland and Devlin (1988). The subset of data used in each weighted least squares fit is comprised of αN, where α = the smoothing parameter and N = number of data points. A higher parameter, α, gives a smoother fit, but the fitted curve is less "local". A smoothing parameter of 0.3 is used.

arbitrage arguments) within the context of financial liberalization, which enables the banks to hold any quantity of foreign asset.

It should be noted, before proceeding, that the mechanism of the minimum mark-up interest rate is different from the Stiglitz-Weiss credit rationing view in one important way. The Stiglitz-Weiss hypothesis holds that banks are aware of a maximum rate of interest. Lenders or banks have no incentive to raise interest rate above the maximum rate since such an action attracts poor quality borrowers and reduce the expected return. This paper, by contrast, supported by the flat liquidity preference curve, argues in favour of a minimum mark-up loan rate. In addition to the perfectly elastic liquidity preference curve, the persistence of high deposit-loan rate spread and the fact that Guyana has never suffered from a systemic financial crisis are factors consistent with the hypothesis of this paper.

Figure 2. Excess reserves and the average loan rate (Quarterly data: 1988Q1 – 2006:Q4)

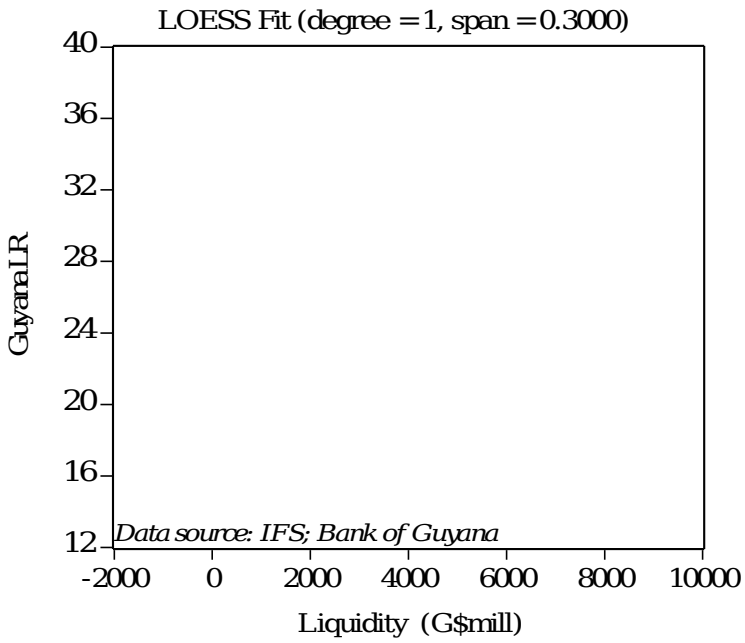
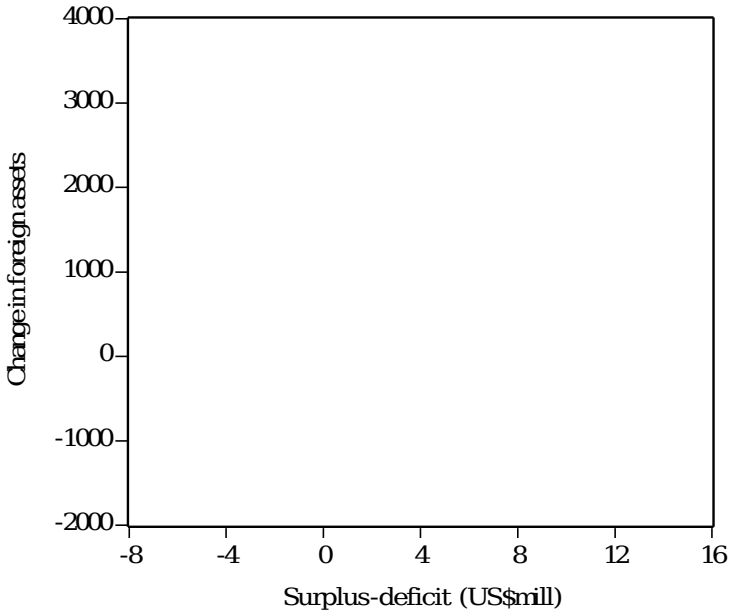


Figure 3. Foreign currency market (purchases minus sales of US$) and change in commercial banks foreign assets – monthly data 1999:1 to 2006:6

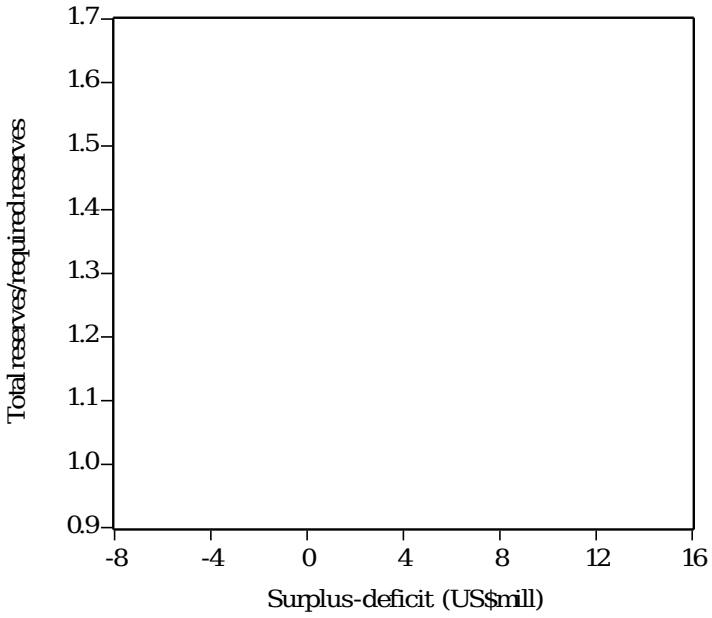


An obvious question would be what other investments banks make after they curtail credit to the private sector. Figure 3 provides an answer to that question. On the vertical axis is the change in the level of foreign assets (foreign assets comprise mainly of deposits in foreign counterpart banks), while on the horizontal axis is the quantity of US dollars purchased minus the quantity sold by the commercial banking system as a whole. A negative value would mean the banks have a shortage of US dollars, while a positive value indicates a surplus of US dollars. A zero value is analogous to equilibrium in the interbank foreign exchange market. The figure shows a positive relationship, which says a surplus value of US dollars is associated with a flight into foreign assets, while a deficit is associated with a decrease in the quantity of foreign assets.

Figure 4 demonstrates that banks decrease their demand for excess reserves contemporaneously. The information contained in figure 4 corroborates the finding of figure 3. Again, the horizontal axis (figure 4) graphs the surplus or deficit of US dollars traded in the interbank foreign exchange market; the ratio of total reserves divided by required reserves is plotted on the vertical axis. A ratio of one indicates that the quantity of excess reserves is zero, while a ratio above one shows a surfeit of excess reserves in the banking system. The fitted line demonstrates a negative relationship[3]. Hence, banks decrease holdings of excess reserves when there as a surplus of US dollars.

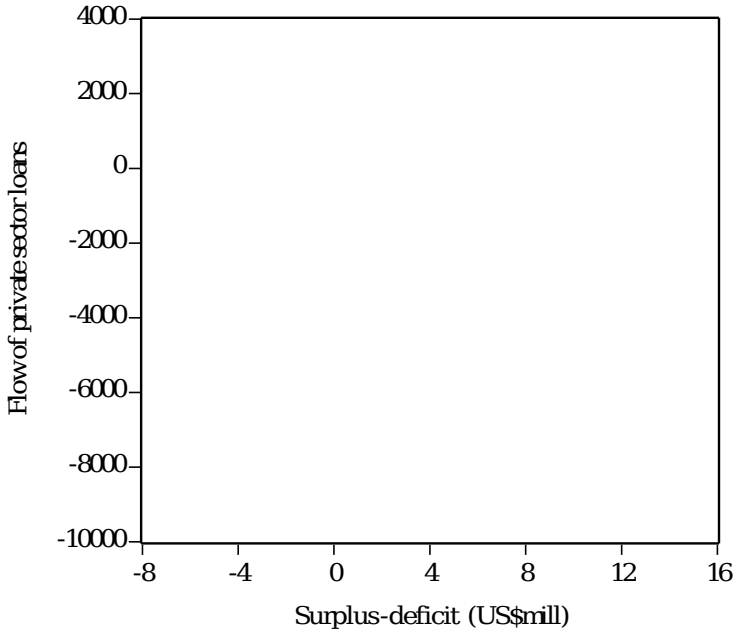
Figure 4. Foreign currency market (purchases minus sales of US$) and commercial banks excess reserves – monthly data 1999:1 to 2006:6

[3] Note that a regression estimation of excess reserves (the dependent variable) on the foreign currency deficit-surplus variable (plus several other determinants of excess liquidity) demonstrates that the relationship is statistically significant (see Khemraj 2006).



In order to complete the picture, it would be interesting to see the extent to which the surplus or deficit in the foreign exchange market influences the loan market. If a deficit in the foreign exchange market induces the banks to make loans, it implies bank portfolios are responsive to liquidity changes. If liquidity changes do not elicit much of a change in the loan market, then bank portfolios are static, a position that is consistent with the hypothesis of the minimum mark-up interest rate. Figure 5 illustrates an almost flat fitted line that intersects the vertical axis just below zero. Hence, a shortage of US dollars is not likely to elicit a substantial change in the supply of bank loans to private agents. The reason being the quantity of loans is determined by different dynamics – principally in our context, the minimum rate determined by the banks that customers are required to pay.

Figure 5. Foreign currency market (purchases minus sales of US$) and change in commercial banks credit to private sector – monthly data 1999:1 to 2006:6



A clear pattern of investment behaviour has emerged from the evidence presented in this section. At first banks limit lending to the private sector because they possess the market power to set the loan rate exogenously. If the marginal borrower is unable to pay the minimum mark-up loan rate the banks can either accumulate excess reserves or deposit money abroad in foreign counterpart banks. The evidence suggests that when commercial banks possess a surplus of US dollars they will prefer to hold more foreign assets instead of extending loans to the private sector. These findings provide a clear

challenge for policy makers and those who are interested in business capital accumulation for the purpose of employment creation, which is the only way to sustain poverty alleviation in the long-term (especially since the relationship between poverty and foreign aid is at best tenuous!). Finally, it should be clear by now that the financial liberalization thesis did not envisage this pattern of behaviour. If the most important financial institutions (the banks) in Guyana invest in this manner, then it is becomes obvious that the finance-growth nexus postulated by the FL thesis is greatly impeded.

To further examine the pattern of bank lending Appendix 1, Tables 1A and 1B, looks at the composition of bank assets and bank credit. Figure 1A shows a dramatic increase after the reforms in the proportion of assets held as foreign assets. The percentage of reserves fell slightly but still remained at a high rate since 2001. Credit to the private sector increased steadily since the reforms; however, there has been a significant decline in the percentage of credit extended to the private sector since 1999. Figure 1B shows the allocation of bank credit. Two main trends are evident: (i) banks extend an increasing percentage of loans to households to fund consumption; and (ii) there is a steady decline in the percentage of credit extended to businesses since 2000. In the Guyanese context, where a significant percentage of consumption goes towards imports, it is safe to say that consumption-driven loans are not tremendously

pro-growth. Credit to businesses has the potential to be the most pro-growth, but the trends do not seem very promising.

6. THE TROUBLE WITH FINANCIAL LIBERALIZATION

The underlying problem with the FL thesis and the reform agenda that follows it is its dependence on a competitive financial system to be effective. However, we have seen that the key markets – the loan and money markets – are uncompetitive. Banks possess significant market power in both markets. Consequently, the commercial banks set interest rates exogenously of monetary policy shocks emanating from the central bank. The exogenous interest rates, moreover, are minimum mark-up rates.

This tendency can be illustrated by a flat (or perfectly elastic) excess reserves demand curve at a very high interest rate[4]. This implies that liquidity shocks – that is shifts in the central bank's reserve supply curve owing to open market operations – along the flat section of the curve will exert no effect on the loan market or the Treasury bill market. Therefore, open market operations are unlikely to alter consumption and investment decisions at the minimum mark-up interest rate, thereby rendering the policy regime ineffective. Indirect monetary policy can only become effective at very high interest rates when the liquidity preference curve is downward

[4] Figure 2 illustrates the case only for the loan market, but Khemraj (2006) discovers the exact behaviour when excess liquidity is plotted against the 91-day Treasury bill rate. However, in this case, the perfectly elastic section of the curve occurs at approximately four percent.

sloping. But such high rates are detrimental to growth and employment generation in low income countries.

But not only do we see high credit rates, we also witness a breakdown of the postulated theoretical relationship between finance and growth. A mark-up loan rate can be proven to be consistent with profit-maximization of a private oligopoly bank operating in a liberalized environment. Hence, should the marginal borrower be unable to pay the minimum rate, the bank accumulates excess reserves – at which point the curve becomes flat as in figure 2[5]. Therefore, the mobilized deposits and savings through FL do not get channelled into the most productive pro-growth assets.

As noted earlier, a key policy measure accompanying monetary policy reform is the formation of primary and secondary markets for government Treasury bills. One reason for doing this is to use the domestic Treasury bill yield as the benchmark upon which the deposit rate and the discount rate (the rate at which a central bank lends reserves to commercial banks) are tied. However, banks tend to have market influence as buyers of the government paper, marking up the rate at which they will bid for the new bills[6]. The result is a movement from financial repression to oligopoly-controlled interest

[5] Therefore, the massive build-up of bank deposits in Guyana together with the mark-up interest rate in the loan market explains the persistence of excess reserves after financial liberalization. Deposit can accumulate independently of central bank expansion of the money supply because of: (i) inflows of remittances that get converted into Guyana dollar bank deposits; and (ii) the large underground economy.

[6] Khemraj (2006) argues the mark-up is done over a foreign interest rate.

rates. Hence, the other key rates in the domestic economy are also tied to oligopoly minimum mark-up rates.

This therefore leads to another problem financial market participants should appreciate. In spite of substantial efforts to liberalize the Guyanese financial system, it is unlikely to possess a domestic benchmark interest rate that can be used as the basis for pricing other domestic financial assets. It is therefore not clear which interest rate will be used in the proposed secondary markets to price securities. In the United States, for instance, the 3-month Treasury bill rate is exogenous (that is, the T-bill supply curve is horizontal) to banks and therefore it acts as a benchmark. But in Guyana the banks face an upward sloping Treasury bill supply curve – an upward sloping supply curve is indicative of oligoposony power.

7. CONCLUSION

The paper argued that a key explanation for the Guyanese growth stagnation is the constraint of domestic financing for new businesses. The purpose of this study is not to deny the importance of the other determinants of economic growth, but more to highlight a very important bottleneck that Guyanese policy makers must address in order to build a diversified and competitive indigenous business sector. Furthermore, activating the other factors of production, such as physical and human capital, will require addressing this financing bottleneck, especially domestic financing.

The paper noted that the theory underlying financial liberalization that promised faster growth after the reforms is not applicable in the Guyanese context because of the uncompetitive nature of Guyanese financial system. The oligopoly structure of the banking sector, in particular, means that banks can mark-up the loan rate independently of monetary policy shocks (via open market operations) emanating from the central bank.

The mark-up rate signifies that should the marginal borrower be unable or unwilling to pay the desired minimum rate, the banks would accumulate excess liquidity. Excess liquidity, therefore, is consistent with profit maximization of an oligopoly bank. Empirically, this is depicted by a liquidity preference curve that is horizontal at the very high minimum mark-up rate of interest.

The horizontal liquidity preference curve, moreover, indicates that indirect monetary policy – a key component of financial liberalization – is ineffective. In other words, the contraction or expansion of excess reserves (along the flat curve) will not alter the loan rate. Hence, consumption and investment decisions are invariant to the central bank's monetary policy shocks. By contrast, indirect monetary policy can only begin to be useful as a stabilizing mechanism at exorbitantly high loan rates when the curve is downward sloping. Indeed, since the financial reforms of the early 1990s the loan-deposit rate, loan-Treasury bill rate, and the loan-

foreign interest rate spreads have remained stubbornly wide. That is largely indicative of the oligopoly pricing power the banks possess.

Finally, the paper uncovers a particular investment behaviour that is inconsistent with the objective of economic growth and job creation. First, banks curtail credit to those who cannot pay the minimum rate; second, they hold excess liquidity; and third, they deposit hard currencies abroad in the form of foreign assets (thus decreasing excess liquidity) when the foreign exchange market has a surplus of hard currencies.

An obvious policy conclusion would be to encourage more competition in the financial system. That, however, is not as straightforward as it seems. The reason being there are natural barriers to entry that cause a country such as Guyana to possess an oligopolistic banking sector. The market size, in particular, does not allow for a very competitive banking sector. There are also significant barriers that preclude the development of the other aspects of the capital markets (see Singh 1997; Stiglitz 1989 for these arguments).

Therefore, what is the alternative? Unfortunately there is no quick fix. However, at minimum government will need to have a clearly defined and transparent business, industrial and technology policy (BIT). Such a policy agenda must be inclusive and at all cost seek to be cognizant of the historical and ethnic sensitivities that are predominant in a society like Guyana. The financing policies must

then follow up within the context of a transparent and inclusive BIT. That the private oligopoly banks (after the post-1988 liberalization) cannot support and sustain business growth is indicative of a dramatic market failure. Guyana has moved from one extreme of government-induced financial repression to another extreme of private oligopoly-induced stagnation. Hence, there is need for the middle-road where government financing plays an important role in tandem with the private sector (including the private banks) within the confines of a transparent and inclusive BIT.

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APPENDIX 1

Table 1A, Composition of commercial bank assets

	Total Assets (G$ mill)	Percent of total				
		Reserves	Foreign Assets	Credit to government	Credit to public enterprises	Credit to private sector
1980	834	15.1	7.1	27.1	27.5	23.3
1985	2851	22.0	1.2	29.1	29.4	18.2
1990	13233	13.6	18.2	31.1	5.7	31.4
1995	50598	20.4	7.5	31.4	0.8	39.9
1996	68530	15.7	5.5	25.2	0.4	53.3
1997	80043	16.6	4.4	22.5	0.3	56.2
1998	88744	18.1	4.4	17.9	0.5	59.2
1999	90130	13.8	8.0	14.8	0.8	62.6
2000	102396	15.1	7.0	19.8	0.4	57.7
2001	108152	17.0	8.1	19.2	0.8	54.9
2002	117819	17.9	10.3	20.3	0.8	50.8
2003	122471	17.9	14.7	26.3	0.7	40.4
2004	133400	17.5	16.3	28.6	0.9	36.7
2005	150180	17.7	18.8	26.9	1.0	35.6

Source: IMF, International Financial Statistics; Author's calculation.
Notes: (1) Credit to government includes Treasury bill holdings and loans.
(2) Reserves include required and excess amounts.
(3) Credit to government include mainly holdings of Treasury bills

Table 1B, Composition of commercial bank credit

		Percent of total				
	Total Loans (G$ mill)	Loans to government sector	Loans to private businesses	Loans to households	Loans to non-bank financial institutions	Loans to non-residents
1980	423	55.2	28.7	15.5	0.5	0.1
1985	1411	60.1	27.0	12.4	0.2	0.2
1990	4914	16.1	68.5	15.1	0.0	0.3
1995	22190	2.2	68.9	24.2	0.3	4.4
1996	37162	0.8	80.2	16.3	0.5	2.2
1997	44540	0.5	76.7	19.7	0.3	2.9
1998	50048	0.8	77.8	19.9	0.4	1.1
1999	53885	1.4	77.4	19.4	1.1	0.8
2000	54660	0.8	79.8	16.8	1.2	1.4
2001	52433	1.6	78.3	16.7	0.9	2.5
2002	50474	1.6	75.9	18.0	1.4	3.1
2003	41739	2.1	71.1	21.1	2.0	3.5
2004	38137	3.4	69.7	21.5	1.3	4.1
2005	40337	3.9	65.7	25.5	1.3	3.5

Source: Bank of Guyana Statistical Bulletin; author's calculation.
Note: commercial bank credit excludes holdings of government Treasury bills