

Financial sector development and economic growth in Pacific island countries

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This paper explores the relationship between financial sector development and economic growth in the Pacific island countries. The analysis suggests that the poor state of financial sectors has constrained the mobilisation of savings for growth and therefore restricted economic development in the region. Moreover, past policies to 'assist' financial sector development have been counterproductive. Alternative policy options to achieve the desired results are explored.

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There has been considerable convergence in views about the significance of financial development for economic growth and resulting improvements in living standards. This is not to discount the large and growing debate over the channels via which financial development impacts on growth; understanding such linkages is essential for the design of growth-enhancing policy. Levine notes that

...the preponderance of theoretical reasoning and empirical evidence suggests a positive, first-order relationship between financial development and economic growth (1997:688).

At least one study (King and Levine 1993a) argues for the existence of a strong link between the level of financial development and the subsequent rate of economic growth, capital accumulation, and technological change.

There is general agreement that links between financial intermediation and economic growth are strong (Levine, Loayza and Beck 2000). Financial intermediaries have a significant role in channeling funds from savers to investors and in ameliorating information asymmetries that are the source of problems of adverse selection and moral hazard pervasive in the sector. Given the suggestion of positive externalities from the efficient operation of the financial sector to the rate of growth of aggregate output, a case may exist for public sector support to the sector. These considerations are important in the design of policy for the Pacific island countries that have lagged both in terms of economic and financial sector development.

This paper presents a simple model to illustrate the operation of financial markets, including the role of the various intermediaries and financial instruments. An application of this framework to the Pacific island countries suggests that past policy interventions to develop the sector have been counterproductive. On the basis of this framework, it is proposed that the public sector withdraw from active participation in supplying financial services (through, for example, state-owned banks) and concentrate on prudential regulation. A strong case also exists for the public sector to create a stable macroeconomic environment and standardise reporting requirements for investors to lower the transaction costs of financial intermediation. These interventions would induce financial sector development and investment, leading to economic growth and, by assumption, economic development.

Financial development and economic growth

The primary purpose of the financial sector is to mobilise savings from disparate sources and to intermediate these savings for investment across space and time. These roles change as the structure of the market evolves and the range of financial products and services increases. Without access to loanable funds, investors are constrained to investment within the bounds of their savings and often to traditional technologies with only marginal variations. By providing liquidity for investment, the financial sector raises the level of output and, once this higher level is reached, growth becomes independent of financial activity. However, something more than liquidity is necessary to link financial development with the longterm economic growth of a country.

The most influential work on the relationship between financial systems and economic development is McKinnon (1973) who uses post World War II case study data from several countries to argue that better functioning financial systems support faster economic growth. Subsequent empirical analysis supports the proposition that financial development precedes rapid growth of output; such timing differences are interpreted as implying a link (causality) from financial development to economic growth. The sceptics, such as Lucas (1988), do not dispute the role of finance in growth but question the degree of emphasis placed on such a link.

One potential link between financial activity and growth is through markets for venture capital to fund innovation. Insofar as innovation is free from the forces of diminishing returns, the provision of venture capital can be a source of sustained growth. King and Levine (1993b) argue that the financial system is a lubricant for innovative activity, that is, the main engine of economic growth and development. The financial sector makes an essential contribution to the rate of innovation by evaluating, then funding, and subsequently monitoring innovative activity. Financial repression,¹ King and Levine argue, restrains the availability of these services and thereby impedes innovative activity and slows the rate of economic growth.

There is other compelling evidence in support of the finance–growth link. For example, several cross-country growth regressions suggest that financial services are linked to growth (see Levine, et al. 2000). Firm-level studies indicate that financial liberalisation tends to increase the funding of more efficient firms. Controlling for several initial conditions, financial development complements the benefits arising from nonfinancial reforms. Thus, the efficacy of other policy reforms depends on the health of the financial sector (King and Levine 1993b).

The skeptics have, however, kept the debate on the direction of causality alive. There is an obvious reverse causation in that growth creates the demand for financial services. When per capita income rises, the demand for financial services rises. This induces formation of growth-promoting financial intermediaries, thus providing a reason to believe that financial and economic developments are jointly determined. Even if there were no links between financial development and long-run growth, the impact of financial development on the level of output could still be significant. Given that the transition between steady states can last from 60 to 70 years (see Vousden 1998), the effect on out-of-steady-state rates of growth can be significant.

A well-functioning financial sector fulfils the role of providing long-term (illiquid) capital for projects that require up-front and lumpy investments that yield returns over the longer term. Investors, particularly those engaged in projects with long gestations, demand funds that can be locked away for considerable lengths of time and at costs that are fixed and known at the time of the advance. Savers, on the other hand, prefer ready access to their funds. The presence of well-developed financial markets allows satisfaction of both these demands; the savers can hold and trade equity, bonds, and deposits in enabling ready access to savings while the investor has access to long-term capital and at fixed costs. Well-developed financial systems also allow the issue of and trade in securities, thereby transforming liquid capital into an illiquid form suitable for long-term investment; this is one of the distinct advantages provided by a well-functioning financial sector. When these large investments generate sufficiently

large externalities through increasing the productivity of resources in the rest of the economy, financial development leads to faster steady-state growth. For example, investment on a major public road linking two populous regions that leads to increased private sector activity on the road corridor has the potential to show growth effects for several years.

Yet another benefit from a wellfunctioning financial sector is through provision of a means to diversify risk via its role as a venture capitalist. Stockmarkets provide the means to trade risk and boost liquidity while banks ameliorate information costs and enhance corporate governance (Levine 1997:719). The small saver may invest in a diversified portfolio of publicly listed stocks and rely on the market to monitor and induce good corporate governance by the managers of these enterprises.

The costs of collecting and analysing information create incentives for the emergence of financial intermediaries. While the individual saver may not find it cost effective to acquire and analyse information on all possible investment opportunities, the financial intermediary having the advantage of economies of scale would do so. Such economies of scale make information acquisition more cost effective and facilitate efficient allocation of savings. Financial intermediaries that have a well-diversified investment portfolio can induce enterprises to reveal information and thereby foster efficient investment by lowering monitoring costs.

A simple model of the operation of financial markets

A depiction of factors impinging on the cost of funds available to business is provided in Figure 1. The C axis denotes the unit cost of capital to business and the C(K) schedule is the locus of points where the (free) market



Figure 1 The operation of financial markets



for capital clears for a given K. This schedule can be thought of as the lower envelope depicting the cost of funds to enterprises of varying sizes. The K axis represents the capital worth of businesses, and hence could depict the market capitalisation of the enterprise. The C(K) schedule postulates an inverse relationship between the unit cost of capital, C, and K; this downward sloping function could reflect the presence of fixed costs independent of the value of K.

$$C^T = F + rK \tag{1}$$

where C^T is the total cost of funds to the borrower while *r* is the marginal cost of funds to the lender. Assuming monopolistic competition in the supply of credit, the average cost and therefore the price of funds to the borrower from Equation 1 is

$$C(K) = \frac{C}{K} = \frac{F}{K} + r \tag{2}$$

In the context of financial markets, this inverse relationship can be rationalised on several grounds, for example, that

 benefits from economies of scale in the provision of funds imply that the average cost of funds will decline with the size of the advance

- the lower risks of failure associated with larger businesses will be reflected in the costs of capital
- larger businesses provide greater quantity and quality of information, perhaps due to statutory requirements; this lowers the cost of funds to the enterprise
- the potential for rescue by the public sector of very large businesses in the case of financial failure are significant; this lower risk to the lender will be reflected in the cost of capital to the business
- the maturity/age of the business is positively correlated with its size and extent of information available to the lender. As a consequence, costs of capital will be lower to a large, mature business than to its new, smaller counterparts.

It is also postulated that businesses move along the C(K) schedule as the natural processes of birth, growth, mergers and fragmentation of enterprises take place over time.

The wholesale price of funds for a given maturity is shown by the horizontal schedule denoted by r on the vertical axis. This price may be construed as the (pure) rate of time preference of consumers. Financial intermediaries may acquire funds at the cost of rand lend it at a cost determined by the C(K) schedule. Here, r may be interpreted as the bond rate or the price of long-term securities.

In reality, the financial market is made up of a broad spectrum of lenders and borrowers ranging in the case of the Pacific island countries from the small betelnut vendors who rely on their own savings and those of their immediate kin to the very large public companies that raise funds through the issue of long-term securities and equity capital. Among the financial intermediaries, banks serve only a distinct section of this market, as shown by the region enclosed by B^L and B^H . Fixed transaction costs, such as those associated with acquiring information on the credit worthiness of a borrower, make loans smaller than B^L unprofitable; this market to the left of B^L is served by the more competitive suppliers of finance such as the local money lenders, relatives, and selffinance. The wiggly line that separates these two groups of suppliers of finance indicates that the demarcation between them may not be distinct since there is considerable room for the integration of the banks with moneylenders and agencies associated with micro-finance.

Profit-maximising banks withdraw from lending beyond B^H because the margins are not sufficient to cover their costs of lending, inclusive of industry specific costs such as license fees. At J, the business is large enough to jump/transit the use of bankfinance and to be able to raise capital via the issue of securities and/or through raising share capital. Since the market-clearing price of finance to business in the interval between B^{H} and S^{H} is greater than r, the securities market may only operate up to S^H; beyond this point finance may be raised through the issue of equity capital alone. The figure shows that to the right of S^{H} , C(K) is less than r; this reflects the possibility that in this range dividend yields could be lower than the yield on long-term securities. Savers are willing to lend their funds in this range in anticipation of future capital gains; however, this 'anticipation effect' is not captured in the above framework.² Hence, the stock and securities markets operate in the range to the right of B^H; banks may integrate with this market as depicted by the porous wall.

The simple framework provided in Figure 1 can be used to illustrate several other issues in relation to the operation of financial markets.

• The horizontal axis could depict the plethora of financial instruments used in providing capital to business. For values of K close to the origin, self-finance would be the prime source; a mixture of debt and equity would be the instrument

in the intermediate ranges; and, perhaps long-term securities provide funds for the largest of the investments. There will be further subdivisions within each of those aggregates.

- As firms mature and grow, they move down the C(K) schedule; perhaps not smoothly but with some falling to the wayside through attrition. One of the assumptions underlying the inverse relationship between the cost of funds and the size of loans has been that the probability of financial collapse falls as firms grow larger and mature over time. Another related assumption is that the association between the lender and the borrower improves with the length of relationship by allowing for the development of a credit history such that the cost of funds falls over time, even for a given level of K. Hence, a third axis depicting time could produce a plane showing that the cost of capital to business falls with both the size of the advance and with the passage of time.
- Policy interventions such as the imposition of an interest rate ceiling affect the size of the market served by each of the suppliers. For example, a ceiling of *r*² will shrink the market for banks to the area between B² and B^H. The void left as a result would be filled by less efficient lenders, including those from the informal sector. This induced inefficient entry raises the cost of capital to borrowers and constrains financial sector development.
- The cost of funds is affected by the monetary and fiscal policies. For example, an inflationary environment will lead to a higher value of *r*, even with an open capital account, due to exchange rate risks. Sovereign risks such as those associated with risks of nationalisation of industry will also raise the cost of funds.
- The C(K) schedule sinks towards the origin as creditors' rights are enforced by the local courts and bankruptcy laws are simplified. The availability of better



information in the form of standardised accounting and reporting requirements also assists in reducing lending margins. This in turn leads to a lowering of costs of funds.

Key characteristics of financial sectors in Pacific island countries

Before considering the extent to which the above framework can be applied to better understand financial markets within the Pacific island countries, we survey the current financial depth and structure of these markets in a few of the countries. A more comprehensive survey is beyond the purview of this paper. However, it should be noted that the specific cases highlighted here are not isolated incidences but seem to be pervasive across the whole region, albeit with different degrees of seriousness.

One common means of gauging financial depth in an economy is to look at the ratio of liquid liabilities (comprising currency in circulation and demand deposits) to GDP. Data from the International Financial Statistics (IFS) has been used to compute this

figure for Fiji, Papua New Guinea, and Vanuatu. The choice of the countries was driven by the availability of consistent data; the IFS does not provide any data for several Pacific island countries. Measures of financial depth, as with any other empirical measure, have their problems with reliability of the source data. For example, liquid capital may constitute holdings of stocks in addition to cash and demand deposits; the measure of financial depth in this case suffers from the omission of a relevant variable for which there is no consistent data. Furthermore. the presence of substitutes for cash in the form of pigs, tabua, mats, and so on, that are often used as a medium for exchange compounds the problem of omission of relevant variables. Not withstanding these problems, the financial depth of the listed countries are computed and compared to the estimates of King and Levine (1993a).

Financial depth is lacking in Fiji, Papua New Guinea and Vanuatu (Table 1), and there is little reason to believe the same is not true for the rest of the Pacific island countries. Financial depth is particularly low, even in comparison to the figures for the averages for poor and middle income

Country	Per capita GDP (US\$ 1987)	Financial depth
Fiji	1,570	0.17
Papua New Guinea	700	0.27
Vanuatu		0.24
Comparators ^a		
Very poor countries	<391	0.26
Poor countries	>391 and <1,161	0.39
Rich countries	>1,161 and <4,998	0.51
Very rich countries	>4,998	0.67

Table 1Indicators of financial depth in Fiji, Papua New Guinea, and Vanuatu and comparator
countries, 1987

^a The figures used for comparison are drawn from King and Levine (1993a).

Notes: Financial depth is defined as (CC+DD)/GDP; CC denotes currency in circulation; DD denotes demand deposits; and GDP is gross domestic product; all values are in 1997 local currency units. The percapita GDP figures are in 1987 US\$ to provide comparisons with the figures in the lower half of the table. **Sources:** Data extracted from World Bank tables and *International Financial Statistics* (IMF. 1948–).

countries with similar per capita income to the Pacific island countries. For example, Fiji, a middle-income country, has financial depth of 17 per cent, comparable to the very poor countries as reported in King and Levine (1993a). Not withstanding the problems with the quality of data, there is other supporting circumstantial evidence of the poor state of financial sector activity in many of the Pacific island countries. For example, the 85 per cent of the population of Papua New Guineans who live in rural areas have access to basic and intermittent banking services. In the urban areas, queues at banking outlets extend to hundreds on paydays. The PNG banking sector, as of 1997, accounted for 28.1 per cent of the domestic credit provided; this compares with 88 per cent for Australia, 49.3 per cent for India, and 54.3 per cent for Indonesia (World Bank 1999). These observations are symptomatic of communities being deprived of competitively priced banking services.

It is often acknowledged that the nonmonetary sector makes up a significant proportion of economic activity in the Pacific island countries. Much of these activities take place in the absence of financial intermediation and through well-established community norms. For example, it is a common practice in the rural villages of Fiji to share a good catch of fish and an excellent harvest from the gardens. These exchanges are undertaken to smooth consumption over time through creation of obligations; they are symptomatic of economies lacking competitive instruments for saving. If increasing financial depth has a positive externality on the rate of growth of output in an economy, then it could be worthwhile exploring strategies to induce entry of the subsistence sectors into the monetary sector. Furthermore, the above would imply that financial depth is greater in the monetary sector than in the subsistence sectors of the economy. This is supported by casual observation of the extent of use of cash in

urban *vis-à-vis* rural areas of the Pacific island countries; the international financial centres perhaps provide the starkest of contrasts.

Another area of minimal activity in the Pacific island countries is their stockmarkets. There is some stockmarket activity in Port Moresby and Suva; these markets are thin both in terms of the number of stocks listed and extent of daily trading. For example, as of January 2001, a total of nine companies were listed on Suva's South Pacific Stock Exchange; their total market capitalisation was around F\$235 million or 7 per cent of GDP. The total value of trade that took place on 4 December 2000—the last day of trading for the calendar year—was F\$15,518 or less than 0.01 per cent of the value of the stock.

Most of the companies listed on the stock exchange are either local subsidiaries of multinationals or divested state enterprises. Several of the local companies, particularly those in Fiji, that have grown into multimillion dollar businesses have tended to remain family-run enterprises. This is in sharp contrast to recent technology companies in the United States that rushed to be listed. The reluctance of businesses in the Pacific island countries to make the transition at point 'J' in Figure 1 deserves some scrutiny to better understand the impediments to a more vibrant stockmarket in the region.

The smallness of the individual markets in the Pacific island countries makes the operation of stock exchanges in each of the capital cities uneconomic. Technology in the form of Internet trading has overcome problems of isolation. Options to better integrate the stockmarkets in the region via the Internet and perhaps digital TV could be explored in order to deepen this market.

Costs of funds in Papua New Guinea, particularly to small rural entrepreneurs, range from 10–600 per cent; these figures compare unfavourably with neighbours Australia and Fiji. Such high costs of funds imply that only projects with appropriately high returns get the go-ahead. Furthermore, insecurity of property rights on potential collateral often requires entrepreneurs to have significant equity in the project before the lender funds it. The absence of creditor records constrains the credit provider in allowing for credit risk in costing the loan. These costs reduce the extent of investment, and hence penalise employment and output growth in the rural districts.

Villagers in Papua New Guinea often have to travel long distances for banking facilities-should they have a bank account to begin with. The local trade stores charge up to 10 per cent of the value of a cheque to cash it and only after establishing the identity of the client and credit worthiness of the issuer of the cheque. To cash a competitors' cheque, the Papua New Guinea Banking Corporation (PNGBC) charges 5 per cent of its value for the service and only when proof of identity of the client is provided and the cheque is written out by the government or a creditworthy large corporation. These high costs are attributable to a combination of the market power the few providers have, the small scale of operation, the high cost of information on customers, and high costs of intermediate inputs such as the transportation of cash. telecommunications. and so on. These costs act as a tax on financial intermediation, thereby lowering both savings and investment in the economy. The reduced liquidity constrains access to health, medicines, education, and so on, to these communities.

Although the bulk of the financial services in the Pacific island countries is provided by banks; other financial institutions including credit unions, national provident funds, and small rural thrift and credit unions, are engaged in the sector. The informal sector, including relatives, the local trade-store that provides goods on credit, and local moneylenders provide the link between the small client and the formal institutions. In thinking about deepening the financial sector, it is important to consider the potential role these institutions could play in financial and economic development as there are obvious benefits from engaging the wider community in the economic welfare of the nation. This thought now leads to considerations of public sector intervention in fostering financial development in the Pacific island countries.

Past public sector interventions in the financial sector

In several Pacific island countries, the active participation of the state in the provision of financial services has been counter-productive. State-owned financial institutions that have delivered highly subsidised services have 'crowded-out' the private sector. Price regulation in the form of an interest rate ceiling has compounded this problem. Many of these state-owned enterprises are not financially viable and their reliance on public sector support has had serious budgetary consequences. These interventions—intended to provide cheap financial services to the community-end up constraining the development of the financial sector. The subsidised credit leads to demand in excess of supply, and to credit rationing by the lender and demands for increased public sector support to such schemes. Rationing creates incentives for rent seeking, including crony-capitalism, corruption and nepotism.

One implication from the above is for the state to refrain from participation in the provision of financial services and allow the competitive forces of the market to determine level of supply and prices for the services. In specific cases where private sector activity is absent, the state may 'purchase' the required services through competitive bids from private providers. Otherwise, the role of the state should remain that of a regulator.

Many of the Pacific island countries have financial institutions for provision of development finance (for example, the Fiji Development Bank (FDB) and the National Bank of Fiji (NBF) in Fiji, PNGBC and the **Investment Corporation of Papua New** Guinea in Papua New Guinea). These institutions have attempted to provide subsidised credit to enterprises in sectors designated to be of priority by their governments. The subsidies are funded either from the budget or from other profitable areas of the business. In terms of Figure 1, finance is provided at the price r^{Z} or less to borrowers that fall in the region to the left of B^Z. Such intervention impacts on both the supply and demand of finance services. On the supply side, the intervention squeezes the client base of the other financial intermediaries, thereby raising costs to the remainder of the borrowers. On the demand side, the problems of adverse selection and moral hazard lead to the funds being used less than efficiently. The price of funds being less than the market-clearing level leads to excess demand; the ensuing credit rationing is the source of corruption and crony capitalism.

Often, a concentration of loans to a few preferred borrowers compounds the problem for the lender. For example, recent work on PNGBC shows that some 60 per cent of the total loans by value are held by less than 1 per cent of the total population of borrowers. These large loans have had a long history of poor performance, culminating in severe problems for PNGBC's liquidity and even its solvency. This is not an isolated incident; similar examples are littered across the Pacific island countries. In terms of Figure 1, the above practice is akin to transplanting borrowers who would normally reside to the left of B^L to a region to the right of this threshold and with an interest rate ceiling. The poor record of success of such transplants suggests that these interventions are ill-advised.

Superannuation schemes are popular in the Pacific island countries as a means of

funding the retirement of workers. These schemes create illiquid funds that are suitable for long-term investments. When the number of people entering the scheme is larger than those exiting—as is the case in nearly all of the Pacific island countries-the superannuation schemes produce a growing stock of illiquid capital. Governments have found these funds an attractive source of finance for their budget deficits. Once again, many of these schemes have failed to deliver on the hopes that these schemes created on their inception. For example, the Public Officers' Superannuation Fund (POSF) in Papua New Guinea has lost considerable amounts of money in failed real estate investments in Australia. Now, there is a distinct possibility that members will lose a large part of their contributions to POSF. Such incidences erode confidence in the saving schemes and are to the detriment of savings and financial sector activity. This could be an extreme case, but problems of a similar nature-perhaps of a lesser degreeseem to be pervasive.

Governments have attempted to catapult specific sections of the population into entrepreneurial activity through specialised entities created for the purpose. For example, several attempts have been made by provincial authorities in Fiji to enable the indigenous population to take a more active part in commerce through purchase of shares in local companies. Many of these investments were funded with public money and contributions from the villagers. Several of these investments failed to produce a return. Some of the companies that were initially considered to be good financial prospects went bankrupt after the investment was made, and in the few cases where profits were realised, a disproportionate amount was siphoned off by the intermediaries. In the process, corruption and nepotism together with demands for further public support to make these ventures viable has prevailed (see Ratuva 2000).

Governments have become directly involved in business, supposedly because the private sector did not have the financial capacity to fill the void. Several airlines, the Forum Shipping Company, and national banks were initiated on this pretext. The promise made at the start was that these companies would contribute to economic activity and to the state budget. The stateowned enterprises in Papua New Guinea were once mandated by their government to provide a specified rate of return on the investment;³ not surprisingly, these returns did not eventuate.

Options for enhancing financial sector development

A revision of Figure 1 draws on the options available to policymakers in developing the financial sectors in their countries. Policy can act on the two schedules, r and C(K), in increasing financial depth (Figure 2). The options can be interpreted as attempts to shift borrowers and lenders along the horizontal axis as shown by the arrow labelled 0 and with an interest rate ceiling at r^{Z} ; here we consider moving the two schedules along the vertical axis. Policy options available to reduce the general interest rate facing the economy are denoted by I while those associated with lowering the margin between r and C(K) are labelled II.

The general rate of interest an economy faces is dependent on the macroeconomic conditions such as the rate and variability of inflation and exchange rates, and the level of budget deficits and public sector debt. Price stability in terms of low rates of inflation and a stable exchange rate translates into a low rate of interest. A good credit rating for the public sector translates into low rates of interest for the whole economy. Policymakers can minimise r by ensuring that their budgets balance over time and debt is kept at sustainable levels. Assuring monetary independence for the central bank and disallowing the monetisation of budget deficits may help. The Central Bank Act passed by the PNG Parliament in March 2000 serves as a useful guide in this regard.⁴ Ensuring macroeconomic stability, including that of the exchange rate, would be one means of achieving the shift depicted by the arrow labelled as I in Figure 2.

The margin that financial intermediaries charge for the provision of financial services may be reduced via a reduction in the intermediate costs of the sector. The most obvious of these costs are those associated with the ability to enforce (debt) contracts. Security to property rights, including access to collateral, directly impinges on the margin as depicted by the arrow labelled as II in Figure 2. Small borrowers with little or no security pay punitive rates of interest on their advances (which is generally of a short-term nature) because of the high transaction costs associated with such lending. The CEO of a multinational bank based in Port Moresby advised the author that lending to coffee plantations in the country was high risk because 'it is impossible to take possession



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of the major collateral, land, should the venture fail'. Wealth locked into land, the one major asset that many residents have, often cannot be accessed to secure credit due to the opaque definition of individual property rights on communal land and problems of enforcement of such property rights. As a result, a wide section of the community is deprived of access to competitively priced finance.⁵

Other intermediate inputs into finance include costs of transportation of funds, including telecommunications and those associated with security. Unreliable telecommunications and high security costs are blamed for the lack of banking services in much of Papua New Guinea. Maintenance of law and order and provision of basic transport and social infrastructure have beneficial externalities on all sectors of the economy and as such should be a primary responsibility of governments. These basic services are inputs into most activities, and hence public sector funding of these services would not disadvantage any sector within the economy. The high costs of these intermediate inputs constrain the expansion of the financial sector in Papua New Guinea, and perhaps in several other Pacific island countries. Regulatory barriers compound this problem and impede competition in the sector, giving market power to the few suppliers.

Regulation and supervision

Given the positive externalities on aggregate output and national welfare from wellfunctioning financial sectors, and the negative externalities from financial sector collapses, there is a substantial and significant role for sensible regulation of the financial sector.

Financial intermediaries mobilise savings from a large population of small savers; many of these savers do not have the capacity to monitor the use of their funds. A collapse of any of the deposit-taking institutions has the potential to lead to bankruns with cascading effects on the liquidity of other related and otherwise solvent institutions. A lender of last resort needs very deep pockets for a successful rescue when such a crisis takes effect. The financial crisis leads to an erosion in aggregate savings, and hence in total investment, and subsequently in the rate of growth of aggregate output. In this context finance is akin to oil in an internal combustion engine, while the intermediaries perform the role of the oil pump; the breakdown of the pump and/or leakage of oil cause damage to and potential seizure of the engine.⁶ For these reasons, governments cannot afford to stand aside and allow the collapse of large financial institutions. Often, the central bank is obliged to act as the lender of last resort to financial institutions experiencing liquidity problems. Insolvent institutions require winding down, often with public sector support, to prevent the creation of panic.

The inability of depositors to monitor their banks' behaviour necessitates prudential regulation. Governments have invariably come to the rescue of depositors in the case of bank insolvencies. As a result, however, the financial institutions have an incentive to take excessive risk given the implicit insurance provided by the state. One option available to policymakers is to price this service, or better still to induce the private sector to provide such insurance. These *ex* ante arrangements are time-inconsistent since, *ex post* the crisis, the state has little option but to come to the rescue. Regulation, therefore, is still necessary to prevent excessive risk-taking by financial institutions.

In the Pacific island countries, the bulk of risks of financial crisis have emanated from state-run banks since their private counterparts, being subsidiaries of foreign banks, have their parents for support. For example, if the Fiji subsidiary of Westpac collapses, the responsibility for its rescue rests with the parent company in Australia and the Reserve Bank of Australia; the latter because the parent company is registered in Australia. In contrast, liquidity and solvency problems of the National Bank of Fiji are the problems of the Fiji authorities.⁷

The limited liability of companies compounds the problems of moral hazard. Limited liability financial intermediaries have an incentive to engage in lending that is riskier than the expected value of financial gains, given that the lender would realise the full benefit of successful investments but bear only a fraction of the penalty of failed investments. This would suggest that regulation is necessary to induce responsible investment by the intermediaries.

The stock and securities markets also rely on many and disparate investors; these investors rely on publicly available information for their investments. Once again, these markets are 'vulnerable to the frictions and instabilities that fraud, misrepresentation, or even just non-uniformity of presentation can create' (White 1999:6). The self-fulfilling nature of bank⁸ and stockmarket runs on the collapse of public confidence in these institutions strongly suggests that prevention is a far superior strategy to *ex-post* remedies; hence there is a crucial role for regulation in these markets.

Policymakers have several options for improving the prudential (safety and soundness or risk-restraining) regulation of their financial sectors. These actions are targeted at either inducing self-regulation through making actions of intermediaries public information and/or through the withdrawal of the commitment to rescue failing financial institutions at the expense of the taxpayer. The latter commitment is generally not credible; hence policymakers try to price the value of their service to private providers of financial services.

Instruments commonly used in prudential regulation of the financial sector in the Pacific island countries include, but are not limited to the following: stipulated minimum

capital net worth requirements to provide a buffer against potential insolvency; minimum liquid asset holdings at the central bankput in place to ensure availability of a minimal level of liquidity; limitations on the range of activities—put in place to prevent unnecessary risk taking; and disclosure rules that require the intermediaries to reveal information on their operations to a monitoring agency, often a section within the central bank—to induce responsible lending. To date, these measures have worked to produce the desired effects, except for state-owned enterprises; examples of the latter include the recent problems of the PNGBC and the NBF. One fruitful area of research in design of better regulatory policies for the financial sector in the Pacific island countries would be to investigate reasons for these departures from the norms.

Making information more transparent by implementing accounting standards and disclosure rules that mandate provision of financial information to the shareholders, creditors, and the stockmarket, will induce more responsible behaviour on the part of financial intermediaries. The threat of a fall in stock prices due to adverse information about the business will induce managers to act in the best interests of the owners, even when such ownership is diverse and thinly distributed.

Many of the Pacific island countries are too small for meaningful competition in their financial sector. For example, Nauru with a population of 12,000 people, cannot be expected to have more than one bank branch. If competition is to be relied on for the delivery of competitively-priced services in the absence of price regulation, then markets have to remain contestable. Minimising regulatory barriers to entry and exit is one means of inducing competitive pricing of financial services. Direct monitoring of anticompetitive behaviour may induce competitive pricing by the incumbents. Allowing domestic markets to integrate with global financial markets, particularly given the advances in communications technology, could lead to increased competition in the domestic financial sector. Allowing domestic firms to list and issue shares on foreign stock exchanges, encouraging banks to offer trading on the stock exchange, and allowing trade in index funds could all deepen the financial markets of the Pacific island countries.

Not withstanding the above, some of the isolated small communities of the Pacific island countries may still be deprived of financial services. In these cases, the purchase of financial services by the state on a competitive basis from private providers may be necessary. These purchases should be transparent in terms of the costs involved, while competitive provision would ensure that the most efficient mode of supply is chosen, hence maximising efficiency of resource use in the provision of the service.

As countries develop, their financial structure evolves (Levine 1997). Changes that take place with growth in per capita income include an increase in the size of the financial sector, as measured by the size of total assets or liabilities of the financial intermediaries

relative to GDP; a shift in the allocation of credit, particularly to the private sector, from the central bank to the commercial banks; growth in non-bank intermediaries such as insurance companies, investment banks, and pension funds; and an increase in stockmarket activity, as quantified by the turnover and value ratio. Evidence over the last two decades in support of such development in the Pacific island countries is lacking. In the case of Fiji, financial depth, defined as the ratio of liquid liabilities to GDP, has increased only marginally over the last two decades (Figure 3). Financial depth increased from approximately 10 per cent of GDP in 1980 to 17 per cent in 1998; this change translates to an annual rate of growth in financial depth of 3 per cent. New Zealand, which seems to have started from a similar position to Fiji, had an annual growth rate in its financial depth of 6.8 per cent and reached a proportion of liquid liabilities to GDP of 34 per cent by 1997. Data on the allocation of credit to the private sector by commercial banks is not available, but credit growth has remained subdued for much of the last decade perhaps as the result of political uncertainty.



Notes: Financial depth is defined as the ratio of liquid liabilities (comprising currency in circulation and demand deposits) to GDP; data drawn from IFS and RBF, 2000.

Most of the Pacific island countries have a regulatory framework adequate to ensure safe operation of their financial sectors. These regulations require enforcement; an area that needs a lot more resources. Two recent cases may illustrate this point. The financial problems faced by the National Bank of Fiji would not have arisen, at least to the same extent, had the legislated capital adequacy requirements been enforced. The responsibility for enforcement of these regulations rests with Reserve Bank of Fiji and the state.9 Similarly, the PNG-POSF debacle on the failed real estate investment in Australia would not have arisen had all the legislated procedures been followed prior to the commitment of members' funds.10

The Pacific island countries are geographically isolated from the major finance markets, but recent progress in information technology is overcoming this handicap. There is every possibility for seamless integration of global capital markets via the Internet. A standardised and transparent regulatory framework, that treats foreign and domestic investment neutrally, protects creditor and stockholder rights, and has a bankruptcy code that is consistent with those operating in the larger markets will reduce cost of capital to entrepreneurs and encourage greater financial activity in the region. This will provide opportunities for diversification of investment in and from the region.

Conclusion

Could it be that insufficient financial development in the Pacific island countries has been a serious obstacle to growth in these countries? Some of the Pacific island countries appear to have had stable macroeconomic conditions, an educated workforce, and an open trading regime; and yet their development record over the last two decades has been far from exemplary. For example, in Samoa, the macroeconomic conditions in terms of a stable exchange rate, low rates of inflation and interest rates, an educated population and an open trade regime, have been inadequate to sustain growth over the long term.

Evidence suggests that countries with financial institutions that are effective at revealing information with greater clarity will promote faster economic growth through increased investment than their counterparts that are less adept at doing the same. Relative to their income level, most of the Pacific island countries have lagged behind other developing countries in terms of development of their financial sectors. Even in the case of international financial centres such as those in Port Vila and Raratonga, the rural population has limited access to financial services. As much as growth in income leads to a rise in demand and hence supply of financial services, there is significant empirical evidence to suggest that economic growth follows financial development. There are several ingredients to growth; the experiences of the past in other countries suggest that the absence of any one ingredient can become a serious impediment to the growth process.

Policymakers have a significant role in the development of their financial sectors. Monetary and fiscal policies affect taxation of financial intermediaries; legal systems affect operation of financial systems; and national institutions influence the development of financial institutions. Past attempts at controlling interest rates and active public sector participation in the delivery of financial services have been detrimental to the development of efficient financial sectors in the region. Policy has a role in prudential regulation of the financial sector and in the creation of a macroeconomic environment that is conducive to investment. Enabling better access to information via standardising disclosure and reporting requirements across the region will reduce the cost of lending, thereby encouraging financial



sector activity. All of these factors are within the remit of policymakers.

Many of the Pacific island countries have the regulatory structure necessary for prudential regulation of their financial sectors but lag in their capacity to translate these regulations into action. To be able to deliver on their intent, regulations have to be enforced; for this to happen, the regulatory agencies need an adequate number of welltrained and well-paid staff. Evidence of the availability of such capacity in the Pacific island countries is lacking. Moreover, the state-owned enterprises have not been subjected to the same degree of scrutiny as their counterparts in the private sector. Capacity building in these areas should be a priority. The small size of some of the Pacific island countries may require amalgamation of regulatory agencies across the region to provide the benefits from economies of scale. Alternatively, some of the regulatory services could be outsourced to agencies better equipped for the task. These options are worthy of further consideration.

Notes

- ¹ That is, placing limits on interest rates or credit availability more generally.
- ² We can build these factors in, together with notions of uncertainty, but doing so is at the cost of losing simplicity; at this stage we believe this is not worth the effort.
- ³ See for example, clause 5 of the PNG National Executive Council decision number 163/83 that was passed on 5 October, 1983.
- ⁴ The Act provides for the usual caveats on political interference with the conduct of monetary policy; the caveat is that it limits the Government of Papua New Guinea to a K100 million overdraft from the Bank of Papua New Guinea.
- ⁵ De Soto (2000) argues that the inability to use assets, particularly land without clear title, to leverage off into capitalism is the basic reason for poverty in the developing world.

- ⁶ Finance is often referred to as the 'lubricant' of the modern economy.
- ⁷ Under the National Bank of Fiji Act, the Government of Fiji fully guarantees the deposits with NBF and therefore could be obliged to rescue an insolvent NBF.
- ⁸ Even solvent banks are prone to becoming illiquid after a significant run on their deposits.
- ⁹ See Siwatibau (1996) for a commentary on the rescue by the state of NBF.
- ¹⁰ Submissions made to the National Provident Fund Commission of Inquiry suggest considerable procedural anomalies in the disbursement of funds.

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Table A1 Per-capita GDP—level and rate of growth, exports/GDP, aid/GDP, savings/GDP,

	(000,)	per annum	per capita () US\$	(per cent per annum)	literacy (per cent)	mortality, (per '000 live birth	expectancy (cu	capîta ırrent US\$)
Cook Islands	19	0.65	4,521	:	100(1994-7)	25(1998)	69((1991 - 93)	:
Fiji	825	1.24	1,982	-3.7(1998)	92(1995)	19(1998)	72.7(1998)	46.1
Kiribati	91	1.42	594	6.1(1998)	97(1999)	58(1998)	60.9(1998)	200.8
Marshall Islands	62	3.21	1,509	3.7(1995)	91(1999)	26(1998)	62.8(1994 - 97)	811.3
Federated States of	118	2.03	1,841	0.3(1999)	81 (1999)	28.5(1998)	67.3(1998)	705.6
Micronesia								
Nauru	12	1.85	2,900	:	90(1999)	26(1994-97)	60.8(2000 est.)	:
Niue	2 0.9	0(1994-97)	2,250	:	99(1991 - 93)	18(1994)	66(1994 - 97)	:
Palau	19	2.41	6,448	:	98(1999)	19(1995)	71(1996)	4,814.1
Papua New Guinea	4,807	2.22	756	0.9(1999)	72(1995)	59.4(1998)	58.2(1998)	78.5
Samoa	169	1.43	1,255	1.3(1998)	98(1999)	25(1998)	68.7(1998)	215.3
Solomon Islands	448	3.14	712	4.0(1999)	62(1999)	22.2(1998)	70.8(1998)	102.4
Tonga	100	0.28	1,614	2.2(1999)	95.9(1991 - 93)	21.3(1998)	70.6(1998)	259.6
Tuvalu	10	2.69	1,215	:	99.5(1991 - 93)	29(1997)	65.6(1991 - 93)	:
Vanuatu	200	2.41	1,276	-2.0(1999)	70(1989-90)	35.5(1998)	65(1998)	221.8

FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH IN PACIFIC ISLAND COUNTRIES

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