Outreach, depth, efficiency and stability: Vanuatu on a global scale

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Contents

Abstract

Literature is replete with financial development related studies—outreach, depth, efficiency, and stability—spanning various countries and regions. Gaps remain, however, including that relating to the PICs. Using the 4 x 2 financial development matrix indicators and data covering the 1980-2016 period, this study systematically investigates the trends in the case of Vanuatu, among the least studied PICs. While outreach might be at comfortable levels for a dispersed, small island economy, efficiency and stability are concerning, having implications for economic growth and development.

Keywords: outreach, depth, efficiency, stability, Vanuatu

1. Introduction

Reforms have been a common feature of the financial landscape across countries and regions, including developing, emerging and developed nations during the last few decades. Efforts have spanned all facets of the landscape—outreach, depth, efficiency, and stability. The motivation appears equally multi-faceted, as alluded to by the imposing body of literature illustrating positive and strong financial development vis-à-vis economic growth and welfare nexus (Levine 1997, 2005; Luintel and Kahn 1999; Levine and Zervos 1996; King and Levine 1993a, 1993b). Greater outreach or financial access has significant beneficial effects as well, especially for traditionally underserved segments, such as small and medium enterprises (SMEs) and the socio-economically disadvantaged (de la Torre, Martínez Pería, and Schmukler 2010; Beck, Demirgüç-Kunt, and Martínez Pería 2008; Beck and Demirgüç-Kunt 2006). Deep financial systems are perceived to be more resilient to shocks and less prone to volatility and financial crises (Easterly, Islam, and Stiglitz 2000; Aghion, Banerjee, and Piketty 1999; Acemoglu and Zilibotti 1997). Policy efforts have involved, among others, improving access to banks (for savings, credit, and financial transactions in general) and developing capital markets as an alternative and competitor to the banking model, which is usually viewed as more costly. Overall, the reform pace and efforts globally have been impressive.

Nonetheless, trends and efforts in some parts of the world have largely remained obscure, mainly for reasons of lack of time-series and comparative data, making targeted policy debates and outcomes challenging. One such part of that world is the Pacific Island Countries (PICs), located east to north-east of Australia. Reform efforts have not been any less venturous or purposeful in the Pacific. In fact, they have been quite broad and comprehensive, including enactments and significant regular revisions to relevant acts. These include: banking; reviews of the payment systems and monetary policy frameworks; adoption of Bank for International Settlements' (BIS) recommended international standard policies and guidelines; and the revision of these as required. Government and central banks have also been highly proactive in advancing the global financial inclusion agenda.

Yet, the PICs remain largely growth and poverty-challenged, with the usual unique socio-economic characteristics—small scale, scattered, remote, and vulnerable, suggesting that, foremost, financial service providers would not be allowed to reap the benefits of scale economies. The anticipated limited demand for savings, insurance and credit, as well as simple payment transactions would make large parts of the population commercially unviable—in any case, the provision of service outside urban centres would not be cost-effective. Transaction costs and risks are amplified in the absence of proper documentation such as enterprise registration, land titles and even formal addresses, exacerbated by the shadow financial operators—the informal sector. Exclusion becomes the apparent candidate. Costs and risks are further amplified by volatile conditions such as informality and the consequent fluctuations in the income streams of many microenterprises and households, making them even less attractive to formal financial institutions. At the macro level, vulnerability to internal and external shocks, together with political and social instabilities, make the situation more challenging. And then there's the governance issue—private and government institutions alike are victims, which is likely to undermine market-based provision of financial services as well as reform attempts and government interventions aimed at fixing market failures.

Against this backdrop, the case of the PICs becomes an intriguing test—how has outreach, depth, efficiency and stability fared in this part of the world over the years and against comparative economies, regions and averages. And, that is precisely the aim of this study. In doing so, the study focusses on a PIC least studied not only in the financial literature but across several disciplines; nonetheless, equally desired by the respective central bank—

Vanuatu. Having properly documented the trends, with explanations, this study will provide a basis for testing numerous relationships such as finance vis-à-vis economic growth, education, income inequality and health in the case of Vanuatu.

Using the 4 x 2 financial development matrix indicators, data covering the 1980-2016[1] period, and comparative regions—Lower Middle Income (LMI), East Asia Pacific (EAP) and PICs—this study finds that banks in Vanuatu have comparatively greater geographical outreach. However, efficiency and stability performances have been relatively weak indicating a need for more robust collaborative policy approach between financial institutions, the Reserve Bank of Vanuatu, the Vanuatu Government and relevant stakeholders to improve the linkages between macroeconomic and financial sector policies in Vanuatu. Section 2 analyses the outreach, depth, efficiency and stability trends in Vanuatu.

2. Outreach, depth, efficiency and stability on a global scale, 1980-2016

Existing literature has developed various indicators to measure the depth, access, efficiency and stability of financial institutions and markets around the world. In this study, we use the indicators from the 4 x 2 Matrix of Financial System Characteristics by Cihak, Demirguc-kunt, Feyen and Levine (2012), which is increasingly used in the literature (for instance, Karapici and Karapici 2016; Svirydzenka, 2016; and Sharma, Roca, Dakai and Manoa, 2014) in relation to benchmarking financial development around the world. In analysing Vanuatu's financial development, two things we should be aware of: (i) the availability of time-series data for Vanuatu as well as comparable countries; and (ii) the virtual absence of financial markets in Vanuatu.

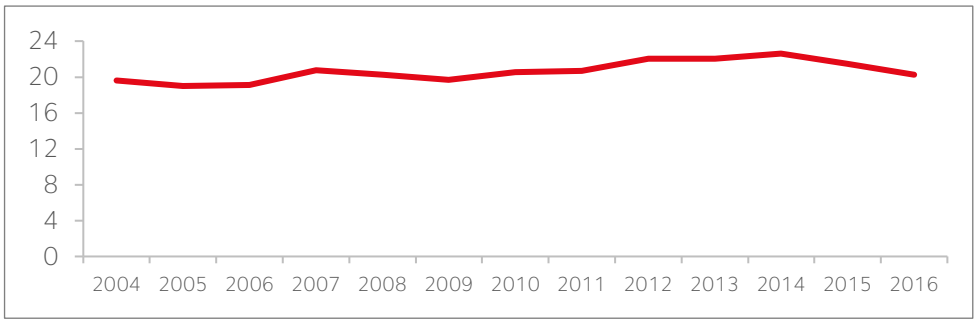
Accordingly, the financial institutions sector is the focus of this study on Vanuatu. Bearing in mind data challenges, the measures we use include number of bank branches per 100,000 adults and the overall financial institutions access index (access/outreach), private sector credit to GDP and financial depth index (depth), lending-deposits spread and overall financial efficiency index (efficiency), and capital adequacy and asset quality ratios (stability). To better understand Vanuatu's trends over the thirty-year period, we benchmark against other PICs, averages of region[2] and income categories[3] to which Vanuatu belongs.

2.1 Outreach

2.1.1 Bank branches per 100,000 adults[4]

Vanuatu depicted a gradual increasing trend in the number of bank branches per 100,000 adults throughout the 2004-2016 period as shown in Figure 1. This upward trend reflected the growth in number of branches overtime from 20 commercial bank branches in in 2004 to 31 branches in 2016[5]. Although there are four commercial banks operating in Vanuatu, the majority of the additional bank branches was for one bank—the National Bank of Vanuatu (NBV)[6]. NBV has 27 branches and agencies throughout the country, while the other three commercial banks maintain their head offices and branches in the two main urban centres of the country.

Figure 1: Bank Branches per 100,000 adults during 2004 — 2016 (number)



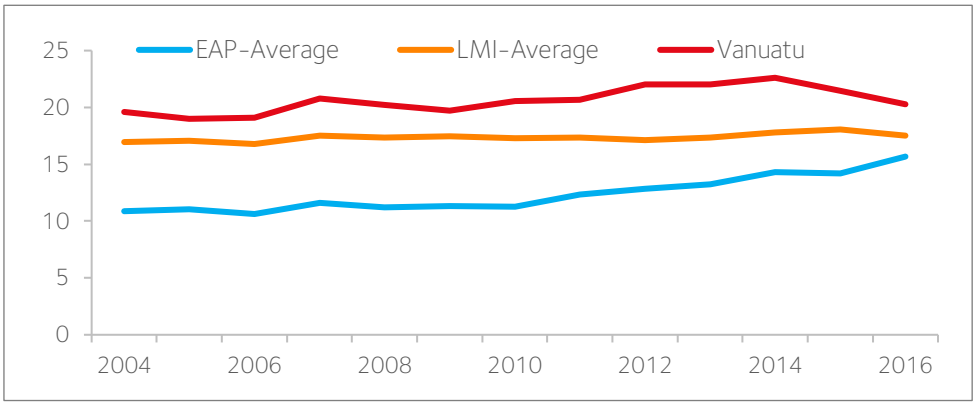
Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis LMI and EAP

Vanuatu's trend in bank branches per 100,000 adults exceeded the average number of bank branches for both the LMI and the EAP regions during the reviewed period as shown in Figure 2. Vanuatu recorded an average of 20 branches, while the average number of bank branches per 100,000 adults for LMI countries stands at 17.3 branches, and 12.3 branches per 100,000 adults for the EAP. These results were understandable considering Vanuatu's smaller population relative to the LMI and EAP regions. Although the majority of countries within the EAP and LMI regions such as Indonesia, Malaysia and other developing Asian countries, face major challenges from geography dispersion similar to the geographical characteristics of Vanuatu their average number of bank branches per 100,000 adults was actually lower than Vanuatu's.

Interestingly, 100,000 adults for the EAP region the lower number of bank branches was attributed mainly to developing countries in Asia which recorded on average 10.6 branches thus dragging the overall EAP indicator downwards (Ayyagari and Beck 2015). Overall, the lower average of bank branches in the LMI and EAP region could be explained by the noticeable growth in the digital financial services within these country groupings. The IMF (2016) highlighted that the rapid development in digital financial services[7] in particularly mobile phone transactions in the sub-Saharan Africa and Asia provided a low-cost effective alternative to the traditional banking systems such as bank branches, thus attributing to the low trend for bank branches for the LMI. Furthermore, the IMF (2018) highlighted faster growth in digital financial services for Bangladesh, Indonesia, Mongolia, Cambodia, China, Malaysia, Thailand, Samoa and Philippines thus attributing largely to the low number of commercial bank branches per 100,000 adults for the EAP.

Figure 2: Bank branches per 100,000 adults amongst the EAP and LMI countries (number)

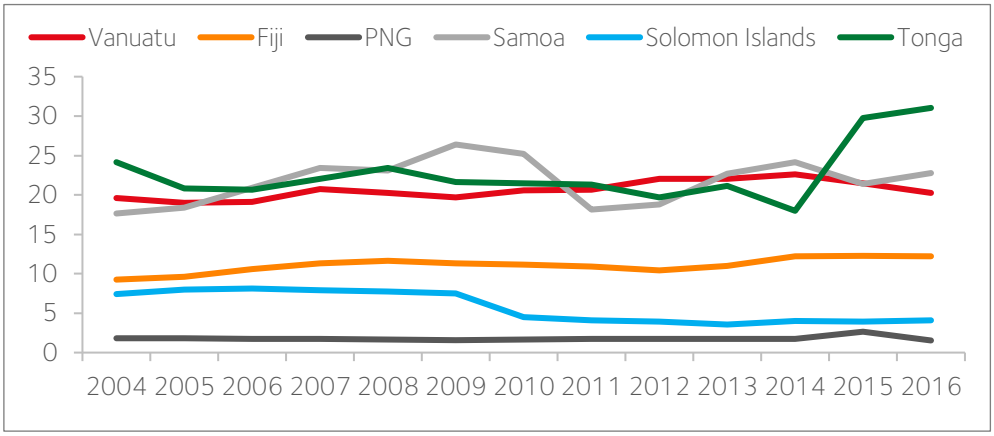


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis PICs

Figure 3 shows that Vanuatu, Tonga and Samoa are the leaders in the number of bank branches per 100,000 populations, with averages of 20 and above during the sample period, respectively. Fiji and Papua New Guinea, both of which have a more developed financial sector, recorded averages of 11 and below branches per 100,000 adults throughout the period. Solomon Islands also depicted a similar trend. These differences could be explained by the demographic and geographical characteristics of each economy. Apart from a more developed financial sector, Fiji and Papua New Guinea, Solomon Islands and Vanuatu have a larger population and bigger geographical boundaries relative to Tonga and Samoa, as shown in Table 1. ADB (2001) states that access to financial institutions in rural populations is especially poor in the Melanesian countries (Fiji, Papua New Guinea, Solomon Islands, and Vanuatu), where the population is dispersed and physical geography is a hindrance. This explains the lower level of bank branches for these countries relative to Tonga and Samoa.

Figure 3: Bank branches per 100,000 adults for PICs (number)



Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Table 1: PICs geography and demography characteristics

	Key Indicators		
	Land Area (000 sq. kms)	2016 Population ('000)	Adult Population (%)
Vanuatu	12	272.5	63
Fiji	18	884.9	71
PNG	463	8151.3	62
Solomon Islands	29	651.7	61
Samoa	3	196.0	61
Tonga	0.747	100.7	63

Data Source: https://www.spc.int/nmdi/population;https://sdd.spc.int/en/stats-by-topic/population-statistics; https//pacific.unfpa.org/sites/default/files/pub-pdf/web; https//www.unfpa.org/data/transparency-portal/unfpa-pacific-sro

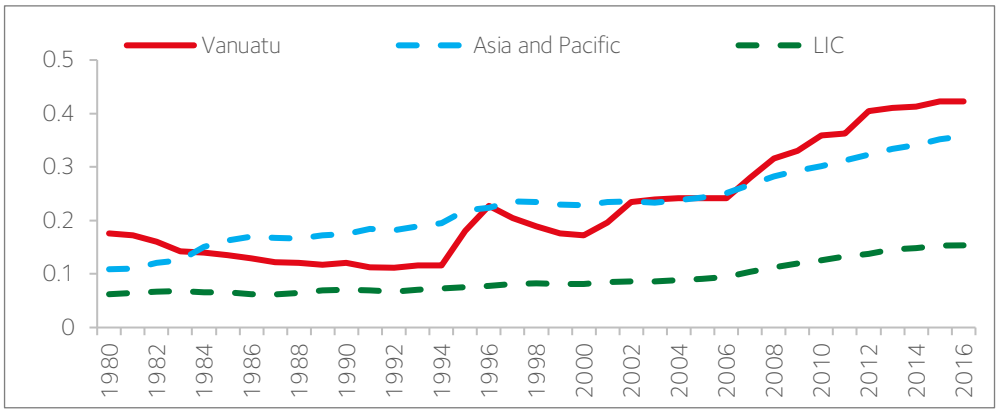
2.1.2 Financial Access Index (FAI) [8]

FAI measures how accessible financial institutions are by the number of bank branches and automated teller machines (ATM)s per 100,000 adults. A zero index represents the least access to financial institutions and a one index represents the highest level of financial access to financial institutions by countries (Svirydzenka 2016). This section provides additional development on the number of ATMs to supplement the discussions under 2.1.1. The first ATM in Vanuatu was introduced in 1997. For the decade from 2004-2014, the number of ATMs increased to 57. In 2016, the number of ATMs was recorded at 70 country-wide. With this increasing trend ATMs per 100,000 adults also rose from 5 per 100,000 adults in 2004 to 41 per 100,000 adults in 2016. In considering the development discussed in 2.1.1, Vanuatu's FAI grew from 0.2 in 2004 to 0.4 in 2016.

Vanuatu FAI vis-à-vis LMI and EAP

Vanuatu's average FAI outperformed LICs average FAI throughout the almost four-decade period. Vanuatu's average FAI stood at 0.2, relative to 0.1 for the LMI. Vanuatu's FAI trended below the EAP from 1980 to 2004. Post 2004 saw Vanuatu's FAI pick up so it trended above the EAP until 2016 as shown in Figure 4. Overall, the average FAI for EAP was at 0.2 during the period similar to Vanuatu's. The lower FAI for both LMI and EAP may be explained by the rapid development of digital financial services.

Figure 4: FAI across LMI and EAP (Index=100)

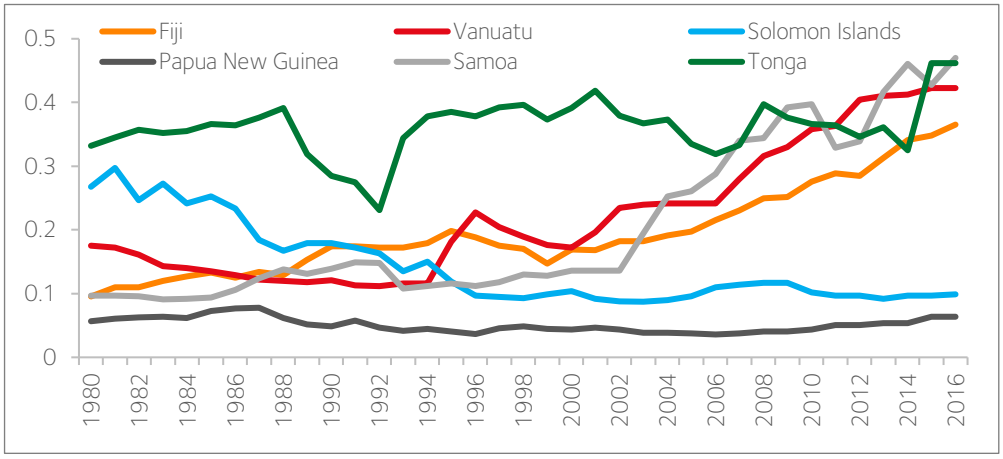


Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

Vanuatu vis-à-vis PICs

The movement in Vanuatu's FAI is comparable with that for Samoa and Tonga. All these three countries FAI outperformed the FAI for Fiji, Solomon and Papua New Guinea, respectively. However, in terms of their rankings, Tonga is rank higher in terms of its FAI in the Pacific region with around 0.3 to 0.4, while Papua New Guinea's FIA ranking is the lowest, recording around 0.04-0.05 from 2004 to 2016 as shown in Figure 5. As discussed in 2.1.1 these developments reflect the differences in the geographical and demographic characteristics of the PICs as depicted in Table 1.

Figure 5: FAI across PICs (Index=100)



Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

2.1.3 Vanuatu's access performance summary

This study uses the single indicator bank branches per 100,000 adults and the overall financial access index to analyse Vanuatu's outreach performance against the LMI, EAP and other PICs over the period from 1980-2016. The measures indicate that Vanuatu's banks have greater geographical outreach than the EAP and LMI, though somewhat comparable to few PICs. Since these measures depend entirely on the demographic characteristics of economies, a lower outreach may not necessarily imply poor performance in financial access. Similar to other countries within the LMI and EAP regions and other PICs, there is greater opportunity for Vanuatu to consider the development of digital financial services which provide a lower cost relative to traditional banking system.

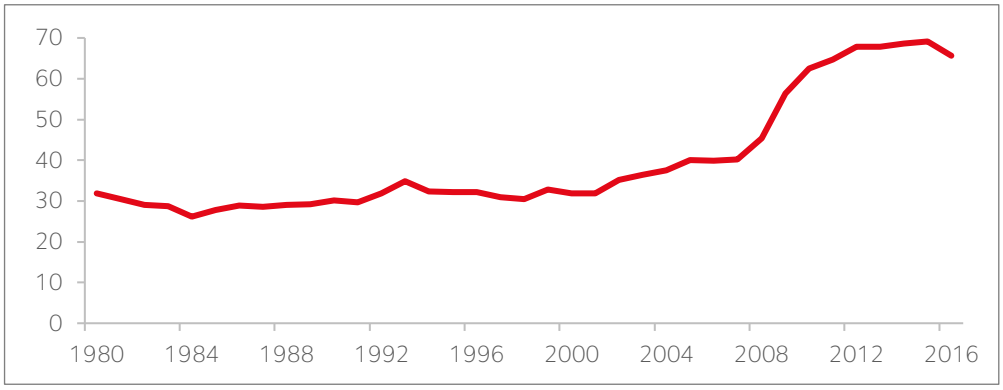
2.2 Depth

2.2.1 Private sector credit to GDP

Growth in private sector credit (per cent of GDP) in Vanuatu appears to depict a gradual and steady trend from 1980 to 2008, then a noticeable increase from 2008-2016 as shown in Figure 6. The ratio averaged 29.0 per cent in the 1980s and gradually rising to 32 per cent and 42 per cent in the 1990s and 2000s, respectively. The average picked up significantly to 67 per cent during the 2010-2016 period.

The period after the 1980s has been an interesting one in Vanuatu's history. This is known as the post-independence era, thus most major development in the economy occurred during this period. The period of 1980s to early 2000 witnessed mergers, acquisitions and liquidations of commercial banks. In addition, lending rates were high which might have restricted credit.

Figure 6: Private sector credit by deposit money banks and other financial institutions (per cent of GDP) in Vanuatu 1980-2016 (per cent)



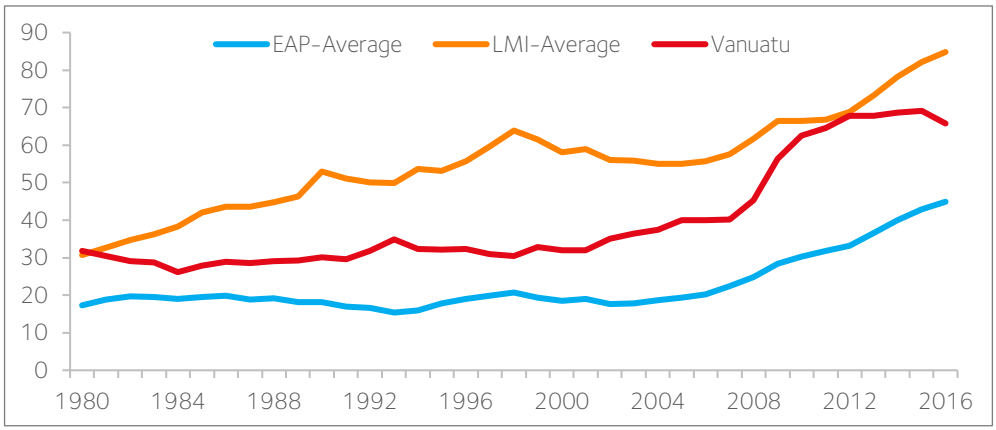
Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database .

Bank credit to the private sector picked up strongly between 2008 and 2016, supported mainly by good economic performance. Major developments which attributed to this favourable economic growth included the implementation of major government infrastructure projects. For instance, the Millennium Challenge Account project (2008 – 2010), other government infrastructure projects, the massive rehabilitation and reconstruction projects in aftermath of the Cyclone Pam in 2015. The entrance of a new bank (BRED) in 2008 also added to significantly strong growth in the private sector witnessed during the period. RBV QER (various issues 2008-2016). The trend in private sector credit post tropical cyclone era from 2015 until 2016 was mainly driven by private consumption as demand for business loans remained weak. Credit to business remained subdued, reflecting structural and institutional issues and uncertainties surrounding the government tax policies.

Vanuatu vis-à-vis LMI and EAP

As Figure 7 shows, Vanuatu's private sector credit to GDP trend was below the World Bank's LMI (Lower Middle Income) countries average for almost the entire sample period. On a more positive note, Vanuatu's trends were better than the EAP (East Asia Pacific) average.

Figure 7: Private sector credit by deposit money banks and other financial institutions (per cent of GDP) across the EAP region and LMI countries (per cent)

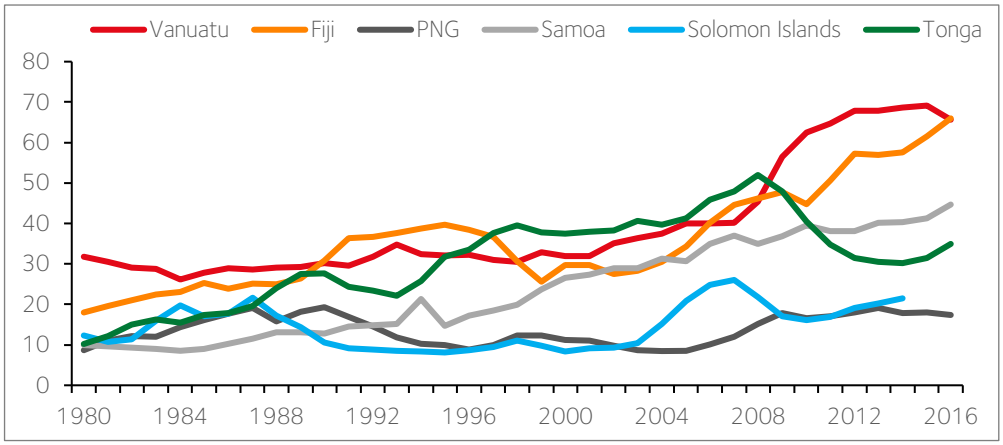


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis PICs

Continuing on the positive note, Vanuatu's trends, on average, were better than most of the region's island economies as shown in Figure 8. The only island economy trending better than Vanuatu over the sample period was Fiji. Interestingly, particularly post 2010, there seems to be a noticeable gap between Vanuatu's trends and those of Papua New Guinea, Tonga and Solomon Islands.

Figure 8: Private sector credit by deposit money banks and other financial institutions (per cent of GDP) for PICs (per cent)



Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

2.2.2 Financial Institutions Depth Index (FID)[9]

In addition to the private sector-credit-to GDP indicator, we also consider the Financial Institution Depth Index (FID), which provides a summary of each countries performance in terms of depth. FID shows how deep financial institutions are, the higher the FID sub-index the deeper financial institutions are and vice versa.

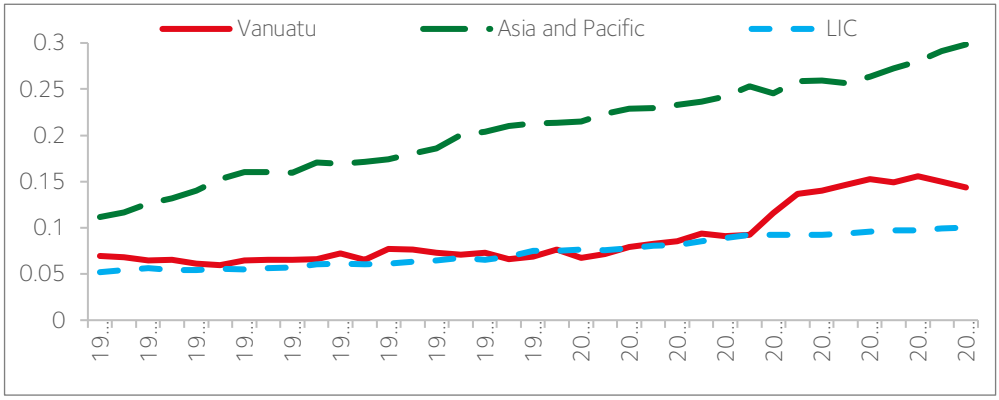
Vanuatu's FID sub index depicted a stable trend ranging from 0.06 and 0.09 during the period 1980 to 2007. It increased to 0.1 in 2008 and remained at that level until 2016. The development in Vanuatu's FID closely follows the trend in the ratio of private sector credit as per cent of GDP by banks and other financial institutions during the entire reviewed period. This is because in Vanuatu, commercials banks and other financial institutions have more penetration and available data than insurance and pension funds, thus making it easier to

quantify their contribution to the economy. There is virtually non-existence of mutual funds in Vanuatu.

Vanuatu vis-à-vis LMI and EAP

The trend in Vanuatu's FID was somewhat similar to the LMI, ranging from 0.05-0.09 from 1980 until 2007, but exceeded the LMI index from 2008 until 2016. The latter trend may imply that that financial deepening was slower in low income developing countries than advanced and emerging countries of the LMI category (Svirydzenika, 2016), thus triggering a lower LMI index than Vanuatu's index from 2008-2016. In contrast, Vanuatu's FID trended below the EAP's FID throughout the reviewed period as shown in Figure 9. This trend could denote that financial deepening in highly advanced economies within the EAP region is more rapid than in less developed economies within the grouping, thus EAP's FID exceeded Vanuatu's.

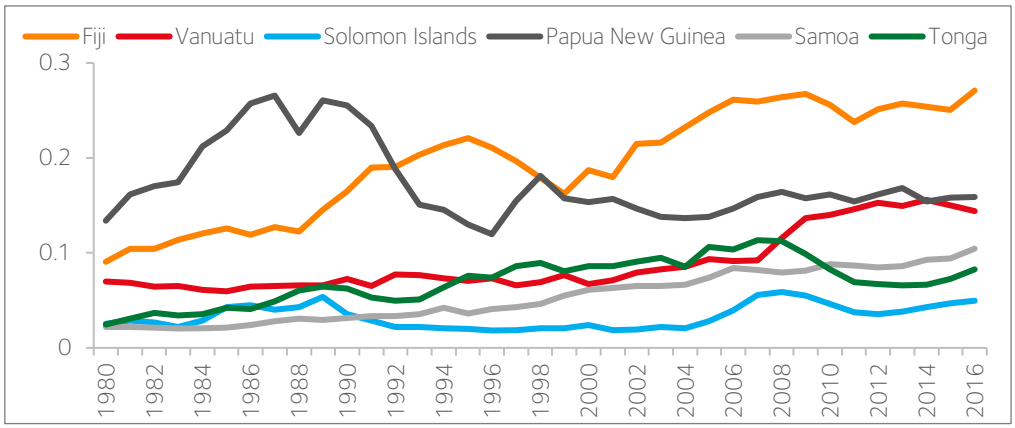
Figure 9: FID across LMI and EAP (index=100)



Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

Vanuatu's FID was lower than Fiji and Papua New Guinea and higher than Solomon Islands throughout the period. It depicted a comparable trend with Tonga and Samoa from 1980 until 2008, then exceeded both countries FID until 2016 as shown in Figure 10. This development is expected considering Fiji and Papua New Guinea have a more developed financial sector relative to other PICs, making them leaders in PICs FID. The ADB report (2001), Sharma and Goundar (2012) affirms that Fiji and Papua New Guinea have more banks and financial institutions than the other Pacific island countries. Furthermore, these are the only countries that have a functioning stock exchange.

Figure 10: FID across PICs (index=100)



Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

2.2.3 Vanuatu's depth performance summary

This analysis uses the most common single measure in literature, private sector credit to GDP and the Financial Institution Depth Index to analyse Vanuatu's depth performance against the LMI, EAP regions and PICs, over the 1980-2016 period. The depth performance produces mixed results. The performance of the single measure was somewhat positive relative to all other PICs and the EAP regions, but lower relative to the LMI category. Vanuatu's Financial Institution Depth Index was comparable to the LMI and most countries throughout the Pacific, but lower than the EAP region and Fiji and Papua New Guinea.

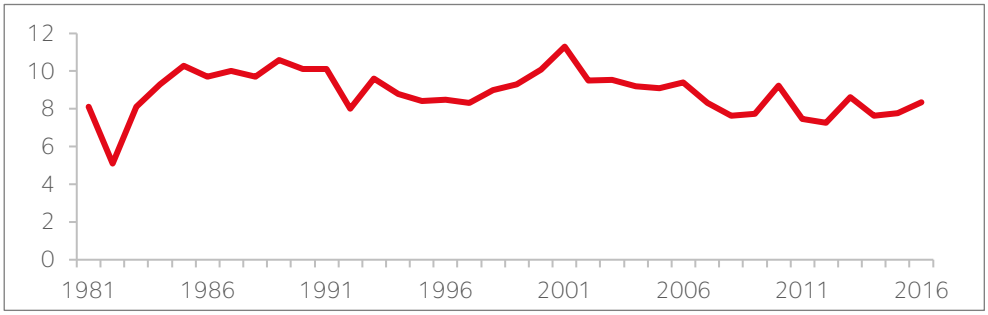
2.3 Efficiency

2.3.1 Lending–deposit spread

Interest rate spread in Vanuatu was very high in the early 1980s and remained high until 2016. The average interest rates spread remained relatively high and stable at around 9.0 per cent throughout the four decades. Furthermore, Figure 11 shows that the highest spread in that period was recorded at 10.1 per cent in 1983, (1980-1990), 11.3 per cent in 2001 (1991-2001), 9.55 per cent (2002-2012).

Although the Reserve Bank of Vanuatu intervened in the early 1980s and issued informal interest rates policy guidelines to alleviate credit cost, the outcome was not successful. Non-performing loans were, and continued to be, a challenge for commercial banks in Vanuatu. This implies that interest rates spread will continue to widen if no policy actions are undertaken to address this issue. In fact, Vanuatu has the highest ratio of non-performing loans to total loans relative to other Pacific island countries. Few studies, Athy and Van de Walle (2000), RBV QER various issues (1986-2016), PFTAC (2011), provide other possible explanations for the persistent high lending-deposit spread in Vanuatu. These includes high risk in all aspects undertaken by banks such as credit risk, economic risk, country risk, high cost of doing business, small market size, low credit ratings by conventional banking standards, insufficient competition in the banking sector and shortcomings relating to the legal and land ownership system.

Figure 11: Lending-deposit spread 1981-2016 (per cent)



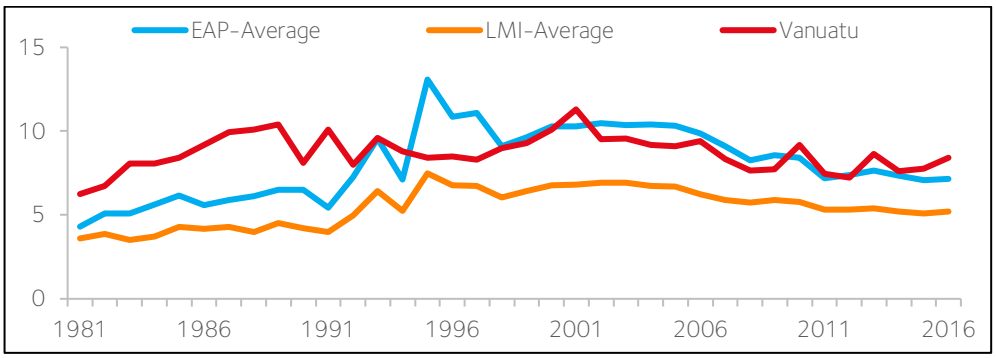
*Data Source: Reserve Bank of Vanuatu QER (Various Issues)*10, https://www.rbv.gov.vu/index.php/en/research-publications*

Vanuatu vis-à-vis LMI and EAP

The trend in Vanuatu's lending-deposit spread was relatively higher than the average lending-deposits spread of the LMI countries throughout the period reviewed. With regards to the EAP region, Vanuatu's lending-deposit spread was higher pre Asian crises from 1981-1995, lower during the Asian crises from 1996-1998, then depicted a gradual and comparable trend with the EAP average interest rates post Asian crises from 1999-2016. The variation of interest rates spread between Vanuatu and the LMI reflected the large variation of interest rates spread among countries within the LMI category. A study by Tennant and Folawewo (2009) finds that within the LMI countries, low income European countries, small islands developing countries and Asian countries all have lower interest rates spread than Latin American and Sub-Saharan countries which have much higher spreads. The offsetting effect of the variation in lending–deposit spread

resulted in lower average spread for the LMI than Vanuatu. From post Asian crises to the current period, the average lending-deposits interest spread throughout the EAP have depicted a declining trend similar to the Vanuatu trend, however interest rates have remained at elevated levels. This indicates that banks within the EAP region are still inefficient even after the crises. Adams (2008) affirms that spreads between loan and deposit remained high in the Asian region because it is the main source of banking systems income, especially in Indonesia, the Philippines and Thailand, although this practice is not fully consistent with a competitive banking system.

Figure 12: Lending to Deposit Spread amongst the LMI and the EAP (per cent)

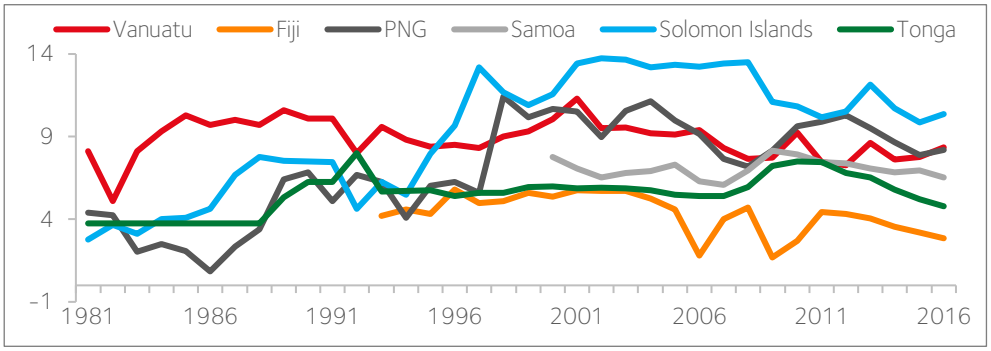


Data Source: Global Financial Development Database (July 2018) https://www.worldbank.org/en/.../data/global-financial-development-database, Reserve Bank of Vanuatu QER (Various Issues) https://www.rbv.gov.vu/index.php/en/research-publications

Vanuatu vis-à-vis PICs

Vanuatu's lending-deposit spread recorded the highest, relative to all PICs in the period 1980s–1996. Since 1996, Vanuatu has been one of the three countries within the PICs with the highest lending–deposit spread with Papua New Guinea and the Solomon Islands. The average lending-deposit spread for Vanuatu throughout the period (1980-2016) stands at 8.9 per cent, Papua New Guinea at 7.1 per cent, Solomon Islands at 9.3 per cent. Samoa and Tonga recorded 7 per cent and 6 per cent each, while Fiji recorded the lowest average lending-deposit spread at 4 per cent. With the exception of Fiji which has a well-developed financial market, lending–deposits spread for PICs are still very high relative to the average LMI lending–deposit spread. Several papers—Jamaludin, Klyuev and Serechtaponge (2015), PFTAC, (2011) and Jayaraman and Sharma (2005)—discuss various reasons for the high interest rates spread which is common to all PICs. This includes the cost and risk of doing business in these countries, the oligopolistic nature of the banking systems, inadequate quality of institutions (in particular, the strength of contract enforcement), communal ownership of land which limits collateral availability, and frequent government changes increases political and economic uncertainty and countries' risk premium. Based on the lending-deposit spread indicator, Fiji's banking system is more efficient, followed by Tonga and Samoa. Vanuatu, Papua New Guinea and Solomon Islands banking systems are less efficient.

Figure 13: Lending-deposit spread relative for PICs (per cent)



Data Source: Global Financial Development Database (July 2018) https://www.worldbank.org/en/.../data/global-financial-development-database,, Reserve Bank of Vanuatu QER (Various Issues) https://www.rbv.gov.vu/index.php/en/research-publications

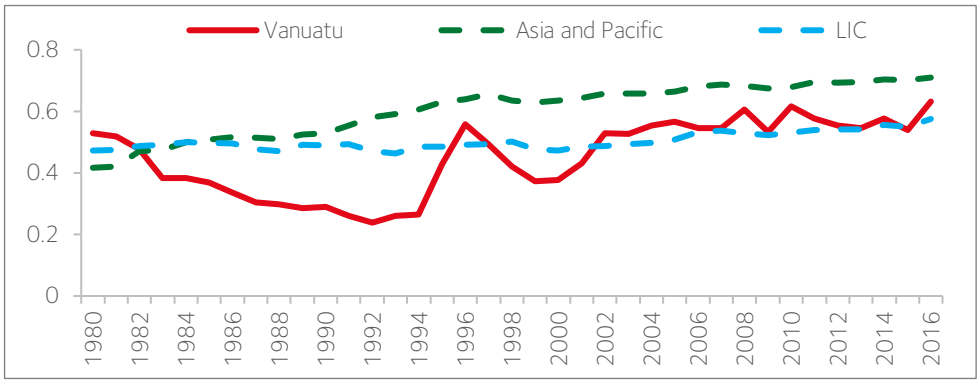
2.3.2 Financial Institution Efficiency Index (FIE)[11]

This sub-index constitutes a combination of the three aspects of bank efficiency. These are: (i) efficiency in intermediating savings to investment, as measured by the net interest margin and lending-deposit spread; (ii) operational efficiency measures, such as non-interest income to total income and overhead costs to total assets; and (iii) profitability measures, such as return on assets and return on equity. A higher index indicates a most efficient financial institution.

Vanuatu vis-à-vis LMI and EAP

Vanuatu's FIE started higher than the indexes for LMI and EAP in 1980, then fell sharply and remained below the FIEs for both the EAP and LMI respectively until 1996. From 1997 until 2016, Vanuatu's FIE depicted a comparable trend with the LMI FIE until the current period. However, Vanuatu's FIE trended below the average FIE for the EAP throughout the four-decade period. As depicted in Figure 14, the average FIE for Vanuatu and the LMI region stands at 0.5, while the average FIE for the EAP stands at 0.6 throughout the sample period. This trend shows that Vanuatu's banks are as efficient as the average performance of the LMIs banking system, but still less efficient relative to the average performance for the Asia and Pacific banks.

Figure 14: FIE across LMI and EAP (index=100)

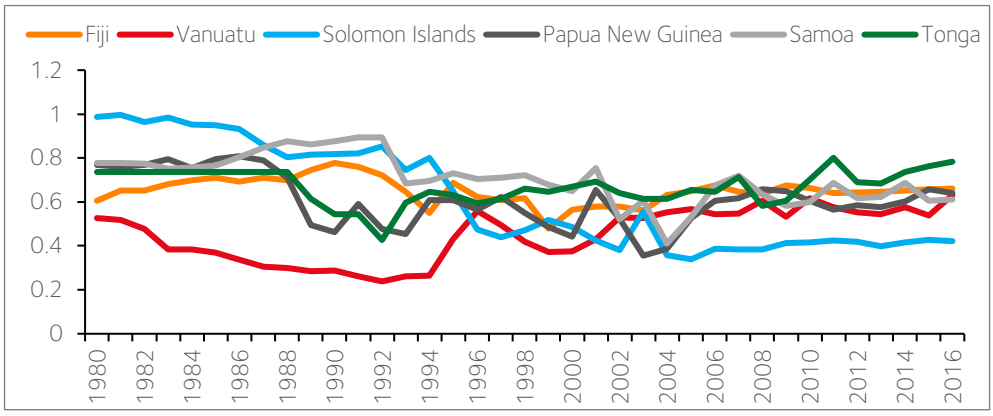


Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

Vanuatu vis-à-vis PICs

Vanuatu FIEs is ranked lower than the average FIEs for all PICs throughout the sample period. Fiji, Samoa and Tonga recorded 0.7 and Papua New Guinea and Solomon Islands each recorded 0.6. However, recent trends show that Vanuatu's FIE exceeded Solomon Islands FIE from 2000-2016. Overall Vanuatu's banks are less efficient relative to the average performance for the PICs banking system.

Figure 15: FIE across PICs (index=100)



Data Source: International Monetary Fund Financial Development Index Database (August 2018) https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42

2.3.3 Vanuatu's efficiency performance summary

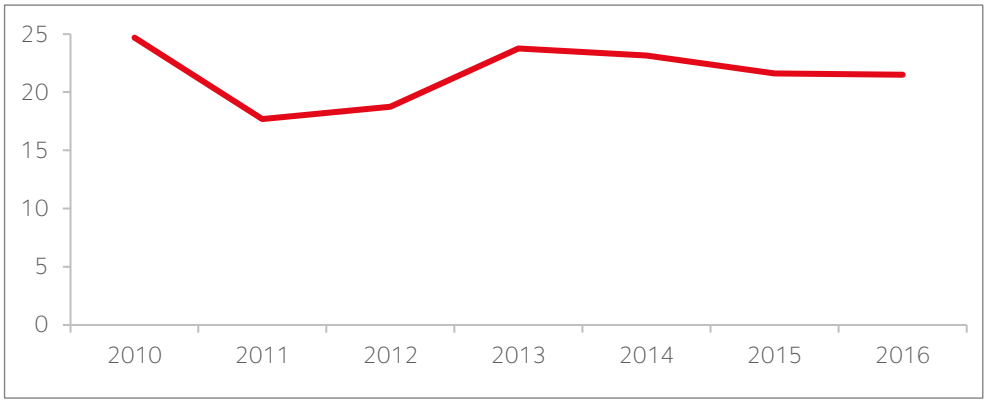
This study uses lending-deposit spread and the Financial Institution Efficiency Index to assess Vanuatu's efficiency performance against the LMI, EAP and PICs over the period 1980-2016. Vanuatu's interest rates spread was higher but comparable to countries within the EAP and other PICs, similarly Vanuatu's Financial Efficiency Index was rather low, indicating relative inefficiency. This requires a robust collaborative policy approach from financial institutions, the Reserve Bank of Vanuatu and the Vanuatu Government in terms of increasing access to affordable credit at lower costs for domestic businesses which may led to reduction in interest rates spread. A good example is the effective implementation of the Vanuatu National Financial Inclusion Strategy 2018-2023, which includes MSME financing as a strategic goal.

2.4 Stability

2.4.1 Regulatory capital to risk-weighted assets (RCRWA)

The RCRWA ratio for Vanuatu fluctuated from 2010-2013 (declined from 2010-2011 then slowly picked up from 2011-2013) and depicted a decreasing trend from 2014 until 2016 as shown in Figure 16. The average ratio throughout the period stands at 21.0 per cent, with the highest ratio of 25.0 per cent attained in 2010. The highest RCRWA in 2010 reflected a stronger Tier 1[12] capital base, exceeding the minimum capital adequacy ratio of 8 per cent. In 2011, the minimum adequacy ratio was raised to 12 per cent, thus resulted in the decline in the overall capital base and total risk weighted assets of commercial banks. Nonetheless the capital adequacy ratio was maintained above the minimum capital adequacy requirement of 12 per cent[13]. The RCRWA ratio increased gradually from 2012-2013 reflecting the accumulation of commercial banks capital base beyond the increase in risk-weighted assets. A downward trend was noticeable from 2014-2016, implying a declining capital base, in particular Tier 1 capital and an increasing trend in total risk-weighted assets, RBV QER (various issues 2010-2016). Overall, Figure 16 shows that commercial banks in Vanuatu are adequately capitalised throughout the period as implicated by the higher level of RCRWA ratio exceeding the minimum capital adequacy requirement of 12.0 per cent.

Figure 16: Regulatory capital to risk-weighted assets 2010-2016 (per cent)

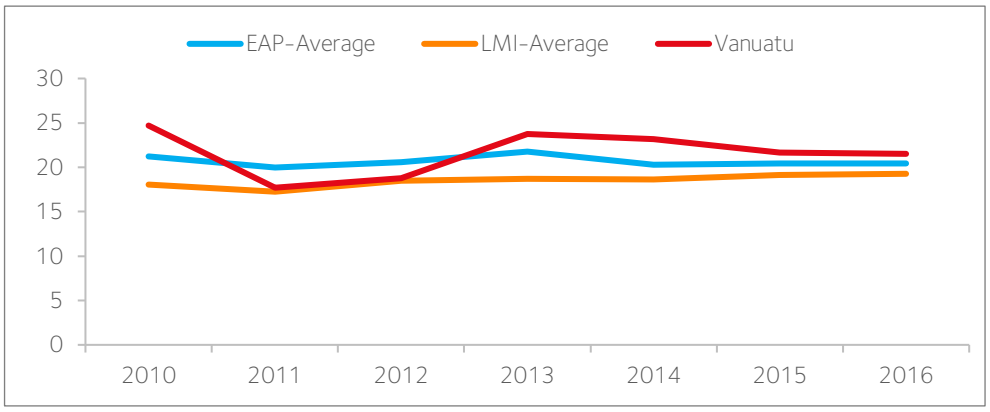


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis LMI and EAP

Vanuatu's average RCRWA ratio (21.6 per cent) was relatively higher than the average RCRWA ratio for LMI countries (18.5 per cent). Although Vanuatu's RCRWA trended lower than the EAP average ratio from 2011-2012, it picked up after 2012 to exceed the average RCRWA for EAP (20.7 per cent) from 2013-2016 as shown in Figure 17. These trends clearly show that Vanuatu's banking industry is adequately capitalised to absorb expected losses, relative to the performance of the average banking industry in the EAP and LMI countries.

Figure 17: Regulatory capital to risk-weighted assets amongst LMI and EAP (per cent)

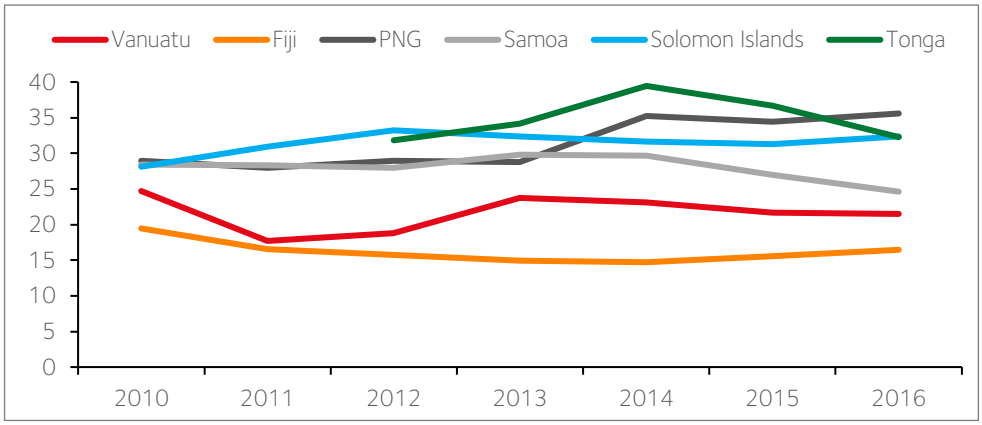


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis PICs

Vanuatu's average RCRWA ratio of 21.6 per cent was higher than Fiji's average RCRWA ratio of 16.2 per cent throughout the period. However, Vanuatu ranks lower relative to the ratios for Papua New Guinea, Samoa, Solomon Islands and Tonga which stand at 31.4 per cent, 28 per cent, 32.3 per cent and 32.2 per cent, respectively. Generally, Vanuatu banks are better capitalised against expected losses than Fijian banks, however there is a need for more improvement in terms of more solvency of financial institutions.

Figure 18: Regulatory capital to risk-weighted assets amongst PICs (per cent)



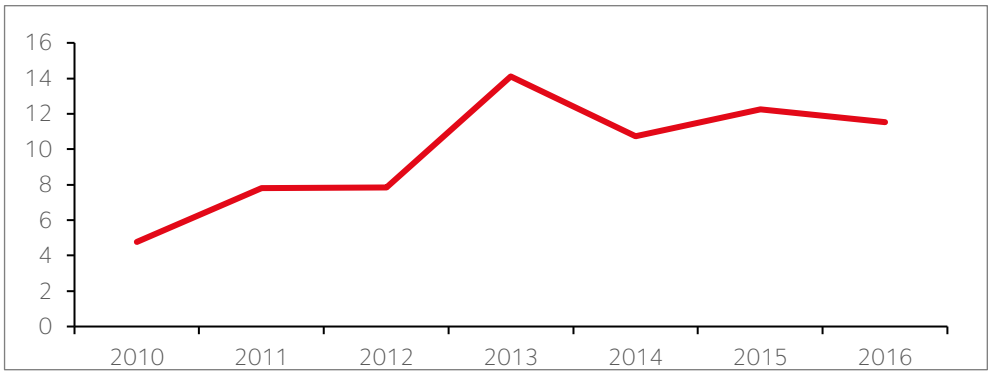
Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

2.4.2 Non-performing loans to gross loans[14] (NPLs)

Vanuatu's ratio of NPLs to Gross loans depicted an increasing trend, with an average ratio of 9.8 per cent from 2010 to 2016 as shown in Figure 19. The escalating ratio reflected the increasing level of impaired assets throughout the period. The highest ratio of 14.1 per cent, recorded in 2013, reflected mainly the reclassification[15]of loans as per the IMF prudential guideline. One of the reclassifications was a downward migration of substandard loans from performing to non-performing accounts. Although impaired assets remained high, the domestic banking industry continues to maintain high quality standard loans, representing around 80-90 per cent of the total loans portfolio throughout the period. RBV QER (various issues, 2010-2016). It should be noted that the high NPLs are recorded for few banks and not across the industry. The accumulation of NPLs are due mainly to structural or institutional issues which take too long to be resolved. For instance, the slow or congested judiciary procedures for asset foreclosure by default borrowers impacts on the level of NPLs. This also discourages banks from taking up new lending opportunities. Similarly, De Fontenay (2000),

highlights that the increasing level of high-risk loans in Vanuatu is due to the shortcomings of legal and land ownership systems. This is an ongoing issue which is yet to be resolved. Furthermore, the IMF Report (2018), discusses that high NPLs for very few banks were related to their ongoing conservative balance sheet management as a proactive measure for mitigating impaired assets and unfavourable business conditions.

Figure 19 NPL to gross loans 2010-2016 (per cent)

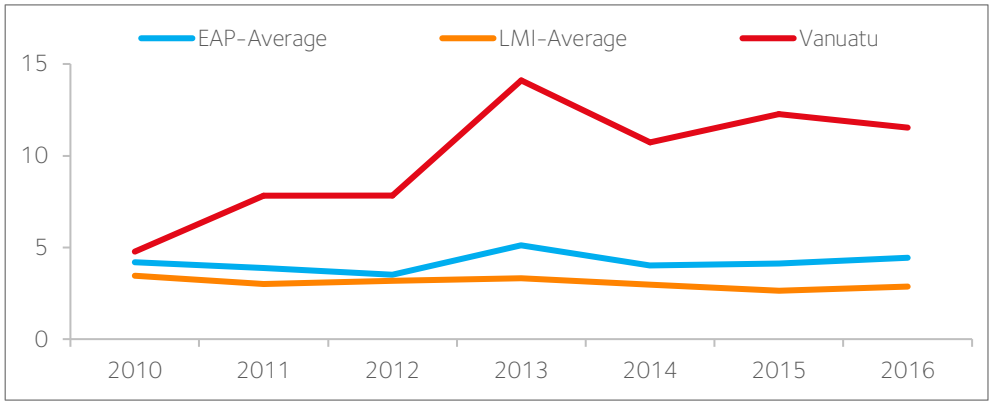


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis LMI and EAP

Vanuatu's NPL appears to trend relatively higher than the average ratios for the LMI countries and the EAP region, respectively throughout the period 2010-2016. The average NPL ratios for the LMI and EAP stood at 3.1 per cent and 4.1 per cent, respectively.

Figure 20: NPL to gross loans amongst LMI and EAP (per cent)

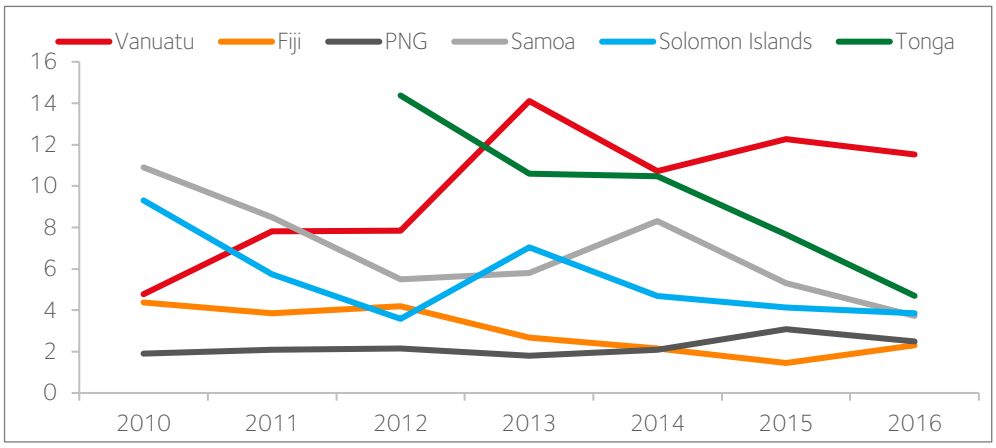


Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

Vanuatu vis-à-vis PICs

Vanuatu's NPL ratio depicts an increasing trend from 2010-2016, in contrast to a declining NPL ratio for other PICs. In fact, Vanuatu's NPL ratio is higher than all PICs ratio in recent years. Papua New Guinea recorded the lowest average NPL ratio of 2.2 per cent throughout the period, against Fiji with 3.0 per cent, Solomon Islands with 5.5 per cent, Samoa with 6.9 per cent and Tonga with 9.6 per cent.

Figure 21: NPL to gross loans amongst PICs (per cent)



Data Source: Global Financial Development Database (July 2018)
https://www.worldbank.org/en/.../data/global-financial-development-database

2.4.3 Vanuatu's stability performance summary

The proxies used in this study are the regulatory capital to risk-weighted assets (RCRWA) and non-performing loans to gross loans (NPL). These measures were used to analyse Vanuatu's stability performance over the 2010-2016 period against the average performance of LMI, EAP and the PICs. These measures produced mixed results, the RCRWA remained robust, while the NPL measure is somewhat concerning. Again, there is need for greater collaboration between the Reserve Bank and the Vanuatu government to address the accumulation of NPLs, which may not be entirely macro-prudential, but more related to institutional issues.

3. Conclusion and policy implications

This study systematically investigates the outreach, depth, efficiency and stability trends in Vanuatu, using the 4 x 2 financial development matrix indicators and data covering the 1980-2016 period. The indicators include the following:

- bank branches per 100,000 adults and the overall financial institutions access index (access/outreach),
- private sector credit to GDP and financial depth index (depth),
- lending-deposits spread and overall financial efficiency index (efficiency), and
- capital adequacy and asset quality ratios (stability).

To better understand Vanuatu's trends over the thirty-year period, we benchmark against other PICs, averages of region (East Asia Pacific) and income categories (Lower Middle Income) to which Vanuatu belongs. The data sources are World Bank and International Monetary Fund (IMF).

For a small island economy, Vanuatu appears to have done well in terms of outreach and may not be too concerned about the depth of the financial sector. However, barring the regulatory capital adequacy ratio for stability, measures indicate that both stability and efficiency trends might be worrying. The relatively high interest rate spreads are likely to keep potential borrowers and investors away from the formal financial sector thus negating much of the proactive action on the financial inclusion agenda. Declining capital allocation is also likely to dampen the economic growth and development efforts. Similarly, the stability of the sector, from an asset quality perspective, is not optimistic—if the trends continued, stability would become more concerning, especially in light of the absence of the nation's bail out capacity and small scale.

While deeper investigations are required to better understand the trends and implications, the findings of this study suggest that the central bank needs to pick up its lenses and start paying closer attention to issues highlighted in this study, including those relating to high interest rates and alarming NPL trends.

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Notes

1 Exception where relevant data is available. Number of bank branches per 100,000 adults (Financial Access Survey) for Vanuatu became available in 2004 and capital adequacy and asset quality ratios (stability Indicators) became available in 2010.

2 According to the UN classification Vanuatu is part of the East Asia Pacific Region (EAP).

3 As per the World Bank classification Vanuatu is in the group of low middle countries (LMI).

4 The FAS is calculated as (number of commercial banks + number of commercial bank branches)*100,000/ Vanuatu adult population.

5 International Monetary Fund Financial Access Survey website: https://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C.
6 National Bank of Vanuatu: https://www.nbv.vu/bank-overview.htm.
7 Includes EPTPOS, branchless banking, mobile banking and mobile money.
8 FIA is the sum of the weighted financial access indicator proxy by the number of bank branches and ATMs per 100,000 adults.
9 Financial Institution Depth Index (FID) compiles data on bank credit to the private sector in per cent of GDP, pension fund assets to GDP, mutual funds' assets to GDP, and insurance premiums, life and non-life to GDP.
10 Sourced from the Reserve Bank of Vanuatu because the three month average deposits interest rates used by the IFS and Global index in the calculation of lending to deposits spread only reflects interest rates offered to few wholesale depositors and does not reflect the overall trend in weighted average deposit interest rates for depositors in Vanuatu, thus weighted average deposits rates on total deposits is used as it best reflects the movement in interest rates for Vanuatu.
11 Financial Institution efficiency Index (FID) is a sub-index combining net interest margin, lending-deposit spread, and non-interest income to total income, overhead cost to total assets, return on assets and return on equity.
12 Tier 1 capital means capital which (i) represents a permanent and unrestricted commitment of funds, (ii) is freely available to absorb losses, (iii) does not impose any unavoidable charge on the earnings of the bank, and (iii) ranks below the claims of depositors and other creditors in the event of the winding-up of the bank.
13 Minimum capital adequacy ratio increased from 8 per cent in 2010 to 12 per cent starting in 2011.
14 Calculated by using the value of NPLs as the numerator and the total value of the loan portfolio.
15 Prior to 2013, NPLS included only doubtful and loss loans. After the implementation of the revised prudential guidelines in 2013 as a requirement from the IMF, loans are impaired as early as 90 days, as such standard loans which were previously classified as performing were downgraded to doubtful thus leading to the increase in impaired loans.

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