

$$U(c_t, c_{t+1}) = \mu(c_t) + \beta E_t [\mu(c_{t+1})]$$



$$\dot{k} = f(k) - c - (n + g + \delta)k$$

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JUNE 2018

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BANKA E KHOLO EA LESOTHO

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ABSTRACTS

1 The Potential Impact of Economic Integration on Fiscal Policy Operations in Lesotho By Retšelisitsoe Mabote¹

Abstract

THE WORLD economy is adopting economic integration as a tool to lead developing countries out of maladies such as poverty. The Southern African Development Community (SADC) is not an exemption, with a clear roadmap leading to a single Central Bank. However, the initiative does not have the same benefits for all Member States. The study, therefore, aimed to establish how Lesotho will be affected by the integration. It is revealed that Lesotho derives about 45 per cent of revenue from SACU inflows, and that the country exports minimally in the region. Furthermore, tax performance test results reveal that the elasticity of revenue to national income is more than unity. This implies that if the country loses fiscal revenue, there is a potential to recover it through other macroeconomic initiatives. This is supported by empirical literature, which confirmed that about 30 per cent of revenue is recovered after the reforms. It is therefore concluded that economic integration can ignite other dormant macroeconomic variables. Context.

Keywords: Fiscal Policy, Tax Revenue, Tax Performance, Tax Buoyance

JEL classification: E62, H21, G23, O16

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ABSTRACTS

2 A Comparative Analysis of Banking Services Fees in the Southern African Customs Union (SACU) Countries

By Selloane Khoabane¹

Abstract

COMMERCIAL BANKS offer financial intermediation services including accepting deposits from and issuing loans to their clients. They then charge their clients fees for these services, in the form of interest levied on loans or paid to depositors or savers and non-interest charges, which comprise fees charged on fee-based bank services. The main objective of this study is to evaluate the costs of banking services in Lesotho through a comparative analysis of the banks in Lesotho with their peers in the SACU region. The prices of individual products and services and their averages per country showed mixed signals, with the SACU countries taking turns on the 5 fees levels. Further analysis showed that Lesotho is the most expensive in the FNB group and second cheapest in both the Nedbank and Standard Bank groups. Lesotho's average prices are also above the SACU mean and median in a significant number of services categories. Thus policy measures for improving Lesotho's business climate should continue with the objective of increasing competition in the banking industry. Enhanced effectiveness of the regulatory framework on price disclosure would also make it easier for clients to choose the best priced services supplier hence increase the use of prices in competing for clients. Direct controls such as caps on fees should be used as the last option.

Keywords: Bank charges, Commercial Banks, Financial Intermediation, SACU

JEL classification: D14, E02, E43, G21

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ABSTRACTS

3 The Effects of Fiscal Policy Shocks on a Selected Group of Macroeconomic Variables in Lesotho: Evidence from SVAR Model

By Moeti Damane¹, 'Marethabile Hlaahla² and Monaheng Seleteng³

Abstract

THIS PAPER investigates the macroeconomic effects of fiscal policy shocks in Lesotho on output gap, consumer prices, private and public gross fixed capital formation and the interest rate spread under a structural vector autoregression (SVAR) framework using annual time series data from 1982 to 2015. The main results of the study show that a positive shock to government expenditure leads to a significant positive response in inflation. However, the effect on all other variables is insignificant. A positive shock to government revenue has no impact on the output gap and the interest rate spread but results in an increase in consumer prices, government expenditure as well as public and private gross fixed capital formation. It is recommended that government expenditure should be tilted towards the productive sectors of the economy. Government revenue should be increased by widening the revenue base and more efficient methods of revenue collection.

Keywords: Fiscal shocks, SVAR, Output Gap, Inflation, Interest Rate Spread

JEL classification: H3, H30, H5, H50

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ABSTRACTS

4 The National Payment System in Lesotho, 2000 - 2016¹

By Lira Peter Sekantsi² and Motheo Ernest Lechesa³

Abstract

PRIOR TO 2000, the payment, clearing and settlement system in Lesotho relied upon manual processes. To address this, a programme to modernise the system and provide better support for the circulation of funds in the economy was initiated. The initiative, which ran between 2000 and 2015, revolutionised the country's payment, clearing and settlement system. Lesotho now boasts an efficient and safe payment, clearing and settlement system that supports monetary policy and fosters financial stability and financial inclusion, along with other economic benefits. The work, however, is not over. Due to the changing needs and emerging challenges within the country, the modernisation of the payment, clearing and settlement system is an ongoing process. Furthermore, it is necessary for the system to align with regional and international standards in order to facilitate international trade and investment. Likewise, it is essential to keep the legal and regulatory framework up to date in order to respond to the rapid changes in financial technology and innovation, as well as to avoid regulatory arbitrage.

Keywords: Lesotho, payment, clearing and settlement systems, mobile money, remittances

JEL classification: F15, G21, G28, L51, Y10

¹ The authors acknowledge the Journal of Payment Strategy and Systems for publishing this paper in Vol. 12, No.1. (2018).

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The Potential Impact of Economic Integration on Fiscal Policy Operations in Lesotho

Retšelisitsoe Mabote

1 INTRODUCTION

1.1 Background

THE GLOBAL ECONOMY is moving towards creating trading blocks for market expansion and product diversification. It is, however, acknowledged that the initiative benefits countries to different degrees, depending on the level of economic development. Smaller economies are often victims to shrinking fiscal resources. The Southern African Development Community (SADC) is no exemption to these trade initiatives. The year 2008 saw implementation of SADC Free Trade Area (SADC-FTA), with Customs Union scheduled for the year 2010, Common Markets in 2015, Monetary Union in 2016 and single Currency in 2018. It is, therefore, important to assess the implications of the free trade agreement and Customs Union on Lesotho's fiscal policy operations.

Lesotho has a unique and complicated policy environment. The country is a member of a number of international and regional organisations. It is through this membership that independence of some policies and policy instruments is either compromised or lost. Of more relevance are, the Common Monetary Area (CMA) arrangement, the Southern African Customs Union (SACU) and SADC. Lesotho shares SACU membership with Botswana, Namibia, South Africa and Swaziland. With the exception of Botswana, the quartet also shares membership of CMA, with the South African rand circulating, parallel with the respective local currencies, as a legal tender in the smaller member states. As a result of the CMA membership, Lesotho has lost independence of the monetary policy, a responsibility which rests with the South African Reserve Bank. For that reason, fiscal policy remains the only relevant policy for macroeconomic stability, with limited instruments to play with, due to her membership in SACU.

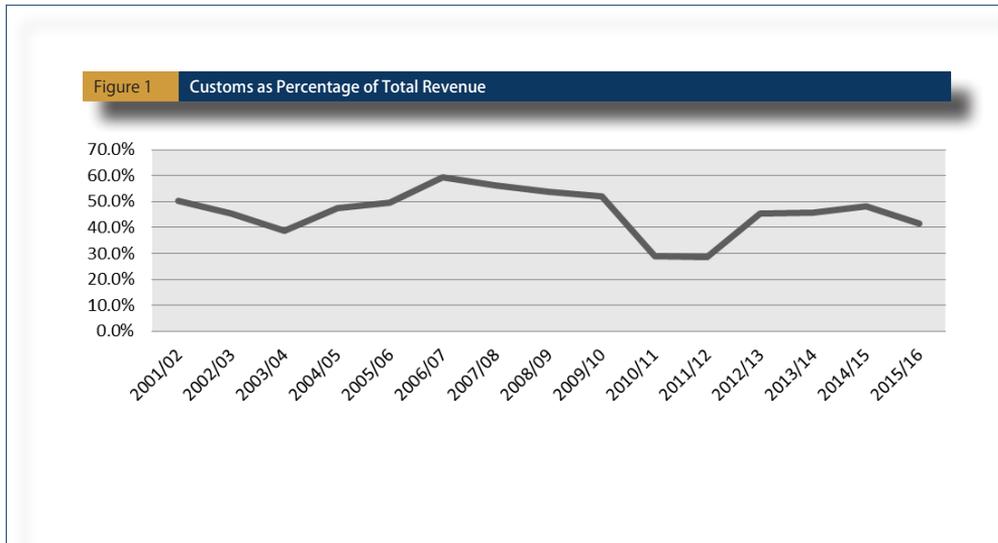


Fiscal policy is the means by which a government adjusts its levels of spending and/or revenue in order to influence a nation's economy. It is a government policy that attempts to influence the direction of the economy through changes in government taxes, or through spending adjustments. The general terminology used for taxation and the other sources of financing is revenue, which refers to the gross proceeds received from taxes, fees, and other charges. A tax is a financial charge or other levy imposed on an individual or a legal entity by a state or a functional equivalent of a state (for example, secessionist movements or revolutionary movements). It is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority and is imposed by government whether under the name of toll, tribute, impost, duty, custom, excise, subsidy, aid, supply, to mention but a few.

Government revenue is classified into revenue from taxes on international trade and domestic tax revenue depending on its source. Understanding this is particularly important in the case of the current trade arrangement for Lesotho. Of the members of SACU, Lesotho is the poorest with skewed dependence on remittances from the SACU revenue pool. This makes her highly vulnerable to any policy change that may be effected by the union. It also explains vulnerability of its economy to external shocks.

1.2 Trends in Government Finances

Due to her relative level of development, Lesotho receives the highest share from the development component of the SACU revenue, which makes this the single largest source of government revenue. This has averaged 46.1 per cent of total revenue collections during the period 1991/92 to 2001/16, reaching a peak of 60 per cent in 2006/07, as depicted in Figure 1 below. Revenue from the other sources has improved over the period, averaging just over 17 per cent growth rate a year in nominal terms. This improvement was mainly on account of the establishment of Lesotho Revenue Authority (LRA), which saw efficiency in tax collections, supported by introduction of value added tax (VAT) at a rate of 14 per cent in 2003, in place of the general sales tax which was levied at 10 per cent. VAT also has a broader base than the former. This tax component averaged 37.1 per cent during the period under review, reaching a maximum of 44.5 per cent in 2011/12.



Source: Central Bank of Lesotho

The other components of revenue (both tax and non-tax revenue), all combined, contributed less than SACU revenue, until 2011 and hence forth. This makes Government budgetary operations highly exposed to external shocks. It is upon this realisation that the study is being conducted. It is important to establish how Lesotho’s budgetary operations can benefit from SADC-FTA in terms of product diversification and markets.

The rest of the paper is organised as follows: Section 2 reviews literature on the emergence of trade liberalisation on fiscal policy. Section 3 presents analytical perspective, while section 4 concludes and suggests policy recommendations.

1.3 Objectives

The study aims to assess the possible impact of economic integration on the Government fiscal policy. This will specifically evaluate the impact of this on government budgetary operations, and its link with the other macroeconomic variables, and draw policy recommendations from the findings.



2 THEORETICAL DEBATE

2.1 Emergence of Trade Liberalisation

Free trade is defined as a system in which trade in goods and services between or within countries flows without government-imposed restrictions. Such government interventions generally increase costs of goods and services to both consumers and producers. Dornbusch et al (1977) define protectionism as a means of attempting to ensure that domestic industries are protected from competition from foreign producers and can be carried out through a variety of means, such as;

Tariffs, which raise the price of goods coming into a country, quotas - a physical limit on the number of goods that can be brought into a country, and other non-tariff barriers such as regulations and legislation that make it very hard for foreign competitors to sell goods into another country.

The great depression of the 1930s stimulated growth of international trade by reducing these trade barriers. It was during that period that the General Agreement on Tariffs and Trade (GATT) was initiated as a negotiation tool to reduce tariffs on imported goods on a reciprocal basis. Countries recognise the importance of trade to instil efficiency. As a result, trade liberalisation has come in different forms, such as the regional free trade agreement, to make use of comparative advantages. This has facilitated establishment of regional trading blocks around the world. Countries aspire to promote interdependence and connectedness with important economic partners since it is argued that free trade raises aggregated economic efficiency, Dornbusch et al (1977).

It is however, advised that liberalisation should be implemented in a way that does not compromise macroeconomic policy such as in government budgetary operations and the external sector. Baunsgaard and Keen (2005) established that trade liberalisation in many developing countries may be hindered unless there are alternative sources of revenue. They have proved that revenue recovery attributed to trade liberalisation mostly benefits high and middle income countries through improvement in collection of VAT.

The least developed countries seemed to recover only around 30 per cent of the lost revenue.

The IMF (2005) also confirmed that some poorer countries have been unable to recover lost trade tax revenues through strengthened domestic taxation. Amongst low-income countries, total tax revenues as a percentage of GDP have on average declined in parallel with trade tax revenues. Middle income countries, on the other hand, have managed to maintain total tax revenues broadly unchanged, while in high income countries they have increased. The full implications of trade reform for government revenue thus depend on a range of considerations, most of which point to a “second-round” increase in overall revenue. These effects are, however, naturally subject to significant uncertainty as to their strength and timing.

2.2 Empirical Evidence on Fiscal Operations

This section presents empirical experience on the benefits of trade tax revenue and the possible impact on liberalisation. Tanzi (2003) established that trade liberalisation affect not just tax revenue but also the role of state in the economy through public spending. His argument was dependent on the level of revenue recovery. If recovery is less than the foregone component, then Government transfer payments and fiscal deficits will be negatively affected. The Economic Commission for Latin America and Caribbean (1999) highlighted that in most small countries, international trade tax revenues account for the largest share of revenue, measured at about 30 per cent in Jamaica in the late 1990s. Therefore, failure to recover it leads countries into unsustainable fiscal position.

In a similar study conducted for the East Africa Community (EAC), Nnyanzi et al (2016) discovered that the EAC regional integration had a significant impact on tax revenue owing to the presence of good institutions. This observation implies that for integration initiatives to benefit member countries, they should be accompanied by deliberate actions with relevant institutions and appropriate legal environment. Accordingly, the study advocated for improvement of institutional environment, financial sector, macroeconomic stability, and manufacturing and trade, as well as a well-integrated approach to reduce a shadow economy. It also encouraged cautious capital control policies to enhance tax collections in East Africa. This was confirmed



by Babyenda (2013) whose earlier review had revealed no relationship at all between Uganda's tax revenue and the East Africa Community (EAC) integration.

Wang et al. (2007) acknowledged that trade liberalisation may improve trade competitiveness, and in most cases participating countries benefit in the form of a surge in trade tax revenue. But it is warned that this is more effective when the concerned are in official trading blocks, with harmonised tax and incentive systems. These findings were based on policy environment of the Common Monetary Area in Southern African.

They observed that revenue collected by SACU represented an important institutional mechanism for fiscal transfers across the union's member countries. On average, SACU revenue accounted for 10 – 34 per cent of GDP in Lesotho, Namibia and Swaziland in fiscal year 2004/05. In addition to the impact on fiscal policy, the inflows of SACU revenue are also important for balance of payments. It is, therefore, notified that the role played by this source of revenue could become less important should the ongoing negotiations for free trade agreements between the United States and the European Union be concluded.

Expansion of SACU to include SADC poses threats to fiscal policies of the current quartet. Wang et al (2007) noted that the issue of SADC revenue sharing distribution arrangements and institutions might supersede the SACU revenue sharing mechanism. This was supported by Government of Lesotho (GoL) (2006) that observed that SACU provides Lesotho with its largest single item of fiscal revenue, and an important balance of payments credit. Therefore, the effect of trade liberalisation and SACU tariff reduction might cause the overall revenue pool to stagnate in real terms.

This anticipated decline reflects the impact of general trade liberalisation, which may lead to generally lower customs tariff levels. Slow or negative real growth has important implications for fiscal and balance of payments sustainability. The replacement of SACU by a SADC Customs Union (SADC-CU) has potential to impact negatively on Lesotho. It is not clear whether a SADC-CU would have any redistribution mechanism, which would be shared across a larger number of low income countries. It is important at this stage to review and understand the revenue sharing formula currently in place.

2.3 SACU Revenue Sharing

According to the SACU agreement, as amended in 2002, Member States agree that in determining their respective shares of the total customs, excise and additional duties collected in the Common Customs Area during any financial year, the share accruing to each Member State is calculated from three distinct components as set out below.

Member States agree that the budgeted cost of financing the Secretariat, the Tariff Board and the Tribunal for the related financial year be deducted proportionately from the gross amounts of customs, excise and additional duties collected, before distribution to Member States from the three components mentioned hereunder:

The Customs Component

- The customs component consists of the gross amount of customs duties and specific and ad valorem customs duties leviable and collected on goods imported into the Common Customs Area, and other duties collected on imported goods, less the deduction as provided for in (b), but excludes any duties rebated or refunded under the provisions of any law relating to customs duties.
- Each Member State's share of the customs component is calculated from the value of goods imported from all other Member States in a specific year as a percentage of total intra-SACU imports in such year.

The Excise Component

- The excise component consists of the gross amount of excise duties, less the deduction as provided for in (b), leviable and collected on goods produced in the Common Customs Area, less the amount set aside to fund the development component, but excludes any duties rebated or refunded under the provisions of any law relating to excise duties.
- Each Member State's share of the excise component is calculated from the value of its Gross Domestic Product (GDP) in a specific year as a percentage of total SACU GDP in such year.



The Development Component

- A development component is established and funded from a fixed percentage of the excise component, less the deduction as provided for in (b).
- Each Member State receives a share of the development component, whose distribution is weighted in favour of the less developed Member States.
- It is clear from the foregoing that revenue sharing formula favours the less developed Members States. However, it also encourages Members to improve private sector participation in order to realise more benefits. It is important to also understand the SADC objectives in order to facilitate comparison with SACU.

2.4 SACU Objectives

The objectives of SADC are stated in Article 5 of the Treaty. The objectives emphasise the need to ensure that poverty alleviation is addressed in all SADC activities and that all programmes aim to eradicate it. Nonetheless, HIV and AIDS is recognised as a major threat to the attainment of the objectives and therefore is accorded priority in all SADC programmes and activities.

For the purpose of this study only the relevant objectives of SADC as stated in Article 5 of the Treaty are listed for ease of interrogation. It aims to;

- Achieve development and economic growth, alleviate poverty, enhance the standard and quality of life of the people of Southern Africa and support the socially disadvantaged through regional integration;
- Promote self-sustaining development on the basis of collective self-reliance, and the interdependence of Member States;
- Achieve complementarity between national and regional strategies and programmes;
- Promote and maximise productive employment and utilisation of resources of the Region.

3 ANALYTICAL PERSPECTIVES

3.1 The Prospects

It is shown on sub-section 1.2 above that trade related revenue accounted for more than 40 per cent of total revenue, in Lesotho, during the period 1991 to 2015/16. It is also revealed from sub-section 2.3 on SACU revenue sharing formula that the allocation tends to favour the poorer member states. Baunsgaard and Keen (2005) confirmed in their panel data that low income countries recover no more than 30 per cent of each dollar lost due to trade liberalisation. Their study also established that low income countries could not recover significant amount of revenue with introduction of VAT.

The empirical literature, further established that the lost trade-related revenue is compensated for with improvement of the institution responsible for tax collection and administration, and to some extent, introduction of VAT. These two measures are already in place in Lesotho. Therefore, it is not going to be easy to recover the revenue that will be lost due to coming into place of the SADC-FTA, and CU. Moreover, with the level of industrialisation in the Non-SACU member states, it is highly likely that the bulk of imports from those countries will mainly be agricultural products, which are immune to VAT. As a result, it will not be easy to get any significant revenue due to the nature of the imports.

In addition, it is important to acknowledge at this stage that with the exception of Mauritius and Seychelles, the rest of SADC-Non-SACU members are low income countries, and most with lower per capita income than Lesotho. This implies that should SADC adopt the same revenue sharing formula as SACU, the share of development component that accrues to Lesotho will definitely contract in the short to medium term.

Furthermore, the free trade arrangement has potential to benefit the Non-SACU SADC members more than will the SACU members with some of their exports getting a wider and bigger market. Nonetheless, for SACU, it might benefit the South African products more in the short run since they already benefit from well established superstructures, and most of the chain stores are already operational in the rest of the region, but only limited by the higher tariffs



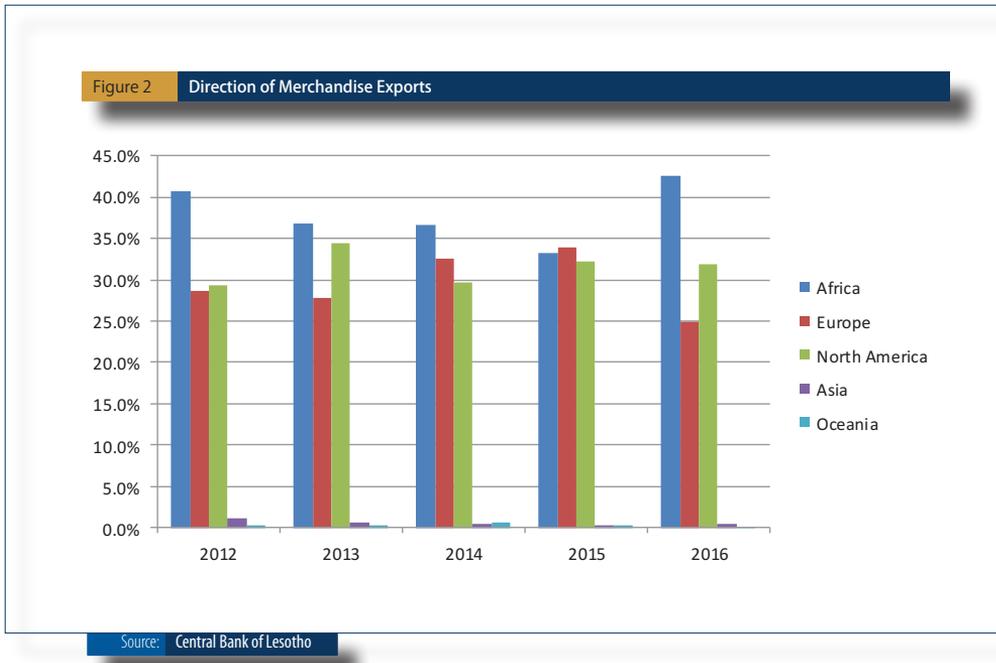
and quotas. On the positive side, this may facilitate expansion of Lesotho's exports through the South African chain stores to penetrate the region as opposed to the current status and boost the external sector. The next section provides analysis of Lesotho's exports by product and destination.

3.2 The Prospects

Lesotho is predominantly a consumption economy, with bulk of consumables imported from South Africa. The country has failed to take advantage of available opportunities. There are a limited product range available in international markets, and with ownership dominated by foreign companies, and largely, destined to three main global markets, SACU¹, the US, and European Union (EU). This could perhaps be on account of investment capabilities and innovativeness. Therefore, it might not be easy to recover 100 per cent of revenue that would be lost due to the free trade arrangement.

Clothing accessories and diamonds remain the largest exports commodities, followed by agricultural products and beverages. About 37.5 per cent of the exports, on average, were destined to the SACU during the period 2012 - 2016, while US was the second at a share of 31.5 per cent. The third destination is the European market where Lesotho's diamonds are traded at 29.6 per cent. Exports to the rest of the other SADC member states were insignificant at less than 1 per cent. This is represented in figure 2 below.

¹ South Africa takes more than 96 per cent.



It is also important to acknowledge that other than imports of intermediaries, most of Lesotho’s imports are sourced from South Africa. Therefore, the free trade arrangement might enhance competition only on agricultural commodities. Otherwise, the status quo will remain for manufactured imports. It is important to assess the responsiveness of tax revenue to other developments. This is achieved with aid of tax performance assessment in the next sub-section.

3.3 Tax Performance

Tax Buoyancy² and Tax Elasticity are useful in quantifying the empirical relationship between tax revenue and income of a state. It is anticipated that the SADC initiatives will facilitate economic growth of respective member states, and thus, their respective revenue. Therefore, it is important to establish whether the same hold for Lesotho. For the purpose of this study, both tax effort index and tax buoyancy are used to determine tax performance. Tax effort is

² Tax buoyancy refers to responsiveness of tax revenue to tax base including other efforts employed to realise efficiency.



regarded as the expected tax yield given a country's taxable capacity to reflect the effectiveness of raising tax revenue. There are three approaches to calculating tax effort, each is discussed, with merits highlighted in the following subsection.

Approaches to Calculating Tax Effort

a) Traditional regression approach

This approach takes the ratio of the actual tax ratio to the tax ratio predicted by the regression equation. It measures the effectiveness of available tax instruments in collecting taxes, relative to the potential collections of these tax instruments. This approach takes into consideration structural economic features that are likely to affect tax effort by adding economic features related to the tax bases and their relative accessibility to the various administration authorities. It yields an indicator that is clear but that generally has important limitations to inform policy reform.

b) Stochastic Frontier Analysis

Stochastic frontier analysis is an econometrics approach that assumes that tax administration potentially collects less revenue than it might due to a degree of inefficiency. This equates tax revenue to random shocks plus the level of inefficiency, which may include corruption³.

c) Revenue potential variables

This approach works with the assumption that a country's revenue capacity depends on economic, demographic and institutional factors. It builds on the Stochastic Frontier Analysis and goes further to include GDP per capita, openness, shares of hard-to-tax sectors in GDP (agriculture, services, and construction), inflation rate, income inequality, capital investments, foreign grants, and crude petrol production. In addition, demographic variables, such as, age dependency, population density, and level of education are included in the model. Corruption is included to account for the country's institutional setting.

³ According to Goodspeed, Martinez-Vazquez and Zhang in Cyan et al (2013) Corruption may lower the burden of corporate taxes.

For the purpose of this study, traditional approach was adopted for its simplicity. According to Teera (2004), tax ratio index that is less than unity implies that country exploits its estimated tax potential less than the average, while that above unity implies that country is making use of the tax base to increase revenue. A high value of tax effort index indicates that a particular country is collecting more tax than would be predicted, given its tax structure and prevailing economic and social conditions. A combination of a high tax ratio and a high tax effort index suggests that potential for further tax increases would be limited.

It is also important to ascertain whether a country has made efforts over a period to increase tax revenue. This is achieved through either tax buoyancy or elasticity. This displays the extent of the sensitivity and response of the tax system to the changes that take place in the composition and value of GDP. Tax buoyancy is calculated by use of the regression equation for tax revenue on national income. Table I below presents tax performance results.

Table I Tax performance	
Description	Ratio
Tax Ratio	36.8
Tax Effort Index	2.536
Tax Buoyancy	1.95
Source	Teera J.M. (2004)

Results on table I above are consistent with developments in tax administration in Lesotho. It is mentioned on the above sections that Lesotho has already put in place revenue administration mechanism to realise efficiency, with VAT replacing the

general sales tax in the year 2003. Table I confirms that Lesotho has the necessary measures in place to realise improvement in tax revenue. This is reflected by the tax effort index of 2.5, which is more than unity.

Moreover, the tax buoyancy of more than unity also implies that a unit increase in GDP is translated into more than a unit increase in tax revenue. This implies that any efforts introduced to enhance the national income will result in higher tax revenue (195 per cent increase in tax revenue). This is further confirmed by Koatsa and Nchake (2017) whose results acknowledged that Lesotho's tax system were elastic. Otherwise, there is limited room to stimulate more growth in tax revenue. Consistent with SADC objectives of increasing both national and regional output, Lesotho needs to focus more attention on efforts to improve the national output if revenue enhancement is to be realised.



4 CONCLUSION

It is established from the above discussion that the SADC-FTA and the envisaged SADC-CU have potential to impact on Lesotho's fiscal policy operations⁴. The study looked at the composition of Lesotho's exports and their destination with a view to determine possibility of expansion and potential for more trade related tax revenue. It revealed that the current composition has a limited market, since it is mainly dominated by clothing and textiles, whose driving force has been the African Growth and Opportunity Act (AGOA) of the United States. This, therefore, means the envisaged integration may have negative impacts of government revenue.

However, not all is lost. A further analysis employing the Tax Buoyancy⁵ and Tax Elasticity technique provide some slim optimism. This established that there is potential to generate revenue by boosting domestic economic activities. The elasticity of revenue to national income is more than unity, implying that a unit increase in economic growth may result in more than a unit increase in tax revenue.

The fluctuations in revenue, as a result, may stimulate development of financial markets in the country. The financing gap may be sourced from all potential financiers including domestic money and capital markets. As a consequence, the auction amount will increase in line with the financing requirements, while the auction frequency will still be determined by liquidity management needs. For that reason, the fiscal operations will complement activities and operations in the financial markets.

⁴ It was not yet easy to quantify the impact due to data availability.

⁵ Tax buoyancy refers to responsiveness of tax revenue to tax base including other efforts employed to realise efficiency.

5 POLICY RECOMMENDATIONS

- It is therefore, imperative for policymakers and Lesotho National Development Corporation, in particular; to review the strategy to attract new entrants that will explore the alternative market. This, therefore, means that domestic economic activities may enhance domestic tax revenue.
- Government should also address measures that facilitate growth of national income in order to realise higher tax collections. This could be by putting in place legislation and policy measures that facilitates establishment and growth of the private sector, with supporting infrastructure and human capital.
- It is also imperative to review and address all rigidities in the government regulatory framework that may hamper business operations. This includes relevant legislation, policies and necessary infrastructure, if the country is to benefit from the initiatives.



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A Comparative Analysis of Banking Services Fees in the Southern African Customs Union (SACU) Countries

Selloane Khoabane

1 INTRODUCTION

COMMERCIAL BANKS PLAY an important role in financial intermediation by accepting deposits from holders of surplus funds and issuing loans to those in deficit. To carry out this important role, commercial banks have developed various products and services as well as channels and mediums for providing these products and services to their clients. The banks generate income from fund-based products and services, which mainly refer to the use of deposits and equity to provide financing facilities to clients and from fee-based products generated from banking services such as cash withdrawals, money transfers, credit card facilities, debit card purchases, *inter alia*. The banks charge their clients fees for the services, in the form of interest, which is levied on loans extended to borrowers or paid to depositors or savers and non-interest charges, which comprise fees charged on fee-based bank services.

While banks have to share the profits from fund-based services with depositors and shareholders, it can be argued that the income from the fee-based products belongs solely to the bank. Fees and charges have in recent years become increasingly important as a source of income for commercial banks and increases in retail banking fees are usually a subject of criticism. Nonetheless, research has focused more on interest rates offered by the banking institutions. This is attributed to unavailability or inaccessibility of data on retail banking fees coupled with the fact that there are numerous types of banking products and services hence fees with different characteristics, which make it difficult to compare across institutions.

The main objective of this study is to evaluate the costs of banking services in Lesotho. This is achieved by comparing Lesotho with its peers in the Southern African Customs Union (SACU) region. A similar study was carried out by the Central Bank of Lesotho in 2003. As such this study is intended to provide an update taking into consideration some of the services and products that have recently been introduced in Lesotho's banking industry. This paper is structured as follows. After this introduction is the literature review followed by the methodology. Thereafter is the comparative analysis after which the paper is concluded and policy recommendations are made.

2 LITERATURE REVIEW

2.1 The Importance of Bank Fees

Fee or non-interest income of the banking industry has been growing in different parts of the world in recent times. For instance, four banks in Namibia earn more than half of their revenues from non-interest income, and income from fees and charges contribute over 30.0 per cent of these banks' income (Feasibility, 2010). Similarly, in the United States (US), non-interest income has increased substantially over the years and accounts for close to half of all operating income generated by commercial banks (DeYoung and Rice, 2004). The increase in commercial banks earnings of non-interest income is attributable to efficiency in the provision of traditional financial services as a result of advances in information, communications and financial technologies as well as the introduction of fee based non-traditional financial services such as automated teller machines (ATMs) and online banking (DeYoung and Rice, 2004). Therefore, in general, the non-interest income of the banking industry is a result of the creation of banking products and services, and their pricing.

According to Wruuck (2013), there are two major reasons why pricing of banking products is important. First, clients base their choice of services providers on the price of their products. This implies that prices of bank products play a vital role in the clients' consideration to switch banks. Second, pricing of retail financial products affects the economy as a whole. The price influences supply and demand for financial products because it provides information and signals in the market.



2.2 Determinants of Prices of Banking Products

The prices of bank products are determined by a number of factors over and above the production costs and the rate of return (Swain, 2007).

(i) *The Asset-Liability Composition:*

This factor considers the long term mismatch of a bank's assets and liabilities. A long-term mismatch of assets and liabilities threatens sustainable growth of a bank. Effective management of assets and liabilities minimizes interest rate risk and liquidity risk, hence enables a bank to earn an adequate return.

(ii) *Supply-Side:*

In this case, fees and tariff rates are set according to what the competitors are charging coupled with what the bank estimates it can afford. For instance, in South Africa (SA), competitors in the banking industry do not compete on price but on non-price determinants. The banks follow the market leader in each of the sub-markets, "spreading their overheads and an expected profit margin across all transactions" (Feasibility, 2010).

(iii) *Demand-Side*

The price is analyzed and quantified according to products, geographical locations, competitors and client segmentation, which is currently the most popular approach (Feasibility, 2010). An example in this regard is the product bundling pricing, which involves grouping two or more products and/or services to create an attractive package for customers. It is gaining popularity in the banking world. Different types of bundles include the simple ones where convenience or price is the main consideration, integrated bundles which include non-price benefits such as additional product features that provide added value and lifestyle-oriented bundles that may look at the overarching needs of a customer (Emerald Group Publishing Limited, 2009). The bundling approach, if implemented correctly, promises a number of advantages for the banks. The most important include increases in profits and retaining of customers. These can only

be realized where the packages are interesting and have been priced attractively (Emerald Group Publishing Limited, 2009). This requires a lot of information on individual customers and customer segments to determine the appropriate bundle. The main inhibiting factor to realization of the advantages of bundling is the pairing of bundling with price promotions, which can reduce the perceived savings on the bundle hence attractiveness and demand for the bundle (Emerald Group Publishing Limited, 2009). In some instances pricing is determined by external factors as in the case of government sponsored schemes (Swain, 2007-08).

(iv) *The Regulatory Environment*

The regulatory environment has a strong influence on price setting in the retail banking market. According to Wruuck (2013), it has an indirect effect on pricing via costs and competitive conditions in the market. Regulations can directly target pricing policy, such as rules with regard to representation of price information, rules for the calculation and adjustment of prices and in some cases even explicit price caps and price floors. Authorities sometimes regulate the price and services providers respond to the regulation of prices. For example, in the US and SA interest rates were regulated to keep them below market rates (Feasibility 2010). Due to the resultant emergence of gaps in the market, the banking services providers circumvented the caps on rates by charging additional fees to supplement their revenues (Feasibility 2010). The US authorities have responded by generally doing away with such caps while in SA they have resorted to capping not only interest rates but the fees on consumer credit loans as well (Feasibility 2010). In Botswana, Bank of Botswana responded to public perceptions that bank charges were high by implementing a two-year moratorium from January 2014 to December 2015 to prevent commercial banks from increasing bank tariffs (Bank of Botswana, 2014).

3 METHODOLOGY

The study covers three commercial banks operating in Lesotho, namely First National Bank (FNB), Nedbank and Standard Lesotho Bank and compares them with their counterparts in other SACU countries. The choice of banks was influenced by easy availability of data for the counterparts in other SACU countries hence the exclusion of Lesotho Post Bank from the



analysis. The study has attempted to include all products and services offered by Lesotho's commercial banks and for which data was available for at least one SACU country within a specific bank group. The study used published tariffs and fees data for all the banks included in the analysis. Attempts to obtain missing data from the individual banks, especially from countries other than Lesotho were unsuccessful. The dates of validity of the fees differ by banks as depicted in Table A1 in the Appendix. All the fees data are in Maloti unless specified otherwise. Data for Botswana's banks was converted to Maloti at the M1.30 per Pula, the annual average exchange rate for 2016.

The analysis employs the following three different comparative analysis approaches:

- The ranking criterion through which different colours were used to distinguish the fees levels from the lowest fee to the fifth lowest fee (See Table 1)
- Calculating the average fee per country by different categories of products and services
- Calculating the overall country averages for each bank group and comparing Lesotho's average fees by services categories with the SACU mean and median.

Table 1 Fees Levels by Colour		
Shade	Colour	Fee Level
	No Fill	Lowest
	Blue	Second Lowest
	Green	Third Lowest
	Orange	Fourth Lowest
	Red	Fifth Lowest

4 METHODOLOGY

4.1 First National Bank (FNB)

A. Pay-As-You- Use Transactional Pricing

The FNBs in the SACU countries have a series of accounts under the pay-as-you-use (PAYU) pricing option. The comparative analysis of the monthly fee considered the savings account that

charges the lowest monthly fee and the cheque account that charges the lowest monthly fee in the PAYU category in each country. The distinguishing factor between the two is that the cheapest is a savings account while the other one is a cheque account. In the lowest monthly fee accounts/ savings accounts, FNB Swaziland's Sicalo account charges the lowest monthly fee among the PAYU products offered by the FNB banks in the SACU region. It charges a monthly fee of M3.50. This is followed by FNB SA's Easy Account at M4.95 and FNB Lesotho's Smart Account is in third position at R11.00. The monthly fee for FNB Lesotho's Smart Account costs less than Botswana's Future Save Account and Namibia's Turquoise Lifestyle Account at M15.13 and M25.00 per month, respectively.

Table 2 Monthly Account Maintenance Fees		
Description	Account	Monthly Fee
Botswana	Standard Savings: Future Save	15.13
	Smart	15.60
Lesotho	Smart	11.00
	Smart Gold	49.00
Namibia	Turquoise Lifestyle	25.00
	Platinum Lifestyle	35.00
South Africa	Easy	4.95
	Premier Cheque	42.00
Swaziland	Sicalo	3.50
	Smart Gold	20.00
Source	Commercial Banks' Pricing Guides	

Looking at cheque accounts in the PAYU category, FNB Botswana's Smart Account charges the lowest fee followed by FNB Swaziland's Smart Gold Account. The monthly fee for Namibia's Platinum Lifestyle Account is lower than SA's Premier Cheque Account's monthly fee. Lesotho's Smart Gold is the most expensive in this category. FNB Lesotho's monthly fee puts it in third position with regard to the savings account and as the highest on the cheque account. Thus

it could be concluded that under the PAYU pricing option Lesotho's monthly fees are high compared to its peers in the SACU region.



Table 3	Payments and Linked Account Transfers				
	Botswana	Lesotho	Namibia	SA	Swaziland
Payments – Electronic Channels					
FNB ATM	3.15	7.50	11.25	3.50	14.00
Online	4.58	7.50	11.25	3.50	14.00
Telephone	N/A	7.50	11.25	3.50	14.00
Scheduled Payments - Online	15.26	7.50	11.25	3.50	14.00
Cellphone Banking	6.25	7.50	1.15	3.50	14.00
Internal Debit Order	8.02	5.50	8.30	0.00	5.65
External Debit Order	8.02	21.50	20.00	3.50	18.00
Stop Payments - Online	176.11	5.00	11.50	5.00	43.00
Average	31.63	8.69	10.74	3.25	17.08
Payments – Consultant Assisted at Branch					
Branch and Telephone Banking	61.93	50.00	55.00	60.00	43.00
Cheque Payments	N/A	60.00	55.00	70.00	43.00
Bank Cheques	59.90	130.00	N/A	100.00	115.00
Stop Payments - Branch	176.11	51.80	125.00	50.00	43.00
Scheduled Payments -Branch - Establishment	15.26	15.50	N/A	15.00	30.00
Scheduled Payments - Branch - Amendment	4.39	11.00	N/A	15.00	15.00
Average	63.52	53.05	78.33	51.67	48.17
Linked Account Transfers					
All Electronic Channels	N/A	5.00	4.20, cellphone 0.00	3.50	10.00
Branch	N/A	50.00	55.00	60.00	43.00
Average	44.92	27.68	29.24	24.97	28.16
Source	Commercial Banks' Pricing Guides and Author's Calculations				

On payments through electronic channels, FNB SA charges the lowest fee on 6 out of 8 services with FNB Namibia and FNB Botswana outperforming it on payments through cellphone banking and FNB ATM, respectively. FNB Lesotho has the highest number of services on which it charges the second lowest fee at 3 out of 8 services. It is followed by Botswana and SA at 2 out of 8 services each and then Namibia with only one service. The highest number of services in the third position was reported by Swaziland with 3 out of 8 services while Lesotho and Namibia had 2 services each and Botswana had 1

service. The highest number of services in the fourth position was reported by Namibia at 3 followed by Swaziland with 2, then Botswana and Lesotho with 1 service each. According to the country averages, FNB SA charges the lowest fees on payments services by electronic channels while FNB Lesotho charges the second lowest fee. Namibia, Swaziland and Botswana are in third, fourth and fifth positions, respectively. Lesotho is cheaper than Namibia, Swaziland and Botswana, which is the most expensive in the category of payments through electronic channels.

With regards to payments carried out over the counter (OTC), with the assistance of a banking consultant, FNB Swaziland had the highest number of services with the lowest fee at 3 out of 6, followed by Botswana with 2 and SA with 1 service. Lesotho dominated in the second lowest fee category with 3 followed by SA with 2 and Botswana with 1. Namibia, Lesotho and Swaziland recorded 2 services each in the third lowest fee category while SA registered only 1 service. SA dominated in the fourth lowest fee category with 2 services while Namibia, Lesotho and Swaziland each reported 1 service. In the highest fee category was Botswana with 2 services and Namibia with 1. According to the country averages, Botswana is the cheapest on OTC payments followed by SA. Lesotho falls in third position and her fees are lower than Botswana's and Namibia's.

The fee for linked account transfers by electronic channels is lowest in FNB SA at M3.50 per transfer followed by FNB Namibia at M4.20. FNB Lesotho charges M5.00 per transfer and it is cheaper than FNB Swaziland, which charges M10.00. FNB Swaziland levies the lowest fee on OTC linked account transfers followed by FNB Lesotho, which is cheaper than Namibia and SA. The average fees on linked account transfers are lowest in SA followed by Lesotho, which is cheaper than Swaziland and Namibia. Data on Botswana was not available. FNB Lesotho is the second cheapest on the fees for linked account transfers.



Table 4 Deposits and Withdrawals		Botswana	Lesotho	Namibia	SA	Swaziland
Deposits						
Cheque - Per Deposit	0.00	35.00	15.00	40.00	19.00	
Branch Cash Deposit (Per M1000.00)	N/A	15.50	0.00	60.00	0.00	
ATM/ ADT Cash Deposit (per M1000.00)	5.30	8.00	0.00	8.00	0.00	
ENC Upliftment Fee	129.61	180.00	150.00	250.00	270.00	
Average	44.97	59.63	41.25	89.50	72.25	
Cash Withdrawals						
FNB ATM Cash (per M500.00)	3.15	5.35	8.50	9.25	5.50	
FNB Branch/ Cheque Encashment (per M1000.00)	N/A	45.00	N/A	60.00	57.00	
Other Bank's ATM (per M1000.00)		40.00	30.00	25.00	20.60	
International Branch/ ATM (per M1000.00)	N/A	50.00	45.00	77.50	45.00	
Average	5.48	35.09	27.83	42.94	32.03	
Source	Commercial Banks' Pricing Guides and Author's Calculations					

Cheque deposits attract a fee at FNB banks in all the SACU countries except Botswana where it is free of charge. Of the 4 countries that levy a fee on cheque deposits, Namibia is the cheapest at M15.00 per cheque deposit followed by Swaziland at M19.00, Lesotho is in third position at M35.00 followed by SA at M40.00. The OTC deposit of cash is free in Namibia and Swaziland while Lesotho charges a fee of 1.55 per cent of the deposited amount and SA a higher fee of 1.85 per cent of the deposited amount and a minimum of M60.00. This translates into fees of M15.50 and M60.00 for a deposit of M1000.00 for Lesotho and SA, respectively. Traditionally, cash deposits used to be done only OTC. However, with the advancements in technology, cash deposits can be done at ATMs. In Lesotho, FNB is currently the only bank that provides this service. This service is provided free of charge in Namibia and Swaziland. In Botswana it attracts a fee of 0.53 per cent of the deposited amount while the charge is 0.80 per cent of the deposited amount in both Lesotho and SA. The average fees on deposits indicate that FNB Namibia is the cheapest followed by Botswana. Lesotho's fees are the third lowest and are cheaper than Swaziland and SA.

With regards to cash withdrawals, FNB Botswana is cheapest on the two services for which its data was available. According to the country averages on cash withdrawals, Botswana charges the lowest fees followed by Namibia and then Swaziland. Lesotho's fees are the fourth lowest and cheaper than SA's.

Table 5 Balance Enquiries, Payment Notifications and Statements					
	Botswana	Lesotho	Namibia	SA	Swaziland
Balance Enquires					
FNB ATM, Online	0.00	0.00	0.00	0.00	0.00
Point of Sale	1.44	2.50	N/A	1.50	N/A
Other Bank's ATM	7.24	7.75	9.50	5.00	5.50
Consultant Assisted	N/A	N/A	8.00	5.00	5.70
Payment Notifications					
E-mail	0.31	0.90	0.85	0.80	0.80
SMS	0.30	1.40	1.15	0.95	1.56
Fax	3.56	6.10	5.50	5.50	4.90
Statements					
Provisional Statement per Page	8.02	13.00	15.00	13.00	13.00
Posted Statement	N/A	15.00	17.00	13.00	13.00
FNB ATM Mini Statement	0.52	3.50	4.00	3.50	5.90
E-mailed Monthly Statement	0.00		0.00	0.00	0.00
Average	2.38	5.02	6.10	4.39	5.04
Source	Commercial Banks' Pricing Guides and Author's Calculations				

In the group comprising products and services related to balance enquiries, payment notification and account statements, Botswana has the highest number of services on which its fee is the lowest among SACU member countries at 7 out of 11. It is followed by SA at 5 services and then Swaziland at 3 services. SA and Swaziland dominate in the category of the second cheapest services at 5 out of 11 each. The third lowest service fees are more concentrated in Namibia at 7 services. Lesotho has the highest number of services that charge the fourth lowest fee among SACU countries at 4 services. From the country averages, it can be deduced that Botswana is the cheapest in this category of services, followed by SA. Lesotho is in third position and is less costly compared with Swaziland and Namibia.



Table 6 Prepaid and Card Purchases		Botswana	Lesotho	Namibia	SA	Swaziland
Prepaid Airtime - Electronic Banking		0.00	2.15	1.15	1.50	2.25
Prepaid Electricity - Electronic Banking		2.69	5.65	0.00	N/A	5.90
Cheque and Debit Card Purchases		N/A	3.60	4.30	0.00	5.50
International Cheque and Debit Card Purchases (per M1000.00)		N/A	43.00	15.50	27.00	33.00
Average		N/A	13.60	5.24	9.50	11.66
Source	Commercial Banks' Pricing Guides and Author's Calculations					

FNB banks enable their customers to purchase prepaid airtime and electricity using electronic payment channels. Prepaid airtime is obtained free of a service fee for FNB Botswana’s clients. FNB Namibia levies a fee of M1.15, which is cheaper than FNB SA’s M1.50, FNB Lesotho’s M2.15 and FNB Swaziland’s M2.25. On the fee for prepaid electricity, Namibia is the least costly as it offers this service free of charge. The second lowest fee is that of Botswana followed by Lesotho while Swaziland’s fee is the highest. The fee for SA was not available. Cheque and debit card purchases are free for FNB SA’s clients. They cost M3.60 in Lesotho, which is cheaper than Namibia and Swaziland’s M4.30 and M5.50, respectively. The international cheque and debit card purchases are cheapest for FNB Namibia’s clients followed by FNB SA’s and Swaziland’s. They are most expensive for FNB Lesotho’s clients among the four countries for which data was available. The country averages indicate that in the prepaid and card purchases category, FNB Namibia charges the lowest fees followed by SA and then Swaziland while Lesotho’s fees are the highest among the four SACU countries. Botswana was excluded because it did not have data for 2 out of 4 types of products or services considered.

Table 7 eWallet Related Fees		Botswana	Lesotho	Namibia	SA	Swaziland
Send Money (eWallet)	11.41	11.50	9.00	9.95	9.00 for w 1000.00, 13.50 for 1001.00 - 2000.00, then 18.00	
Cash Withdrawal	1st free then 1.35	0.00	1st free then 7.60	1st free then 6.50	1st Free, then 5.00	
Prepaid Airtime	0.00	0.00	0.00	1.50	1.50	
Prepaid Electricity	2.69	5.65	0.00	1.50	3.00	
Dormancy	7.14	5.00	5.00	6.00	5.00	
Average	4.52	4.43	4.32	5.09	7.86	
Source	Commercial Banks' Pricing Guides and Author's Calculations					

eWallet is a service through which FNB's customers can create and fund an electronic store of value from an FNB account. The funds are then accessible to a nominated beneficiary through a cellphone, via FNB ATMs, cellphone banking, FNB App or FNB online banking. Services that can be carried out with the use of eWallet include sending money, withdrawing cash and buying prepaid airtime and electricity. Concerning the fees, Namibia has the highest number of services on which it charges the lowest fee at 4 out of 5 services followed by Lesotho with 3 services. SA dominates in the category of the second lowest fees with 4 services. Country averages show that FNB Namibia's fees are the lowest followed by Lesotho and then Botswana. FNB SA is in the fourth position and FNB Swaziland is the most expensive.

Table 8 Penalty Fees		Botswana	Lesotho	Namibia	SA	Swaziland
Honouring Fees (per item)	189.80	170.00	250.00	75.00	210.00	
POS Declined Transaction	6.19	7.00	6.50	8.50	7.00	
Other Bank's ATM Declined Transaction	6.19	9.50	10.00	8.50	N/A	
Deposit of Post Dated Cheque	48.02	59.00	80.00	N/A	97.00	
Card Replacement Fee	88.05	100.00	116.00	85.00	80.00	
Pin Replacement Fee	36.83	40.00	N/A	85.00	45.00	
Average	62.51	64.25	92.50		87.80	
Source	Commercial Banks' Pricing Guides and Author's Calculations					



Customers are charged penalty fees for violation of the terms of their bank account holder agreement or other requirements related to their bank account. In this category of fees, FNB Botswana has the highest number of services or products on which it charges the lowest fees at 4 out of 6 followed by SA and Swaziland with only 1 service each. Lesotho dominates in the second lowest fee group with 3 services followed by SA with 2 and Namibia with 1. The honouring fee, which is levied where a bank honoured a debit order even though there was not enough money in their client's account to honour it, appears to be the highest among penalty fees. FNB SA charges the lowest honouring fee of M75.00 followed by FNB Lesotho at M170.00. Nonetheless, Lesotho is less costly compared with Botswana (M189.90), Swaziland (M210.00) and Namibia (M250.00). The country averages of penalty fees covered here show that SA is the cheapest followed by Botswana. Lesotho is the third lowest and its fees in this category are cheaper than Swaziland and Namibia's fees.

B. Bundled/ Unlimited Transactional Pricing

The FNB banks in the SACU region offer their customers bank accounts under the bundled transactional pricing option. Under this option, clients are charged a relatively higher monthly banking fee and transactions carried out through electronic channels are offered free of charge or at a highly discounted fee while all other transactions are offered at the same fee as under the PAYU transaction pricing. The bundled transactional pricing option applies to cheque/ current accounts. Each FNB bank offers different cheque/ current accounts under this pricing option, the distinguishing features of which include the income requirements and the services or products offered clients under each. For each country, the account that charges the lowest monthly fee and one that charges the highest monthly fee are considered in this study.

Table 9 Monthly Account Maintenance Fee		
	Account	Monthly Fee
Botswana	Gold	80.70
	Premier Cheque	168.19
Lesotho	Gold	99.00
	Platinum Lifestyle	199.00
Namibia	Turquoise Lifestyle	127.00
	Platinum Lifestyle	150.00
South Africa	Easy	49.00
	Premier Cheque	175.00
Swaziland	Smart Gold	65.00
	Gold Lifestyle	150.00
Source	Commercial Banks' Pricing Guides and Author's Calculations	

Considering comparable accounts under the bundled transactional pricing option, FNB SA's Easy Account charges the lowest monthly banking fee of M49.00 followed by FNB Swaziland's Smart Gold Account at M65.00. The monthly fee on Botswana's Gold Account is M80.73. FNB Lesotho's Gold Account charges the fourth lowest monthly fee of M99.00 and is cheaper than Namibia's Turquoise Lifestyle Account whose monthly fee is M127.00. With regard to the higher monthly fee accounts, FNB Namibia's Platinum Lifestyle Account and Swaziland's Gold Lifestyle Account charge the lowest monthly fee of M150.00 each. They are followed by Botswana's Premier Cheque Account at M168.19 and SA's Premier Cheque Account at M175.00. The monthly fee for FNB Lesotho's Platinum Lifestyle Account is the most expensive at M199.00.



Table 10 Payments and Linked Account Transfers						
	Botswana	Lesotho	Namibia	SA	Swaziland	
Payments						
FNB ATM	0.00	0.00	0.00	1st 10 free then 3.50	0.00	
Online	0.00	0.00	0.00	1st 10 free then 3.50	0.00	
Telephone Banking	N/A	0.00	N/A	1st 10 free then 3.50	0.00	
Scheduled Payments – Online	15.30	0.00	N/A	1st 10 free then 3.50	0.00	
Cellphone Banking	0.00	0.00	0.00	1st 10 free then 3.50	0.00	
Internal Debit Order	7.80	0.00	0.00	0.0	0.00	
External Debit Order	8.00	0.00	0.00	1st 10 free then 3.50	0.00	
Linked Account Transfers						
All Electronic Channels	0.00	0.00	0.00	0.00	0.00	
Card Purchases						
Other Bank's ATM (per M1000.00)	7.80	40.00	30.00	25.00	20.60	
Cheque and Debit Card Purchases	N/A	0.00	0.00	0.00	0.00	
Source	Commercial Banks' Pricing Guides and Author's Calculations					

All the products and services, whose fee under the bundled pricing option was different from under the PAYU pricing option for FNB Lesotho, were considered in this section. They all fall under the payments and linked account transfers category. All the products and services are offered free of charge by FNB Lesotho and Swaziland. FNB SA does not levy a fee on 3 out of 9 types of services. On the rest of the products and services, it offers the first ten transactions free of charge after which it levies a fee of M3.50 per transaction. FNB Botswana appears to be the most expensive in this category of services. It levies fees ranging from M7.75 to M15.26 on 3 types of services and does not levy a fee on only 4 types of services. FNB Lesotho and FNB Swaziland are the cheapest in this group of products and services.

C. Business Accounts

The most affordable business bank account in terms of the monthly service fee is FNB Botswana's Commercial Cheque account at M56.67 followed by FNB SA's Gold Business Account at M69.00. The fee for Namibia's Business Cheque Account is the third lowest while FNB Lesotho's is the highest among four SACU countries for which data on business accounts was available. With regards to services related to payments and linked account transfers, FNB SA is the cheapest on 4 out of 6 services, FNB Lesotho has the highest number of second lowest fees at 4 out of 6 while FNB Namibia is dominating in the third category with 5 out of 6 services. The average fees by country show that FNB SA charges the lowest fees. Even though FNB Lesotho has the highest number of services on which it charges the second lowest fees and FNB Namibia has the highest number of services in the third lowest fee category, in terms of the average fees, FNB Namibia is cheaper than FNB Lesotho, though marginally. This is attributable to FNB Namibia's very low fee on payments by cellphone banking.

Table 11 Monthly Account Maintenance Fee, Payments and linked Account Transfers				
	Botswana	Lesotho	Namibia	SA
	Commercial Cheque Account	Business Account		Gold Business Account
Monthly Fee	56.67	120.00	85.00	69.00
Payments and Linked Account Transfers				
	Botswana	Les		SA
Payments				
FNB ATM	N/A	10.50	11.62	8.95
Online	N/A	10.50	11.62	8.95
Telephone	N/A	10.50	11.62	8.95
Scheduled Payments - Online	N/A	10.50	11.62	4.00
Cellphone Banking	N/A	10.50	1.15	8.95
Linked Account Transfers -				
Electronic Channels	0.00	5.00	Online 4.20, cellphone free	4.00
Average	N/A	9.58	9.53	7.30
Source	Commercial Banks' Pricing Guides and Author's Calculations			



On deposits and withdrawals, FNB Botswana has the highest number of services on which it charges the lowest fees among the four SACU countries for which data was available at 4 out of 7 followed by Namibia with 3 services. FNB Lesotho dominates with services on which the third lowest fee is levied and FNB SA with fees that fall in the fourth category. The country averages reveal that in this group of services FNB Namibia is the cheapest followed by FNB Botswana. Lesotho’s fees on deposits and withdrawals are higher than Namibia and Botswana’s but cheaper than SA.

Table 12 Deposits and Withdrawals				
	Botswana	Lesotho	Namibia	SA
Deposits				
Cheque - Per Deposit	0.00	50.00	15.00	40.00
Branch Cash Deposit (per M10 000.00)	35.00	155.00	0.00	840.00
ATM/ ADT Cash Deposit (per M10 000.00)	35.00	80.00	N/A	79.75
ENC Upliftment Fee (per M10 000.00)	168.49	180.00	100.00	500.00
Cash Withdrawals				
FNB ATM Cash (per M500.00)	4.10	5.35	8.50	11.20
Other Bank's ATM (per M500.00)	9.67	40.00	21.50	18.75
International Branch/ ATM (per M1000.00)	115.54	50.00	45.00	87.50
Average	52.54	80.05	31.67	261.00
Source	Commercial Banks' Pricing Guides and Author's Calculations			

4.2 Nedbank

A. Pay-as-You-Use Transactional Pricing

Nedbank Lesotho has three types of accounts under the PAYU pricing option, namely the Savings Account, the Cheque Account and the Private Banking Account. The Savings Account charges the lowest monthly fee followed by the Cheque Account and then the Private Banking Account.

Table 13 Monthly Account Maintenance Fee and Internet Banking Fees			
	Lesotho	SA	Swaziland
Monthly Service Fee			
Savings Account	7.00	20.00	30.00
Cheque Account	90.00	30.00	45.00
Average	48.50	25.00	37.50
Private Banking Account	179.00	100.00	N/A
Internet Banking Monthly Fee			
Cheque Account	44.95	0.00	35.00
Private Banking Account	49.80	12.00	N/A
Average	47.38	6.00	35.00
Source	Commercial Banks' Pricing Guides and Author's Calculations		

Nedbank Lesotho's monthly fee of M7.00 for the savings account is the cheapest among the three SACU countries for which data was available. It is followed by Nedbank SA's fee of M20.00 while that of Nedbank Swaziland is the highest at M30.00. With regards to the cheque accounts, Nedbank SA charges the lowest monthly service fee followed by Swaziland. The cheque account monthly fee for Nedbank Lesotho is the most costly among the three SACU countries. Nonetheless, looking at the country averages of the cheque and savings accounts, SA's monthly service fee is the lowest followed by Swaziland while Lesotho's average makes it the most expensive. Data on Nedbank Swaziland's private banking monthly fee was not available. As such only Lesotho and SA could be compared. The private banking monthly fee for Lesotho is 79.0 per cent more costly compared to SA's. With regards to the internet banking monthly fee, SA does not levy any fee for the cheque account and Swaziland charges a fee of M35.00, which is lower than Lesotho's M44.95. For the private banking account, Lesotho's internet banking monthly fee is more than three folds higher than SA's. Nedbank Lesotho's fees in this category of products are highest among comparator SACU countries.



Table 14 Payments and Cheque Deposits			
	Lesotho	SA	Swaziland
Payments			
Debit Orders	20.00	16.00	16.00
Card Purchases	3.45	4.00	N/A
Internet Account Payments - Internal	7.00	8.00	12.30
Internet Account Payments - External	5.00	4.00	13.00
Internet Transfer - Own Account	0.00	4.00	0.00
Cheque Deposit per R10 000.00	25.00	20.00	40.00
Average	10.08	9.33	16.26
Source	Commercial Banks' Pricing Guides and Author's Calculations		

On the fees related to payments and cheque deposits, Nedbank Lesotho and Nedbank SA are at par in terms of the number of services on which their fee is lowest and second lowest with 3 services in both cases. Swaziland has only 2 services in the lowest fee category and dominates in the third lowest fee category. The country averages reveal that Nedbank SA is cheaper than Lesotho, though by a small margin of 8.0 per cent. In addition, Lesotho is less costly compared with Swaziland.

Table 15 ATM Cash Withdrawals and Branch Transactions			
	Lesotho	SA	Swaziland
ATM Cash Withdrawals			
Nedbank ATM per M1 000.00	17.50	18.50	8.00
Other Bank's ATM per M1 000.00*	46.25	25.50	N/A
Branch Transactions			
Cash Deposit Fee per M1 000.00	26.15	25.00	0.00
Cash Withdrawal Fee per M1 000.00	27.65	54.00	15.00
Average (excluding*)	23.77	32.50	7.67
Source	Commercial Banks' Pricing Guides and Author's Calculations		

Cash withdrawals from a Nedbank ATM are cheapest for Nedbank Swaziland's clients followed by Nedbank Lesotho's. Nedbank SA is the most expensive among the three countries on cash withdrawals from a Nedbank ATM. Nedbank Lesotho's fee on withdrawals by Nedbank customers from other bank's ATMs are 81.4 per cent more expensive compared with Nedbank SA's fee. With

regards to OTC cash deposits and withdrawals, Nedbank Swaziland charges the lowest fee on both while Nedbank Lesotho and Nedbank SA have 1 second lowest and 1 third lowest fee product or service each. Looking at the country averages, excluding cash withdrawals from other banks' ATMs because Nedbank Swaziland did not have data on it, Nedbank Swaziland charges the cheapest fee followed by Lesotho while Nedbank SA is the most expensive.

B. Bundled Transactional Pricing

Under the bundled pricing option, Nedbank Lesotho's Private Banking Account is compared with Nedbank SA's Savvy Bundle Account. The published fee schedule for Nedbank Swaziland did not have any information on bundled pricing accounts hence why it is excluded from this analysis. The monthly service fee for Nedbank Lesotho's private banking account is 21.7 per cent more costly than Nedbank SA's fee. Both countries do not charge a monthly fee for internet banking services for the accounts under the bundled pricing option.

Table 16 Monthly Account Maintenance Fee and Internet Banking Fee		
	Lesotho	SA
Monthly Service fee	219.00	180.00
Internet Banking Monthly Fee	0.00	0.00
Source	Commercial Banks' Pricing Guides	

Payments transactions made through different payment channels are free of charge in both countries. The cost of a cheque deposit is stipulated as 0.25 per cent, minimum M10.95 and Maximum M315.55 by Nedbank Lesotho and M20.00 per deposit by Nedbank SA. For comparability, the stipulated charges were standardized per cheque deposit of M10 000.00. The results show that the cost of a cheque deposit is higher at Nedbank Lesotho than at Nedbank SA. Specifically a cheque deposit to the tune of M10 000.00 costs 25.0 per cent more at Nedbank Lesotho than at Nedbank SA.



Table 16 Monthly Account Maintenance Fee and Internet Banking Fee		
	Lesotho	SA
ATM Cash Withdrawals		
Debit Orders	0.00	0.00
Card Purchases	0.00	0.00
Internet Account Payments - Internal	0.00	0.00
Internet Account Payments - External	0.00	0.00
Internet Transfer - Own Account	0.00	0.00
Cheque Deposit per R10 000.00	25.00	20.00
Source	Commercial Banks' Pricing Guides and Author's Calculations	

Cash withdrawals from a Nedbank ATM are priced differently by the two Nedbanks. In the case of Nedbank Lesotho, the first five withdrawals per month are free of charge and a fee of M40.00 applies to the rest of the withdrawals during a specific month. In the case of Nedbank SA the fee is stipulated as M11.50 plus 1.40 per cent of the amount withdrawn. These mean that the first five Nedbank ATM withdrawals are cheaper in Lesotho. However, while the sixth withdrawal in a month would cost M40.00 at Nedbank Lesotho, the sixth withdrawal of M1000.00 would cost M15.00 less for Nedbank SA's clients. A cash withdrawal by a Nedbank client from other bank's ATM is more than three folds more expensive to a Nedbank Lesotho's client than to a Nedbank SA's client. An OTC cash deposit of M1000.00 costs 4.6 per cent more in Nedbank Lesotho than in Nedbank SA while SA's clients also enjoy the benefit of a zero charge on the first four OTC cash deposits in a month. With regards to the OTC cash withdrawal, the first transaction per month is free of charge in SA but attracts a fee in Lesotho. However, on the basis of a benchmark of an OTC cash withdrawal of M1000.00, Nedbank Lesotho charges a lower fee of M10.95 compared with M54.00 by Nedbank SA. Nedbank Lesotho is cheaper on two types of services and more expensive on the same number of services. The same is the case for Nedbank SA. Consequently, the paper concludes that the two countries are at par in this category of services.

Table 17 ATM Cash Withdrawals and Branch Transactions		
	Lesotho	SA
ATM Cash Withdrawals		
Nedbank ATM	1st 5 free then 40.00	11.50 + 1.40% (25.50 for 1000.00)
Other Bank's ATM	46.25	10.00
Branch Transactions		
Cash Deposit Fee	1.95%, min 26.15 (26.15 / 1000.00)	1st 4 free then 11.00 + 1.40% (25.00/ 1000.00)
Cash Withdrawal Fee	0.25%, min 10.95, max 315.55 (10.95/ 1000.00)	1st 1 Free then 40.00 + 1.40% (54.00/ 1000.00)
Source	Commercial Banks' Pricing Guides and Author's Calculations	

C. Business Accounts

Nedbank Lesotho's Small and Medium Enterprises (SMEs) account is compared with Nedbank SA's Small Business Services Current account. For Swaziland there was no information on a comparable account for businesses in the published fee schedule. The fees for all the services including payments through different channels and cheque deposits, ATM cash withdrawals and OTC transactions are the same as in PAYU pricing. The only different fees in the case of Nedbank's accounts for small businesses are the monthly service and internet banking fees. The monthly service fee for Nedbank SA is cheaper than for Nedbank Lesotho. The same picture is observed with regard to the internet banking monthly fee. In a nutshell, Nedbank Lesotho's monthly fees are higher than SA's for business accounts.

Table 19 Monthly Account Maintenance Fees and Internet Banking Fees			
	Lesotho	SA	Swaziland
Monthly Service fee	139.1	58.00	480.00
Internet Banking Monthly Fee	104.9	0.00	130.00
Source	Commercial Banks' Pricing Guides		



4.3 Standard Bank

Standard Lesotho Bank, which is the reference/benchmark bank for comparison in this Section, contends that all its products and services are offered under the PAYU pricing option. It does not adopt the bundled pricing option. Its products are mainly grouped into 4 categories according to the clients' income levels as follows with incomes in brackets; the blue card category (less than M3000.00), Silver (M3000.00 – M15999.00), Gold (M16000.00 – M35000.00) and private banking (more than M35000.00 and M28000.00 or more for professionals). The accounts for the lowest income earners and the private banking accounts across the SACU standard banks are considered for purposes of this paper:

A. Entry Level accounts for Low income Earners

Under the low income earners group, the TransactPlus Account for Standard Lesotho Bank is compared with Stanbic Bank Botswana's TransactPlus Blue Account, Standard Bank Namibia's Pure Save Savings Account, Standard Bank SA's Access Account and Standard Bank Swaziland's Savings Account. These are savings accounts. The monthly account maintenance fee for this category of accounts is lowest for Standard Bank Swaziland's clients at no charge, followed by Standard Bank SA's at M4.99. Standard Bank Namibia charges the third lowest monthly fee followed by Botswana. Standard Lesotho Bank's fee is the highest.

	Botswana	Lesotho	Namibia	SA	Swaziland
Monthly Account Maintenance Fee	16.55	45.00	14.00	4.99	0.00
Source	Commercial Banks' Pricing Guides				

On OTC services, Standard Lesotho Bank and Standard Bank SA are the only ones that charge a fee for cash deposit and Lesotho's fee is lower than SA's. Own bank's cheque deposits are offered free of charge in Botswana, Lesotho and Swaziland while Namibia charges a lower fee of M15.00 compared with M30.00 for SA. Fees are levied on OTC withdrawals in all the five SACU countries. Botswana's fees in this group of services are the most affordable

followed by Lesotho and Namibia. Balance enquiries are free of a service fee in Swaziland. SA charges the lowest fee followed by Botswana. In the absence of data for Namibia, Lesotho's fees on balance enquiries are the highest. The country average fees show that Botswana's fees are the lowest followed by Swaziland's fees. Namibia is in third position though it lacks data on a number of services. SA is the fourth lowest while Lesotho levies the highest fees in this category of OTC services.

Table 2.1 OTC Deposits, Withdrawals and Balance Enquiries					
	Botswana	Lesotho	Namibia	SA	Swaziland
Deposits					
Cash Deposit - per M1 000.00	0.00	20.00	0.00	24.00	0.00
Cheque Deposit - Own Bank's	0.00	0.00	15.00	30.00	0.00
Withdrawals					
Cash Withdrawal per M1 000.00	10.40	40.00	40.00	51.00	54.50
Cheque Encashment per M1 000.00	10.40	40.00	N/A	53.00	50.50
Cheques/ Service Fee per M1 000.00	10.90	15.00	43.00	21.00	N/A
Balance Enquiry					
Balance Enquiry	9.44	50.00	N/A	7.25	0.00
Provisional/ Mini Statements	9.69	35.00	N/A	7.25	0.00
Average	7.26	28.57	24.50	27.64	17.50
Source	Commercial Banks' Pricing Guides and Author's Calculations				

With regards to services accessed with the use of an ATM, Botswana has the highest number of services on which it charges the lowest fees at 5 out of 7 followed by SA with 2. Lesotho and SA dominate on the second lowest fees category with 3 services each. Namibia has the highest number of services with the third lowest fees at 3 services and Lesotho shows its head again in the fourth lowest fees category with 3 services. The country averages reveal that Botswana levies the lowest fees among the five SACU countries followed by SA. Lesotho is the third lowest and is cheaper than Swaziland and Namibia.



Table 22 ATM Transactions		Botswana	Lesotho	Namibia	SA	Swaziland
ATM Cash Withdrawal - Own ATM (per M1 000.00)		4.42	5.00	25.00	16.00	21.00
ATM Cash Withdrawal - Other Local Bank's ATM (per M1 000.00)		7.14	28.75	36.00	22.70	56.00
ATM Cash Withdrawal - International (per M1 000.00)		24.22	50.00	45.00	22.70	N/A
Declined ATM Cash Withdrawal - Other Banks		3.35	10.00	9.00	4.90	N/A
ATM Balance Enquiry - Own Bank's printed		1.94	2.00	0.00	1.50	N/A
ATM Balance Enquiry - Other Bank's		N/A	9.00	9.00	5.50	5.50
ATM Statement		2.22	3.00	4.00	5.00	4.50
Average		7.22	15.39	18.29	11.19	17.40
Source	Commercial Banks' Pricing Guides and Author's Calculations					

Standard banks in the SACU region offer internet banking services to their clients. For the countries where data was available, all Standard banks in SACU countries do not charge their clients the internet banking activation fee and monthly subscription fee. Internal transfers including to local banks attract a fee of M3.81 in Botswana, M10.00 in Lesotho and SA's fee is highest at M12.00. With regards to transfers between linked accounts, Botswana and Lesotho offer this service free of a service fee while Namibia charges M4.20 and SA M5.00. In this group of services, Stanbic Botswana is the cheapest followed by Standard Bank Namibia. Standard Lesotho bank is the third cheapest while Standard Bank SA levies the highest fees.

Table 23 Internet Banking Fees		Botswana	Lesotho	Namibia	SA
Activation Fee		0.00	0.00	N/A	0.00
Monthly Subscription		N/A	0.00	0.00	0.00
Internal Transfers incl. Local Banks		3.81	10.00	N/A	12.00
Transfers between Linked Accounts		0.00	0.00	4.20	5.00
Source	Commercial Banks' Pricing Guides				

Foreign exchange transactions, including purchase and sale of foreign notes are both offered at the lowest service fee by Botswana followed by Namibia. Lesotho's fee is the third lowest among the four countries for which data was available and SA's fee is the highest. The use of telegraphic transfers in carrying out foreign exchange transactions is charged the lowest fee by Lesotho followed

by Botswana and then Namibia. The country averages indicate that Botswana's fees are the lowest followed by Lesotho's, which are cheaper than Namibia and SA's.

Table 24 Foreign Exchange Transactions		Botswana	Lesotho	Namibia	SA
Purchase of Foreign Notes		42.00	77.00	69.00	155.00
Sale of Foreign Notes		42.00	77.00	62.50	155.00
Inward Telegraphic Transfer/SWIFT		88.40	74.00	117.00	N/A
Average		57.47	76.00	82.83	155.00
Source	Commercial Banks' Pricing Guides and Author's Calculations				

B. Private Banking Accounts

In addition to targeting the high income clients, the other main feature/characteristic that distinguishes the private banking products from the rest is that a client is assigned a dedicated personal banker. Additional benefits enjoyed by private banking clients in the case of Standard Lesotho bank include access to an overdraft facility and a revolving line of credit, amongst others. According to Standard Lesotho bank's published pricing schedule, PAYU prices that apply to accounts for lower income groups also apply to Private Banking account holders, except in a few cases including ATM cash withdrawal and OTC balance enquiry on which Private Banking clients enjoy a lower fee and on the monthly account maintenance fee on which they pay more than the lower income account holders. As such, the comparison of Lesotho with other SACU countries is made only on these three.

The choice of comparable accounts for the comparator SACU countries was difficult because of a number of factors. First, as mentioned earlier, Standard Lesotho Bank is of the assertion that all their products are priced on PAYU basis. Nonetheless, their Private Banking Account has features of a bundled product including a higher monthly service fee in return for some free banking and non-banking services. Stanbic Botswana has a private banking current account under the PAYU option with a monthly service fee of M236.47 and a bundled private banking account at a monthly service fee of M338.00. Standard Bank



Namibia offers its private banking current account under both the PAYU option at no monthly service fee and the bundled option at M465.00. In SA's case, the private banking account is offered on bundled terms with a monthly service fee of M325.00. This notwithstanding, a choice was made as indicated in Table 25 below. Swaziland is not included in this analysis because data on its pricing schedule is classified by saving and basic cheque account only and there was no information on private banking.

Table 25 Monthly Account Maintenance Fees, OTC Balance Enquiry and ATM Cash Withdrawal Fee				
	Botswana	Lesotho	Namibia	SA
Monthly Account Maintenance Fee	236.47	215.00	465.00	325.00
OTC Balance Enquiry	9.44	30.00	0.00	7.25
ATM Cash Withdrawal - Own ATM (per M1 000.00)	4.42	0.00	20.00	18.00
Average	83.44	81.67	161.67	116.75
Source	Commercial Banks' Pricing Guides and Author's Calculations			

Standard Lesotho Bank's monthly account maintenance fee is the lowest among standard banks in the SACU region followed by Stanbic Bank Botswana and then SA. Standard Bank Namibia's fees are the highest. Nonetheless, Standard Lesotho Bank's fee on OTC balance enquiry is the highest among the 4 SACU countries at M30.00. It is followed by Stanbic Botswana at M9.44. Namibia is the cheapest as it offers this service free of charge to its private banking clients. With regard to ATM cash withdrawals, Standard Lesotho Bank is the cheapest at a zero fee. The second lowest fee is that of Stanbic Bank Botswana followed by SA's. Namibia charges the highest fee on ATM cash withdrawals. The country averages of these two services indicate that Lesotho's fees are lowest followed by Botswana's and then SA's. Namibia is the most expensive.

C. Business Accounts

Standard Lesotho Bank has two current account options for business enterprises, namely the Molleloa Current Account and the Business Current Account. Banking services offered under these accounts are charged the same service fees as under the entry level accounts. The same situation was observed for

other SACU countries on the products and services considered in this analysis. Thus, it is concluded that the results of the comparative analysis of business accounts would not be any different from that of the entry level accounts under the PAYU pricing option.

4.4 The Overall Average Fees by the Three Bank Groups

In this Section, the country product fees and services category averages by banks are put together to calculate the countries' overall averages across bank groups. This is with the objective of assessing the countries' fees levels within the bank groups. All the services and product fee averages covered in the foregoing analysis are included here.

FNB Namibia has the highest number of products/service fee averages that are highest among SACU countries. FNB Lesotho dominates with fee averages in the third category at 6 out of 17 and in the fourth category at 5 out of 17. Nonetheless, FNB Lesotho's overall average is the highest among comparator SACU countries and exceeds that of FNB Namibia. FNB Swaziland overall average fee is the lowest followed by that of SA and then Botswana. At the aggregate level, FNB Lesotho is the most expensive compared with its peers in the SACU region.



Table 26 FNBs Overall Average Fees					
	Botswana	Lesotho	Namibia	SA	Swaziland
PAYU Pricing Option					
PAYU Savings Account Monthly Fee	15.13	11.00	25.00	4.95	3.50
PAYU Cheque Account Monthly Fee	15.60	49.00	35.00	42.00	20.00
Payments Electronic Channels	31.63	8.69	10.74	3.25	17.08
Payments - Consultant Assisted at Branch	63.52	53.05	78.33	51.67	48.17
Linked Account Transfers	44.92	27.68	29.24	24.97	28.16
Deposits - ATM and Branch	44.97	59.63	41.25	89.50	72.25
Withdrawals - ATM and Branch	5.48	35.09	27.83	42.94	32.03
Balance Enquiries, Payment Notifications & Statements	2.38	5.02	6.10	4.39	5.04
Prepaid and Card Purchases	N/A	13.60	5.24	9.50	11.66
eWallet Related Fees	4.52	4.43	4.32	5.09	7.86
Penalty Fees	52.51	64.25	92.50	52.40	87.80
Bundled Products					
Low Monthly Fee Account Monthly Service Fee	80.73	99.00	127.00	49.00	65.00
High Monthly Fee Account Monthly Service Fee	168.19	199.00	150.00	175.00	150.00
Payment and Linked Account Transfer	5.17	0.00	0.00	2.33	0.00
Business Accounts					
Monthly Fee	56.67	120.00	85.00	69.00	N/A
Payments and Linked Account Transfers	N/A	9.58	9.53	7.30	N/A
Overall Average	42.24	47.44	45.44	39.58	39.18
Source	Commercial Banks' Pricing Guides and Author's Calculations				

Nedbank SA has the highest number of products/services fee averages that are lowest among the 3 SACU countries included in the analysis at 9 out of 12. The majority of Nedbank Lesotho's products/ services fee averages are in the second lowest group at 7 out of 12. Nedbank Swaziland is dominant in the third lowest average fee category though it is missing data on a number of products/ services. As such Nedbank SA is the cheapest followed by Nedbank Lesotho.

Table 27 Nedbanks' Overall Average Fees			
	Lesotho	SA	Swaziland
PAYU Products			
Monthly Service Fee Savings Account	7.00	20.00	30.00
Monthly Service Fee Cheque Account	90.00	30.00	45.00
Monthly Service Fee Private Banking Account	179.00	100.00	N/A
Internet Banking Monthly Fee	47.38	6.00	35.00
Payments and Cheque Deposits	10.08	9.33	16.26
ATM Cash Withdrawals and Branch Transactions	23.77	32.50	7.67
Bundled Products			
Monthly Service Fee	219.00	180.00	N/A
Internet Banking Monthly Fee	0.00	0.00	N/A
Payments and Cheque Deposits	25.00	20.00	N/A
ATM Cash Withdrawals and Branch Transactions	30.84	28.62	N/A
Business Account			
Monthly Service Fee	139.10	58.00	480.00
Internet Banking Monthly Fee	104.90	0.00	130.00
Overall Average	73.01	40.37	106.28
Source	Commercial Banks' Pricing Guides and Author's Calculations		

Stanbic Botswana records the highest number of products/service fees that are lowest compared with other Standard banks in the SACU region. Consequently, its overall average is the lowest in the region. Lesotho's overall average is in second position despite recording the highest average fees on two product/service categories. It is followed by Standard Bank Namibia. The overall average for Standard Bank SA puts it in fourth position as the most expensive standard bank in the SACU region, excluding Standard Bank Swaziland, which lacked data on a number of services.



Table 27 Standard Banks' Overall Average Fees		Botswana	Lesotho	Namibia	SA	Swaziland
Entry Level Account						
Monthly Account Maintenance Fee		16.55	45.00	14.00	4.99	0.00
OTC Deposits, Withdrawals and Balance Enquiries		7.26	28.57	24.50	27.64	17.50
ATM Transactions		7.22	16.39	18.29	11.19	17.40
Internet Banking - Funds Transfers		1.90	5.00	4.20	8.50	N/A
Foreign Exchange Transactions		57.47	76.00	82.83	155.00	N/A
Private Banking Account						
		83.44	81.67	161.67	116.75	N/A
Overall Average		28.97	42.11	50.92	54.01	N/A
Source	Commercial Banks' Pricing Guides and Author's Calculations					

4.5 The Overall Average Fees – A Closer Look at the Statistics

As a way of cross verifying the findings of the paper we calculated and analyzed some statistics on the overall average fees of services categories by SACU countries, for each bank group. These statistics include the Coefficient of Variation (CV) with the objective of evaluating the nature of the data involved, the mean and median to assess Lesotho's position in relation to SACU under two scenarios, the first one including Lesotho and the second one excluding Lesotho.

The following assumptions were made about the CV; Let $X = CV$, then

CV	Description	CV	Description
$X < 30$	Very Low	$60 < X < 90$	High
$30 < X < 60$	Low	$X > 90$	Very High

The results, as depicted in Appendix 2 show that, for all the bank groups, under the two scenarios of including Lesotho and excluding Lesotho, majority of the services categories have a very low or low CV indicating that the individual countries' average prices lie close to the mean, that is, there is less variation in the data. For example, there are only 3, 2 and 1 services category (ies) with a high or very high CV for the FNB, Nedbank and Standard bank group,

respectively, under both scenarios. In addition, comparing Lesotho's average prices by services categories with the SACU mean and median by services categories, we find that Lesotho's average prices are higher than the SACU mean and median on a significant number of services categories. Specifically, the average prices of 37.5 (50.0), 50.0 (66.7) and 50.0 (66.7) per cent of services categories for the FNB, Nedbank and Standard Bank groups, respectively, are higher than the SACU mean under the including Lesotho (excluding Lesotho) scenario.

5 CONCLUSION

The analysis of individual products and services and their averages per country emitted mixed signals throughout the three bank groups covered by the study. The countries took turns on the 5 fees levels within and across products and services categories for all the 3 bank groups. Even on countries' averages for products and services categories, countries took turns on the fees levels. Thus, further analysis of country averages was undertaken to rank the countries at a higher level across the bank groups. The results revealed that FNB Lesotho is the most expensive among FNBs in the SACU region. This was despite recording the highest average on only 1 out of 15 products or services categories. FNB Lesotho registered the highest number of categories in the third and fourth lowest fee categories at 6 and 5 out of 15, respectively. FNB Swaziland is the cheapest followed by FNB SA. FNB Botswana is in third position and FNB Namibia in fourth.

Nedbank SA has the highest number of products/services fee averages that are lowest among the 3 SACU countries included in the analysis at 9 out of 12. The majority of Nedbank Lesotho's products/services fee averages are in the second lowest group at 7 out of 12. Nedbank Swaziland is dominant in the third lowest average fee category though it lacked data on a number of products/services. As such Nedbank SA is the cheapest followed by Nedbank Lesotho.



Stanbic Botswana records the highest number of products/service fees that are lowest compared with other standard banks in the SACU region. Consequently, its overall average is the lowest in the region. Lesotho's overall average is in second position despite recording the highest average fees on two product/service categories. It is followed by Standard Bank Namibia. The overall average for Standard Bank SA puts it in fourth position as the most expensive standard bank in the SACU region, excluding Standard Bank Swaziland, which lacked data on a number of services.

The comparative level of Lesotho's bank fees differs by bank group. Lesotho is the most expensive in the FNB group and second cheapest in both the Nedbank and Standard bank groups. However, the statistical analysis reflects that Lesotho's average prices are higher than the SACU mean and median on a significant number of services categories, under both the including Lesotho and excluding Lesotho scenarios. Consequently, one could conclude that banking fees in Lesotho are high relative to other SACU countries.

6 RECOMMENDATIONS

The analysis of the prices of individual products and services and their averages per country showed mixed signals, with the SACU countries taking turns on the 5 fees levels. In addition, the countries' average prices by products or services categories revealed that Lesotho is the most expensive in the FNB group and second cheapest in both the Nedbank and Standard Bank groups. Furthermore, the paper found out that Lesotho's average prices are above the SACU mean and median in a significant number of services categories. Consequent to these findings, the paper makes the following recommendations;

- Efforts to improve Lesotho's business climate should continue with the objective of attracting more investors into the banking industry, hence increase competition.

- The literature pointed out that the prices of banking products are an important consideration by clients in choosing amongst services providers at their disposal. Hence the importance of an effective regulatory framework on price disclosure and transparency. While the commercial banks in Lesotho publish their pricing schedules on their websites and in printed brochures, which are available at their branches, they often lack comprehensiveness in their coverage of products/services. In addition, measures should be undertaken to improve public awareness of prices and how they could utilize this information to make informed choices of services suppliers. This could encourage the banks to price their products reasonably.
- Direct controls such as caps on fees can be distortionary and services providers often find ways to circumvent them. Thus they should be used as the last option.

Further research is required to understand the determinants of banking prices in SACU countries. This is important for understanding why prices differ from one country to another. It will also assist in determining country specific factors so as to come up with more relevant policy recommendations.



APPENDICES

Appendix I Table A1: Effective Dates of Banking Fees and Charges	
Bank	Effective Dates of Banking Fees and Charges
FNB	
FNB Botswana	From August 2016
FNB Lesotho	1 st December 2016 to 30 November 2017
FNB Namibia	1 st July 2016 to 30 th June 2017
FNB South Africa	1 st July 2016 to 30 th June 2017
FNB Swaziland	1 st July 2016 to 30 th June 2017
Nedbank	
Nedbank Lesotho	Not stipulated, labeled Pricing Guide
Nedbank South Africa	From 1 st January 2017
Nedbank Swaziland	From 5 th December 2016
Standard Bank	
Stanbic Bank Botswana	From 12 th July 2016
Standard Bank Lesotho	2 nd January 2017 to 31 st December 2017
Standard Bank Namibia	1 st January 2017 to 31 st December 2017
Standard Bank South Africa	1 st January 2017 to 31 st December 2017
Standard Bank Swaziland	Not stipulated, labeled Pricing Guide 2016
Source	Central Bank of Lesotho

A Comparative Analysis of Banking Services Fees in the Southern African Customs Union (SACU) Countries

Appendix 2		Table A2.2: FNB Group Statistics					
Bank	Lesotho	Mean	Median	Coefficient of Variation	Mean	Median	Coefficient of Variation
PAYU Pricing Option		Including Lesotho			Excluding Lesotho		
PAYU Savings Account Monthly Fee	11.00	11.92	11.00	72.88	12.15	10.04	82.43
PAYU Cheque Account Monthly Fee	49.00	32.32	35.00	44.04	28.15	27.50	44.12
Payments Electronic Channels	8.69	14.28	10.74	76.26	15.68	13.91	76.83
Payments - Consultant Assisted at Branch	53.05	58.95	53.05	20.79	60.42	57.60	22.55
Linked Account Transfers	27.68	30.99	28.16	25.62	31.82	28.70	28.02
Deposits - ATM and Branch	59.63	61.52	59.63	32.37	61.99	58.61	37.04
Withdrawals - ATM and Branch	35.09	28.67	32.03	49.16	27.07	29.93	58.15
Balance Enquiries, Payment Notifications and Statements	5.02	4.59	5.02	30.04	4.48	4.72	34.97
Prepaid and Card Purchases	13.60	10.00	10.58	35.88	8.80	9.50	37.12
eWallet Related Fees	4.43	5.24	4.52	28.46	5.45	4.81	30.13
Penalty Fees	64.25	69.89	64.25	27.44	71.30	70.16	30.64
Bundled Products							
Low Monthly Fee Account Monthly Service Fee	99.00	84.15	80.73	36.00	80.43	72.87	41.82
High Monthly Fee Account Monthly Service Fee	199.00	168.44	168.19	12.08	160.80	159.10	7.94
Payment and Linked Account Transfer	0.00	1.50	0.00	152.42	1.88	1.17	130.98
Business Accounts							
Monthly Fee	120.00	82.67	77.00	33.21	70.22	69.00	20.23
Payments and Linked Account Transfers	9.58	8.80	9.53	14.79	8.42	8.42	18.74
Overall Average	47.44	42.78	42.24	8.45	41.61	40.91	6.95
Source	Central Bank of Lesotho						



Appendix 2		Table A2.2: Nedbank Group Statistics					
Bank	Lesotho	Mean	Median	Coefficient of Variation	Mean	Median	Coefficient of Variation
PAYU Pricing Option		Including Lesotho			Excluding Lesotho		
Monthly Service Fee Savings Account	7.00	19.00	20.00	60.70	25.00	25.00	28.28
Monthly Service Fee Cheque Account	90.00	55.00	45.00	56.77	37.50	37.50	28.28
Monthly Service Fee Private Banking Account	179.00	139.50	139.50	40.04	100.00	100.00	#DIV/0!
Internet Banking Monthly Fee	47.38	29.46	35.00	72.09	20.50	20.50	100.03
Payments and Cheque Deposits	10.08	11.89	10.08	31.99	12.80	12.80	38.30
ATM Cash Withdrawals and Branch Transactions	23.77	21.31	23.77	59.10	20.09	20.09	87.42
Bundled Products							
Monthly Service Fee	219.00	199.50	199.50	13.82	180.00	180.00	#DIV/0!
Internet Banking Monthly Fee	0.00	0.00	0.00	#DIV/0!	0.00	0.00	#DIV/0!
Payments and Cheque Deposits	25.00	22.50	22.50	15.71	20.00	20.00	#DIV/0!
ATM Cash Withdrawals and Branch Transactions	30.84	29.73	29.73	5.28	28.62	28.62	#DIV/0!
Business Account							
Monthly Service Fee	139.1	225.70	139.10	99.22	269.00	269.00	110.93
Internet Banking Monthly Fee	104.9	78.30	104.90	88.07	65.00	65.00	141.42
Overall Average	73.01	73.22	73.01	45.01	73.32	73.32	63.56
Source	Central Bank of Lesotho						

Appendix 2		Table A2.3: Standard Bank Group Statistics					
Bank	Lesotho	Mean	Median	Coefficient of Variation	Mean	Median	Coefficient of Variation
Entry Level Account		Including Lesotho			Excluding Lesotho		
Monthly Account Maintenance Fee	45.00	16.11	14.00	108.53	8.89	9.50	86.94
OTC Deposits, Withdrawals and Balance Enquiries	28.57	21.09	24.50	42.05	19.23	21.00	46.98
ATM Transactions	16.39	14.10	16.39	33.55	13.53	14.30	38.87
Internet Banking - Funds Transfers	5.00	4.90	4.60	55.84	4.87	4.20	68.84
Foreign Exchange Transactions	76.00	92.83	79.42	46.12	98.43	82.83	51.41
Private Banking Account	81.67	110.88	100.10	33.83	120.62	116.75	32.55
Overall Average	42.11	44.00	46.51	25.49	44.63	50.92	30.58
Source	Central Bank of Lesotho						

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The Effects of Fiscal Policy Shocks on a Selected Group of Macroeconomic Variables in Lesotho: Evidence From SVAR Model

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1 INTRODUCTION

FISCAL POLICY IS a government tool designed to monitor and influence a nation's economy through its control over the size and structure of the government's revenues and expenditures (Rena and Kefela, 2011). Fiscal policy can therefore be recognised as a macroeconomic stabilisation instrument. Bank (2011), Rena and Kefela (2011) as well as Mathewos (2015) posited that following the global financial crisis of 2007-2008 that left many of the world's economies in a state of deep recession, various governments, from the developing and developed world employed fiscal policy in an attempt to ferry their respective economies out of the economic downturn. Empirical study into the effects of fiscal policy on macro variables has gained great prominence in recent years. According to Fatás and Mihov (2001), Perotti (2005), Giordano *et al* (2007), Caldara and Kamps (2008), Kamal (2010), Afonso and Sousa (2012) together with Mathewos (2015), fervent interest into how fiscal policy affects macroeconomic variables has been driven by the fact that unlike monetary policy¹, there is little or no consensus in economic literature on the effects of fiscal policy on key macroeconomic variables. Furthermore, although Fatás and Mihov (2001), Caldara and Kamps (2008), Kamal (2010) as well as Mathewos (2015) pointed out that there is increased evidence to suggest that the empirical literature into the effects of fiscal policy on the macroeconomy has been growing over the years, the research is predominantly confined to advanced economies. Adding to the point, to the best of the researcher's knowledge, the size, duration and nature (positive or negative) of the impact emanating from shocks² in fiscal policy variables on a select group of macro variables, using SVAR methodology has not yet been conducted on Lesotho. Not to mention, the effects of

¹ Monetary policy can be understood as a Central Bank's policy through which it controls a nation's money supply (Rena and Kefela, 2011).

shocks to fiscal policy on macro-variables differ across countries and across methodologies and also depend on the set of included variables. As if that was not enough, Masha *et al* (2007) pointed out that Lesotho is a member of the Common Monetary Area (CMA) and thus operates under a fixed exchange rate regime where the country's currency, the Loti is pegged at par with the South African Rand. This effectively means that the country has surrendered its monetary policy and only has at its disposal, the use of fiscal policy to influence the economy.

The aim of this paper is therefore to contribute to the body of knowledge and inform policy by investigating the dynamic effects of fiscal shocks on macroeconomic variables in Lesotho with the use of a structural vector autoregression (SVAR) model and annual time series data from 1982 to 2015. The macroeconomic variables³ selected are the output gap, consumer prices, private and public gross fixed capital formation and the interest rate spread. The rest of the paper is organised as follows: Section 2 provides an evolution of the tax and expenditure history of Lesotho from 1982 to 2015. Section 3 reviews the relevant literature. Section 4 presents the empirical framework. Section 5 outlines the empirical results. Robustness checks are contained in section 6. Section 7 concludes.

EVOLUTION OF TAX AND EXPENDITURES IN LESOTHO: 1982 – 2015

2 Similar to most governments around the globe, the Government of Lesotho (GoL) collects revenues to finance infrastructure projects, social protection and well-being, and other public needs. From the early 1980s to the early 2010s, Lesotho's revenues (tax and non-tax) and expenditures have been volatile. The volatility has in part been driven by significant changes in the country's political economy. For instance, the year 1993 marked the country's political transition into a democracy since independence in 1966. This time also reflected a drastic change in fiscal policy as income tax rates were increased markedly from the rates of 1962. Specifically, the income tax rate was adjusted from 12.5 per cent in 1962 to 35 per cent in 1993.

² In the study, fiscal shocks are explained as positive shifts in government expenditure and government revenue, respectively. This is done in order to examine and conclude on the different effects of each shock on identified macro variables together with their mutual influence.

³ According to Perotti (2002), Ravnik and Žilić (2011) and Chung and Leeper (2007), the chosen macro variables are sufficient to study the effects of shocks in fiscal policy. They have been chosen for the benefit of establishing a homogenous comparison with other fiscal policy VAR studies.



Table 1 presents the trends in fiscal policy indicators and Gross Domestic Product (GDP) in Lesotho from 1982 to 2015. During this 34-year period, real GDP grew by an average of 4.1 per cent while Government revenues and expenditures recorded an average of 49.9 per cent and 48.4 per cent of GDP, respectively.

Table 1	Trends in Fiscal Policy Indicators and GDP from 1982 to 2015 (In percentages of GDP)				
	1982-1988	1989-1995	1996-2002	2003-2009	2010-2015
Revenue	37.8	49.2	45.4	58.4	58.6
Expenditure	37.4	41.7	50.5	52.4	60.1
o/w capital	10.8	5.7	7.1	5.8	13.5
Surplus/Deficit	0.4	7.5	-5.1	6.0	-1.5
Real GDP growth (% changes)	4.9	3.1	3.3	5.0	4.1

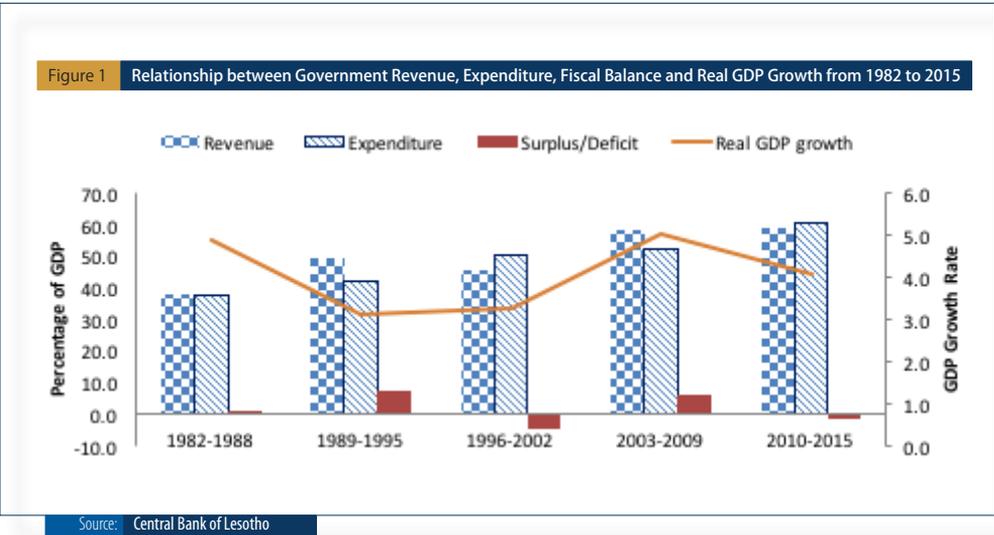
Source: Ministry of Finance and Central Bank of Lesotho.

Between 1996 and 2002 the GoL registered an average fiscal deficit of 5.1 per cent of GDP. The government’s biggest expenditure emanated from the liquidation and privatisation of State Owned Enterprises (SOEs) including two indigenous banks; Lesotho Bank and Lesotho Agricultural Development Bank. The cost of privatisation was estimated at M605.00 million that was spent on retrenchment packages. This led to an accumulation of public debt that was used for financing (Maope, 2000). There was also a rise in public capital expenditure from the implementation of the Lesotho Highlands Water Project⁴ (LHWP). Spending on the LHWP constituted a major part of the government’s capital expenditure during the period from 1996 to 1999. On a broader perspective, the period between 1996 and 2002 saw the real GDP growth increase marginally to 3.3 per cent from 3.1 per cent recorded between 1989 and 1995.

Figure 1 presents a graphical relationship between government revenue, expenditure, the fiscal balance and real GDP growth from 1982 to 2015. The fiscal balance exhibited a surplus of approximately 2.2 per cent of GDP between 2003 and 2015. According Tsekoa (2002), in 2003, as a way to strengthen the tax administration in the country, the GoL established the Lesotho Revenue Authority (LRA). The tax administration reform of 2003 contributed positively to tax revenue collection that registered an average of 33.2 per cent of GDP between 2003

⁴ The Lesotho Highlands Water Project was signed in 1986 by the GoL and the Government of the Republic of South Africa (RSA) aiming to transfer water to RSA and generate hydropower for Lesotho. Upon completion, this introduced two revenue items that expanded the revenue base: royalties paid by the RSA on water transfer from Lesotho to RSA, and cash flows on electricity sales from hydropower component of the project.

and 2015 compared to 6.6 per cent of GDP between 1982 and 2002. Another important contribution to Lesotho’s revenue during the period 2003 and 2015 were the sizeable inflows of Southern African Customs Union (SACU) receipts that registered 40.3 per cent of GDP. Thahane (2005) pointed out that together with domestic tax revenue (income tax and value added tax), foreign grants from the United States (US) Millennium Challenge Account (MCA) also boosted Lesotho’s revenue base during the 2003 to 2015 period.



Total government spending from 2003 to 2015 stood at an average of 56.3per cent of GDP. This included the redemption of 5-year and 10-year bonds related to the privatisation process of SOEs, spending on *Old Age Pension Scheme*, pension liability to Public Officers Defined Contribution Pension Fund, unitary payments on health projects through public-private partnership financing, as well as international transport costs. There was also a significant increase in capital spending to finance the cost of building the Metolong Dam project, and other MCA-funded projects. The real GDP growth registered an average of 5.0 per cent.



3 LITERATURE REVIEW

3.1 Theoretical Literature

This section aims to briefly articulate the main arguments surrounding the theoretical literature on fiscal policy from the perspective of the neoclassical and Keynesian schools of thought. The discussion will focus on discretionary fiscal policy, which is explained by Mathewos (2015) as the purposeful change in government spending and revenue with the deliberate intention to promote employment, price stability and economic growth.

- *Neo Classical Theory*

The underpinnings of neoclassical theory as they relate to discretionary fiscal policy are touched on in Bank (2011) who explained that the neoclassical school, which assumes flexible prices does not regard discretionary fiscal policy as having any impact on the business cycle. The result of increased government expenditure rather leads to a contraction of the economy through the crowding out of private consumption and private investment. A similar conclusion is highlighted in Perotti (2007) and Mathewos (2015) who presented that according to neoclassical theory on fiscal policy, a shock to government consumption financed by higher taxation results in a negative wealth effect that discourages household consumption and increases labour supply. However, since labour supply increases along a given labour demand, the level of real wage falls.

- *Keynesian Theory*

According to Perotti (2007), Bank (2011) and Mathewos (2015), Keynesian economic theory is based on assumptions of price rigidity and postulates that an increase in government expenditure coupled with a cut in taxes leads to an increase in the real wage as well as private consumption and as a result an increase in aggregate demand. Subsequently, a higher level of aggregate demand will mean an increase in the level of output. However, an increase in taxes retards economic growth.

3.2 Empirical Literature

Empirical research on dynamic effects of shocks in fiscal policy variables on macroeconomic variables is vast as depicted in Table 2.

Table 2		Summary of Studies on Fiscal Shocks		
Author(s) & Year	Country & Period	Methodology	Variables	Key Findings
Blanchard and Perotti (2002)	US. QI: 1947 – QIV: 1997	SVAR	Government spending, Government tax, GDP	Positive shocks to government spending lead to positive impact on output.
				Positive shocks to government spending and revenue lead to a crowding out of private investment.
Giordano <i>et al.</i> (2007)	Italy. QI: 1982 – QIV: 2004	SVAR	Government spending, Government revenue, private GDP, inflation and long-term interest rate	Positive shocks to government spending lead to positive impact on output, employment, private consumption, investment and inflation
				Positive shocks in government revenue have negligible effects on all selected variables.
Kamal (2010)	UK. QI: 1971 - QII: 2009	BVAR	Government spending, Government revenue, GDP deflator, private consumption, private investment, monetary aggregates, real wages, producer price index, short-term interest rate, trade balance and the real effective exchange rate.	Deficit-financed spending increase (DFSI) and the deficit financed tax cut (DFTC) lead to a positive impact on output.
Kofi Ocran (2011)	SA. QI: 1990 - QIV: 2004	VAR	Government gross fixed capital formation, tax expenditure, government consumption expenditure, GDP and the budget deficit	Government consumption expenditure and gross fixed capital formation have a positive effect on economic growth.
				Positive shocks to tax receipts have a positive effect on economic growth.

Source: Ministry of Finance and Central Bank of Lesotho.



Table 2 Summary of Studies on Fiscal Shocks (continued)				
Author(s) & Year	Country & Period	Methodology	Variables	Key Findings
Bank (2011)	Germany. Q1: 1991 - QIV: 2009	SVAR	GDP, government expenditure, taxes, inflation and the interest rate.	Impact of government expenditure shock on output is positive and short-term.
				Impact of government revenue shock is insignificant.
Ravnik and Žilić (2011)	Croatia. 2001 - 2009	SVAR	Government spending, government revenue, Industrial production, price levels and short-term interest rates.	Positive shock in government revenue leads to increase in the rate of inflation, a reduction in the short-term interest rate and an increase in industrial production.
				Government expenditure shock led to a reduction in industrial production.
Afonso and Sousa (2012)	US. 1970: QIII -2007: QIV UK. 1964: QII - 2007: QIV Germany. 1980: QIII - 2006: QIV Italy. 1986: QII - 2004: QIV	BVAR	Government spending, government revenue, private investment, private consumption, stock prices and housing prices.	Positive government spending shocks have small but positive effect on GDP and varied effect on private consumption and private investment.

Source: Ministry of Finance and Central Bank of Lesotho.

Blanchard and Perotti (2002) explored the dynamic effects of shocks in fiscal policy on economic activity in the US in the post war period by using a Structural Vector autoregression (SVAR) approach and quarterly time series data spanning Q1:1947 - QIV:1997. The findings revealed that positive shocks in government spending result in a positive effect on output whereas positive shocks in revenue negatively affect output. Furthermore, the impacts of positive innovations in government spending and government revenue were discovered to crowd out private investment spending.

Giordano et al. (2007) studied the effects of fiscal policy in Italy on private GDP, inflation and the long-term interest rate using a SVAR model and quarterly time series data ranging from the Q1:1982 to QIV:2004. The analysis concluded that shocks to total direct government expenditure positively affected output three quarters after the shock but the effect is transitory

and goes to zero after two years. Furthermore, positive shocks to government expenditure led to a positive response in employment, private consumption and investment and inflation. A positive shock in government revenue was discovered to have negligible effects on all selected variables.

Kamal (2010) investigated fiscal policy shocks in the United Kingdom (UK) within a Bayesian Vector Autoregression (B-VAR) framework and the use of quarterly data spanning from Q1:1971 to Q4:2009. The study was interested in the impacts of three fiscal policy experiments, namely a deficit-financed spending increase (DFS), a deficit financed tax cut (DFTC) and a balanced budget spending increase (BBS), on a set of chosen macroeconomic variables. Twelve macro variables were included in the study, viz. government expenditures, government revenues, GDP deflator, private consumption, private investment, monetary aggregates, real wages, producer price index, short-term interest rate, trade balance and the real effective exchange rate. The analysis concluded that the DFS and the DFTC lead to a positive impact on output, private investment and private consumption in the short-term while real wages, monetary aggregates and prices decline under both experiments. However, the DFS has greater costs in the medium term relative to the DFTC, making the DFTC a more desirable option. In addition, under the BBS experiment, it was discovered that the distortionary effects of an increase in tax outstripped the expansionary effects of increased government expenditure leading to a decline in output, private consumption, private investment and real wages coupled with an increase in prices.

Kofi Ocran (2011) analysed the impact of fiscal policy variables (government gross fixed capital formation, tax expenditure, government consumption expenditure and the budget deficit) on economic growth in South Africa (SA) by using a VAR model and quarterly time series data spanning 1990 to 2004. The investigation discovered that government consumption expenditure and gross fixed capital formation have a positive effect on economic growth but the former's impact on economic growth outweighed that of the latter. In addition, positive shocks to tax receipts had a positive effect on economic growth although the size of the budget deficit was found not to have a significant impact on growth outcomes.



Bank (2011) examined the effects of discretionary fiscal policy in Germany with the use of quarterly time series data from Q1: 1991 to Q4: 2009 within a SVAR framework. The study included GDP, government expenditure, taxes, inflation and the interest rate as variables. Focusing on the impact of discretionary fiscal policy shocks on GDP, the study concluded that a positive shock to government expenditure leads to an increase of 0.20 per cent in GDP on impact but the influence falls quickly and becomes statistically insignificant from the second quarter onwards. On the other hand, a shock to government tax revenue was found to have small and insignificant effects on GDP. Generally, the findings supported the neoclassical view of discretionary fiscal policy and found discretionary fiscal policy ineffective in spurring economic growth in Germany.

Ravnik and Žilić (2011) researched the dynamic effects of fiscal policy shocks in Croatia by investigating the impact of fiscal policy shocks on economic activity (where industrial production was used as a proxy variable for output), price levels and short-term interest rates using a SVAR methodology and monthly time series data from January 2001 to December 2009. The study concluded that the interest rate responded the strongest to fiscal shocks whereas inflation responded the weakest. A shock in government revenue was found to lead to an increase in the rate of inflation and a reduction in the short-term interest rate while an expenditure shock decreased inflation in the short-term and increased the short-term interest rate. On the same token, a shock in government expenditure led to a reduction in industrial production whereas a shock in government revenue resulted in an increase in industrial production.

Afonso and Sousa (2012) used a Bayesian SVAR (B-SVAR) and quarterly time series data to investigate the effects of government spending and government revenue shocks on the composition of GDP (private investment and private consumption) as well as on asset markets (stock prices and housing prices). Their study analyses empirical evidence from the US, the UK, Germany and Italy for the periods, 1970: Q1 - 2007: Q4, 1964: Q1 - 2007: Q4, 1980: Q1 - 2006: Q4 and 1986: Q1 - 2004: Q4 and includes a debt feedback component to account for the government intertemporal budget constraint. In general, positive government spending shocks were found to have a small but positive effect on GDP, a key discovery that is in support of the Keynesian theory on fiscal policy. The impact of expansionary fiscal policy on private consumption and private investment varied across selected countries but had a

positive effect on housing prices, the price level and the average cost of refinancing debt. On the other hand, positive shocks to government revenue were found to result in a positive effect on GDP and private investment but a varied effect on private consumption and housing prices. In addition, increased levels of government revenue showed a positive impact on stock prices, a mixed effect on the interest rates but a no impact on the price level. When the debt feedback was taken into consideration, long-term interest rates and GDP became more responsive to changes in fiscal policy and the effect of fiscal policy on the macro variables was more persistent.

The empirical review of the literature indicates that studies on the dynamic effects of fiscal policy shocks across developed and developing countries yield diverse results. This is especially true considering the differences in periods and methodologies used. However, what is a general consistency among the reviewed studies is the inclusion of output, inflation, private investment and interest rates as macro variables upon which the impact of shocks in fiscal policy variables is assessed. This common feature has played a significant role in informing the choice of variables to include in our study.

4 EMPIRICAL FRAMEWORK

4.1 Data Description

The study uses annual time series data from 1982 to 2015. Table 3 presents the variable description and consists of the general government expenditure⁵ (GExp), output gap (Ygap⁶), consumer price index (LesP), general government revenue⁷ (GRev), the interest rate spread⁸ (R), public gross fixed capital formation (PubGFCF) and private gross fixed capital formation (PriGFCF). GExp, Ygap, LesP and GRev were obtained from the International Monetary Fund (IMF) World Economic Outlook (WEO) data base, R was sourced from the World Bank (WB) development indicators while PubGFCF and PriGFCF were acquired from the Central Bank of

⁵ General government expenditure consists of total expense and the net acquisition of nonfinancial assets.

⁶ The output gap is calculated as the difference between the log of real GDP and expected output.

⁷ General government revenue consists of taxes, social contributions, grants receivable, and other revenue.

⁸ This is calculated as the difference between lending rates and deposit rates.



Lesotho (CBL). The variables in the model are all expressed in logarithmic form except R which is expressed in percentages.

Table 3 Variable Description		
Variable	Descriptor	Database/Source
GExp	General Government Expenditure	IMF WEO Data base
Ygap	Output Gap	Author's Own Calculations ⁹
LesP	Consumer Price Index	IMF WEO Data base
GRev	General Government Revenue	IMF WEO Data base
R	Interest rate spread	WB Development Indicators
PubGFCF	Public Gross Fixed Capital Formation	CBL
PriGFCF	Private Gross Fixed Capital Formation	CBL

4.2 Model Specification

In this study, a VAR model is used to assess the response of specific Lesotho macro-variables; the output gap (Ygap), consumer prices (LesP), the interest rate spread (R), public gross fixed capital formation (PubGFCF) and private gross fixed capital formation (PriGFCF) to shocks in domestic fiscal policy, that is, positive changes in general government expenditure (GExp) and general government tax revenue (GRev). Caldara and Kamps (2008) together with Ravnik and Žilić (2011) indicated that VAR models have become the main econometric tool for analysing the effects of fiscal and monetary policy shocks on macroeconomic variables. Clarida (2001), Jacobsson et al (2002), Lütkepohl (2011), Ravnik and Žilić (2011), Kofi Ocran (2011) as well as Kilian (2011) concurred. They posited that the VAR's superiority over other methods such as the use of simultaneous equations lies in its ability to quantify the average contribution of a given structural shock to the variability of the data over time through forecast error variance decompositions.

The reduced form of the VAR is presented as follows:

$$Z_t = G_0 + G_1 Z_{t-1} + G_2 Z_{t-2} + \dots + G_s Z_{t-s} + \varepsilon_t \tag{1}$$

⁹ The GDP series used to develop the output gap was taken from the IMF WEO Data base.

Where Z_t is a (7x1) vector of endogenous macroeconomic variables (GExp, Ygap, LesP, GRev, R, PubGFCF and PriGFCF) observed at time t . G_0 is a vector of constants, $G_{1,2,\dots,s}$ is a (7x7) matrix of coefficient estimates, ε is a (7x1) vector of serially uncorrelated system innovations and s is the optimal lag length of each variable. When unpacked, equation 1 is a system of seven equations as follows:

$$GExp_t = \beta_{1,0} + \sum_{i=1}^s \theta_{1,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{1,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{1,i} LesP_{t-i} + \sum_{i=1}^s \omega_{1,i} GRev_{t-i} + \sum_{i=1}^s \delta_{1,i} R_{t-i} + \sum_{i=1}^s \pi_{1,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{1,i} PriGFCF_{t-i} + \varepsilon_{1,t} \quad (2)$$

$$Ygap_t = \beta_{2,0} + \sum_{i=1}^s \theta_{2,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{2,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{2,i} LesP_{t-i} + \sum_{i=1}^s \omega_{2,i} GRev_{t-i} + \sum_{i=1}^s \delta_{2,i} R_{t-i} + \sum_{i=1}^s \pi_{2,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{2,i} PriGFCF_{t-i} + \varepsilon_{2,t} \quad (3)$$

$$LesP_t = \beta_{3,0} + \sum_{i=1}^s \theta_{3,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{3,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{3,i} LesP_{t-i} + \sum_{i=1}^s \omega_{3,i} GRev_{t-i} + \sum_{i=1}^s \delta_{3,i} R_{t-i} + \sum_{i=1}^s \pi_{3,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{3,i} PriGFCF_{t-i} + \varepsilon_{3,t} \quad (4)$$

$$GRev_t = \beta_{4,0} + \sum_{i=1}^s \theta_{4,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{4,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{4,i} LesP_{t-i} + \sum_{i=1}^s \omega_{4,i} GRev_{t-i} + \sum_{i=1}^s \delta_{4,i} R_{t-i} + \sum_{i=1}^s \pi_{4,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{4,i} PriGFCF_{t-i} + \varepsilon_{4,t} \quad (5)$$

$$R_t = \beta_{5,0} + \sum_{i=1}^s \theta_{5,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{5,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{5,i} LesP_{t-i} + \sum_{i=1}^s \omega_{5,i} GRev_{t-i} + \sum_{i=1}^s \delta_{5,i} R_{t-i} + \sum_{i=1}^s \pi_{5,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{5,i} PriGFCF_{t-i} + \varepsilon_{5,t} \quad (6)$$

$$PubGFCF_t = \beta_{6,0} + \sum_{i=1}^s \theta_{6,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{6,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{6,i} LesP_{t-i} + \sum_{i=1}^s \omega_{6,i} GRev_{t-i} + \sum_{i=1}^s \delta_{6,i} R_{t-i} + \sum_{i=1}^s \pi_{6,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{6,i} PriGFCF_{t-i} + \varepsilon_{6,t} \quad (7)$$

$$PriGFCF_t = \beta_{7,0} + \sum_{i=1}^s \theta_{7,i} GExp_{t-i} + \sum_{i=1}^s \lambda_{7,i} Ygap_{t-i} + \sum_{i=1}^s \phi_{7,i} LesP_{t-i} + \sum_{i=1}^s \omega_{7,i} GRev_{t-i} + \sum_{i=1}^s \delta_{7,i} R_{t-i} + \sum_{i=1}^s \pi_{7,i} PubGFCF_{t-i} + \sum_{i=1}^s \Omega_{7,i} PriGFCF_{t-i} + \varepsilon_{7,t} \quad (8)$$



Equation 1, the reduced form VAR can be estimated using the ordinary least squares (OLS) method. First, the choice of optimal lag order has to be made and this is done with due consideration of information criterion such as the Schwarz Information Criterion (SIC) and or Akaike Information Criterion (AIC). The smallest information criterion is the most preferred. Once the appropriate lag order has been selected, the stationarity of the system, or the stability of the system is tested with the help of the AR roots table. The system will be found to be stationary if the modulus of each root is within the unit circle, (Lütkepohl, 2011).

4.3 Unit Root Tests

Lütkepohl (2011) explained that VAR models are designed for stationary variables. To ascertain the order of integration of the variables, the study uses Augmented Dickey and Fuller (1979, 1981) (ADF) and Phillips-Perron (1988) test. The Phillips-Perron (PP) test is used together with the ADF because of the PP test's non-parametric character and its ability to correct for any serial correlation and heteroskedasticity in the errors. The two tests are utilized to establish whether the series are either $I(0)$ or $I(1)$.

4.4 Model Checking

Since the reduced form VAR, represented in equation 1 underlies the structural VAR, it is important to check the adequacy of the reduced form VAR in the data generation process (DGP), (Lütkepohl, 2011). For this purpose, the study focuses on tests for residual autocorrelation, non-normality, heteroskedasticity and structural stability.

4.5 SVAR Identification

Following the model checking process and confirmation that equation 1 passes the relevant residual diagnostics and structural stability tests, what comes next is the specification and

¹⁰ To test for autocorrelation in the residuals, the study uses the Breusch-Godfrey LM test. According to Luetkepohl (2011), this is the most suitable test for checking autocorrelation in VARs..

estimation of the structural VAR (SVAR). According to Kilian (2011), the SVAR, unlike the reduced form VAR, isolates the structural shocks and allows for the development of impulse response functions (IRFs) and the forecast error variance decompositions. The SVAR is represented in equation 9

$$AX_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_{t-2} + \dots + \beta_s X_{t-s} + v_t \quad (9)$$

Where; A is a (7×7) matrix of contemporaneous relations among the endogenous variables where the diagonal elements are normalized to equal one but the off diagonal elements may be arbitrary. X_t is a (7×1) vector of endogenous macroeconomic variables (GExp, Ygap, LesP, GRev, R, PubGFCF and PriGFCF) observed at time t . β_0 is a vector of constants, $\beta_{1,2,\dots,s}$ is a (7×7) matrix of coefficient estimates, v is a (7×1) vector of serially uncorrelated structural errors and s is the optimal lag length of each variable.

The SVAR cannot be estimated with OLS because of the contemporaneous relations between the endogenous variables in matrix A that are correlated with the structural errors. Therefore, to estimate the SVAR and develop IRFs and forecast error variance decompositions (FEVDs), equation 9 needs to be identified. This is done by imposing restrictions on elements of matrix A in equation 9. Kilian (2011) explained that imposing restrictions to matrix A in equation 9 also means imposing restrictions on the inverse of matrix A , that is; A^{-1} . Multiplying the right and left hand sides of the SVAR by A^{-1} results in the reduced form VAR in equation 10 such that

$$Z_t = A^{-1} AX_t \quad (10)$$

The relationship between the forecast errors and structural shocks is represented by equation 11

$$\varepsilon_t = A^{-1} v_t \quad (11)$$

In order to obtain the structural innovations in equation 11, the study employed a strictly



recursive Cholesky decomposition technique where $((n^2-n))/2$ zero (exclusion) restrictions¹¹ are imposed. Perotti (2004) and Mathewos (2015) point out that there is not much theoretical or empirical guidance on how best to identify the fiscal policy structural shocks. As a benchmark, Perotti (2004) ordered the government expenditure first. The Cholesky decomposition used in this study has the ordering of (GExp, GRev, PubGFCF, PriGFCF, Ygap, LesP and R). With this ordering, similar to Perotti (2004) and Ravnik and Žilić (2011), the study assumes that the government expenditure (GExp) is not contemporaneously affected by changes in other macroeconomic variables. This means that government expenditure's movements are solely dependent on government decisions and all other macro-variables can only affect the GExp with a lag. On the other hand, GRev, M2, PubGFCF, PriGFCF, Ygap, LesP and R are assumed to likely respond to contemporaneous changes in the government expenditure. Once successful identification of the structural shocks is attained, the IRFs and FEVDs can then be developed.

5 EMPIRICAL RESULTS

5.1 Results of the Unit Root Tests

Before estimation of the reduced form VAR model (equation 1), the ADF and PP unit root tests were performed. Their respective results are presented in Table 4. Granger (1986) underscored that the unit root test is conducted in order to ensure that there is no spurious regression. From Table 4, all of the macro-variables, except LesP and PriGFCF are non-stationary at levels under both the ADF and PP tests. In addition, all of the variables, except LesP are stationary at first difference under the ADF and PP tests.

¹¹ Where n is the number of endogenous variables in the model.

Table 4		ADF and PP Unit Root Test Results		
Variable	Levels		First differences	
Variable	ADF Statistic	PP Statistic	ADF Statistic	PP Statistic
GExp	-1.874424 (0.3397)	-2.258009 (0.1909)	-5.558582 (0.0001)	-5.560730 (0.0001)
Ygap	-2.529244 (0.1180)	-2.599543 (0.1032)	-5.804944 (0.0000)	-5.805107 (0.0000)
LesP	-6.029111 (0.0000)	-6.869833 (0.0000)	-2.717103 (0.0822)	-2.717103 (0.0822)
GRev	-2.732499 (0.0794)	-2.818728 (0.0665)	-4.705376 (0.0007)	-4.696117 (0.0007)
R	-2.605088 (0.1024)	-2.410763 (0.1466)	-4.912862 (0.0004)	-4.902138 (0.0004)
PubGFCF	-2.654923 (0.0933)	-1.805733 (0.3505)	-3.79275 (0.0071)	-3.840568 (0.0063)
PriGFCF	-3.077130 (0.0382)	-3.069664 (0.0388)	-7.681794 (0.0000)	-10.11885 (0.0000)

Note: H_0 : non-stationary and p-values are in parentheses
Authors' Calculations

Herrera and Pesavento (2013) advocated that the variables that are non-stationary but stationary of the same order of integration (in this case, Ygap, GExp, GRev, PubGFCF and R) should be tested for the presence of cointegration. However, even if cointegration is found to exist between the variables, the most robust form of model specification would be to estimate the VAR in levels. This point is echoed by Sims (1980) alongside Khan and Ali (2003) who highlighted that the intention of VAR analysis is to determine interrelationship between macro variables and not the development of parameter estimates. From Appendix 1, the Johansen cointegration test (considering only the trace statistic) shows that cointegration does not exist between the five variables. Following the recommendation of Sims (1980), Khan and Ali (2003) coupled with Herrera and Pesavento (2013), equation 1 is estimated in levels.



5.2 Optimal Lag Selection

The lag length selection criteria are presented in Table 5. The AIC and SC propose the use of 1 lag respectively. In order to make a final decision, the study performs an autocorrelation LM test. The results of the autocorrelation LM test are presented in Table 6 and indicate that the study fails to reject the null hypothesis of no serial correlation under a lag order of 1 and a lag order of 2. Furthermore, when the VAR is estimated under a lag order of 1, it is found to be stable and is sufficient to explain the dynamics in the model. This is evidenced by results from Appendix 2 that show that under a lag length of 1, no root lies outside the unit circle. Equation 1 is therefore estimated using OLS with a lag length of 1.

Table 5		VAR Lag Order Selection Criteria				
VAR Lag Order Selection Criteria						
Endogenous variables: GEXP GREV PUBGFCF PRIGFCFYGAP LESP R						
Exogenous variables: C						
Sample: 1982 2015						
Included observations: 32						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	184.2637	NA	3.64e-14	-11.07898	-10.75835	-10.97270
1	399.5472	322.9252*	1.20e-18*	-21.47170*	-18.90666*	-20.62146*
2	443.9310	47.15773	2.60e-18	-21.18319	-16.37374	-19.58899
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						
Authors' Calculations						

Table 6		VAR Residual Serial Correlation LM Test	
VAR Residual Serial Correlation LM Tests			
Null Hypothesis: no serial correlation at lag order h			
Sample: 1982 2015			
Included observations: 33			
Lags	LM-Stat	Prob	
1	53.67782	0.2997	
2	35.99841	0.9166	
Probs from chi-square with 49 df.			
<i>Authors' Calculations</i>			

5.3 Results of the Residual Diagnostic Tests

The reduced form VAR estimated with a lag order of 1 has no evidence of serial correlation in the residuals as can be seen from Table 6. In addition, there is no heteroskedasticity in the residuals and the residuals are normal, as evidenced from Appendix 3 and Appendix 4, respectively.

5.4 Impulse Responses

The impulse responses generated from the SVAR and calculated over a 10 year period are presented in Figure 2 and Figure 3. Figure 2 presents the impulse responses of GExp, GRev, PubGFCF, PriGFCF, Ygap, LesP and R following a shock to GExp. Figure 3 on the other hand shows the impulse responses of GExp, GRev, PubGFCF, PriGFCF, Ygap, LesP and R following a shock to GRev. In the study, impulse response functions (presented as solid lines in the figures) are interpreted as the percentage change in one variable after a one per cent increase in another variable. Moreover, similar to Giordano et al. (2007), the study defines “statistically significant” impulse responses as those estimates for which the narrow error band¹² does not include zero.

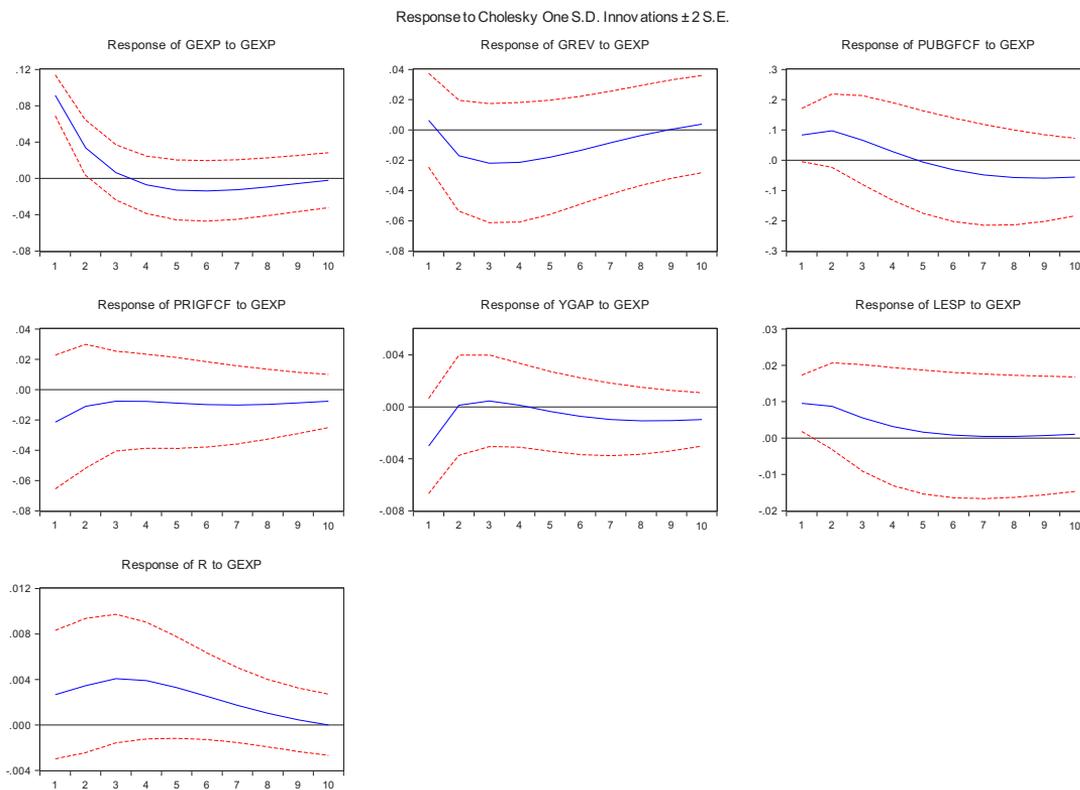
From Figure 2, a per cent increase in government expenditure results in an immediate and highly significant positive response to itself in the first two years. The impact becomes statistically insignificant after that period. A positive shock in government expenditure leads

¹² One standard deviation bands computed by analytic (asymptotic) simulations.



to a positive change of 0.01 per cent in the level of consumer inflation upon impact, for the first year only, thereafter the impact becomes insignificant. This finding is similar to that obtained by Giordano et al. (2007). The impact of government expenditure on all the other macro variables including government revenue and the output gap is found to be statistically insignificant. According to Ravnik and Žilić (2011), the irresponsiveness of taxes to increases in government expenditure could mean that government expenditure is financed not through revenue increments but through increases in the public debt level. Furthermore, increased levels of government expenditure appear not to mean increased revenue generation capacity for the government.

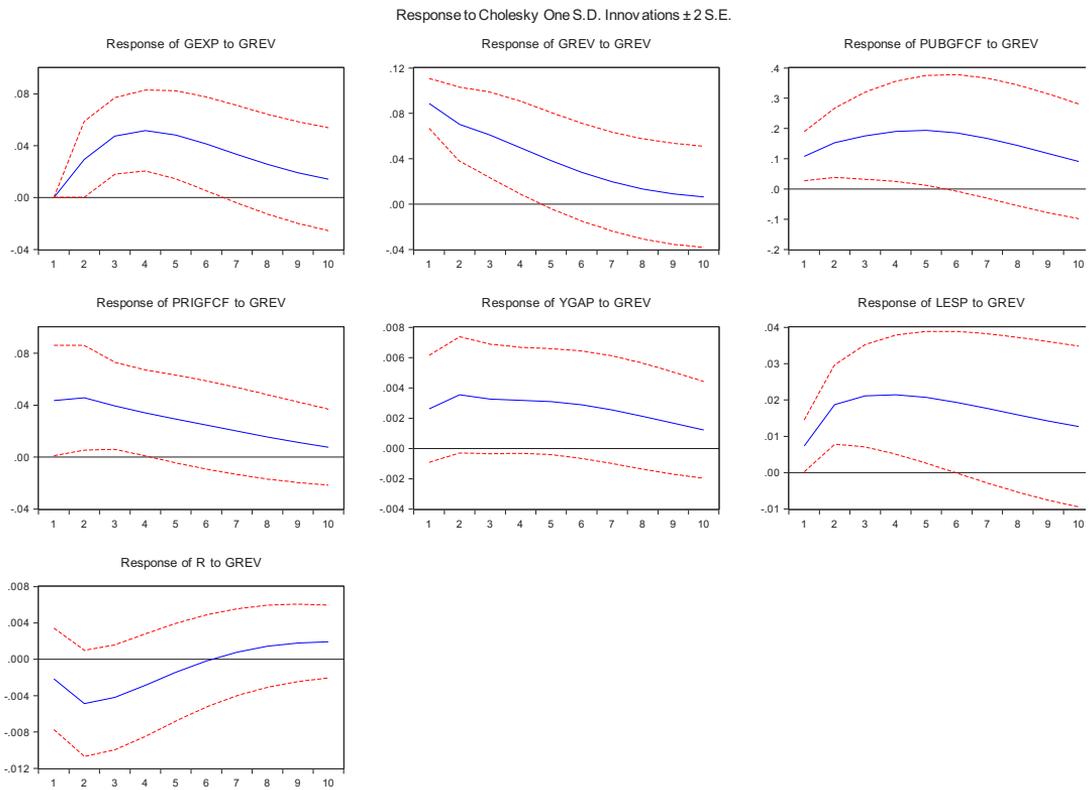
Figure 2 Impulse Response to Government Expenditure Shock



Source: Word Development Indicators, 2016



Figure 3 Impulse Responses to Government Tax Shock



Source: World Development Indicators, 2016

Figure 3 indicates that a one per cent increase in government revenue leads to a positive and highly significant impact on government expenditure starting from the second year after the initial shock up until year six. The impact peaks in year four at about 0.052 per cent. Importantly, after the sixth year following the initial shock, the impact becomes statistically insignificant. Ravnik and Žilić (2011) together with Mathewos (2015) found a similar result and explained that it can be attributed to the fact that intuitively, increased government revenue allows for greater government expenditure in the future. Following its own shock, government revenue is found to have a positive and highly significant impact for the first four years upon impact before becoming insignificant. In addition, a positive shock in government revenue leads to a positive reaction in the public gross fixed capital formation upon impact for five years before becoming statistically insignificant. The impact peaks in year five at about 0.19 per cent. This suggests that an increased level of government revenue translates into additional funding for purposes of financing public capital expenditure. On the same token, a positive shock to government revenue results in a positive impact on private gross fixed capital formation for the first four years following the initial shock, after which it becomes insignificant. This impact peaks in year two at around 0.046 per cent. The results suggest that increases in government revenue crowd in private investment and are similar to those found by Ravnik and Žilić (2011).

Consumer prices react positively to a positive shock in government revenue from the second year following the shock and last until the fifth year. After that period, they become statistically insignificant. The impact on consumer prices peaks in year 4 at approximately 0.021 per cent. The positive impact of a government revenue shock on inflation was also found by Ravnik and Žilić (2011) and Mathewos (2015). To find a possible explanation, the supply side dynamics would have to be considered. An increase in taxes will lead to an overall increase in firm production costs. The burden is then passed on from the producers to the consumers in the form of indirect taxes. This results in higher services and goods costs which result in a rise in the level of inflation. Positive shocks in government revenue were found to have an insignificant impact on the interest rate spread and the output gap. Mathewos (2015) explained the insignificant impact of government revenue on the output gap to possibly mean that government uses the increase in revenue to finance past debt obligations rather than stimulate output.



5.5 Forecast Error Variance Decomposition

According to Lütkepohl (2011), Kilian (2011) as well as Ravnik and Žilić (2011), forecast error variance decompositions present another tool to investigate the impact of shocks in VAR models. They provide historical decompositions that measure each structural shock's cumulative contribution to the evolution of each variable over time. Table 7 presents the forecast error variance decompositions extracted for the fifth and tenth years. The percentage of variation in the row variables, labelled 1 through 7, is explained by shocks to the column variables, labelled a through g.

Table 7 Forecast Error Variance Decomposition in Percentage							
Forecast Horizon (Yrs)	a. GExp	b. GRev	c. PubGFCF	d. PriGFCF	e. Ygap	f. LesP	g. R
1. GExp							
5 th Year	47.11768	39.23264	1.058548	1.753465	4.997804	2.027899	3.811970
10 th Year	32.51433	38.70661	1.398945	2.765368	3.501054	14.89066	6.223042
2. GRev							
5 th Year	6.321379	80.73708	1.550304	2.671541	1.367828	5.174382	2.177488
10 th Year	5.170638	60.24132	1.592744	2.779953	0.983640	20.37559	8.856123
3. PubGFCFv							
5 th Year	5.485993	35.42559	33.63916	0.202814	4.774884	7.070687	13.40087
10 th Year	5.734962	40.11773	22.49555	0.189891	4.284435	8.459478	18.71796
4. PriGFCF							
5 th Year	2.965526	28.69290	3.585913	53.78940	0.336426	4.065650	6.564181
10 th Year	4.070378	30.14991	3.250295	47.51026	0.550518	5.184349	9.284291
5. Ygap							
5 th Year	4.091847	21.49837	10.69538	4.322498	49.77697	4.794465	4.820472
10 th Year	5.029551	25.99330	8.918998	3.682037	40.78539	6.356854	9.233872
6. LesP							
5 th Year	5.442904	45.02692	4.003538	2.346423	1.812250	37.45386	3.914099
10 th Year	3.045789	43.49755	2.715056	2.534480	2.262886	39.60571	6.338532
7. R							
5 th Year	11.71924	10.71044	6.502173	1.053982	0.436367	14.49280	55.08500
10 th Year	12.71588	11.64381	7.913585	0.997039	0.759635	13.92742	52.04263
<i>Authors' Calculations</i>							

¹³ A more detailed variance decomposition table is presented in Appendix 5.

Table 7 indicates that in the fifth year, approximately 47 per cent of total variation in government expenditure is explained by own shocks while 39 per cent of the variation is explained by shocks in government revenue. In the tenth year, shocks to government revenue explain 38 per cent of the variation in government expenditure while own shocks explain 32 per cent. Furthermore, 14 per cent of the total variation in government expenditure is explained by shocks to consumer prices. 80 per cent of the total variation in government revenue is explained by own shocks in the fifth year. The remainder of the variation is explained by shocks to the rest of the macro-variables with the shocks in government expenditure explaining around 6 per cent of the variation in government revenue and shocks in consumer prices explaining around 5 per cent of the variation. In the tenth year, 60 per cent of the variation in government revenue is explained by own shocks while 20 per cent of the variation is explained by shocks in consumer prices.

In the fifth year, around 35 per cent of the total variation in public gross fixed capital formation is explained by shocks in government revenue and approximately 33 per cent of the variation is explained by own shocks. In addition, shocks in the interest rate spread explain around 13 per cent of the variation in public gross fixed capital formation in the fifth year. In the tenth year, shocks to government revenue take the lead once again and explaining around 40 per cent of the variation in public gross fixed capital formation while own shocks only explain about 22 per cent of the variation. Moreover, the interest rate spread explains about 18 per cent of the variation in public gross fixed capital formation in the tenth year.

Shocks in government revenue combined with own shocks explain most of the variation in private gross fixed capital formation in the fifth and tenth years. Similarly, most of the variation in the output gap and in consumer prices across the years under review is explained by own shocks and shocks in government revenue. The variation in the interest rate spread in the fifth and tenth years is mostly explained by own shocks, shocks to consumer prices, government expenditure and government revenue, respectively.



6 ROBUSTNESS CHECKS

This section investigates whether the previously stated findings are robust. As an initial robustness check, the reduced form VAR, equation 1 has to satisfy the stability condition that stresses that all roots of the characteristic polynomial should be inside the unit circle (Ravnik and Žilić, 2011). This condition is satisfied, as shown in Appendix 2. The second test for robustness is one similar to that used by Bank (2011) who analysed different specifications of the reduced form VAR. That is, equation 1 is estimated with a change in the ordering of the endogenous variables. In Section 4.5, the ordering, under the Cholesky decomposition was such that government expenditure was ordered first, then followed by government revenue, public gross fixed capital formation, private gross fixed capital formation, the output gap, consumer prices and last the interest rate spread. Christiano et al (1999) cautioned that under the Cholesky decomposition, the ordering of variables before and after the variables of interest (in this case the fiscal policy variables) does not have any consequence for the shock in the variables of interest. That is to say, if the ordering is not changed for the fiscal policy variables themselves but is changed for all variables that come after them, the same result as the initial ordering will be obtained.

Under the new ordering, the study maintains the use of the Cholesky decomposition with $((n^2-n))/2$ zero (exclusion) restrictions but orders the government revenue first, followed by government expenditure, public gross fixed capital formation, and private gross fixed capital formation, the output gap, consumer prices and last the interest rate spread. The assumption here is that is that government revenue, especially tax decisions, does not follow the expenditure decisions of the government. Moreover, government expenditure rather responds to government revenue shocks contemporaneously and so do the other selected macro-variables. Judging by the forecast error variance decompositions presented in Appendix 6, the results remain broadly unchanged and provide proof of the robustness of the model used.

7 CONCLUSION

This paper analysed the impact of shocks to Lesotho's fiscal policy variables on a set of macro-variables within a structural vector autoregression (SVAR) framework covering the period 1982 to 2015 using annual data. The results are as follows: A positive shock to government expenditure leads to a positive response of 0.01 per cent in consumer prices upon impact for the first year only; thereafter the impact becomes statistically insignificant. Importantly, shocks in government expenditure were found to have an insignificant impact on all other selected macro variables, including government revenue. The insignificant impact of government expenditure shocks on government revenue implies that government spending, to a large extent is financed through greater levels public debt. Moreover, increased government expenditure does not translate into an increased revenue generation capacity for the government. Positive innovations in government revenue cause a positive and highly significant response in government expenditure for a period of four years from the second year after the initial shock. The impact peaks in year four at approximately 0.052 per cent. While the dynamic effects of government expenditure on the level of inflation as well as private and public gross fixed capital formation are insignificant, positive shocks in government revenue result in a rise in the level of inflation coupled with private and public gross fixed capital formation. The positive impact of government revenue shocks on consumer prices is realised from the second year following the shock and lasts until the fifth year. On the other hand, the positive innovations in government revenue affect private and public gross fixed capital formation positively upon impact for a period of four and five years, respectively.

The discovery that positive shocks to government expenditure do not affect any of the selected macro variables except inflation (in a positive fashion) is worrying. In the same vein, the finding that positive shocks in government revenue lead to increased levels of inflation is also of concern. In light of this, the following policy recommendations can be made. Government expenditure should favour more the productive sectors of the economy in order to stimulate higher economic output and growth. Last, government revenue should be increased through a widening of the revenue base and more efficient methods of revenue collection as opposed to increases in the tax rate as this could lead to inflation.



Although the results of this study are, in general, informative; it is advised that they be cautiously interpreted. This is due to three reasons. First; the relatively small number of observations used in the study due to lack of data. Second; the sensitivity of the results to the choice of shock identification approach. Last; the absence of a debt feedback effect in the model. A possible area for further research would therefore be to expand on the current work by replicating it with a longer data set, a different shock identification approach as well as the inclusion of a debt feedback effect in the model to capture the effect of the government intertemporal budget constraint.

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Appendix		1. Johansen Cointegration Test		
Sample (adjusted): 1984 2015				
Included observations: 32 after adjustments				
Trend assumption: Linear deterministic trend				
Series: YGAP R PUBGFCF GEXP GREV				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.548903	65.25882	69.81889	0.1095
At most 1	0.471844	39.78447	47.85613	0.2303
At most 2	0.243540	19.35685	29.79707	0.4675
At most 3	0.220454	10.42548	15.49471	0.2494
At most 4	0.073881	2.456071	3.841466	0.1171
Trace test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Authors' Calculations				

Appendix		2. AR Roots Graph (Roots of Characteristic Polynomial)	
Roots of Characteristic Polynomial			
Endogenous variables: GEXP GREV PUBGFCF PRIGFCFYGAP LESP R			
Exogenous variables: C			
Lag specification: 1 1			
Root		Modulus	
0.962788		0.962788	
0.803256 - 0.205088i		0.829024	
0.803256 + 0.205088i		0.829024	
0.747473		0.747473	
0.434833		0.434833	
0.224395		0.224395	
0.084693		0.084693	
No root lies outside the unit circle.			
VAR satisfies the stability condition.			
Authors' Calculations			

Appendix		3. VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)			
Sample: 1982 2015					
Included observations: 33					
Joint test:					
Chi-sq	df	Prob.			
411.4232	392	0.2400			
Individual components:					
Dependent	R-squared	F(14,18)	Prob.	Chi-sq(14)	Prob.
res1*res1	0.477781	1.176307	0.3672	15.76678	0.3278
res2*res2	0.566875	1.682746	0.1484	18.70688	0.1765
res3*res3	0.465918	1.121622	0.4029	15.37531	0.3530
res4*res4	0.261635	0.455585	0.9296	8.633957	0.8538
res5*res5	0.413475	0.906375	0.5677	13.64469	0.4765
res6*res6	0.300205	0.551559	0.8685	9.906766	0.7690
res7*res7	0.563756	1.661522	0.1543	18.60395	0.1806
res2*res1	0.526465	1.429428	0.2350	17.37335	0.2368
res3*res1	0.638513	2.271021	0.0517	21.07092	0.0998
res3*res2	0.511561	1.346577	0.2726	16.88150	0.2625
res4*res1	0.302979	0.558870	0.8631	9.998307	0.7623
res4*res2	0.408191	0.886801	0.5843	13.47030	0.4899
res4*res3	0.280268	0.500665	0.9030	9.248839	0.8148
res5*res1	0.679678	2.728107	0.0237	22.42938	0.0702
res5*res2	0.498983	1.280496	0.3064	16.46645	0.2857
res5*res3	0.368469	0.750156	0.7041	12.15949	0.5935
res5*res4	0.199022	0.319466	0.9824	6.567719	0.9501
res6*res1	0.333757	0.644083	0.7959	11.01397	0.6849
res6*res2	0.597726	1.910401	0.0982	19.72496	0.1391
res6*res3	0.334761	0.646996	0.7935	11.04712	0.6823
res6*res4	0.374018	0.768202	0.6881	12.34260	0.5788
res6*res5	0.298518	0.547141	0.8716	9.851102	0.7730
res7*res1	0.183855	0.289636	0.9886	6.067221	0.9648
res7*res2	0.472862	1.153333	0.3819	15.60445	0.3381
res7*res3	0.333091	0.642156	0.7975	10.99199	0.6867
res7*res4	0.482251	1.197563	0.3540	15.91428	0.3186
res7*res5	0.374546	0.769935	0.6865	12.36001	0.5774
res7*res6	0.436330	0.995255	0.4953	14.39889	0.4204
<i>Authors' Calculations</i>					



Appendix		4. VAR Residual Normality Tests		
VAR Residual Normality Tests				
Orthogonalization: Cholesky (Lutkepohl)				
Null Hypothesis: residuals are multivariate normal				
Sample: 1982 2015				
Included observations: 33				
Component	Skewness	Chi-sq	df	Prob.
1	-0.001354	1.01E-05	1	0.9975
2	0.386359	0.821001	1	0.3649
3	0.158166	0.137590	1	0.7107
4	-0.604012	2.006570	1	0.1566
5	-0.420714	0.973500	1	0.3238
6	-0.718449	2.838929	1	0.0920
7	-0.877532	4.235340	1	0.0396
Joint		11.01294	7	0.1381
Component	Kurtosis	Chi-sq	df	Prob.
1	2.143645	1.008348	1	0.3153
2	3.102805	0.014532	1	0.9040
3	3.054149	0.004032	1	0.9494
4	2.431341	0.444638	1	0.5049
5	2.286674	0.699646	1	0.4029
6	2.828073	0.040643	1	0.8402
7	3.871052	1.043257	1	0.3071
Joint		3.255096	7	0.8604
Component	Jarque-Bera	df	Prob.	
1	1.008358	2	0.6040	
2	0.835533	2	0.6585	
3	0.141622	2	0.9316	
4	2.451209	2	0.2936	
5	1.673146	2	0.4332	
6	2.879572	2	0.2370	
7	5.278597	2	0.0714	
Joint	14.26804	14	0.4299	
Authors' Calculations				

Appendix	5. Forecast Error-Variance Decomposition in Percentage							
Variance Decomposition of GEXP:								
Period	S.E.	GEXP	GREV	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.091490	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.105546	85.34962	7.853827	0.487061	0.027301	3.162609	0.032957	3.086626
3	0.119192	67.21969	22.01749	0.722537	0.395722	4.961956	0.245881	4.436731
4	0.132645	54.56310	32.96714	0.888113	1.112294	5.259737	0.855327	4.354288
5	0.143964	47.11768	39.23264	1.058548	1.753465	4.997804	2.027899	3.811970
6	0.152900	42.60294	42.09093	1.224944	2.215114	4.628966	3.835630	3.401471
7	0.160080	39.45938	42.73993	1.355935	2.513581	4.283984	6.227643	3.419543
8	0.166249	36.89601	42.02054	1.428208	2.683266	3.984102	9.030597	3.957271
9	0.171942	34.60200	40.53281	1.437922	2.757185	3.724914	11.99864	4.946533
10	0.177414	32.51433	38.70661	1.398945	2.765368	3.501054	14.89066	6.223042
Variance Decomposition of GREV:								
1	0.089006	0.521143	99.47886	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.117996	2.389533	92.13834	0.527952	0.832151	1.295772	0.224765	2.591487
3	0.137219	4.336811	87.76124	0.921230	1.728700	1.528986	1.071699	2.651336
4	0.150062	5.659251	84.31736	1.269874	2.319083	1.474499	2.722974	2.236957
5	0.159159	6.321379	80.73708	1.550304	2.671541	1.367828	5.174382	2.177488
6	0.166376	6.438829	76.72924	1.727026	2.857370	1.263047	8.230800	2.753686
7	0.172825	6.206160	72.40417	1.791648	2.925054	1.170868	11.56685	3.935247
8	0.179007	5.827148	68.04284	1.765962	2.913760	1.093212	14.84587	5.511214
9	0.185022	5.455050	63.92561	1.687493	2.856821	1.030727	17.82222	7.222071
10	0.190774	5.170638	60.24132	1.592744	2.779953	0.983640	20.37559	8.856123
Variance Decomposition of PUBGFCF:								
1	0.260127	10.22842	17.21436	72.55722	0.000000	0.000000	0.000000	0.000000
2	0.386243	10.97723	23.43163	59.10657	0.361858	2.600253	1.772808	1.749657
3	0.481197	8.969884	28.40373	48.39312	0.300019	4.101165	3.977137	5.854939
4	0.560732	6.854246	32.43584	39.90908	0.238365	4.678271	5.810354	10.07385
5	0.627322	5.485993	35.42559	33.63916	0.202814	4.774884	7.070687	13.40087
6	0.680720	4.879840	37.47031	29.23934	0.186131	4.684260	7.833183	15.70693
7	0.721121	4.805378	38.77244	26.27334	0.181144	4.550110	8.240911	17.17668
8	0.749763	5.029134	39.53893	24.35347	0.182344	4.430276	8.422399	18.04345
9	0.768677	5.376729	39.94287	23.17258	0.185992	4.341826	8.473399	18.50660
10	0.780216	5.734962	40.11773	22.49555	0.189891	4.284435	8.459478	18.71796
<i>Authors' Calculations</i>								



Appendix	5. Forecast Error Variance Decomposition in Percentage (continued)							
Variance Decomposition of PRIGFCF:								
Period	S.E.	GEXP	GREV	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.127744	2.808687	11.61089	0.058163	85.52226	0.000000	0.000000	0.000000
2	0.139556	2.979989	20.41338	2.125236	72.33921	0.011329	1.035760	1.095094
3	0.148987	2.877449	24.91082	3.291950	63.54413	0.062563	2.289634	3.023461
4	0.156415	2.858065	27.31576	3.610498	57.72214	0.199466	3.320959	4.973105
5	0.162077	2.965526	28.69290	3.585913	53.78940	0.336426	4.065650	6.564181
6	0.166202	3.172118	29.48368	3.471064	51.16532	0.434945	4.561161	7.711711
7	0.169034	3.427068	29.90829	3.363946	49.47168	0.494997	4.868354	8.465663
8	0.170848	3.681561	30.10232	3.293107	48.43070	0.527701	5.045426	8.919189
9	0.171920	3.901498	30.16046	3.258547	47.83030	0.543702	5.139358	9.166137
10	0.172500	4.070378	30.14991	3.250295	47.51026	0.550518	5.184349	9.284291
Variance Decomposition of YGAP:								
1	0.010743	7.850574	5.916462	4.755764	0.000123	81.47708	0.000000	0.000000
2	0.012747	5.585981	11.89656	9.706954	3.798703	68.13576	0.870908	0.005138
3	0.013751	4.912189	15.82257	11.23041	4.641220	60.28598	2.259351	0.848281
4	0.014513	4.416724	18.98188	11.24121	4.571569	54.39140	3.669897	2.727324
5	0.015175	4.091847	21.49837	10.69538	4.322498	49.77697	4.794465	4.820472
6	0.015730	4.023193	23.36127	10.06971	4.088108	46.32790	5.555067	6.574747
7	0.016158	4.174500	24.62282	9.559072	3.911874	43.90557	6.005194	7.820979
8	0.016460	4.449585	25.39503	9.211731	3.793854	42.31187	6.236309	8.601628
9	0.016654	4.755780	25.81048	9.011276	3.721892	41.33564	6.332519	9.032406
10	0.016766	5.029551	25.99330	8.918998	3.682037	40.78539	6.356854	9.233872
Variance Decomposition of LESP:								
1	0.023219	16.92967	10.07508	2.770378	0.124537	2.252392	67.84795	0.000000
2	0.037358	11.98513	29.00054	4.856637	1.406581	1.405508	47.93184	3.413762
3	0.047537	8.754412	37.67422	4.810716	1.912616	1.494171	41.54917	3.804691
4	0.055560	6.729011	42.48535	4.421344	2.183153	1.655180	38.69790	3.828058
5	0.062166	5.442904	45.02692	4.003538	2.346423	1.812250	37.45386	3.914099
6	0.067729	4.598809	46.08608	3.634450	2.446707	1.948716	37.14046	4.144775
7	0.072493	4.017813	46.16151	3.327821	2.505205	2.060465	37.39957	4.527616
8	0.076644	3.597936	45.59955	3.078530	2.534173	2.148073	37.99775	5.043984
9	0.080317	3.283760	44.65071	2.877204	2.541848	2.214297	38.77122	5.660963
10	0.083612	3.045789	43.49755	2.715056	2.534480	2.262886	39.60571	6.338532
Authors' Calculations								

Appendix		5. Forecast Error Variance Decomposition in Percentage (continued)						
Variance Decomposition of R:								
Period	S.E.	GEXP	GREV	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.016338	2.645794	1.727263	3.391015	1.915249	0.434594	16.17988	73.70620
2	0.019648	4.921788	7.350523	4.072003	1.355916	0.303193	16.44352	65.55306
3	0.021453	7.719530	9.992525	4.892520	1.147949	0.284872	15.72008	60.24253
4	0.022414	10.08139	10.76668	5.727398	1.074704	0.345700	15.00270	57.00144
5	0.022889	11.71924	10.71044	6.502173	1.053982	0.436367	14.49280	55.08500
6	0.023132	12.64742	10.49321	7.137104	1.046066	0.529306	14.19063	53.95626
7	0.023294	13.01819	10.45872	7.579900	1.036718	0.611416	14.04005	53.25500
8	0.023449	13.03650	10.69391	7.827852	1.023940	0.677196	13.97643	52.76416
9	0.023612	12.89164	11.12959	7.920183	1.009894	0.725899	13.94883	52.37396
10	0.023774	12.71588	11.64381	7.913585	0.997039	0.759635	13.92742	52.04263

Cholesky Ordering: GEXP GREV PUBGFCF PRIGFCF YGAP LESP R

Authors' Calculations



Appendix		6. Forecast Error Variance Decomposition in Percentage						
Variance Decomposition of GREV:								
Period	S.E.	GREV	GEXP	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.089006	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.117996	91.01867	3.509207	0.527952	0.832151	1.295772	0.224765	2.591487
3	0.137219	85.82159	6.276461	0.921230	1.728700	1.528986	1.071699	2.651336
4	0.150062	81.97014	8.006477	1.269874	2.319083	1.474499	2.722974	2.236957
5	0.159159	78.23370	8.824758	1.550304	2.671541	1.367828	5.174382	2.177488
6	0.166376	74.23051	8.937557	1.727026	2.857370	1.263047	8.230800	2.753686
7	0.172825	70.00286	8.607467	1.791648	2.925054	1.170868	11.56685	3.935247
8	0.179007	65.77984	8.090145	1.765962	2.913760	1.093212	14.84587	5.511214
9	0.185022	61.80790	7.572764	1.687493	2.856821	1.030727	17.82222	7.222071
10	0.190774	58.25857	7.153384	1.592744	2.779953	0.983640	20.37559	8.856123
Variance Decomposition of GEXP:								
1	0.091490	0.521143	99.47886	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.105546	9.547356	83.65609	0.487061	0.027301	3.162609	0.032957	3.086626
3	0.119192	23.57486	65.66232	0.722537	0.395722	4.961956	0.245881	4.436731
4	0.132645	33.84627	53.68397	0.888113	1.112294	5.259737	0.855327	4.354288
5	0.143964	39.49324	46.85708	1.058548	1.753465	4.997804	2.027899	3.811970
6	0.152900	41.93313	42.76075	1.224944	2.215114	4.628966	3.835630	3.401471
7	0.160080	42.34558	39.85374	1.355935	2.513581	4.283984	6.227643	3.419543
8	0.166249	41.51981	37.39674	1.428208	2.683266	3.984102	9.030597	3.957271
9	0.171942	40.00567	35.12914	1.437922	2.757185	3.724914	11.99864	4.946533
10	0.177414	38.19467	33.02626	1.398945	2.765368	3.501054	14.89066	6.223042
Variance Decomposition of PUBGFCF:								
1	0.260127	19.08879	8.353991	72.55722	0.000000	0.000000	0.000000	0.000000
2	0.386243	25.66640	8.742457	59.10657	0.361858	2.600253	1.772808	1.749657
3	0.481197	30.50770	6.865916	48.39312	0.300019	4.101165	3.977137	5.854939
4	0.560732	34.17017	5.119907	39.90908	0.238365	4.678271	5.810354	10.07385
5	0.627322	36.71812	4.193463	33.63916	0.202814	4.774884	7.070687	13.40087
6	0.680720	38.34681	4.003346	29.23934	0.186131	4.684260	7.833183	15.70693
7	0.721121	39.30194	4.275880	26.27334	0.181144	4.550110	8.240911	17.17668
8	0.749763	39.80178	4.766279	24.35347	0.182344	4.430276	8.422399	18.04345
9	0.768677	40.01493	5.304663	23.17258	0.185992	4.341826	8.473399	18.50660
10	0.780216	40.06325	5.789437	22.49555	0.189891	4.284435	8.459478	18.71796
Authors' Calculations								

Appendix	6. Forecast Error Variance Decomposition in Percentage (continued)							
Variance Decomposition of PRIGFCF:								
Period	S.E.	GEXP	GREV	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.127744	10.74267	3.676912	0.058163	85.52226	0.000000	0.000000	0.000000
2	0.139556	19.26088	4.132496	2.125236	72.33921	0.011329	1.035760	1.095094
3	0.148987	23.66918	4.119087	3.291950	63.54413	0.062563	2.289634	3.023461
4	0.156415	26.01044	4.163389	3.610498	57.72214	0.199466	3.320959	4.973105
5	0.162077	27.31871	4.339717	3.585913	53.78940	0.336426	4.065650	6.564181
6	0.166202	28.04060	4.615202	3.471064	51.16532	0.434945	4.561161	7.711711
7	0.169034	28.40527	4.930082	3.363946	49.47168	0.494997	4.868354	8.465663
8	0.170848	28.55364	5.230242	3.293107	48.43070	0.527701	5.045426	8.919189
9	0.171920	28.58135	5.480607	3.258547	47.83030	0.543702	5.139358	9.166137
10	0.172500	28.55356	5.666728	3.250295	47.51026	0.550518	5.184349	9.284291
Variance Decomposition of YGAP:								
1	0.010743	4.945120	8.821916	4.755764	0.000123	81.47708	0.000000	0.000000
2	0.012747	11.20404	6.278492	9.706954	3.798703	68.13576	0.870908	0.005138
3	0.013751	15.31347	5.421292	11.23041	4.641220	60.28598	2.259351	0.848281
4	0.014513	18.52555	4.873054	11.24121	4.571569	54.39140	3.669897	2.727324
5	0.015175	20.99293	4.597293	10.69538	4.322498	49.77697	4.794465	4.820472
6	0.015730	22.75227	4.632194	10.06971	4.088108	46.32790	5.555067	6.574747
7	0.016158	23.89810	4.899214	9.559072	3.911874	43.90557	6.005194	7.820979
8	0.016460	24.56870	5.275915	9.211731	3.793854	42.31187	6.236309	8.601628
9	0.016654	24.90793	5.658330	9.011276	3.721892	41.33564	6.332519	9.032406
10	0.016766	25.04109	5.981763	8.918998	3.682037	40.78539	6.356854	9.233872
Variance Decomposition of LESP:								
1	0.023219	11.99151	15.01323	2.770378	0.124537	2.252392	67.84795	0.000000
2	0.037358	31.32219	9.663484	4.856637	1.406581	1.405508	47.93184	3.413762
3	0.047537	39.75662	6.672012	4.810716	1.912616	1.494171	41.54917	3.804691
4	0.055560	44.24846	4.965907	4.421344	2.183153	1.655180	38.69790	3.828058
5	0.062166	46.50285	3.966980	4.003538	2.346423	1.812250	37.45386	3.914099
6	0.067729	47.33435	3.350541	3.634450	2.446707	1.948716	37.14046	4.144775
7	0.072493	47.24145	2.937875	3.327821	2.505205	2.060465	37.39957	4.527616
8	0.076644	46.56096	2.636527	3.078530	2.534173	2.148073	37.99775	5.043984
9	0.080317	45.53183	2.402640	2.877204	2.541848	2.214297	38.77122	5.660963
10	0.083612	44.32606	2.217278	2.715056	2.534480	2.262886	39.60571	6.338532
Authors' Calculations								



Appendix		6. Forecast Error Variance Decomposition in Percentage (continued)						
Variance Decomposition of R:								
Period	S.E.	GEXP	GREV	PUBGFCF	PRIGFCF	YGAP	LESP	R
1	0.016338	1.424206	2.948852	3.391015	1.915249	0.434594	16.17988	73.70620
2	0.019648	6.496697	5.775614	4.072003	1.355916	0.303193	16.44352	65.55306
3	0.021453	8.741263	8.970792	4.892520	1.147949	0.284872	15.72008	60.24253
4	0.022414	9.310447	11.53761	5.727398	1.074704	0.345700	15.00270	57.00144
5	0.022889	9.194523	13.23516	6.502173	1.053982	0.436367	14.49280	55.08500
6	0.023132	9.002819	14.13782	7.137104	1.046066	0.529306	14.19063	53.95626
7	0.023294	9.026886	14.45002	7.579900	1.036718	0.611416	14.04005	53.25500
8	0.023449	9.318076	14.41234	7.827852	1.023940	0.677196	13.97643	52.76416
9	0.023612	9.790223	14.23101	7.920183	1.009894	0.725899	13.94883	52.37396
10	0.023774	10.31894	14.04075	7.913585	0.997039	0.759635	13.92742	52.04263
Cholesky Ordering: GREV GEXP PUBGFCF PRIGFCF YGAP LESP R								
<i>Authors' Calculations</i>								

The National Payment System in Lesotho, 2000–2016¹

Lira Peter Sekantši and Motheo Ernest Lechesa

1 INTRODUCTION

LESOTHO IS A SMALL landlocked enclave within South Africa, with a population of about 2 million people. Its real GDP growth rate over the past ten years has averaged at about 4 per cent per annum, driven largely by the mining, manufacturing, construction and tertiary sectors (World Bank, 2015). Nonetheless, unemployment, poverty and income inequality remain pervasive in the face of non-inclusive growth in the economy. Unemployment currently remains high at more than 24 per cent; the Gini coefficient for income inequality stands at 0.5; while the poverty headcount ratio of US\$1.25 a day means that 56.2 per cent of the population remains trapped in extreme poverty. Efforts to promote inclusive growth are constrained by, among other factors, the prevalence of HIV/AIDS, which stands at about 22.9 per cent of the population, and the high rate of urbanisation and population concentration (AfDB, 2016). With regard to employment, the government is the largest employer and the largest private employer is the garment industry, which employs approximately 36,000 Basotho and benefits significantly from the United States (US) African Growth and Opportunity Act 2000.

Lesotho's location within South Africa and her narrow economic base makes the country heavily reliant on South Africa for much of its economic activity through factors such as trade, remittances from workers employed in various industries in South Africa and water royalties due to the Lesotho Highlands Water Project treaty. The country is a member of the Common Monetary Area (CMA) along with South Africa, Namibia and Swaziland, and its currency, the Loti (plural Maloti) through the CMA agreement, is fixed at par to the South Africa Rand (ZAR), with ZAR also circulating as a legal tender in Lesotho. In addition, it is a member of the Southern

¹ The authors acknowledge the Journal of Payment Strategy and Systems for publishing this paper in Vol. 12, No.1. (2018).



Africa Development Community (SADC) and Southern African Customs Union (SACU) along with all the CMA countries and Botswana (Sekantsi and Molapo, 2017). The financial sector in Lesotho is mostly dominated by the banking industry, with three of the country's four commercial banks being subsidiaries of South African banks. In light of this, the banking sector remains the primary distributor of financial services and products in the country. However, banking penetration and access to banking services and therefore financial inclusion remain relatively low by regional and international standards due to the limited banking infrastructure, especially in rural areas (Thamae, 2014).

Prior to 2000, Lesotho's payment and settlement system mainly involved manual processes and paper-based instruments, which were inefficient and did not conform to international standards and best practices. Against this background, the majority of the population, particularly the rural poor, remained financially excluded. Having recognised the deficiencies of the payment and settlement system in Lesotho and the importance of a safe and efficient payment and settlement system in promoting monetary and financial stability and fostering financial inclusion, among other things, the Central Bank of Lesotho (the Bank) in collaboration other stakeholders, including commercial banks under the umbrella of the National Payment System Council (NPSC), embarked on a project to modernise the payment and settlement system in the early 2000s. The aim of this reform initiative was to strengthen the financial infrastructure and maintain financial stability through a safe and efficient payment system, which complies with international standards and best practices (CBL, 2004).

In this regard, the Bank, with support from the NPSC, the banking industry and other relevant stakeholders, developed the 'Lesotho National Payment System Project: Envisaged National Payment System' document in 2004, in order to provide strategic direction for the modernisation project. This document outlined a number of projects which would be undertaken during the period 2004–2015 to reform and modernise the national payment and settlement system in Lesotho, and provided a framework for the implementation of the projects highlighted therein.⁶ Following its implementation, the reform initiative achieved significant milestones related to the legal and regulatory framework, the institutional framework for guiding all payment systems, the financial infrastructure, and the regional projects undertaken to improve remittance flows. These reforms have enabled the country to build and operate a modern payment system

that complies with international standards and supports monetary policy and fosters financial stability and financial inclusion, as well as providing other economic benefits.

This paper briefly discusses the projects undertaken as part of the modernisation programme, the challenges faced during their implementation and also their resolutions. The paper also highlights how Lesotho benefits from operating its modern payment and settlement system. The rest of the paper is organised as follows: the following section briefly discusses the projects undertaken and their performance. The paper then describes the key challenges encountered and how these were resolved. This is followed by a discussion of the benefits resulting from the project, and finally, the conclusion and some recommendations.

2 PROJECTS ACHIEVED UNDER THE MODERNISATION PROGRAMME

2.1 Legal and regulatory framework for the national payment system

The safety and soundness of payment systems processes depend, to a great extent, on the prevailing legal and regulatory framework in the country. An effective legal and regulatory framework promotes market confidence, protects investors and helps manage risks. In particular, the payment and settlement system must be supported by the legal and regulatory framework, which is clear on the obligations of parties to a transaction or in the interpretation or application of the laws when the need arises. As part of the project, the Bank therefore reviewed and reformed the legal and regulatory framework for payment and settlement systems in Lesotho. In this respect, a number of milestones were achieved, as discussed below.

2.1.1 Payment System Act 2014

The Payment System Act 2014, in conjunction with other legislation, empowers the Bank to oversee, inspect and monitor the payment and settlement systems in the country to ensure their safety and efficiency. It goes a long way to fulfilling an important requirement that all payment systems should have a well-founded, clear, transparent and enforceable legal basis for



each material aspect of its activities in all relevant jurisdictions, 7 in line with the Committee on Payment and Settlement Systems (CPSS)-International Organisation of Securities Commission (IOSCO) Principles of Financial Markets Infrastructures (PFMIs).

2.1.2 The Payment Systems (Issuers of Electronic Payments Instruments) Regulations 2017

To operationalise the Payment System Act 2014 and to strengthen the mobile money regulation and consequently promote market confidence, protect investors and manage risks, the Bank drafted the Payment Systems (Issuers of Electronic Payments Instruments) Regulations 2017 with the technical assistance of a consultant from the International Monetary Fund (IMF). These regulations were enacted and promulgated by the Parliament of the Kingdom of Lesotho and put in place in March 2017. The objective of these regulations is to provide for the licensing and oversight of issuers of electronic payment instruments (including issuance of e-money) as well as to provide general provisions applicable to all e-money issuers.

Prior to the enactment and promulgation of these regulations, the Bank developed the Mobile Money Guidelines 2012, which were subsequently reviewed in 2013, to provide guidance in the provision of mobile money services in Lesotho. This was done to fill the regulatory gaps that emerged as a result of the deployment of mobile money in Lesotho. In this regard, the Bank, like other regulators in other jurisdictions, issued a 'letter of no objection' as a regulatory instrument which allowed mobile network operators (MNOs) to operate while the Bank worked with them and other stakeholders in the payment system sphere to prepare the Payment Systems (Issuers of Electronic Payments Instruments) Regulations 2017.

2.1.3 Oversight policy framework, rules and procedures

Through the National Payment System Division (NPSD) and with support from other departments within the Bank, the Bank has developed the rule book and procedural manual that guide the participation in Lesotho Wire, the real-time gross settlement (RTGS) system used for processing and settling large-value and time-critical payments in Lesotho. The rule

book and procedural manual has been circulated to all commercial banks in Lesotho in addition to the Banking Division of the Bank, which acts as a system participant on behalf of the Bank. In the same manner, the Payment Association of Lesotho (PAL) has developed the Lesotho Automated Clearing House (LACH) rules to guide the participation of its members in the LACH.

In addition to the operational rules and procedures, the Bank has developed an oversight framework to guide oversight activities. There is also a risk management framework that guides NPSD in the ongoing identification, assessment and resolution of risks. The Bank reviews these documents on a continuous basis to ensure they are in line with the legal and regulatory framework and international standards and best practices in the payment system arena.

2.2 Institutional framework

Aside from the legal and regulatory framework, the project enabled the set-up of the payment system institutional framework in Lesotho as described below.

2.2.1 The Bank as an overseer of the payment system

By drawing the powers from Part IV Section 34 of the Central Bank of Lesotho Act 2000 and Part II Section 2(a) of Payment Systems Act 2014, the Bank, through the NPSD, acts as an overseer of the payment and settlement systems as well as payment instruments in the country. In this regard, it sets rules and procedures to guide participation in the systems it operates, and vets rules for those systems and instruments operated by other institutions such as commercial banks and MNOs. Not only does the Bank achieve this mandate through ensuring compliance with the domestic legal and regulatory framework, but also with other international standards and best practices in the payment system arena, including CPSS-IOSCO PFMI.



2.2.2 The Bank as an operator and user of payment systems

As well as overseeing payment systems, the Bank is the owner and operator of Lesotho Wire. In this regard, the Bank controls user permissions as well as the screening of institutions that wish to participate in the system. Currently, all the commercial banks in Lesotho (namely; Standard Lesotho Bank, First National Bank Lesotho, Nedbank Lesotho and Lesotho Post Bank) in addition to the Bank through its Banking Division participate in Lesotho Wire. In addition, the Bank also provides settlement services to commercial banks by ensuring that the latter's accounts (domiciled at the Bank) are indeed debited or credited as expected. Besides playing the above-mentioned roles, the Bank is also a user of the different payment products and services in Lesotho. As a user, the Bank makes its own payments through the implemented payment systems (specifically, Lesotho Wire and LACH for cheques and electronic funds transfers). These payments are different from those carried out under the Bank's responsibility as payment system operator.

2.2.3 The Payments Association of Lesotho

The Payment Association of Lesotho (PAL) was established in 2009 and has assumed the role of the payment system management body. Members of PAL are the four commercial banks, with the Bank as chair. PAL is recognised by the Payment Systems Act 2014 as a self-regulatory body, which is licensed and regulated by the Bank. In terms of the Act, the body's main function is to manage the payment system, organise and set the technical standards and regulate the participation of its members in the payment system. PAL currently operates the LACH, which hosts the Maseru Image Clearing House (MIACH) — the cheque clearing system — and the electronic funds transfer (EFT) system.

2.2.4 Regional institutional framework

Through NPSD, the Bank is also a member of the Southern African Development Community (SADC) Payment System Oversight Committee (PSOC) and SADC Payment System Subcommittee to advance the objectives of payment, clearing and settlement systems as set

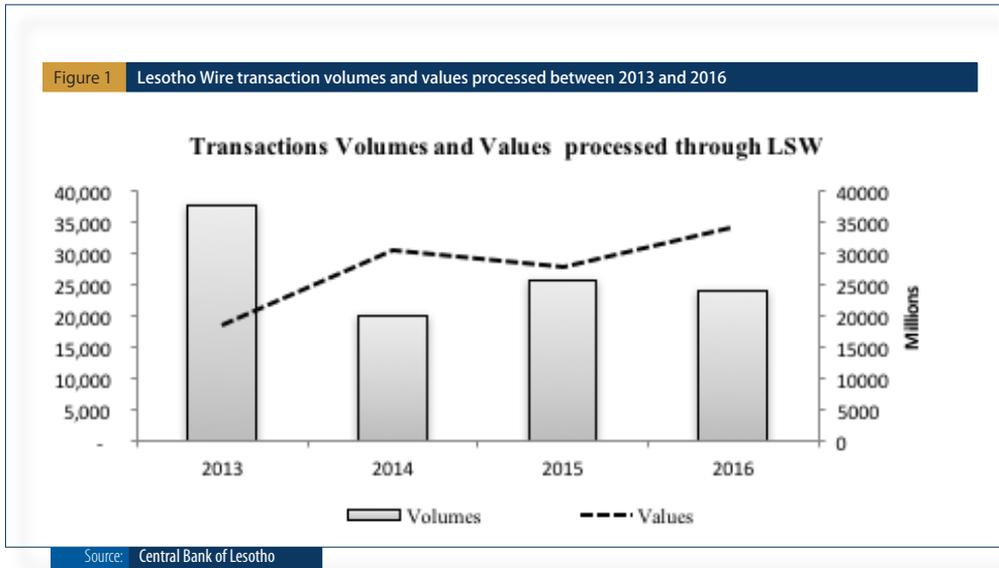
out in the SADC Protocol on Finance and Investment (SADC, 2006). The SADC PSOC is responsible for overseeing the SADC Integrated Regional Electronic Settlement System (SIRESS) and guiding development of integrated regional payment systems. In addition, the committee is also responsible for aligning the legal and regulatory frameworks of the payment, clearing and settlement systems of member countries. The committee reports to the SADC Committee of Central Bank Governors (CCBG). To this end, SADC Payment System Model law and SADC Mobile Money Guidelines have been drafted by the SADC PSOC with the assistance of the SADC Legal Sub-Committee and approved by the CCBG in late 2017. Once completed, member countries will be required to align their payment systems laws and mobile money regulations/guidelines with the SADC Model law and Mobile Money Guidelines, respectively (SADC, 2017).

2.3 Physical infrastructure

2.3.1 Real-time gross settlement system

The RTGS in Lesotho is called LesothoWire and was first implemented in 2006 and subsequently upgraded in 2013. As mentioned earlier, this system is operated and administered by the Bank through NPSD. It is used for settlement of large-value (transactions equivalent to at least M100,000) funds transfers and time-critical payments between commercial banks in the country and is based on the credit push principle in order to mitigate systemic risks. As a result, it is regarded as a financial market infrastructure (FMI) and a systemically important payment system (SIPS) as it is also a settlement system for transactions cleared by LACH and those emanating from the Central Securities Depository (CSD) system to allow for delivery versus payment (DVP) of securities.





Since its launch, Lesotho Wire has remained the backbone of the payment and settlement system in Lesotho and it continues to process and settle significant interbank transactions in the country. Figure 1 shows Lesotho Wire transaction volumes and values processed between 2013 and 2016. In 2016, the system processed and settled a total of 23,917 transactions valued at approximately M34.26 billion compared with 27,683 transactions worth about M28.06 billion processed and settled in 2015. This represents a decline of about 7 per cent in terms of transaction volumes and growth of 22 per cent in terms of transaction values. On average, the system processed and settled a total of 26,816 interbank transactions valued at approximately M27.92 billion per year between 2013 and 2016. The observed decline in Lesotho Wire transactions from 2013 was due to the fact that most low-value transactions were previously processed through Lesotho Wire in the absence of a clearing house for EFTs.

As an FMI and SIPS in Lesotho, Lesotho Wire must meet high safety and efficiency standards to manage and/or mitigate all risks arising from its operations, otherwise its failure could cause systemic risk, with negative repercussions for financial stability in the country. For this reason, the Bank has adopted the Core Principles for SIPS (CPSS, 2001) and lately the CPSS-IOSCO PFMI, against which Lesotho Wire’s management and mitigation of the inherent risks will be assessed. The last Lesotho Wire assessment against the Core Principles for SIPS was done in 2012 and

the outcome of that assessment was that Lesotho Wire generally complied with the Core Principles for SIPS. The system's assessment against the CPSS-IOSCO PFMI was conducted in 2017 and it is hoped that the outcome of the assessment will be published in 2018.

2.3.2 Centralised Securities Depository (CSD)

The Centralised Securities Depository (CSD) is a computer-based system that facilitates the holding of securities such as shares, bonds and money market investments in electronic accounts as opposed to paper certificates. It also caters for the transfer of securities between beneficial owners via a book entry, and for the settlement of transactions made in an organised exchange. It was introduced in Lesotho in 2010 to handle only government securities (treasury bills and bonds). However, this system was upgraded in 2015 to also handle corporate securities and to permit secondary market transactions. It is fully integrated with Lesotho Wire to facilitate settlement (through DVP) of transactions in respect of the sale and purchase of government securities. Thus, commercial banks' settlement accounts maintained in Lesotho Wire are used for settlement while other participants settle through commercial banks.

As another FMI in Lesotho, CSD must meet high safety and efficiency standards to manage and/or mitigate all risks inherent in its operations. For this reason, the Bank has also assessed this system against the Core Principles for SIPS and has undertaken to assess it against CPSS-IOSCO PFMI in the same spirit with respect to the management of inherent risks. The last CSD assessment against the PFMI was done in 2012 and the outcome of that assessment was that CSD generally complied with those principles.

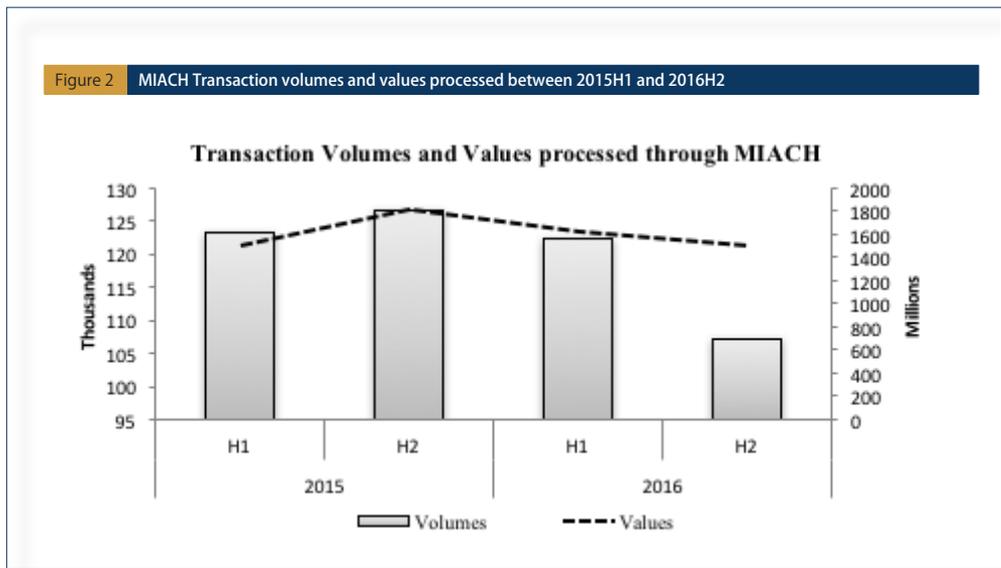
2.3.3 Lesotho Automated Clearing House

As discussed earlier, LACH hosts the cheque clearing and EFT systems and is operated by PAL. Previously, cheque processing and clearing in Lesotho was done manually in the Maseru Clearing and Settlement House. However, due to delays associated with cheque processing, PAL developed and implemented a new automated cheque clearing system based on cheque images



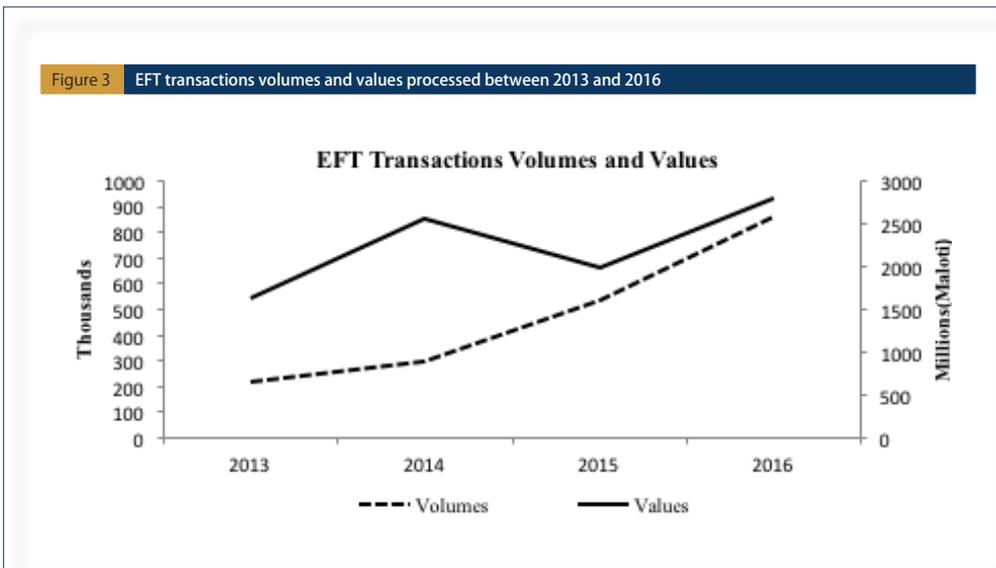
in September 2014. This electronic clearing centre is known as the Maseru Image Automated Clearing House (MIACH). The essence of MIACH technology lies in the use of cheque images (cheque truncation) instead of the physical cheque for payment processing. Cheque truncation obviates the need to move the physical instruments across bank branches to the clearing house and has therefore increased the efficiency and cost-effectiveness of cheque payments in the economy. Notably, prior to the implementation of cheque truncation, it took three to seven days to clear cheques in the country; since the implementation of MIACH, however, clearing time has been reduced to two days.

In terms of transactions, the number of cheque-based transactions and their corresponding transaction values processed through MIACH continue to decline. Figure 2 shows MIACH transaction volumes and values between the first half of 2015 and the second half of 2016. In 2016, the system processed a total of 229,486 transactions valued at M3.12 billion compared with 249,485 transactions valued at about M3.31 billion cleared in 2015. This represents about 8 per cent and 6 per cent decline in terms of transaction volumes and values, respectively. The gradual decline in cheque usage in the economy is generally attributed to the continuous switch by users/consumers to electronic payment systems (or instruments), which are relatively safer and more efficient.



Source: Central Bank of Lesotho

The EFT payment stream was launched and implemented in Lesotho in 2012 by the PAL through outsourcing such services from a South African company, Bankserv, for a period of three years, ending in 2015. In an effort to further enhance the efficiency and maintain full control over the operations of the payment clearing house (PCH) for EFTs, the EFT system was domesticated in May 2015. This system is particularly useful for the clearing of bulk retail payments such as salaries. Figure 3 illustrates the transactions volumes and values related to the EFT payment stream between 2013 and 2016.

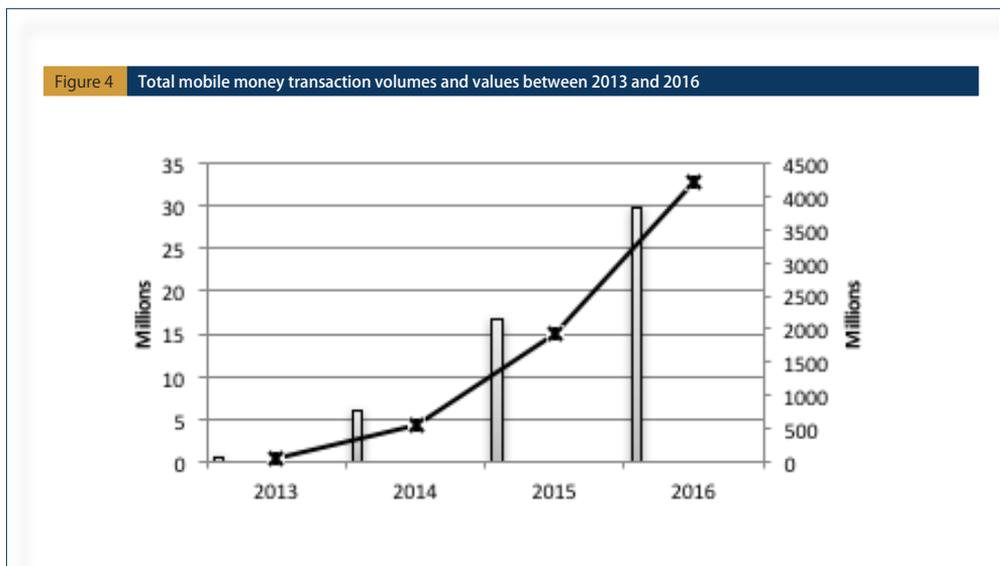


Unlike MIACH, EFT transactions volumes and values have been increasing over the years. In 2016, the EFT system processed a total of 863,342 transactions valued at M2.79bn compared with 533,286 transactions worth M1.99bn processed in 2015. This corresponds to approximately 300 per cent and 71 per cent growth in terms of volumes and values, respectively, between 2015 and 2016. Between 2013 and 2016, transaction volumes and values grew by about 62 per cent and 40 per cent, respectively. The growth in EFT usage in the country is testament to the fact that individuals, consumers and businesses have substituted cheque-based transactions for EFT transactions when making payments to one another. This is because EFT usually cuts the administrative costs, increases the efficiency, security and safety of processing payments, and also simplifies bookkeeping.

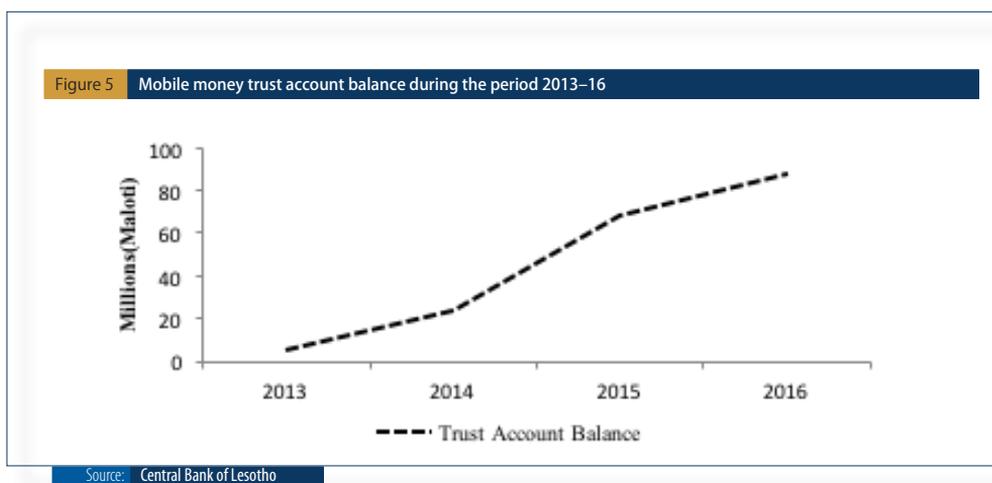


2.3.4 Mobile money — EcoCash and M-pesa systems

Following the deployment of mobile money in other countries, MNOs, namely Econet Telecom Lesotho (ETL) and Vodacom Lesotho (VCL), introduced mobile money in Lesotho. ETL launched its mobile money system, EcoCash, in October 2012 while VCL launched the M-pesa system in July 2013. Following their deployment, EcoCash and M-pesa, through their parent companies, ETL and VCL, relied upon the Mobile Money Guidelines 2013 to guide the provision of mobile money services. However, these guidelines were superseded by the Payment Systems (Issuers of Electronic Payment Instruments) Regulations of 2017 in March 2017. These mobile money systems accumulated a total of 6,479 agents by the end of 2016; 47 per cent and 32 per cent of which were active on 90-days and 30-days bases, respectively. Thus, the MNOs continue to make an effort to build an active agent network throughout the country. Similarly, at the end of 2016, MNOs registered a total of 1.1 million customers; 39 per cent and 31 per cent of which were active on 90-days and 30-days bases, respectively. These MNOs provide a menu of financial services, including customer deposits and withdrawals, bill payments, domestic money transfers, merchant payments and cross-border money transfer services as well as bank-to-wallet services.



In terms of transactions, mobile money has experienced significant growth. In 2016, these two systems collectively processed a total of 29.69 million transactions, worth about M4.21 billion compared with 16.76 million transactions valued at approximately M1.95 billion in 2015; representing approximately 77 per cent and 116 per cent growth in terms of transaction volumes and values, respectively, between 2015 and 2016. Between 2013 and 2016, transaction volumes grew by 388 per cent while transaction values grew by 647 per cent during the same period. Figure 4 depicts total mobile money transactions volumes and values during the period 2013–16. In line with the growth in transactions volumes and values, the trust account balances held by MNOs in the name of users at the commercial banks (namely, Standard Lesotho Bank and Lesotho Post Bank) also continue to grow over time. Figure 5 depicts mobile money trust account balance between 2013 and 2016. The growth in mobile money transactions is generally driven by low service charges, combined with their convenience, safety and reliability.



2.3.5 SADC Regional Payment Systems Initiatives

Although SIRESS was not a direct part of Lesotho's payment modernisation project, the Bank does participate in the SADC Payment System Modernisation Project, which started with the implementation of SIRESS on 22nd July, 2013. SIRESS is an electronic payment system developed by SADC member states to settle large-value regional transactions among banks within the SADC region on a gross basis and in real time. It is an RTGS for SADC member countries and



replaced paper-based instruments such as bank drafts and cheques and facilitates electronic transfers within SADC member states. The system is much safer and efficient than using paper-based instruments. The benefits associated with this system include faster settlement time, reduction in settlement risk and settlement period and low transaction costs. In addition, the system allows prefunding of participants' accounts and settlement takes place in the central bank's money. The next phase of the regional payment system modernisation drive is the retail payment stream, namely, the cross-border EFT of low-value credits, remittances and mobile payments. To this end, Bankserve has been appointed as a regional clearing and settlement operator (RCSO) for all SADC-based transactions and work is underway to develop cross-border mobile-enabled payments in the SADC region to facilitate low-value cross-border transactions (CBL, 2013; SADCBA, 2013 and SADC, 2017).

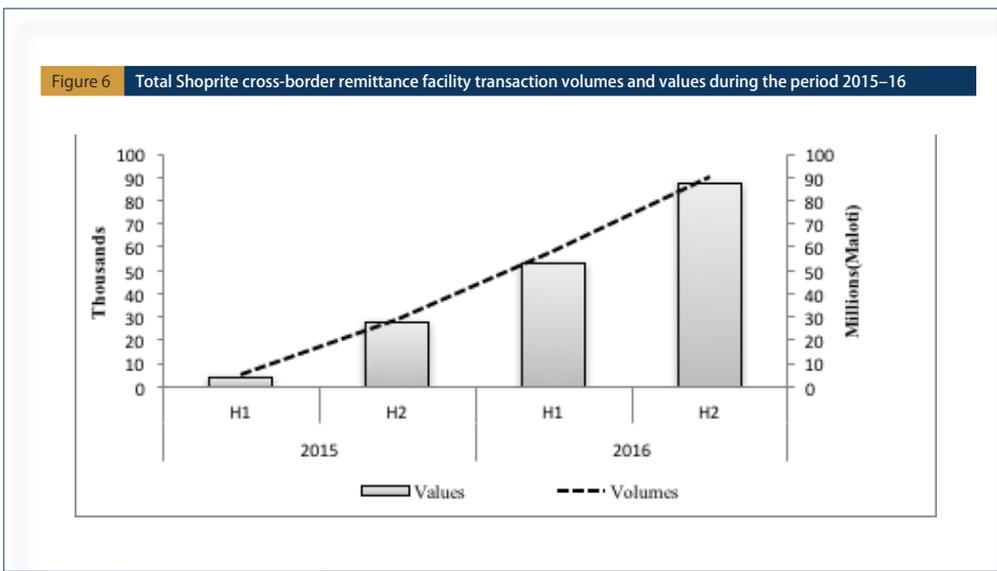
2.3.6 Remittance projects

2.3.6.1 Shoprite money transfer cross-border remittances facility

Shoprite Lesotho, in collaboration with Capitec Bank in South Africa, launched a cross-border money transfer remittances facility in March 2015. This facility was a culmination of intensive consultations between the Bank, South African Reserve Bank, Shoprite South Africa and Shoprite Lesotho as well as Capitec Bank as the sponsoring bank. Capitec Bank, however, was subsequently replaced by Standard Bank as the sponsoring bank for this remittance facility in order to facilitate the expansion of the facility to other countries where both Standard Bank and Shoprite have subsidiaries. The main objectives of the initiative were to develop an affordable, convenient, safe, and reliable and real-time inbound remittance corridor to facilitate remittance flows from South Africa.

Since its launch in March 2015, this facility has experienced phenomenal growth in terms of processed transaction volumes and values. Figure 6 shows the transaction volumes and values processed through the Shoprite cross-border remittance facility between the first half of 2015 and second half of 2016. The facility processed a total of 148,858 transactions valued at M140.29 million in 2016 compared with a total of 33,977 transactions to the tune of M31.53

million in 2015. This represents about 338 per cent and 345 per cent growth in terms of transaction volumes and values, respectively. These significant transactions volumes and values are due to the large number of Basotho diaspora residing and working in South Africa who use this facility as a channel for remitting money to individuals, relatives and friends in Lesotho due to its low service charge or fee (equivalent to M19.99 per transaction regardless of the amount of remittance sent from South Africa to Lesotho), convenience, safety and reliability. This makes the service fairly cheap relative to other remittance service providers. According to the project plan, the next phase of the remittance facility would be to facilitate the outbound transfer of money from Lesotho to South Africa, so that the facility works both ways.



Noting the considerable uptake of inbound cross-border transfers, Shoprite Lesotho, in collaboration with Standard Lesotho Bank, has launched a similar facility domestically. To date, this facility continues to grow and with many Basotho getting to know it, its transaction volumes and values are expected to grow significantly. Similar to the cross-border facility, it has allowed Basotho living in areas where Shoprite has branches to send and receive money to and from relatives and/or friends domestically.



2.3.6.2 Mobile money cross-border transfer services

In partnership with licensed international money transfer service providers, the MNOs in Lesotho have launched inbound cross-border remittance services. In particular, ETL partnered with WorldRemit to facilitate inbound remittance from the UK and USA, while VCL partnered with Mukuru, a South Africa-based international money transfer company, to facilitate inbound remittances from South Africa. These services have not only provided instant corridors for migrant workers to send money to relatives and friends in Lesotho but also brought convenience to Eco-cash and M-pesa registered users by enabling them to receive funds from abroad directly into their wallets, which they can withdraw from registered Eco-cash and M-pesa agents across the country or use to pay bills and purchase goods and services, buy airtime or transfer to anyone. For this reason, transactions associated with these remittance facilities continue to grow significantly. For instance, these remittance facilities jointly started with just 83 transactions worth M105,692 in 2015, growing to 11,806 transactions valued at about M7.04 million in 2016. While this facility may be convenient, reliable and safe, it is a bit more expensive compared with the Shoprite cross-border money transfer facility. For instance, in order to send money from South Africa to Lesotho through this service, Mokuru levies a transaction fee of 10 per cent of the transaction amount. Clearly, this has the potential to represent a huge transaction fee.

3 CHALLENGES FACED DURING PROJECT IMPLEMENTATION AND THEIR RESOLUTIONS

Projects of this nature inevitably pose challenges during implementation. The modernisation of payment systems in Lesotho was no different. These challenges mainly related to organisational arrangements, system operations and technology. First, governance arrangements were set that would govern the modernisation of the payment and settlement systems. However, the Bank faced challenges due to capacity constraints as most people who worked in payment and settlement structures lacked the requisite knowledge and skills related to payment and settlement systems and their operation, supervision and oversight. This challenge is valid because the payment systems are now more complex and technical in nature and therefore require highly-skilled manpower to operate and oversee them due to ever-changing technology.

In this regard, the Bank worked with the International Monetary Fund (IMF), Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI) and the World Bank to build the capacity of the set governance structure in the areas of payment, clearing and settlement systems operation and oversight of these systems. This was done to enable the staff to appreciate the new roles and concepts associated with the payment system modernisation project. In addition, the Bank annually set aside training budget to ensure continuous capacity building in these areas in an effort to keep the knowledge and skill base of the staff in tandem with the ever-changing payment system landscape and technology, and foster better operation and oversight of the systems and manage the risks inherent in system operations.

Secondly, the Bank assumed the roles of an operator of wholesale payment system (RTGS) and a participant in the RTGS and retail payment systems (LACH) as well as that of an overseer of the payment, clearing and settlement systems. These roles brought about some conflicts of interest, which to some extent could compromise the oversight role of the Bank. In this regard, the Bank initially separated the oversight function from the payment system operation function within the NPSD to comply with international best practices. However, given the expansion of the role of the private sector in providing payment and settlement systems, the Bank further elevated the NPSD to the Department of Payment and Settlements, with the oversight function distinctly separated from operations of payment systems. This would enable effective interaction with both internal and external participants such as bank supervision and financial markets and to enable the Bank to perform its role enumerated in the Payment System Act 2014.

With respect to technology, the Bank encountered some teething problems in the implementation of the RTGS and other systems. In this regard, the Bank received technical assistance from system vendors and also worked in concert with entire the banking sector to develop business continuity arrangements for all systems, which are regularly tested to ensure seamless and smooth switching between the primary and secondary sites in the event of disruption and/or disaster. In connection with the teething problems, other technology problems which would often occur were those related to network disconnection or system downtime. Nevertheless, those problems were and/or are usually resolved within a reasonable time and the system's operations are now stable.



Another challenge related to technology is that the legal and regulatory framework always lags behind technological innovation and/or financial technology. This requires the Bank to update and/or establish new legal and regulatory frameworks in a timely manner in order to align the legal and regulatory frameworks with the latest developments in financial technology. This is done to level the playing field in the provision of financial services, not just in the interest of financial inclusion, but also to avoid regulatory arbitrage, and manage the risks inherent in the operation of the systems, services and products emanating from innovation in financial technology. In addition, it is important to regulate poor market conduct practices that may compromise financial stability. Nonetheless, lengthy legislation procedures and processes tend to hamper the ability of legislative and regulatory developments to respond quickly to ever-changing financial technology. Last, but not least, some of the projects, such as the domestication of card switch, which were planned within the time frame of the modernisation project, could not be implemented during the actual time horizon. Plans to implement the card clearing system to modernise the current clearing process and thus meet the objectives of improved safety, visibility of transactions and efficiency, however, are now at an advanced stage.

4 THE BENEFITS ASSOCIATED WITH MODERN PAYMENT SYSTEMS

Lesotho continues to benefit from the safe and efficient payment systems resulting from the modernisation project. First, the modern payment systems improve the efficiency and timeliness of the flow of funds between and/or among economic agents within the economy. For instance, the systems enable businesses and companies to acquire raw materials, pay wages and salaries both conveniently and efficiently. Not only does this promote domestic and international trade but it also increases economic activities within the country. In line with this, the implementation of payment systems has assisted Lesotho to pursue open economic and trade policies with other SADC countries, improved the movement of capital and investment and led to more pronounced gains from intra-regional trade and economic integration. In addition, the modern systems link regional centres for commerce and finance and facilitate the same-day settlement of transactions and improve the timeliness and transparency of custom processes and government revenue collection. All these contribute significantly to economic growth, not only in Lesotho, but also in the rest of the region (CBL,2013).

Secondly, the modern payment systems have enabled the efficient and timely settlement of the proceeds from the purchase and/or sales of financial markets instruments (such as treasury bills and bonds). Not only does this enhance the efficacy of monetary policy but it also facilitates the execution and management of financial conditions within the economy with a resultant increase in investment spending and consequently a boost in national income.

Thirdly, the reliability of the efficient payment systems is also linked to financial stability in that it facilitates the provision of 'emergency loans' in the form of either intra or inter-day liquidity to distressed system participants to ensure the continuous and orderly settlement of transactions by participants and avoid settlement failures. This is particularly important in the case of large-value payment systems where failure to settle high-value and time-critical payments by one participant as a result of lack of funds can easily lead to contagion (ie a domino effect). Similarly, disruptions in the clearing process in retail payment systems may lead to widespread economic chaos as a result of failure to make payments by the majority of the people (CBL, 2013 and MEFMI, 2016).

Fourthly, modern payment systems provide the springboard for further financial sector development. Specifically, large-value payment systems such as RTGS serve as the basic component for the country's financial sector infrastructure upon which new financial instruments, products and services, institutions and markets could be introduced.

Last, but not least, payment systems are also linked to financial inclusion in that retail payment infrastructures such as the ACH and national switch facilitate the introduction of, and access to, new payment instruments (e.g. credit and debit transfers and card payments) and services (e.g. interoperability) among unbanked communities. In recent times, payments through mobile phones and agent banking services have significantly promoted financial inclusion in many developing countries, including Lesotho. This is because such payment services are relatively affordable, easy to access and straightforward to use by the majority of the population, including the rural poor. Once interfaced with the formal financial services through innovative retail payment products (including mobile payments), previously excluded segments of society are able to open bank accounts, make savings and obtain loans to finance further productivity. If the payment system is efficient, it will attract more competing players, products and services



on the market. Thus, prices would decline further, setting the stage for further opportunities for financial inclusion, thereby benefitting the economy as a whole (CPMI-WBG, 2015 and MEFMI, 2016).

5 CONCLUSION AND RECOMMENDATIONS

Prior to 2000, the payment, clearing and settlement system in Lesotho depended upon manual processes that were not only inefficient but also failed to align with international standards. Thus, the Central Bank of Lesotho, in concert with other stakeholders, implemented a programme between 2004 and 2015 to modernise the country's payment, clearing and settlement systems to support monetary and financial stability, among other things. This initiative realised significant milestones and drastically modernised the payment, clearing and settlement systems in Lesotho. This system now supports the efficient and effective circulation of funds, encouraging growth in economic activities; provides monetary and financial stability; and has been the catalyst for financial sector development.

Although the project has provided the country with a modern payment, clearing and settlement system, the payment system, clearing and settlement is by its nature dynamic and ever-changing. In this light, the Bank, in concert with the other stakeholders, must continuously modernise the payment, clearing and settlement system in Lesotho, not only to respond to the changing needs of the country, but also to address emerging challenges in this landscape. Furthermore, it is necessary for the system to align with regional and international standards in order to facilitate international trade and investment. Likewise, it is essential to keep the legal and regulatory framework up to date in order to respond to the rapid changes in financial technology and innovation, as well as to avoid regulatory arbitrage.

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$$\dot{k} = f(k) - c - (n + g + \delta)k$$

$$U(c_t, c_{t+1}) = \mu(c_t) + \beta E_t [\mu(c_{t+1})]$$

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