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| Papua New Guinea:TA - Financial Services Sector Development Strategy[[1]](#footnote-1) **Review of the PNG Government Bond &**  **Capital Market Development [[2]](#footnote-2)** |
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| **Confidential**  **DRAFT FOR COMMENTS ONLY**  **August 2015** |

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# List of Abbreviations

|  |  |
| --- | --- |
| ALM | Asset Liability Management |
| ANZ | Australian & New Zealand Bank |
| ATM | Average Time to Maturity |
| A$ | Australia Dollar |
| BPNG | Bank of Papua New Guinea |
| BSP | Bank of South Pacific |
| CBBs | Central Bank Bills |
| CRR | Cash Reserve Requirement |
| CSD | Central Securities Depository |
| DeM | Debt Management |
| DAP | Dealer Advisory Panel |
| DBMDC | Domestic Bond Market Development Committee |
| ESA | Exchange Settlement Account |
| DOF | Department of Finance |
| FMD | Financial Management Division |
| FMD BPNG | Financial Markets Division |
| FRA | Fiscal Responsibility Acts |
| FSAP | Financial Sector Assessment Program |
| FSDS | Financial Sector Development Strategy |
| GDI | Gross Domestic Income |
| GDP | Gross Domestic Product |
| GIS | Government Inscribed Stock |
| GoPNG | PNG Government |
| IMF | International Monetary Fund |
| KATS | Kina Automated Transfer System |
| KFR | Kina Facility Rate |
| LNG | Liquefied Natural Gas |
| MMOC | Money Market Operations Committee |
| MRA | Master Repurchase Agreement |
| MTDS | Medium Term Debt Management Strategy |
| OTC | Over-the-Counter |
| POMSoX | Port Moresby Stock Exchange |
| PGK | Papua New Guinea Kina |
| PNG | Papua New Guinea |
| PDC | Public Debt Committee |
| PDPC | Public Debt Policy Committee |
| RMA | Repurchase Master Agreement |
| Repos | Repurchase Agreements |
| SCPNG | Securities Commission of Papua New Guinea |
| SME | Small & Medium Enterprises |
| Treasury | Department of Treasury |
| T-bills | Treasury Bills |
| WB | World Bank |

**Preface**

As part of the FIRST TA to PNG on PNG Financial Services Sector Development Strategy project, the mission was requested by the authorities to prepare a technical note with the main considerations for developing the government bond and capital markets in Papua New Guinea. The Senior Consultant visited Port Moresby from May 18-29, 2015 and conducted a fact-finding and assessment mission. This report is classified as Strictly Confidential and access to it is restricted to those having specific, absolute and essential need for the information.

The Senior Consultant is grateful to the officials and staff of the Bank of Papua New Guinea and the Department of Treasury of Papua New Guinea for their assistance and hospitality.

**I. Executive Summary**

1. This review is an input to the Financial Services Sector Review being undertaken by the PNG Department of Treasury and the Bank of Papua New Guinea (BPNG). The purpose of this review is to provide an input to the review and further development of the Government Securities and Capital Markets in PNG. The review has sought to:

* Assess the current legal, regulatory and supervisory framework for the government bond and capital market in PNG.
* Assess issues and impediments to developing the government securities & capital market in PNG relating to the supply and demand of government securities; including agency, investors, and market participants roles and presence in the local market; and market infrastructure capacity and efficiencies in government securities trading and clearing and settlement.
* Recommend necessary reforms and commitments needed in short-term and mid-term for further development of the PNG government securities and capital markets.

1. The Department of Treasury, Financial Management Division (FMD), and the Bank of Papua New Guinea (BPNG) have implemented various policy initiatives towards developing the domestic government securities and capital markets. The issuance of government securities is a market-based competitive primary auction system conducted by the BPNG. Recently, the planning and lack of timely notification of the government’s issuance plans for T-bills and Government Inscribed Stock (GIS) has been a concern for local investors.
2. The holdings of domestic government securities is highly concentrated in the financial sector with commercial banks and superannuation funds holding roughly 70% of the outstanding public debt stock. Furthermore, beyond the 70% holdings from deposit taking institutions, the BPNG holds 22% of government debt. Both FMD and the BPNG have recognized the need to diversify the investor based to retail, small and medium enterprises (SMEs), and non-resident investors, whilst recognizing that this diversification it will take time to achieve.
3. A consistent area of concern raised by the investment community was the lack of a secondary bond market structure and liquidity for government securities. Developing a secondary bond market and liquidity is a considerable challenge for all emerging markets. The BPNG has drafted the Master Repurchase Agreement (MRA), which is currently under BPNG internal legal review. Market participants have been consulted and provided the BPNG with feedback and all but one commercial bank consented with the draft MRA. This is a positive step in bond market development in that it will by providing market participants and the central bank with liquidity management tools.

*Key Reform Recommendations & Commitments-*

1. Selected key reform recommendations and suggested commitments by the enabling agency (s) are summarized below and further recommendations and detailed suggestions are provided within the content of each appropriate section of this report together with a summary and action plan of the recommendations and commitments in Annex: 1.

*1.Legal & Regulatory-*

1. That Treasury and FMD should review and potentially amend Loans Securities Act 1960 and T-Bills Act 1974, as well as any relevant Memorandums of Understanding (MOUs) to ensure the acts and MOUs are consistent with the current public debt management policies, objectives, and activities.
2. That BPNG establish a code of conduct, market convention, and reporting requirements for market participants transacting in the primary and secondary market for government securities, central bank bills, and repurchase agreements.
3. That a review be undertaken to of the supervision of the government securities market carried out by the BPNG, to ensure that there is effective supervision and that all market participants are subject to the same standards and conventions.

*2. Public Debt Management Strategy-*

1. The government’s maturity profile of the outstanding stock of T-bills and GIS falling due within 12-months is highly concentrated. The Treasury and FMD should develop and adopt a MTDS policy to proactively manage refinancing and liquidity risks in the government’s domestic portfolio, such as buy backs, switches, and cash buffers in the government’s account.
2. In the short-term, action should be taken to reweight the domestic debt composition of 47% T-bills and 52% GIS in line with the 2015 annual borrowing plan’s objective of 39% to 61% T-bills to GIS. In the medium-term, action should be taken to gradually reweight the composition in line 2013-2017 MTDS’s objective of 15% to 30%.
3. Treasury and FMD should prioritize the issuance of an external bond in the international capital markets as a potential new source of fund raising to meet the government’s financing needs and or project finance and develop and implement an action plan on gaining interest in investing in PNG from the international capital markets.

*3. Institutional Arrangements & Market Communication-*

1. Treasury and the FMD should initiate and maintain regular market dialogue with market participants relating to the government’s funding plans, debt issuance strategies, and domestic bond market development endeavors. A suggested complementary mechanism is through a dealer advisory panel.
2. Treasury and the BPNG should establish a policy level *Domestic Bond Market Development Committee (DBMC).* The committee would comprise a working group of agencies and departments involved in the overall objective of domestic bond and capital market development. The mandate of the DBMC would initially focus upon outlining, prioritizing, and advocating market development activities.
3. The BPNG should establish a centralized in-house agency/division function responsible for all debt market information and data, market conventions, and the dissemination and easy access to the information needed by the investment community, both domestic and international.

*4. Money Market-*

1. The Master Repurchase Agreement (MRA) draft that is currently under legal review should be reviewed to ensure that it enables the BPNG to promote the use of interbank repurchase transactions amongst banks and market participants.
2. The BPNG should execute and promote the use of traditional secured repurchase transactions through the MRA in conducting the Bank’s open market operations so as to mitigate the Bank’s credit risk exposure.
3. Interbank transactions should be disseminated to the market place by the BPNG, in a practical time frame given the volume, providing information for secured and unsecured interbank lending.

*5. Primary Market-*

1. Treasury and the FMD should reinitiate the previous government funding and auction announcement practices of providing the market participants with: (i) the annual borrowing plan (currently done as in table 2); (ii) the GIS benchmark maturities to be targeted and issued within the calendar year; (iii) provide targeted benchmark maturities of T-bills; (iv) quarterly announcements and updates for inscribed stock issuance; (v) quarterly announcements and monthly updates for T-bills.
2. The BPNG and FDM should adopt and implement the Bloomberg Automated Auction System for the government securities and central bank bills primary market.
3. FMD should develop and implement an action plan to consolidate the 23-benchmark GIS lines with due cognizance to roll-over risks over an acceptable timeframe. FMD should ensure that the maturity profile and or to retire illiquid benchmark lines is subject to on-going and regular review and that action is taken to adjust by the use of buybacks and switches.
4. Treasury, FMD, and the BPNG should give review and consider the use of bond syndications for certain issuances practices such as issuance of longer dated GIS to satisfy institutional investor demands further out the government yield curve as well as extending the average time to maturity of the government’s maturity profile. Syndications can be used when establishing long-term benchmarks and the unknown liquidity factor.
5. Treasury, FMD, and the BPNG should allow and introduce non-competitive bidding for retail, corporates, and small to medium sized entities. Promote the access to the primary market for small investors through market intermediaries e.g. banks or brokers.

*6. Investor Base-*

1. Treasury, FMD, and the BPNG should broaden the target investor base to develop, promote, and provide access into the local market to include: retail customers, corporate entities, insurance companies, small and medium sized enterprises. Registered bidders such as banks and brokers should act as intermediaries and facilitate customers primary and secondary transactions.
2. Treasury, FMD, and the BPNG should seek to attract non-residents investors into the PNG government securities market by automating the primary market auction system; improve government public relations e.g. roadshows & presentations; clearly disseminate information specifically addressing non-residents questions and investment criteria; and developing an automated clearing and settlement and Central Securities Depository (CSD).
3. Treasury, FMD, and the BPNG should factor into domestic debt issuance planning the investor base habitat and the demands that exist along the yield curve spectrum from each different class of investors.
4. Treasury, the BPNG, and the market regulator[[3]](#footnote-3) should promote the creation and establishment of pools of liquidity in the form of market funds to purchase domestic debt securities in the primary and secondary market and to enable small investors to gain access to the domestic debt market through the managed funds.

*7. Secondary Market-*

1. Treasury and FMD should provide the market, through dialogue with investors and participants, with adequately sized T-bill and Government Inscribed Stock benchmarks, which appropriately match the maturity interests of the institutional investor base and potential bank and private sector debt issuance.
2. The BPNG, in collaboration with Treasury, should implement the drafted and approved, by all parties, Master Repurchase Agreement (MRA). To ensure market integrity, the MRA’s terms and conditions set out prudential standards for margining, accounting, and other relevant prudential requirements.
3. The BPNG should develop and implement repurchase agreement procedures, standards, and code of conduct must be set out by BPNG for all market participants to ensure compliance with best practices in conducting repurchase transactions.
4. In developing a domestic government securities market the Treasury and the BPNG could consider allowing intermediaries, banks and brokers, to provide primary dealer market making functions for price discovery and trade execution in exchange for dealer privileges.
5. The BPNG should establish market convention standards and a code of conduct for intermediaries executing trades between dealer-to-client and dealer-to-dealer in the secondary market. The BPNG should establish a code of conduct for intermediaries and dealers to conduct business in the PNG debt securities market.
6. Transparency is enhanced by requirements for timely and accurate reporting of secondary market transactions in the OTC market. Reporting dealer and client transactions should be directly to the BPNG and the BPNG should establish procedures to ensure that there is timely and accurate dissemination of secondary market transactions to the market place.
7. Compliance plays a key role in ensuring market professionals are acting within the standards and practices set by the governing authorities. The BPNG must ensure that there is effective market oversight/surveillance of all parties transacting in the OTC secondary market. Trades reported to the BPNG will need a mechanism for dissemination to the market place.

*8. Market Infrastructure-*

1. The BPNG should establish an automated clearing and settlement and a Central Securities Depository (CSD) as a key infrastructure development for the interbank, government securities, and central bank bills markets.
2. The BPNG should reinitiate dialogue and evaluation with vendors of electronic clearing, settlement, and central custodial systems e.g. Austraclear with the aim of establishing an electronic clearing, settlement, and central custodial systems within a reasonable timeframe.

*9. Equity Market-*

1. It is recommended that action be taken to amend the stock exchange’s current duopoly ownership by potentially allowing international ownership, which would import technology and expand knowledge to the local exchange.

**II. Introduction**

1. The IMF estimates that economic activity will expand by 5.8% in 2014, largely driven by liquefied natural gas (LNG) production. With production reaching full capacity next year, real GDP growth is projected to surge to around 19.5% in 2015. Headline inflation is projected to exceed 5% in 2014, reflecting the effects of the Kina depreciation in the first part of the year and fiscal stimulus.[[4]](#footnote-4)
2. PNG’s overall stock of Kina denominated public debt stood at 35.5% of GDP at the end of 2014.The Fiscal Responsibility Act (FRA) stipulates a nominal debt to GDP limit on central government borrowings of 35% of GDP for 2013, 2104, and 2015, with the level falling to 30%[[5]](#footnote-5) thereafter. The limit applies only to debt centrally borrowed by the Government and does not include superannuation arrears, State Owned Enterprise borrowing or contingent liabilities.
3. PNG’s fiscal position began running fiscal deficits in 2011 of PGK 65.7mm with subsequent increases to PGK 1, 377.9mm in 2012, PGK 2, 672.4mm in 2013, and PGK 2, 992.2mm in 2014, with projected fiscal deficits continuing into 2017.
4. PNG made its first two shipments of LNG in 2014. The anticipated revenue from the ExxonMobil-led project encouraged the Government to commit itself to increased budgetary expenditures for development of public infrastructure, upgrading education, and health services. The main benefits of LNG production would come from the revenue to the Government and local investors, and how productively this revenue is then reinvested in the local economy.
5. The banking system remains stable[[6]](#footnote-6), underpinned by strong capital adequacy and ample liquidity. Banks continue to be profitable and non-performing loans ratios are low, at less than 2%, and banks’ maintain high liquidity ratios, with more than half of their assets held in government securities or cash, partly reflective of the structurally low levels of lending. The loan-to-deposit ratio has been consistently below 50%, among the lowest in the Pacific Island region.
6. Typically in the early stages of domestic bond market development, the leading catalyst is the central government’s issuance of debt securities and in some cases the issuance of central bank debt securities, which is the current environment in Papua New Guinea. The PNG primary market for government and central bank securities are principally the main access points for investors as secondary market transactions are extremely limited.
7. Furthering the lack of development of the domestic government securities market in PNG is an important to economic growth and both the Treasury and the BPNG must under take thoughtful policy decisions. This endeavor is critical given the significant role government and central bank securities play in the local financial institution’s and institutional investor’s asset liability management (ALM), central bank monetary operations, financial stability, and providing an alternative investment opportunity for the general public.
8. The domestic government securities market development is a principle objective, globally, of debt management office’s and Treasury department’s Medium Term Debt Management Strategies (MTDS), as is the case with Treasury’s MTDS. As emerging economies, over time, move away from concessional sources of finance and transition to market-based domestic and external issuance, the development of the domestic bond market, given the considerable time it takes to achieve, is a high priority.
9. Domestic government securities markets help in reduce the government’s foreign currency exposure. In PNG’s case, the government’s FX exposure is moderate, with 23% of public debt portfolio composition in foreign currency, of which is concessional financing. Treasury’s consideration of market-based external sovereign issuance would be appropriate.
10. As a small economy, there must be attention given to the development of the PNG domestic government bond and capital markets, with the emphasis being placed on initiatives that are not resource intensive and have meaningful impact in the short to medium term. Also, considerations for market development must consider the conditions specific to PNG.
11. Priority areas to concentrate on are: (i) improving the efficiency of the primary market; (ii) promoting money market and interbank transactions through repurchase agreements; (iii) developing automated clearing, settlement, and custody facilities; (iv) establishing bond market code of conduct and conventions and introducing effective oversight by the BPNG; (v) engaging in market dialogue and coordination amongst fiscal, monetary, regulatory authorities and market participants; and (vi) developing and maintaining a centralized source for bond market information and data. These sets of preconditions will serve the medium-term development of a diversified investor base and a liquid and efficient secondary market, with realistic expectations.

**III. PNG Government Secutities & Capital Markets**

**A. Public Debt Portfolio**

1. PNG’s overall stock of Kina denominated public debt stood at 35.5% of GDP at the end of 2014.The volume of total indebtedness has risen by PGK 8,785.4mm or roughly a 57% increase of total debt during the 2010 to 2014 period. The significant increase in overall indebtedness occurred in 2013 and 2014.

**Table 1: Public Debt Stock**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| In million Kina | 2010 | 2011 | 2012 | 2013 | 2014 |
| T-bill | 1558.2 | 2254.5 | 2751.6 | 4200.7 | 5620.6 |
| Inscribed Stock | 2517 | 2866.6 | 3366.6 | 4644.5 | 6207.3 |
| Other | 2.6 | 0.3 | 12.6 | 0.0 | 0.0 |
| Total Domestic Debt | 4077.8 | 5121.4 | 6130.8 | 8845.2 | 11827.9 |
| *% of Total Debt* | *62%* | *71%* | *73%* | *75%* | *77%* |
| Multilateral | 2422.5 | 2057.8 | 2174.5 | 3018.4 | 3537.2 |
| Commercial Debt | 79.4 | 59.2 | 44.8 | 14.1 | 0.0 |
| Total External Debt | 2501.9 | 2117 | 2219.3 | 3032.5 | 3537.2 |
| *% of Total Debt* | *38%* | *29%* | *27%* | *25%* | *23%* |
| Total Public Debt | 6579.7 | 7238.4 | 8350.1 | 11877.7 | 15365.1 |
| Total Public Debt % GDP | *25%* | *24%* | *26%* | *34.6%* | *35.5%* |
| *Source: BPNG & Treasury* | |  |  |  |  |

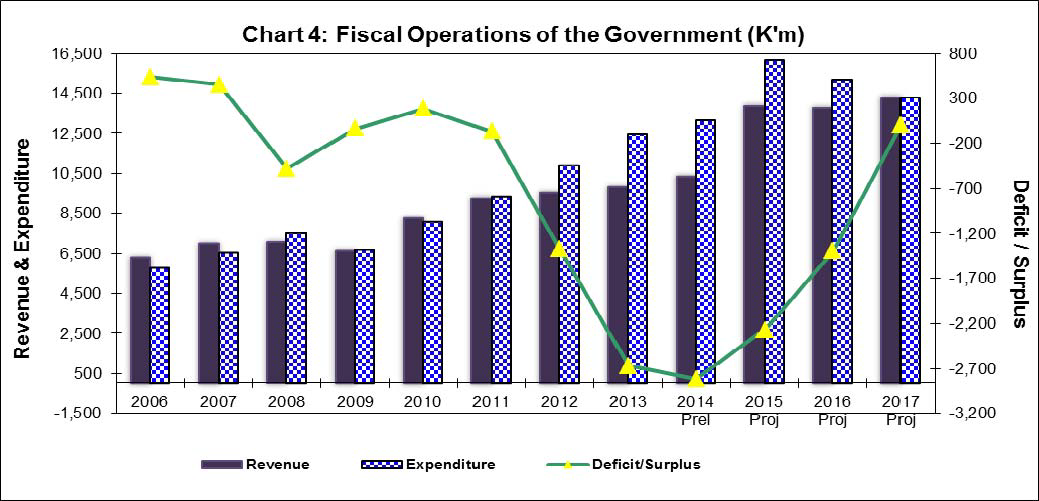
1. The increase in PNG’s debt portfolio has been led by domestic debt increasing 2-½ fold from PGK 4,077.8mm to PGK 11,827.9mm in the 5-year period of 2010 to 2014 with domestic debt representing 77% of the total public debt composition. The average time to maturity of the domestic debt stock is currently roughly 4.4-years.
2. External debt represents 23% of the total stock of public debt as of 2014. External debt is entirely concessional borrowings from multilateral sources at low interest rates of roughly 1.5%. The 2015 debt strategy is to maintain foreign currency debt at or below 40% of total debt by restricting the amount of new foreign currency loans. However, the current debt strategy incorporates the potential for the issuance of a PGK1,000mm (US$365mm) sovereign bond in the international capital markets.
3. The developing and emerging domestic debt market in PNG consists predominately of central government securities issued by the Department of Treasury under the authority of Parliament and the Treasury Secretary and central bank bills (CBBs) issued by the BPNG. Currently there is only one outstanding corporate bond issue from Bank of South Pacific.
4. Treasury bills comprise 47% of domestic government debt outstanding, Figure 1, whilst this is high, the objective of the FMD’s medium term debt management strategy is to gradually increase the percentage of Government Inscribed Stock (GIS) to 61% and decrease the percentage of T-bills to 39% of total government domestic debt by 2015[[7]](#footnote-7). However, this target would appear unattainable in the timeframe suggested.

**Figure 1: Domestic Government Debt Composition (Q4 2014)**

*Source: BPNG*

1. The current issuance strategy for GIS is focused on 3, 5, 7, and 8-year benchmark lines. Currently, there are 23 GIS outstanding benchmark lines from August 2015 out to May 2031. The average outstanding amount of individual benchmark lines stood at roughly PGK306mm and in terms of distribution 78% of lines is out to 2025, inside 10-years, with the remainder of 22% out to 2031. T-bills are issued with maturities of 6-months (182 days) and 12-months (364 days).
2. The maturity profile of domestic debt is uneven due to the high concentration of debt falling due within a 12-month period given that T-bills (less than one year) comprise roughly 47% of the total domestic composition. Coupled with inscribed stock falling due within the same12-month period increases the Treasury’s refinancing risk to roll over the debt as well as interest rate risk where the Treasury may have to accept any unexpected increase in costs to rollover the debt.
3. The investor base is highly concentrated with a limited investor pool, which further contributes to the risks inherent in the domestic debt portfolio. The Bank of South Pacific (BSP) and the two Superannnuation Funds have a dominant position of holdings of the public debt in relation to the total. Refer Investor Base section for further details.
4. PNG’s fiscal position began running fiscal deficits in 2011 of PGK65.7mm with subsequent increases to PGK 1,377.9mm in 2012, PGK 2,672.4mm in 2013, and PGK 2,992.2mm in 2014, with projected fiscal deficits into 2017.

**Figure 2: Government Fiscal Operations**



*Source: BPNG, 2015 National Budget. 2014 outcome is preliminary*

1. PNG made its first two shipments of LNG in 2014. The anticipated revenue from the ExxonMobil-led project encouraged the Government to commit itself to increased budgetary expenditures for development of public infrastructure, upgrading education and health services. The main benefits of LNG production would come from the revenue to the Government and local investors, and how productively this revenue is then reinvested in the local economy. With dwindling revenue from the minerals sector overall, LNG was expected to provide a growing contribution to Government revenue and help restrain the accumulating deficit. However, early production, when prices were higher would have boosted Government revenue due for 2014, but LNG shipments commenced after the global commodity decline.
2. Accrued tax credits. The government provided energy firms for exploration and development with tax credits. The accrued tax credits are reducing the energy companies tax remittance back to the government.
3. Papua New Guinea’s credit ratings:

* Standard & Poor’s: B+ stable;
* Moody’s: B1 negative.

**B. Legal & Regulatory Environment**

1. The legal and regulatory framework is critical to the structure, functionality, and development of government securities and capital markets. The regulatory framework for government securities will typically address: (i) maintaining fair, efficient, and transparent markets; (ii) reducing systemic risk; and (iii) protecting investors. As the government is the borrower and the issuer of securities, legislation should provide the proper authority for the government agency(s) to borrow on behalf of the government, the ability to place ceilings on public debt, and to authorize different government entities to act in these markets, such as the central bank as the fiscal agent. In terms of market participants and investors, an appropriate set of rules and regulations, which are in line with the current status of the local markets, should govern the organization of the primary and secondary markets for government securities and the roles of different types of market participants.
2. The authority for the Treasury Department and the Minister of Finance to issue government securities, on behave of the Government of PNG, is clearly articulated in the Loans Securities Act 1960 and the Treasury Bills Act 1974.
3. The Loans Act stipulates that the Head of the State, acting on advice, may, by order, authorise the Minister to pay off, repurchase or redeem a loan raised by the State, or to convert any such loan into any other loan undertaken by the State. This would allow for buybacks and switch operations for outstanding government securities.
4. The Central Banking Act 2000 stipulates that the Bank of PNG as the banker and fiscal agent to the Government and to Treasury. Under the memorandum of understanding, the BPNG acts as an agent in relation to debt issuance, payment of interest, and redemption of government securities. The Treasury’s FMD initiates these activities.
5. The Information Memorandum for Government Inscribed Stocks dated 30 May 2007 and the Terms and Conditions for the Auction of Papua New Guinea Treasury Bills dated April 2007 provides; (i) GIS & T-bill descriptions and primary market arrangements; (ii) interest rate definition; (iii) fees and deductions[[8]](#footnote-8); (iv) bidding procedures; (v) announcement process of tender results; (vi) registrations, settlement, and transfers; and (vii) repayment details. The debt instruments are transferable and negotiable, although it is not stated specifically that they can be pledged as collateral.
6. No law defines the regulatory responsibility for government securities; in fact the Securities Market Law 1997 specifically excludes government securities from its mandated responsibilities.
7. The BPNG acts as regulator and supervisor for the PNG government securities, the primary and secondary markets, as well as repurchase agreement transactions. Currently, no code of conduct criteria exists for market participant’s activities in government securities market. Currently, given there is no secondary market activity; supervision is limited to primary market bidding and participation by registered and non-registered bidders. However, in the advent of secondary market transactions and potential greater participation from the non-financial sector, market intermediaries, commercial banks, and brokers should be subject to adhering with a code of conduct with effective oversight of compliance being undertaken by the BPNG.
8. Currently, PNG government securities are subject to an interest withholding tax of 15% for interest income only which is collected at maturity. There is no capital gains tax on government securities. Taxation on repurchase transactions is limited to interest received. Under s35 of the Income Tax Assessment Act 2000 interest income received by commercial banks, superannuation funds and other ‘financial institutions’ are exempt from the withholding tax. However this does not exempt them from tax. Therefore ‘their tax obligation is based upon their total income from their tax obligation which is calculated based on their total income from holding and trading government securities’.
9. Transactions on Port Moresby Stock Exchange (POMSoX) are exempted from capital gains tax, GST, and stamp Duties. This exemption applies also to debt products, thus any corporate debt issued and listed on the POMSoX is exempt from these taxes.
10. The Securities Commission of PNG (SCPNG) was established under the Securities Act 1997. The SCPNG is currently a division within the Investment Promotion Authority (IPA). The Securities Act 1997 vests regulatory and oversight powers with the Securities Commission, the latter does not have powers to specify operating requirements and guidelines for brokers and to license and oversee registrars and depositories, nor does it have oversight powers over settlement systems. Corporate stock ownership is recorded in the “PNG Registry” – an unlicensed and unregulated entity – and the ownership title is given in paper-form. The Securities Commission Act does not give the Securities Commission (SCPNG) powers to license Registrars and Depositories. PNG Registry provides registrar services on its own and all listed companies currently use its services.
11. Brokers are licensed and supervised by the Port Moresby Stock Exchange. POMSoX as a Self-Regulatory Organization, approved by the SCPNG, has the authority to set rules and standards for its members as well as conduct inspections and enforcement of members found in breach such rules and standards.

*Recent Initiatives-*

1. New draft regulations to make the SCPNG an independent agency are currently under legislative review, to include (i) Securities Commission Bill 2015, (ii) Capital Markets Bill 2015, and (iii) Central Depository Bill 2015.
2. As part of the World Bank’s Financial Sector Development Strategy the Market Supervision and Regulation component of the TA is required to comprehensively assess the current regulatory framework and make recommendations for improvement in the regulatory framework in PNG.

*Recommendations-*

1. Treasury and FMD should review and potentially amend Loans Securities Act 1960 and T-Bills Act 1974, as well as any relevant Memorandums of Understanding (MOUs) to ensure the acts and MOUs are consistent with the current public debt management policies, objectives, and activities.
2. The BPNG should ensure that the Master Repurchase Agreement’s legal basis e.g. margining, reserve requirements, accounting, and taxation etc. is agreed, accepted, and adopted by all market participants before implementation.
3. The BPNG should establish a code of conduct, market convention, and reporting requirements for market participants transacting in the primary and secondary market for government securities, central bank bills, and repurchase agreements.
4. There should be effective supervision of the government securities market, carried out by the BPNG, whereby all market participants are subject to the same standards and conventions.

**C. Public Debt Management Strategy**

1. The Treasury’s FMD prepares, implements, and monitors the Medium-Term Debt Strategy (MTDS). A MTDS is a plan that the government intends to implement over the medium-term (three to five years) in order to achieve a composition of the government debt portfolio that captures the government’s preferences with regard to the cost-risk tradeoff. The MTDS operationalizes the government’s debt management objectives. Potential risks and or cost can arise from uncertainty over of the government’s financing strategy and to unexpected changes to the government’s financing strategy.
2. The objective of the most recent version of the Medium-Term Debt Management Strategy MTDS 2013 -2017[[9]](#footnote-9) is to minimize the cost of debt consistent with the Government’s tolerance for financial risk. There are three major strategies to support Treasury’s & FDM’s MTDS objective, to include:
3. *Maintain public debt at sustainable levels:*

* The Financial Responsibility Act imposes a nominal debt to GDP limit on central Government borrowings of 35 % of GDP for 2013, 2014 and 2015;
* The limit applies only to debt centrally borrowed by the Government and does not include superannuation arrears, State Owned Enterprise (SOE) borrowings or contingent liabilities.

1. *Maintaining financial risks at prudent levels:*

* Foreign Currency Risk: limit the government’s foreign currency exposure to 40% of the total public debt portfolio;
* Interest Rate Risk: T-bills represent floating rate risk as T-bills are rolled over frequently within 364-day period. The target for T-bills ratio is 15% to 30% of the total domestic debt portfolio;
* Refinancing Risk: to manage the debt falling due within a 12-month period the targeted average time to maturity (ATM) is 5-years for domestic debt and roughly 12-years for external debt. The limit placed on the amount of government inscribed stock maturing in any one year is PGK800mm. The MTDS also provides for an increase the GIS issuance from PGK6.2bln at 2014, to PGK9.0bln in 2019.

1. *Develop the domestic debt market:*

* Issue a sovereign bond in the international capital markets;
* Greater interaction with market participants;
* Establish a retail facility for small and medium sized investors to purchase T-bills and GIS;
* Finalize the Master Repurchase Agreement with BPNG.

*Recommendations-*

1. The Treasury’s & FMD’s MTDS and any revisions should be published as a separate document linked on the Treasury’s website. This does not suggest removing the MTDS chapter 6 from the Budget document. However, easy access to the MTDS for investors and potential investors would be useful. The main topics which the MTDS should provide are:

* Macroeconomic and Public Debt Overview and Statistical Data;
* Goal and Objectives for the MTDS and its Rationale;
* Institutional Arrangements;
* Risk Management;
* Market Communication.

1. Given the potential for PNG issuing a sovereign bond in the international capital markets, as indicated in the MTDS 2013-2107, it would be useful to state in the MTDS the objectives for issuing a sovereign bond, to include: (i) a source of budgetary funding; (ii) to alleviate potential pressures and or constraints in the domestic government securities market, particularly the T-bill market; (iii) to build up an external presence in the international sovereign debt markets. This would be especially beneficial to the international investors.
2. Treasury and FMD should consider and prioritize the issuance of an external bond in the international capital markets as a potential new source of fund raising to meet the government’s financing needs and or project finance. This would provide the Treasury with an alternative-funding source should liquidity constraints in the domestic marketoccur. PNG is classified as a lower middle-income country[[10]](#footnote-10) and has achieved ‘blend’ status, which enables the country to source concessional financing and at the same time deemed credit-worthy to access market based finance. Establishing an external PNG sovereign bond benchmark will provide the Treasury with further access to market based external finance in the future, as concessional funds (low interest rates) potentially will no longer be available.
3. J.P. Morgan Emerging Market Bond Index (EMBI) is the most widely used and comprehensive emerging market sovereign debt benchmarks. This is a benchmark index for measuring the total return performance of international government bonds issued by emerging market countries that are considered sovereign and that meet specific liquidity and structural requirements. *In order to qualify for index membership, the debt must be more than one year to maturity, have more than $500 million outstanding, and meet stringent trading guidelines to ensure that pricing inefficiencies don't affect the index.*
4. Given the uneven maturity profile of the outstanding stock of government debt with a high concentration falling due within 12-months along with bullet inscribed stock maturing within the same period, the Treasury and FMD should develop and adopt a MTDS policy to proactively manage refinancing and liquidity risks;

* *Liquidity risk:* a situation where the volume of liquid assets diminishes quickly as a result of unanticipated cash flow obligations and/or a possible difficulty in raising cash through borrowing in a short period of time.
* *Refinancing risk:* the inability to refinance maturing debt and/or at exceptionally large increases in government funding costs, the latter is a type of interest rate risk.

1. To mitigate *liquidity risk* would entail maintaining an adequate *cash buffer* in the government’s account e.g. cash against a predetermined forthcoming expenditures. To ensure the cash buffer does not get lost in the government’s account a *sinking fund* could be considered. Any funds or accounts established would require legislation to support the fund from the budget.

* Partly as a response to the funding pressures since the financial crisis erupted, there has been a tendency among some government issuers to issue more than what is strictly needed in a given year.
* The motive is to prefund known future liabilities, most notably close-to-maturity government bonds, in periods with high uncertainty about economic growth and high market volatility. In that situation, governments, that enjoy currently good access to capital markets at relatively *favorable* borrowing costs, may decide to prefund.
* The debt manager may decide to hold the proceeds in very liquid form (cash) or invest in credit-risk free instruments, which match the maturity to the prefunded liability. The investment should mature before the maturing bond.

1. To mitigate *refinancing risk* as well as providing tools to adjust the government’s maturity profile, if desired, the MTDS should incorporate the potential use and process for buybacks and switches:

* *Buybacks* – older less liquid government bonds are purchased for cash. Typically a “reverse auction” is conducted as a competitive tender to repurchase older less liquid government bonds, where the Ministry of Finance places bids, via the fiscal agent, to the holders of securities.
* S*witches* (often referred to as exchanges) – older less liquid government bonds are switched for a new benchmark issue. Similar to buybacks, switch operations are typically conducted same day.

1. Bond Buyback and Switch operations serve two main purposes:

* First, by reducing the outstanding amounts of bonds close to maturity, switches and buybacks help in reducing rollover peaks and thus lowering refinancing risk.
* Second, buybacks and switches allow debt managers to increase the issuance of new on-the-run [[11]](#footnote-11) securities by taking out of circulation old illiquid off-the-run[[12]](#footnote-12) issues. The resulting more rapid build-up of new benchmark bonds enhances market liquidity of these securities. In addition these operations may also contribute to lower funding costs for governments.

1. To achieve effective execution of these strategic activities, should they be adopted, careful consideration should be given to including:

* Assess debt market and macroeconomics dynamics and conditions to determine whether these operations are in best interest of the domestic debt markets and do not potentially cause any market disruptions, anomalies, or volatility;
* Investor consultations will be recommended to first explain the mechanisms for buybacks and or switches and the FMD’s rationale for executing such strategies;
* Determine FMD’s internal capacity to plan, negotiate, and execute these strategies;
* Coordination and consultation with the Treasury’s fiscal agent, the BPNG is essential as the BPNG would be part of the process;
* Procedures for conducting buy-backs and or switches, much like auction and issuance procedures, will need to be established, documented and revised on a regular basis.

1. In practice, the government may choose a mixed strategy by both prefunding close-to-maturity liabilities and by maintaining or creating liquidity buffer of a specific preferred size. This combination of two 'pure' strategies involves buybacks operations while at the same time leaving a specific amount of cash as liquid buffer.
2. In the short-term, the aim should be to reweight the domestic debt composition of 47% T-bills and 52% GIS in line with the 2015 annual borrowing plan’s objective of 39% to 61% T-bills to GIS. In the medium-term the aim should be to gradually reweight the composition in line 2013-2017 MTDS’s objective of 15% to 30%.
3. Progress reports on the implementation of the MTDS should be produced by the FMD’s front and middle offices so that relevant policy officials and or responsible committees are well informed on the evolution of the debt portfolio as articulated in the strategy. Also, it provides good risk management internal oversight by the middle office.
4. If there are fundamental shifts in macroeconomic or domestic and external market conditions, the MTDS should be reassessed. The changing conditions should prompt FMD to initiate new analysis and if required a new proposal should be submitted along with a clear explanation of why a revision and update of the strategy is recommended. As previously discussed, timely communication of changes to the MTDS together with detailed explanations for the market on the reasons for the changes is essential.

*Recent Initiatives-*

1. A cash buffer account in principle has recently been adopted and established, which is in the process of legislative authority to fund and manage the account.
2. Buyback and Switch operations procedure manuals are currently under development by the Financial Management Division.

**D. Institutional Arrangements & Market Communication**

1. The role of the Fiscal Agent has been assigned, by the Department of Treasury, to the BPNG, to perform domestic debt issuance constituted through an inter-agency Memorandum of Understanding. The fiscal agent role is further acknowledged in the Central Banking Act 2000, Article 53. The BPNG acts as sole registrar, settlement and payment agent for all government securities.
2. The Public Debt Committee (PDC) coordinates fiscal and monetary authorities, on an operational level, for the issuance of government securities. The PDC is made up of representatives from:

* Department of Treasury
  + Financial Management Division
  + Macroeconomic Policy Division’s Fiscal and Cash Forecasting
  + Budget Operations Division
  + Budget Coordination & Analysis Division
* Department of Finance
  + Cash Management Division
  + Trust Division
* Department of National Planning & Monitoring
* PNG Internal Revenue Commission
* Bank of PNG
  + Financial Markets Division.

1. The PDC conducts weekly meetings on Tuesdays to collectively decide on the issuance of government securities in accordance with the Department of Treasury’s cash requirements and financing needs. The outcomes of the PDC weekly meeting are to conclude and finalize the government’s funding requirements and volumes of issuance for the upcoming auctions. *More details to follow in the Primary Market section of this paper.*
2. The Public Debt Policy Committee (PDPC) meets quarterly to coordinate on macro fiscal and monetary issues. The committee is represented by senior officials from;

* Department of Treasury
* Department of Finance
* Department of National Planning & Monitoring
* Bank of PNG.

1. Previously the Financial Management Division, on a semi-annual and open manner, carried out market dialogue with market participants. This exchange between FMD and the market has been inactive for a year or more and market participants expressed the need to re-activate dialogue.

*Recommendations-*

1. It is strongly recommended that these semi-annual meetings recommence and that action be taken to ensure that they continue to occur to discuss the government’s funding plans, debt issuance strategy, and domestic government securities development.
2. That Treasury and FMD should initiate contact with the international investment community to alert and inform potential international investors as to the opportunities to invest in PNG government securities. This contact should include engagement with the international investors with *road shows* or *non-deal road shows* in the event of a potential external sovereign bond issue in the international capital markets. Road shows are effective communication channels with international investors to get the PNG economic and financial markets story heard. The banks and or book arrangers[[13]](#footnote-13) selected for an external issue will be instrumental in advising Treasury and FMD as to what information the investors will be expecting to hear. The BPNG should be part of the team for the road shows.
3. Treasury and the BPNG should establish a policy level *Domestic Bond Market Development Committee (DBMC).* The committee would comprise a working group of agencies and departments involved in the overall objective of domestic bond market development. The mandate of the DBMC would initially focus upon outlining, prioritizing, and advocating market development activities with Terms of References.
4. The DBMC would comprise officials from Treasury, BPNG, Securities Commission, the Internal Revenue Commission, the Stock Market, and possibly private sector participants. The DBMC suggested sub-working/responsible agencies:

* Primary Market
  + Department of the Treasury, Financial Management Division
* Public Debt Management
  + Department of the Treasury, Financial Management Division
* Secondary Market
  + Bank of Papua New Guinea
* Repurchase Market
  + Bank of Papua New Guinea
  + Department of the Treasury, Financial Management Division
* Clearing, Settlement, and Central Securities Depository
  + Bank of Papua New Guinea
* Taxation
  + Revenue Commission
* Code of Conduct and Market Convention
  + Bank of Papua New Guinea
  + Securities Commission
* Market Education & Capacity Building
  + Department of the Treasury
  + Financial Management Division
  + Bank of Papua New Guinea
  + The Port Moresby Stock Exchange
  + Securities Commission

1. Action should be taken to encourage coordination and organization between banks, super funds, and brokers. This can be achieved by way of a domestic bond market development *Dealer Advisory Panel (DAP).* Private sector coordination and collaboration can be a good source of information for the Treasury and the BPNG to include: (i) overall domestic bond market conditions; (ii) issuer and investor demands; (iii) structural suggestions for the primary and secondary markets; (iv) recommendations to assist the FMD in its formulation of the borrowing plan to achieve cost effective funding; and (v) general recommendations on financial products that would further develop the domestic debt market. The dealer advisory panel could meet on a quarterly basis and report minutes of the meetings with recommendations to the Treasury, FMD, and the BPNG. A model of this type of outside committee is the United States Treasury Borrowing Committee[[14]](#footnote-14).
2. That BPNG establish a centralized in-house agency/division function responsible for all debt market information and data, market conventions, and the dissemination and easy access to the information. This is similar to bond market association’s roles and responsibilities. The agency/division could consider the following functions:

* Center for all bond market information e.g. primary and secondary market activities and data for both government, central bank, and corporate securities;
* Develop, maintain, and publish a daily or weekly government yield curve[[15]](#footnote-15);
* Develop secondary market trade reporting requirements and timely transaction dissemination to the market place;
* Establish a market code of conduct;
* Establish, document, and disseminate bond market standards and conventions in coordination with Treasury;
* Establish a web-link exclusively for non-resident investors;
* Provide education and training for bond market development.

1. The Bank of PNG’s Financial Markets Division is currently producing various market data information and the likely staring point for developing a centralized in-house function could be the FMD’s middle-office, which currently comprises staffs with good analytical capability and capacity.
2. Equally, the Financial Management Division should develop its internal database for central government debt data, public debt composition, and primary market data. The data should be disseminated and made easily assessable for the public, investment community, and importantly institutions needing the public debt data for analysis, such as; (i) multilateral development institutions e.g. World Bank & Asian Development Bank; (ii) bilateral donors; (iii) International Monetary Fund; (iv) etc. Furthermore, this would, in time as the database is fully developed, alleviate time intensive pressures on FMD and Treasury staffs to provide requested information on the government’s debt portfolio on a case by case basis.

*Recent Initiatives-*

1. In an effort to build and maintain better investor relation the Financial Management Division has indicated that in the 3rd quarter of 2015 commenced informal weekly market dialogue with local investors and financial institutions relating to: (i) the government’s funding needs; (ii) issuance of T-bills and GIS; (iii) refinancing needs and rollover intentions of government securities; (iv) potential intended public debt activities / transactions to management the debt portfolio e.g. Buybacks.

**E. Money Market**

*Monetary Operations-*

1. The BPNG has four main objectives (Central Banking Act 2000, Article 7): (a) to formulate and implement monetary policy with a view to achieving and maintaining price stability; (b) to formulate financial regulation and prudential standards to ensure stability of the financial system in Papua New Guinea; (c) to promote an efficient national and international payments system; and subject to the above; and (d) to promote macroeconomic stability.
2. The BPNG conducts monetary policy with the objective of achieving and maintaining price stability. The BPNG uses indirect instruments for monetary policy operations through the issuance of central bank bills (CBBs) and the use of Repurchase Agreements (Repo) transitions between commercial banks and the BPNG. C-bills volumes are adjusted at the weekly auctions to move the 28-day bill in line with the policy rate or the Kina Facility Rate (KFR). Similarly, the issuance of central government T-bills and Inscribed Stock are factored in the Bank’s assessment, forecasting, and management of system liquidity.
3. The Bank also has at its disposal administrative or direct policy instruments, the Cash Reserve Requirement (CRR) is currently at 10% to total deposits and the bank uses Minimum Liquid Asset Requirement (MLAR) for analysis *only* with 20% as an acceptable level. T-bills and inscribed stock are classified as liquid assets.
4. The BPNG’s Monetary and Economic Policy Group is responsible for the design and formulation of monetary policy, while the Financial Markets Department of the Financial Operations Group implements monetary policy mainly through the use of market-based instruments.
5. CBBs are issued at the short-end of the T-bill maturity range 28-, 63-, 91, 182-day maturities. CBB issuance mix is determined by the Money Market Operations Committee (MMOC) to achieve the targeted closing balance in the Exchange Settlement Account (ESA). Registered Bidders can purchase CBBs at the weekly auctions, which is conducted every Wednesday from 9am – 12pm, at the BPNG. CBB auctions are based on competitive and multiple priced bidding. The composition of CBBs is 47% 28-day; 25% 63-day; and 28% 91-day.
6. Repos and reverse repos operations can be conducted by the BPNG for the sole purpose of injecting (repo) or withdrawing (reverse repo) liquidity in the system. Repo transactions are not collateralized, thus they are not a classic Repo, but buy-sell back, and are priced at one percent above or below the Kina Facility Rate.
7. There are no standing facilities[[16]](#footnote-16) available to deposit taking institutions. Under KATS, it is a requirement that no commercial bank can have a negative balance in their Exchange Settlement Account by end of the business day (5:00pm).  A commercial bank must first access the interbank market to bring its ESA back to zero or credit balance and should the bank not find funding/liquidity in the interbank market they can borrow from the BPNG at the Kina Facility Rate (seen as a Lender of Last Resort)[[17]](#footnote-17).  This is a temporary arrangement in the absence of a standing facility.
8. Trust fund accounts and their spending accounts are currently being held at the Bank of South Pacific thus escalating the excess liquidity for the BPNG to manage and this in turn increases the cost BPNG must bear in their issuance of CBBs to sterilize excess liquidity.

*Interbank Market -*

1. The current interbank market is very illiquid and transactions that do occur are only for overnight funds. The interbank market comprises only three banks, two Australian banks (ANZ and Westpac) and BSP. The main reason for limited interbank transactions has been excess bank liquidity and little need and or incentive to trade. Also, limited unsecured credit limits between ANZ, Westpac, and BSP could be another reason for lack of transactions. The interbank market is OTC and phone based. Money market rates are determined in the primary market for shorter maturity CBBs and longer maturity T-bills. At present without the Master Repurchase Agreement in place, transactions are unsecured.
2. In the absence of the BPNG standing facilities deposit-taking institutions, in their management of liquidity, banks could be taking an extra cautious approach to hold excess liquidity to mitigate the possibility of needing funding, at punitive rates, from the central bank to settle their end of day ESA.
3. *Recommendations-*
4. The Master Repurchase Agreement draft that is currently under legal review. The BPNG should promote the use of interbank repurchase transactions amongst banks and market participants.
5. That BPNG will execute and promote the use of traditional repurchase transactions, secured, through the MRA in conducting the Bank’s open market operations so as to mitigate the Bank’s credit risk exposure.
6. That BPNG examine margining, reserve requirements, accounting practices, and tax issues to ensure market soundness and effectiveness. The BPNG should also develop and provide guidelines to market participants on sound procedures for repurchase transactions.
7. Interbank transactions should be disseminated by the BPNG, in a practical time frame given the volume, providing information for secured and unsecured interbank lending.
8. That the BPNG upgrade payment, custody, and settlement infrastructure to reduce the credit and operational risk of secondary market and interbank repurchase transactions.

**F. Primary Market**

1. The Department of Treasury’s FMD is responsible for financing the central government’s funding needs domestically and externally. As mentioned previously, the central bank is sole fiscal agent to conduct primary auctions and the allocations of tenders awarded. The responsibility for the authorization of the auction allocations is with the Financial Management Division and FMD’s First Assistant Secretary (FAS). An alternate from the division is assigned in the event of the absence of the FAS.
2. The planning of the government’s debt issuance strategy is executed by FMD. Upon passage of the National Budget, usually in November, the FMD announces and publishes, generally in February, the “Annual Debt Issuance Plan Update”. The annual plan is an indicative aggregate borrowing for T-bills, Government Inscribed Stock (GIS), and any potential external issuance in the international capital markets. The announcement for both T-bills and GIS provides: (i) ending aggregate balance of outstanding stock as of December 31 of the previous fiscal year; (ii) aggregate amount of repayment / refinancing: (ii) aggregate new debt issuance; (iv) the projected aggregate balance at the end of the current fiscal year; and (v) net changes to the outstanding balance for T-bills and GIS. Table 2 provides the actual summary of FMD’s repayments and issuances for 2015.

**Table 2:** **Summary of Repayments & New Issuance during 2015 (Kina millions)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Financing Source** | **Balance**  **31 Dec 14** | **Repayment**  **2015** | **New**  **Issuance** | **Projected**  **Balance**  **31 Dec 15** | **Net Change**  **2015** |
| T-bills  GIS  **Domestic Debt**  International Agencies  Sovereign Bond  **External Debt** | 5,620.6  6,207.8  **11,828.3**  3,460.7  0.0  **3,460** | 6,6276.5  491.1  **7,118.6**  175.8  0.0  **175.8** | 5,779.8  1,800.0  **7,579.8**  986.8  1,000.0  **1,986.8** | 4,772.9  7,516.7  **12,289.6**  4,271.7  1,000.0  **5,271.7** | -847.7  1,308.9  **461.2**  811.1  1,000.0  **1,811.0** |
| Less Redemption |  | 2,500.0 |  |  | -2,500.0 |
| **Total Debt** | **15,289.0** | **9,794.4** | **9,566.6** | **17,561.3** | **-227.8** |

*Source: FMD*

1. The annual issuance calendar is to be published and made readily accessible through the Department of Treasury’s and the Bank of Papua New Guinea’s websites. Included in the annual plan are any relevant public debt management policy changes and bond market development strategies and or initiatives.
2. The annual plan provides a Government Inscribed Stock issuance calendar to include: (i) indicative amounts on offer for each GIS series, ranging from PGK100mm to PGK200mm; (ii) issuance/auction dates, which is the third Tuesday of each month and notice is given if it is not to be held on the third Tuesday; (iii) maturities, auction amounts, and coupon rates of each GIS series is confirmed and announced by the Bank of PNG on the second business day at of each month; and (iv) settlement of T+3 on Friday.
3. The issuance calendar for GIS is based on projections in the annual budget and any changes will be made as part of the Supplementary Budget and notification of any potential changes will be announced accordingly.
4. The annual issuance calendar is to be updated on a quarterly basis for GIS, which indicates each specific benchmark’s maturity, amount, and a set coupon rate for the coming quarter. The actual auction dates have already been established in the annual issuance plan. GIS existing benchmark outstanding volumes are subsequently increased by “re-opening” auctions on a quarterly basis to establish liquid benchmarks, but with due cause to refinancing risks. Inscribed Stocks are simultaneously auctioned e.g. multiple maturities, to the public on the specific issuance dates.
5. Treasury bills provide the Department of Treasury with flexible funding tools to manage the government’s cash receipts and expenditures. Thus so, T-bill volumes can be adjusted frequently and on a timely basis. The 2015 annual plan states: (i) the Treasury T-bill issuance will mainly be 6-month & 12-month securities with the possibility of 9-month securities; (ii) at the beginning of each quarter Treasury will announce the amount of T-bills that will mature and the likely amount of T-bills to be offered at tender, over the next three months; and (iii) the BPNG, as issuing agent, will announce to investors by the close of business on Tuesdays the confirmed amount and terms of T-bills to be sold the next business day (Wednesday). The medium-to-long part of the T-bill curve is reserved for the Department of Treasury (central bank bills will be discussed later in this report) with maturities of 182-days and 364-days.
6. The Public Debt Committee (PDC) meets every Tuesday to assess to cash needs of the central government at which time the PDC formulates a T-bill issuance plan by determining maturities and amounts on offer. Upon the PDC’s resolution to issue T-bills, it receives approval from the committee’s Chairman and in the absence of the Chairman it receives the Deputy Chairman’s approval. Thereafter, the issuance plan is sent to the central bank for announcement to registered bidders that same day (Tuesday) and T-bills are auctioned the next business day (Wednesday).
7. The mechanisms for the sale and distribution of government securities are mostly market-based auctions with occasional private placements for a select institutional investor class. Government securities auction tenders are based on a competitive and multiple-priced format. Bids are submitted on a yield basis. The BPNG opens the auction bidding at 9 am and closes the auction at 11am for T-bills and 12pm for GIS, with auction results announced same day roughly by mid-afternoon.
8. Currently non-competitive bids[[18]](#footnote-18) for retail investors and small and medium sized entities are not permissible. However, BPNG *Tap Facility* is similar to non-competitive bids, (see central bank bills).
9. Eligible bidders must be registered (“registered bidders”) with the Department of Treasury’s issuance agent, the BPNG. The minimum starting bid is PGK100, 000, and subsequent bids are in multiples of PGK10,000. Registered bidders can submit their tenders through e-mail directly to the BPNG. Retail investors and non-registered bidders for T-bills can place bids for the nominal amount by way of a cheque attached to the tender directly with the BPNG, but this rarely occurs. For GIS non-registered and retail bids must go through registered bidders.
10. The central bank’s Financial Market Department reviews T-bill and GIS tenders, then sets the auction cutoff and allocates tender awards. The bids of both T-bills and GIS are reviewed and allocated on the basis of adherence with auction rules and convention. The allocated bids are sent to the Treasury’s Financial Management Division for approval.
11. Auction results are released to registered bidders by the central bank and posted in the media and published on the Treasury and the BPNG’s websites. The auction results includes: security on offer, total offering amount, bid amounts received; amount allocated, minimum, maximum, and the weighed average of accepted yields.
12. Information relating to auction information and process is published on the Department of Treasury’s website. The following publications provide information on auction and settlement processes of government securities:

* Inscribed Stock- Information Memorandum;
* Treasury Bills- Terms and Conditions;
* Information for Registered Bidders on Auctions.

*Primary Market Recent Condition-*

1. The primary market remains manual and physical where registered bidders, primarily commercial banks place bids, usually through e-mail, without accompanying payment instructions, while other non-registered bidders submit physical cheques at the central bank along with the bidding documents. *This current manual and cumbersome process will not attract non-resident investor’s.*
2. It should be noted, that due to illiquidity in the secondary market, some local investors are currently purchasing short dated central bank bills due to uncertainty of their future cash liquidity position. However, with the introduction of repurchase agreements (to be discussed in the following sections of this report) they would be willing to purchase longer dated T-bills and short to medium dated GIS and in the event they needed to liquidate their position they would repo out the securities for cash. Thus, the repo market will, in the near term, offer liquidity and bring in potential buyers of longer dated government securities, which prior to the establishment of a repo market did not exist, and this will help the Treasury’s underwriting capacity.
3. Domestic debt has increased from PGK4077.8mm to PGK11827.9mm during the 2010 to 2014 period, significant increases in 2013 and 2014 The resultant increased funding requirement has caused an increase in yields with the weighted average tender yield of roughly 7.5% in mid 2013 increasing to roughly 11.5% in late 2014 and at times government securities auctions have been under-subscribed. Investors expressed frustration and concerns with the uncertainty created in the market by the issuance announcement procedures, auctions canceled on occasions, and the relative short time to react to the government’s issuance announcements, particularly with T-bills.

**Figure 3: Government Bond Yield Curve**

*Source: BPNG*

1. From September 2014 to April 2015, Figure 4, supply out weighted demand, as government Treasury bill auctions were mostly under-subscribed, while GIS auctions received better demand from the market, generally fully subscribed, with the average bid-to-cover ratio for GIS at 1.4 times. The total under-subscription at the Treasury bill auction in the March quarter of 2015 was PGK702.5 million, compared to PGK918.3mm in the December quarter of 2014. Under-subscriptions for Treasury Bills between September 2014 and February 2015 were bought by the BPNG through the *“Slack* *Arrangement”*, Figure 5, between the central bank and the government totaling PGK1865.5mm.
2. The “slack agreement” between the BPNG and Treasury only applies to T-bills. The central bank purchases of the under-subscribed T-bills are injecting liquidity into the financial system, which is subsequently sterilized through the issuance of CBBs.
3. The BPNG participates in the auctions for GIS through competitive bidding as part of the bank’s assets to diversify income and mitigate the net asset deficiency that the bank has been carrying for successive years.  Also, the bank’s intent is to build up stock of government securities for the purpose of conducting repurchase transactions and at some point open up a Tap Facility so the Bank can sell inscribed stocks from its portfolio to small -medium size investors.

**Figure 4: Net Subscriptions of Government Securities**

*Source: BPNG*

**Figure 5: Net Subscriptions of Government Securities & BPNG Slack**

*Source: BPNG*

1. As previously mentioned, FMD is to publish the Annual Borrowing Plan at the start of the fiscal year, with quarterly announcements for T-bills and GIS. However, recently this practice has not been implemented, the last published annual plan was 2014, while it is believed the 2015 annual plan was distributed directly to registered bidders. The last published quarterly GIS plan was Q3 2013 and the last published T-bill update was April 2013. The current practice is to announce the actual issuance amounts and tenors through the BPNG just ahead of an auction. As previously stated, investors expressed frustration and concerns with the uncertainty created in the market over the issuance announcement procedures, auctions canceled on occasions, and the relative short time to react to the issuance announcements, particularly with T-bills.
2. A current GIS auction announcement for June 2015: (i) announcement date June 10, 2015; (ii) auction date June 16, 2015; (iii) settlement Date June 19, 2015; (iii) amount on offer PGK160mm - PGK40mm (each) of 3, 5, 7, and 8-year notes;

* It should be noted that the 2015 annual plan for GIS indicted K150mm to be issued in June. However, the annual plan does not indicate maturities but it is considered by FMD that the market generally knows. A six-day advanced notice of issuance details is not sufficient notification, which has been expressed by the market participants and the investment community.

1. T-bill auctions are announced at the close of business on Tuesdays and auctioned the next day (Wednesday). The annual plan does state that the maturities for T-bills are 182 and 364-days. However, the amounts are unknown until the day before and are being auctioned the same day as central bank bills.
2. Market participants, local investors, and monetary policy operations at the BPNG have expressed the view that the current notice period for T-bills and GIS is not sufficient notification and given market conditions has lead to the weak demand for government securities, specifically for T-bills.

*Recent Initiatives-*

1. The BPNG has evaluated and is currently testing the Bloomberg Automated Auction System for the government securities and central bank bills primary market. The Bloomberg system allows for registered bidders to submit their tenders electronically through a Bloomberg terminal directly to the BPNG. The system automatically collates the bids in from highest bid to lowest and by individual registered bidder. The fiscal agent decides on the cutoff of all the bids, then forwards the results to FDM’s Bloomberg terminal for approval. Upon approval, results are instantly released to the awarded tenders as well as to the general market place.
2. The Bloomberg auction system provides a fast and efficient bidding process with a high degree of operational risk mitigation by transitioning from a manual to a highly automated process.

*Recommendations-*

1. That the BPNG and FDM adopt and implement the Bloomberg auction system for the government securities and central Bank bills primary market.
2. That FMD reinitiate and maintain previous government funding and auction announcement practices of: (i) annual borrowing plan (currently done as in table 2); (ii) provide the GIS benchmark maturities to be targeted and issued in the calendar year; (iii) provide targeted benchmark maturities of T-bills; (iv) quarterly announcements and updates for inscribed stock issuance; (v) quarterly announcements and monthly updates for T-bills.
3. If in the interim due to ineffective cash flow forecasting, the quarterly GIS announcement should provide, at a minimum, indicative amounts to be issued and to be confirmed closer to the auction. The annual plan should have already indicated the maturities and FDM should not deter from that. However, this suggestion is a short-term stopgap and the indicative amounts provided should be relatively close to the final amount.
4. That action is taken to reinitiate and maintain market communication and dialogue between FMD and market participants as to FMD’s annual borrowing plan, issuance strategies, and market development.
5. That FDM and the BPNG allow and introduce non-competitive bidding for retail, corporates, and small to medium sized entities. This broadens the investor base and promotes access to the primary market for small investors through market intermediaries e.g. banks and or brokers.
6. That Treasury and FMD change the BPNG competitive bidding in the primary market for government securities to non-competitive so that the BPNG does not have nor be not to have or perceived to have influence over the auction pricing.
7. That FMD and the BPNG lower the minimum bid threshold of PGK100,000 for small corporates and individuals that wish to take part in the primary market, which could help to diversify the investor base and reduce concentration.
8. That endeavors be made to diversify the investor base and smooth out and distribute holdings of government securities. While this is a challenge and will requiring considerable time to achieve, it must be a high priority for the Treasury, the BPNG, and the suggested Domestic Bond Market Development Committee and Dealer Advisory Panel.
9. That FMD strive to, over time, consolidate the 23-benchmark lines with due cognizance to roll-over risks. This means that, instead of issuing small amounts of bonds on slightly different maturity dates, and with slightly different coupons, the issuer concentrates issues into larger lines of bonds. These larger lines would potentially widen the holdings from different investors, in each individual line, and promote secondary market transactions.
10. As previously mentioned in the MTDS section, actions by FMD and the BPNG to consolidate benchmarks lines, reconfigure the maturity composition, and manage refinancing risks of maturing GIS lines and T-bills can take two forms: (i) Buybacks – older less liquid government bonds are purchased for cash and reissued in new benchmark line; (ii) Switches (often referred to as exchanges) – older less liquid government bonds are switched for a new benchmark issue.
11. Treasury, FMD, and the BPNG should give consideration and assessment given to the possible use of bond syndications for certain issuances practices given the following assumptions: (i) consolidate benchmark lines, (ii) the possible need for longer dated benchmarks e.g. 10-years plus, based on investor demand and extension of Treasury’s average term to maturity, (iii) the unknown liquidity factor farther out the yield curve to issue long dated securities; and (iv) often large government securities switch programs uses arrangers.

* Generally governments issue domestic bonds through auctions and use syndications for external placements. Private companies and public owned entities mostly issue debt using bond syndications. Syndications are seen as being useful in assuring the placement will be successful and are used by governments in establishing a first issue long dated security[[19]](#footnote-19). Globally, there are two types of [underwriting](http://en.wikipedia.org/wiki/Underwriting) for syndications: an *underwritten deal* where the syndication assures the placement and *best-efforts* syndication where the syndication commits to a certain amount leaving the rest to market forces.

1. That Treasury and FMD incorporate into the future annual borrowing plans and MTDS the potential external placements in the international capital markets and with the rationale, which may include: (i) providing alternative market-based financing instruments for the government; (ii) alleviating potential funding and liquidity constraints that may exist in the domestic government securities market; (iii) putting PNG in the global markets and providing the international market with the PNG sovereign and macroeconomic story, (iv) allowing international investors to take a position in PNG; and (v) providing a PNG sovereign pricing reference.
2. Attention should be given to updating and upgrading the custody and settlement arrangements by introducing automated securities clearing and settlement and a Central Securities Depository for all government securities. To be discussed in market infrastructure of this report.

***Central Bank Bills-***

1. The main purpose for the issuance of central bank bills (CBB) is indirect monetary policy tools to manage financial system liquidity. This is not uncommon in emerging economies where the availability of liquid and tradable assets, such as government securities, is insufficient as well as the absence of a liquid repurchase market.
2. Central bank bills are short-term discounted securities redeemable at par on maturity. CBBs are issued in maturities of 28-days, 63-days, and 91-days with the understanding between Treasury and BPNG that CBBs will be issued in the short-end of the T-bill curve.
3. Central bank bills are issued with the same terms and conditions as Treasury bills via competitive and multiple priced auctions. CBB’s are auctioned weekly on Wednesdays, along with T-bills, and settled on Fridays.
4. CBBs outstanding were PGK3174.4mm as of Dec 31, 2013 and 2,525.0 as of Dec 31, 2014. The composition of CBBs, as per figure 6, shows 28-day bills comprising 47% of the portfolio as the 28-day is linked to the policy rate or the Kina Facility Rate.

**Figure 6: Central Bank Bills Composition**

*Source: BPNG*

1. The BPNG provides a CBB *Tap Facility* for small retail investors. The CBB Tap Facility has terms of 28, 63, 91, and 182 days with a fixed interest rate based on a margin of 1 percent above the CBB auction weighted average rate. Interest is paid on maturity only. The minimum starting bid is PGK10,000 with increments of PGK10,000 and is limited to a maximum of PGK100,000. Terms and conditions for CBB Tap Facility are provided for the general public on the BPNG’s website.
2. The BPNG will continue to operate the CBB Tap Facility to allow small retail investors to participate in the securities market and help develop a savings culture in the country. Participation has been low, mainly due to limited access to the facility from other centers of the country.

**G. Investor Base**

1. The holdings of domestic government securities is highly concentrated in the financial sector with commercial banks and superannuation funds holding roughly 70% of outstanding debt stock, Figure 7, Furthermore, beyond the 70% holdings from deposit taking institutions and superannuation funds, the BPNG holds 22% of government debt due to the recent T-bill “slack arrangement” with the Government where the BPNG is purchasing under subscribed T-bill auctions.

**Figure 7: Holdings Of Government Securities**

*Source: BPNG*

Others: Insurance cos., mining cos., churches, commercial entities, & business groups.

1. Commercial banks are the dominant players in the government securities with Bank of South Pacific (BSP) holding a significant share, BSP held 21% of T-bills, 35% of GIS, and 22% of CBBs as of December 2014. The superannuation funds represent the second commercially dominant entity with holdings of GIS at 31% of total. The BPNG holdings of T-bills and GIS are 29% and 15% to total outstanding, respectfully, as per Figure 8. In terms of holdings of central bank bills, as per Figure 9, ANZ owns a significant 54% of the total outstanding of CBBs, while holding 15% of Treasury bills due to its ALM and investment criteria.

**Figure 8: Holdings of T-bills & GIS (December 2014)**

*Source: BPNG*

**Figure 9: Holdings of Central Bank Bills (December 2014)**

*Source: BPNG*

1. The Superannuation funds provide contractual savings schemes both compulsory and voluntary contributions for employees and employers in PNG. Membership are mainly workers from private sector companies, government owned corporations, and statutory authorities. Also, retirement savings accounts are offered by the super funds.
2. The Nasfund and Namabwan Super Funds assets allocations, as of December 2014, are indicated in Tables 3 & 4. Nasfund investment portfolio totaled PGK 3,760.5mm as of December 31, 2014 up 9% from 2013 and Namabwan investment portfolio totaled PGK 4,207.9mm as of December 31, 2014 up 10.7% from 2013.
3. Nambawan fund targets 36% holdings of fixed income with a current ratio of 33% and Nasfund holdings ratio of fixed income is 24% and at the lower end of its investment range. Given superfunds hold very little short-term debt it would appear that both superfunds have the ability and desire to acquire more holdings of government inscribed stock, assuming the current holdings have not changed. The reason for the current ratios is possibly that the superfunds require more longer dated GIS e.g. 10-years plus, and at present the Treasury and FMD is issuing 3,5,7, and 8-year GIS which between 5-year to 8-year GIS does not offer any significant duration pick up.

**Table 3: Nasfund Investment Guidelines (Dec 2014)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Min** | **Max** | **Current** |
| **Cash & Receivables** |  | **0%** | **20%** | **15%** |
| **Fixed Income** |  | **20%** | **38%** | **24%** |
| **Equities - domestic** |  | **17%** | **27%** | **31%** |
| **International Equity** |  | **16%** | **30%** | **9%** |
| **Property & Fixed Assets** |  | **12%** | **25%** | **21%** |
| **Total** | |  |  | **100%** |

*Source: Nasfund*

**Table 4: Nambawan Fund Investment Guidelines (Dec 2014)**

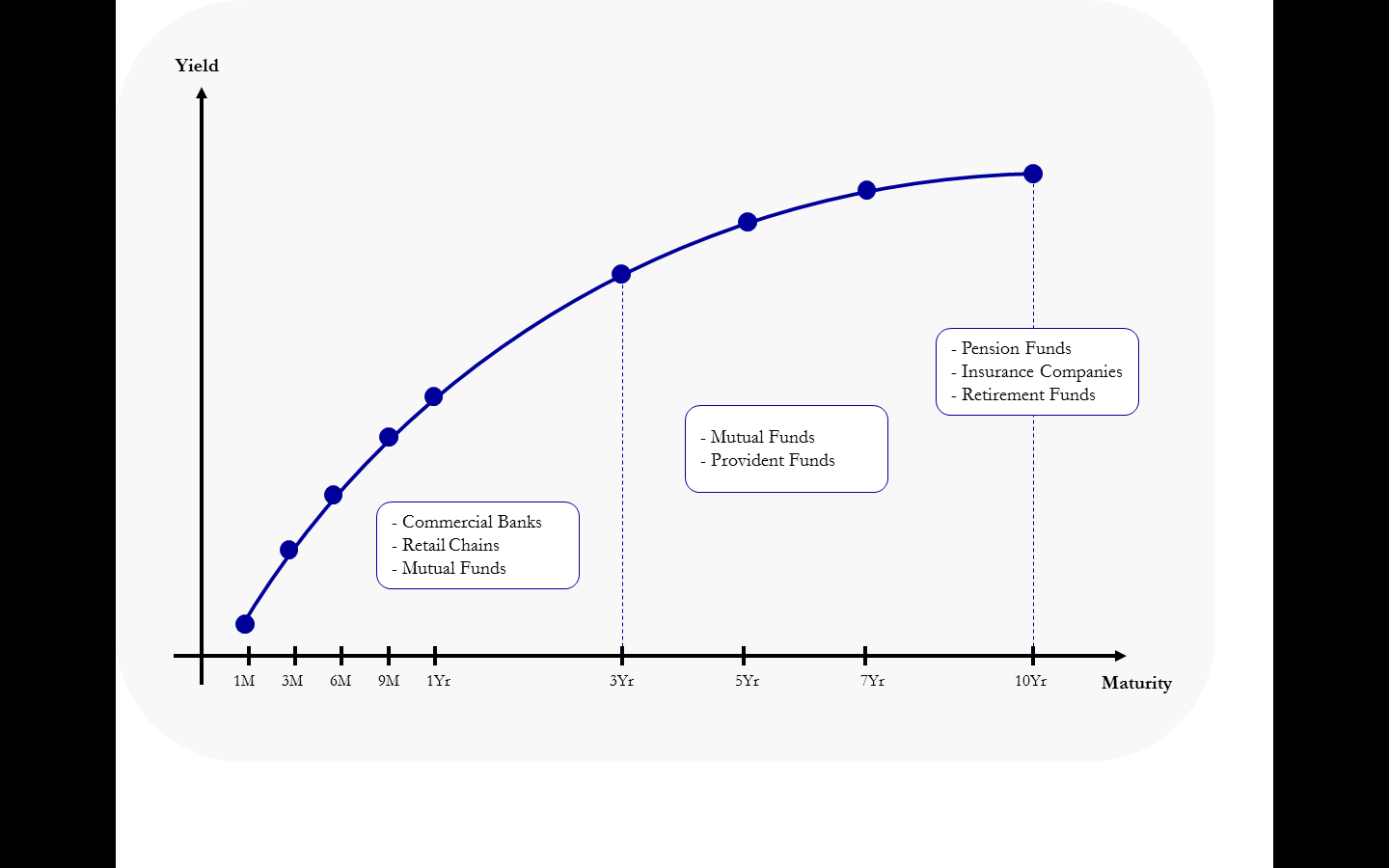
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Min** | **Max** | **Target** | **Current** |
| **Cash at Banks** |  | **0.0** | **5.5** | **3%** | **2%** |
| **Fixed Interest** |  | **33.5** | **38.5** | **36%** | **33%** |
| **Unlisted Equities - Domestic** |  | **13.5** | **18.5** | **16%** | **27%** |
| **Listed Equities - Domestic** |  | **9.5** | **14.5** | **12%** | **14%** |
| **Equities - International** |  | **4.0** | **14.5** | **17%** | **14%** |
| **Property** |  | **13.5** | **21.0** | **16%** | **11%** |
| **Total** | |  |  | **100%** | **100%** |

*Source: NSL*

1. While a high concentration of ownership is characteristic in developing/frontier markets whereby financial institutions play a dominant role in purchasing government debt for their asset-liability management. The PNG institutional investor base exhibits minimal competition, especially amongst commercial banks where there are only three players. The government as an issuer is very dependent on a few investors and their preferences. This poses potential funding and refunding risks for government debt as a “price taker[[20]](#footnote-20)” in times of financial imbalance and or financial stress domestically.
2. Given the concentration of the investor base, it is important and recognized by the Treasury and the BPNG that there is a need to attract new classes of investors and to broaden the investor base. It is widely accepted that for the development of the domestic debt market a broader class of investors needs to be promoted and given access to the local bond market. The investors targeted would be retail customers, corporate entities, insurance companies, and small and medium sized enterprises.
3. To attract this group of investors, would at first, allow access to the primary market for government securities as well as central bank bills. Registered bidders such as banks and brokers should act as intermediaries and facilitate customers primary and secondary transactions. As previously mentioned, Treasury & the BPNG should allow for non-competitive bidding in the primary market for these entities.
4. The BPNG Tap Facility has attempted to generate interest and participation for retail and small investors into the government securities and central bank bills market. However, to date there, as been very low participation mainly due to difficulties in accessing the TAP Facility for small investors as the central bank has only one location.
5. The other stated goal of the Treasury, FMD, and the BPNG is to attract a non-resident investor base into the PNG local market. Previously no foreign investor base has been identified or targeted. Local investment managers have indicated that foreign investors, recently, have made inquiries and expressed interest in investing in PNG fixed income products, specifically government securities, based on return and a desire to acquire assets to provide a stake in the local economy as part of their allocation to new or emerging markets in investment strategies. Non-residents entry into the domestic markets brings new sets of demand as well as bringing a new set of requirements that can lead to market development, such as improvements to market infrastructure. Also, as non-resident investors gradually, and over time, enter the PNG capital markets, close attention and monitoring must be given by the regulator and market supervision on their holdings, duration of holdings, movements in the local market e.g. seeking longer dated securities, and the potential for outward flows or repatriation.
6. Typical concerns by *non-resident* investors which should be addressed through the relevant authority’s website, should include: (i) Central bank’s exchange rate regime; (ii) Capital controls, if they exist; (iii) The ability to repatriate their investment upon liquidation; (iii) Access to the primary market and requiring an automated auction system not manual; (iv) If a non-residents need to purchase bonds in the primary market via domestic banks, would the banks and intermediaries be willing to do so; (v) Secondary market liquidity or ability to buy or sell at “fair value”; (vi) Market infrastructure – automated clearing, settlement, and central securities depository.
7. Market infrastructure of automated primary market and sound electronic clearing, settlement, and custody systems is a critical precursor to attracting foreign investor’s as their investment policies and charters mandate them. Developing electronic systems for debt products should be a priority for Treasury, the BPNG, and FMD.
8. Many institutional investors will seek assets that they can use to more effectively hedge their liabilities in domestic currency denominated T-Bills, CBBs, and GIS bonds to potentially improve asset-liability management. More efficient asset-liability management translates to potential low-cost funding to the government, assuming the issuance planning factors into the demand and provides the required maturities. To analyze demand, the yield curve can usefully be categorized into three distinct *“investor habitats”,* Figure10:

* Short-term maturities (less than 3 years): Commercial banks, retail clients, and mutual funds can be expected to have a high demand for domestic T-bills and government bonds with maturities less than 3 years.
* Medium-term maturities (3–7 years): Mutual funds and provident funds are often significant buyers of medium-term government bonds.
* Long-term maturities (7–30 years): Pension funds, insurance companies, and retirement funds are typically seeking longer-dated assets to hedge their liabilities.

**Figure 10: The Investor Habitat**

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*Licensed Investment Managers*-

1. In PNG there are currently five-licensed investment managers providing investment advice and services to superannuation funds. In addition, these five licensed investment managers plus an unknown number of unlicensed investment advisors provide advice to individual, institutional, politicians and government clients. General areas of specialties are; (i) cash term deposits for liquidity; (ii) fixed income for income generation, to include; government securities both T-bills and inscribed stock and corporate debentures, and CBBs; (iii) Equities for capital growth, to include; listed, unlisted, and dual listed equities; and (iv) property/real estate for income and capital growth.
2. The five licensed investment managers are:

* BSP Capital Ltd;
* Kina Funds Management Ltd;
* PacWealth Capital Ltd,;
* Frontier Equities Ltd;
* Niugini Capital Ltd.

*Recommendations-*

1. To develop, promote, and provide access into the local market Treasury and the BPNG should be targeting retail customers, corporate entities, insurance companies, and small and medium sized enterprises. Registered bidders such as banks and brokers should act as intermediaries and facilitate customers primary and secondary transactions. As previously mentioned, Treasury and BPNG should allow for non-competitive bidding in the primary market for these entities.
2. To attract non-residents investors into the PNG government securities market, Treasury and the BPNG, should: (i) updating and automating the primary market auction system; (ii) undertake government public relations e.g. roadshows and or presentations; (iii) clearly disseminate information specifically addressing non-residents questions and investment criteria; and (iv) automate the clearing and settlement system and central depository.
3. Treasury, the BPNG, and the market regulator should promote the creation and establishment of pools of liquidity in the form of market funds to purchase domestic debt securities in the primary and secondary market and to allow small investors to gain access to the domestic debt market through the managed funds. The establishment of unit trusts/money market funds based on government and central bank securities would require minimal changes to the regulatory and legal infrastructure. The funds would need to consider and install withdrawal requirements and or curbs. These short-term investments would act as alternatives to fixed term deposits, which would likely be the interest of investment management companies and not commercial banks.
4. Treasury, FMD, and the BPNG should factor into domestic debt issuance planning the investor base habitat, see Figure 10, and the demands that exist along the yield curve spectrum from each different class of investors. Treasury, FMD, and the BPNG should facilitate market dialogue with the investors to ascertain their demands, asset liability needs and or constraints, and like amounts of capital willing to invest. This analysis of demand could be complimented with feedback and suggestions from the proposed Dealer Advisory Panel.
5. Treasury, FMD, and the BPNG should take the same approach, to the previous paragraph, but with the view, in the medium-term, to promote and facilitate the potential domestic issuance of private sector corporates and State Owned Enterprises (SOEs) fixed income securities e.g. commercial paper, certificates of deposit (money market products), and bonds. This would require a well functioning government yield curve for price discovery. This would in the medium to long term provide the investor base with more diverse and different instruments to consider for their portfolio.

**H. Secondary Market**

1. The development of a secondary market for government securities is a considerable challenge for most emerging, developing, and even developed markets. In nascent markets where the presence of an efficient and well functioning primary market already exists (the precursor to secondary market development), secondary market transactions can be highly inactive. Generally speaking investor’s and intermediary’s investment and trading behaviors are the major factors in secondary market liquidity or illiquidity.
2. The present condition in the PNG government securities market is purely asset-liability management. Thus it is a one-way “buy and hold” approach to investing in T-bills, Central Bank bills, and Government Inscribed Stock prevails. Given this “buy and hold” investment behavior of banks and superannuation funds, the only occasion for a secondary transaction to take place is merely for adjusting their cash position. Thus, the transactions, which rarely do occur, are need based and not opportunistic.
3. The limited number of intermediaries, three banks, and the non-existent service of secondary market-making functions greatly undermine any potential secondary transactions. Similarly, given the narrow investor base, coupled with similar investment behaviors, contributes to limited reason to transact. Thus, as previously mentioned, the investor base must be expanded by allowing and facilitating access to the domestic market for varied investor classes with different time horizons and risk tolerances.
4. The secondary market for PNG government debt securities and CBBs can be characterized as phone based over-the-counter amongst commercial banks and investors. Market supervision of T-bills, Central bank bills, and Inscribed Stock is under the authority of the BPNG. Government securities are not listed or traded on the stock exchange and there appears to be little advantage to do so.
5. The stock exchange has an electronic trading system, which is in need of updating and upgrading, and can accommodate listing of government and corporate securities but at present only one corporate security is listed.
6. Commercial banks in developing markets play a lead role and have a slight comparative advantage in the government securities markets due to their balance sheet strength, internal infrastructure, being a member of the central bank’s payment system, having access to primary auctions, and a wide client base. Commercial banks have a dual role to play as both major investors and intermediaries. These dual roles may conflict in periods of excess liquidity as the greater the portion of auction tenders are awarded to the bank’s client base, the smaller the portion that is available for the bank’s portfolio.
7. In the longer term, brokers similarly could play an active role in the government securities market going forward provided they are adequately regulated and supervised. Brokers could assist in the collection of bids to be tendered, non-competitively or competitively, in the primary market auctions and help develop capacity and education of potential retail and small corporate investors.
8. Greater liquidity and efficiencies of the secondary market potentially benefits the primary issuance of government securities with high bid-to-cover-ratios[[21]](#footnote-21), elimination of failed auctions[[22]](#footnote-22), and cost minimization over the long term. However, the development of the secondary market is highly dependent on the government’s development of the primary market and issuance strategies to build up the government yield curve with adequate benchmark series. *Please refer to primary market section.*
9. A developing domestic bond market can realize greater secondary market liquidity through proactive dealer/intermediary behavior. This is where dealers/intermediaries, on their own initiative, take proprietary risks to position debt securities to express their opinion on the course of interest rates or the shape of the yield curve. A market characterized as “one way” or “buy and hold” will never achieve a high degree of secondary market liquidity. Policymakers cannot mold the character or behavior of market intermediaries and participants, but they can encourage and allow for the types of transactions that provide incentives to trade, manage liquidity & risk, and profit. Equally important is the cultivation of a competitive environment amongst dealers and investors.

*Repurchase Agreements (Repos)-*

1. Secondary market liquidity is widely benefited by the use of repurchase agreements, as the economic significance of repo transactions derives from the fact that they allow one party to temporarily, in a specific time frame, exchange cash for securities and the other party to temporarily exchange securities for cash. As the repurchase agreement approaches close out or reversal, and the selling party has been able to fully sell outright, at fair value, the bonds traded under the repurchase agreement, the agreement is then terminated. Alternatively, the agreement could be rolled over for another term agreeable by each of the counterparties.
2. From a legal point of view, a key feature that makes the repurchase contracts attractive is the legal transfer of securities, as collateral, for the duration of the contract which provides protection against credit risk and counterparty default risk.
3. Importantly, Repos allow funds to access liquidity in their fixed income portfolio and equally crucial is the repurchase market is a major facility for liquidity within the banking system between the central bank and market participants. Ultimately, local funds could, potentially, hold less cash and more bonds, as local funds could seek and obtain liquidity in the repurchase market.
4. Whilst there are no institutional investment funds per se in PNG at this time, it can be expected that such funds will be developed over the medium to longer term. Institutional investment funds, such as mutual funds, can lend out securities as opposed to outright sales in the case of unanticipated redemptions[[23]](#footnote-23). In the event of market imbalances a mutual fund receiving overwhelming redemptions would only exacerbate the negative market conditions by outright selling the securities. A mutual fund can receive proceeds to meet the redemptions by “repurchasing out” the fund’s securities holdings. While the market imbalance may translate in pricing issues for repurchase agreements, the process is more efficient than outright selling in a distressed market. Once the market finds equilibrium and increased liquidity the repo transaction can be unwound and the fund manager can subsequently out-right sell the asset position. This contributes to the markets ability to rebound and stabilize quicker and creating market confidence.
5. Repos can be useful in developing markets where domestic and foreign banks are participating in the local bond market. In a banking system where liquidity is ample domestic banks with a large depository bases are typically “net lenders” of money while foreign banks with a limited or no branch system would be a “net borrower” of money and repos facilitate the transaction.

*Recent Initiatives-*

1. The BPNG has drafted a Master Repurchase Agreement (MRA), which is currently under BPNG internal legal review. Also, local financial institutions were consulted to obtain feedback on the draft agreement and all but one bank concurred with the draft agreement. Upon BPNG internal legal approval and further discussions needed with commercial banks, funds, and another relevant entities the MRA is to be adopted.

*Recommendations-*

1. That Treasury and FMD to provide the market, through dialogue with market participants, with adequately sized T-bill and GIS benchmarks which appropriately match the maturity interests of the institutional investor base and potential bank and private sector debt issuance. Benchmarks can achieve sufficiently sized issues through primary market auctions and subsequent re-opening auctions to top-up the benchmarks.
2. The BPNG, in collaboration with Treasury, after due legal review and industry consultation, implements the MRA. To ensure market integrity the master agreement terms and conditions sets out standards for margining, accounting, and relevant requirements. To standardize these practices, the MRA, should be signed in advance by the all parties allowed to the trade in order to enable rapid processing of the transaction.
3. Repurchase agreement procedures, standards, and code of conduct must be set out by BPNG for all market participants to comply with best practices in conducting repurchase transactions.
4. Bloomberg’s Repo analysis is a very efficient and operationally sound module to determine Repo value and pricing. The BPNG may consider Repo transaction testing via “mock” trades between counterparties and the BPNG, both Repo and reverse Repo.
5. In developing a domestic government securities market the Treasury and the BPNG could consider allowing intermediaries, banks and brokers, to provide primary dealer market making functions for price discovery and trade execution in exchange for dealer privileges[[24]](#footnote-24).
6. The BPNG has a key role to play in developing secondary market liquidity through open-market activities. Furthermore, the BPNG can use secondary market and repurchase transactions as a means to mitigate any undue volatility or imbalances.
7. Treasury and BPNG, as previously mentioned, place a high priority to develop and promote the expansion of the investor base to include: institutions, private sector corporates, insurance companies, SMEs, retail, and non-resident investors. The first priority is to promote the ease of access to an automated primary market through intermediaries. With this precondition achieved secondary market transactions would gradually follow.
8. That the BPNG establish market conventions and standards for intermediaries executing trades between dealer-to-client and dealer-to-dealer in the secondary market. Market conventions for pricing methodologies and international best practice standards for bond market calculations including money market calculations.
9. BPNG establish a code of conduct for intermediaries and dealers to conduct business in the PNG debt securities market. A resilient code of conduct must be in accordance and supported by local legal and regulatory environments that match international best standards. Realizing an integral code of conduct and highly ethical environment for participants to conduct business in the local debt markets requires effective education and training.
10. Compliance plays a key role in ensuring market professionals are acting within the standards and practices set by the governing authorities. BPNG to ensure effective market oversight/surveillance of parties transacting in the OTC secondary market. This becomes increasingly important in the event of retail investors participation in the government and central bank securities market.
11. Transparency is enhanced by requirements for timely and accurate reporting of secondary market transactions in the OTC market. Reporting dealer and client transactions will be directly to the BPNG. The BPNG will set reporting standards, which are practical under current conditions but should be revised and adopted as market conditions improve and transactions increase. Secondary market transactions in debt markets are largely phone based over-the-counter transactions thus it is incumbent of participants transactions to be reported within an appropriate timeframe. The importance for timely and accurate trade reporting can be the basis for establishing pricing mechanisms for the government yield curve and government benchmarks.
12. Trades reported to the BPNG will need a mechanism for dissemination to the market place. The Bank’s website would act as the centralized vehicle for bond market information. Centralization of market information contributes to the efficiencies of the domestic bond market, as all information is shared and accessible in an equal manner. The significance of centralized market information is that it mitigates market participant’s potential confusion of where information is being sourced and solidifies the authority of the Bank’s information sharing. In due time and perhaps when economically feasible the development of the Bank’s market information distribution would be dedicated on its website and strive for real-time attributes. Real-time market information is a catalyst for developing an active secondary market and creating efficiencies in the primary market resulting in cost effective financing for the government.
13. The BPNG’s continuous development of robust settlement and custodial systems for all debt securities to enhance participant’s confidence in the operational capacities and to facilitate secondary market and repurchase transactions as well as mitigate potential settlement risks. A Central Securities Depository would be beneficial in the long-term development of the PNG Capital Markets. This is especially vital with the advent of private sector debt issuers taking a more active role in the financing landscape of PNG.

**J. Market Infrastructure**

1. The BPNG as sole Fiscal Agent to the Government of Papua New Guinea provides Registry and Custodian Services for government securities. This is where all records and details of investor’s holdings of Government securities and central bank bills are kept and maintained. As part of the Registry services, the Bank monitors and records movements in holdings of Government securities and CBBs, makes interest payments to investors.
2. The SWIFT System is used for settlement of foreign exchange (FX) transactions between local banks and their international counter party banks. The BPNG also uses SWIFT for settlement of FX transactions with all the commercial banks.
3. Clearing and settlement and the primary market auctions for government securities and CBBs are carried out by the BPNG and currently remain manual. In the primary market for government securities and central bank bills, registered bidders are eligible to place bids without accompanying payment instructions nor are they required to show a minimum balance in the bidder’s settlement account, which are mostly commercial banks. Non-registered bidders are required to submit cheques for the face value of the securities being bid along with the bidding documents. Upon allocation of securities to registered bidders, the awarded tenders amount is collected from the exchange settlement account of banks, and in the case of non-registered bidders the previously submitted cheques are presented in the clearinghouse for settlement.
4. BPNG’s Registry and Money Market System (RMS) is used as the registry for all Central Bank Bills, Treasury Bills and Government Inscribed Stock, which are dematerialised. RMS is also used to support the securities auction process and for registering transfers of ownership on the secondary market. However, RMS does not contain the complete functionality of a full-fledged CSD.
5. The secondary market transactions are for the most part non-existent. In the event of a transaction from a procedural standpoint the seller and buyer will have to submit a transfer and acceptance agreement, respectively, to the BPNG. Upon receipt of both these agreements, the BPNG effects the change in ownership; however, the payment leg of the transaction is executed independently of the change in ownership.
6. The current securities settlement process exposes counterparties to settlement risk. Funds and securities settlement for purchases in the primary market is T+2 for T-bills and CBBs and T+3 for government inscribed stock and given the registered bidders are not required to prove that adequate funds are in the ESA at the time of bidding and the lack of delivery-versus-payment, this exposes the Treasury and the BPNG to settlement risk. Similarly, secondary market transactions are T+3 and would expose traders, investors, and intermediaries to similar settlement risk.
7. Globally the majority of secondary bond market transactions are traded over-the-counter (OTC), as opposed to the use of an exchange, and the vast majority of these trades are settled through electronic settlement platforms, as opposed to registries. Examples of electronic systems are as follows:

* Austraclear;
* Clearstream;
* Euroclear; and,
* The Depository Trust and Clearing (DTC), which is a subsidiary of The Deposit Trust and Clearing Corporation (DTCC) in the United States.

1. International institutional investors settle through international best practice, electronic settlement, and not registries. Since institutional investors are now heavily regulated and their investment policies essentially prohibits the use of non-standard settlement formats, like registries.
2. Members of local funds will benefit from enhanced security using electronic settlement. Electronic settlement is also required for global investors, who may wish to invest in PGK bonds. Such settlement, specifically for fixed income, is not be confused with the recent real time gross settlement (RTGS), in November 2013, also known as the Kina Automated Transfer System (KATS), which involves processing of inter-bank high-value payments. KATS integrates all commercial banks, the BPNG, and government institutions. Given that electronic settlement enables global intuitional investor participation, this is seen as the most important initiative of those described herein. While KATS remains a distinct system, relating to payment, it is conceivable that electronic settlement of bonds might well be linked to it, so as to achieve the payment aspect of delivery vs. payment (DVP).

*Recent Initiatives-*

1. The BPNG has done an initial evaluation of Austraclear [[25]](#footnote-25) electronic clearing, settlement, and custodial system. However, currently there appears to be no initiative to consider adopting, acquiring, and implementing Austraclear or any other like electronic systems.

**Box 1:** **Austraclear Features**

***Austraclear Transaction Process:***

* Transaction input on Trade Date:
* Trade instructions are input by both Austraclear Participants (dual entry);
* Trade instructions are approved subject to Austraclear Participant’s policy;
* Austraclear matches the transaction.
* Settlement on Settlement Date:
* Austraclear confirms the sellers holds securities;
* Austraclear confirms the buyer’s cash account balance and limit;
* If the balance or limit is sufficient, the transaction settles.
* On Settlement of the Transaction, Austraclear simultaneously:
* Transfers the title of securities to the Buyer;
* Transfers the cash amount to the Seller.

***Austraclear Reporting:***

* Cash trade reconciliation reports;
* Security open trade reconciliation reports;
* Security details report;
* Security turnover reports;
* Securities holding reports;
* Maturing securities reports;
* Securities issuers / issuers representative reports;
* Repo activity, turnover, and owners summary.

*Source: Austraclear presentation to BPNG July 2014*

1. Austraclear provided an implementation effort cost and timeline proposal[[26]](#footnote-26):

* Estimated time to for Austraclear to have PGK securities to be a four-month development and testing effort;
* The estimated cost for development and testing to be approximately A$350k;
* All estimates are subject to further refinement as requirements are established and agreed with relevant stakeholders;
* Actual go-live is dependent on requirements relating to customer testing;
* Subject to regulatory approval from the Reserve Bank of Australia.

*Recommendations-*

1. It is strongly recommended that an automated clearing and settlement and Central Securities Depository (CSD) be established. The CSD would serve as basic infrastructure to establish a central bank standing facilities. It would also be a key infrastructure for the development of an interbank deposit market, and would facilitate banks’ liquidity management and portfolio diversification. Also, it would represent an essential platform to handle government and central bank securities and would be part of the effort to develop the domestic secondary market for debt. The CSD could be the central facility for the safe and efficient custody, trading and settlement of all types of (public and private sector) securities.
2. The BPNG should consider dialogue and evaluation with vendors of electronic clearing, settlement, and central custodial systems. The need for such systems to facilitate bond and capital market development and to attract non-resident investors is essential. Given that in house development would take considerable time, effort, and resources, it would seem useful and practical to adopt and implement established systems. In the case of Austraclear, implementation was estimated at a four-month timeframe.

**K. Equity Market**

1. The Port Moresby Stock Exchange Ltd (POMSoX) was established and registered as an organization under the Companies Act 1997. POMSoX was granted a license to operate a stock market under the Securities Act 1997. The PNG Securities Commission is the overall regulator of the Securities Market.
2. The POMSoX is limited with ownership vesting with only two licensed brokers, Kina Securities and BSP Capital. This does not necessarily offer a competitive or dynamic trading environment for government securities or equities on the exchange. There has been no interest from other entities to be authorized brokers specifically commercial banks where they are the dominant players in the PNG government debt market.
3. Currently, 18 stocks are listed on the POMSoX of which 11 stocks are from the natural resource sectors and one corporate debt instrument. Liquidity and turnover is the biggest challenge, POMSoX has an automated Trading System called the Port Moresby Stock Exchange Electronic Trading System (PETS). PETS is an order driven system with relatively few narrow bid-to-offer quotes. Investors must go through one of the two licensed brokers for securities transactions, settlement is T+3, and clears and settles are done manually.
4. It was suggested by an official of the POMSoX that financial resources are required to update and upgrade PETS and develop an electronic clearing and settlement and custody system to attract company listings, domestic and foreign investors, and facilitate secondary market transactions
5. Bond trading activities of bond dealers and clients are by a negotiated mechanism as over-the-counter (OTC) rather than exchange traded which is order driven. In countries where government securities are listed on the stock exchange, the trading activities are still chiefly OTC. The bond market in PNG should develop as an OTC market regardless of where a trading platform is housed. It is not uncommon in markets where trades are executed in the OTC market and the trade reporting to the exchange are merely pass-through. Central bank open market activities utilize predominately T-bills, CBBs, and repurchase agreements executed in the OTC market for efficiencies and timeliness. Government securities are not listed on the stock exchange nor are there any initiative to do so by Treasury.

*Recommendations-*

1. It is strongly recommended that consideration be given to varying the stock exchange’s ownership from the current two shareholders by potentially allowing international ownership, which would import technology and knowledge to the local exchange.POMSoX encourage greater competition through attracting new participants, domestic and or foreign, in the local market.

**Annex 1: Summary of Recommendations & Actions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Recommendations** | **Priority** | **Time Frame** |  |
| Short-Term (ST) 6-to-12 Months  Medium-Term (MT) 1-to-3 Years  Long-Term (LT) 3-to- 7 Years |  |  |  |
| **Legal & Regulatory** |  |  |  |
| Review and potentially amend Loans Securities Act 1960 and T-Bills Act 1974, as well as any relevant Memorandums of Understanding (MOUs) to ensure the acts and MOUs are consistent with the current public debt management policies, objectives, and activities. ***(FMD)*** | **M** | **MT** |  |
| Ensure all relevant parties adopt the Master Repurchase Agreement’s legal basis. ***(BPNG)*** | **H** | **ST** |  |
| Establish a code of conduct, market convention, and reporting requirements for market participants transacting in the primary and secondary market. ***(BPNG)*** | **M** | **MT** |  |
| Ensure the effective supervision of the government securities market, whereby all market participants subject to the same standards and conventions. ***(BPNG)*** | **M** | **MT** |  |
| **Public Debt Management Strategy** |  |  |  |
| Develop and adopt a MTDS policy to proactively manage refinancing and liquidity risks: Buybacks; Switches; Cash Buffer. Market consideration and communication is needed. ***(FMD, Treasury, BPNG)*** | **H** | **ST** |  |
| Prioritize the issuance of an external bond in the international capital markets as a new source of fund raising to meet the government’s financing needs and or project finance. State the rationale in MTDS. ***(FMD, Treasury, & BPNG)*** | **H** | **ST** |  |
| Reweight the domestic composition of T-bills & GIS. ***(FMD)*** | **H** | **ST** |  |
| Implementation progress of the MTDS should be monitored and reported as well as macroeconomic conditions requiring a strategy shift. ***(FMD & Treasury)*** | **M** | **MT**  **LT** |  |
| MTDS published with public debt portfolio data, objectives, arrangement, risk management, & market communication. ***(FMD & Treasury)*** | **L** | **MT** |  |
| **Institutional Arrangements & Market Communication** |  |  |  |
| Semi-annual market dialogue with market participants to discuss the government’s funding plans and domestic government securities development. ***(FMD)*** | **H** | **ST** |  |
| Establish a Policy Level Domestic Bond Market Development Committee (DBMC). ***(Treasury & BPNG)*** | **M** | **ST** |  |
| Engage with the international investment community with road shows or non-deal road shows. ***(Treasury, FMD, BPNG)*** | **H** | **ST** |  |
| Encourage organization between banks, super funds, and brokers. This can be by way of a domestic bond market development Dealer Advisory Panel. ***(Treasury & FMD)*** | **M** | **MT** |  |
| Establish centralized source for all bond market information and data. ***(BPNG)*** | **M** | **MT** |  |
| **Money Market** |  |  |  |
| Promote the use of interbank repurchase transactions amongst banks and market participants. ***(BPNG)*** | **H** | **ST** |  |
| Execute and promote the use of traditional repurchase transactions, secured, with the MRA in conducting the Bank’s open market operations so to mitigate the Bank’s credit risk exposure. ***(BPNG)*** | **H** | **ST** |  |
| Examine margining, reserve requirements, accounting practices, and tax issues to ensure market soundness. ***(BPNG)*** | **H** | **MT** |  |
| Interbank transactions and data should be disseminated, in a practical time frame given the volume. ***(BPNG)*** | **M** | **MT** |  |
| Upgrade payment, custody, and settlement infrastructure to reduce the credit and operational risk of secondary market and interbank repurchase transactions. ***(BPNG)*** | **H** | **ST** |  |
| **Primary Market** |  |  |  |
| Implement the Bloomberg auction system for the government securities and central Bank bills primary market. ***(BPNG & FMD)*** | **H** | **ST** |  |
| Timely and preannounced primary market auction calendar for T-bills & GIS. ***(Treasury, FMD, PDC)*** | **H** | **ST** |  |
| Allow non-competitive bidding for small and retail investors. ***(Treasury, FMD, BPNG)*** | **M** | **ST** |  |
| Central bank bidding changed to non-competitive from competitive. ***(Treasury, FMD, BPNG)*** | **H** | **ST** |  |
| Lowering the minimum bid threshold of PGK100,000 for small corporates and individuals. ***(Treasury, FMD, BPNG)*** | **M** | **MT** |  |
| Consolidate the 23-benchmark lines to promote yield curve benchmark series with due cognizance to roll-over risks. ***(FMD)*** | **M** | **MT** |  |
| Incorporate into the future annual borrowing plans potential external placements in the international capital markets. ***(Treasury & FMD)*** | **H** | **ST** |  |
| The use of bond syndications for long dated GIS 10-years plus. ***(Treasury & FMD)*** | **L** | **MT** |  |
| Diversify the investor base and smooth out and distribute holdings of government securities. (***Treasury, FMD, BPNG, DBMC)*** | **H** | **MT** |  |
| Upgrade custody and settlement arrangements by introducing automated securities clearing and settlement and a Central Securities Depository for all government securities. ***(BPNG & Treasury).*** | **H** | **MT** |  |
| **Investor Base** |  |  |  |
| Investors targeted to develop, promote, and provide access into the local market should be retail customers, corporate entities, insurance companies small and medium sized enterprises. ***(Treasury, FMD, BPNG, DBMC)*** | **H** | **MT** |  |
| Attract non-residents investors into the PNG government securities market by automating the primary market auction, settlement, and CSD. ***(Treasury, FMD, BPNG, DBMC)*** | **H** | **ST** |  |
| Registered bidders such as banks and brokers should act as intermediaries. ***(Treasury, FMD, BPNG, DBMC)*** | **M** | **MT** |  |
| Establish and promote pools of liquidity in the form of market funds to purchase domestic debt securities in the primary and secondary market. ***(Treasury, FMD, BPNG, DBMC)*** | **M** | **LT** |  |
| Factor into domestic debt issuance planning the investor base habitat and the demands that exist along the yield curve spectrum from each different class of investors. ***(Treasury, FMD, BPNG)*** | **M** | **MT** |  |
| Take the same approach; to the previous paragraph, but with the view, in the medium-term, to promote and facilitate the potential domestic issuance of private sector corporates and SOE fixed income securities. ***(Treasury, FMD, BPNG)*** | **M** | **MT** |  |
| **Secondary Market** |  |  |  |
| Adequately sized T-bill and Government Inscribed Stock benchmarks, which appropriately match the maturity interests of the institutional investor base. ***(Treasury & FMD)*** | **H** | **MT** |  |
| Master Repurchase Agreement (MRA). To ensure market integrity the master agreement terms and conditions sets out standards for margining, accounting, and relevant requirements. ***(BPNG)*** | **H** | **ST** |  |
| Repurchase agreement procedures, standards, and code of conduct must be set out. ***(BPNG)*** | **H** | **ST** |  |
| Allow intermediaries, banks and brokers, to provide primary dealer market making functions for price discovery and trade execution in exchange for dealer privileges. ***(Treasury, FDM, BPNG)*** | **M** | **MT** |  |
| Develop and promote the expansion of the investor base to include: institutions, private sector corporates, insurance companies, SMEs, retail, and non-resident investors. ***(Treasury, FDM, BPNG)*** | **H** | **MT** |  |
| Establish market code of conduct, conventions and standards for intermediaries executing trades between dealer-to-client and dealer-to-dealer in the secondary market. ***(BPNG)*** | **M** | **MT** |  |
| Transparency is enhanced by requirements for timely and accurate reporting of secondary market transactions in the OTC market and data dissemination. ***(BPNG)*** | **M** | **LT** |  |
| Continuous develop of robust settlement and custodial systems. ***(BPNG)*** | **H** | **MT** |  |
| **Market Infrastructure** |  |  |  |
| Establish an automated Central Securities Depository (CSD) and automated clearing & settlement. ***(BPNG)*** | **H** | **MT** |  |
| Dialogue and evaluation with vendors with established electronic clearing, settlement, and central custodial systems. ***(BPNG)*** | **H** | **ST** |  |
| **Stock Exchange** |  |  |  |
| Expand the stock exchange’s ownership from the current two by potentially allowing international ownership, which would import technology and knowledge to the local exchange. Encourage greater competition through attracting new participants, domestic and or foreign, in the local market. ***(POMSoX & SCPNG)*** | **M** | **MT** |  |

1. The Report is part of the Technical Assistance provided by the World Bank to the Bank of Papua New Guinea and Papua New Guinea Treasury to support the development of the Financial Services Sector Development Strategy. Funding for the Technical Assistance has been provided by FIRST Initiative.

   [↑](#footnote-ref-1)
2. The report was drafted by Mr. Robert T. Andreoli Jr., Senior Bond Market Consultant, World Bank. The author thanks the support provided by PNG Department of Treasury, the Bank of Papua New Guinea and the financial institutions visited during the diagnostic mission. The assessment and recommendations are that of the author and do not necessarily reflect the views of the Executive Directors of the World Bank or the governments they represent. The Word Bank does not guarantee the accuracy of the data included in this work. [↑](#footnote-ref-2)
3. The Regulatory and Supervision component of the TA will make that recommendation. [↑](#footnote-ref-3)
4. IMF Article IV Consultation December 2014. [↑](#footnote-ref-4)
5. PNG Government’s 2015 Annual Budget and 2013-2017 Medium Term Debt Strategy. [↑](#footnote-ref-5)
6. IMF Article IV Consultation December 2014. [↑](#footnote-ref-6)
7. 2015 Annual Domestic Debt Issuance Plan [↑](#footnote-ref-7)
8. The registration, transfer, Coupon Interest payments, Principal repayment, issue of certificates of title and certifications of transfers of Stocks will be made free of any fees, duty, charges, deductions or levy, except to the extent required by law. [↑](#footnote-ref-8)
9. Source: 2015 Annual Budget and FMD [↑](#footnote-ref-9)
10. World Bank income classification gross national income (GNI) per capita. Lower middle income is classified as $1,045 to $4,125 for 2014. [↑](#footnote-ref-10)
11. On-the-run refers to the most current benchmark issues. [↑](#footnote-ref-11)
12. Off-the-run refers to older and seasoned securities in between on-the-run benchmarks issues. [↑](#footnote-ref-12)
13. The banks and book arrangers that would be considered typically are based their strengths in the currency of issuance and geographies of investors targeted. [↑](#footnote-ref-13)
14. <http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/members-index.aspx> [↑](#footnote-ref-14)
15. Currently, BPNG publishes government yield curve. [↑](#footnote-ref-15)
16. Standing facilities are borrowing or deposit facilities that central banks may provide to eligible counterparties at the counterparties’ initiative. [↑](#footnote-ref-16)
17. Since KATS went live in 2012 only one occurrence where a bank needed funding from BPNG to settle it ESA. It was K15mm and was only overnight. [↑](#footnote-ref-17)
18. The bids are placed as the amount to purchase and not in price. [↑](#footnote-ref-18)
19. US Treasury’s first issuance of the 30-year benchmark was syndication. [↑](#footnote-ref-19)
20. Governments typically place “Effectively Funding the Government’s needs” as the prime goal. Given this the Treasury should not “make price” but rather will accept the price given by the market. [↑](#footnote-ref-20)
21. Bid-to-cover ratio is the amount for bids tendered in a bond auction over the amount for sale. [↑](#footnote-ref-21)
22. Failed auctions are when the government receives bids less than the amount on offer thus not resulting. [↑](#footnote-ref-22)
23. Redemptions are when investors wish to sell or close out their holdings in the fund. [↑](#footnote-ref-23)
24. Privileges include exclusive rights to primary auctions, access to non-competitive bids, and participation in second round auctions e.g. in high demand the Treasury issues additional securities in the auction. [↑](#footnote-ref-24)
25. Austraclear is the dominant settlement mechanism in Australia, which settled AUD 17.7 trillion of trades in the last twelve months, and is used by al bond market participants in Australia (Source: Austraclear). [↑](#footnote-ref-25)
26. Austraclear presentation to BPNG July 2014 [↑](#footnote-ref-26)