

# Compilation and analysis of data on securitised public debt in Kenya

Isaya Maana<sup>1</sup>

## 1. Introduction

This paper presents the framework for compiling and analysing data on securitised public domestic debt in Kenya, and the measures being undertaken to improve the quality of the data. Section 45 of the Central Bank of Kenya (CBK) Act provides the legal framework for the Bank to manage public domestic debt on behalf of the government. Compilation of data on securitised debt, and public debt in general, is guided by international standards specified in the IMF manuals. Kenya subscribed to the IMF GDDS and SDDS in 2002 with the aim of improving the quality, coverage, periodicity and timeliness of its macroeconomic data, and a commitment to improving the integrity and ensuring timely dissemination of data to the public. Comparability of data across time and countries requires that the compilation methodology be guided by certain principles.

Currently, securitised debt applies only to domestic debt as all external borrowings are undertaken through loans. According to the Budget Strategy Paper for June 2008, this situation will change in 2009 as the government plans to issue a sovereign bond in the international capital markets, which will give investors a long-term benchmark as well as providing the government with additional funds for infrastructure development.

Domestic debt in Kenya comprises central government debt incurred internally through borrowing in the local currency from residents. The government borrows from the domestic market using securities, overdrafts at the Central Bank of Kenya and advances from commercial banks. Securitised public domestic debt comprises of all government borrowings through treasury bonds, treasury bills held for fiscal and monetary policy purposes, and government long-term stocks.

According to the Annual Public Debt Management Report of 2007, securitised debt accounted for 99.6% of overall public domestic debt in Kenya in June 2007 (Table 1). Although securitised debt has been rising, its percentage in GDP dropped from 26.8% in June 2003 to 22.0% in June 2007 due to a faster growth of the economy. Domestic debt has been rising rapidly since 2001 due to reduced access to external funding and the need for domestic borrowing to finance the budgetary operations. However, domestic debt, as a percentage of GDP, decreased from 27.9% in June 2003 to 22.1% in June 2007 following improved performance of the economy.

With most of the debt held in treasury bonds in the period, the government made significant progress in achieving its debt management objective of restructuring domestic debt to longer-dated instruments. This is an important development and is crucial for reducing rollover and the market risks that characterise short-term borrowing.

The importance of accurate data on securitised debt has been underscored by Abbas and Christensen (2007). The study analysed optimal domestic debt levels in developing countries (including 40 sub-Saharan Africa countries) between 1975 and 2004 and found that

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<sup>1</sup> The author is a Manager, Monetary Policy Committee Secretariat, Central Bank of Kenya and can be contacted by email at: [maanai@centralbank.go.ke](mailto:maanai@centralbank.go.ke). The views expressed in the paper do not necessarily reflect those of the Central Bank of Kenya.

moderate levels of marketable securitised debt as a percentage of GDP have significant positive effects on economic growth. The link between debt markets and economic growth is through the fact that domestic debt markets promote economic efficiency and financial depth.

Table 1  
**Trends in securitised domestic debt**

	June 01	June 02	June 03	June 04	June 05	June 06	June 07
1. Total domestic debt (as percentage of GDP)	21.9	23.0	27.9	25.3	23.4	23.2	<b>22.1</b>
2. Total securitised domestic debt (as percentage of GDP)	20.6	22.1	26.8	23.9	22.4	22.7	<b>22.0</b>
3. Total securitised domestic debt (as percentage of domestic debt)	94.1	96.1	96.2	94.5	95.8	97.7	<b>99.6</b>
4. Treasury bills excluding repo bills (as percentage of securitised debt)	71.7	43.2	32.6	24.9	27.0	30.2	<b>25.7</b>
5. Treasury bonds (as percentage of securitised debt)	27.4	56.0	66.9	74.7	72.6	69.5	<b>74.1</b>
6. Long-term stocks (as percentage of securitised debt)	0.9	0.8	0.4	0.4	0.4	0.3	<b>0.2</b>

Source: *Annual Public Debt Management Report*, Ministry of Finance.

The need for quality, comprehensive, comparable and reliable data on securitised debt is therefore vital for informed decisions by policymakers, financial markets and other users. Timely and accurate data on domestic debt facilitates continuous monitoring of the macroeconomic risks associated with domestic borrowing, and implementation of necessary measures to mitigate the risks.

Compilation of securitised debt by instrument type, investor type and maturity structure is fundamental in facilitating the formulation of effective strategies of managing the macroeconomic risks associated with domestic borrowing (Christensen (2005)). A diverse investor base reduces the monopoly power of a particular group of investors in government securities, thereby bringing down the cost of borrowing and rollover risks. It also prevents excessive reliance on commercial banks funds, thereby reducing the risk of crowding out private sector lending (World Bank and IMF (2001)).

The paper is organised as follows: section 2 gives the overall coverage of securitised debt in Kenya, and section 3 provides the disaggregation of the statistics. The compilation methodology for securitised debt is presented in section 4, and plans for improving the statistics in section 5. Section 6 provides an analysis of the recent trends in public securitised debt, and section 7 concludes.

## **2. Coverage of the statistics**

The general government in Kenya is made up of central government, public enterprises and local authorities. Currently, public enterprises and local authorities do not issue bills or bonds to raise funds. They are both funded mainly through their parent ministries under the central government. Domestic debt securities statistics therefore relate only to central government borrowings.

The Central Bank of Kenya (CBK) compiles daily data on domestic borrowing and domestic debt positions of the central government. Domestic debt is distinguished from external debt on the basis of residency, using the criteria recommended in the IMF Government Finance Statistics manual (2001). An institutional unit is classified as a resident in a country if it has a centre of economic interest in the economic territory of that country.

The debt is compiled from the accounts of the National Debt Office at CBK for all government securities. The CBK balance sheet is the source of advances to government and holdings of government securities by the CBK. Commercial banks' reports are the sources for data on their advances to government and their holdings of government securities. Securitised public domestic debt statistics comprise: outstanding amount; borrowed amount (net issues); interest payments amounts; maturity profile; and weighted interest rates.

Treasury bills were first issued in 1969 and have been issued mainly in maturities of 91 days and 182 days since 1996. However, nine-day, 16-day and 23-day treasury bills were issued in 1995, while 30-day and 60-day treasury bills were issued in 1993. Similarly, 28-day treasury bills were issued between September 1996 and June 1997.

On the other hand, treasury bonds were first issued in 1986 and are currently issued in maturities of between one and 20 years. The types of bonds issued are fixed rate, fixed coupon discounted, zero coupon, floating rate, and special fixed and floating rate. Special and restructuring bonds were issued with respect to pending bills, and recapitalization of government parastatals and agencies.

Government stocks are long-term debt instruments with a period to maturity ranging from five to 40 years. The first issues of Government stocks were in September 1980 in an attempt to lengthen the maturity structure of domestic debt. Interest rates were fixed and payable semiannually and ranged from 6% to 11% per annum for five-year and 40-year stocks, respectively. The instrument was not tradable, and therefore illiquid and less attractive to investors. It is consequently no longer issued.

Except for special and public entities restructuring bonds, all other government securities are issued weekly for treasury bills and monthly for treasury bonds through open-ended auctions. In July 2002, the government replaced the non-auction based system with a multiprice bid auction system for bonds to allow market determined yields and promote price discovery. Treasury bonds are tradable in the secondary market but treasury bills are not.

## **3. Disaggregation of the statistics**

Securitised domestic debt statistics are disaggregated as follows:

- Type of instrument: treasury bonds; treasury bills; and long-term stocks.
- Type of creditor: commercial banks; building societies; insurance companies; pension funds; public enterprise; and other financial institutions.
- Maturity profile: outstanding treasury bills broken down into 91-day and 182-day maturities; outstanding treasury bonds broken down into maturities of between one and 20 years; and outstanding domestic debt securities broken down by days to maturity.

- Residency of creditor: outstanding treasury bills and bonds are also classified by residency of the creditor.
- Interest payments on outstanding domestic debt securities are compiled by instrument type: type of treasury bond (fixed rate, fixed coupon discounted, special, and floating rate); treasury bills; and long-term stocks.

#### **4. Compilation methodology**

Public securitised debt is compiled on a weekly basis as the sum of outstanding treasury bills, treasury bonds and long-term stocks. The securities are treated at face value (redemption amount) and not issue amounts, which may be discounted. This methodology is consistent with the criteria recommended in the GFS 2001 manual, which indicates that accrued but unpaid interest should be treated as part of the debtor's total liability. Therefore, accrued but unpaid interest is added to the principal of the underlying security.

Interest payments on securitised public debt are computed as the sum of the interest due on treasury bonds, treasury bills and long-term stocks. Since treasury bills and zero coupon treasury bonds are issued at a discount, the government is not required to make any payments to the creditors until the security matures. For this reason, interest payments on these instruments are due when they mature. In the case of fixed coupon discounted treasury bonds, the interest expense is compiled as the sum of the periodic payments, and the discount component when the instrument matures. For treasury bonds issued at a premium, the interest expense is compiled in the same way as that of a discounted bond, except that the premium is considered as negative interest expense.

The Central Bank of Kenya, Ministry of Finance and Kenya National Bureau of Statistics publish outstanding domestic debt securities statistics with varying time lags. The CBK publishes the statistics weekly in the Weekly Bulletin of Economic Indicators, monthly in the Monthly Economic Review, in June and December in the Bi-Annual Statistical Bulletin (longer time series), and annually in the Bank's Annual Report.

The Ministry of Finance and Kenya National Bureau of Statistics obtain data on securitised debt from the Central Bank of Kenya for dissemination through their respective publications. The Ministry of Finance disseminates the data quarterly in the Quarterly Budget and Economic Review, and in the Annual Public Debt Management Report. The Kenya National Bureau of Statistics publishes annual data in the Annual Economic Survey.

#### **5. Plans for improvement**

The government is in the process of documenting the methodological framework for compilation of public debt statistics in Kenya, which includes securitized debt. This is expected to build the institutional framework for compiling debt data, given the current high staff turnover and low capacity in the Debt Management Department at the Ministry of Finance.

Plans are also underway to improve the adequacy of the data on non-resident holdings of domestic debt securities to cover investment through commercial banks. Currently, non-resident holdings comprise only direct investment in securities through the Central Bank of Kenya. It is thought that most non-resident investors in government securities invest through commercial banks through nominee accounts. Since the banks do not disclose these holdings, a large proportion is not reported. Plans are underway to make it obligatory for banks to report these statistics to the CBK through the National Debt Office.

Participation of foreign investors in the domestic debt market promotes competition, thereby lowering the cost of domestic borrowing, and also increases efficiency in the domestic debt market since foreign participation introduces financial technology and innovation. Improving the adequacy of data on non-resident investment in government securities also enhances monitoring of foreign direct investment in the country.

Commercial banks have also been known to invest in government securities on behalf of individuals or institutions such as pension funds. Since these funds are part of what commercial banks declare as their own investments, statistics on holdings of government securities by banks could be overstated, while those on holdings by individuals could be understated. Therefore, making it statutory for the banks to declare these holdings to the CBK would increase the accuracy of statistics on holders of the debt.

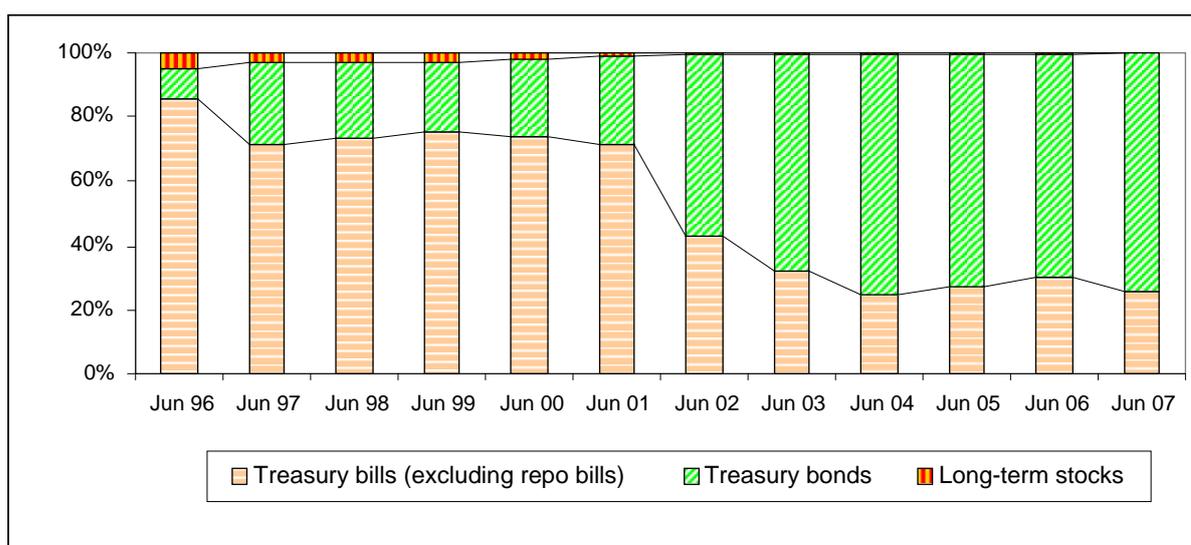
## 6. Recent developments in securitised debt

### 6.1 Maturity structure

Treasury bonds comprised the largest proportion of securitised debt between June 2002 and June 2007 (Table 1 and Chart 1). The proportion of treasury bonds increased from 27.4% in June 2001 to 74.1% in June 2007 while treasury bills dropped from 71.7% to 25.7% during the period.

The shift in the composition of domestic debt in favour of the longer-dated instruments followed a deliberate government initiative in May 2001 to restructure public domestic debt and develop the domestic debt markets. This was to restructure domestic debt from the short-dated treasury bills to the long-dated treasury bonds in order to minimise the risks of short-term borrowing, as well as develop a secondary market for government securities. The secondary market for government securities was envisaged to promote financial resource mobilization for both the public and private sector through the financial market.

Chart 1  
**Composition of securitised domestic debt by instrument**  
 Percentage of total



Source: Central Bank of Kenya.

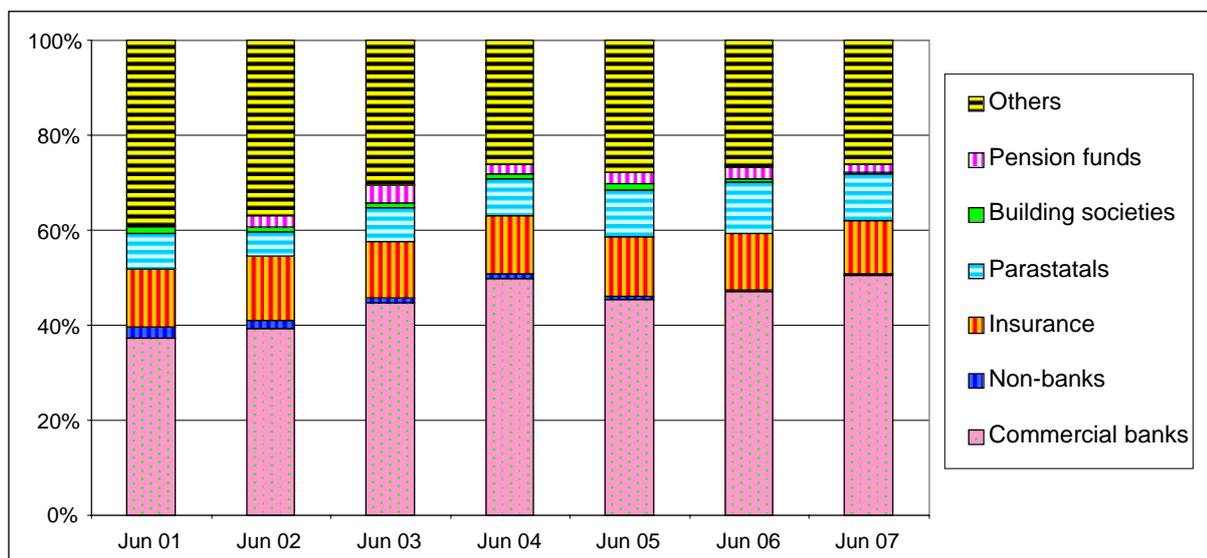
The success of the government bond programme during the period was largely attributed to reforms in pensions and insurance sectors, which required that a specific part of their investment must be in government securities.

There was also support from the financial market players through the Market Leaders Forum (MLF), which was constituted in May 2001. This is a consultative meeting held monthly to discuss market developments that may impact on the performance of new issues of government securities and strategies for debt market development.

## 6.2 Securitised domestic debt by investor

The largest proportion of securitised debt as at June 2007 was held by commercial banks. The proportion of the debt held by the banks increased from 37.2% in June 2001 to 50.7% in June 2007 (Chart 2). However, the proportion held by non-bank entities comprising non-bank financial institutions, pension funds, building societies, parastatals and individuals decreased from 62.8% to 49.3% during the period.

Chart 2  
**Securitised domestic debt by creditor**  
 As percentage of total



Source: Central Bank of Kenya.

A wide investor base plays a major role in ensuring that the government meets its domestic borrowing requirements at reasonable costs. A narrow investor base consisting mainly of commercial banks increases the risk of crowding out private sector investment, as private companies depend mainly on commercial bank financing.

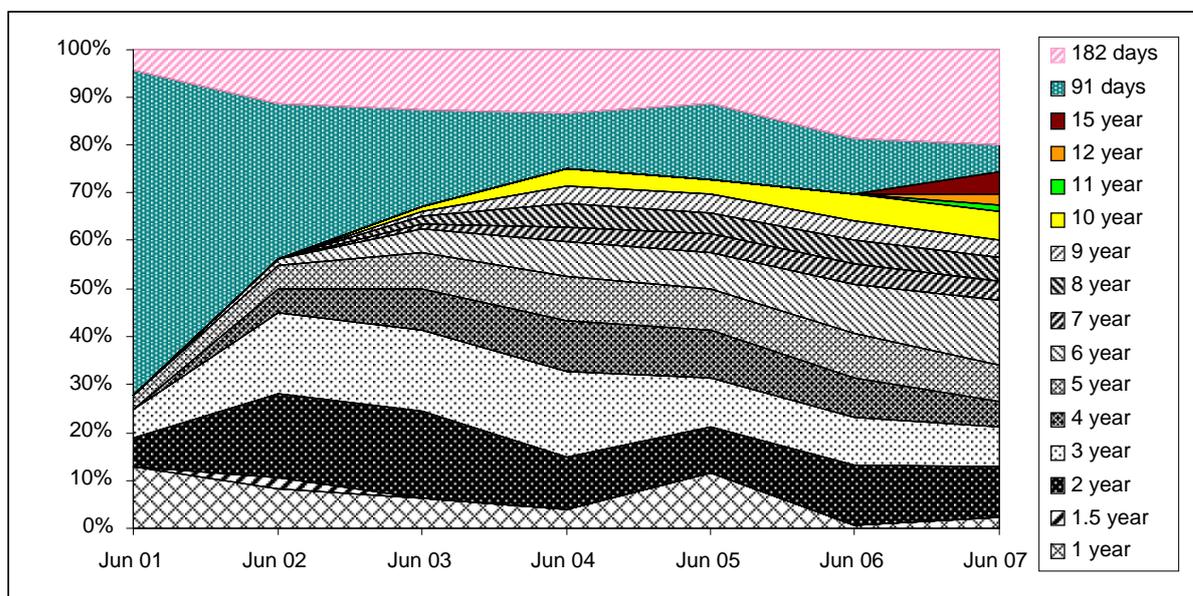
## 6.3 Composition of government securities by tenor

The proportion of 91-day treasury bills in outstanding government securities decreased from 68.1% in June 2001 to 6.1% in June 2007 while 182-day treasury bills increased from 4.3% to 19.7% in the period (Chart 3). Similarly, treasury bonds with tenors of five years and above increased from 2.7% to 47.8% during the period while the longest tenor for existing bonds increased from five to 15 years. However, a 20-year bond was issued in June 2008.

The 15-year bonds were introduced in 2007 and proved to be very popular with investors as their auctions were oversubscribed. Their popularity was also an indication of the confidence that investors have in the government securities market.

Chart 3  
**Composition of government securities by tenor**

As percentage of total



Source: Central Bank of Kenya.

The average maturity profile of domestic debt by months to maturity increased from three months in May 2001 to three years and one month by June 2007. The issue of longer-dated treasury bonds during the period was important for institutional investors such as pension funds and insurance companies for matching their long-term liabilities with long-term assets.

The government reduced the interest rate risk on domestic debt, which is associated with fluctuations in the 91-day treasury bill rate, by increasing the proportion of the debt held in fixed rate treasury bonds from 12.1% to 88.2% during the period. The share of floating rate bonds in outstanding treasury bonds dropped from 85.8% to 0.3% during the period.

#### 6.4 Impact of securitised debt on the government budget

Interest expenses on securitised debt account for about 99% of total interest payments on domestic debt. With a rising domestic debt stock, an important issue for debt management is the cost implications for the government budget. As shown in Table 2, domestic interest payments have been rising at a lower rate than growth in ordinary government revenue and GDP. Domestic interest payments, as a percentage of revenues, decreased from 12.1% in the fiscal year 2000/01 to 9.9% in the fiscal year 2006/07. The decline is attributed to strong revenue performance in the period.

Due to higher interest rates and rising domestic debt, the interest cost on domestic debt accounted for the largest proportion of total government interest expenditure during the period. Domestic interest payments, as a percentage of total interest expenditure, increased from 85.7% to 89.3% in the period. However, due to lower interest rates compared with those on domestic debt and various debt relief initiatives, foreign interest payments fell from 14.3% of total government expenditure on interest to 10.7% in the period.

Table 2

**Debt service ratios and amounts**

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
External interest (KES billion)	3.9	5.9	9.8	5.8	4.4	3.6	4.4
<b>Domestic interest (KES billion)</b>	<b>23.2</b>	<b>23.7</b>	<b>27.6</b>	<b>23.3</b>	<b>23.4</b>	<b>31.4</b>	<b>36.9</b>
External interest (percentage of revenue)	2.0	3.0	4.6	2.3	1.5	1.2	1.2
<b>Domestic interest (percentage of revenue)</b>	<b>12.1</b>	<b>12.1</b>	<b>13.1</b>	<b>9.1</b>	<b>8.1</b>	<b>10.1</b>	<b>9.9</b>
External interest (percentage of total interest)	14.3	19.8	26.2	20.0	15.9	10.4	10.7
<b>Domestic interest (percent of total interest)</b>	<b>85.7</b>	<b>80.2</b>	<b>73.8</b>	<b>80.0</b>	<b>84.1</b>	<b>89.6</b>	<b>89.3</b>
External interest (percentage of GDP)	0.4	0.6	0.9	0.5	0.3	0.2	0.2
<b>Domestic interest (percentage of GDP)</b>	<b>2.3</b>	<b>2.3</b>	<b>2.5</b>	<b>1.9</b>	<b>1.7</b>	<b>2.0</b>	<b>2.0</b>
<b>Implicit interest rate on domestic debt (per cent)</b>	<b>11.0</b>	<b>10.1</b>	<b>9.5</b>	<b>7.6</b>	<b>7.4</b>	<b>8.8</b>	<b>9.1</b>
Implicit interest rate on external debt (per cent)	1.0	1.6	2.4	1.3	1.0	0.8	1.1

Source: *Quarterly Budgetary and Economic Reviews*, Ministry of Finance.

The average implicit interest rates on domestic debt dropped from 21.7% in 1995/96 to 9.1% in 2006/07, and those on external debt dropped from 3.3% to 1.1% during the period. The implicit interest rates were computed by dividing the respective interest payments by the corresponding actual debt stocks in the previous year.

## 7. Conclusion

The aim of this paper was to present the framework for compiling and analysing data on securitised public domestic debt in Kenya and measures being taken to improve the quality of the data. Overall, there has been significant improvement in the management and compilation of securitised debt in Kenya. However, much more remains to be done to improve the quality of the disaggregated statistics of securitised debt held by commercial banks, pension funds, non-residents and other individuals. This underscores the importance of the ongoing project to improve the quality of the disaggregated statistics.

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