Macroprudential Policy Report

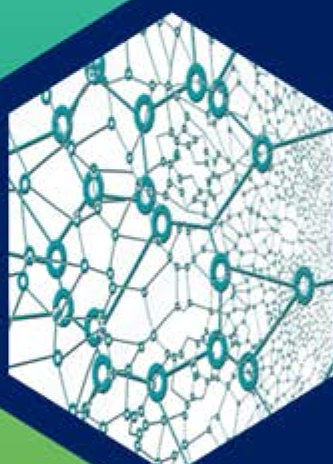
BANK OF JAMAICA

MITIGATE AND PREVENT EXCESSIVE CREDIT GROWTH AND LEVERAGE

MITIGATE AND PREVENT EXCESSIVE MATURITY MISMATCHES AND MARKET ILLIQUIDITY

LIMIT DIRECT AND INDIRECT EXPOSURE CONCENTRATIONS

LIMIT THE IMPACT OF INTERCONNECTED-NESS, SYSTEMIC IMPORTANCE AND MISALIGNED INCENTIVES



STRENGTHEN THE RESILIENCE OF THE FINANCIAL SYSTEM & INFRASTRUCTURE

June 2023

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Preface

Bank of Jamaica frequently conducts assessments of the resilience and strength of the financial system. These financial system stability assessments inform the Bank's macroprudential policy. This report provides highlights of those assessments for the reporting quarter. The document is organized into five assessment areas, the analysis of which utilizes leading and coincident indicators relevant to the specific type of vulnerability. The aim of the report is to:

- *Convey Bank of Jamaica's financial system stability assessment.*
- *Make clear the link between the Bank's assessment and any policy action taken.*
- *Provide information on matters related to financial system stability.*

Overview

The Jamaican financial system remained stable during the June 2023 quarter, consistent with the overall improvement in domestic macroeconomic conditions. This stability was broadly reflected in the Bank's composite measures of financial stress which showed moderate improvement. Systemic risks associated with financial cycles and the system's exposure to other financial actors, as well as to selected sectors of the real economy, also continued to be moderate. In addition, financial soundness data up to end-June 2023 showed that overall financial institutions' capital, liquidity buffers, asset quality and profitability continued to be broadly stable.

There were several macroeconomic developments that aided in engendering financial system stability during the quarter. In particular, the Jamaican economy is estimated to have grown by 1.5 per cent for the June 2023 quarter, reflecting growth in most economic sectors. Furthermore, the annual point-to-point inflation rate for Jamaica was virtually unchanged at 6.3 per cent at end-June 2023, relative to end-March 2023 and was much lower than the peak rate of 11.8 per cent at end-April 2022. Similarly, in the United States, inflation trended downwards to 3.0 per cent at June 2023, relative to 5.0 per cent and 9.1 per cent at end-March 2023 and end-June 2022, respectively. This impacts market risk in that lower inflation signals the prospects for lower interest rates and consequently moderation in funding costs and fair valuation losses.

However, there remains a risk that further policy tightening may be required to assure a permanent return of inflation to policy targets. The Federal Reserve of the United States (FED) has signalled at least two additional rate hikes, one of which occurred in July 2023. Of note as well, is that geopolitical tensions could cause imported grains to remain elevated and hence inflation being higher for longer. For the domestic economy, a low unemployment rate and anecdotal information relating to wage increases above inflation point to a risk that inflation could track above the central banks baseline forecast.

In light of the foregoing, stress simulations were conducted to determine the impact on balance sheets of domestic financial institutions of further increases in bond yields.

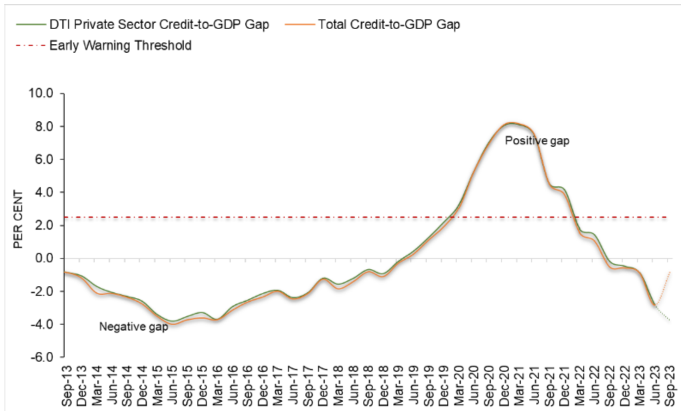
The results of the stress test show that the DTI and SD sectors are resilient to the risks associated with the contemplated interest rate risk shocks. Notwithstanding, there remain instances of vulnerability, which would need to be remedied by additional capital injections. Bank of Jamaica continues to promote financial system stability through regulatory reform and improved supervisory capacity, based on ongoing assessment of sectoral risks.

Objective 1 – Mitigate and prevent excessive credit growth and leverage

1.1 **There was a further reduction in credit risks related to the financial cycle in Jamaica during the June 2023 quarter**. The credit-to-GDP gap fell to -2.8 per cent at end-June 2023 from -0.9 per cent at end-March 2023 (see **Chart 1.0**), below the Bank of International Settlements' (BIS) upper threshold of 10.0 per cent and the BOJ early warning threshold of 2.5 per cent for financial-cycle-related credit risks. This reflects a credit-to-GDP gap that is progressively falling below trend and is projected to increase slightly at end-September 2023.[1,2]

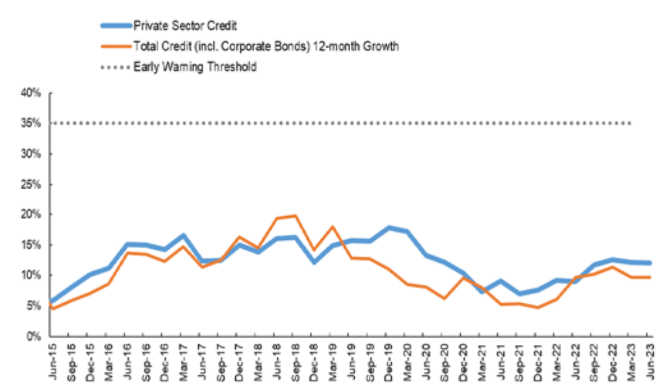
1.2 **Despite the moderation in the credit-to-GDP gap, there was a faster pace of growth in credit compared to GDP**. Total credit, which includes corporate bond issues and public sector credit, grew by 9.6 per cent for the year ended June 2023, relative to growth of 9.7 per cent for March 2023 (see **Chart 1.0**). In this context, DTIs credit to the private sector grew at annual rate of 12.0 per cent for the year ended- June 2023, which was slower than the 12.2 per cent growth for the year ended-March 2023 (see **Chart 1.1**).[3] At the same time, nominal GDP is estimated to have grown between 1.0 and 3.0 per cent for the June 2023 quarter, relative to 4.9 per cent for the March 2023 quarter.

Chart 1.0 Evolution of credit-to-GDP gap indicators



Source: Bank of Jamaica

Chart 1.1 Annual growth in credit



Source: Bank of Jamaica

[1] The credit-to-GDP gap indicator measures the deviation of credit-to-GDP from its long-term trend. It is a systemic risk indicator associated with financial cycles which signals the extent of credit risk accumulation. Total credit used to calculate the credit-to-GDP gap is comprised of private sector credit plus corporate securities held by DTIs plus public sector credit. Nominal GDP is annualized by calculating a 4-quarter moving sum. The trend in credit/GDP is estimated using the Hodrick Prescott (HP) filter data smoothing econometric technique.

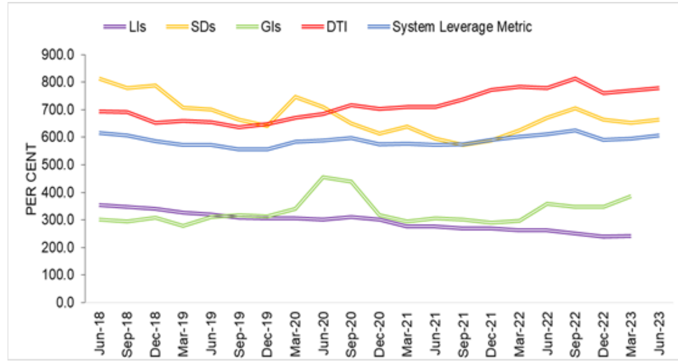
[2] The credit to GDP gap is projected to increase by 2.0 percentage points to -0.8 per cent at end September 2023. This estimate is based on estimated growth (Q-t-Q) in credit and nominal GDP for the September 2023 quarter of 2.0 per cent and 4.0 per cent, respectively.

[3] Private sector credit is measured as DTIs' loans and advances to the private sector excluding credit to overseas residents and other financial institutions. Total DTI credit includes private sector credit plus credit issued to the public sector plus DTIs' holdings of corporate bond issues via exempt distribution.

1.3 **The leverage ratio for the financial sector continued to be fairly stable for the review quarter.**[4,5,6] The leverage ratio increased by 8.0 percentage points during the review quarter to 605.6 per cent at end-June 2023, reflecting the system's increased use of debt to fund asset expansion.[7] The marginal deterioration in leverage reflected a faster pace of growth in total financial assets, relative to equity (see **Chart 1.2**).[8]

1.4 Notwithstanding the increase in DTIs' leverage, the primary ratios for all DTIs at end-June 2023 remained above the regulatory requirement of 6.0 per cent, indicating the absence of overleverage, with the lowest ratio being 9.9 per cent.[9] Similarly, at end-June 2023, the primary ratio for the top 10 securities dealers was above the 6.0 per cent benchmark. The sub-sector's outturn reflected growth in financial assets and a reduction in equity due to a fall in retained earnings.

Chart 1.2 Leverage – DTIs, securities dealers, life and general insurance companies



Source: Bank of Jamaica and Financial Services Commission

Objective 2 – Mitigate and prevent excessive maturity mismatches and market illiquidity

2.1 For the June 2023 quarter, the maturity transformation risk metric for the financial sector grew (deteriorated) by 8.3 percentage points to 39.7 per cent, relative to end-March 2023 (see Chart 2.0).[10] The deterioration in the maturity mismatch ratio was evident for DTIs and securities dealers, reflecting a faster pace of increase in long-term assets relative to long-term liabilities and equity. Specifically, for DTIs long-term assets increased by $50.5 billion. While for SDs, long-term assets on average grew by 24.2 per cent.[11]

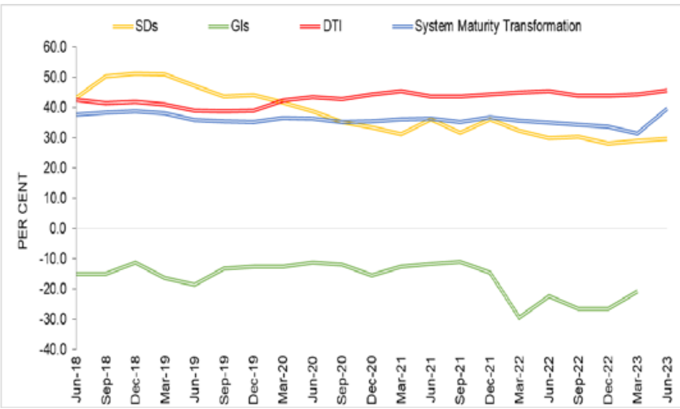
[4] The Financial Sector includes deposit taking institutions, securities dealers, life insurance companies and general insurance companies
[5] Leverage is calculated as total financial assets/equity. Growth in the ratio reflects an increase in leverage.

[6] Calculation of the metric for the system for June 2023 includes data at end March 2023 for LI and GI companies.
[7] Leverage calculation utilized data at end June 2023 for DTIs and SDs, while for Lis and GIs the metric used data at end March 2023.

[8] At end June 2023 for the financial system, total financial assets grew by 1.8 per cent relative to an increase of 0.4 per cent in equity when compared to end March 2023.

[9] The Primary ratio is a capital adequacy measure. It is measured as Tier 1 capital as a share of assets, with a benchmark of 6%.
[10] Calculation of the metric for the system for June 2023 includes data at end March 2023 for GI companies.
[11] Barita and Mayberry Investments recorded growth in long term assets of 25.2 per cent and 23.3 per cent, respectively, for the June 2023 quarter.

Chart 2.0 Maturity transformation (long term) DTIs, securities dealers, life and general insurance companies

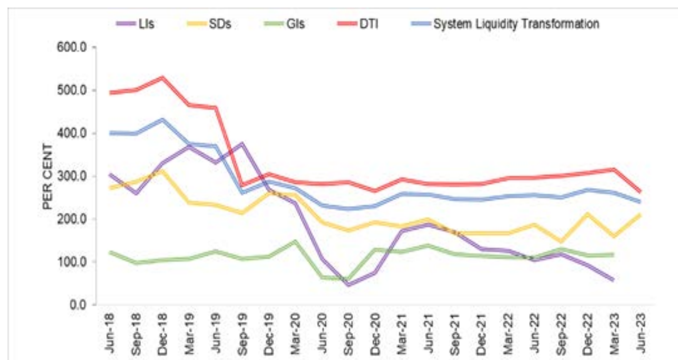


Source: Bank of Jamaica and Financial Services Commission

2.2 **Generally, the liquidity transformation risk metric for the system was remains fairly stable.** On a sectoral level, the trend in the ratios for DTIs and NDTFI was mixed for the quarter. The liquidity transformation risk metric declined by 21.9 percentage points to 240.2 per cent at end-June 2023, relative to end-March 2023.[12,13,14] This improvement in liquidity risk was evident for the DTI sub-sector, while the metric for the securities dealers' sub-sectors increased (deteriorated) (see **Chart 2.1**).[15]

2.3 The overall improvement in liquidity transformation for DTIs resulted from a faster pace of growth in liquid assets relative to a decline in short-term liabilities.[16] The deterioration in liquidity transformation for the securities dealers sub-sector was mainly due to a larger than proportional decline in liquid assets relative to the decline in short-term liabilities.[17,18]

Chart 2.1 Liquidity transformation – DTIs, securities dealers, life and general insurance companies



Source: Bank of Jamaica and Financial Services Commission

[12] Liquidity Transformation = short term liabilities [≤ 30 days] / liquid assets. Liquid assets include high quality liquid assets, such as cash and equivalents, short-term investments and government securities with a 0% risk-weight. The risk metric for the financial system was analysed with DTI and SD data at end of June 2023 and Life and General Insurance companies at end of March 2023.

[13] Liquid assets and short-term liabilities for the system grew by 10.9 per cent and 1.7 per cent respectively at end June 2023, relative to end March 2023.

[14] Calculation of the metric for the system for June 2023 includes data at end March 2023 for LI and GI companies.

[15] The performance in the DTI sub-sector was due to a greater than proportional increase in liquid assets relative to short-term liabilities. While the performance of the life insurance sector was driven by a greater than proportional decline in short-term liabilities relative to a decline in liquid assets

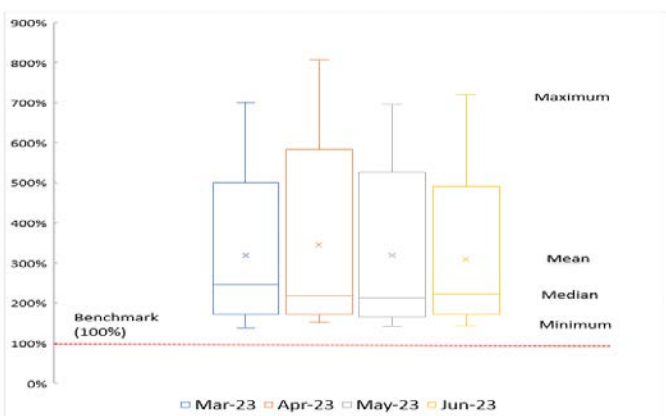
[16] At end-June 2023 short-term liabilities and liquid assets for the DTI subsector increased by 2.4 per cent and 23.1 per cent respectively relative to the previous quarter.

[17] The decline in liquid asset for the SD sector was primarily driven by reduced liquid assets for three of the top 10 securities dealers.

[18] This performance was due mainly to increases in other investments and foreign government securities.

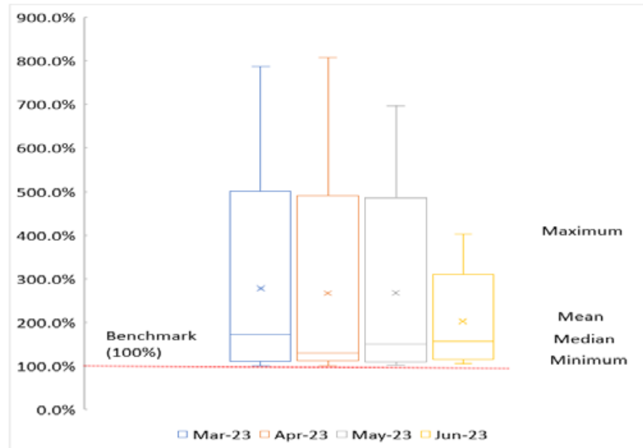
2.4 **Despite slightly lower averages compared to the previous quarter, the liquidity coverage ratio (LCR) showed that DTIs' liquidity remained robust.**[19] At end-June 2023, all DTIs exceeded the LCR benchmark of 100.0 per cent, with an average ratio for the sector of 296.5 per cent, relative to 308.8 per cent at end-March 2023. With regard to the Jamaican dollar-denominated LCR, an average ratio of 187.7 per cent was recorded at end-June 2023, relative to 258.6 per cent at end-March 2023 (see **Charts 2.2** and **2.3**).[20] While the maximum LCR fell significantly from 786.9 per cent at end-March to 403.4 per cent at end-June, no institution recorded an LCR below the minimum.

Chart 2.2 Liquidity coverage ratio (JMD and USD equivalent) at end-June 2023 – DTIs



Source: Bank of Jamaica

Chart 2.3 Liquidity coverage ratio (JMD only) at end-June 2023 – DTIs



Source: Bank of Jamaica

Objective 3 – Limit direct and indirect exposure concentrations & misaligned incentives

3.1 **DTIs' exposure to households, as measured by the ratio of household loans to DTI assets, was broadly constant during the June 2023 quarter, although the relative importance of this exposure continued to shift in favour of mortgages.** The exposure metric for DTIs fell marginally by 0.1 percentage point to 27.1 per cent at end-June 2023, relative to the previous quarter. Household loans continued to account for the largest share of the DTIs' loan portfolio.[21]

3.2 Within household loans, residential mortgage loans increased by 3.1 per cent over the June 2023 quarter, contributing to the 2.1 per cent overall growth in household loans. In this

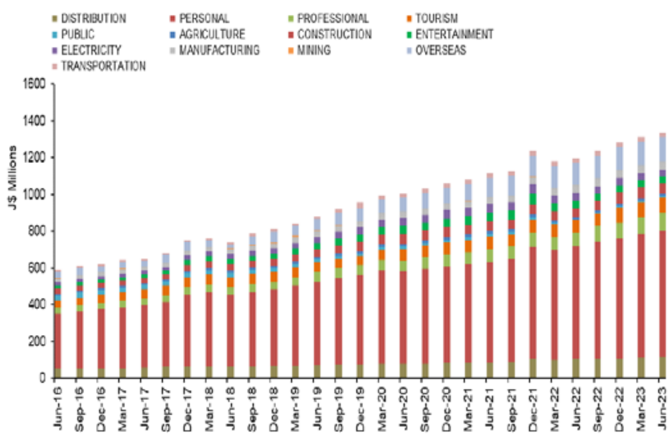
[19] LCR is a requirement under Basel III whereby banks are required to hold an amount of high-quality liquid assets (HQLA) that's enough to fund cash outflows for 30 days.

[20] The decline in the total JMD LCR was driven by declines in the JMD component of the LCR. This was mainly driven by two entities which experienced increases in net cash outflows over HQLA.

[21] Personal Loans is used as a measure of household debt. It excludes NHT loans.

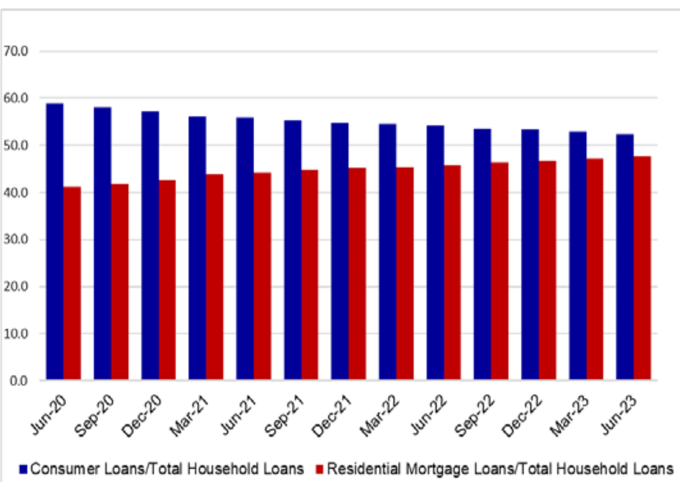
context, the share of other consumer loans (not mortgages) fell over the June 2023 quarter to 52.4 per cent, continuing the trend decline from the 55.8 per cent that was recorded at June 2021 (see **Chart 3.0** and **Chart 3.1**).

Chart 3.0 Loan concentration- selected industries



Source: Bank of Jamaica

Chart 3.1 Decomposition of household debt



Source: Bank of Jamaica

3.3 **The quality of the loans extended to the household sector by DTIs remained relatively unchanged over the review period**. The ratio of households' non-performing loans (NPLs) to total household loans declined by 0.1 percentage point to 3.3 per cent at end-June 2023, relative to end-March 2023.[22] Similarly, the ratio of household past due loans to total household loans was relatively unchanged at 3.1 per cent at end-June 2023, compared to the previous quarter.

3.4 **Debt sustainability measures for households and non-financial corporates (NFCs) showed mixed results over the review period.** Households' net financial position to GDP increased (improved) by 0.3 percentage point to 27.3 per cent at end-June 2023, relative to end-March 2023.[23] However, NFCs' net financial position to GDP fell by 0.4 per cent to 3.0 per cent at end-June 2023, relative to-end March 2023. The improvement in households net financial position was due to a faster increase in households' assets, relative to their liabilities. The decrease in the ratio was primarily due to an increase in NFCs' liabilities (see **Chart 3.2**).[24,25]

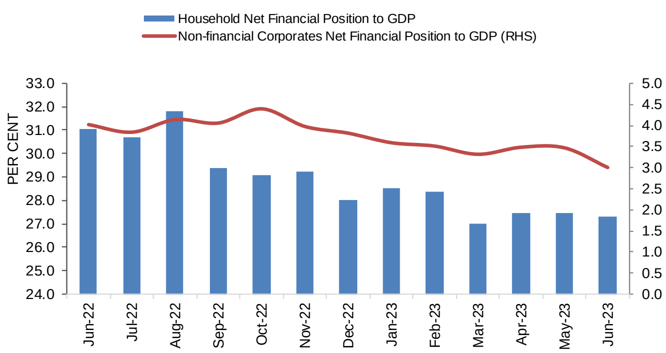
[22] This outturn is consistent with the results of the cobweb measures of financial exposures for DTIs, which showed that DTIs' household and non-financial corporates credit risk were generally unchanged for the review period (see Appendix).

[23] Net financial position = financial assets minus financial liabilities; (i) financial assets for NFCs include deposits and repo liabilities; (ii) financial liabilities for NFCs include loans and exempt distributions; (iii) financial assets for households include pension holdings, deposits, retail repos, life assurance and annuity contracts and policyholder funds on deposit; (iv) financial liabilities for households include: consumer loans and mortgage loans.

[24] Deposits grew which may be as a result of higher savings rate

[25] The increase households' net financial position, and more specifically household assets, was primarily due to an increase in customer deposits. The performance in deposits could be attributable to higher rates being offered on client holdings. Also, the increase in NFC's liabilities was due to an increase in NFC's debt.

Chart 3.2 Households' and NFCs" net financial positions[26]

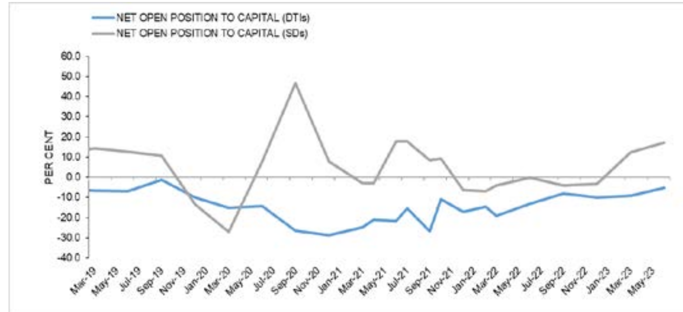


Source: Bank of Jamaica

3.5 At end-June 2023, the DTI sector recorded a net open *short* FX position to capital of 5.3 per cent, relative to a short position of 9.2 per cent at end-March 2023 which is a reduction in FX risk exposure (see **Chart 3.3**).[27, 28]

3.6 Securities dealers recorded a net open *long* FX position to capital of 17.3 per cent at end-June 2023, compared to a net open *long* position to capital of 12.4 per cent at end-March 2023 signalling an uptick in FX risk exposure.[29] This change was due to increased holdings of USD-denominated assets by one entity affiliated with a DTI group.[30]

Chart 3.3 Net open position to capital[31]



Source: Bank of Jamaica

Objective 4 – Limit the impact of interconnectedness and systemic importance

4.1 **There was a continued decrease in counterparty risk for the June 2023 quarter.** The dollar value of funding exposures within the domestic financial network fell by 10.3 per cent to $283.1 billion at end-June 2023 from $315.5 billion at end-March 2023 (see **Table 4.0**).

[26] Net financial position = financial assets minus financial liabilities; (ii) financial assets for NFCs include: deposits and repo liabilities; (iii) financial liabilities for NFSCs include: NFC loans and non-exempt distributions; (iv) financial assets for households include: pension holdings, deposits, retail repos, life assurance and annuity contracts and policyholder funds on deposit; (v) financial liabilities for households include: consumer loans and mortgage loans.

[27] These positions were within the prescribed range of +15 per cent/-25 per cent established by the Bank.

28 The net open position across the selected foreign currencies for each institution is the sum of the foreign currency spot position, net forward position and the foreign currency guarantees that are certain to be called and likely irrevocable. The spot position is calculated as foreign currency assets less foreign currency liabilities and capital items.

[29] Securities dealers' cobweb measure of exposure to foreign exchange risk increased for end-June 2023 relative to end-March 2023. The increase in foreign exchange risk exposure was due to an increase in the sector's net open position to capital (see Appendix).

[30] The higher volatility in the securities dealers' NOP during the pandemic is largely attributable to the actions of a few large players in the market and is reflective of constant portfolio adjustments to meet client needs.

[31] The increase in December 2022 was mainly attributable to an entity affiliated to a DTI group holding a significant amount of "Other currency" assets

4.2 **Systemic risk and interconnectivity within the domestic network also continued to fall.**[32] The systemic risk score declined to 4.7 at end-June 2023, relative to 5.4 at end-March 2023.[33] This was due to a lower concentration of risk within key financial institutions in the network. Similarly, the fragility score fell for the quarter by 6.9 per cent to 14.9 (see **Chart 4.0**).[34] Notably, the reciprocated links and density of the DTIs' and securities dealers' funding network decreased to 46.4 per cent and 27.1 per cent, respectively, at end-June 2023, compared to 51.7 per cent and 31.0 per cent at end-March 2023 (see **Table 4.0**).[35,36] This outturn indicated that financial institutions continued to be less willing to engage in interbank funding transactions with each other, particularly those outside of their financial group.

4.3 **Funding transactions among group affiliates and foreign institutions remained the main sources of systemic risk.** There were increases in exposures among group affiliates over the review period. There was also a decrease in foreign institutions' funding of the domestic network for the quarter to $184.7 billion at end-June 2023, relative to the $187.6 billion recorded at end-March 2023.

Table 4.0 Descriptive statistics of the financial institutions "funding to" exposures network[37,38]

J$ Billions	Mar-23	Jun-23
Total System Funding to Exposure	315.5	283.1
Network Metrics		
Network Mean	0.7	0.6
Reciprocity (%)	51.7	46.4
Density (%)	31.0	27.1
Systemic Risk Score	5.4	4.7
Fragility Score	16.0	14.9
Diameter[39]	4.0	6.0

Source: Bank of Jamaica

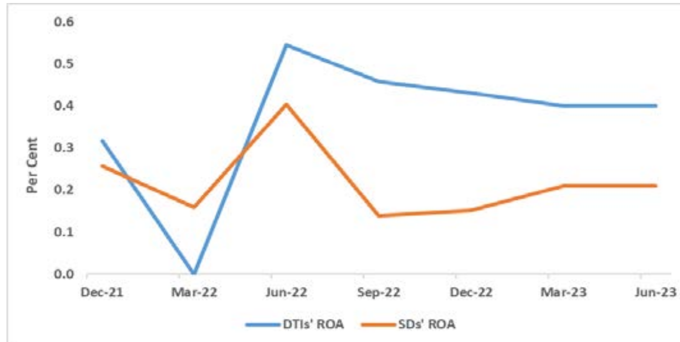
[32] Network Metrics as at September 2021 include DTIs and the ten main SDs.
[33] The systemic risk score quantifies systemic risk in the financial system by combining each institution's contribution to interbank network risk for a specific period weighted by its overall ranking in the financial system.
[34] Fragility refers to how quickly the failure of any one institution would trigger failures across the network. The greater the degree of concentration in a few institutions the higher the fragility. Scores above 2 are considered fragile.
[35] Reciprocity reflects the proportion of bi-directional funding relationships (Entity X both sends and receives funding from Entity Y and vice versa) that exist in the network.
[36] Density measures the proportion of actual funding relationships in the system against the total number of potential funding relationships in the network.
[37] Network Metrics (reciprocity, density, systemic and fragility score, diameter and articulation points) are based on a network without foreign transactions.
[38] Network Metrics as at September 2021 include DTIs and the ten main SDs.
[39] Diameter indicates the "speed" of contagion, the more institutions on the diameter the slower the "speed" of contagion.

Objective 5 – Strengthen the resilience of the financial system

5.1 **Capital adequacy continued to be well above prudential requirements across the financial system while DTIs' and securities dealers' earnings and profitability remained stable for the June 2023 quarter.** The capital adequacy ratio (CAR) for DTIs and securities dealers sector marginally increased to 14.9 per cent and 21.2 per cent, respectively, at end-June 2023, relative to 14.2 per cent and 21.0 per cent at end-March 2023. Moreover, the general insurance sub-sector had a Minimum Capital Test ratio of 221.1 per cent at end-March 2023, which exceeded the regulatory minimum of 150.0 per cent. The life insurance sub-sector recorded a Minimum Continuing Capital Surplus Requirement of 273.3 per cent at end-March 2023, also well above the regulatory benchmark of 150.0 per cent see **Appendix – Table 1.0**)[40]

5.2 DTIs' and securities dealers' return on assets (ROA) was relatively unchanged for the June 2023 quarter at 0.4 per cent and 0.2 per cent, respectively, relative to the March 2023 quarter (see **Chart 5.0)**. Life insurance and general insurance companies' ROA increased to 2.4 per cent and 0.6 per cent, respectively, for the December 2022 quarter, relative to 2.1 per cent and 0.3 per cent for the September 2022 quarter. The increases in the earnings and profitability for the insurance companies were primarily due to higher growth in total income earned and gross written premiums, relative to growth in assets.

Chart 5.0 Profitability indicator trends for both DTIs and securities dealers

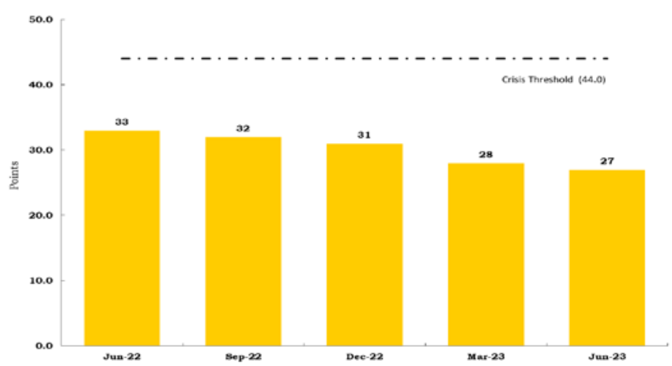


Source: Bank of Jamaica and Financial Services Commission

5.3 **Aggregate measures of financial stability in Jamaica showed an improvement in macro-financial conditions for the June 2023 quarter**. The macro-financial index (MaFI) improved to 27.0 points for the June 2023 quarter, relative to 28.0 points for the previous quarter. This was primarily due to an improvement in annual inflation, which moved to a signal of 3.0 points at end-June 2023, from a signal of 5.0 points at end-March 2023 (see **Chart 5.1**).

[40] Due to the unavailability of data for the insurance sector, analysis was done to end-December 2022.

Chart 5.1 Macro-financial index[41]



Source: Bank of Jamaica

Stress tests

5.4 Stress simulations were conducted to assess financial institutions' resilience to the impact of further increases in bond yields (based on data as at end-June 2023). Given the uncertainty surrounding the future path of the domestic and the external economy, two scenarios (moderate and severe) related to increases in GOJ bond yields were contemplated (see **Table 5.1**).[42]

Table 5.1 Assumptions of the stress tests

Risk	Shocks Moderate	Shocks Severe
Interest rate risk		
↑Yields -Domestic	75 bps	125 bps
↑Yields - Foreign	50 bps	100 bps

5.5 The results of the interest rate risk assessment at end-June 2023 show that financial institutions are generally resilient to the contemplated increases in GOJ bond yields.[43]

[41] The MaFI is a signal-based index computed using scores for indicators based on the number of standard deviations of each indicator from its 'tranquil period' mean value. The tranquil period for both indices spans the period March 2002 to March 2003. The scores range from 0 to 5 with a score of 5 representing the most severe signal. The higher the aggregate score, the more severe the signal.

[42] The moderate scenario uses the entire historical time series to generate the shock value at the 95th percentile while, under the severe scenario, the data is stratified and only periods of financial stress is used to derive the applicable shocks. The rationale for using this methodology is that it is useful for capturing tail risk. i.e. high impact events that have a small probability of occurring as predicted by a probability distribution. The magnitude of the interest rate shocks was adjusted downwards based on the assumption that some of the rate increases have already passed-through to existing rates. Current and expected market conditions by end-2023 were also accounted for as they relate to the Fed's policy adjustment and BOJ's policy reaction in order to maintain interest rate parity. The historical time series uses quarterly data and spans the period 2000 -2022.

[43] As a result of selected shocks/increases in yields, the new market value of these securities (GOJ bonds) are recalibrated using the price formula in excel. Next the fair value loss is derived and deducted from available buffer capital. However, if the buffer capital is insufficient to cover losses, the residual FV losses are deducted from statutory capital and the corresponding post-shock CAR re-calibrated.

Appendix

Table 1.0 Select Financial Soundness Indicators

	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Asset to GDP (%)							
DTI	105.6	108.9	101.4	94.2	93.8	94.4	94.7
SDs	35.7	27.1	33.6	32.5	31.8	31.6	32.3
LIs	18.3	22.6	16.4	15.7	15.4	14.7	n/a
GIs	4.7	4.7	4.8	4.6	4.3	n/a	n/a
Capital Adequacy (%)							
DTI (CAR)	14.2	14.3	14.1	13.8	14.2	14.2	14.9
SDs (CAR)	21.4	21.4	22.3	19.9	21.9	21.0	21.2
LIs (MCSSR)	211.1	212.8	232.8	254.4	270.7	273.3	n/a
GIs (MCT)	281.9	276.3	268.9	296.7	304.5	221.1	n/a
ROA (%)							
DTI	0.3	(0.0)	0.5	0.5	0.4	0.4	0.3
SDs	0.3	0.2	0.4	0.1	0.2	0.2	0.2
LIs	2.3	1.7	2.8	2.1	2.4	n/a	n/a
GIs	0.5	(0.1)	(0.2)	0.3	0.6	n/a	n/a
Liquidity (%)							
DTIs Liquidity Coverage Ratio (LCR)	260.2	231.0	211.6	199.3	182.4	183.6	184.0
DTIs (liquid assets to short-term liabilities)	27.8	29.5	30.2	29.6	27.5	26.3	25.7
SDs (liquid assets to short-term liabilities)	18.2	17.3	16.4	16.9	16.5	17.0	17.0
LIs (liquid assets to total liabilities)	24.9	22.7	24.2	24.8	30.4	n/a	n/a
GIs (liquid assets to total liabilities)	67.8	69.4	69.6	66.6	70.2	n/a	n/a
Non-Performing Loans to Total Loans (%)							
DTIs	2.9	2.8	2.7	2.5	2.5	2.4	2.5
SDs	0.8	0.6	0.9	0.7	0.7	0.9	1.0
Past Due Loans to Total Loans (%)							
DTIs	2.58	3.03	2.69	2.97	2.99	2.48	3.50

Source: Bank of Jamaica and Financial Services Commission

Heat Maps of Core Indicators

The below tables provide the values over time of core indicators associated with macro-prudential assessment objectives. Each indicator is ranked according to five percentiles based on the empirical distribution of historical values. Each percentile is shaded according to the below key.

0 – 20%, 21% – 40%, 41% – 60%, 61% – 80%, 81% – 100%

Objective 1: Core indicators associated asset price and credit boom-bust cycles

			Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Objective 1: Mitigate and prevent excessive credit growth and leverage	Credit-to-GDP measures[1/]	DTI private credit-to-GDP gap	7.53	4.55	4.18	1.80	1.44	-0.17	-0.47	-0.88	-2.82
		Total credit-to-GDP gap	7.55	4.55	3.89	1.56	1.06	-0.52	-0.58	-0.89	-2.84
	Credit Indicators: year-on-year growth (%)	Total Credit	6.83	7.08	7.08	8.05	7.73	10.28	4.36	12.30	12.54
		DTI Credit to Households	6.40	4.80	5.56	10.81	9.60	6.71	6.98	3.47	3.44
		DTI Credit to Non-financial Corporates	5.36	1.74	12.17	12.10	5.48	4.78	6.71	4.15	2.83
	Leverage 2/	DTI	710.89	737.13	771.07	782.52	782.52	812.35	759.38	769.51	779.20
		SDs	594.53	571.96	588.55	625.20	625.20	705.07	663.83	652.46	664.26
		LIs	274.98	269.28	269.80	261.81	262.41	251.33	240.48	242.19	-
		GIs	306.52	298.63	289.77	296.78	358.71	348.07	347.19	386.10	-

1/ Total credit is DTI credit plus public sector credit (gross loans to public sector)

2/ Leverage = (total financial assets) / equity

3/ * Data for March 2023 remains unavailable for SDs, Lis and GI's, therefore the missing indicators are denoted by the symbol in parentheses (-)

Objective 2: Core indicators associated with the intermediation of funds

			Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Objective 2: Mitigate and prevent excessive maturity mismatches and market illiquidity	**Cumulative Maturity Gap to Total Assets (%)**	DTIs - up to 30 days	-42.05	-41.92	-40.66	-43.21	-44.89	-44.85	-44.42	-43.50	-44.62
		DTIs - up to 90 days	-46.61	-45.95	-44.35	-47.83	-47.86	-46.33	-44.89	-46.93	-46.30
		DTIs - up to 365 days	-44.85	-44.69	-45.38	-46.06	-46.50	-44.91	-44.88	-45.21	-46.39
		SDs - up to 30 days	-14.82	-11.16	-9.63	-6.17	-7.68	-4.19	-9.25	-8.70	-8.15
		SDs - up to 90 days	-28.48	-24.26	-20.76	-22.75	-21.95	-22.04	-26.21	-21.75	-24.92
		SDs - up to 365 days	-33.73	-27.85	-32.40	-28.33	-29.40	-32.84	-30.75	-30.38	-33.77
	Maturity Transformation (%)[1/]	DTI - MT1	43.78	43.71	44.41	45.01	45.01	43.88	44.01	44.28	45.72
		SDs - MT1	36.03	31.71	36.19	32.44	32.44	30.36	28.06	29.01	29.78
		LIs - MT1	3.39	2.12	3.18	0.59	-1.77	-1.43	-4.76	-31.24	-
		GIs - MT1	-11.68	-11.13	-14.48	-29.34	-22.28	-26.59	-26.58	-20.78	-
	Liquidity Transformation (%)[2/]	DTI - LT3	281.72	280.18	281.05	295.91	295.91	300.88	307.26	315.19	262.18
		SDs - LT3	199.27	167.46	167.20	166.84	166.84	148.20	211.97	160.61	211.77
		LIs - LT3	187.18	169.50	130.83	125.59	104.84	117.78	93.04	56.65	-
		GIs - LT3	138.47	122.59	114.32	112.02	110.02	129.77	114.92	116.95	-

1/ MT1 = (long term assets - long term liabilities - nonredeemable equity) / total financial assets
2/ LT3 = short term liabilities [≤ 30 days] / liquid assets [broad]
3/ * Missing indicators, due to unavailable date, are denoted by the symbol in parentheses (-).

Objective 3: Core indicators associated with exposure concentrations

			Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Objective 3: Limit direct and indirect exposure concentrations	Exposure to Financial Markets (%)	Composite Indicator of Systemic Stress	0.30	0.28	0.39	0.23	0.37	0.27	0.37	0.31	-
		DTIs - Net open position to capital	-21.47	-26.78	-16.86	-19.00	-13.12	-8.05	-9.97	-9.23	-5.27
		Securities Dealers - Net open position to capital	17.64	8.50	-6.42	-4.01	-6.41	-4.19	-3.28	12.44	17.31
	Exposure to Sovereign Risk (%)	DTIs - Public Sector Debt to total assets	9.72	10.00	9.32	9.67	8.83	7.76	8.22	7.32	8.35
		Securities Dealers - Public Sector Debt to total assets	15.14	15.27	15.45	14.55	14.39	14.51	14.97	14.77	15.84
		Insurance Companies - Public Sector Debt to total assets	35.22	35.54	36.39	23.40	34.69	35.57	35.89	-	-
	Exposure to Households and Corporates (%)	Household debt to GDP	38.44	37.29	36.90	37.25	37.13	33.47	32.86	33.54	32.49
		Household Net Financial Position to GDP	38.97	36.54	34.42	31.57	31.70	29.40	28.02	28.33	27.30
		Corporate debt to GDP	20.67	19.65	21.39	20.87	19.28	17.38	17.56	17.87	17.37
		Corporate Net Financial Position to GDP	4.79	4.67	2.10	3.17	4.76	4.06	3.82	3.36	3.01
	Exposure to Real Estate (%)	DTIs - Mortgages to Assets	11.19	11.31	11.48	12.53	12.16	12.47	12.49	12.83	12.90

1/ * Data for March 2023 remains unavailable for SDs, Lis and GI's, therefore the missing indicators are denoted by the symbol in parentheses (-)

Objective 4: Core indicators associated with systemic importance and interconnectedness

			Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Objective 4: Limit the impact of interconnectedness, systemic importance and misaligned incentives	Systemically Important Financial Institutions (SIFIs)	Total SIFI group assets to total system assets	77.26	76.87	77.00	76.74	77.00	64.80	64.44	75.11	74.97
	Non-Deposit Taking Financial Institution (NDTFIs)	NDTFIs asset share to total system assets	35.93	35.96	35.70	36.01	36.52	35.91	35.48	25.43	24.96
	Dollarization Indicators (%)	FX investment holdings to total investment - SDs	55.98	53.14	53.66	55.98	55.10	55.15	54.51	53.92	53.92
		FX loan & investment holdings to total investment - DTIs	31.73	30.83	32.11	31.56	30.71	32.25	32.86	32.62	32.28
		FX deposits to total deposits - DTIs	38.90	38.82	39.64	41.05	40.11	39.89	39.01	38.34	38.44

1/ * Missing indicators, due to unavailable date, are denoted by the symbol in parentheses (-).

Objective 5: Core indicators associated with resilience of financial institutions and the macro-financial environment.

			Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
Objective 5: Strengthen the resilience of the financial system & infrastructure	**Composite Indices**	Macro-Financial Index	21.00	21.00	25.00	28.00	33.00	32.00	31.00	28.00	27.00
		Micro-Prudential Index - DTIs	21.00	25.00	29.00	25.00	27.00	28.00	26.00	28.00	30.00
		Banking Stability Index	0.39	0.21	-0.16	0.10	0.32	0.04	0.03	-2.34	-
		Aggregate Financial Stability Index	0.59	0.53	0.53	0.47	0.48	0.47	0.48	0.51	-

1/ * Missing indicators, due to unavailable date, are denoted by the symbol in parentheses (-).