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# CONSULTATION PAPER

# IMPLEMENTATION OF A NEW PRUDENTIAL BENCHMARK FOR RETAIL REPURCHASE AGREEMENTS

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**FINANCIAL SERVICES COMMISSION**

**IMPLEMENTATION OF A NEW PRUDENTIAL BENCHMARK FOR RETAIL REPURCHASE AGREEMENTS: CONSULTATION PAPER**
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## 1.0 BACKGROUND

1.01 Until the recent regulatory changes in Jamaica, securities dealers that were engaged in retail repurchase agreements (retail repos) would accept cash from clients and maintain internal records of the clients' beneficial interest in the securities that are associated with the repo contracts, but the legal title of the securities would be retained in the dealers' own name. This implied significant (i) legal, (ii) operational and (iii) balance sheet risks. The legal and operational risks were effectively mitigated when, in August 2015, all retail repos were transferred to a trust-based structure operated by the JCSD Trustee Services Limited (JCSDTS). This was the first of a two-phase process to address risks inherent with the retail repo product offering.

1.02 The purpose of this paper is to outline an implementation plan for the introduction of a new prudential benchmark for retail repos, which is aimed at monitoring and controlling the level of intermediation risk[1] inherent in the product. The implementation of this ratio represents another phase in the retail repo reform, subsequent to the transition to the trust-based framework and will be complemented at a later date by the introduction of liquidity ratio(s)[2] for securities dealers aimed at monitoring the level of liquidity risks inherent in the securities dealers' overall business model.

## 2.0 INTRODUCTION

2.01 The retail repo product is primarily used by securities dealers to finance their inventory of long-term securities, mainly Government of Jamaica (GOJ) securities, using shorter-term obligations with clients. This however, results in a significant mismatch in the maturities and duration of the interest-bearing liabilities (which are generally one to two months) and the interest-generating assets (which can be many years). Over the years, the mismatch has worsened significantly, primarily because of the debt exchanges effected by the GOJ in 2010 and 2013 as well as their issues subsequent to the debt exchanges. These measures are in keeping with the debt management strategy of the GOJ which continues to result in lower

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[1] These intermediation risks relate to balance sheet risks which arise primarily from the duration and liquidity mismatches especially from the dealers' retail repo business.

[2] A consultation paper on the proposed liquidity ratio(s) for the securities industry will be issued in 2018.

interest rates and longer maturities, thus increased durations. The mismatch between retail repo liabilities and long-term securities highlights the vulnerability of securities dealers to interest rate and liquidity shocks and has been identified as a source of systemic risk in the Jamaican financial system, thus necessitating the implementation of regulatory measures to monitor and control these risks.

2.02 Initially, a retail repo leverage ratio (RRLR) was contemplated as a suitable indicator that could be used to monitor and control the balance sheet risks inherent in the retail repo portfolios of securities dealers. This ratio would ensure that these risks are maintained at a systemically safe and prudentially manageable level. The RRLR, computed by dividing a securities dealer's retail repo portfolio into its regulatory capital, was intended to measure the ability of a dealer's capital to absorb a large fall in the value of the assets that underlie its retail repo obligations. This measure was shared with the securities dealers through consultation with the Jamaica Securities Dealers Association.

2.03 After further analysis and feedback from the industry and other relevant stakeholders, limitations of the RRLR as a suitable indicator was highlighted and a study[3] was conducted to identify other possible options. These options were specified in the forms of alternative prudential ratios namely retail repo (RR) leverage multiple and retail repo (RR) mismatch ratio.

## 3.0 METHODOLGY USED TO DETERMINE THE PRUDENTIAL BENCHMARK

### 3.1 *Alternative Prudential Indicators for Retail Repos*

3.10 The study revealed that a systemically safe level may be determined based on the correlation between stress testing results (change in post-shock capital adequacy ratios (CARs)) and the potential indicators i.e. the RR Leverage Multiple and the RR Mismatch Ratio.

3.11 <u>Retail Repo Leverage Multiple</u>

The RR Leverage Multiple indicates the multiple of capital represented by retail repos that are very short-dated or which are covered by medium to long dated assets. It is computed as follows:

> The sum of: (i) retail repo liabilities that have less than one month to maturity **PLUS**
> (ii) retail repo liabilities that are backed by assets that have durations above 1 year
>
> ***Divided by***
>
> Regulatory Capital i.e. Tier 1 and Tier 2 Capital, less prescribed deductions

[3] A joint working group comprising representatives from the Securities Division of the Financial Services Commission (FSC) and the Financial Stability Unit of the Bank of Jamaica (BOJ), with assistance provided by a short-term expert contracted by the International Monetary Fund (IMF) completed a study in June 2017 on the appropriate indicators for a systemically safe level of retail repos.

3.12 *The Retail Repo Mismatch Ratio*[4]

The RR Mismatch Ratio directly indicates the degree to which the securities dealer's retail repo portfolio is exposed to the impact of movements in interest rates. The ratio effectively represents the potential percentage movement in the value of the retail repo assets for every percentage movement in interest rates.

The weighted average duration of retail repo assets **MINUS** the weighted average maturity/duration of retail repos liabilities

***Multiplied by***

Total retail repo l liabilities

***Divided by***

Regulatory Capital i.e. Tier 1 and Tier 2 Capital, less prescribed deductions

## 3.2 *Stress Tests*

3.20 Stress tests were conducted on the thirteen (13) dealers which offer retail repos to their clients, using financial data for the periods ended December 31, 2015; March 31, 2016; June 30, 2016; September 30, 2016; December 31, 2016; and March 31, 2017.

3.21 The particular set of assumptions[5] used to carry out the stress tests included:

(i) A hypothetical 1,000 basis point (bps) increase in domestic interest rates;
(ii) A hypothetical 100 bps increase in foreign interest rates; and
(iii) A hypothetical 30% withdrawal of retail repos.

3.22 The interest rate and liquidity stress tests were performed separately and the resulting individual effects on a dealer's CAR aggregated to determine the overall impact on CAR.

3.23 The results of the stress tests were fairly consistent over the four periods reviewed, demonstrating dealers' continued susceptibility to interest rate and liquidity shocks. It is worth noting however that three dealers had post-shock CARs below the statutory benchmark of 10% in all periods.

**Stress Tests Results Summary**

| | End-Dec 2016 | End-Dec 2015 | End-March 2017 | End-March 2016 |
|---|---|---|---|---|
| Range of Post-shock CARs | 6.1% to 40.1% | 4.8% to 46.2% | 6.2% to 44.5% | 4.6% to 42.9% |
| No. of dealers failing 10% CAR benchmark | 4 | 5 | 5 | 3 |
| Capital injection required to satisfy 10% benchmark | J$5.22 billion | J$5.16 billion | J$2.45 billion | J$5.44 billion |

[4] Based on the structure of retail repo where interest and principal are made in a single payment at the end of the contract period, the duration and maturity for repo liabilities are identical.
[5] The set of assumptions was established based on the working group's viewpoint that, collectively, the assumptions represent an adverse, but plausible scenario in light of the recent trend in interest rates and the historically high rollover rate for retail repos.

### 3.3 *Selection of the Preferred Prudential Indicator*

3.31 Of the two indicators identified during the study, the RR mismatch ratio appears to be the better indicator of the exposure of the dealers' capital to the risks inherent in their retail repo portfolios as the correlation between the ratio and the reduction in CAR was significantly higher and was more stable over time.

**The correlations between the decline in CAR and the proposed indicators**

| RR Leverage Multiple | RR Mismatch Ratio |
|---|---|
| • Dec 2015: = 0.55 | • Dec 2015: = 0.81 |
| • Dec 2016: = 0.75 | • Dec 2016: = 0.88 |
| • March 2017: = 0.60 | • March 2017: = 0.90 |

This conclusion was confirmed after extending the dataset to include data for end-March, end-June, and end-September 2016.

3.32 The correlations between the falls in CAR (same stress test assumptions as above) and the RR mismatch ratio for these additional periods were as follows:

- March 2016: = 0.79
- June 2016: = 0.88
- Sept 2016: = 0.77

### 3.4 *Tolerable levels of RR Mismatch Ratio*

3.40 The study revealed that the average RR mismatch ratio for all dealers was 10%, while the average RR mismatch ratio for dealers which failed the stress tests was 15%. This would suggest that a tolerable level for the mismatch ratio should be between 10% and 15%, which is broadly correlated with reductions in the CAR for retail repo dealers of between 30% and 50% in the extreme conditions set in the stress tests.

3.41 The average CAR for retail repo dealers as at December 31, 2016 was 19.83%. Therefore, if there is a 50% fall off in CAR values, the average CAR for these dealers would fall to 9.92%, which is just below the 10% statutory benchmark. Additionally, assuming that aggregate risk weighted assets remain unchanged, aggregate regulatory capital would fall from J$72 billion to J$36 billion. From a systemic risk standpoint, this fall off in capital adequacy would be unacceptable. In this regard, setting the preferred level of the RR mismatch ratio at 15% initially or below seems appropriate as it will be subject to on-going review.

## 4.0 IMPLEMENTATION OF THE PRUDENTIAL BENCHMARK

4.01 A dealer whose RR mismatch ratio is above the 15% threshold is likely to have three broad options to reduce its mismatch ratio in order to become compliant: (a) increase its regulatory capital, (b) reduce the

duration of the assets underlying retail repos, and (c) reduce the size of its retail repo portfolio. Given these options, it is recognised that reducing the mismatch may have unintended consequences including:

(a) the implementation of the RR mismatch ratio may significantly impact the GOJ's ability to raise funds from the securities dealers using longer dated securities;

(b) as the GOJ continues to issue these longer dated securities primary dealers may face a challenge given that they are obligated to purchase these securities in order to maintain their primary dealer's license; and

(c) the restriction on the type of securities that dealers are allowed to purchase effectively creates a 'natural' demand for the GOJ and BOJ issues and to a larger extent other sovereign issues that are classified as low risk and have a longer tenure.

4.02 The foregoing discussion highlights the need for a realistic approach to the implementation which allows for an adequate period of adjustment to new prudential requirements. The proposed implementation timetable therefore comprise a three (3) year implementation programme which involves an early warning monitoring period from March 2018 to March 2020 followed by full implementation by end December 2020. This timetable was drafted in recognition that securities dealers as well as the FSC will require time to implement the relevant systems and procedures to calculate and monitor the ratio in order to determine compliance. .

4.03 The provisional arrangements are outlined below:

4.03.1 The FSC will incorporate the RR mismatch ratio into its supervisory framework as an on-going Early Warning Indicator which will guide intensity of supervision of the relevant dealers when necessary. This will be achieved upon completion of the following:

a. Effective March 31, 2018, the FSC will begin conducting calculations of the ratio on a quarterly basis. The basis for the frequency is primarily due to historical observations which reveal that on a monthly basis no significant changes occur in the portfolio of securities underlying retail repos.

b. Monitoring will occur based on an established tolerable range to curtail the growth in the ratio in excess of the benchmark of 15%. That range will be 15% to 20% and the ratio will be monitored for each dealer to determine divergence from and/or convergence to the proposed threshold of 15%.

c. Divergence from the maximum threshold of 15% will result in enhanced monitoring of the relevant dealers which includes but not limited to:

   (i) Monthly RR mismatch analysis
   (ii) Convening meeting with dealers to discuss concerns
   (iii) Request the submission of a Board approved action plan plan to promote convergence to proposed benchmark within an agreed timeframe.
   (iv) Enforcement actions if deemed necessary.

4.03.2 The table below outlines the schedule for implementation the RR mismatch ratio

| Implementation Date | Benchmark |
|---|---|
| March 31, 2020 | 20% |
| June 30, 2020 | 18.75% |
| September 30, 2020 | 17.5% |
| December 31, 2020 | 15% |

4.03.3 The phased implementation period will be reviewed on an on-going basis, taking into consideration other changes in the prudential framework.

4.04 During the transition period, in addition to monitoring the ratio for each dealer, several activities will be undertaken, including but not limited to:

(i) Reassessment of the proposed benchmark on an on-going basis taking into consideration the other changes in the supervision namely liquidity ratio and large exposure limits.

(ii) Address data inadequacy issues for the classic repos in order to examine the levels of mismatch between the classic repo liabilities and their underlying securities and determine if an indicator should be developed given the similarities in the balance sheet risks with retail repos.

(iii) Review the current pool of allowable assets for retail repos.

(iv) Explore incentives to adjust the ratio for dealers that are willing to hold excess buffer/margin to compensate for the mismatch.

4.06 The FSC, in collaboration with the GOJ Debt Management Unit, will also monitor the dealers' level of participation in GOJ issues subsequent to the implementation notice. Any significant issues will be discussed by the two authorities as they arise, including any potential impact on the proposed implementation of the RR Mismatch Ratio.

The FSC invites comments on any and all aspects of the proposal presented in this paper. Comments should be submitted in hard copy or via email, on or before Monday, January 29, 2018 to:

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Or by email to:
securities@fscjamaica.org