

# **SHUSA Board July 30, 2015**

## **Risk Appetite Redevelopment - Appendix**

**Sponsor: Brian Gunn, CRO SHUSA**

**Presenter(s): Beatriz Shapiro, ERM SHUSA; Edward Smith, Director Risk Architecture, SHUSA**

**Author: Oliver Wyman and SHUSA Risk Appetite function**

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# Key risk drivers and long list of potential families of quantitative metrics under consideration (1/3)

For discussion

| Risk category                   | Key risk drivers  | Families of quantitative metrics  |
|---------------------------------|---|---|
| <b>Capital adequacy</b>         | <ul style="list-style-type: none"> <li>Insufficient capital due to related risks (e.g., credit losses)</li> </ul>   | <ul style="list-style-type: none"> <li>Regulatory capital ratios (baseline and stress) relative to policy limits</li> </ul>   |
| <b>Credit risk</b>              | <ul style="list-style-type: none"> <li>Loan losses due to borrower default</li> <li>Value of collateral to mitigate losses</li> <li>Asset quality as an indicator of borrower default and/or recovery rate</li> <li>Concentrations and correlations of default risk and collateral performance</li> </ul> | <ul style="list-style-type: none"> <li>Realized losses and projected losses (baseline and stress)</li> <li>Total loans outstanding or RWA</li> <li>Payment behavior and expectations (e.g., % 90+ DPD, % criticized and classified, % NPL, % non-accrual)</li> <li>Risk ratings / scores (e.g., distribution of risk ratings, maximum exposure under X rating)</li> <li>Concentration (e.g., in single name, top X obligors, portfolio, industry, geography, collateral types, asset type, exposure to unsecured lending)</li> <li>Loan-to-value ratio (for secured lending)</li> </ul> |
| <b>Residual value risk</b>      | <ul style="list-style-type: none"> <li>Losses due to adverse market movements impacting the value of vehicles</li> <li>Losses due to mispricing of vehicle leases</li> <li>Portfolio concentrations</li> </ul>  | <ul style="list-style-type: none"> <li>Realized losses and projected losses (baseline and stress)</li> <li>Lease residuals outstandings</li> <li>Sensitivity of residual value to macro / auto / financial indicators (e.g., Light Vehicle Sales, Manheim Index, gasoline prices)</li> <li>Concentration (e.g., in vehicle make / model, geography)</li> </ul>  |
| <b>Liquidity / funding risk</b> | <ul style="list-style-type: none"> <li>Mismatch of cumulative asset and liability cash flows</li> <li>Funding concentrations</li> <li>Concentrations in illiquid assets (e.g., insufficient HQLA)</li> </ul>  | <ul style="list-style-type: none"> <li>Liquidity coverage ratio</li> <li>Survival horizon</li> <li>% of liability in high LCR run-off categories</li> <li>Wholesale funding %</li> <li>Securitization funding % of production</li> <li>Net stable funding ratio / other funding ratios</li> <li>Loans-to-deposits ratio</li> <li>Maximum refinancing requirement</li> </ul>   |

# Key risk drivers and long list of potential families of quantitative metrics under consideration (2/3)

| Risk category                                 | Key risk drivers  | Families of quantitative metrics  | For discussion |
|---|---|---|----------------|
| <b>Interest rate risk in the banking book</b> | <ul style="list-style-type: none"> <li>• Movement of interest rates</li> <li>• Mismatch of asset and liability repricing cash flows</li> <li>• Investment of equity</li> </ul>  | <ul style="list-style-type: none"> <li>• Sensitivity to interest rates of:               <ul style="list-style-type: none"> <li>– Earnings (e.g., ALM NII +/- 100bps)</li> <li>– Economic value of equity (e.g., ALM EVE +/- 200bps)</li> <li>– Regulatory capital ratios</li> </ul> </li> <li>• AFS and HTM portfolio mark-to-market impact</li> <li>• Duration</li> <li>• Convexity</li> <li>• Basis risks</li> </ul> |                |
| <b>Trading risk</b>                           | <ul style="list-style-type: none"> <li>• Mark-to-market and realized losses from adverse market movements in trading securities and/or derivatives contracts</li> <li>• CVA</li> </ul>  | <ul style="list-style-type: none"> <li>• Realized trading P&amp;L</li> <li>• Value at Risk (baseline and stress)</li> <li>• Size and composition of portfolio</li> <li>• CVA sensitivity</li> </ul>   |                |
| <b>Strategic / business risk</b>              | <ul style="list-style-type: none"> <li>• Revenue volatility arising from business mix / concentrations</li> <li>• Poor earnings due to management decisions</li> <li>• Losses due to counterparty event (e.g., primary mortgage insurers, Chrysler)</li> <li>• Unfavorable results due to business partnership with Chrysler</li> </ul>   | <ul style="list-style-type: none"> <li>• Credit rating</li> <li>• Earnings / profitability under different scenarios</li> <li>• Product concentration</li> <li>• Asset growth targets</li> <li>• Maximum revenue/ capital in non-core business</li> </ul>   |                |
| <b>Operational risk</b>                       | <ul style="list-style-type: none"> <li>• Losses due to any operational risk event types<sup>1</sup>:               <ul style="list-style-type: none"> <li>– Internal fraud</li> <li>– External fraud</li> <li>– Employment practices &amp; workplace safety (e.g., poor culture)</li> <li>– Clients, products and business practices</li> <li>– Damage to physical assets</li> <li>– Business disruption and system failures</li> <li>– Execution, delivery and process management (e.g., change management)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Gross losses (baseline and stress)</li> <li>• Frequency of material operational risk events</li> <li>• Maximum loss over &gt;\$X</li> <li>• # of material operational events (&gt;\$X gross loss)</li> <li>• # of delinquent issues</li> <li>• Proportion of issues identified by management vs. internal vs. regulator</li> <li>• Legal-related financial losses</li> </ul>   |                |

1. Event types based on Basel II

# Key risk drivers and long list of potential families of quantitative metrics under consideration (3/3)

| Risk category                         | Key risk drivers   | Families of quantitative metrics   | For discussion |
|---------------------------------------|--|--|----------------|
| <b>Model risk</b>                     | <ul style="list-style-type: none"> <li>Financial losses due to any of the following:               <ul style="list-style-type: none"> <li>Poor model development (e.g., due to low quality data inputs, invalid assumptions, poor parameterization)</li> <li>Inappropriate validation (e.g., over reliance on provisional approvals)</li> <li>Improper implementation</li> <li>Misuse / use for purposes other than what it was validated for</li> </ul> </li> </ul>   | <ul style="list-style-type: none"> <li>Models in use / production without appropriate approval (either all models or only new models)</li> <li>% of models with Level 1 validation findings</li> <li>% of models with elevated model risk / with “X” model risk score</li> <li>% of models with ongoing monitoring in place</li> <li>Maximum discrepancy between modeled output and actuals</li> </ul>   |                |
| <b>Compliance / reputational risk</b> | <ul style="list-style-type: none"> <li>External needs:               <ul style="list-style-type: none"> <li>Failure to meet regulatory standards (e.g., AML, CFPB, etc.)</li> <li>Losses from litigation or fines / penalties</li> </ul> </li> <li>Internal needs:               <ul style="list-style-type: none"> <li>Decline in customer acquisition or increase in customer attrition due to negative impact on public perception (e.g., poor customer service , public scandal)</li> <li>Employee attrition due to poor work environment</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li># of regulatory issues (e.g., MRA / MRIAs)</li> <li>Compliance, AML, and other regulatory fines, penalties and actions</li> <li># of reported breaches of the Code of Conduct and Ethics</li> <li># of complaints</li> <li>Unresolved KRIs at any time</li> <li>Loss of market share / impact on share price</li> <li>Customer satisfaction (e.g., JD Powers) / attrition</li> <li>Mystery shopping scores</li> <li>Negative references in media</li> <li>Employee satisfaction / attrition</li> <li>Mandatory training completion</li> </ul> |                |