H-1B Job Description Explanation

What follows below is a detailed description of the job duties of the Associate, Risk Management position we offer to Mr. Liu at Bank of China’s New York Branch (“BOC-NY”). They reflect not only the specialized and complex nature of the position, but also demonstrate that its professional responsibilities require the body of specialized professional knowledge in data analysis, statistical modeling, finance and economics, etc. that is normally taught by courses taken in these master-level university science degree programs. Market Risk Management Department is responsible for managing the Bank’s interest rate risk, price risks and liquidity risk as a function of second line of defense according to the Bank’s risk governance framework. The role is to assist the head of Market Risk Management Department in overseeing the front business units’ risk management, and ensuring the Bank’s risk exposure within risk appetite framework, and helping protect the Bank with safety and soundness liquidity risk management practice.

* **Liquidity Risk Analysis (Percentage of time spent: 40%)**

1. Build Market Risk Management analytical capabilities in data analysis and establish comprehensive SQL templates to collect data from DataMart.

Such work requires the employee to analyze data and model market and liquidity risk by various statistic approaches including but not limited to volatility analysis, regression and time series modelling and replicating portfolio etc. The employee must be able to analyze and assess the Bank’s deposit operational level, runoff and sedimentation, rollover and early remediation, loan prepayment and off-balance-sheet facilities contingent withdraw behaviors based on internal historical data, market dynamic data and industry benchmark. The employee should be able to utilize Excel VBA and SQL to design, test and analyze portfolio construction and risks contribution and help the department assess the risks of portfolio.

1. Ensure the First Line Units fully capture all known liquidity risk exposures and perform ongoing analysis on bank’s liquidity positions.

This requires the employee to have a variety of skills including but not limited to measuring, analyzing and managing intraday liquidity, high liquid assets and investment collateral. The employee shall ensure the bank hold adequate liquidity positions to timely meet the payment demands against normal conditions and under stress scenarios. The employee needs to have strong data analysis and modeling background to fully understand the methodologies of liquidity risk profile and funding behaviors for better risk assessment. This requires the employee to have thorough academic understanding of financial model design and database system structure, plus a specialized theoretical knowledge of data visualization and storytelling necessary to perform such duties. Because the employee will need to build internal models based on historical data and industry modeling practices, specialized quantitative knowledge in statistics and data analytics is required to perform these complex and sophisticated model responsivities.

1. Pro-actively analyze the potential impact of regulatory or market change that may alter the CUSO liquidity risk profile.

In reaction to volatile market condition or sudden risk events, this position is to gather related information to the specific adverse stress situation or market event, analyze impacts in risk levels and gauge the risk trend to help the department management ensure the risks are well contained. The employee needs to establish cash segmentation model based on industry practices and perform customer liquidity behavior analysis to forecast the future liquidity positions and funding structures. This requires the employee performing trends and seasonality analysis to identify, assess and monitor the Bank’s potential funding gaps including but not limited to intraday payment activities, credit facility rollovers and available unencumbered asset. This will enhance the Bank’s asset liability and funding management directly.

A sample of the analysis Mr. Liu has done is attached here for your reference. **(Liquidity Reporting Dashboard)**

The analysis was performed on the Bank’s liquidity risk report including FR2052a, Liquidity Stress Testing and Cash Flow Projection etc. Mr. Liu analyzed the Bank’s cash flows, funding structure, risk profile and product complexity with a focus on the potential impact on the liquidity position and exposures. The analysis has been included in the CRO’s monthly report package and presented to the Bank senior management to provide insight and commentary on the risk management. (Customer name and sensitive information was replaced/covered for confidentiality purpose).

In Mr. Liu’s case, the graduate level courses he took in ***Applied Analytics Framework and Methods, Modern Database Architecture* and *Data Visualization and Design* at Columbia University** provided him with the theoretical academic preparation required to perform these sophisticated responsibilities.

* **Liquidity Risk Management Oversight and Monitoring (Percentage of time spent: 20%)**

1. Enhance and improve liquidity risk management policies and procedures. Improve bank’s asset liability and funding management.

This requires the employee to take a role in annual review of policies and procedures owned by Market Risk Management Department. The employee should have clear understanding and sensitiveness towards changes from regulator’s action and Head Office’s authorization, investigate historical data in previous years for recommendation to this year, and straighten out the logic of the policies or procedures. The employee needs to have strong analytical background to fully understand the department structure and operation.

1. Implement the requirement of the Bank’s risk governance framework, including Heightened Standard and Enhanced Prudential Standard.

This duty requires employee to assist in regulators’ projects towards the Bank and effective communication with outside regulators such as Fed or OCC with regard to any particular aspects of the Bank’s market and liquidity risk management. This duty is performed under the direct and close supervision of the department head. The employee needs to have strong business knowledge and analytical skills to fully understand the issue or subject. It also requires the employee to have good communication skills to put across the main points and interact well with outside officers. This also requires the employee corporate with colleagues in business lines.

1. Build strong governance in market and liquidity risk management and assesse new product’s risk impact.

Such work requires the employee to build up or refine new product/model through customer behavior analysis and modelling. This requires the employee to have a variety of skills including but not limited to measuring, analyzing and controlling market, credit, liquidity and model risks of new products or new models. The employee should utilize Excel VBA to design, test and analyze risk models, adopt open platform such as Bloomberg to test, validate and revise new products, and help the department assess the risks of the new model or product.

In Mr. Liu’s case, the graduate level courses he took in ***Strategic Communications*, *Applied Analytics in the Organizational Context* and *Applied Analytics Framework and Methods* at Columbia University** provided him with the theoretical academic preparation required to perform these sophisticated responsibilities.

* **Liquidity Risk Appetite and Limits (Percentage of time spent: 20%)**

1. Analyze, review and recalibrate liquidity risk metrics and limits, ensuring alignment with the risk appetite and tolerance defined in the Risk Governance Framework and suitability for the size and complexity of the Bank.

This requires the employee to analyze the Bank’s liquidity portfolio from multiple database systems, build up methodology to perform statistical oriented risk analysis and monitor limit usage of risk indicators and their trends, then escalates any limit breach according to the policies and procedures. The employee must be able to analyze and assess the Bank’s funding structure, risk profile, complexity and activities to ensure liquidity risk exposures align with the risk appetite and provide insight and commentary on the liquidity risk management. The employee needs to have strong statistical modeling background to fully understand the methodologies of risk appetite framework for better risk assessment.

1. Perform ongoing analysis to capture the Bank’s potential liquidity needs, exposures, and specific information related to operational deposit, funding concentration, contractual maturity mismatch, contingency funding usage and available liquid assets etc.

This requires the employee to fully understand the First Line Units’ liquidity position and exposure, evaluate their risk appetite and awareness, and develop a thorough report based on reviews. When developing reports, the employee should challenge the risk taking from First Line Units and monitor the exposure trends. The employee needs to have strong business knowledge and analytical skills to fully understand the risk profile, position and exposure of the Bank’s product and activities. It also requires the employee to refine the core influences from First Line Units’ business and have good communication skills to put across the main points and interact well with colleagues in First Line Units.

In Mr. Liu’s case, the graduate level courses he took in ***Applied Analytics Framework and Methods*, *Research Design* and *Analytics and Leading Change* at Columbia University** provided him with the theoretical academic preparation required to perform these sophisticated responsibilities.

* **Liquidity Risk Reporting (Percentage of time spent: 20%)**

1. Analyze, review and challenge Liquidity Stress Testing scenarios and assumptions.

This work require to monitor, analyze and bring forth suggestions the Bank’s Liquidity Stress Testing model to ensure the model is valid and fit-for-purpose, stress scenarios are sufficient and in compliance with EPS requirement, and various assumptions are conceptually sound and consistent across scenarios, products/accounts and planning horizon. The employee needs to have the knowledge of processing the data by using statistics such as confidence level, skewness, kurtoses, etc. in order to better understand the meaning behind the model’s data process. Besides processing data, the employee also needs to know the meanings behind the model’s stress scenarios and liquidity assumptions and analyze how it will affect the Bank’s future liquidity position and exposure.

1. Analyze FR2052a reporting data attributes and validate FR2052a LCR production process.

This duty involves validate risk data mapping and collection process, reconcile data elements across systems and ensure data attributes comply with regulatory instructions. The employee needs to have database system structure and programming knowledge to process the data and visualize the results and have knowledge in data analysis and statistics to integrate source data from multiple systems. Such work also requires the employee to validate the whole production process and monitor the model performance by industry benchmarks. The employee must be able to analyze risk data intelligently and use it to build the quantitative methodologies required to derive the exposure of the liquidity portfolio. The results of this complex review process will affect the Bank’s safety and soundness liquidity risk management practice directly.

1. Analyze and monitor Cash flow Projection.

This includes identifying, measuring and monitoring data from several departments with regard to existing cash position and forecast future cash flows. The position has to process large amount of data from different sources and aggregate them according to his financial knowledge and understanding of data analysis. The employee needs to understand complex cash flow calculation engine including contractual and behavior projection as well as its forecast assumptions and aggregation processes. The employee needs to escalate if there is anomalism in the cash flow projection.

In Mr. Liu’s case, the graduate level courses he took in ***Corporate Finance*, *Security Analysis* and *Strategic Communications* at Columbia University** provided him with the theoretical academic preparation required to perform these sophisticated responsibilities.