

## Contents of the Certificate Course of Treasury and Foreign Exchange Operations

### Learning Outcomes

Upon completing this course, participants will be able to:

- understand the operations of a treasury department.
- comprehend how different financial markets operate, along with the various products and their characteristics.
- grasp the concept of ‘Asset and Liability Management’ and become familiar with the relevant tools.
- identify ways to mitigate risks related to treasury functions.
- gain familiarity with the regulatory and compliance requirements of treasury operations.

	Content Coverage
<b>Resource person</b>	<b>Mr. Yasantha Jayasinghe, Former Executive Director, Head of FX and Rates Trading, Standard Chartered Bank PLC</b>
<b>2025.03.08</b>  (08.30 am – 10.30 am)	<b>Module 1- Introduction to Treasury</b> <ul style="list-style-type: none"> <li>• Recognise the role of the treasury within the bank - Treasury's role as a profit center</li> <li>• Identify the tools used by the Treasury to achieve its goals</li> <li>• Identify the organisational structure and functions of Treasury (i.e., Treasury Front Office, Middle Office, and Back Office)</li> <li>• Internal Controls of Treasury Function</li> <li>• Requirement for control of dealing and best practices in dealing: Individual dealer limits, per deal limits, product limits, dealing room limits, Stop Loss Limits</li> <li>• Different types of limits (internal &amp; external): Open Position Limits: Daylight, Overnight, Asset Position Limit, Intraday Limits.</li> <li>• Identify key factors in funds management</li> <li>• Liquidity and Cash Flow Management - CRR.</li> <li>• Payment &amp; Settlement Systems, SLIPS, RTGS, SWIFT</li> <li>• Dealing Room Operations: Nostro / Vostro– Open Currency Position / Cash Position by Dealers</li> <li>• Aligning treasury strategy with overall organisational goals</li> <li>• Ethics/Best Practices for Dealers</li> </ul>
<b>2025.03.08</b>  (10.45 am – 12.45 pm)  01.30 pm – 03.30 pm)	<b>Module 2 –Financial Markets</b>  Overview of the global financial markets (major markets, recent trends, Gold/oil, outlook)  <b><u>Money Market</u></b> <ul style="list-style-type: none"> <li>• Define the money market and describe the role of the money market</li> <li>• Introduction to different money market products</li> </ul>

	<ul style="list-style-type: none"> <li>• Describe the characteristics of main money market instruments: deposits, Certificate of Deposits, bankers' acceptances, T-bills, Commercial Papers, and Repos in terms of issuers/investors, methods of issue, transferability, and whether securitised or not.</li> <li>• Define and distinguish difference between domestic, foreign, and Euro money markets</li> <li>• Calculate the value of each type of instrument using quoted price in local market</li> <li>• Calculate cash flows of a repo transaction based on the value of the collateral and agreed hair cut/initial margin.</li> <li>• Define general collateral (GC) and specials with change in Repo rates</li> <li>• Day count conversion in different markets and different products</li> </ul>
<p><b>2025.03.08</b>  (03.45 pm – 05.45 pm)</p> <p><b>2025.03.09</b> (08.30 am – 10.30 am)</p> <p>(10.45 am – 12.45 pm)</p> <p>(01.30 pm – 03.30 pm)</p>	<p><b>Module 2 –Financial Markets (contd.)</b></p> <p><b><u>Foreign Exchange Market</u></b></p> <ul style="list-style-type: none"> <li>• Understand the organisation of the foreign exchange market</li> <li>• Define the exchange rate and ways of quoting the exchange rate (Direct quote and indirect quote)</li> <li>• Explain the terminology             <ul style="list-style-type: none"> <li>◦ Base currency and counter currency</li> <li>◦ Trade date and value date</li> <li>◦ SPOT/TOM/CASH/SPOT NEXT/FORWARD</li> <li>◦ FX SWAPS</li> </ul> </li> <li>• Understand the concept of two-way quote (bid and offer/ask)</li> <li>• Apply a bid/offer exchange rate as price-maker and price-taker to convert either a base or quoted currency amount</li> <li>• Describe the determinants of exchange rate</li> <li>• Explain different exchange rate regimes</li> <li>• Calculate cross currency rates</li> <li>• Calculate and explain the reciprocal rate of an exchange rate</li> <li>• Calculate the forward exchange rate given the spot exchange rate and the interest rates</li> <li>• Explain the trading mechanisms (e-platforms, through voice broker, and direct dealing)</li> <li>• Compare and contrast characteristics of different financial instruments</li> </ul>
<p><b>2025.03.09</b>  (03.45 pm – 05.45 pm)</p>	<p><b>Module 2 –Financial Markets (contd.)</b></p> <p><b><u>Practical aspects of the FX market</u></b></p>

	<ul style="list-style-type: none"> <li>• Continuous market - holiday convention, value dates</li> <li>• Cross Currency - Base currency, quoted currency - direct, indirect</li> <li>• Interbank market - maker, taker</li> <li>• Two-way quotes</li> <li>• SPOT/FWDs</li> <li>• Trading on two-way quotes</li> <li>• Quoting to customers</li> <li>• Position - NOP, currency position</li> <li>• Realised profit, unrealised profit - mark to market, average cost</li> <li>• Cross currency rates - deriving from standard quotes</li> <li>• Fundamental/technical analysis</li> <li>• USD/LKR market - CBSL, Trading process</li> <li>• Deriving FWD price using interest rates and SPOT - FWD premium/discount</li> <li>• SWAPs</li> <li>• Dealing on SWAPs</li> </ul>
<b>Resource person</b>	<b>Mr. Nilanka Abeywickrama, Head of Treasury Markets, Standard Chartered Bank PLC</b>
<p><b>2025.03.22</b> (08.30 am – 10.30 am)</p>	<p><b>Module 2 –Financial Markets (contd.)</b></p> <p><b><u>Interest Rate</u></b></p> <ul style="list-style-type: none"> <li>• Explain the concept of interest rate</li> <li>• Distinguish between nominal and real interest rates</li> <li>• Identify the determinants of interest rates</li> <li>• Understand the principles of the time value of money and net present value (NPV)</li> <li>• Calculate present value and future value using the techniques of discounting and compounding</li> <li>• Calculate simple interest using different day count and annual basis conventions</li> <li>• Fix same-day, next-day, spot, and forward value dates and maturity dates following the modified following business day convention and end-end rule.</li> <li>• Convert interest rates and yields between the money market basis and bond basis</li> <li>• Convert interest rates and yields between annual and semi-annual compounding frequencies</li> <li>• Calculate effective annual rate</li> <li>• Calculate a forward-forward rate from two mismatched cash rates</li> <li>• Calculate the value of a discount-paying money market instrument from its discount rate (straight discount) and convert a discount rate directly into a true yield</li> <li>• Plot a yield curve, describe the shape of the yield curve, describe the changes in the shape of the yield curve</li> <li>• Explain pure expectation theory, liquidity preference theory, and market segmentation hypothesis explaining the shape of the yield curve</li> </ul>

<p><b>2025.03.22</b> (10.45 am – 12.45 pm)</p> <p>(01.30 pm – 03.30 pm)</p> <p>(03.45 pm – 05.45 pm)</p> <p><b>2025.03.29</b> (08.30 am – 10.30 am)</p> <p>(10.45 am – 12.45 pm)</p> <p>(01.30 pm – 03.30 pm)</p>	<p><b><u>Fixed Income Securities Market</u></b></p> <ul style="list-style-type: none"> <li>• Define a fixed income security in terms of its terminology: price, yield, face value, coupon rate, accrued interest, yield-to-maturity, yield curve, etc.</li> <li>• Identify different types of issuers and investors of bonds</li> <li>• Understand and explain features of different types of fixed income securities; zero coupon, fixed coupon, floating rate notes, mortgage-backed securities (MBS), and asset backed securities (ABS)</li> <li>• Calculate the price, yield, coupon, time to maturity, face value, yield-to-maturity, etc., relating to fixed income securities, where all other parameters are given.</li> <li>• Describe the assumptions of yield to maturity.</li> <li>• Describe the relationship between price and yield</li> <li>• Describe the relationship between coupon, maturity, and price</li> <li>• Calculate and interpret duration and modified duration</li> <li>• Calculate the change of value of a bond for a given modified duration and a level of yield change.</li> <li>• Understand the zero-coupon yield curve.</li> <li>• Describe what happens to Fixed Income Securities in following events:             <ul style="list-style-type: none"> <li>o Payment of an income such as coupon</li> <li>o Default</li> <li>o Failure to deliver collateral</li> </ul> </li> <li>• Identify the risk of investing in bonds; market risk (interest rate risk/duration risk), credit risk, reinvestment risk</li> </ul>
<p><b>Resource person</b></p>	<p><b>Mr. Nilanka Abeywickrama, Head of Treasury Markets, Standard Chartered Bank PLC</b></p>
<p><b>2025.03.29</b> (03.45 pm – 05.45 pm)</p> <p><b>2025.03.30</b></p>	<p><b><u>Module 3 – Financial Derivative Markets &amp; Products</u></b></p> <p><b><u>Introduction</u></b></p> <ul style="list-style-type: none"> <li>• Explain the characteristics of derivatives and underlying transactions</li> <li>• Distinguish between forward commitments and contingent claims</li> <li>• Explain the differences between exchange traded derivatives and over the counter derivatives and their risks</li> <li>• Identify whether there is any arbitrage opportunity and how to trade on arbitrage</li> </ul> <p><b><u>Forwards</u></b></p> <ul style="list-style-type: none"> <li>• Understand the basic characteristics of a forward and forward-forward rates</li> </ul>

(08.30 am – 10.30 am)	<ul style="list-style-type: none"> <li>• Explain the mechanism of a forward-forward loan or a deposit</li> <li>• Identify the interest rate risk of a forward-forward loan or a deposit</li> <li>• Describe FRA as a derivative of forward-forward instrument</li> <li>• Explain the mechanics of a FRA and related terminology.</li> <li>• Calculate the price of FRA</li> <li>• Describe how to use a FRA to hedge interest rate risk while identifying the correct contract, decide whether to buy or sell a FRA</li> <li>• Identify the settlement rate and calculate the settlement amount</li> </ul>
(10.45 am – 12.45 pm)	<p><b><u>Future contracts</u></b></p> <ul style="list-style-type: none"> <li>• Understand the basic characteristics of a futures contract</li> <li>• Explain the similarities and differences of forwards and futures contracts</li> <li>• Explain how futures transactions are settled and functions of the futures exchange and the clearing house</li> <li>• Describe the margining procedure and calculate the variation margin</li> <li>• Calculate the price of a futures contract using cost and carry model</li> <li>• Calculate the profit or loss of a futures contract</li> <li>• Explain how to use futures contract to hedge an existing position</li> <li>• Understand the risks of futures contracts</li> <li>• How to close and calculate the profit or loss of a futures contract</li> </ul>
(01.30 pm – 03.30 pm)	<p><b><u>Option contracts</u></b></p> <ul style="list-style-type: none"> <li>• Define an option, call options, and put options</li> <li>• Compare and contrast option contracts with other derivative instrument</li> <li>• Define strike price, the underlying, premium, and expiry</li> <li>• Distinguish between European, American, Asian, and Bermudian style options</li> <li>• Explain the pay-off profile of an option contract</li> <li>• Define intrinsic value and time value of the option</li> <li>• Identify the main determinants of an option premium and explain how those determinants affect the option premium</li> <li>• Define option Greeks- Delta, Gamma, Theta, Rho, and Vega</li> <li>• Explain the meaning of in the money (ITM), at the money (ATM), and out of the money (OTM) relating to options and identify risks of option contracts</li> <li>• Put/Call parity</li> <li>• Understand option strategies such as straddles, strangles, etc.</li> <li>• Explain how options can be used to hedge an existing position</li> </ul>
(03.45 pm – 05.45 pm)	<p><b><u>Swaps</u></b></p> <ul style="list-style-type: none"> <li>• Explain the terminology related to SWAP transactions</li> <li>• Describe the mechanics of Interest Rate Swap (IRS)</li> <li>• Explain the terminology related to IRS</li> <li>• Differences and interpretations of Negative and Positive Swap points</li> <li>• Select the correct IRS contract to hedge interest rate risk</li> </ul>

	<ul style="list-style-type: none"> <li>• Currency/FX SWAPS and calculation of SWAP points</li> <li>• Applicability of SWAPS in cash flow management</li> </ul>
<b>Resource person</b>	<b>Mr. Yasantha Jayasinghe, Former Executive Director, Head of FX and Rates Trading, Standard Chartered Bank PLC</b>
<b>2025.03.23</b>	<b>Module 4 - Asset &amp; Liability Management (ALM)</b>
(08.30 am – 10.30 am)	<ul style="list-style-type: none"> <li>• Define the meaning and general concepts of ALM</li> <li>• Elaborate on the impact of main risk factors on the asset and the liability side of the Balance sheet</li> </ul>
(10.45 am – 12.45 pm)	<ul style="list-style-type: none"> <li>• Define Treasury’s Role in ALM and ALM’s role as a management tool in the organization</li> <li>• Understand the role of ALCO and the ALCO process</li> </ul>
(01.30 pm – 03.30 pm)	<ul style="list-style-type: none"> <li>• Understand the importance of an efficient organisational structure and its impact on ALM and describe the organisational and infrastructure set up of ALM in a bank: Parameters, risk identification, risk measurement, risk management, and related tolerance levels</li> <li>• Understand the importance of ALM information systems (Management Information System, Information availability, and accuracy)</li> </ul>
(03.45 pm – 05.45 pm)	<ul style="list-style-type: none"> <li>• Understand the use of Maturity Gap Analysis and management: interest and duration mismatches, Asset and liability management techniques</li> <li>• Explain the concept of funds transfer pricing as a mean to ensure that funding and liquidity costs &amp; benefits are transparently allocated to respective businesses and products</li> <li>• Define liquidity and its importance to a bank</li> <li>• Differentiate between managing liquidity with assets and managing liquidity with liabilities</li> <li>• Recognise the cost associated with maintaining liquidity</li> <li>• ALM function from a Practical and Performance Oriented Perspective</li> </ul>
<b>Resource person</b>	<b>Mr. Yasantha Jayasinghe, Former Executive Director, Head of FX and Rates Trading, Standard Chartered Bank PLC</b>
	<b>Module 5 - Risk Management</b>
<b>2025.04.05</b> (08.30 am – 10.30 pm)	<ul style="list-style-type: none"> <li>• Explain various types of risks faced by banks and treasury</li> <li>• Describe types of market risk; interest rate, exchange rate, equity, currency, and commodity</li> <li>• Describe the Risk management framework relating to Market Risk, Liquidity Risk, Interest Rate Risk</li> <li>• Explain, calculate, and interpret market risk measures such as Value at Risk, Expected Shortfall</li> </ul>

<p>(10.45 am – 12.45 pm)</p>	<ul style="list-style-type: none"> <li>• Explain the limitations of above market risk measures</li> <li>• Understand the default risk</li> <li>• Describe the ways of managing credit risk/settlement risk relating to treasury operations and explain the limit structures</li> <li>• Understand the credit risk mitigation techniques such as collaterals, cash settlements and netting</li> <li>• Describe the use of documentation such as MRA/GMRA, and ISDA</li> <li>• Define liquidity risk</li> <li>• Identify the importance of liquidity risk management in banks</li> <li>• Define operational risk relating to Treasury operations and explain the process of operational risk management</li> <li>• Identify and explain the sources of operational risk; system, people, processes and external events</li> <li>• Understand the importance of Business Continuity Plan (BCP) for Treasury operations and as a part of overall bank’s BCP</li> <li>• Techniques for the evaluation of risk</li> <li>• Risk management approaches</li> <li>• Risk reporting and the feedback loop</li> <li>• Interrelationships between multiple treasury risks e.g., interest rate and foreign exchange.</li> <li>• Role of treasury in supporting the business in the identification of other key non-treasury risks</li> <li>• An overview of Integrated Risk Management System</li> <li>• Segregation of duties</li> <li>• Roles, responsibilities, and reporting of front office, middle office, and back office</li> <li>• Dealing room physical and system controls</li> </ul>
<p><b>Resource person</b></p>	<p><b>Resource Person from Bank Supervision Department, CBSL</b></p>
<p><b>2025.04.05</b> (01.30 pm – 03.30 pm)</p>	<p><b>Module 6 - Regulations and Compliance</b></p> <ul style="list-style-type: none"> <li>• Treasury/Investment Policies, Operational Procedures, Guidelines, and Internal Controls</li> <li>• Ethics and Code of Conduct</li> <li>• Regulations on market conduct and treasury operations and regulatory framework</li> <li>• System for risk monitoring and controls, Limits framework</li> <li>• Systems for risk measurement and reporting</li> <li>• Policies on new products, services, and activities</li> <li>• Regulations on Liquidity risk and management</li> <li>• Regulations on foreign currency borrowings</li> </ul>

<p>(03.45 pm – 05.45 pm)</p>	<ul style="list-style-type: none"><li>• Regulations on financial derivatives</li><li>• KYC &amp; CDR Rules and Provisions on Money Laundering</li><li>• BIS FX global code</li><li>• Other regulations over Treasury operations</li><li>• Sanctions or regulatory interventions</li></ul>
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