

Contents of the Certificate Course of Treasury and Foreign Exchange Operations

Learning Outcomes

Upon completing this course, participants will be able to

- gain an understanding on operations of a treasury department,
- understand how different financial markets operate along with the different products and their characteristics,
- understand the concept on ‘Asset and Liability Management’ and be familiar with relevant tools,
- identify ways of mitigating risks related to treasury function,
- gain familiarity with regulatory and compliance requirements of treasury operations

	Content Coverage
Resource person	Mr. Nalin Basnayake, Senior Dealer, Sampath Bank PLC
2023.09.02 (08.30 am – 10.30 am)	Module 1- Introduction to Treasury <ul style="list-style-type: none"> • Recognise the role of the treasury within the bank - Treasury's role as a profit center • Identify the tools used by the Treasury to achieve its goals • Identify the organisational structure and functions of Treasury (i.e., Treasury Front Office, Middle Office, and Back Office) • Internal Controls of Treasury Function • Requirement for control of dealing and best practices in dealing: Individual dealer limits, per deal limits, product limits, dealing room limits, Stop Loss Limits • Different types of limits (internal & external): Open Position Limits: Daylight, Overnight, Asset Position Limit, Intraday Limits. • Identify key factors in funds management • Liquidity and Cash Flow Management - CRR. • Payment & Settlement Systems, SLIPS, RTGS, SWIFT • Dealing Room Operations: Nostro / Vostro– Open Currency Position / Cash Position by Dealers • Aligning treasury strategy with overall organisational goals • Ethics/Best Practices for Dealers
2023.09.02 (10.45 am – 12.45 pm) 01.30 pm – 03.30 pm)	Module 2 –Financial Markets Overview of the global financial markets (major markets, recent trends, Gold/oil, outlook) <u>Money Market</u> <ul style="list-style-type: none"> • Define the money market and describe the role of the money market • Introduction to different money market products • Describe the characteristics of main money market instruments: deposits, Certificate of Deposits, bankers’ acceptances, T-bills, Commercial Papers, and

	<p>Repos in terms of issuers/investors, methods of issue, transferability, and whether securitised or not.</p> <ul style="list-style-type: none"> • Define and distinguish difference between domestic, foreign, and Euro money markets • Calculate the value of each type of instrument using quoted price in local market • Calculate cash flows of a repo transaction based on the value of the collateral and agreed hair cut/initial margin. • Define general collateral (GC) and specials with change in Repo rates • Day count conversion in different markets and different products
<p>2023.09.02 (03.45 pm – 05.45 pm)</p> <p>2023.09.03 (08.30 am – 10.30 am)</p> <p>(10.45 am – 12.45 pm)</p> <p>(01.30 pm – 03.30 pm)</p>	<p>Module 2 –Financial Markets (contd.)</p> <p><u>Foreign Exchange Market</u></p> <ul style="list-style-type: none"> • Understand the organisation of the foreign exchange market • Define the exchange rate and ways of quoting the exchange rate (Direct quote and indirect quote) • Explain the terminology <ul style="list-style-type: none"> ◦ Base currency and counter currency ◦ Trade date and value date ◦ SPOT/TOM/CASH/SPOT NEXT/FORWARD ◦ FX SWAPS • Understand the concept of two-way quote (bid and offer/ask) • Apply a bid/offer exchange rate as price-maker and price-taker to convert either a base or quoted currency amount • Describe the determinants of exchange rate • Explain different exchange rate regimes • Calculate cross currency rates • Calculate and explain the reciprocal rate of an exchange rate • Calculate the forward exchange rate given the spot exchange rate and the interest rates • Explain the trading mechanisms (e-platforms, through voice broker, and direct dealing) • Compare and contrast characteristics of different financial instruments
<p>2023.09.03 (03.45 pm – 05.45 pm)</p>	<p>Module 2 –Financial Markets (contd.)</p> <p><u>Practical aspects of the FX market</u></p> <ul style="list-style-type: none"> • Continuous market - holiday convention, value dates • Cross Currency - Base currency, quoted currency - direct, indirect • Interbank market - maker, taker

	<ul style="list-style-type: none"> • Two-way quotes • SPOT/FWDs • Trading on two-way quotes • Quoting to customers • Position - NOP, currency position • realised profit, unrealised profit - mark to market, average cost • Cross currency rates - deriving from standard quotes • Fundamental/technical analysis • USD/LKR market - CBSL, Trading process • Deriving FWD price using interest rates and SPOT - FWD premium/discount • SWAPs • Dealing on SWAPs
<p>Resource person</p>	<p>Mr. Nilanka Abeywickrama, Head of Treasury Markets, Standard Chartered Bank PLC</p>
<p>2023.09.09 (08.30 am – 10.30 am)</p>	<p><u>Interest Rate</u></p> <ul style="list-style-type: none"> • Explain the concept of interest rate • Distinguish between nominal and real interest rates • Identify the determinants of interest rates • Understand the principles of the time value of money and net present value (NPV) • Calculate present value and future value using the techniques of discounting and compounding • Calculate simple interest using different day count and annual basis conventions • Fix same-day, next-day, spot, and forward value dates and maturity dates following the modified following business day convention and end-end rule. • Convert interest rates and yields between the money market basis and bond basis • Convert interest rates and yields between annual and semi-annual compounding frequencies • Calculate effective annual rate • Calculate a forward-forward rate from two mismatched cash rates • 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 • Plot a yield curve, describe the shape of the yield curve, describe the changes in the shape of the yield curve • Explain pure expectation theory, liquidity preference theory, and market segmentation hypothesis explaining the shape of the yield curve
<p>2023.09.09 (10.45 am – 12.45 pm)</p>	<p><u>Fixed Income Securities Market</u></p> <ul style="list-style-type: none"> • Define a fixed income security in terms of its terminology: price, yield, face value, coupon rate, accrued interest, yield-to-maturity, yield curve, etc. • Identify different types of issuers and investors of bonds

(01.30 pm – 03.30 pm)	<ul style="list-style-type: none"> 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)
(03.45 pm – 05.45 pm)	<ul style="list-style-type: none"> 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.
2023.09.10	<ul style="list-style-type: none"> Describe the assumptions of yield to maturity.
(08.30 am – 10.30 am)	<ul style="list-style-type: none"> Describe the relationship between price and yield Describe the relationship between coupon, maturity, and price
(10.45 am – 12.45 pm)	<ul style="list-style-type: none"> Calculate and interpret duration and modified duration Calculate the change of value of a bond for a given modified duration and a level of yield change.
(01.30 pm – 03.30 pm)	<ul style="list-style-type: none"> Understand the zero-coupon yield curve. Describe what happens to Fixed Income Securities in following events: <ul style="list-style-type: none"> Payment of an income such as coupon Default Failure to deliver collateral Identify the risk of investing in bonds; market risk (interest rate risk/duration risk), credit risk, reinvestment risk
Resource person	Resource Person from BSD, CBSL
2023.09.10	Module 3 - Regulations and Compliance
(03.45 pm – 05.45 pm)	<ul style="list-style-type: none"> Regulations on market conduct and treasury operations and regulatory framework System for risk monitoring and controls, Limits framework Systems for risk measurement and reporting Policies on new products, services, and activities Regulations on Liquidity risk and management Regulations on foreign currency borrowings Regulations on financial derivatives KYC & CDR Rules and Provisions on Money Laundering BIS FX global code Other regulations over Treasury operations Sanctions or regulatory interventions
Resource person	Mr. Malin Fernando, Head of Group Treasury, Hayleys PLC
2023.09.16	Module 3 - Regulations and Compliance (contd.)
(08.30 am – 10.30 am)	<ul style="list-style-type: none"> Treasury/Investment Policies, Operational Procedures, Guidelines, and Internal Controls

(10.45 am – 12.45 pm)	<ul style="list-style-type: none"> • Ethics and Code of Conduct <p>Module 4 – Financial Derivative Markets & Products</p> <p><u>Introduction</u></p> <ul style="list-style-type: none"> • Explain the characteristics of derivatives and underlying transactions • Distinguish between forward commitments and contingent claims • Explain the differences between exchange traded derivatives and over the counter derivatives and their risks • Identify whether there is any arbitrage opportunity and how to trade on arbitrage
(01.30 pm – 03.30 pm)	<p><u>Forwards</u></p> <ul style="list-style-type: none"> • Understand the basic characteristics of a forward and forward-forward rates • Explain the mechanism of a forward-forward loan or a deposit • Identify the interest rate risk of a forward-forward loan or a deposit • Describe FRA as a derivative of forward-forward instrument • Explain the mechanics of a FRA and related terminology. • Calculate the price of FRA • Describe how to use a FRA to hedge interest rate risk while identifying the correct contract, decide whether to buy or sell a FRA • Identify the settlement rate and calculate the settlement amount
(03.45 pm – 05.45 pm)	<p><u>Future contracts</u></p> <ul style="list-style-type: none"> • Understand the basic characteristics of a futures contract • Explain the similarities and differences of forwards and futures contracts • Explain how futures transactions are settled and functions of the futures exchange and the clearing house • Describe the margining procedure and calculate the variation margin • Calculate the price of a futures contract using cost and carry model • Calculate the profit or loss of a futures contract • Explain how to use futures contract to hedge an existing position • Understand the risks of futures contracts • How to close and calculate the profit or loss of a futures contract <p><u>Option contracts</u></p> <ul style="list-style-type: none"> • Define an option, call options, and put options • Compare and contrast option contracts with other derivative instrument • Define strike price, the underlying, premium, and expiry • Distinguish between European, American, Asian, and Bermudian style options • Explain the pay-off profile of an option contract • Define intrinsic value and time value of the option • Identify the main determinants of an option premium and explain how those determinants affect the option premium • Define option Greeks- Delta, Gamma, Theta, Rho, and Vega

	<ul style="list-style-type: none"> • 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 • Put/Call parity • Understand option strategies such as straddles, strangles, etc. • Explain how options can be used to hedge an existing position <p><u>Swaps</u></p> <ul style="list-style-type: none"> • Explain the terminology related to SWAP transactions • Describe the mechanics of Interest Rate Swap (IRS) • Explain the terminology related to IRS • Differences and interpretations of Negative and Positive Swap points • Select the correct IRS contract to hedge interest rate risk • Currency/FX SWAPS and calculation of SWAP points • Applicability of SWAPS in cash flow management
<p>2023.09.17</p> <p>(08.30 am – 10.30 am)</p> <p>(10.45 am – 12.45 pm)</p> <p>(01.30 pm – 03.30 pm)</p> <p>(03.45 pm – 05.45 pm)</p>	<p>Module 5 - Asset & Liability Management (ALM)</p> <ul style="list-style-type: none"> • Define the meaning and general concepts of ALM • Elaborate on the impact of main risk factors on the asset and the liability side of the Balance sheet • Define Treasury’s Role in ALM and ALM’s role as a management tool in the organization • Understand the role of ALCO and the ALCO process • 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 • Understand the importance of ALM information systems (Management Information System, Information availability, and accuracy) • Understand the use of Maturity Gap Analysis and management: interest and duration mismatches, Asset and liability management techniques • Explain the concept of funds transfer pricing as a mean to ensure that funding and liquidity costs & benefits are transparently allocated to respective businesses and products • Define liquidity and its importance to a bank • Differentiate between managing liquidity with assets and managing liquidity with liabilities • Recognise the cost associated with maintaining liquidity • ALM function from a Practical and Performance Oriented Perspective

<p>2023.09.23 (08.30 am – 10.30 pm)</p>	<p>Module 6 - Risk Management</p> <ul style="list-style-type: none">• Explain various types of risks faced by banks and treasury• Describe types of market risk; interest rate, exchange rate, equity, currency, and commodity• Describe the Risk management framework relating to Market Risk, Liquidity Risk, Interest Rate Risk• Explain, calculate, and interpret market risk measures such as Value at Risk, Expected Shortfall• Explain the limitations of above market risk measures• Understand the default risk• Describe the ways of managing credit risk/settlement risk relating to treasury operations and explain the limit structures
<p>(10.45 am – 12.45 pm)</p>	<ul style="list-style-type: none">• Understand the credit risk mitigation techniques such as collaterals, cash settlements and netting• Describe the use of documentation such as MRA/GMRA, and ISDA• Define liquidity risk• Identify the importance of liquidity risk management in banks• Define operational risk relating to Treasury operations and explain the process of operational risk management• Identify and explain the sources of operational risk; system, people, processes and external events• Understand the importance of Business Continuity Plan (BCP) for Treasury operations and as a part of overall bank's BCP• Techniques for the evaluation of risk• Risk management approaches• Risk reporting and the feedback loop• Interrelationships between multiple treasury risks e.g., interest rate and foreign exchange.• Role of treasury in supporting the business in the identification of other key non-treasury risks• An overview of Integrated Risk Management System• Segregation of duties• Roles, responsibilities, and reporting of front office, middle office, and back office• Dealing room physical and system controls