

Module Outline

Module Title:	Treasury Markets and Operations
QF Level:	Reference is being taken and pitched to HKQF Level 6
QF Credit:	30 credits for Postgraduate Diploma for Certified Banker (15 contact hours and 3 examination hours)
Teaching/Training & Learning Activities:	Training Class
Pre-requisite:	N/A

Module Objective:

This module contributes to the achievement of the knowledge and skills embedded in the Programme Intended Learning Outcomes by providing the learners an essential blend of professional and practical learning opportunity on the technical treasury operations. Learners would consolidate the previous knowledge and extend critical applications of accounting and financial knowledge in the sophisticated areas of treasury functions. Through participations and discussions, the learners would manifest tactic skills and exercise careful considerations on how and when to use what tools available for which markets.

Module Intended Learning Outcome (MILO) & Unit of Competencies (UoCs)

Upon completion of the module, learners should be able to:

MILO1:	Undertake critical analysis on the roles and functions of treasury operations in banks and demonstrate how the operations provide check-and-balance internal controls;
MILO2:	Deal with the day-to-day management of a wide range of treasury activities by market segments to fulfill the asset and liability management objectives of the bank;
MILO3	Identify the types and assess the magnitude of risks and decide on the deployment of resources and tools to implement effective risk measures and control; and
MILO4:	Conduct research on market practices and operation procedures to evaluate the effectiveness of risk control.

Assessment Activity

Type of Assessment Activity	MILOs	Weighting (%)
Examination	MILO 1-4	100

Examination Format and Duration

Time allowed: 3 hours

The examination consists of two parts:

- Part 1 – Practical Operation: 2 out of 3 essay questions
- Part 2 – Calculations and Knowledge: 2 out of 3 essay questions

Passing mark for this subject is 50%

Syllabus

Chapter 1: Treasury Management	
1	Treasury Management of Financial Institutions
1.1	- Role of Treasury's functions: <ul style="list-style-type: none"> ▪ Balance sheet management ▪ Liquidity risk management ▪ Interest rate risk and foreign exchange exposure management ▪ Management of settlement / pre-settlement credit risk
1.2	- Internal control as a protection against overexposures, errors and frauds: <ul style="list-style-type: none"> ▪ Organization structure and segregation of duties ▪ Position limits and VaR limits for dealers ▪ Monitoring and control of the dealing operation ▪ Internal audit functions ▪ Compliance issues ▪ Ethical issues - The Code of Conduct & Practice of TMA
Chapter 2: Foreign Exchange, Money Market & Derivatives	
1	Foreign Exchange Markets
1.1	- Spot market: spot rate, value date, direct and indirect quotations, reciprocal rate. One-way and two-way quotations, and cross rate
2	Money and Capital Markets
2.1	- The Hong Kong Dollar market: <ul style="list-style-type: none"> ▪ Market structure and participants ▪ The Linked Exchange Rate system and Exchange Fund operation ▪ Interbank placement and money rate (HIBOR) fixing mechanism ▪ HKMA discount window, repo between CMU member banks of USD CHATS, repo of Exchange Fund Bills and notes for intraday overdraft ▪ Certificate of Deposit, RMB corporate bond HKD Government Bond issuance program
2.2	- International market: <ul style="list-style-type: none"> ▪ Eurodollar bond, Eurozone bond, floating rate note, government securities ▪ Eurodollar Interbank Money rate (LIBOR) fixing mechanism ▪ Central bank bond repurchase programs and implication on market liquidity
2.3	- Credit: <ul style="list-style-type: none"> ▪ Managing credit spread risk and default risk

2.4	<ul style="list-style-type: none"> ▪ Credit rating and role of credit rating agencies - Bond market <ul style="list-style-type: none"> ▪ Yield curve and interest rate risk management ▪ Bond issuance for long term funding and capital management (MTN, Cocos e.g. contingent convertible bond)
2.5	<ul style="list-style-type: none"> - Offshore RMB money and capital market development <ul style="list-style-type: none"> ▪ Benchmark yield curve ▪ CNH–HIBOR fixing ▪ Shanghai FTZ and Qianhai SEZ
3	Derivatives
3.1	<ul style="list-style-type: none"> - Derivatives for hedging <ul style="list-style-type: none"> ▪ Interest rate swap and currency swap, forward rate agreement, non-deliverable forward (NDF), options, financial futures – ▪ Credit derivatives: credit default swaps (CDS) ▪ Other aspects: options pricing modeling, dealing convention (ISDA documentation), accounting principles and valuation, hedging techniques, risk consideration (distinguish hedging and speculation)
Chapter 4: Treasury Operation	
1	Treasury Operations
1.1	<ul style="list-style-type: none"> - Operations in front office <ul style="list-style-type: none"> ▪ Interbank trading, proprietary trading, corporate treasury
1.2	<ul style="list-style-type: none"> - Operations in middle office <ul style="list-style-type: none"> ▪ Treasury accounting (International Financial Reporting Standard 9), risk management, regulatory compliance, internal audit
1.3	<ul style="list-style-type: none"> - Operations in back office <ul style="list-style-type: none"> ▪ Cash management, payment and settlement processing ▪ Trades / position/ cash account reconciliation ▪ Operations process control - access right, setting levels of authorization, amendments and cancellation
1.4	<ul style="list-style-type: none"> - Treasury Markets Association Code of Conduct and Practice <ul style="list-style-type: none"> ▪ General Standards ▪ General Controls ▪ Dealing Principles ▪ Risk Management Principles ▪ Back-Office Practices ▪ Market Specific Dealing Practices and Conventions
2	Market Risk Measures
2.1	<ul style="list-style-type: none"> - Risk consideration and control: country risk, counter-party risk, market risk, operations risk and settlement credit risk
2.2	<ul style="list-style-type: none"> - Mark to market, calculation of VaR (Value at Risk), tools to manage financial risk, monitoring and compliance <ul style="list-style-type: none"> ▪ Exposures limit considerations, assessment and review process

3	Payment and settlement systems Risk Management
3.1	- Payment and Settlement systems <ul style="list-style-type: none"> ▪ RTGS clearing and settlement system – major currencies and RMB, linkage of CHATS to international settlement systems including securities clearing and custody (EuroClear) ▪ Cross border collateral management
3.2	- OTC Derivatives counterparty risk management <ul style="list-style-type: none"> ▪ Standardized OTC derivative transactions <ul style="list-style-type: none"> ◆ Cleared through Central Counterparties (CCPs), ◆ Traded on exchanges or electronic trading platforms ▪ Non-centrally cleared OTC derivative transactions <ul style="list-style-type: none"> ◆ Credit Valuation Adjustment (CVA)
Chapter 4: Case Studies	
1	Case Studies
1.1	- Risk Management & Control illustration: <ul style="list-style-type: none"> ▪ Operations risk on segregation of duties ▪ Settlement risk ▪ Liquidity risk
1.2	- Case studies on treasury fraud and/or control flaws

Essential Readings:

- HKIB. (2014). Treasury Markets and Operations (1st ed.). Wiley
- Moorad Choudhry. (2007). Bank Asset and Liability Management – Strategy, Trading, Analysis. Wiley.

Supplementary Readings:

- Andrew M. Chisholm. (2009). An Introduction to International Capital Markets: Products, Strategies, Participants (2nd ed.). Wiley.
- Heinz Rieh. (1999). Managing Risk in Foreign Exchange, Money and Derivative Markets. McGraw Hill.

Further Readings:

- Bruce Tuckman and Angel Serrat. (2011). Fixed Income Securities: Tools for Today's Markets (3rd ed.). Wiley.
- John C. Hull. (2014). Options, Futures and Other Derivatives (9th ed.). Prentice Hall
- Joseph F. Sinkey. (2002). Commercial Bank Financial Management (6th ed.). Prentice Hall
- Simon Benninga. (2014). Financial Modeling (4th ed.). MIT.
- Steiner Robert. (2012). Mastering Financial Calculations: A Step-By-Step Guide to the mathematics of Financial Market Instruments. Pearson

For more details, please refer to further reading session at end of each chapter.