The Institute of Banking & Finance Singapore

Corporate Banking Common Examination (CBCE) Study Guide

1

Industry Product Knowledge and Awareness

March 2016 (Version 1.0)

Acknowledgements

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Candidates who have passed the CBCE examinations are encouraged to continue on their learning journey by attending IBF accredited programmes.

Candidates are to note that the CBCE forms part of the assessment for the IBF Standards for Corporate Banking Level 1 Programme accredited by The Institute of Banking and Finance (IBF). For more information of this accredited programme, please visit www.ibf.org.sg.

Preface

CBCE Paper 1: Corporate Banking Common Examination – Industry Product Knowledge and Awareness

The objective of the Corporate Banking Common Examination (CBCE) is to test candidates on their understanding of the Industry Product Knowledge and Rules and Regulations for Corporate Banking.

The CBCE is intended to broaden and deepen the capabilities of corporate banking professionals in the provision of comprehensive corporate banking services. This assessment was first introduced in September 2010 by The Institute of Banking and Finance (IBF) to assess the knowledge dominant competencies of corporate bankers with 0 – 3 years of banking experience in their understanding of products and rules and regulations for corporate banking.

The Institute of Banking and Finance (IBF) has been appointed as the administrator of the CBCE. The CBCE is organized as a two-paper assessment:

CBCE Paper 1: will cover concepts on core corporate banking products on loans, cash management, trade finance, treasury solutions and basic credit evaluation.

CBCE Paper 2: will cover rules and regulations governing the banking and corporate banking industry.

Candidates will have to pass both papers in order to be deemed to have passed the CBCE. The CBCE assessment will be conducted at the IBF's Assessment Centre. The Assessment will comprise of multiple-choice questions, and will include both questions testing on concepts, as well as computations.

Candidates are expected to have prepared themselves adequately for the Assessment through the use of the Study Guide as well as other relevant reference materials.

Please refer to the IBF's website at www.ibf.org.sg for the rules and regulations regarding the CBCE assessment.

Organisation of the Study Guide

The CBCE Paper 1 Study Guide consists of 6 chapters, starting with an overview of the Corporate Banking industry.

Each chapter begins with a list of learning objectives, followed by a chapter introduction which provides an overview of the chapter. Examples are used where appropriate in the Study Guide to enhance candidate's understanding of key learning points and application of issues discussed.

A summary of each chapter is provided below:

CBCE Paper 1

Chapter 1: Overview of Corporate Banking Industry
Provides an introduction to the corporate banking industry and its interrelationships with the various market segments. It also highlights the core corporate banking products and services.

Chapter 2: Commercial Loans
Provides an introduction to the various types of commercial loans, interest rate framework, loan repayment structures, and interest rate calculation methodologies.

Chapter 3: Cash Management
Provides an introduction of various cash management solutions for payment and collection management and liquidity management for corporates.

Chapter 4: Trade Finance
Provides an overview of the various types of trade financing products for corporates.

Chapter 5: Treasury Solutions
Provides an overview of the various types of treasury solutions including foreign exchange, derivatives (options, forwards, swaps), structured products, bonds and money market instruments for corporates.

Chapter 6: Credit Evaluation
Provides an overview of the lending process and the application of basic credit evaluation framework, qualitative analysis, quantitative analysis and risk mitigation measures for structuring a credit proposal for corporates.

To assist candidates in the review of the study materials, we have included a set of review questions and answer key, at the end of the Study Guide.

Study Guide Updates

The CBCE Paper 1 Study Guide will be updated at appropriate intervals to reflect changes and developments in the corporate banking industry. Candidates should ensure that they have the latest version of the Study Guide before sitting for the examination. Please refer to the IBF website at www.ibf.org.sg or contact IBF directly to check for the latest updates.

The Study Guide is available in electronic (e-book) format. Candidates may request for printed hardcopies of the Study Guide at an additional fee of S$32+GST.

Candidates should note that the study guide contains information believed to be correct, current or applicable as at 31 December 2015.

Important Notes about the Exam

The CBCE Paper 1 Exam is conducted at the Assessment Centre of IBF. This examination comprises of 80 multiple-choice questions (MCQ). The duration for the examination will be 1.5 hours.

The passing mark is 70%.

The CBCE Paper 1 Exam includes questions that test candidates' knowledge, understanding and application of the relevant product offerings of Corporate Banking.

Chapter 1 on "Overview of Corporate Banking Industry" will not be tested in the CBCE Paper 1 Examination.

For more information on the examination rules, regulations and other administrative procedures, please refer to the IBF website at www.ibf.org.sg.

Contents

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Chapter 1:
Overview of Corporate Banking Industry

Learning Objectives

The candidate should be able to:

- ✓ Gain an overview of the banking and financial services industry
- ✓ Differentiate the roles and functions of different banking segments
- ✓ Understand the banking and financing needs of corporations
- ✓ Know the core corporate banking products and services

1.1 Introduction

This chapter provides an overview of the banking and financial services industry, including the roles, functions, and interrelationships of different banking segments. A brief introduction on the core corporate banking products and services, namely commercial loans, cash management, trade finance and treasury solutions, and how they meet the financing needs of corporates, are discussed.

1.2 Overview of Banking and Financial Services Industry

The banking business is traditionally defined as the business of receiving money and offering loans to customers. The traditional role of banks is, therefore, to act as an intermediary for collecting deposits, which together with its own capital, lends funds to customers of both individuals and companies.

Banks typically offer lower interest rates to customers for their deposits than the interest rates charged for the loans they extend. The difference in interest rates for deposits and loans is referred to as the "spread". In addition to earning spreads, banks charge various fees for providing other services such as account maintenance fees, management fees, advisory fees, commissions, and sales charges.

As the economy develops, supported by rapid advancements in technology, the role of banks has expanded to include the provision of other financial services.

Technological changes also allow banks to offer their products and services via e-banking, widening their reach and distribution beyond physical branches.
The banking and financial services industry can be broadly segmented by the following key activities:

- Corporate banking
- Transaction banking
- Treasury services
- Investment banking
- Custodian and security services
- Consumer/retail banking
- Wealth management
- Asset management
- Insurance

1.2.1 Corporate Banking

Corporate banking engages in lending and the offering of banking services to large corporates, multi-national companies (MNCs), government and public sector agencies, financial institutions, as well as small-and-medium enterprises (SMEs).

Key corporate banking products and services include:

- Loans and credit facilities
- Transactional services
- Corporate treasury services

A bank can leverage off its lending relationship to expand its customer base for its investment banking activities, and its retail distribution network for capital market fund raising and investment products. The senior management team of a bank's corporate customers is a good source of potential customers for its wealth management banking business.

1.2.2 Transaction Banking

Transaction banking serves corporate customers' needs for cash management, international trade financing, as well as custodian and security services. Commercial products and services offered include domestic and cross-border payment and settlement, liquidity management solutions, trade and supply chain financing solutions, trust, agency, depository, custodian and related services.

1.2.3 Treasury Services

Banks deal in foreign exchange (FX) and a wide range of financial instruments in the financial markets, for themselves and their corporate customers. Banks' treasury sales desks market to corporate customers and serve their needs to hedge currency and interest rate exposures, trade money market instruments

and bonds to enhance returns on surplus funds, or trade on interest rate and FX fluctuations using financial instruments such as forwards, swaps, options and futures.

1.2.4 Investment Banking

Investment banks provide corporate financing and advisory services to corporate customers, such as:

- Taking the company public via initial public offering of shares
- Mergers and acquisitions
- Corporate restructuring, spin-offs, de-listing and/or re-listing
- Equity fundraising in secondary markets via rights issues and placements of shares
- Fundraising in debt capital market via issuance of bonds

In some transactions, the investment banking unit works with the corporate banking division to provide financing (e.g. bridging loan and project financing) for the customers. When cross-border transactions are involved, the treasury division may also help to hedge exposures in currency and/or interest rates.

1.2.5 Consumer/Retail Banking

Consumer banking involves deposit-taking and offering loans to individual retail customers. Such loans are typically extended in the form of car loans, mortgage loans, overdrafts or other credit facilities.

The range of products and services offered to the retail segment is typically less complex than those offered to corporate customers.

1.2.6 Wealth Management

With the growing affluence of retail customers, banks have increasingly segmented the market to serve mass affluent and high net-worth (HNW) private banking customers. Wealth management services include investment advisory, discretionary portfolio management, trust and estate planning services

The banking relationship with HNW customers is multi-faceted and goes beyond the bank-individual relationship. Such HNW customers could be the management of a corporation that utilizes the bank's corporate credit facilities, transactional and treasury services and/or investment banking services for capital market transactions.

1.2.7 Asset Management

Some banks set up investment or asset management units to manage institutional or retail funds, to capture more fee-based income, based on assets

under management (AUMs). The fund management unit accepts funds from customers and invests them in portfolios consisting of different asset classes with the aim of generating higher returns.

HNW customers from the wealth management segment have now emerged as the key target segment to grow AUMs. Banks target retail investors by launching collective investment schemes such as unit trusts or mutual funds, which are distributed through the bank's retail network.

1.2.8 Insurance

Some banks work with insurance companies to provide insurance products to their corporate and retail customers for protection and risk mitigation.

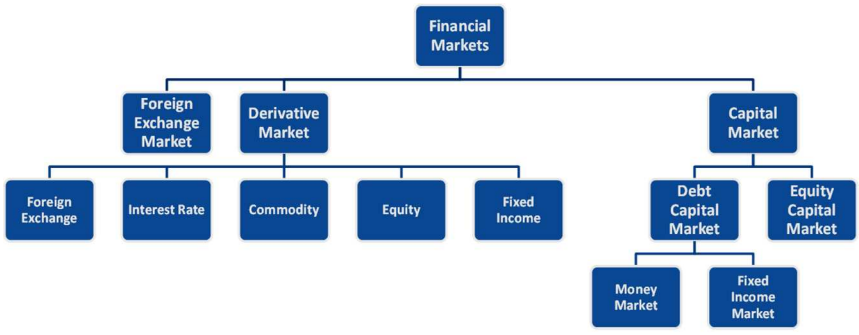
For example, XYZ bank has granted a mortgage loan to a borrower to purchase a factory. Unless the borrower has taken up fire insurance from the bank's approved panel of insurance companies, the bank may make a referral to its preferred insurance partner to underwrite the fire insurance. This will protect the bank's interest as it has taken the property as collateral for the loan.

1.3 Financial Markets Overview

Financial Markets are broadly segmented into capital market and treasury market. Capital market is further segmented into equity capital market and debt capital market. Debt capital market is also sub-divided into money market (for short-term instruments up to one year) and fixed income market (for instruments that mature after one year).

The treasury market comprise of the foreign exchange market and derivatives market. The derivatives market trades financial instruments whose underlying assets can be foreign exchange, interest rate, commodity, equity or fixed income instruments.

Diagram 1.3: Financial Markets



Financial markets can be highly structured and organized, such as regulated exchanges, or less formally structured, such as the Over-the-Counter (OTC) market.

1.3.1 Organized Exchanges

Organized Exchanges, such as the Singapore Exchange (SGX) and the New York Stock Exchange (NYSE) have legally enforceable rules and regulations governing trading activities. Transaction costs, such as commissions and fees, would typically be incurred for trading on exchanges.

Traditionally, an Exchange was a physical trading location where traders congregate to conduct businesses. However, with advancements in technology, most trading activities are now conducted electronically, and a physical trading floor is no longer common.

The core functions of an exchange are to ensure fair, orderly and transparent trading of securities, by facilitating price and volume discovery, as well as to ensure proper settlement of transactions to protect the interest of investors. A broad range of financial instruments including shares, equity, commodity and currency derivatives are traded on Exchanges.

1.3.2 Over-the-Counter (OTC) Market

An OTC market has no centralized trading mechanism for price and volume discovery, and is governed by guidelines, recommendations and common practices among market participants. Arbitration of disputes is presided over by market committees, such as the Singapore Foreign Exchange Market Committee (SFEMC), which has no judicial powers, but make recommendations to its members.

1.3.3 Foreign Exchange Market

The Foreign Exchange Market is a wholesale market in which participants are able to buy and/or sell currencies. Participants are banks, central banks, non-bank financial institutions (e.g. asset management companies, hedge funds), brokers and corporates. It is an OTC market where FX trades are transacted directly between participants via established electronic trading platforms and/or FX brokers.

1.3.4 Derivatives Market

The Derivatives Market is the financial market where financial instruments like futures, options, swaps that derive their values from an underlying asset, such as foreign exchange, interest rate, commodity, equity or fixed income, are traded. Derivatives can be traded on exchanges (e.g. futures, options) or over-the-counter (e.g. forward, swaps).

1.3.5 Debt Capital Market

The Debt Capital Market is a market where governments, banks and corporates can raise funds by issuing debt instruments, which are also known as fixed

income securities. The market is sub-divided into money market for debt instruments that mature between 1 day to 12 months, and the fixed income market for debt instruments with maturity of more than one year.

Money market instruments include treasury bills issued by governments, certificate of deposits issued by commercial banks and commercial paper issued by corporates.

Fixed income securities, commonly known as bonds, can be issued by governments, financial institutions or corporates. Maturity can ranges from one year to 30 years.

1.3.6 Equity Capital Market

An Equity Capital Market is a market where various types of equity instruments such as shares, preference shares, warrants etc. are issued and traded, either through exchanges or over-the-counter markets. It is also commonly known as the stock market, which gives companies access to capital, and investors a slice of ownership in a company with the potential to realize gains based on its future performance.

1.4 Banking and Financing Needs of Corporates

Corporate banking can be sub-divided into various segments, depending on size, complexity of businesses and their banking and financing needs.

Segmentation varies from bank to bank, but would typically be as follows:

- Small-medium-enterprises
- Mid-size local corporations
- Large local corporates
- Multi-national corporations
- Government-linked corporations
- Public agencies
- Non-bank financial institutions

Common banking and financing needs of corporates include:

- Financing for the purchase of capital assets (e.g. building, machinery)
- Providing working capital for businesses
- Financing international trade imports and exports
- Managing liquidity (e.g. pooling of funds)
- Handling and processing of financial transactions (e.g. payment to suppliers, collection from customers, processing of staff payroll)
- Mitigating financial risks (e.g. hedging of foreign exchange exposures)

1.5 Core Corporate Banking Products & Services

Banks and financial institutions offer a range of core corporate banking products and services to meet the needs and requirements of their corporate customers. The core corporate banking products and services are commercial loans, trade finance, cash management and treasury solutions.

1.5.1 Commercial Loans

Commercial loans are credit facilities extended to customers to provide funding for working capital, purchase of productive assets, construction projects and/or business acquisitions. Common types of financing include working capital, asset-based, cash flow and project financing. Each type of financing has different risks and repayment sources.

1.5.2 Trade Finance

Banks provide credit facilities and services to finance their customers' international trade. Trade financing can be for the buyer or seller, for importing or exporting of goods from one country to another.

Common types of trade finance instruments include open account, documentary collection, letters of credit, bank guarantees, factoring, import and export financing. Each instrument has different features and functions that can be applied to meet various needs and mitigate certain risks for the customers.

1.5.3 Cash Management Solutions

The key building blocks of cash management services aim to provide liquidity, collection and payment solutions. Common tools include cash pooling, electronic collections, lockbox service, and electronic fund transfer services (e.g. GIRO and FAST). These fee-based services offered by the banks help customers shorten their cash conversion cycle, maximize flexibility and improve liquidity, which ultimately translate into lower funding costs and higher profitability for the customers.

1.5.4 Treasury Solutions

Banks offer treasury solutions to help corporates manage their foreign exchange and interest rate risks, and improve the yield on their surplus funds. Corporates can enter into forward, swap or option contracts to hedge their currency or interest rate exposures.

More details on the core corporate banking products will be discussed in Chapters 2 to 5.

1.6 Summary

In this chapter, we have learnt:

- The key roles, functions and interrelationships of various banking segments including corporate banking, transaction banking, treasury services, investment banking, retail banking, wealth management, asset management and insurance.

- Market segmentation of corporate banking by size and complexity of business such as SMEs, MNCs, public agencies and financial institutions.

- The core corporate banking products and services are commercial loans, trade finance, cash management and treasury solutions.

Chapter 2:
Commercial Loans

Learning Objectives

The candidate should be able to:

- ✓ Know the different types of loans and purpose of financing
- ✓ Learn the key features of syndicated loans
- ✓ Understand the interest rate framework and related fees
- ✓ Differentiate instalment payment methods and repayment structures

2.1 Introduction

Businesses need funds to finance the working capital and/or investments in the operations. *A **commercial loan*** is a debt arrangement whereby a bank/financial institution *(lender)* provides funds to a company/business (*borrower)*. In addition to making repayment of the original loan amount (the *principal*), the borrower also needs to service the periodic loan interest payment.

This chapter looks at the basic types of commercial loans that are used to finance different purposes, and how lenders may demand some form of securities to mitigate credit risk. We will also discuss the loan relationship between two parties (bilateral loans) and multiple parties (syndicated loans), interest rates framework, instalment payment methods and repayment structures.

2.2 Types of Loans and Purpose of Financing

Loans can be classified according to the purpose of financing with various risks and repayment sources. The common classifications include:

- Working capital financing
- Asset based financing
- Cash flow financing
- Mortgage financing
- Project financing

2.2.1 Working Capital Financing

Working capital is the amount of funds a business needs in running its daily operations. It arises due to the differences in timing between making payments for the cost incurred, and delay in the collection of revenue due to credit terms given to the buyers.

The amount of working capital required depends on the following factors:

- Amount of inventory required and the stocking period
- Amount of trade credit and credit period given to buyers
- Amount of suppliers' credit and credit period received from suppliers

There are different types of short term financing that banks offer to support businesses. Generally, the purpose is to finance:

- The purchase of inventory
- The account receivables
- Wages and general overheads incurred

Depending on the credit standing of the borrower, banks may require different forms and amounts of security for the credit lines granted.

2.2.2 Asset Based Financing

Asset based lending is a form of secured lending to fund business growth (e.g. vessels, inventory), based on the value of the asset pledged as the collateral by the borrower. The borrowers are typically smaller-sized companies that may not have easy access to the capital markets to raise additional capital, and thus have problems generating additional cash flow to fund expansion or growth.

The source of repayment comes from the revenue generated from the asset and/or the liquidation of the asset financed.

For example, the bank may grant the company a $5 million loan secured by equipment valued at $15 million which is not encumbered. The cash flow from the expansion in production capacity will be used to service the loan interest and repay the loan. The bank may also grant the company a $5 million loan secured by the company's palm oil shipment worth about $25 million. When the shipment is sold, the sales proceeds are used to repay the loan.

2.2.3 Cash Flow Financing

This is a form of financing in which the loan is backed by the borrower's expected cash flows. This differs from an asset backed loan, where the lender looks towards the collateral for the loan as a source of repayment. The loan is generally used to finance capital expenditure or business expansion.

The loan is usually structured as a term loan and the repayment schedule for cash flow financing is based on the company's projected future cash flows.

Lenders therefore place great emphasis on the cash flow from the business operations. Debt covenants on these loans are typically focused on adequate levels of cash flow from operations.

2.2.4 Mortgage Financing

This is a subset of cash flow financing extended to finance the purchase of residential, commercial or industrial property. The property is expected to generate cash flow from the business operations or rental income to service the mortgage loan.

To mitigate the risk of not generating sufficient cash flow to service the repayment of interest and principal amount, the mortgage loan is secured against the property. Independent valuation is usually done on the property to determine its value. A haircut[1] is typically applied to determine the financial quantum of the loan.

Mortgages in Singapore are subject to regulations on the quantum and tenor of the loan. These regulations are discussed in the study guide for CBCE Paper 2 under Chapter 2 – Relevant Laws and Regulations for Corporate Banking.

2.2.5 Project Financing

Project financing provides long-term funding for specific projects, typically involving the construction of large infrastructure such as highways, power plants, oil refineries, natural gas pipelines and telecommunication networks. Project financing involves multiple stakeholders such as the project sponsor, borrower, financier, regulator, technical, legal and financial advisors across regional and/or international jurisdictions.

The project sponsor, the entity that owns the project, generally sets up a Special Purpose Vehicle (SPV) to raise the necessary financing and executes the project. Loan size is usually large and long-term, with tenure of 15 to 20 years.

The source of repayment is the cash flow generated when the project is completed, begins operation and starts generating revenue. The complexity of the project and financing arrangement, deal size and long loan tenure, expose the lenders to risks such as delays in the completion of the project, performance and revenue shortfalls. To mitigate such risks, lenders look to the track record of the various stakeholders, as well as completion and payment guarantees provided by various parties. Stringent project monitoring and control is undertaken to ensure that key project milestones are met, and project cost and profitability are on track.

[1] a haircut is the difference between the market value of an asset used as loan collateral and the amount of the loan.

Table 2.2: Types of Loan Financing

	Working Capital Financing	Asset Based Financing	Cash Flow Financing	Mortgage Financing	Project Financing
Purpose	Provide funding for inventory, trade receivables, and general working capital e.g. overheads	Provide funding for the acquisition of assets	Provide financing for capital expenditure or business expansion	Provide financing for acquisition of residential or commercial properties	Provide financing for large projects
Tenure	Short to medium term	Medium to long term	Medium to long term	Medium to long term	Long term
Sources of Payment	Sale of inventory or collection of receivables	Revenue generated from the asset or from liquidation of the asset	Expected cash flow from business operations	Revenue generated from the operation or rental of the property	Revenue generated from the completed project deliverables
Risk	Inability to sell its goods and collect payment due	Inability to generate revenue from the asset or a fall in the asset's value	Inability to generate sufficient cash flow from operations	Inability to generate sufficient revenue or a fall in the value of the property	Inability to complete the project or shortfall in projected revenue after completion
Protection	Provide short-term funding backed by liquid assets or high quality receivables	Apply haircuts to the asset's projected future value and lending amounts lower than this value	Impose debt covenants that focus on ensuring adequate levels of operating cash flow	Exercise a lien on the property for collateral or apply haircuts to the value of the property in determining the loan quantum	Employ robust evaluation of stakeholders or stringent control of the project costs and delivery

2.2.6 Secured vs Unsecured Loans

Depending on the credit risk of the borrower, a lender may extend a loan on a secured or unsecured basis.

For ***Secured Loans***, the lender would require a security before extending the loan to the borrower. Such security can be in the form of collateral, i.e. tangible assets or intangible assets such as patents and intellectual property, or credit support (e.g. guarantees, indemnities). In the event that the borrower defaults

and fails to repay the loan, the lender has the right to recover the outstanding loan by liquidating the security, or seek payment from the guarantor.

Unsecured Loans are loans which are extended without any form of collateral held by the lender. As a result, the expected loss of unsecured loans is higher than that of secured loans, because the lender would not have any claim on any specific assets of the borrower to recover the outstanding loan. The lender's only recourse is to make a claim on the borrower's general assets as an unsecured creditor.

Loans secured solely by personal or corporate guarantees are generally deemed unsecured loans. While the personal or corporate guarantees provide some level of comfort to the lender, the recoverable amount in the event of default is very uncertain.

2.2.7 Committed vs Uncommitted Loans

Loan facilities can be offered on a committed basis or uncommitted basis.

In the case of ***Committed Loan facilities,*** the bank has a legally binding agreement with its customer, which gives the customer the right to borrow funds, up to the stipulated limit. The facility would be subject to specific terms and conditions, including the purpose of the funds borrowed, and measures of the borrower's ability to repay the loan (such as its credit rating). So long as the borrower meets these pre-agreed conditions, it retains the right to borrow from the bank.

This is especially important to corporate borrowers when planning major strategic activities, such as mergers and acquisitions. The corporate would want to avoid a situation where the terms of the merger are successfully negotiated, but is unable to raise the funding to complete the deal.

Banks would typically charge a fee for committed loan facilities, in addition to the usual interest rate charges. Subject to the loan agreement, banks could also charge cancellation fees should the loan be arranged and subsequently cancelled by the borrower. Cancellation fees would typically be charged based on the cancelled amount.

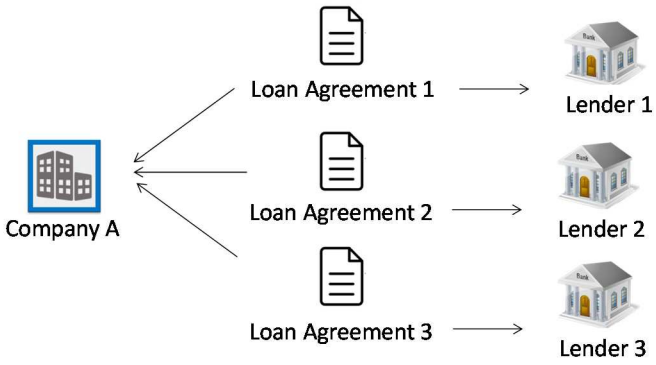
For ***Uncommitted Credit facilities,*** the lender is not obligated to extend the loan, even after the loan documentation between the borrower and the bank has been completed. The bank has the right to revoke or cancel the facility at the bank's discretion, or upon the occurrence of specific conditions tied to the facility, such as a delay in the repayment of periodic installments or a downgrade in the borrower's credit rating.

2.3 Key Features of Bilateral and Syndicated Loans

2.3.1 Bilateral Loan

A ***Bilateral Loan*** is a loan arrangement between one lender and one borrower. The loan is typically used to fund day-to-day operations and/or acquisition of production assets, and loan size is small relative to the overall lending capacity of the lender. Loan agreement and documentation are simpler compared to those for syndicated loan, since the terms and conditions are negotiated between two parties.

Diagram 2.3.1: Bilateral Loan



2.3.2 Syndicated Loan

A ***Syndicated Loan*** is a loan arrangement provided by more than one lender to a single borrower, usually involving a large loan size. Syndicated loans allow lenders to spread the concentration risk to a single borrower. The participating banks may sell their portion of the syndicated loan in the secondary market.

Generally syndicated loans are initiated when the borrower approaches a lender with whom the borrower has an existing relationship. This lender (the *arranger bank)* goes to the market to recruit other interested lenders or *participating banks*. Each bank in the syndicate acts on a several basis and is not responsible for the performance of the other participating banks. That is, if one bank fails to honor its commitment, the other members of the syndicate have no obligation to make good the commitment.

There are 2 types of syndicated loans – ***Underwritten Deal*** **and** ***Best-Effort Syndication*****.**

In an ***Underwritten Deal***, the underwriter guarantees the required amount to the borrower, if the commitments from the participating banks fall short. The underwriter may underwrite a part or the entire amount of the syndicated loan.

For ***Best-Effort Syndication***, the loan amount raised by the arranger depends on how much the participating banks are prepared to commit, and may fall short of the amount required by the borrower.

An Agent bank coordinates all negotiations, payments, collection and administration on behalf of the lenders after the loan agreement has been signed. The syndicated loan agreement is signed by all parties – borrower, lenders, arrangers and agents. It details a common set of terms and conditions that apply to all lenders on all aspects of the transaction, except for fees and commitment amount.

Diagram 2.3.2(a): Syndicated Loan at Award of Mandate

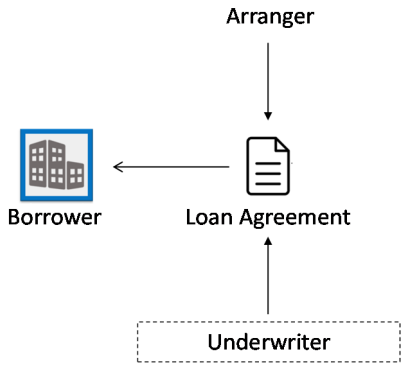
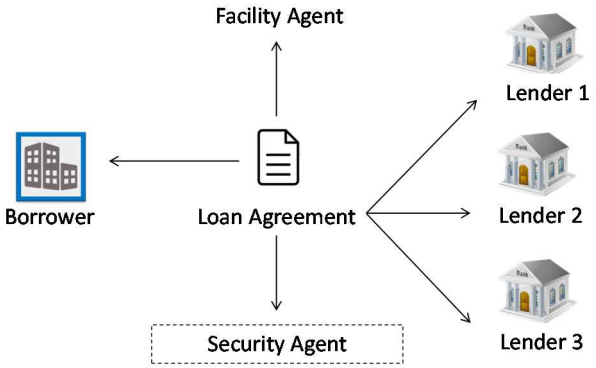


Diagram 2.3.2(b): Syndicated Loan at Signing of Loan Agreement



In a syndicated loan arrangement, there must be an award of mandate by the borrower to the lead arranger. In return, the lead arranger will arrange with the respective lenders and setup the loan agreement and have it signed with the borrower.

Club Loans, also referred to as a private placement based on a take-and-hold strategy, are syndicated deals put together by the borrower. The borrower invites a small group of relationship banks which agree to take up and hold a "syndicated" loan at the outset of the transaction. There is no intention of reducing the commitment to lend through a subsequent syndication.

There is no need for an agent bank, arranger or underwriter in a club loan, which lowers the cost of borrowing for the borrower, and generates higher returns for the participating banks.

2.4 Interest Rate Framework

2.4.1 Types of Interest Rate

Interest is the amount paid by the borrower for the use of money provided by the lender. It is expressed as a percentage of the principal amount borrowed. Interest rates can be either fixed or variable over the loan tenure. Interest can be computed on annual, semi-annual, quarterly, monthly or daily rest.

1. Fixed Interest Rate

Interest rate is fixed and remains unchanged for the entire tenure of the loan. Such interest rates are used when borrowers think that the interest will rise over time.

2. Floating interest rate

Interest rate is pegged to certain market benchmarks and is adjusted according to fluctuations in the benchmark during the term of the loan. The common benchmarks are the London Interbank Offered Rate (LIBOR), the Singapore Interbank Offered Rate (SIBOR), prime lending rate and the Singapore swap offer rate (SOR).

3. Flat Interest Rate

It is a form of fixed interest rate. A flat interest rate is charged on the initial principal for the entire tenure of the loan, without taking into consideration that the periodic repayments reduce the principal amount. Hire purchase financing uses flat interest rate.

2.4.2 Market Benchmarks

Floating interest rates are quoted with reference to some market benchmarks. The common benchmarks are LIBOR, SIBOR, SOR or prime lending rate. Floating interest rates are quoted as a spread over the market benchmark e.g. LIBOR + 2% or Prime + 1%.

1. The London Interbank Offered Rate (LIBOR)

LIBOR is the average interest rate that a group of large and reputable participating banks in the London interbank money market can borrow unsecured funds from other banks. There are a total of 35 different LIBOR rates calculated and published daily, for 5 currencies (CHF, EUR, GBP, JPY and USD) and 7 maturities from overnight to 12 months.

2. The Singapore Interbank Offered Rate (SIBOR)

SIBOR is a reference rate based on the interest rates used by banks in Singapore when lending unsecured SGD funds to each other. It is administered by the Association of Banks in Singapore (ABS).

3. The Singapore Swap Offer Rate (SOR)

SOR is defined as the synthetic rate for deposits in SGD, which represents the effective cost of borrowing the SGD synthetically by borrowing USD for the same maturity, and swap out the USD in return for the SGD.

4. Prime Lending Rate

It refers to the interest rate that banks charge their most creditworthy customers. This can vary from bank to bank, depending on their cost of funding.

2.4.3 Interest Rate Calculation Methodologies

The amount of interest payable can vary, depending on the method of calculation used.

The main considerations when calculating interest payable are:

- Day count basis for the currency in question - 360 or 365 basis
- Interest rate basis such as annual versus monthly rest

1. Day Count for Different Currency Loans – 360 or 365 days

Different currencies assume different number of days in a year when calculating interest. Most currencies, including the USD, JPY and EUR, use a 360 day-count convention for computation of interest. Some currencies, such as the SGD, use a 365 day-count for computation of interest.

The number of days in a year used in the loan interest computation can either be based on actual or approximation i.e. 360 or 365 days.

Example – 360 or 365 Basis

A loan starting on 6th June and ending 10th August would be treated as having 66 days. If interest rate is at 5% per annum for the $1 million loan, interest incurred for the period will be $9,041.10 ([66/365] x 5%).

If the approximation method is used, every month is assumed to have 30 days and 360 days in a year. A loan starting on 6th June and ending 10th August would be treated as having 65 days. If interest rate is at 5% per annum for the $1 million loan, interest incurred for the period will be $9,027.78 ([65/360] x 5%).

2. Interest Rate Basis

Interest rate can be calculated based on annual, quarterly, semi-annual, monthly or daily rest. The effective interest rate can vary depending on the basis of computation and the frequency of instalments.

For example, for a loan with interest charged on a monthly rest basis, the loan interest will be calculated based on the previous month's outstanding balance.

If interest is charged on a daily rest basis, then the loan interest will be computed daily based on previous day's outstanding balance. This is typically used for overdraft computation. If the instalment is paid monthly but based on annual rest, this loan will effectively cost more than a loan based on monthly or semi-annual rest.

2.4.4 Loan Instalment Calculation

The method used to calculate the instalments of a loan would affect the periodic repayment amounts. The following are common methods of instalment calculation.

1. The **Equal Principal Method** calculates periodic repayment amounts such that an equal amount of the principal borrowed is returned each period. This method will result in a decreasing instalment amount and a decreasing amount of interest paid in each period.

2. The **Equal Instalment Method** involves constant instalment payment in each period. Part of the instalment is for principal repayment, with the balance for interest. Given that the outstanding principal amount, and hence interest payable, gets lower each period, the amount of principal being repaid in each period increases.

3. The **Flat Rate Method** also gives constant periodic instalments, but actually results in a higher effective interest rate as compared to the Equal Installment Method.

The differences between the above methods are best illustrated below:

Example – Loan Instalment Calculation

Let us assume a loan with the following details.
Principal = $10,000
Interest Rate = 5%
Tenor = 5 years
Installment period = 1 year

1) The ***Equal Principal Method*** would give the following payment schedule:

Year	Periodic Installment	Principal Portion	Interest Portion	Remaining Principal Balance
1	$2,500	$2,000	$500	$8,000
2	$2,400	$2,000	$400	$6,000
3	$2,300	$2,000	$300	$4,000
4	$2,200	$2,000	$200	$3,000
5	$2,100	$2,000	$100	$0

Total interest paid on this loan is $1,500.00. Note the constant principal repayment of $2,000 per year.

2) The ***Equal Installment Method*** would give the following payment schedule:

Year	Periodic Installment	Principal Portion	Interest Portion	Remaining Principal Balance
1	$2,309.75	$1,809.75	$500.00	$8,190.25
2	$2,309.75	$1,900.24	$409.51	$6,290.01
3	$2,309.75	$1,995.25	$314.50	$4,294.76
4	$2,309.75	$2,095.01	$214.74	$2,199.75
5	$2,309.75	$2,199.75	$109.99	$0

Total Interest paid on this loan is $1,548.74. Note the constant periodic installments of $2,309.75.

3) The ***Flat Rate Method*** would give the following payment schedule:

Year	Periodic Installment	Principal Portion	Interest Portion	Remaining Balance
1	$2,500	$2,000	$500	$8,000
2	$2,500	$2,000	$500	$6,000
3	$2,500	$2,000	$500	$4,000
4	$2,500	$2,000	$500	$3,000
5	$2,500	$2,000	$500	$0

Total Interest paid on this loan is $2,500. Note the constant periodic installments, principal and interest portions.

2.4.5 Repayment Structures

The common types of loan repayment structures include:

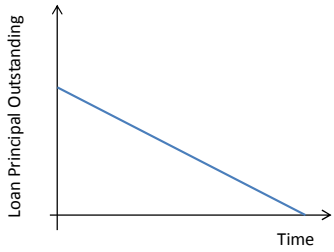
- Equal Amortisation Repayment
- Balloon Repayment
- Bullet Repayment

1. Equal Amortisation Repayment

With **Equal Amortisation Repayment**, the loan principal is gradually reduced over the tenure of the loan using the equal principal or equal installment

method described earlier. As a result, the interest paid during the loan tenure also falls with the declining loan principal.

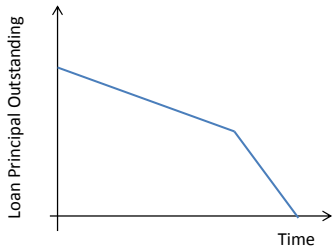
Diagram 2.4.6 (a): Equal Amortisation Repayment



2. Balloon Repayment

For **Balloon Repayment**, the borrower pays smaller instalments in the early stages and larger instalments at the later stage of the repayment schedule. This structure can be attractive to borrowers with limited repayment capacity at the beginning and to match their cash flow.

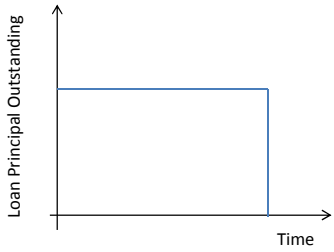
Diagram 2.4.6 (b): Balloon Repayment



3. Bullet Repayment

For **Bullet Repayment**, the loan principal is repaid in one lump sum on the maturity of the loan. Only interest on the loan amount is paid in the interim period. This repayment structure presents the highest risk to the lender.

Diagram 2.4.6 (c): Bullet Repayment



2.5 Other Loan Related Fees

In addition to interest cost, lenders may impose other fees related to the loan of the following.

1. Commitment fees

Commitment fees are payment related to the Committed Loan facilities discussed in section 2.2.7 of this chapter.

2. Arrangement fees

These are fees that are associated with the arrangement of the loan. They can also be viewed as administrative or management fees.

3. Cancellation fees

These are fees imposed on the borrower for cancelling a previously arranged loan. When the borrower cancels a loan, the lender may incur losses due to processing and administrative costs which have been spent in arranging the loan.

Cancellation fees imposed on the borrower would help to defray the losses incurred by the lender.

4. Pre-payment fees

These are fees charged for repayment of loan ahead of schedule. This is to compensate the lender for lost income due to early prepayment and break funding cost, if any.

2.6 Summary

In this chapter we have learned:

- The different purposes and repayment sources for working capital, asset based, cash flow, mortgage and project financing.
- The key features of secured vs. unsecured loans, committed vs. uncommitted loan facilities, bilateral vs. syndicated loans.
- The different instalment payment methods (equal principal, equal instalment and flat rate), repayment structure (equal amortization, balloon payment and bullet payment) and loan related fees (commitment, arrangement, cancellation and prepayment).

Chapter 3:
Cash Management

Learning Objectives

The candidate should be able to:

- ✓ Understand the key objectives of corporate cash management
- ✓ Differentiate key clearings and settlement systems
- ✓ Know the different liquidity management solutions
- ✓ Learn the types of payment management solutions
- ✓ Be familiar with collection management solutions

3.1 Introduction

From the perspective of a corporate, the key objective of cash management is to optimize the availability of its funds – at the right time, in the right currency, at the right place and at the lowest cost. Corporates are also keen to improve operational efficiency and tighten control over their funds.

This chapter will look at the key building blocks of cash management services in providing payment, collection and liquidity management solutions. Common tools and infrastructures, and how they can be applied to meet the different objectives of the corporates will be discussed.

3.2 Key Objectives of Cash Management

There is generally an interval between the time a company converts its sales into cash receipts, and the time when they make payment to suppliers and employees. Depending on the nature of the business, a company may end up with a cash surplus or shortage from its operations.

For example, a departmental store which collects cash from daily sales but pays its suppliers on credit enjoys positive cash flow from its operation, and is looking to improve the interest income from its surplus cash. However, a manufacturer that extends 3 months credit to its customers but gets only 1 month credit from its supplier, will need working capital financing that incur interest costs. If these two companies belong to the same group, the corporate treasurer will be looking at ways to manage the group's cash to improve the liquidity and net interest outcome for the group as a whole.

From the perspective of the corporate, the objectives of cash management are to:

- Improve visibility of cash positions
- Optimise the availability of funds
- Improve net interest outcome
- Enhance operational efficiency (e.g. shorten cash conversion cycle)
- Tighten control and security over cash balances and payment systems

The principles of cash management for corporates are to manage liquidity, maintain flexibility, maximize earnings, reduce cost and remain in control of its cash position.

These can be achieved by:

- Ensuring bank lines are available and sufficient
- Monitoring fluctuations in cash over different business units and cycles
- Shortening its cash conversion cycle
- Reconciling the company's cash position
- Managing foreign currency risk

The building blocks of cash management solutions are:

- Payment
- Collection
- Accounts structure
- Liquidity management

Cash management solutions involve the movement of funds, which may be delivered independently by a bank, or require collaboration across the industry and shared architecture.

An example of shared architecture would be the Fast and Secure Transfers (FAST), which requires participating banks to connect to a centralized system, to make payments to each other.

In the next section, the key payment and settlement infrastructure and methods are discussed.

3.3 Multi-lateral Payment and Settlement Systems

3.3.1 Nostro and Vostro Accounts

Given the international nature of their business, banks accumulate and maintain balances in different currencies. These currencies are usually kept in banks in the various currencies' domicile, due to regulatory requirements or other operating efficiencies.

Nostro and Vostro are Latin words which mean "ours" and "yours" respectively. Nostro accounts mean "our accounts" while Vostro accounts mean "your accounts". A Nostro account refers to an account, in a foreign bank, where the account currency is denominated based on the foreign bank country, held by a domestic bank.

For example, a Singapore bank may have a Nostro account in a US bank. The Nostro account in the US bank is denominated in USD. The same account would be viewed as a Vostro account for the US bank.

3.3.2 Payment and Settlement Systems

Payment and settlement systems are operational networks that link bank accounts to facilitate the movement of funds between banks. Payment system operators and participants are subjected to supervision and regulations by central banks and/or monetary authorities to ensure safety and efficiency of the payment systems.

Payment and settlement systems are designed to cater to two categories of transactions. High Value Payment Systems are used to handle high value high priority transactions, while Low Value Payment Systems are used mainly to handle high volume low value transactions, such as retail payments or business-to-business transactions.

A variety of clearing and settlement systems are used in Singapore. The MAS Electronic Payment System (MEPS+), Continuous Linked Settlement (CLS) and the Offshore Renminbi (RMB) Clearing are for large value fund transfers.

The Singapore Automated Clearing House (SACH) systems and the NETS Electronic Fund Transfers at Point of Sale (NETS EFTPOS) are used for high volume low value transactions.

Table 3.3.2: Clearing & Settlement Systems

Clearing & Settlement Systems	Key Features
Large Value Payment Systems (Singapore Dollar)	
MAS Electronic Payment System (MEPS+)	MEPS+ is a real-time gross settlement system (RTGS) designed for high-value SGD funds transfers and settlement of script-less Singapore Government Securities (SGS).
Large Value Payment Systems (other currencies)	
Continuous Linked Settlement (CLS) System	A global multi-currency settlement system that aims to eliminate foreign exchange (FX) settlement risk due to time-zone differences.

Renminbi (RMB) Clearing	It is used for establishing 'offshore' markets to promote the use of RMB outside the Chinese mainland, RMB Clearing allows participating banks to make payments in RMB.
Low Value Payment Systems	
Singapore Automated Clearing House (SACH)	The Singapore Dollar Cheque Clearing System, US Dollar Cheque Clearing System and Interbank GIRO System, collectively called the SACH systems, are provided by the Singapore Automated Clearing House ("SACH").
Singapore Dollar Cheque Clearing System (Cheque Truncation System, CTS)	CTS is an online cheque clearing system that enables banks to scan deposited cheques and transmit the scanned images of the cheques to the SACH.
Interbank GIRO (IBG)	This allows customers of a participating bank to transfer funds through direct debits and credits, to the accounts of another participating bank.
Fast And Secure Transfers (FAST)	FAST enables the instantaneous payment of SGD between participating banks
NETS Electronic Fund Transfers at Point of Sales (NETS EFTPOS)	This is used for high volume low value retail payment transactions, such as at restaurants, shopping malls, and petrol stations.

1. The MAS Electronic Payment System (MEPS+)

Real-time Gross Settlement (RTGS) refers to payments that are irrevocably cleared and settled in real time from one bank to another. Transactions are settled on gross basis without netting.

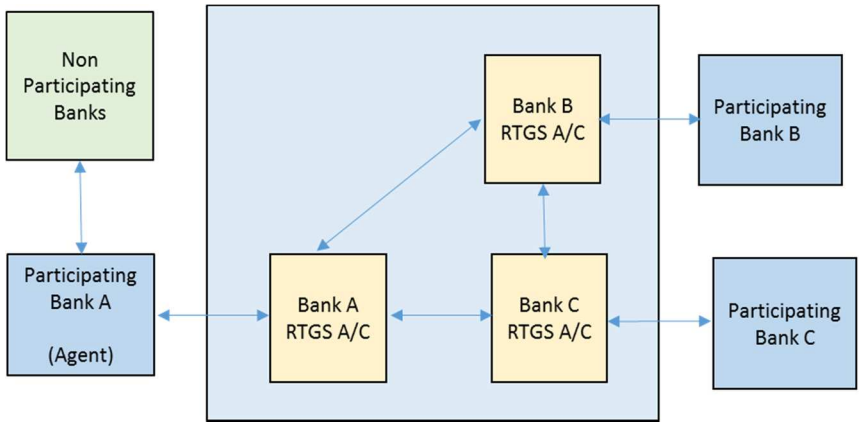
MEPS+ is a RTGS designed for high-value SGD funds transfers and settlement of script-less Singapore Government Securities (SGS). It allows same-day, irrevocable transfer of funds and securities, and is the fastest way of remitting high-value SGD funds in Singapore.

At the start of each day, funds from the current accounts of participating banks, in excess of their Minimum Cash Balances, are transferred to the MEPS+ system to facilitate their required interbank payments. At the end of day, balances are transferred back to the respective participating banks.

Banks with smaller SGD payment requirements might choose to appoint another bank to function as their MEPS+ agent, instead of connecting directly

to the MEPS+ system. Agent banks would negotiate the commercial terms of these arrangements directly with the customer's banks.

Diagram 3.3.2 (a): MEPS

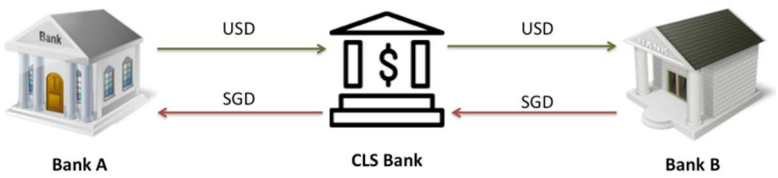


2. Continuous Linked Settlement System (CLS)

The CLS system is a global multi-currency settlement system that aims to reduce foreign exchange (FX) settlement risk due to time-zone differences. The CLS settlement service, provided by CLS Bank, reduces the risk of time lags inherent in the settlement of both legs of FX transactions by enabling simultaneous settlements, across the books of CLS Bank. The CLS system is based on a "payment vs payment" mechanism, also referred to as the *PVP mechanism*.

For example, Bank A is looking to buy SGD 1,400,000 by selling USD 1,000,000. On the other end, Bank B is looking to buy USD 1,000,000 by selling SGD 1,400,000. To settle the transaction, Bank A will provide their USD 1,000,000 (sell currency) to CLS bank. Bank B will provide their SGD 1,400,000 (buy currency) to CLS bank. Upon receiving USD 1,000,000 from Bank A and SGD 1,400,000 from Bank B, CLS bank will release SGD 1,400,000 to Bank A and USD 1,000,000 to Bank B.

Diagram 3.3.2 (b) – Continuous Linked Settlement



The above scenario illustrates a single foreign exchange transaction supported by CLS. In reality, the CLS system supports a large number of FX transactions between multiple counterparties. The transactions are settled on a multilateral netted basis i.e. only the net amount of payment obligations in each currency is settled. This significantly reduced the liquidity requirement and settlement risk.

3. Renminbi (RMB) Clearing

To internationalise the RMB, the Chinese government has cooperated with several countries in establishing 'offshore' markets to promote the use of RMB outside the Chinese mainland. The list of RMB clearing hubs outside China includes Germany, Hong Kong, London, Singapore, Switzerland and Tokyo. More countries are likely to be added to the list over time.

In Singapore, the People's Bank of China (PBC) has appointed ICBC Singapore branch as the RMB Clearing Bank. Through the RMB Clearing Bank, participating banks are able to access the onshore market to buy or sell RMB for trade purposes, on behalf of their corporate customers.

When a corporate customer of a participating bank wants to make payment to a trading partner in China, the bank would send a SWIFT message to the RMB Clearing Bank, which will instruct PBC to make the RMB payment in China. The RMB Clearing system, also known as the China National Advanced Payment System (CNAPS), facilitates the sending and receiving of funds denominated in RMB, which helps to mitigate foreign exchange risk for corporates.

The Clearing Bank will direct the funds paid to China via CNAPS outside the ICBC group. For payments sent to Hong Kong, the Clearing Bank will direct the funds via Hong Kong RTGS. If the Receiving Bank has an account with the ICBC group, the Clearing Bank will direct the funds via book transfer.

In October 2015, China launched its China International Payment System (CIPS) with the objective of achieving greater consistency of service levels across various clearing centres. This system provides capital settlement and clearing services for cross-border RMB transactions for financial institutions, located both within and outside of China.

CIPS removes the need to route RMB transactions through a RMB Clearing Bank, allowing market participants outside of China to clear RMB transactions with their Chinese counterparts directly. Eventually, CIPS will allow offshore-to-offshore RMB payments.

4. Singapore Automated Clearing House (SACH)

The Singapore Dollar Cheque Clearing System ("SGDCCS"), US Dollar Cheque Clearing System ("USDCCS") and Interbank GIRO System ("IBG"), collectively called the SACH systems, are provided by the Singapore Automated Clearing House ("SACH").

The SACH systems process mainly interbank retail payments, involving large volume of mostly consumer-to-business (e.g. bill payments for utilities, credit cards), and business-to-consumer (e.g. payment of salary), transactions. Unlike RTGS, SACH clears transactions on a multilateral deferred net settlement basis. Hence, there is usually a time lag between the submissions of payment instructions and receipt of funds.

5. Cheque Truncation System (CTS)

CTS is an online cheque clearing system that enables banks to scan deposited cheques and transmit the scanned images of the cheques to the SACH. CTS eliminates physical movement of cheques and hence improves operating efficiencies within the banking industry, shortening the cheque clearing cycle to one business day.

3.4 Payment Methods

3.4.1 Interbank GIRO (IBG)

IBG is an offline interbank payment system catering mainly for low value bulk payments. It allows a customer of a participating bank to transfer funds, through direct debits or credits, to or from the accounts of customers of any other participating bank. The IBG can be broadly separated into two types of transfers – Direct Debit Transfers and Direct Credit Transfers.

In ***Direct Debit Transfers***, the payee instructs his bank to collect payment from the paying party, often on a recurring basis. Direct debit payments are pre-authorized by the paying customer, who gives permission to his bank to debit his account upon receipt of instructions initiated by the specified originator.

Examples of such pre-authorized recurring payments include utility bill payments or payments for telecommunication services.

In ***Direct Credit Transfers***, the payer instructs his bank to debit his account and transfer the fund to the payee. In Singapore, most direct credit transfers are standing order arrangements made by the originator with their bank. The bank then carries out the necessary transfers on a regular specific date, to a specific receiver and for a specific amount.

Payroll crediting is the most common direct credit transfer. Some banks have recently offered direct crediting services to their individual customers, mainly through Internet banking and ATMs.

3.4.2 Fast and Secure Transfers (FAST)

FAST enables customers of the participating banks to transfer Singapore Dollars from one participating bank to another participating bank in Singapore, immediately via electronic means. FAST offers the convenience of transacting 24x7 but is limited to a maximum of $50,000 per transaction.

3.4.3 Telegraphic Transfers (TT)

TT refers to the communication of payment details, such as currency, amount, value date and recipient information, via electronic means. Messages are

routed through an electronic communication system known as SWIFT (Society for Worldwide Interbank Financial Telecommunication), which is fast, secure and convenient. Settlement is done through a correspondent bank account via domestic RTGS systems.

3.4.4 NETS Electronic Funds Transfer at Point-of-Sale ("EFTPOS")

NETS was founded in 1985 to establish Singapore's national PIN debit scheme, NETS Electronic Funds Transfer at Point-of-Sale ("EFTPOS"). NETS is the EFTPOS scheme operator, processor and the acquirer of the service. The transactions settled via NETS EFTPOS are mainly higher volume lower value retail payment transactions.

3.4.5 Stored Value Services

Stored value facilities involve the issue of stored value cards. Customers load their cards with value by paying the issuing organization. MAS allows any organization to issue its own stored value facility, so long as the total amount of the issuing organization's facility is not more than SGD 30 million.

Examples of commonly found stored value cards in Singapore are the EZ-Link card, used for paying for public transport, and the NETS Cashcard, used for payment of hourly carpark facilities as well as payment for small consumer purchases, such as at 24-hour convenience stores.

3.5 Banking Channels

Apart from the different payment and settlement systems shared by the industry described above, banks may operate their own infrastructure to bring their services to their customers.

Banking Channels refer to the various avenues through which customers can access the bank's services. These could be physical in nature, such as branches and automated teller machines (ATMs), or electronic, such as internet banking.

ATM networks and internet banking portals operated by each bank, allow their customers to withdraw cash at their convenience, pay for services consumed (such as payment of utility bills), as well as perform other transactions, such as paying for traffic fines.

On the other side of the payment, it would be the collections of these payments by the vendors or beneficiaries. This is achieved by the bank crediting the recipients' accounts with the collected funds.

3.5.1 The Automated Teller Machine (ATM)

The ATM network enables banks' customers to perform routine banking transactions without having to visit a bank branch. Transaction data is transmitted via secured networks linked to the banks' data centers. Most banks have their own proprietary ATM networks but also arrange shared networks with each other, to provide greater convenience to customers. Security is provided by way of PIN identifications and magnetic strip cards.

Whilst the primary purpose of the ATM is to dispense cash to customers 24x7, other services typically available through ATM's include bill payment to collection customers of the bank, stored value card transaction services, and subscription of Initial Public Offering (IPO) shares.

3.5.2 Internet Banking

Internet banking is an electronic banking platform provided by the bank to both individual and corporate clients. It offers the convenience of 24x7 banking and virtual access, anytime and anywhere. Control measures such as two-factor authentication and identity verification questionnaires are used to mitigate security risks at the client interface point.

Services typically available via internet banking portals include:

- Account transfers between own accounts within the bank or other accounts in the same bank
- Transfers between banks via FAST
- Bill payment services
- Application and management of GIRO payments
- Enquiry on status of cheques
- Bank statement and advice retrieval

3.5.3 Host-to-Host systems

Corporates which maintain their own accounting and payment systems may wish to update ledger balances and make payments directly from these systems, instead of using the internet banking interface provided by the bank.

In such cases, the corporate and bank would develop a secured link between the former's accounting and payment systems and the latter's back-end system to transfer files/data; this is termed a host-to-host connection.

Transactional messages sent by the corporate may be in a format specific for that bank's system, or alternatively, the corporate may send messages in standard industry formats such as ISO20022 (SWIFT) and IDoc (SAP).

3.6 Payment and Collection Management Solutions

Payment and collection go hand in hand, "collection" being the counterpart of "payment". As such, solutions that often address both payments and collections are:

- Cheque Truncation System (CTS)
- Interbank GIRO (IBG)
- Fast And Secure Transfers (FAST)
- Telegraphic Transfers (TT)
- NETS Electronic Fund Transfers at Point of Sales (NETS EFTPOS)
- Credit cards

3.6.1 Credit Cards

Credit Cards are a convenient payment mode for consumers, both corporate and retail, to make payment for goods and services consumed. On the other side of the transaction, the providers of such goods and services receive their due payment.

Credit card transactions work in two phases – authorization followed by settlement. When a transaction is first initiated, the authorization phase will then be triggered.

3.6.2 Collection Management Services

There are some cash management services that cater only to the collection side of the value chain. They are combined with other services to complete the payment and collection cycle.

Some examples of collection management services are:

- Cash collection service
- Lock Box service
- Billing service
- Cheque purchasing
- Merchant solutions (through customers' credit cards)

1. Cash Collection Service

When a business receives payments by cash, the business will need to deposit the cash to its bank account. This exposes the business to risk of carrying cash or "pavement risks". Cash collection solutions engages collection agencies e.g. security companies such as CISCO (Singapore) and Brinks, to provide secured collection and transportation of cash from the business premises to the bank for deposit. Such agencies employ armed escorts and provide insurance against loss from theft.

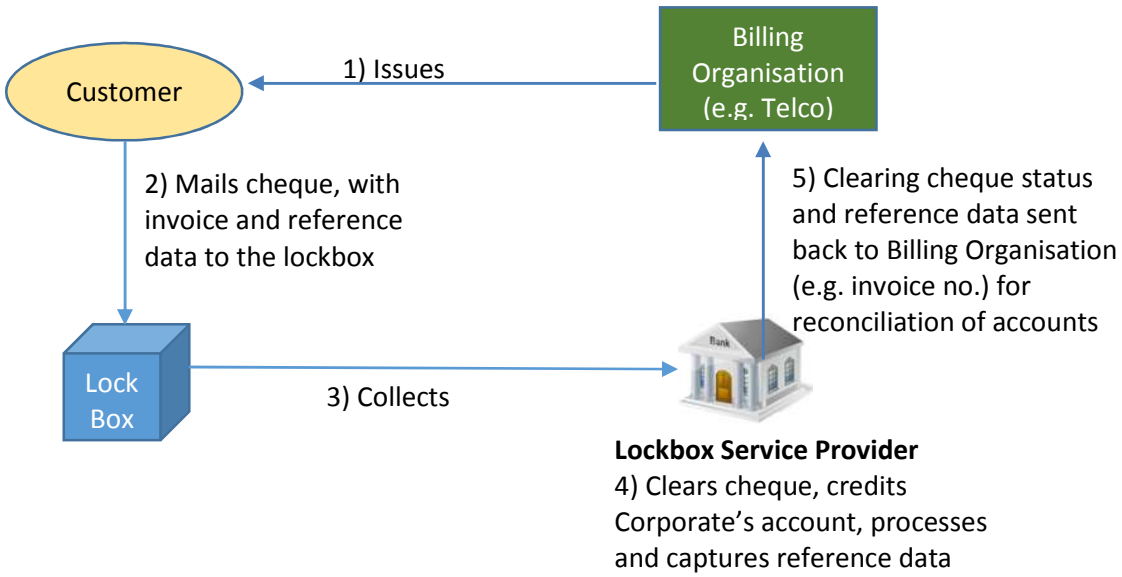
2. Lock Box Service

Lock Box service provides convenience by removing the need for the Billing Organisation to collect the cheque payments mailed in by their customers, and bringing them to the bank for deposit into their account. Lock Box service also helps to shorten the cash conversion cycle, from sales to cash for the Billing Organisation.

Also known as "remittance processing", Lock Box service essentially sets up a physical mailbox where customers can send their payment. The mailbox is typically located in a post office branch. The bank providing the service is allowed access to the mailbox. The bank will retrieve the payments by cheques or cashier's orders, process them and credit the funds into the Billing Organisation's account.

Following the processing of the payments, the bank will provide reference data, such as the invoice number, and amount of payment collected, to the Billing Organisation, for reconciliation against their accounts receivable.

Diagram 3.6.2 (a): Lock Box Services



Customers making payments could be individual retail consumers or other corporates.

Retail Lock Box service collects payments from retail customers. Retail cheque payments typically would be regular recurring payments for standardized items, such as credit card bill payments or subscription fees. These payments typically would be accompanied by a payment coupon, which is sent to the customer together with the Invoice issued by the Billing Organisation.

Wholesale Lock Box service caters to business-to-business payments. Such payments would typically be less standardized, and hence require more processing effort from the bank. Payments accompanied by non-standard documents (e.g. copies of invoices, payer's own cover letters etc.)

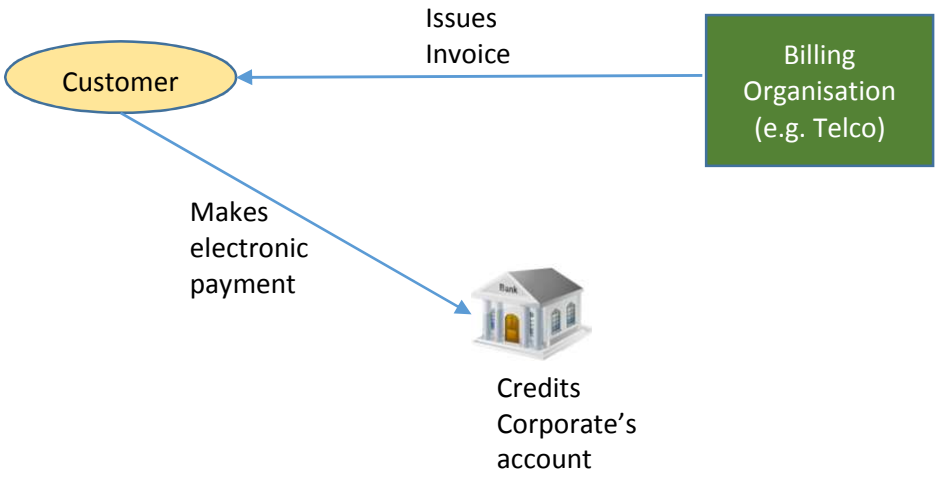
3. Billing Services – Electronic Collections

Billing Services allow banks to collect payments on behalf of their corporate customers.

For example, an Insurer might sign up with a Bank as a Billing Organisation. With this agreement in place, customers of the Insurer would make payments for their insurance premiums to the bank, which would then credit the funds to the Insurer's account.

These payments would typically be in electronic form availed through the bank's consumer/ retail internet banking portal.

Diagram 3.6.2(b): Billing Services – Electronic Collections



3.6.3 Summary of Payment and Collection Management Solutions

The following table compares the key features and associated products and services, of the various payment and collection management solutions.

Method	Key Features	Estimated Processing Time
Cheque	Convenience, can be issued any time	Up to 2 working days
Cashier's Order	Requires payee to purchase the cashier's order	Up to 2 working days

	Does not incur the cost of a Cheque Account	
Interbank GIRO	Convenience, can be set up via internet banking Allows recurring payments on a single instruction	Up to 3 working days
FAST	Convenience (24x7), can be instructed via internet banking	Almost instantly
Stored Value Facilities	Convenient, cashless payments for specific services Creates a captive consumer base for the issuing organization, as consumers have already paid and will want to use the stored value	Almost instantly

3.7 Accounts Structure and Liquidity Management Solutions

Companies often hold more than one account with their banks, and typically have different bank accounts in different currencies to support their operations. In particular, multinational corporations usually have subsidiaries or joint ventures that operate in different countries, with each subsidiary having their own bank accounts. As a result, multinational corporations generally have to manage multiple bank accounts.

Liquidity management solutions aim to help businesses maximize interest earned, minimize overdraft charges and identify any surplus cash that can be converted into short-term investments to improve overall returns.

There are two main types of liquidity management solutions – cash concentration and notional pooling.

3.7.1 Cash Concentration

Cash Concentration is a facility whereby all operating accounts with positive balance are swept into a master account. This is usually done to gain better returns on surplus funds.

There are 2 sub-variants of cash concentration:

1. **Zero Balance Account**

All operating accounts with positive day-end balance are set to zero balance by sweeping to master account, and all operating accounts with negative day-end

balance are set to zero by top up from master account. Below is an example to illustrate.

Diagram 3.7.1(a): Accounts with / without Cash Management

Without cash Management

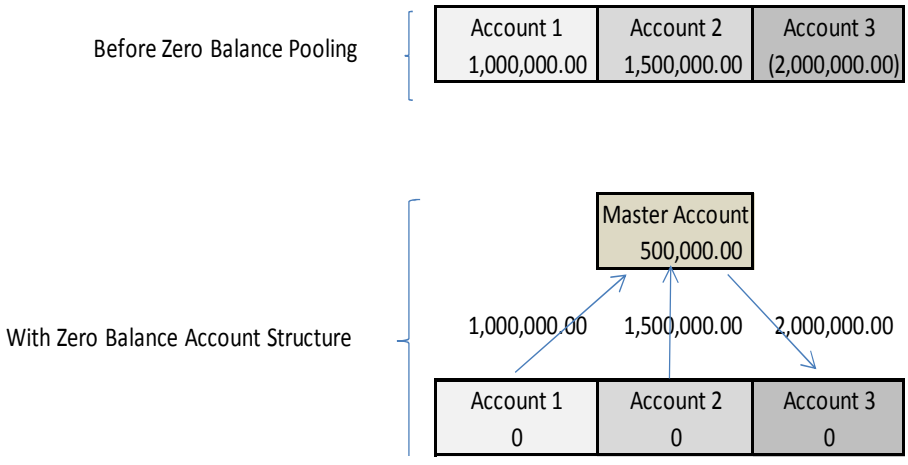
		Account 1	Account 2	Account 3	Sub Total	
Day end Balance		1,000,000.00	1,500,000.00	(2,000,000.00)		
Assumed Interest						
Positive balance interest for the day	1%	27.40	41.10		68.49	
Negative balance interest for the day	10%			(547.95)	-547.95	
Net Interest paid for the day					-479.45	a

Cash Concentration with Zero Balance Account Structure

		Account 1	Account 2	Account 3	Master Account	
Day end Balance before pooling		1,000,000.00	1,500,000.00	(2,000,000.00)		
Step 1 (Surplus funds swept to master account)		(1,000,000.00)	(1,500,000.00)	-	2,500,000.00	
Step 2 A/c 3's negative bal is set to zero with funds in master account				2,000,000.00	(2,000,000.00)	
Final day end balance		-	-	-	500,000.00	
Assumed Interest						
Positive balance interest for the day	1%				13.70	b

For example, current account that maintains a zero balance, even as cheques are written against it. In essence, the zero balance account is funded by an account that receives all the deposits, and disburses funds to the zero balance account to cover cheques that have been cleared.

Diagram 3.7.1(b): Cash Concentration with Zero Balance Account Structure



2. Target Balance Account

A Target Balance Account is similar to the Zero Balance Account except that instead of zero, this account is set to have a target balance by sweeping the excess to the master account or top up from the master account.

3.7.2 Notional Pooling

In Notional Pooling, all operating accounts are physically untouched. Interest is charged or paid based on whether the account is in negative or positive balance. However, all the operating accounts are notionally pooled i.e. the balances are deemed to be aggregated. Interest is then charged or paid on the notionally pooled amount.

The pooling benefit is the difference between the net interests on the individual accounts and the net interest on the notionally pooled amount. The corporate customer can instruct the bank on how to pay out the pooling interest e.g. paying into the central treasury account.

In notional pooling, the actual funds in the account are not moved and interest is paid or charged on the notionally pooled amount. A separate notional pool is computed and the interest computation is carried out on the notional pool.

Diagram 3.7.2: Notional Pooling

Notional Pooling

		Account 1	Account 2	Account 3	
Day end Balance before pooling		1,000,000.00	1,500,000.00	(4,000,000.00)	
Interest					
Positive balance interest for the day	1%	27.40	41.10		
Negative balance interest for the day	10%			(1,095.89)	Net Interest Paid
Actual Interest earned or paid for the day		27.40	41.10	(1,095.89)	→ (1,027.40) a

Notional Pool Computation		Account 1	Account 2	Account 3	Notional Pool	
Account Balance		1,000,000.00	1,500,000.00	(4,000,000.00)	(1,500,000.00)	
Interest						
Negative balance interest for the day based on notional pooling computation	10%					(410.96) b

In the above example, the pooling interest is the difference between (a) and (b) or $616.44, which is credited back to the corporate customer. The net effect is that the customer pays an actual interest of only $410.96, instead of $1,027.40.

3.8 Summary

In this chapter we have learned:

- The key objectives of corporate cash management are to optimise the availability, lower costs and tight control of funds.
- Payment and settlement systems for high-value fund transfers (MEPS+, CLS and offshore RMB Clearing) and high volume low value transactions (SACH, CTS).

- Different payment methods (e.g. interbank GIRO, FAST, TT and NETS and banking channels (ATMs, internet banking, host-to-host).

- Common payment and collection management solutions such as lock box and billing services.

- Managing liquidity via cash concentration or notional pooling.

Chapter 4:
Trade Finance

Learning Objectives

The candidate should be able to:

- ✓ Understand the key risks in trade finance
- ✓ Learn the rules for international trade finance (INCOTERMS)
- ✓ Know the documents used in international trade
- ✓ Differentiate methods of payment and their risks to buyers and sellers (open account, documentary collection, documentary credit, payment in advance)
- ✓ Apply the various rules governing trade finance products (UCP600, URC522, ISP98, URDG758)

4.1 Introduction

International Trade is the exchange of goods between buyers (*importers*) and sellers (*exporters*) that reside in different countries. This exchange of goods and payments presents challenges as exporters and importers have opposing concerns. Importers are concerned about not receiving the goods or that goods received are not according to specifications after payment, while exporters are concerned with not receiving payment after delivering the goods.

Banks play a critical intermediary role in facilitating international trade by guaranteeing and/or financing trade payments, thereby reducing and mitigating the risk of trade transactions. This chapter looks at the different methods of payment in international trade finance that are used to mitigate risk and meet funding needs of buyers and sellers.

4.2 Key Risks in International Trade

The flow of a trade transaction starts when seller receives the order of goods from the buyer. The seller ships the goods ordered via various modes of transportation (land, air and sea) to the destination specified by the buyer.

During the transition period, from the time the goods leave the seller's premise to the seller receiving the payment in full settlement of goods sold, the seller and buyer may encounter various problems that result in non-fulfilment of obligations by one or both parties.

Table 4.2: Types of Risk in International Trade

Type of Risk	Seller	Buyer
Credit/ Performance	• Non-acceptance • Payment default	• Short, late or non-delivery • Problem with quality & specifications of delivered goods
Transport	• Non delivery of goods • Pilferages	• Fraud by carrier • Damages to goods
Foreign Exchange	• Export prices changes	• Import prices changes
Sovereign Political Regulatory	• War, riots • Currency restrictions • Trade restrictions & sanctions	

4.3 Key Rules for International Commercial Terms (INCOTERMS 2010)[1]

Trade terms vary from country to country, especially in relation to when a shipment is considered delivered, and when the risks and responsibilities of the shipment are transferred from the seller to the buyer. In order to avoid differences in understanding, especially for cross border transactions, the industry uses International Commercial Terms (Incoterms) in trade agreements. These are standard trade definitions that are drafted and published by the International Chamber of Commerce (ICC).

These rules are used in international and domestic sales contracts. They spell out the duties and risks of the buyer and seller, in matters related to carriage, insurance, duties etc., and the point when risk passes and how costs are allocated between buyer and seller. Understanding Incoterms is important to determine performance risk of buyer versus seller, and how to mitigate transport risk.

[1] http://www.iccwbo.org/products-and-services/trade-facilitation/incoterms-2010/the-incoterms-rules/

In Incoterms 2010, 11 Incoterms rules are defined for two distinct groups – 7 rules (EXW, FCA, CPT, CIP, DAT, DAP, DDP) for any mode of transport, and 4 rules (CIF, CFR, FOB, FAS) for sea and inland waterway transport.

The Incoterms are grouped according to the mode of transport, the party responsible for paying the transport cost and the delivery point:

Table 4.3(a): International Commercial Terms

Rules for any mode of transport	
EXW	Seller is only responsible for goods at his premise
FCA	Buyer pays for main transport cost
CPT, CIP	Seller pays for main transport cost
DAT, DAP, DDP	Seller pays for main transport cost and delivers the goods to specific location in the destination country
Rules for sea or inland waterway transport	
FAS, FOB	Buyer pays for main transport cost
CFR, CIF	Seller pays for main transport cost

The common Incoterms are highlighted below:

1. Ex Works - EXW (named place of delivery)

Usage	Any mode of transport
Seller's Duty	Make the goods available at the seller's premises
Export Clearance	Carried out by buyer
Main Transport Cost	Paid by buyer
Transport Risk	Borne by buyer
Import Clearance	Carried out by buyer

2. Free Carrier – FCA (named place of delivery)

Usage	Any mode of transport
Seller's Duty	Deliver the goods to the carrier nominated by the buyer
Export Clearance	Carried out by seller
Main Transport Cost	Paid by buyer
Transport Risk	Borne by buyer
Import Clearance	Carried out by buyer

3. Carriage Paid to – CPT (named place of destination)

Usage	Any mode of transport
Seller's Duty	Deliver the goods to the carrier nominated by the seller
Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Borne by buyer
Import Clearance	Carried out by buyer

4. Carriage and Insurance Paid to – CIP (named place of destination)

Usage	Any mode of transport
Seller's Duty	Deliver the goods to the carrier nominated by the seller
Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Borne by seller
Import Clearance	Carried out by buyer

5. Delivered At Terminal – DAT (named terminal at port or place of destination)

Usage	Any mode of transport
Seller's Duty	Deliver and unload the goods to a named terminal at the named port or place of destination
Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Borne by seller
Import Clearance	Carried out by buyer

6. Delivered At Place – DAP (named place of destination)

Usage	Any mode of transport
Seller's Duty	Deliver and unload the goods to the named place of destination
Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Borne by seller
Import Clearance	Carried out by buyer

7. Delivered Duty Paid – DDP (named place of destination)

Usage	Any mode of transport
Seller's Duty	Deliver and unload the goods to the named place of destination

Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Borne by seller
Import Clearance	Carried out by seller

8. Free Along Side – FAS (named port of shipment)

Usage	Only for sea or inland waterway transport
Seller's Duty	Obligation is fulfilled when goods have been placed alongside the vessel nominated by the buyer at the port of shipment
Export Clearance	Carried out by seller
Main Transport Cost	Paid by buyer
Transport Risk	Borne by buyer
Import Clearance	Carried out by seller

9. Free on Board – FOB (named port of shipment)

Usage	Only for sea or inland waterway transport
Seller's Duty	Deliver the goods on board the vessel nominated by the buyer at the port of shipment
Export Clearance	Carried out by seller
Main Transport Cost	Paid by buyer
Transport Risk	Borne by buyer
Import Clearance	Carried out by buyer

10. Cost And Freight – CFR (named port of destination)

Usage	Only for sea or inland waterway transport
Seller's Duty	Deliver the goods on board the vessel at the port of shipment
Export Clearance	Carried out by seller
Main Transport Cost	Paid by buyer
Transport Risk	Borne by buyer
Import Clearance	Carried out by buyer

11. Cost Insurance And Freight – CIF (named port of destination)

Usage	Only for sea or inland waterway transport
Seller's Duty	Deliver the goods on board the vessel at the port of shipment
Export Clearance	Carried out by seller
Main Transport Cost	Paid by seller
Transport Risk	Pay for insurance cover against the buyer's risk of loss or damage during the transport
Import Clearance	Carried out by buyer

Table 4.3(b): Responsibilities of Buyers & Sellers For Carriage, Insurance & Duties

	Any Mode of Transport							Sea & Inland Waterway Only			
Responsibilities	**EXW**	**FCA**	**CPT**	**CIP**	**DAT**	**DAP**	**DDP**	**FAS**	**FOB**	**CFR**	**CIF**
Delivery to Carrier	↑ Buyer ↓	Seller	Seller	Seller				Seller	Seller	Seller	Seller
Delivery to Port of Shipment											
Delivery to Port of Destination					Seller						
Delivery to Named Place of Destination						Seller	Seller				
Export Clearance & Duty	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Carriage Charges	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Buyer	Buyer	Seller	Seller
Insurance	Buyer	Buyer	Buyer	Seller	Neither Buyer or Seller			Buyer	Buyer	Buyer	Seller
Import Clearance & Duty	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Buyer	Buyer	Buyer	Buyer

4.4 Documentations Used in International Trade

Trade documentations in international trade are broadly categorized as follows:

Table 4.4: Types of Documents Used in International Trade

Type of Documents	**Description/Function**
Commercial	
Invoice	A document that gives details of goods, their values, payment & delivery terms.
Packing/Weight list	A document that gives details of goods / listing of weights accompanying a package.
Official	
Export/Import Certificate	A document that gives evidence of approval for export/import by relevant authorities.
Certificate of Origin	A document that gives evidence of origin of goods.
Transport	
Bill of Lading	A document signed by a carrier or its representative, and issued to the shipper of goods that evidences the receipt of goods for shipment to a specified destination and person.

Airway Bill	A contract of carriage between shipper and carrier, it is a receipt of goods and not a document of title.
Insurance	
Marine Insurance	An insurance document that defines the risk covered for loss or damage of shipment during transition between original and final destinations.
Financial	
Bill of Exchange	A binding agreement addressed by one party requiring another party to pay a certain amount of money, at a predetermined date or on demand.
Promissory Notes	A signed document containing a written promise to pay a stated sum to a specified person or the bearer, at a specified date or on demand.

4.5 Methods of Payments

In trade financing, banks take on the role of a trusted party to the trade transaction i.e. lending its creditability to the buyer, seller or a third party. Banks offer various trade finance products to meet the varying levels of risk mitigation and/or financing to bridge the uncertainties over the timing of payment between seller and buyer.

The main methods of payment for international trade are:

- Open account
- Payment in advance
- Documentary collection
- Documentary credit – letter of credit

The methods of payment use for trade transactions will depend on a number of factors. Two primary considerations are:

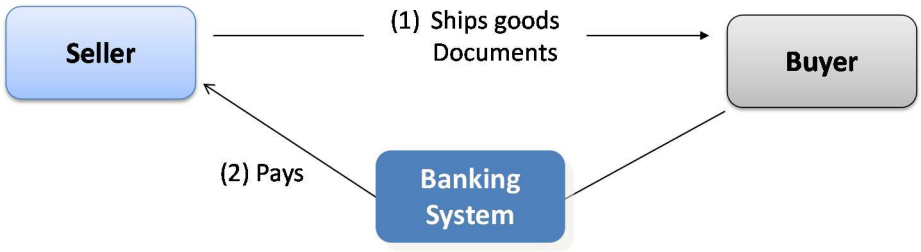
- Relationship between the buyer and seller
- Availability of facilities and working capital to the buyer and seller

Diagram 4.5: Methods of Payment and Risk Exposure for Buyer and Seller

4.5.1 Open Account

In an open account transaction, seller ships goods to a buyer and sends an invoice for payment by a specified date. Banks are not involved in the document flow. While this is beneficial to importer in terms of cash flow and cost, exporter is exposed to high risk of non-payment.

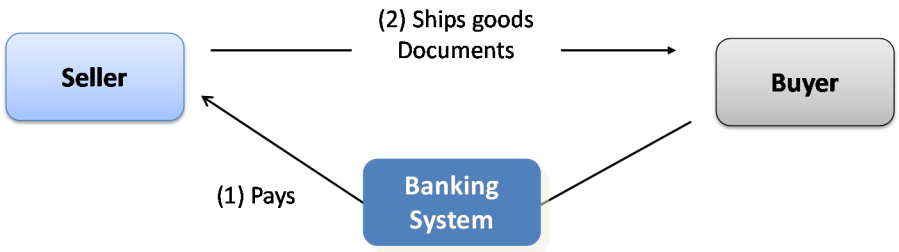
Diagram 4.5.1: Open Account



4.5.2 Payment in Advance

Buyer may need to pay seller in advance for goods ordered. When seller received the funds, it ships the goods to the buyer. Payment in advance exposes the buyer to high risk of non-performance by the seller. Buyer may also need additional working capital financing as funds are tied up for a longer period of time.

Diagram: 4.5.2: Payment in Advance



4.6 Documentary Collection (D/C)

In documentary collection (D/C), seller ships its goods to the buyer. Rather than sending the trade documents (e.g. commercial invoice, bill of lading, certificate of origin etc.) directly to the buyer, the seller sends the documents through the banking systems.

There are four parties are involved:

- Seller/exporter – principal
- Seller's bank – remitting bank
- Buyer/importer – drawee
- Buyer's bank – collecting bank / presenting bank

The **''Collecting bank''** is defined as any bank, other than the remitting bank, involved in processing the collection.

''Collection'' means the handling by banks of documents in accordance with instructions received, in order to:

- obtain payment and/or acceptance
- deliver documents against payment and/or against acceptance
- deliver documents on other terms and conditions

The **''Presenting bank''** is the collecting bank making presentation to the drawee. The presenting bank has a more specific role than a collecting bank and is the final party dealing with the buyer.

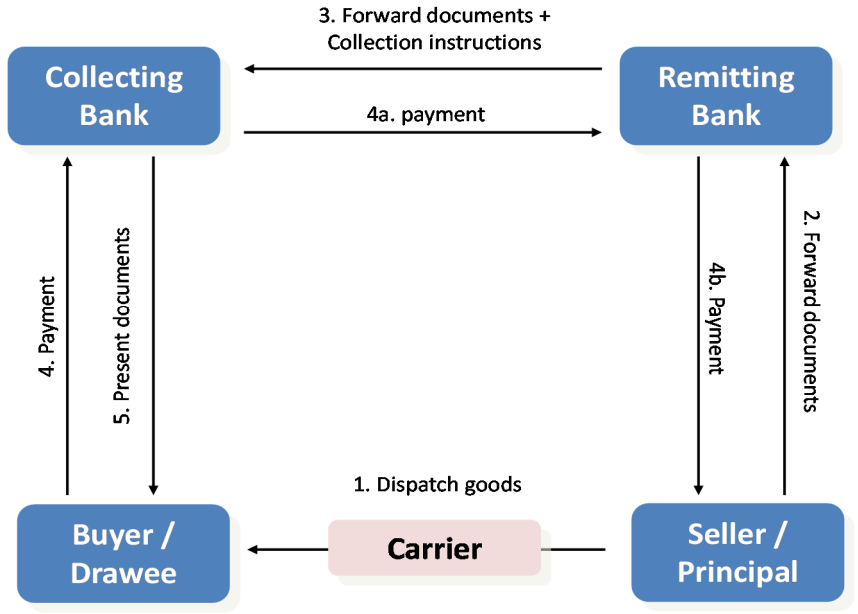
In D/C, the seller retains control of the goods by retaining the documents that confer title to the goods until payment is received, or the buyer gives an enforceable undertaking to pay at an agreed future date.

There are two types of documentary collection – Documents against Payment (D/P) and Documents against Acceptance (D/A).

4.6.1 Documents against Payment (D/P) Collection

Under a D/P collection, the seller ships the goods, and then gives the documents to his bank, which will forward them to the presenting bank, along with instructions on how to collect the money from the buyer. In this arrangement, the collecting bank releases the documents to the buyer only on payment for the goods. Upon receipt of payment, the presenting bank transmits the funds to the remitting bank for payment to the seller.

Diagram 4.6.1(a): Document against Payment



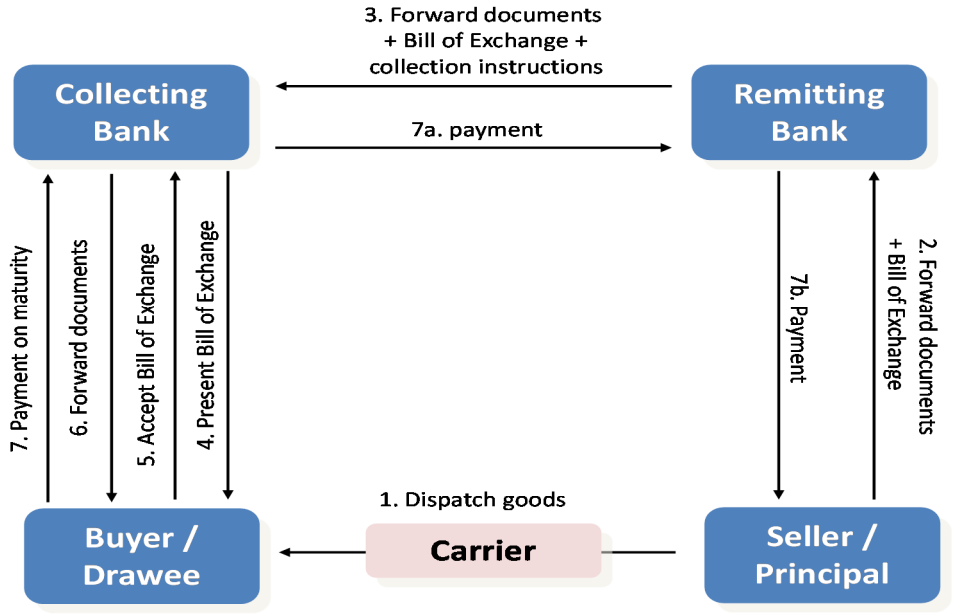
Time of Payment: After shipment, but before documents are released
Transfer of Goods: After payment is made on sight
Seller Risk: If the documents are not accepted by buyer, goods may have to be disposed at a loss

4.6.2 Documents against Acceptance (D/A) Collection

Documents against Acceptance (D/A) is also known as Usance Collection. The documents are sent by the seller to the presenting bank, and delivered to the buyer against its commitment to pay at a future date.

Under a D/A collection, the seller extends credit to the buyer by using a bill of exchange or time draft. In this case, the documents are released to the buyer to receive the goods upon acceptance of the time draft. By accepting the bill of exchange, the buyer becomes legally obligated to pay at a future date. Upon receipt of payment, the collecting bank transmits the funds to the remitting bank for payment to the seller.

Diagram 4.6.2: Document against Acceptance



Time of Payment: On maturity of draft at a specified future date
Transfer of Goods: Before payment, but upon acceptance of draft
Seller Risk: Has no control of goods and may not get paid at due date

Documentary collections are governed by the Uniform Rules for Collection 522 (URC 522), published by the International Chamber of Commerce (ICC)[2].

Under URC522, banks are responsible for ensuring that all the documents listed on the collections are present, but have no obligation to ensure that the documents are completed correctly. Both the remitting bank and collecting bank must receive complete and precise instructions to execute the transaction.

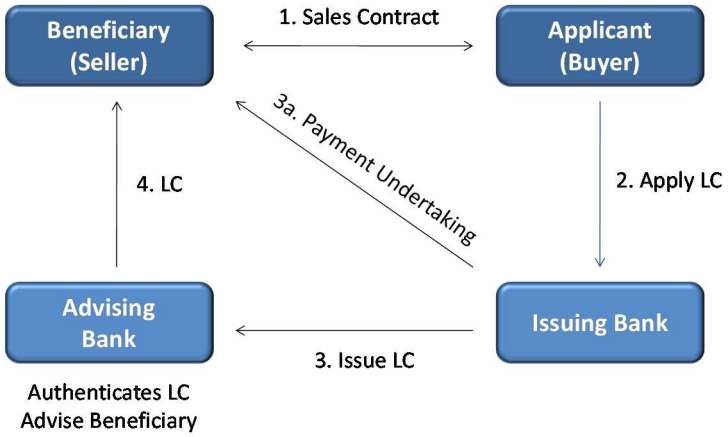
URC 522 also covers the parties involved, the form, structure and procedure of a collection, payment procedure, need to check accuracy and authenticity of documents etc.

4.7 Documentary Credit (Letter of Credit)

A documentary credit, also known as letter of credit (LC), is a written undertaking by a bank (issuing bank) to pay the seller (beneficiary), according to instructions from the buyer (applicant), upon presentation of complying documents stated in the LC. A second bank (advising bank) confirms the authenticity of the letter of credit and transmit the details of the letter of credit to the beneficiary.

[2] http://www.iccwbo.org/

Diagram 4.7(a): Parties to Documentary Credit (Issuance & Advice)



Under LC, banks deal exclusively with the documents and not with the goods or the underlying sales contract between the buyer and seller.

The parties involved as defined by UCP[3]:

- Applicant
  - Party requesting for the LC to be issued
- Issuing Bank
  - Bank that issues the LC on behalf of applicant
- Beneficiary
  - Beneficiary of the LC issued
  - Party in whose favour a LC is issued
- Advising bank
  - Bank that advises the LC at the request of the issuing bank
- Confirming Bank
  - Bank that adds its confirmation to a LC upon the issuing bank's authorization or request

  **(Confirmation means a definite undertaking from the confirming bank to honor or negotiate a complying presentation[4] in addition to that of the issuing bank.)*
- Nominated Bank
  - Bank with which the LC is available or any bank in the case of a LC available with any bank

The advising bank, confirming and nominated bank may be the same bank.

[3] UCP - The Uniform Customs and Practice for Documentary Credits (**UCP**) is a set of rules on the issuance and use of letters of credit.

[4] Complying presentation – a presentation that is in accordance with the terms and conditions of the credit, the applicable provisions of UCP600 rules and international standard banking practice

Under UCP, LCs must be irrevocable i.e. the terms cannot be amended or cancelled unless all parties agreed to the change.

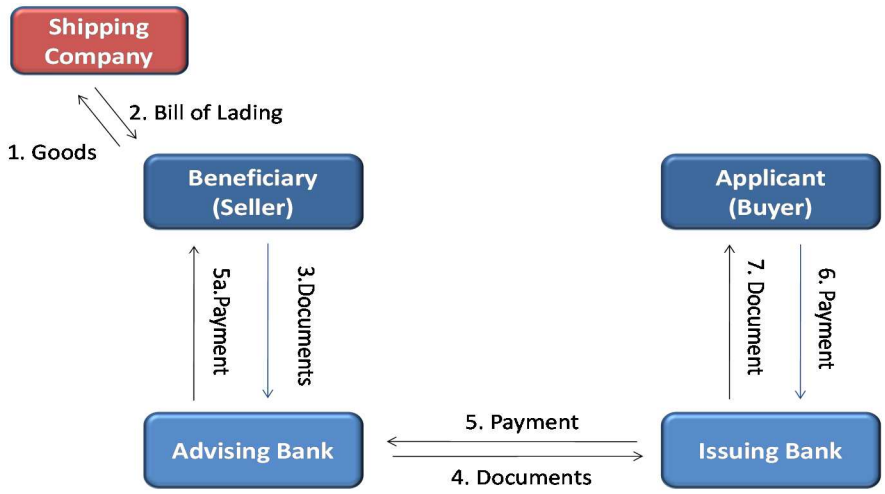
UCP 600 article 2

"**Credit''** means any arrangement, however named or described, that is irrevocable and thereby constitutes a definite undertaking of the issuing bank to honour a complying presentation.

4.7.1 Sight Letters of Credit

Under a sight LCs, the issuing bank has to pay the beneficiary when complying documents are presented to it.

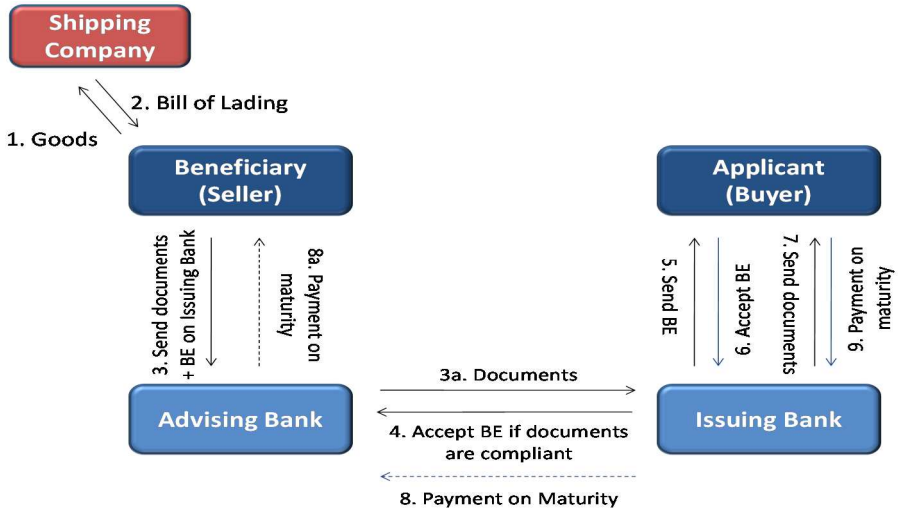
Diagram 4.7.1: Document Presentation and Honoring of Sight LC



4.7.2 Term Letters of Credit

Under an acceptance LC, the beneficiary sends the documents to the issuing bank together with the Bill of Exchange (BE) drawn on the issuing bank. The issuing bank has to accept the BE when complying documents are presented to them. On maturity date of the BE, the issuing bank has to pay the beneficiary. The issuing bank will issue a deferred payment undertaking in countries where BE are not used. In this case, the LC is known as a deferred payment LC.

Diagram 4.7.2 – Document Presentation and Honoring of Acceptance LC



4.7.3 Letter of Credit (LC) Negotiation

Negotiation means the purchase of drafts by the nominated bank (drawn on a bank other than the nominated bank) and/or documents under a complying presentation, by advancing or agreeing to advance funds to the beneficiary on or before the banking day on which reimbursement is due to the nominated bank. Nominated bank means the bank with which the credit is available.

For example, the LC states that it is available with Bank Y and that the BE drawn on Bank Z. In this case, Bank Y is known as the nominated bank.

The beneficiary draws a BE on Bank Z and present it together with other complying documents to Bank Y. Bank Y then pays the beneficiary a discounted amount and collects full payment from Bank Z on maturity date. Since Bank Y has given the advance, it has negotiated the LC and is now known as the negotiating bank.

The Uniform Customs and Practice for Documentary Credit or UCP 600 published by the ICC contains contractual rules that apply to LC transactions. There is also a supplement to UCP for electronic presentation eUCP[5].

4.7.4 Specialised Letters of Credit

Depending on the circumstances of the transaction, different types of LCs may be used to meet the needs of the parties involved. LCs can take many forms.

1. Transferrable LCs

Very often trade transactions can involve more than two parties. For example, the buyer buys goods from an intermediary who in turn sources the goods from

[5] http://www.iccwbo.org/News/Articles/2002/ICC-issues-Guide-to-the-eUCP/

the seller. Such intermediary may not have the resources to pay the seller for the goods and resell them to the buyer. In this situation, the intermediary can asked the buyer to issue a transferrable LC.

UCP 600 article 38 defines a transferable LC as a documentary credit under which the beneficiary (first beneficiary) may request the transferring bank to transfer the LC, available in whole or part, to one or more of secondary beneficiaries.

A transferrable LC will enable the intermediary to purchase the goods using the credit resources of the seller, by transferring the LC to its suppliers.

2. Back-to-Back LCs

A back-to-back letter of credit occurs when an intermediary receives a LC (master LC) and has to fulfill the terms of the master LC by requesting his bank to issue another LC (back-to-back LC) to the ultimate supplier of the goods. To mitigate the risk (eg. non-delivery of goods, exchange risk or risk of inferior goods received) of the bank issuing the back-to-back LC, the description of the goods and documentary requirement in the back-to-back LC have to mirror the master LC.

3. Red Clause LCs

Red clause LC allows the nominated bank to make a specified advance payment to the beneficiary. Such advance payment is deducted from the full amount of the LC when the documents are later presented for payment. If the advance payment is not repaid through subsequent presentation of documents, the nominated bank will have recourse against the issuing bank.

4. Standby Letters of Credit (SBLCs)

A standby letter of credit (SBLC) differs from a normal LC in that the requirement for the beneficiary to get payment under the LC is very much simplified. Unlike a normal LC which typically specifies in great details the documents to be presented for payment, the beneficiary in a SBLC need to provide a simple document to receive payment. E.g. “Statement purportedly signed by a representative of the beneficiary, stating that the amount claimed is due and the amount remains unpaid at the time of drawing”.

UCP 600 and ISP98 (International Standby Practices) are contractual rules that apply to the operation of SBLCs. Topics cover by ISP98 include irrevocability, enforceability, limitation to issuer’s responsibilities, undertakings etc. It also contains rules in the event of dishonor.

4.8 Guarantees

A bank guarantee is an irrevocable undertaking by the bank to pay a specific sum of money upon presentation of a complying demand. The terms guarantee and bond can be used interchangeably.

Banks typically issue demand or unconditional guarantees which is independent of the underlying contract. As such, guarantees are treated as credit facilities by the bank since they are contingent liabilities that the bank may be required to pay out in the future.

Either buyer or seller can request their counterparty to obtain a bank guarantee. A bank guarantee helps seller eliminate the risk of non-payment by the debtor, it also help buyer mitigate the cost of non-performance by the seller.

There are different types of guarantees. Shipping guarantees are used in support of trade transactions while performance guarantees issued to support projects include tender or bid bonds, performance bond, advance payment bonds and retention bonds etc.

Guarantees may be subject to the ICC Uniform Rules for Demand Guarantees (URDG). URDG 758 is a set of contractual rules that apply to demand guarantees if it is expressly indicated in the transactions.

4.8.1 Shipping Guarantees

Shipping guarantee is issued by the bank in favour of the shipping company. It enables the buyer to take possession of the goods before the company receives the bill of lading to secure the release of the goods.

It is usually issued when the shipment has arrived but buyer has yet to receive the bill of lading. The issuing bank will indemnify the shipping company in the event that it suffers a loss arising from the release of the goods without the presentation of the bill of lading.

Shipping guarantees present a very high risk to the bank, because the bank's exposure is unlimited, as there is no dollar value specified in the guarantee. The bank is essentially liable for all losses.

4.8.2 Project Related Guarantees

1. Tender or Bid Bonds

For major contracts, the project owners are concerned with the disruption and costs to a project arising from a bidder's withdrawal or failure to accept the contract if selected. Such bonds, typically set at 2% - 5% of the contract value,

will enable the project owners to recover some cost to defray the cost of repeating the bidding process.

2. Advance Payment Bonds

An advance payment may be provided by the project owner to the successful bidder to enable the bidder to procure materials and start preparatory work. The project owner may request for an advance payment guarantee from the successful bidder to protect against failure to perform, and to recover the advance payment given.

3. Performance Bonds

Performance bonds are issued to guarantee the performance of the seller's contractual obligations. It usually covers 10% of the contract value.

For example, the owner has awarded a contract to supply and installed some equipment for its new factory. To ensure that the equipment is installed on time and meets its stated production specifications, the owner requests for a performance bond to be issued. In the event that the supplier fails to meet its contractual obligations, the owner can call on the guarantee to recover the guaranteed amount the guarantor.

4. Other Types of Bonds

Retention, warranty and maintenance bonds are other guarantees that are used to provide protection against supplier's failure to carry out post completion obligations such as maintenance of the project or equipment.

4.9 Summary

In this chapter we have learned:

- The application of Incoterms in international trade finance (EXW, FCA, CPT, CIP, DAT, DAP, DDP, FAS, FOB, CFR, CIF).
- Two types of documentary collection – documents against payment and document against acceptance.
- Documentary credit and payment by sight, acceptance, deferred payment or negotiation.
- Specialised LCs such as transferrable LCs, back-to-back LCs, red clause LCs and Standby LCs.
- Different types of guarantees such as shipping guarantees and project related guarantees e.g. tender or bid bonds, advance payment bonds and performance bonds.

Chapter 5:
Treasury Solutions

Learning Objectives

The candidate should be able to:

- ✓ Understand the key objectives of treasury solutions
- ✓ Know the basic derivatives – forwards, futures, swaps and options
- ✓ Learn the features, characteristics and applications of derivatives
- ✓ Apply treasury solutions to hedge foreign exchange and interest rate risk
- ✓ Be aware of industry practices and guidelines for treasury transactions

5.1 Introduction

The financial market is a marketplace which facilitates the efficient allocation of capital, transfer of risk and international trade. Financial institutions act as intermediaries to facilitate the flow of funds from surplus to deficit units, matching lenders and borrowers, and act as conduits for trades and/or facilitate the transfer of risks.

As corporates operate in an increasingly global market, they are exposed to currency and interest rate fluctuations. This chapter examines the key features and functions of financial derivatives – forwards, futures, swaps and options, and how derivatives can be applied to help corporates manage their foreign exchange and interest rate risks. Yield enhancement solutions on surplus liquid funds will also be discussed.

5.2 Key Objectives of Treasury Solutions

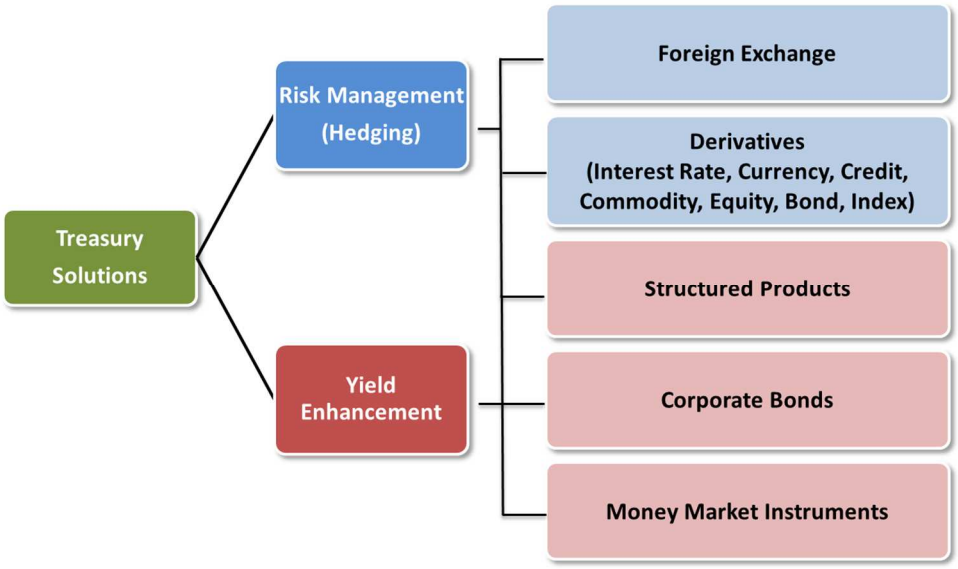
Corporate customers need access to the financial markets for various purposes.

Corporate customers export and import goods and services from overseas and need to receive or make payment in foreign currencies. Such customers may also borrow to fund their purchase of assets and investments locally or

overseas, and are therefore exposed to interest rate and foreign exchange rate fluctuations.

Corporates may wish to seek higher returns for their short-term surplus funds. These short-term surplus funds may arise due to seasonality of their operations, or from the proceeds of major fund raising exercises in the capital market before the funds are deployed.

Diagram 5.2: Treasury Solutions for Risk Management & Yield Enhancement



Typically, corporate bankers would work with the treasury sales team to provide treasury solutions to meet hedging and yield enhancement needs of the corporate customers.

5.3 Basic Derivatives Overview

Derivatives are financial instruments that derive their values from the value of underlying assets. The underlying assets can be currencies, interest rates, bonds (fixed income securities), equities, commodities or indexes. The basic types of derivatives are forwards, futures, swaps and options.

5.3.1 Forward Contract

A forward contract is a non-standardized contract between two parties to buy or sell an asset (currency, interest rate), at an agreed price on a future date. Corporates enter into forward contracts to hedge against price fluctuations of its underlying exposure by fixing the price.

5.3.2 Futures

On the other hand, a futures contract is a standardised contract between two parties to buy or sell an underlying instrument at a certain time in the future for a certain price, on **an exchange**.

Contract terms are standardised with regards to the quality, quantity and maturity. Future contracts can be written on a broad range of instruments including currencies, commodities, financial instruments (e.g. bonds) and stock indexes.

An investor need not pay for the entire futures contract at trade initiation. They pay a small up-front amount to the Clearing House, known as margin. A mark-to-market is conducted to measure the performance of the futures contract, comparing the traded price against the Daily Settlement Price. In the event there are marked-to-market losses, which are greater than the pre-determined minimum threshold margin, the investor will be issued a margin call, and he/she would be required to provide additional funds to the account to maintain the margin.

The margin collected by the Clearing House is used to pay for any unrealised losses, in event that the futures contract holder defaults. This removes counterparty risk for participants in the futures market, which is a key feature of futures markets. Contract holders can exit the contract at the last trading date.

5.3.3 Swaps

A swap transaction is the simultaneous buying and selling of a similar underlying asset or obligations of equivalent amount, over a specific future period. The arrangement provides both parties to the transaction with more favorable rates than if they have not executed the transaction. Common types of swaps include interest rate swaps and currency swaps.

5.3.4 Options

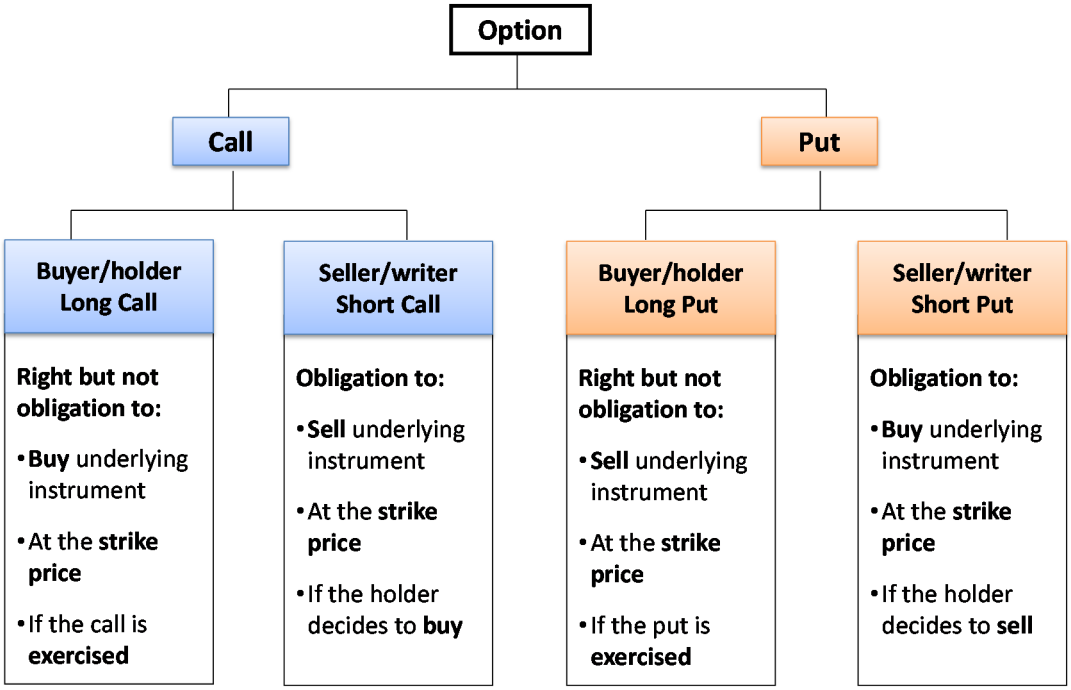
An option is a contract that entitles its holder with the right, but not the obligation to buy or sell a specific quantity of the underlying instrument, at a specified price (strike or exercise price), and on or before a specific future date (expiry date). The buyer pays an amount (option premium) to the seller in return for this right.

The underlying instrument can be currencies, interest rates, commodities, equities or indexes. Options can be standardized exchange-traded contracts or customized contracts traded over-the-counter with banks as intermediaries.

There are two basic types of options – calls and puts. A **call option** gives the buyer/holder the right, but not the obligation, to buy an underlying asset, at the strike price, on or before maturity. A **put option** gives the buyer/holder the

right, but not the obligation, to sell an underlying asset, at the strike price, on or before maturity.

Diagram 5.3.4 - Options



The two most common options styles are the European option and American option. ***European Option*** can be exercised only at the expiration date of the option. The option cannot be exercised early. ***American Option*** can be exercised at any time during the life of the option, on or before the expiry date. This means that the option can be exercised early.

Hence, the price of the underlying asset on expiry date relative to the strike price will be the only determinant on whether to exercise an European option. The price of the underlying asset on any given day relative to the strike price, throughout the life of the option, would impact the profitability of an American Option and hence the decision to exercise it or not.

On the other hand, an Asian option is an option whose payout is determined by the difference between the average value of the underlying asset on a predetermined set of dates, known as fixings, over the life of the option and the strike price.

As such, Asian option protects against the risk of price volatility as the payoff is based on the average price of the underlying asset price over a period of time instead of the underlying asset price at the end of the option period as in the case of European Option, or the price of the underlying asset at any point in time during the option period in the case of American Option.

From the basic building blocks of options, swaps and forwards, customized hedging strategies can be structured to cater to corporate's specific hedging needs.

5.4 Basic Spot Foreign Exchange Rate Quotations

The *foreign exchange market*, also known as the *forex market*, is a marketplace where market participants are looking to buy and sell foreign currencies. In the forex market, a market participant is simultaneously selling a currency to buy another. The value of a currency in terms of another is generally expressed as an *exchange rate*.

5.4.1 Reading Foreign Exchange Rate

Foreign exchange quotes show the amount of one currency, called the quoted currency, which can be exchanged for one unit of the base currency.

Direct and Indirect Quote

Direct quote is the exchange rate which gives the domestic currency price per unit of the foreign currency. Whereas an *Indirect quote* expresses the quantity of foreign currency required to exchange for one unit of the domestic currency.

As USD is the dominant currency in global foreign exchange markets, the general convention is to use direct quotes that use the USD as the base currency. However, there are exceptions to this rule. Indirect quotes are used for the Euro and Commonwealth currencies like the British Pound, Australian dollar and New Zealand dollar.

Example – Direct vs Indirect Quote

Simply put, direct quote is the rate that indicates the worth of one USD to the value of another currency. E.g. USD1/SGD 1.4200 which means USD1 can be exchanged for SGD1.4200. In comparison, indirect quote is the rate that indicates the worth of 1 foreign currency against the USD. E.g. EUR 1/USD 1.1124 which means EUR1 fetches USD1.1124.

Cross Currency Quote

Cross currency quotes are exchange rates that are not expressed in terms of USD. With cross rates, one foreign currency is traded for another without having to first exchange the currencies into USD.

Example – Cross Currency Quote

One of the most common cross currency pair is the EUR/JPY. E.g. EUR/JPY=133.41 which means 1EUR can be exchanged for 133.41JPY.

Bid and Offer

An FX quote contains both a *bid* and an *offer*. *A bid* is the maximum price that buyer of the base currency is willing to pay. *An offer* is the minimum price that the seller of the base currency is willing to receive.

Spot and Forward Rate

A *spot rate* is the current exchange rate for settlement within the next 2 business days.

A *forward rate* is the exchange rate that a bank agrees to exchange one currency for another at a specific future date. The forward rate is determined by the interest rate differentials between the two currencies.

Example – A Spot Rate Transaction

Company A wants to sell USD 1.0 million and buy SGD now.

Spot Rate:	
Bank buying (USD):	SGD 1.4000
Bank selling (USD):	SGD 1.4210
Rate to quote customer:	SGD 1.4000
Sell Amount (USD)	USD 1 million
Received Amount (SGD)	SGD 1.4 million (1.400 x 1 million)

The corporate customer wants to sell USD and buy SGD. From the corporate banker's standpoint, it means the bank will buy USD and sell SGD to the corporate customer. Based on the example above, the bank will buy USD at SGD1.4000. Thus the corporate customer would receive SGD1.4000 x USD 1 million = SGD 1.4 million.

Example – A Forward Rate Transaction

Using the same example, but now Company A would like to enter into a forward contract to sell USD 1.0 million and buy SGD in 3 months' time.

Spot Rate:	
Bank buying (USD):	SGD 1.4000
Bank selling (USD):	SGD 1.4210

3 months' forward rate:
Bank buying (USD): SGD 1.3995
Bank selling (USD): SGD 1.4205

Rate to quote customer: SGD 1.3995
Sell Amount (USD) USD 1 million
Received Amount (SGD) SGD 1.3995million (1.3995 x 1 million)

The bank will buy USD at SGD1.3995. Thus the corporate customer would receive SGD1.3995 x USD 1 million = SGD 1.3995 million.

5.4.2 Settlement Date

The date when both parties of a foreign exchange transaction deliver their respective currencies is known as the value date or settlement date.

Example – Settlement Date

A spot foreign exchange deal transacted on Monday, 28th June 2014 will be settled on Wednesday, 30th June 2014. The two-day period gives ample time for both parties to exchange the currencies.

A spot deal done on Thursday and Friday will be settled on the following Monday and Tuesday respectively. If there is a public holiday on one of these days, the settlement date will be pushed to the next working day such that settlement will always take place after 2 business days.

5.5 Hedging FX Risks Using Forward Contracts

Hedging is a way for a company to minimize or eliminate foreign exchange risk. This can be done by entering into a forward contract to buy or sell the required currency at a rate fixed today for delivery at a pre-determined date in the future.

Diagram 5.5 – Hedging FX Risks Using Forwards

	Asset / Receivables	Liabilities / Payables
Expect future value to rise	**Do nothing**, since assets/ receivables will worth more	**Buy forward** to lock in lower costs at current level
Expect future value to fall	**Sell forward** to lock in higher values at current level	**Do nothing**, since liabilities/ payables will cost less

Example – Hedging FX Risks using Forwards

A Singapore importer bought goods and has to pay the US supplier US$1m in 3 months' time. The current USD/SGD exchange rate is 1.4210 and the importer expects USD to strengthen in the coming months.

To hedge the currency exposure, the importer enters into a forward contract to buy USD 1 million for delivery in 3 months' time at the exchange rate of 1.4205. If the exchange rate strengthens to 1.5000, and the importer did not buy USD forward, the cost of the goods purchased would have been higher by S$79,500.

Of course hedging means that the importer gives up any potential gains it might have received from a weakening USD. For example, if USD/SGD had fallen to 1.3500, the importer would have been able to buy his required USD 1 million at 1.3500, thereby saving $70,500; but the importer would be willing to give that up, since he does not expect the USD to weaken.

5.6 Hedging Risks Using Interest Rate Swaps

An Interest Rate Swap (IRS) is an agreement between two parties in which each party agrees to make a series of payments to the other party on agreed future dates, until maturity of the agreement.

An IRS enables the parties involved to exchange a fixed interest rate to floating rate or vice-versa, without actually changing their original loans. Generally, the floating rate is linked to a market benchmark rate, such as the Singapore Interbank Offered Rate (SIBOR), the rate that banks charge each other for short-term loans.

It is important to note that the interest rate payments are based on the same currency. Each party's interest payments are calculated using different formulas by applying the agreed terms to the notional principal amount of the swap.

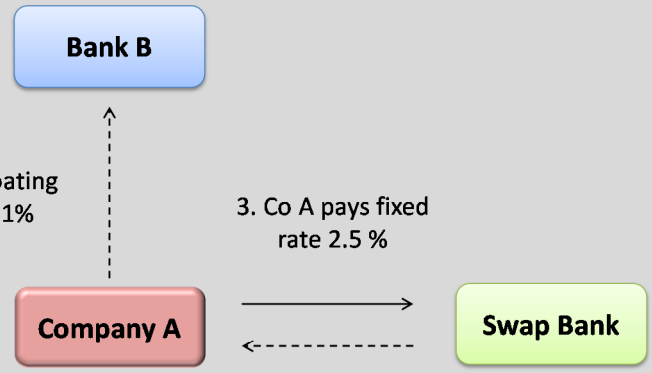
With IRS the notional principal does not change hands. It is only used as a reference point for calculating payments. This means that the interest rate basis for a debt or investment for both parties is changed, without altering the underlying principal obligation for the loan or investment.

Example – Hedging Risks using Interest Rate Swaps

Company A has secured a floating rate SGD 10 million loan from Bank B at SIBOR + 1%. It expects interest rate to rise and wishes to hedge against the exposure to higher interest.

By entering into an IRS for the notional amount of SGD 10 million, Company A will pay fixed rate to and receive floating rate from the swap counterparty. It will receive floating rate interest at SIBOR – 0.1% (as an intermediary, Swap Bank makes the bid-ask spread) and pay fixed interest rate at 2.5%.

Diagram 5.6(a): Hedging Interest Rate Using Interest Rate Swap (Floating-to-Fixed Rate)

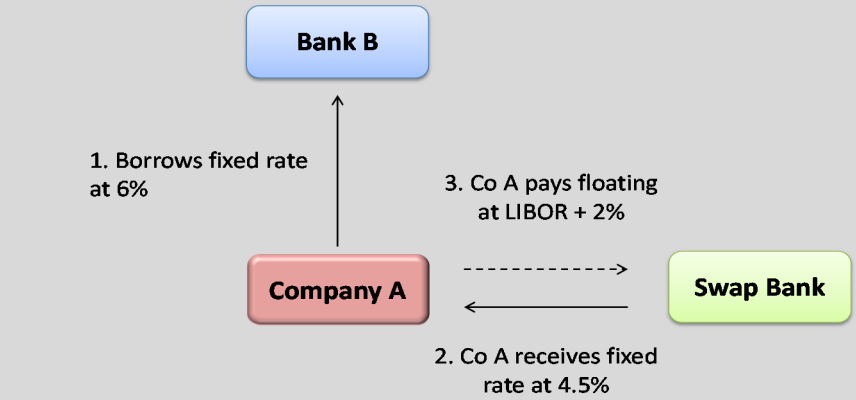


4. Co A's effective rate:

Pay:	SIBOR + 1%
Receive:	SIBOR – 0.1%
Net	1.1% (a)
Pay:	Fixed 2.5% (b)
Effective Rate	**Fixed 3.6% (a)+(b)**

Company A will use the SIBOR rate received to pay off the SIBOR component on the original loan with Bank B, resulting in net cost of borrowing at 1.1%. Together with the 2.5% payable on the IRS, Company A has essentially converted its floating rate obligation of SIBOR +1% loan into a fixed rate loan obligation of 3.6%. Note that there is no exchange of loan principal, only the exchange of interest.

Diagram 5.6(b): Hedging Interest Rate Using Interest Rate Swap (Fixed-to-Floating Rate)



4. Co A's effective rate:

Pay:	Fixed 6.0%
Receive:	Fixed 4.5%
Net	1.5% (a)
Pay:	LIBOR + 2% (b)
Effective Rate	**LIBOR + 3.5% (a)+(b)**

Conversely, if Company A has a fixed rate USD 10 million loan from Bank B at 6% and expects interest rate to fall, it will want to convert from the current fixed rate obligation to a floating interest rate obligation, benefit from the declining interest rate.

Company A will use the 4.5% interest rate received to pay off its 6% interest on the original loan with Bank B, resulting in net cost of borrowing at 1.5%. Together with the LIBOR + 2% payable on the IRS, Company A has essentially converted its fixed rate loan into a floating rate loan with effective interest of LIBOR + 3.5%. Similarly, there is no exchange of loan principal, only the interest payment.

5.7 Hedging FX & Interest Rate Risks Using Currency Swaps

A currency swap is an agreement between two parties in which one party makes payments in one currency and other party makes payments in a different currency, on agreed future dates until maturity. Currency swaps allow buyers and sellers to exchange the principal and interest of a loan in different currencies.

The principal differences between currency swaps and IRS are:

- Principal amount will change hands at both the beginning and the maturity of the contract, at the original exchange rate
- Interest payments are made in different currencies on agreed future dates until maturity

The Cross Currency Swap (CCS) is a popular tool for hedging or "converting" foreign currency liabilities into domestic currency exposures.

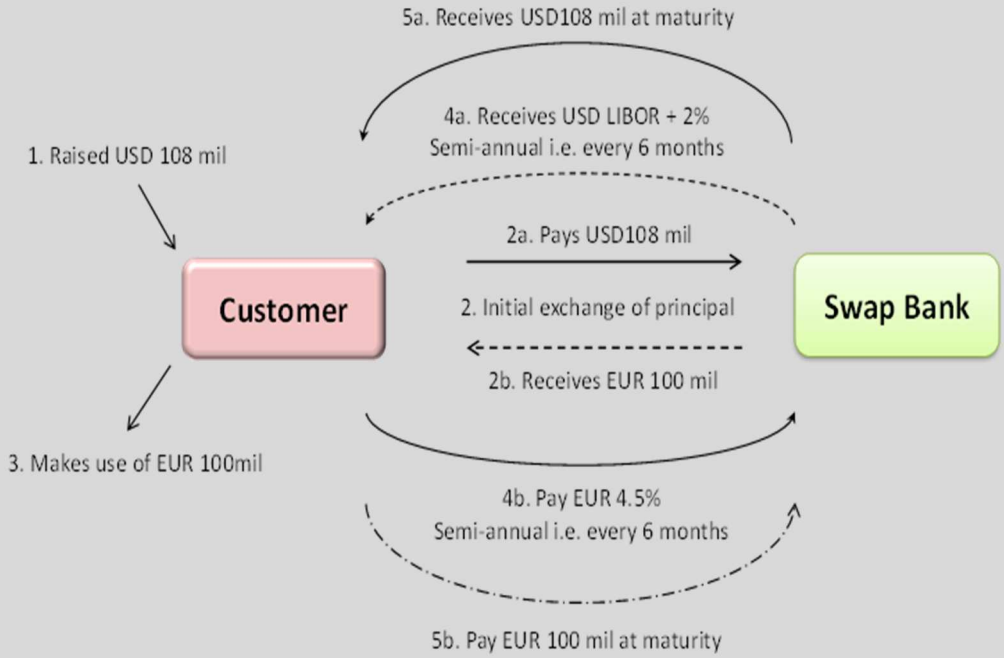
Example – Hedging FX & Interest Rate Risks using Currency Swaps

A European company raised funds through a US dollar denominated loan at USD LIBOR + 2%. The company wishes to exchange the funds into Euro by entering into a Cross Currency Swap.

Swap Start Date: 1 May 2015
Swap Maturity Date: 1 May 2017
EUR/USD Spot Rate: 1.0800
USD Amount: USD 108 Million
EUR Amount: EUR 100 Million
Initial exchange: Company pays swap bank USD 108million and receive EUR 100million
Borrower pays: EUR 4.5% semi-annual Act/360
Borrower receives: USD LIBOR + 2%, semi-annual Act/360

The principal amount is exchanged at the beginning of the period. During the 2-year period, company will pay the interest on the currency received i.e. pay 4.5% on the EUR100 million, and receive LIBOR +2% on USD108 million. At maturity, the principal amount of EUR 100 million is repaid in exchange for USD108 million. By entering into the Cross Currency Swap (CCS), the European company is able to hedge against interest rate and currency risk of its foreign currency loan.

Diagram 5.7: Hedging FX & Interest Rate Using Cross Currency Swaps (Floating-to-Fixed Rate)



5.8 Hedging Interest Rate Risks Using Interest Rate Options

In hedging interest rate risks with Options, Caps and Floors are often mentioned.

A Cap is an option that gives the holder a payout if the referenced interest rate is above the Strike Price. **A Floor** is an option that gives the holder a payout if the referenced interest rate is below the Strike Price.

Below is an example to illustrate hedging interest rates using interest rate cap.

Example – Hedging Interest Rate Risks using Interest Rate Options

Company A has a loan with interest rate at LIBOR + 2%. It wants to hedge against rising interest rates by buying an interest rate cap, with the strike for LIBOR fixed at 2.0%. If LIBOR rise above 2.0%, Company A will receive a payment which will be used to offset the higher borrowing costs on the loan, effectively capping its interest rate at 4.5% (excluding any premium cost).

However, if interest rate declines instead, Company A will not receive any payout from the cap. Instead, it will benefit from the lower interest rates.

Table 5.8: Example of Hedging Interest Rate Using Interest Rate Cap

LIBOR	Spread	Amount Payable	Cap Rate	Option Payout Received	Net Interest Paid on Loan	Premium Paid	Total Cost
1.0%	+ 2.5%	3.5%	2.0%	0.0%	3.5%	0.1%	3.6%
1.5%	+ 2.5%	4.0%	2.0%	0.0%	4.0%	0.1%	4.1%
2.0%	+ 2.5%	4.5%	2.0%	0.0%	4.5%	0.1%	4.6%
2.5%	+ 2.5%	5.0%	2.0%	0.5%	4.5%	0.1%	4.6%
3.0%	+ 2.5%	5.5%	2.0%	1.0%	4.5%	0.1%	4.6%
3.5%	+ 2.5%	6.0%	2.0%	1.5%	4.5%	0.1%	4.6%

5.9 Yield Enhancement Instruments

From time to time, corporates may have surplus funds and want to look for investments that can generate higher interest than putting them in short-term deposits with low yields. Generally, such investments need to be highly liquid and relatively low risk. They include short-term money market instruments (e.g. treasury bills, certificate of deposits, commercial papers) and medium-term

bonds. Banks also offered more complex products for corporates with higher risk appetite such as structured deposits.

5.9.1 Treasury Bills

Treasury Bills (T-bills) are short-term debt instruments issued by governments, with maturities of less than 1 year. They are exposed to sovereign risk and their credit ratings would differ depending on the issuers, but they are generally deemed to be low risk due to their short tenor. Hence, interest rates tend to be low. They are attractive for corporates looking for a low risk, highly liquid instruments to earn interest for short-term surplus funds.

T-bills are traded in the secondary market[1] but liquidity differs for different issuers. US treasury bills are actively traded in the secondary market and are highly liquid. In comparison, the secondary market for treasury bills issued by the Singapore government is less liquid.

5.9.2 Certificate of Deposit

Certificate of Deposits (CDs) are time deposits issued by commercial banks, for a specific period of time at a specific rate of interest. They are exposed to the credit risk of the issuing bank, but are generally considered to be relatively low risk and offer higher interest rate than T-bills, but lower yield compared to commercial papers.

CDs are not common in Singapore but are more actively issued in America and Europe. They are typically short-dated and have medium to low secondary market liquidity.

5.9.3 Commercial Paper

Commercial Papers (CPs) are short-term unsecured debt instrument issued by highly rated corporations to meet short-term funding needs. They are attractive to investors looking for higher interest and are prepared to accept the higher credit risks of the corporate issuers.

CPs are typically low in terms of secondary market liquidity and are usually held to maturity by investors.

5.9.4 Bonds

Bonds, also known as fixed income securities, are debt instruments that have maturity of more than one year. They are issued by governments and corporates in the capital market to raise long-term financing. The interest rates

[1] Trading activity that takes place outside of the initial capital-raising activities (i.e. in the primary market)

paid by the issuers, or coupons, depend on the credit rating of the issuer and prevailing market condition.

There are various types of bonds with different security, redemption and interest rate characteristics. In general, they offer higher interest rates than money market instruments.

In Singapore, the government issues Singapore Government Securities with maturities of 2, 5, 10, 15, 20, 25 and 30-year maturities. In recent years, Singapore has developed an active SGD bond market which has attracted both local and foreign issuers to tap this market.

Bonds are traded in the secondary market. Liquidity differs depending on market depth and issuer. For example, the bond markets in the US and Japan are huge and highly liquid.

5.9.5 Structured Deposits

A structured deposit combines a time deposit with an investment product, and is created with to achieve higher yield than fixed deposits. The overall yield of a structured deposit depends on the performance of the underlying investment product – market indices, equities, commodities, interest rates, fixed-income securities, foreign exchange rates, or a combination of these.

They are purchased by corporates looking for higher yield on surplus fund ~~than~~ compared to what they can get from fixed deposits.

For example, Structured Deposit, which allows the corporate investor to deposit $250,000 for a 15-month period, with interest between 0% to 10% at maturity.

This structured product is made up of 2 components: a capital protection component and a return component. The capital protection component may take the form of zero-coupon bonds.

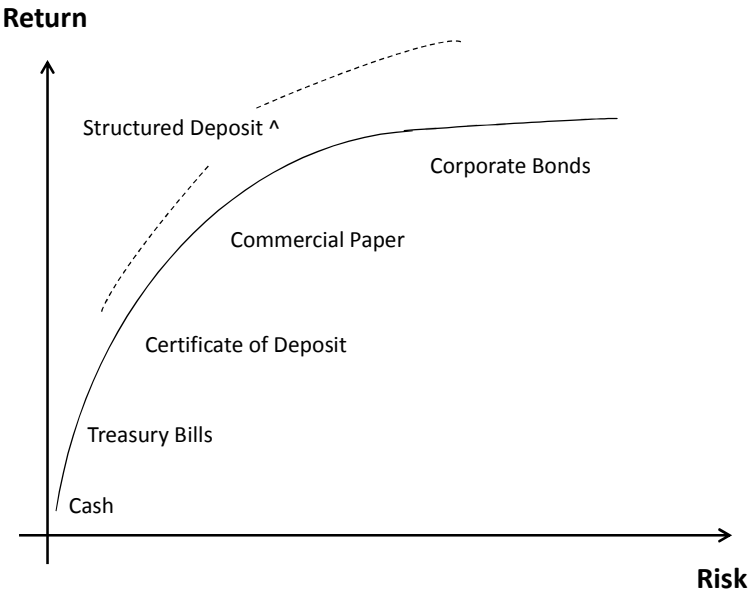
Using the above example, $225,000 of the initial investment may be used to purchase these bonds, which repay $250,000 at maturity in 15-months' time. This thus allows the bank to repay the investor's principal.

The remaining $25,000 of the investment principal is used to buy Options. This provides the potential return, whilst presenting a finite, limited loss.

If the Options do not become profitable, the full principal amount, recovered through the maturing zero-coupon bonds, is returned to the investor, but with no profit, hence the lower limit return of 0%.
If the Options are profitable, the principal and profit, expressed as a percentage of the principal investment amount, is returned to the investor; hence the upper limit return of 10%.

The Structured Deposit is termed the "wrapper", since it wraps up the protection and return components.

Table 5.9 Comparison of Risk vs. Return of Financial Instruments



5.10 Industry Practices and Guidelines for Treasury Transactions

The International Swaps and Derivatives Association (ISDA)[2], which represents participants in the privately negotiated derivatives industry, is the largest global financial trade association, by number of member firms. Since its inception, ISDA has pioneered efforts to ensure enforceability and reduce risks in derivative transactions, by developing the ISDA Master Agreement and a wide range of related documentation.

The ISDA Master Agreement is a document that sets out the standard terms agreed between two parties that apply to all OTC derivative transactions entered into between these two parties. The ISDA master agreement contains the following provisions:

- A list of obligations, detailing the mechanics of payment conditions, including the netting of obligations
- A list of credit provisions, which describe events of default and termination, early termination, and credit support provisions (e.g. the system of collateral payments)

The ISDA also promotes netting agreements and credit support annex. Netting agreements reduce the amount of funds that actually need to be exchanged

[2] ISDA - http://www2.isda.org/

between counterparties, thereby reducing settlement risk. The credit support annex allows the profitable party in a trade to demand collateral from the unprofitable party. This is done to mitigate default risk. Collateral, other than cash, is typically subject to a haircut. This helps ensure that exposures are not under-collateralized, which could otherwise lead to losses in the event of a default.

5.11 Summary

In this chapter, we have learnt:

- Key objectives of treasury solutions of managing risk and yield enhancement.
- Features of basic derivatives such as forward, future, swap and options.
- Application of treasury solutions to hedge foreign exchange and interest rate risks using FX forward contracts, interest rate swaps and currency swaps.
- Risk and return comparison of money market instruments, bonds and structured deposits.

Chapter 6:
Credit Evaluation

Learning Objectives

The candidate should be able to:

- ✓ Understand the credit lending process
- ✓ Learn the credit evaluation framework
- ✓ Perform qualitative and quantitative analysis
- ✓ Know the practical considerations for financial projections
- ✓ Mitigate risks using collaterals, credit support and covenants

6.1 Introduction

This chapter looks at the credit evaluation framework to provide a structured approach to determine the purpose of the loan, the viability of the business for which the loan is extended, and the sources of repayment. Qualitative and quantitative factors are analyzed to evaluate the borrower's financial performance, health and loan servicing capability.

6.2 An Overview of Lending Process

Credit is given when a product or service is availed with a promise to settle payment in the future. For instance, trade credit involves a supplier providing a buyer with goods or services for which payment is deferred. In the context of banking, credit can be in the form of a loan for which the borrower promises to make capital repayment as well as interest payments in the future.

The lending process starts off with the identification of target market segments and prospective customers that meets the bank's lending policies. Preliminary due diligence is performed before meeting up with the prospects to determine their banking needs, and obtain more information required for performing a detailed credit evaluation on the prospects.

A credit proposal is drawn up, containing the recommendations and risk mitigation measures, for approval by the credit committee. An offer is then made to the prospect. If accepted, loan agreement and other documentation will need to be completed before the loan is disbursed.

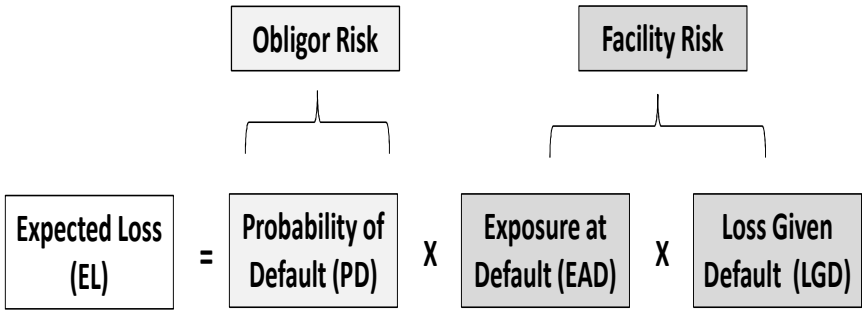
After disbursement, the facility's usage is monitored and reviewed, to identify additional opportunities or signs of potential problems. Early identification of potential problems allows the bank to initiate appropriate action in order to ensure that the loan can be repaid in full and on time.

6.3 Components of Credit Risks

In extending loans, banks are exposed to the uncertainties in the ability of the borrowers (or obligors) to repay the loans. There are three components to credit risk – Probability of Default (PD), Exposure at Default (EAD) and Loss Given Default (LGD).

The expected loss is quantified as follows:

Diagram 6.3: Quantification of Credit Risk



6.3.1 Obligor Risk

Obligor risk is measured by the ***Probability of Default***, which is the likelihood of the borrower defaulting on its obligations over a specified time horizon.

Banks perform credit evaluation on potential borrowers to determine the borrower's ability to meet its obligation by analyzing inter alia; the purpose of the loan, market and economic conditions, business operations, management ability and sources of repayment. Details of credit evaluation are discussed in section 6.4 of this chapter.

Banks also rely on external credit rating agencies, such as Standard and Poor's or Moody's, to carry out credit assessments on companies. There is a close correlation between the credit rating and default rate. A good credit rating is associated with a low default rate.

6.3.2 Facility Risk

Facility risk consists of 2 components – ***Exposure at Default (EAD)*** and ***Loss Given Default (LGD).***

Exposure at Default is defined as the outstanding amount that a bank is exposed to at the time of default. ***Loss Given Default*** is the percentage of the EAD which the bank expects to lose when a borrower defaults.

Example: Computation for Probability of Default (PD), Loss Given Default (LGD) and Expected Loss (EL)

Company Z has been granted a credit facility of S$500million secured by fixed deposit of S$150million. The assumed usage of the line at default is 80% (i.e. $400million). The company has a credit rating of 3.

The default probability mapping used by the bank is as follows:

Credit Rating	Probability of Default
1	0.10%
2	0.20%
3	0.30%
4	1.00%
5	1.50%
6	5.00%
7	7.50%
8	Default

Using the above example, we can calculate:

1. Probability of Default (PD)

Given the credit rating at 3, the PD would be at 0.3% according to the default probability mapping table.

2. Exposure at Default (EAD) = 80% x $500m = $400m

3. Loss Given Default (LGD)

Given that the loan is at S$500m secured by fixed deposit of S$150m, the LGD will be:

Recovery = $150 m
Recovery rate (R) = $150m / (80% x 500m) = 37.5%
LGD = (1-R) = 62.5%

4. Expected Loss (EL)

Expected Loss = Obligor Risk (PD) X Facility Risk (EAD x LGD)
= 0.3% x $400m x 62.5%
= $750,000

EAD is dependent on the credit facility that is granted to the borrower. Credit facility with ease of drawdown and less control by bank (e.g. overdraft) will present higher risk, as compared to one that has strict drawdown conditions (e.g. 70% financing against evidence of confirmed sales order).

LGD depends on whether the loan is senior[1] or subordinated[2], and the collateral obtained to secure the loan. Debt which is ranked "senior" gets repaid after the secured debtors but before subordinated debtors in event of default by the borrower. Hence, subordinated debt faces the higher risk of not being repaid in full.

Banks usually ask for security in the form of collaterals and/or credit support to mitigate facility risk. The common types of collaterals and credit support and their usage are discussed in section 6.9 in this chapter.

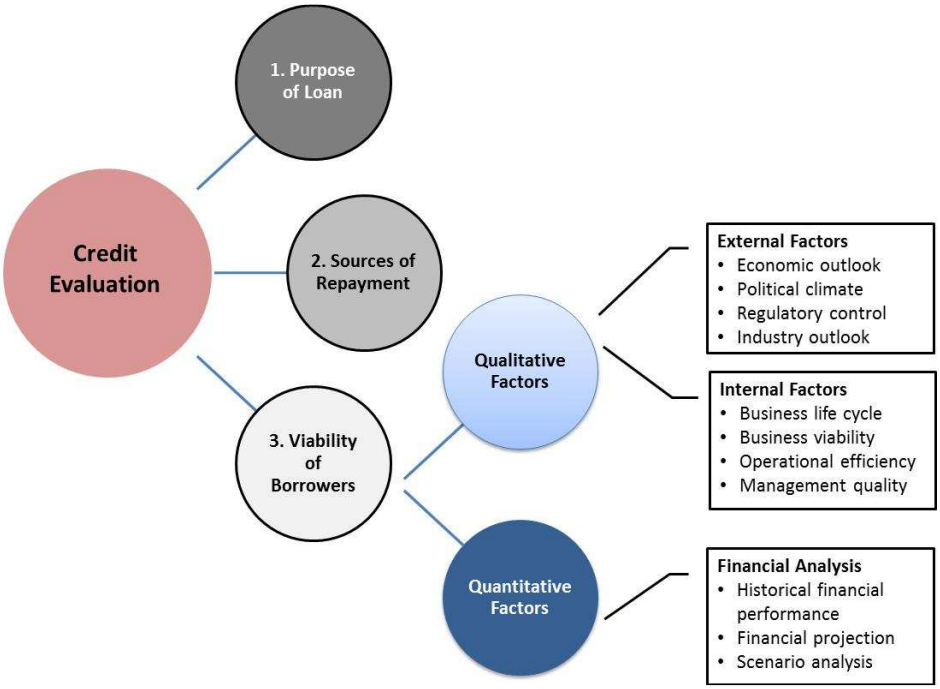
6.4 Credit Evaluation Framework

A well-performed credit evaluation is critical in ensuring that the bank meets the financing needs of the borrower with appropriate controls to limit the bank's risk exposure, and maximize the bank's return on the credit facilities extended.

The main objectives of credit evaluation are to:

- Identify the risks in extending credit facilities
- Assess the viability of the borrower
- Determine the sources and likelihood of repayment
- Recommend the appropriate type and structure of credit facilities

Diagram 6.4 – Credit Evaluation Framework



[1] debt that takes priority over other unsecured or otherwise more "junior" debt owed by the issuer.

[2] debt owed to an unsecured creditor that in the event of a liquidation can only be paid after the claims of secured creditors have been met.

6.4.1 The 5Cs Credit Analysis Model

The ***five Cs*** credit analysis model looks at character, capital, capacity, conditions and collateral. The first 4*C*s assess the probability of default, while collateral evaluates the recovery rate in the event of default.

1. **Character**

The integrity of the borrower, which principally focuses on the willingness to repay, is a prime factor in any lending decision. This is usually inferred by looking at the borrower's banking relationships, credit history, background checks and interviews.

2. **Conditions**

The general macroeconomic, industry and business conditions can impact the borrower's repayment ability.

3. **Capacity**

The ability to generate cash flow to service the interest and repay the loan principal is critical in credit risk assessment. The borrower's technical, managerial and financial track records are good indicators of repayment capability.

4. **Capital**

Understanding the borrower's capital structure helps to determine the financial strength and the commitment of the owners or shareholders in the business. Both factors provide some indications of the borrower's ability to weather difficult economic and business conditions.

5. **Collateral**

Collateral are assets pledged to support the loan. In the event of a default, lender can seize and liquidate the assets to repay the loan and minimize any losses.

6.5 Qualitative Analysis

In assessing a borrower's credit risk, banks need to consider both quantitative and qualitative factors. Qualitative analysis involves the assessment of external and internal opportunities and threats that affect the borrower's operations, thus its ability to service and repay the loan. These factors include economic outlook, political and regulatory climate, social conditions, environmental issues, competition, industry cycles, management and operational efficiencies etc.

6.5.1 External Factors – Macro Risk Analysis

1. Economic Outlook

International and domestic economic outlook will have a significant influence on the business environment. Macroeconomic factors such as economic expansion, recession, inflation, unemployment etc. will affect demand and supply, interest and exchange rates. These will in turn have an impact on business conditions and ultimately, the profitability of the borrower.

2. Political Climate

Political stability is important to ensure favorable environment for business to flourish. Political changes can result in war, civil unrest or the imposition of new laws or controls. Similarly, they can also bring about new business opportunities or new markets.

For example, Thailand's rice subsidy scheme was scrapped after a change in government. The scheme and the subsequent termination affected the prices of rice as Thailand is the world's largest exporter of rice. The fluctuations in the prices will have an impact on the sales and profitability of the companies that are involved in the export, import or distribution of rice.

3. Regulatory Control

International and domestic regulations can affect different aspects of a company's operations, such as manpower, sales and distribution of products, and cross-border payment.

For example, the restrictions on the hiring of foreign workers can affect a company's production output and expansion plans. The introduction of a new law restricting public drinking and alcohol retail sales to certain time of the day is expected to lower sales for convenient chain stores.

Similarly, when currency controls are imposed by a country, the outflow of capital from that country would be restricted. This will have serious repercussions on the companies' ability to pay suppliers from other countries, or to repay cross-border loans.

4. Industry Outlook

Every industry has its unique characteristics that determine the competitive environment that companies operate in. Key factors that affect the business viability and profitability of an industry include cyclicality, capital intensity, barrier to entry, threat of substitutes for the products and services, bargaining power of suppliers and customers.

For example, the telecommunications industry is typically subject to regulatory control via licensing and is exposed to rapid technology changes. Investments and capital requirements are high and companies will need certain economies of scale to sustain profitability. The introduction of new technology and entrance of a new player can have significant impact on existing incumbents' market share, pricing, revenue and cash flow.

Some industries are more resilient to economic cycles (e.g. basic medical care, public transportation) while others are highly cyclical (e.g. property, shipping, commodities). Some industries are highly fragmented and characterised by many small players (e.g. trading, logistics, retail) while others are dominated by a handful of big players (e.g. energy, power and telecommunications).

Growth prospects differ for different industries, and can vary for different businesses within the same industry. For example, with the advent of the internet, traditional postal and mail industry faces the prospect of becoming a sunset industry. However, some players have restructured their operations to provide end-to-end e-commerce, marketing and logistic services, and ride the e-commerce boom to sustain growth.

6.5.2 Borrower's Internal Factors – Micro Risk Analysis

Understanding the business operations of the borrower is critical to determine the business viability and sustainability of financial performance. Key internal factors to be evaluated include business life cycle, quality and track record of management and operational efficiency.

1. Business Life Cycle

Companies go through different stages of business life cycle – start-up, expansion, matured, consolidation and decline. At different stages, the risk exposure, revenue potential, profitability and cash generating capabilities, hence banking needs, can vary materially.

Risk tends to be the highest during the start-up and decline stages, when companies do not generate sufficient cash flow to fund investments and cover operating costs. Failure rates tend to be high and the banks can potentially end up with non-performing loans.

When companies are established in the market and experience rapid growth, they need working capital to fund capacity expansion and higher volume of businesses. While risk is not as high as the start-up stage, banks need to be vigilant that companies can expand faster than they can cope, and run into cash flow problems.

Risk tends to be lower when companies have established their track record and matured. Business is relatively stable and investments tend to level off or decline, resulting in improving cash flow and building up of cash from operations. At this stage, some companies may look to mergers and acquisitions to consolidate their market share.

2. Business Viability

The viability of a business depends on factors specific to the company such as market demand, quality, pricing, product and service differentiation, marketing strategy, distribution channels, research and development capabilities etc. These factors will have significant impact on the company's ability to generate cash flow for investments, operations, repay borrowings and generate return for shareholders.

3. Operational Efficiency

In a business context, operational efficiency is defined as the ratio of output from the business relative to the input. The lesser the resources (e.g. labour, materials, overheads) being utilised to produce the same level of output, or the higher the output given for a certain amount of resources, the higher the operational efficiency.

The efficiency of a company's operations can be affected by factors such as manpower constraints, poor labour relations, production bottlenecks, rejection rate, material shortages, high concentration of customers and suppliers. The impact of these factors on pricing, utilisation rate and costs will affect revenue and ultimately, profitability of the company.

4. Management Quality

Management expertise, experience, integrity and track record are critical to evaluate a company's business viability, ability to weather changes in market conditions, risk-taking appetite, commitments and willingness to repay the loan.

It is also important for a company to put in place succession planning to ensure sustainability of the business. This is especially important for small and medium enterprises that are highly dependent on founding shareholders and management.

6.6 Quantitative Analysis

Banks extend loans to borrowers with the aim of earning interest income on the capital provided during the period of the loan, and getting the loan repaid at maturity. The objective of quantitative analysis is to evaluate the past performance of the borrower to form an assessment on the viability of the business going forward. The aim is to determine its ability to generate cash flow to sustain the business and repay the loan.

Companies' annual reports provide stakeholders (e.g. shareholders, lenders, government agencies, etc.) information on how the business performed, to facilitate decision making.

The key elements of an annual report are:

- Management's strategic review
- Key management team and biography
- Management's discussion and analysis on operational and financial issues
- Auditor's report
- Financial statements
- Notes to the accounts

Management's strategic, operational and financial review and analysis provide insights into the business' performance, risk exposures, management actions and outlook. The auditor's report provides an independent opinion on whether the financial statements are properly drawn up in accordance with generally accepted accounting standards, and that they reflect a true and fair view of the state of affairs of the business.

6.6.1 Understanding Financial Statements

The financial statements are key sources of information used to perform financial analysis, to quantify credit risk and facilitate lending decisions. It is important to know that they are prepared based on key accounting concepts and principles, in order to interpret the financial information properly.

Table 6.6.1: Key Accounting Concepts and Principles

Monetary Measurement	All transactions must be quantifiable i.e. expressed in monetary terms for them to be captured into the accounts.
Separate Entity	Business is separate and distinct from the owners i.e. only transactions related to the business are recorded.
Historical Cost	Transactions involving assets and liabilities are recorded at their cost at the time the transactions occurred i.e. any subsequent changes in value will not be reflected in the accounts.
Going Concern	Business is assumed to be on an on-going basis and will not be forced to sell its assets in the near future.
Materiality	All material matters are to be reported. Materiality is relative to the underlying circumstances. The general principle is that, information is material if its omission or misstatement could impact the decision of users of the financial reports.
Prudence	The principle of conservatism is to recognize profit only when sales are completed, but to capture the costs or

	losses as soon as there is a reasonable chance that they will be incurred in the future.
Consistency	Transactions and valuation methods are applied in the same way from period to period, to facilitate meaningful comparisons of financial performance.
Matching (or "Accruals")	Income should be properly "matched" with the expenses of a given accounting period.

6.6.2 Core Financial Statements

The core financial statements which form the basis of financial analysis are:

- Statement of Financial Position, or Balance Sheet
- Income Statement, or the Profit and Loss Statement
- Cash Flow Statement

1. Balance Sheet

The ***Balance Sheet*** shows the financial position of a company at a specific point in time, typically the company's financial year end. The balance sheet has three components – assets, liabilities and shareholders' equity.

- ***Assets*** represent the resources owned by the company. They represent economic values that are expected to provide future benefits to the company. Assets can be tangible (e.g. cash, receivables, plant and equipment) or intangible (e.g. goodwill).

- ***Liabilities*** are borrowings or debts owed by the company to providers of funds either in the form of loans (e.g. banks, directors) or credit extended by vendors for the supply of goods and services.

- ***Shareholders' Equity*** refers to the capital contributed by shareholders, which include paid-in capital, retained earnings and other reserves.

Balance sheet classifies assets into current assets and non-current assets. Current assets are assets that are expected to be used or sold in the entity's normal operating cycle, usually within a 12-month period after the balance sheet date. Current assets typically consist of cash or cash equivalent (e.g. fixed deposits), trade receivables and inventories.

All other assets are classified as non-current assets. They consist of long-term assets such as building and equipment, whose economic values are expected to extend beyond the next financial period.

Similarly, liabilities are classified into current and non-current liabilities. Current liabilities are obligations due within the financial period. They typically consist

of trade payables, accruals (e.g. utilities, payroll) and loans due within a 12-month period after the balance sheet date.

All other liabilities are classified as non-current liabilities. They consist of long-term obligations beyond a 12-month period from balance sheet date, such as loans due in 2-5 years.

Assets are financed by either creditors or shareholders. Hence, the total value of assets equals to the sum of liabilities and equity.

Table 6.6.2(a) – Balance Sheet of Good Health Ltd

Year Ended 31 Dec ($'000)	X1	X2	X3
Land & Property	100,000	100,000	100,000
Plant & Equipment	108,500	177,500	170,250
Intangibles Assets	26,000	25,000	24,000
	234,500	**302,500**	**294,250**
Cash & Cash Equivalent	20,000	29,783	112,164
Trade & Receivables	115,068	150,000	125,000
Inventories	77,151	110,000	80,000
Other Current Assets	5,000	5,000	5,000
Current Asset	**217,219**	**294,783**	**322,164**
Total Asset	**451,719**	**597,283**	**616,414**
Trade & Other Payables	77,151	98,000	80,000
Bank OD & ST Borrowings	25,000	45,000	30,000
LT Loans Due Within 1 Year	-	25,000	10,000
Current Liabilities	**102,151**	**168,000**	**120,000**
LT Loans Due After 1 Year	50,000	70,000	70,000
Long-term Liabilities	**50,000**	**70,000**	**70,000**
Share Capital	75,000	75,000	75,000
Retained Earnings	224,568	284,283	351,414
Shareholders' Equity	**299,568**	**359,283**	**426,414**
Total Equity & Liabilities	**451,719**	**597,283**	**616,414**

2. Profit & Loss Statement

The ***Profit and Loss Statement*** is a summary of the firm's revenues and expenses over a given time period, usually over the financial period of 12 months. It provides information on the financial performance of the entity, to either generate a profit or incur a loss from business and other activities.

Table 6.6.2(b) – Profit and Loss Statement for Good Health Ltd

Year Ended 31 Dec ($'000)	X1	X2	X3
Revenue	**700,000**	**775,200**	**852,720**
Materials	(200,000)	(235,000)	(255,816)
Labour	(106,000)	(117,000)	(127,908)
Overheads	(38,000)	(40,000)	(42,636)
Depreciation	(8,000)	(11,000)	(17,250)
COGS	**(352,000)**	**(403,000)**	**(443,610)**
Gross Profit	**348,000**	**372,200**	**409,110**
Sales & Distribution Expenses	(105,000)	(124,032)	(140,699)
Administration Expenses	(119,000)	(135,660)	(144,962)
Operating Expenses	**(224,000)**	**(259,692)**	**(285,661)**
Operating Profit	**124,000**	**112,508**	**123,449**
Non-Operating Income	2,000	10,000	2,000
Net Interest Expense	(1,850)	(3,800)	(2,300)
Profit Before Tax	**124,150**	**118,708**	**123,149**
Tax	(32,279)	(30,864)	(32,019)
Net Profit	**91,871**	**87,844**	**91,130**

3. Cash flow Statement

The ***Cash Flow Statement*** *shows* how changes in profit & loss and balance sheet affect cash and cash equivalent (e.g. liquid investments) over the financial period. It also breaks down the inflow and outflow of cash arising from operating, investing and financing activities, where:

- Operating activities are the principal revenue-producing activities of the entity
- Investing activities involve the purchases and/or disposal of long-term assets and/or investments
- Financing activities involve funds raised through loans and/or additional capital injection by shareholders, loan repayment and dividend payment to shareholders

Table 6.6.2(c) – Cash Flow Statement for Good Health Ltd

Year Ended 31 Dec ($'000)	X1	X2	X3
Cash Flow from Operating Activities			
91,871	**87,844**	**91,130**	**91,871**
Add/(Less):			
Depreciation	9,000	12,000	18,250
Amortisation of Intangibles	1,000	1,000	1,000
One-off Non-Operating Gain		(8,000)	
Change in Working Capital	(18,000)	(46,932)	37,000
Net Cash From Operating Activities	**83,871**	**45,912**	**147,380**
Cash Flow from Investing Activities			
Purchase of Land & Property	(50,000)		
Purchase of Plant & Equipment	(15,000)	(80,000)	(10,000)
Net Cash Used in Investment Activities	**(65,000)**	**(80,000)**	**(10,000)**
Cash Flow from Financing Activities			
Repayment of Bank Loan			(30,000)
Proceeds from Short Term Bank Loan		45,000	
Proceeds from Long Term Bank Loan	10,000	20,000	
Dividend Paid to Shareholders	(25,000)	(25,000)	(25,000)
Net Cash Used in Financing Activities	**(15,000)**	**40,000**	**(55,000)**
Net Increase/(Decrease) in Cash	**3,871**	**5,912**	**82,380**
Cash at Beginning of Period	20,000	23,871	29,783
Cash at End of Financial Period	**23,871**	**29,783**	**112,164**

6.6.3 Impact of Accounting Methods on Financial Statements

The choice of accounting methods can have a significant impact on the financial performance of a company.

1. Asset vs. Expense

Company incurs expenditures in order to generate profit. However, such expenditures may generate benefits to the company beyond the current period. If the expenditures are charged to the profit & loss statement, it will have the effect of reducing the profit for the year and boosting profit for subsequent years.

On the other hand, if the expenditures are capitalised as an asset on the balance sheet, to be amortized over subsequent periods, it will have the effect of boosting profit for current period and lowering profit for subsequent periods.

Example - Impact of Accounting Method on Financial Statement: Asset vs Expenses

A company purchases a new machine for the production of its goods. The machinery costs $50,000 and has a useful life of 5 years, and has no residual value at the end of its life.

Revenue for the year: $150,000.
Operating cost for the year: $120,000.

If the company expenses off the cost of the machine, operating cost will increase to $170,000. This would result in the company reporting an operating loss of $20,000 for the year.

In the subsequent years, the company will not need to bear the cost of using the machine. That would result in lower costs, and hence higher profits.

However, if the company capitalises the cost of the machine as an asset and spread the cost over the useful life of 5 years, it will incur additional cost of $10,000 for the proportionate use of the machine this year. Operating cost will increase to $130,000 and the company will report an operating profit of $20,000 for the year.

For the next 4 years, it will have to continue to report an "expense" of $10,000 annually for the machinery.

In reality, there is no change to the cash flows of the company, but the different accounting treatments will result in different reported profits.

2. Depreciation

Fixed assets can be depreciated using either the straight line, reducing balance or units of production methods.

I. Straight Line Method

The ***Straight Line*** method divides the cost of the asset equally over the useful life of the asset.

In the above example where the straight line method is applied, the cost of $50,000 was divided by 5 years, giving an annual depreciation of $10,000.

This method is simple to apply, but may not reflect the underlying economic value of the asset.

For example, the performance of the machine, and hence the economic value it generates, deteriorates with time. As such, charging the same amount of depreciation in the first year, when the machine is at its most efficient, as what

is charged in the final year, when the machine is less efficient, may not present a true and fair picture.

II. Reducing Balance Method

The ***Reducing Balance*** method depreciates assets using a fixed percentage each year. This results in higher depreciation expenses in the early years and lower expenses in the latter years, which could parallel the declining productiveness of the asset.

Using a rate of 50%, the machine in the above example would be depreciated as follows:

Table 6.6.3(a): Calculation of Depreciation Using Reducing Balance Method

Year	Net Book Value of Machinery	Depreciation for Year
1	$50,000.00	$25,000.00
2	$25,000.00	$12,500.00
3	$12,500.00	$6,250.00
4	$6,250.00	$3,125.00
5	$3,125.00	$3,125.00
	Total	**$50,000.00**

While this method may provide a fairer representation of the machine's productivity, the basis for the rate of depreciation could be subjective.

III. Units of Production Method

The ***Unit of Production*** method estimates depreciation based on the production output from the asset, rather than in terms of the duration of its useful life.

Using our earlier example, if the machine is expected to produce 100,000 units of goods during its useful life, then the depreciation per unit is $0.50 ($50,000 divided by 100,000 units). The depreciation expense per annum would then be derived from the actual, or budgeted, production levels for the year, multiplied by $0.50.

As with the reducing balance method, the estimation of production output can be quite subjective.

3. Inventory Valuation

Inventory can be valued using ***first-in-first-out (FIFO), last-in-first-out (LIFO), specific identification or weighted averaged (WA) methods***. In a rising cost environment, the value of the inventory captured as cost of goods sold in the profit & loss statement will be lowest under FIFO and the highest under LIFO, with WA costing between the two methods. This will have the effect of boosting profit under FIFO and lowering profit under LIFO.

Inventory valuation methods will also have different impact on balance sheet, which captures the value of the inventories at the end of the financial period. In a rising cost environment, the value of the inventory will be the highest under FIFO and lowest under LIFO, with WA having a value between the two.

The Financial Reporting Standards in Singapore allow only the FIFO, WA and specific identification methods of inventory valuation. The use of LIFO is prohibited.

Example – Inventory Valuation

Let us assume a construction company's inventory of 150 tonnes of steel is built up over 3 years, and the cost of each tonne varies from year to year.

Year	Amount Purchase (tonnes)	Cost per tonne
1	50	$110
2	70	$140
3	30	$160

A construction project now requires the use of 30 tonnes of steel.

Under the ***FIFO*** method, the cost to the project will be $3,300, being 30 tonnes at $110 per tonne. Its inventory value on the balance sheet in Year 3 would be $16,800 ([30 x $160] + [70 x $140] + [20 x $110]).

Under the ***WA*** *method*, the cost to the project will be $4,020, being 30 tonnes at $134 per tonne. Its inventory value on the balance sheet in Year 3 would be $16,080 (120 x $134).

The ***Specific Identification*** method is applicable for inventory that is non-homogenous, such as hand-carved wooden doors. Depending on the intricacy of the patterns and the skill of the craftsmanship, the cost of each door would be different. In such cases, the specific cost of the item being consumed would be used to compute the value of the inventory.

6.6.4 Auditor's Report

The auditor's report is a formal opinion or disclaimer, issued by an independent external auditor, on the financial statements of the company. There are three main types of auditor's opinions – unqualified, qualified and adverse.

An unqualified opinion would state that the financial statements comply with generally accepted accounting principles and they present a true and fair view of the company.

A qualified opinion contains exceptions that prevent the auditor from giving a clean opinion. For example, the auditor may not have access to certain

information. While the missing information is significant, it is not pervasive, and the auditor may limit the scope of the audit opinion.

Some examples of audit qualifications – "Valuation of the company's landholdings in China cannot be ascertained", "Loans extended to related companies may not be fully recoverable".

If the auditor is unable to obtain the necessary evidence to give an opinion on the accuracy of the financial statements, the auditor may issue a disclaimer of opinion.

An adverse opinion is the most serious opinion that auditors give to indicate that the mis-statement in the financial reports are severe. For example, if the going-concern of a company is seriously in doubt, and the financial statements were prepared on historical cost rather than realisable value upon liquidation.

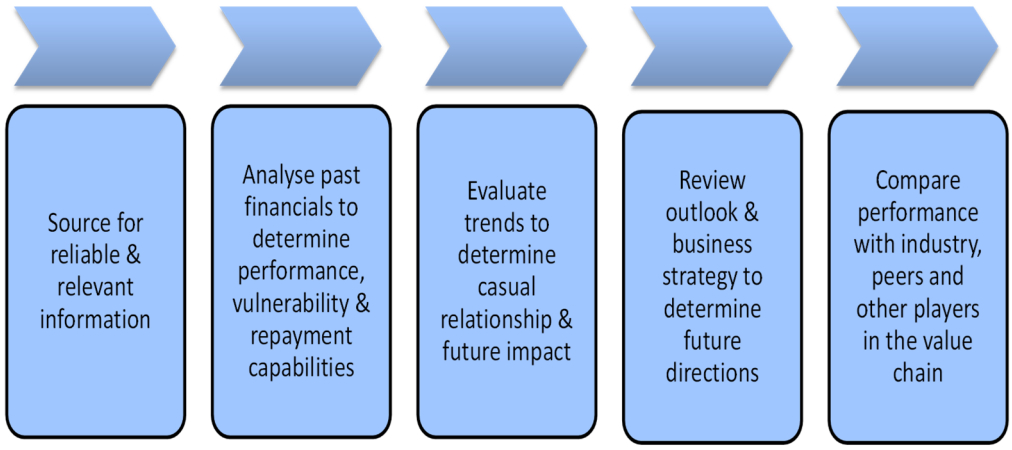
Besides audit qualification, other red flags that may point towards potential financial problems include frequent changes in auditors (especially from a "Big Four" to a mid-tier audit firm), changes in accounting policies, valuation methods etc.

6.6.5 Financial Analysis

In credit evaluation, financial analysis is performed to determine the borrower's financial performance, strength of its capital structure, ability to generate cash flow and sustain its operations into the future. In this section, we will look at the key financial ratios that are used to evaluate a company's profitability, efficiency, sustainability, liquidity and solvency.

When analysed over a period of time, historical financial ratios help to identify underlying trends in the company's financial performance to provide some basis to project the company's expected performance in the future.

Diagram 6.6.4: Framework for Financial Analysis



However, a meaningful evaluation of the company's financial performance needs to take into consideration other factors such as:

- Trend analysis for previous financial periods i.e. time-series analysis
- Comparison with industry peers i.e. cross-sectional analysis
- Macroeconomic and industry development and outlook
- Comparability arising from changes in accounting treatment and business operations

1. Profitability

Proceeds generated from sales are used to pay off the cost of production, overheads, financing costs and other expenses. The residual surplus is accrued to the provider of capital i.e. shareholders.

In general, the higher the profit, the better the company is able to generate cash, and the greater the return on assets and capital invested. This implies stronger capability to service loan interest and principal repayment, and lower risk to the lender.

i. Absolute Profit

The absolute size of a company's sales and profit gives an indication of a company's scale of operations and its vulnerability to changes in business condition.

ii. Profit Margins

Profit margins provide indications of the business' ability to recover costs from sales proceeds and generate a profit. Gross profit, derived from deducting cost of goods sold from sales proceeds or revenue, is a reflection of the company's ability to add value from the factor of production or sales.

Operating profit is derived after deducting selling, general and administrative expenses from gross profit. A company uses its profit from operations to pay off financing cost i.e. interest expense and taxes. The net profit after tax will be the profit attributed to the shareholders of the company.

For companies that are capital intensive (e.g. telecom, utilities) earnings are usually impacted by high depreciation charges. Therefore, depreciation (which does not involve cash flow) is usually added back to operating profit to derive Earnings before Interest Tax and Depreciation (EBITDA), to better approximate the company's cash profit and debt servicing capabilities.

Profit margins are usually expressed as a percentage of sales, in order to facilitate comparison of profitability over different periods and among different companies and industries.

iii. Return on Assets and Equity

Profitability can also be expressed as a percentage of assets or capital invested in the business i.e. the return generated on the assets (ROA) or shareholders' equity (ROE). ROA and ROE are defined as:

$$\text{ROA (\%)} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

$$\text{ROE (\%)} = \frac{\text{Net Profit After Tax}}{\text{Shareholders' Equity}}$$

2. Efficiency

Asset turnover ratios provide some indication on the company's efficiency in utilizing its assets to generate profit for the business.

i. Total Assets Turnover

High turnover in fixed or total assets generally implies better utilization of assets, leading to higher sales and returns on invested capital.

$$\text{Asset Turnover (X)} = \frac{\text{Sales}}{\text{Total Assets}}$$

Fixed asset turnover ratio is used for companies in capital intensive industries. For such companies, it is important for the companies to generate sufficient sales to justify the high cost of capital investment.

$$\text{Fixed Asset Turnover (X)} = \frac{\text{Sales}}{\text{Fixed Assets}}$$

Note that asset ratios can be affected by factors other than a firm's efficiency.

For example, if a company leases its facilities, the cost of the asset is not captured on the company's balance sheet. This would have the effect of lowering the capital cost and inflating the asset turnover ratio. This is the same for companies whose fixed assets are fully depreciation i.e. minimal or zero net book value.

ii. Inventory Turnover Days

The higher the current asset turnover means faster conversion of current asset to cash, which implies lower working capital tied up in the operation, hence lower funding cost.

Inventory turnover days is the average number of days it takes for inventory to be consumed in the operations during the financial period.

$$\text{Inventory Turnover (Days)} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold}} \text{ X } 365$$

However, high inventory turnover days may imply long production cycle, over-stocking of inventory or risk of stock obsolescence. It also means more funds are tied up in the company's working capital, which could incur higher financing costs.

iii. Debtor Turnover Days

Debtor turnover days is the average number of days it takes to collect accounts receivables and convert them into cash.

$$\text{Debtor Turnover (Days)} = \frac{\text{Average Trade Debtors}}{\text{Sales}} \text{ X } 365$$

In general, the faster a company is able to collect payment from its customer, the lower will be the funds tied up in working capital. Conversely, high debtor turnover may imply slow-paying customers, and more capital tied up in receivables and possibility of bad debts.

However, if a company's debtor turnover is substantially below the industry norm, it may also indicate overly stringent credit terms that could be detrimental to sales.

iv. Creditor Turnover Days

Creditor turnover days is the average number of days it takes to pay supplies for the purchases.

$$\text{Creditor Turnover (Days)} = \frac{\text{Average Trade Payables}}{\text{Purchase}} \text{ X } 365$$

Supplies' credit is a form of working capital financing. It makes sense for a company to maximise suppliers' credit to save on funding cost. However, suppliers typically give cash discounts for early payment. Company will need to find the best trade-off between the two.

3. Sustainability

Trend analysis of growth ratios and changes in financial performance provide insight on the company's resilience against cyclical downturn, the scalability of the business, and the impact of business cycles on profitability and returns.

Year-on-year growth trends of revenue, cost components and profits are analysed to determine the reasons and assess the likelihood that such situation will persist in the near future.

4. Liquidity

Liquidity ratios measure the business' ability to convert its assets into cash to meet its short-term debt obligations. They focus on the short-term financial health of the company.

In general, higher liquidity ratios imply greater ability of the company to meet its short-term obligations, and the ability to withstand unexpected disruptions to the business.

i. Current Ratio

The most common liquidity ratio is the current ratio, which measures the extent to which current assets are able to cover current liabilities.

$$\text{Current Ratio (X)} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

ii. Quick Ratio

Also known as the acid test ratio, quick ratio indicates the amount of highly liquid assets that are available to cover current liabilities. Generally, a quick ratio of more than one is considered a healthy sign of liquidity.

$$\text{Quick Ratio (X)} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

Note that current and quick ratios are susceptible to manipulation of financial reporting dates, otherwise known as "window dressing". For example, towards the financial year-end, the collection of receivables may be pushed up, inventory may be reduced to below normal levels, and purchases may be delayed. Proceeds from these actions can be used to pay off current liabilities.

iii. Cash Conversion Cycle

Cash conversion cycle provides an indication of the length of the financing period required by the business to meet its working capital requirements.

$$\text{Cash Conversion Cycle Period (Days)} = \text{Inventory Turnover Days} + \text{Debtor Turnover Days} - \text{Credit Turnover Days}$$

5. Solvency

Gearing ratios measure the proportion of a company's liabilities relative to its equity capital. They provide indications of the company's debt burden and its financial risk and its vulnerability to financial shocks.

$$\text{Gearing Ratio (X)} = \frac{\text{Total Liabilities}}{\text{Shareholder's Equity}}$$

i. Total Debt to Equity Ratio

The debt to equity ratio provides an indication on the leverage of the firm. The greater the debt, the higher the leverage, the higher the income a firm needs to generate to service its debts.

Debt includes all long-term fixed obligations, including subordinated convertible bonds. Operating leases, especially if these are extensive, have to be included as an estimate of the present values of the lease payments.

$$\text{Debt to Equity Ratio (X)} = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

ii. Debt to Total Assets Ratio

The debt to total assets ratio reflects the proportion of the assets of the company that is financed by debt. It provides an indication on the stability of the company's capital structure. A relatively high debt to asset ratio, especially when a large proportion of the assets are long-term or fixed assets, could point to under-capitalisation of the company.

$$\text{Debt to Asset Ratio (X)} = \frac{\text{Total Debt}}{\text{Total Asset}}$$

iii. Interest Coverage

Interest coverage ratio provides an indication on the ability of the company to generate cash flow to service interest payments. In general, the higher the interest coverage, the greater is the company's ability to service its loans, and the lower the risk of default on loan.

$$\text{Interest Cover (X)} = \frac{\text{Earnings Before Interest \& Tax}}{\text{Interest Expense}}$$

In general, the higher the gearing, the greater will be the financial risk. However, some companies deliberately use financial leverage to improve their returns on equity, which is common among companies with steady cash flow (e.g. utilities, telecom). Hence, the gearing ratio should be interpreted with other ratios to provide a more accurate assessment of the financial risk.

6. Cash Flow Analysis

The objective of cash flow analysis is to determine how and where cash is generated and/or used in the company's business operations. Key considerations include the type of industry and stage of business cycle of the business. It provides insights into the company's ability to generate future cash flow to sustain and grow its business, as well as the sources of interest servicing and loan repayment.

6.6.5 Example of Financial Ratio Computation

Table 6.6.5(a): Good Health Ltd – Computation of Profit Margins

Key Financial Data ($'000)

Year Ended 31 Dec		X1	X2	X3
Revenue	[A]	700,000	775,200	852,720
Gross Profit	[B]	348,000	372,200	409,110
Operating Profit	[C]	124,000	112,508	123,449
Profit Before Tax	[D]	124,150	118,708	123,149
Net Profit	[E]	91,871	87,844	91,130
Depreciation	[F]	9,000	12,000	18,250
EBITDA = [C]+[F]	[G]	133,000	124,508	141,699
Total Assets	[H]	451,719	597,283	616,414
Shareholders' Equity	[I]	299,568	359,283	426,414

Profit Margin

Year Ended 31 Dec		X1	X2	X3
Gross Margin	[B]/[A]	49.7%	48.0%	48.0%
EBITDA Margin	[G]/[A]	19.0%	16.1%	16.6%
Operating Margin	[C]/[A]	17.7%	14.5%	14.5%
Pretax Margin	[D]/[A]	17.7%	15.3%	14.4%
Net Margin	[E]/[A]	13.1%	11.3%	10.7%
Return Analysis				
ROE = [E]/([I]		30.7%	24.4%	21.4%
ROA = [E]/([H]		20.3%	14.7%	14.8%

Table 6.6.5(b): Good Health Ltd – Computation of Efficiency Ratios

Key Financial Data ($'000)

Year Ended 31 Dec		X1	X2	X3
Revenue	[1]	700,000	775,200	852,720
Purchases *	[2]	354,151	435,849	413,610
Fixed Assets	[3]	208,500	277,500	270,250
Total Assets	[4]	451,719	597,283	616,414
Inventory	[5]	77,151	110,000	80,000
Debtors	[6]	115,068	150,000	125,00
Creditors	[7]	77,151	98,000	80,000

*Note: * Purchases = COGS+ ending inventory – beginning inventory*

Efficiency Ratios

Year Ended 31 Dec		X1	X2	X3
Fixed Asset Turnover	[1]/[3]	3.4	2.8	3.2
Total Asset Turnover	[1]/[4]	1.5	1.3	1.4
Inventory Turnover (Days)	[2]/[5]^x365	80.0	84.8	78.2
Debtors Turnover (Days)	[1]/[6]^x365	60.0	62.4	58.9
Creditors Turnover (Days)	[2]/[7]^x365	74.8	73.3	78.5

Note: ^ Average between 2 periods

Table 6.6.5(c): Good Health Ltd – Computation of Liquidity & Solvency Ratios

Key Financial Data ($'000)

Year Ended 31 Dec		X1	X2	X3
Inventory	[a]	77,151	110,000	80,000
Current Assets	[b]	217,219	294,783	322,164
Current Liabilities	[c]	102,151	168,000	120,000
Total Liabilities	[d]	152,151	238,000	190,000
Total Debt	[e]	75,000	140,000	110,000
Total Asset	[f]	451,719	597,283	616,414
Shareholders' Equity	[g]	299,568	357,283	426,414
EBTIDA	[h]	133,000	124,508	141,699
Interest Expense	[i]	2,250	4,200	3,300

Liquidity & Solvency Ratios

Year Ended 31 Dec		X1	X2	X3
Current Ratio	[b]/[c]	2.1	1.8	2.7
Quick Ratio	[b-a]/[c]	1.4	1.1	2.0
Total Liabilities/Equity	[d]/[g]	0.5	0.7	0.4
Total Debt/Equity	[e]/[g]	0.3	0.4	0.3
Total Debt/Total Asset	[e]/[f]	0.2	0.2	0.2
Interest Cover	[h]/[i]	59.1	29.6	42.9

6.7 Financial Projection

The objective of financial projection is to determine the funding requirement, repayment ability and future financial health of the company. Financial projections should not simply be just an extrapolation of the most recent financial performance into the future. It should be based on realistic assumptions, taking into account historical performance and trends, and future expectations of economic conditions, industry outlook, management strategy and action plans.

It involves formulating forward expectations on factors that impact revenue, expenses and funding requirements. Output of financial projections would include pro forma income statement, balance sheet and cash flow statement.

Some of the key assumptions relate to:

- Economic and industry developments that impact revenue and cost trends
- Strategic actions such as expansion or disposal of business leading to new or loss in revenue streams
- Purchases and disposals of fixed and/or production assets
- Material and labor costs trends
- Debt and/or capital fund raising plans

6.8 Credit Rating

Banks have developed Internal Credit Rating models or tools, to quantify the borrower's probability of default. Key drivers of customer credit worthiness are statistically identified, weighted and the levels of those drivers calibrated into a scoring system. The rating assigned is an indication of the risk inherent in the credit, for the purpose of loan approval, monitoring, reporting, pricing and provision for loss.

Credit Rating Agencies such as Standard and Poor's, Moody's or Fitch offer external rating systems that use widely known credit rating systems. They analyze, compare and rank companies' across industries and countries, providing lenders with independent and objective credit opinions on the borrowers.

6.9 Risk Mitigation

Overall credit risk can be mitigated by using collateral, credit supports and covenants to reduce the facility risks. Collateral can be in the form of tangible assets, such as property, inventory, plant, equipment, fixed deposits, or shares, or intangible assets, such as insurance policies, trademarks or patents.

Credit supports are undertakings which provide a level of comfort to the lenders. They may take the form of guarantees provided by the parent company of the borrower. These are covered in greater detail in section 6.9.1

When taking assets as collateral, banks need to consider the following factors:

- Marketability
  - Type of assets
  - Commodity vis-à-vis specialised assets
  - General economic condition & market sentiment

- Asset Quality
  - Perishable vis-a-vis non-perishable goods
  - Price stability & value fluctuation

- Legal Enforceability
  - Governing law & local court process.

- Control
  - Lender's control and possession of the assets;
  - Movable vs. non-movable assets

6.9.1 Types of Collateral

Collaterals are assets taken by the banks as credit enhancements that improved the recovery rate in the event of default by a borrower.

The different types of collaterals are:

1. Legal Mortgage

The bank obtains the security over the land and property in the form of a legal mortgage. The party offering the security (borrower) is called mortgagor and the party taking the security is (lender) called mortgagee.

When a bank takes a mortgage on the asset, the mortgagor transfers the ownership of the asset to the mortgagee. The transfer of ownership is subject to the mortgagor's right to redeem, which entitles the mortgagor to call for the re-transfer of ownership to the mortgagor when the secured debt is satisfied (this is known as the mortgagor's equity of redemption).

A mortgage over real property is governed by the Land Titles Act (Cap 157, 2004 Rev Ed). It must be in the prescribed form and registered under that Act. It is the act of such registration that creates the mortgage. Further, it is provided that a registered mortgage shall not operate as a transfer of the land mortgaged but shall take effect as security only.

The statutory power of sale is conferred upon the bank by the Conveyancing and Law of Property Act. In the event of default, the mortgagor may sell the property in an auction or private treaty. In either case, the proceeds of the sale will go towards payment of expenses relating to the sale and the debt owing. Surplus if any will be given back to the mortgagor.

The mortgagee can recover from the mortgagor if there is a shortfall between the loan outstanding and the sale price

2. Equitable Mortgage

Equitable mortgage is an informal deposit of title deeds coupled with an intention to create a mortgage over the property or by transfer of an equitable title to the property.

The mortgage will be an equitable mortgage when:

- the formalities necessary to create a legal mortgage have not been complied with
- the mortgagor's interest in the asset being mortgaged is an equitable interest
- the parties have merely entered into an agreement to create a legal mortgage in the future over the asset in question, rather than formally creating such a mortgage

3. Deposit of Titles

When the proposed loan period is very short and the lender does not have the intention to create a mortgage over the property, the lender can ask for a

simple deposit of title deed to “secure” the loan. The title documents will be returned to the borrower when the loan is repaid.

In the event of default, the lender can have a lien on the title document. The lender (holder of a lien) only has a passive right to detain the property of another until its claim is met. It cannot recover the amount owing by disposing of the property. However, a power of sale may be conferred on the lien holder by statutory provisions or contractual terms. In the absence of a statutory or contractual power of sale, a lien holder may apply to court for an order of sale.

4. Charges

A charge does not transfer the physical ownership of asset between the borrower (chargor) and the lender (chargee), but rather it gives the lender the legal right to take control over the asset.

Charges can either be fixed or floating. The nature of a charge, whether fixed or floating, is particularly important if the borrower becomes insolvent.

A ***Fixed Charge*** is created over identifiable assets. The fixed charge encumbers the charged asset immediately from the time it is created. The charger is unable to deal with a charged asset without the consent of the chargee.

A ***Floating Charge*** creates an immediate security interest, but does not specifically attach to the individual assets until ‘crystallisation’. The assets secured by a floating charge are generally identified in the charging document by referring to all of an identifiable class of assets both present and future.

A floating charge allows a company to deal with and dispose of the assets under the floating charge in the ordinary course of its business. The company may, therefore, process its raw materials, sell its finished products, purchase machinery and generally conduct its business without requiring the chargee's approval.

The principal weaknesses of a floating charge are:

- The value of the assets may reduce and become negligible over time, especially custom made products or specialised stocks. Furthermore, the company may dispose such assets and pay off other pressing creditors when it foresees pending insolvency or the bank's intention to crystallise the charge.

- If the company goes into liquidation within six months of the date of the charge, other creditors may be able to set the floating charge aside, if it can be proven that there was undue preference given to the chargee.

5. Legal assignment

Legal assignment gives the lender a contractual right to claim an asset (e.g. sales proceeds) owned by the borrower.

The assignment must be properly documented in writing and signed by both the borrower (assignor) and the lender (assignee). A notice of assignment must be given to XYZ.

Example – Legal Assignment

The borrower (ABC Company) has entered into a contract to provide service to XYZ Company. The bank has agreed to give a loan to ABC against an assignment of the sales proceeds from XYZ.

6.9.2 Types of Credit Support

Credit support like security, is taken by the lender to reduce lending risk. In the case where the security is weak or the loan is unsecured, credit support is used to mitigate the risk.

Some common types of credit support are:

1. **Guarantees**

A guarantee is an undertaking by the guarantor to repay debts of the borrower, failing which the beneficiary of the guarantee (lender) can claim for damages from the guarantor in accordance with the terms of the guarantee.

Guarantees taken by the bank as credit support may be personal or corporate guarantee.

Guarantees may be in the form of:

- Joint and several guarantee
- Proportionate guarantee
- Limited guarantee

When taking guarantee, banks need to consider the following factors:

- Capacity to pay
- Function of creditworthiness, which is reflected as a function of the risk rating
- Legal enforceability
- Substance of the guarantee (e.g. pay on demand, conditional, specific events only)
- Governing law
- Cross jurisdictional issues may arise if borrower and guarantor are in different countries

2. Indemnities

An indemnity is a legally binding agreement by the borrower, to compensate the bank for any losses or expenses that may arise in relation to the loan. Unlike a guarantee, the obligation is primary, where the obligation of the guarantor is secondary. In Singapore most "guarantees" are drafted in the form of an indemnity.

3. Letter of Comfort/Letter of Awareness

A Letter of Comfort is issued by the parent company of the borrower. It does not mean the parent company guarantees or indemnifies the bank against default by the borrower. Instead, it serves as a moral obligation of the parent company to ensure the financial health of the borrower to service the loan.

4. Credit Insurance

Common types of insurance taken by the borrower that can be assigned to the bank to protect the bank's interest are as follows:

- Credit insurance
- Marine insurance
- Property insurance
- Key man insurance

Credit insurance provides protection for a seller in local and export transactions. General risk covered includes insolvency of buyer, non-payment risk, non-acceptance risk and transfer risks. This is important when the bank has granted financing to the seller and is looking towards the sales proceeds to repay the loan.

Under a letter of credit transaction, the issuing bank has the obligation to pay against complying documents. If the applicant has bought the goods on FOB terms, it has to procure the marine cargo insurance for protection against damage or loss during transit.

Property insurance protects the owner against damage to buildings, contents and assets due to fire. Some "Industrial All Risks" policies also provide comprehensive coverage against the loss of income or increase in expenses that result from property damage.

Key man insurance protects the business against financial loss incurred due to death or extended incapacity of key persons such as the founder, CEO, chairman etc.

6.9.3 Types of Covenants

Loan covenants are conditions in the loan agreement that require the borrower to fulfill certain conditions or forbid the borrower from undertaking certain actions. Covenant can be financial or non-financial, affirmative or negative.

Table 6.9.3: Examples of Types of Covenants

	Financial	Non-Financial
Affirmative	The borrower shall ensure that its current ratio is at least 120% at all times for the duration of the loan	The borrower shall ensure that the Bank's credit facilities shall rank pari-passu (equal in all aspects) with all present and future indebtedness
Negative	The borrower shall ensure that its gearing ratio shall not exceed 300% at all times for the duration of the loan	The borrower shall not allow its assets to be encumbered for subsequent indebtedness to other banks. (This is also known as a negative pledge)

6.10 Key Components when Structuring a Credit Proposal

The Credit Proposal is a written memo setting out purpose of the credit application, the credit risk assessment of the borrower, and the recommendation in terms of facilities proposed and risk mitigation. It also includes the account servicing strategy and is supported by financial spreadsheets, legal and compliance clearance.

Banks develop standard formats for presenting credit proposals to ensure consistency and to uniformity in reporting, to facilitate decision-making by senior management.

A credit proposal will typically include the following components:

1. General Information
    - Company background
    - Purpose of the Loan
    - Account servicing strategy
    - Approval authority

2. Risk Assessment and Rating

    a) Qualitative Assessment
    - Political, economic and regulatory environment
    - Strategy and key business risks
    - Ownership structure
    - Management

b) Quantitative Assessment
   - Profitability
   - Liquidity
   - Capital structure
   - Cash flow analysis
   - Debt service
   - Peer and industry comparisons
   - Financial projections
   - Credit Ratings

3. Recommendation

   a) Credit lines
      - Facilities
      - Amount
      - Tenure
      - Pricing
      - Terms & conditions

   b) Risk mitigation
      - Collateral
      - Credit support
      - Covenants

4. Account strategy

5. Expected Earnings

6.11 Summary

In this chapter, we have learnt:

- The credit evaluation framework and the 5Cs credit analysis model to assess the credit worthiness of a borrower.

- Key accounting principles and concepts and how they impact core financial statements (balance sheet, profit & loss statement and cash flow statement).

- Perform financial analysis to determine the profitability, efficiency, liquidity and solvency of the borrower.

- To mitigate obligor risk using appropriate collaterals (legal mortgage equitable mortgage, deposit of titles, charges, legal assignment), credit support (guarantees, indemnities, letter of comfort, insurance) and covenants (financial, non-financial, affirmative, negative).

Appendix A

Review Questions

Candidates should note that the sole purpose of the Review Questions is to familiarise candidates with the scope and general nature of the examinations, and the format of the examination questions.

The Review Questions are not intended to be used as preparatory study material for the examinations, nor do the questions cover all the material tested in the examination.

1. Which type of financing would you recommend to a company that requires a loan for the purchase of inventory and payment of staff wages?

a. Cash flow financing
b. Working capital financing
c. Asset based financing
d. Project financing
Answer: b

2. Which of the following statements on syndicated loans is TRUE?

a. It is a loan arrangement provided by more than one lender to multiple borrowers
b. Lenders can spread their concentration risk to multiple borrowers
c. Participating banks may sell their portion of the loan in the secondary market
d. Each participating bank is responsible for the performance of other participating banks
Answer: c

3. Which is the most efficient payment method for a department store chain to credit payroll for staff in all its retail outlets?

a. Cheques
b. Telegraphic transfers
c. Interbank GIRO
d. Retail Lockbox
Answer: c

4. Which of the following statements on notional pooling is TRUE?

a. It involves the physical movement of funds from all operating accounts to a master account
b. It involves moving funds from an account with the highest positive balance to an account with the lowest positive balance
c. It does not involve physical movement of funds in the operating accounts
d. Interest is not charged or paid on the notionally pooled amount

Answer: c

5. What are some of the key risks in international trade?

I. Non-acceptance of goods by buyers
II. Riots
III. Currency restrictions

a. I only
b. I & II
c. I & III
d. I, II & III

Answer: d

6. A _____ is a document signed by a carrier and issued to the shipper of goods that evidences the receipt of goods for shipment to a specific destination and person.

a. Bill of lading
b. Export certificate
c. Bill of exchange
d. Promissory note

Answer: a

7. Stars Ltd wants to buy USD and sell SGD. How much SGD would it need to pay in order to buy USD 1,200,000 based on the following exchange rate?

   USD/SGD: 1.3900 / 1.4050

a. SGD 863, 309.35
b. SGD 854, 092.53
c. SGD 1,668,000
d. SGD 1,686,000

Answer: d

8. _____ are short-term unsecured debt instruments issued by highly rated corporates for short term funding.

a. Bonds
b. Commercial papers
c. Options
d. Structured deposits
Answer: b

9. Which of the following is a macro risk factor that would affect the credit risk assessment of a company?

a. Management team
b. Business cycle
c. Operational efficiency
d. Political climate
Answer: d

10. Which of the following components are typically included in a credit proposal?

I. Risk Assessment and Rating
II. Recommendation of credit facilities
III. Account strategy
IV. Expected Earnings

a. I & III
b. I, II & III
c. II, III & IV
d. I, II, III & IV
Answer: d

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