equaliFi ACADEMY

CTM

CERTIFICATE IN INTEGRATED TREASURY MANAGEMENT

Session 1-Treasury Management in Corporate, Working Capital, Cash and Liquidity Management

TREASURY MANAGEMENT

Treasury Management (or **treasury** operations) includes **management** of an enterprise's holdings, with the ultimate goal of maximizing the firm's liquidity and mitigating its operational, financial and reputational risk

IN CORPORATES

- To maintain the liquidity of business
- Develops and executes all capital market activity
- Manages the financial risks of the company
- Implementing company's optimal capital structure
- To provide quick finance to Company

TREASURY MANAGEMENT

- Working Capital Management
- Cash Management
- Financial Risk Management
- Capital Markets and Funding
- Corporate Financial Management
- Treasury Management

CASH MANAGEMENT

SIGNIFICANCE OF CASH MANAGEMENT

- Cash – "Life blood of a business"

- Motives of holding cash

  Transactions Motive

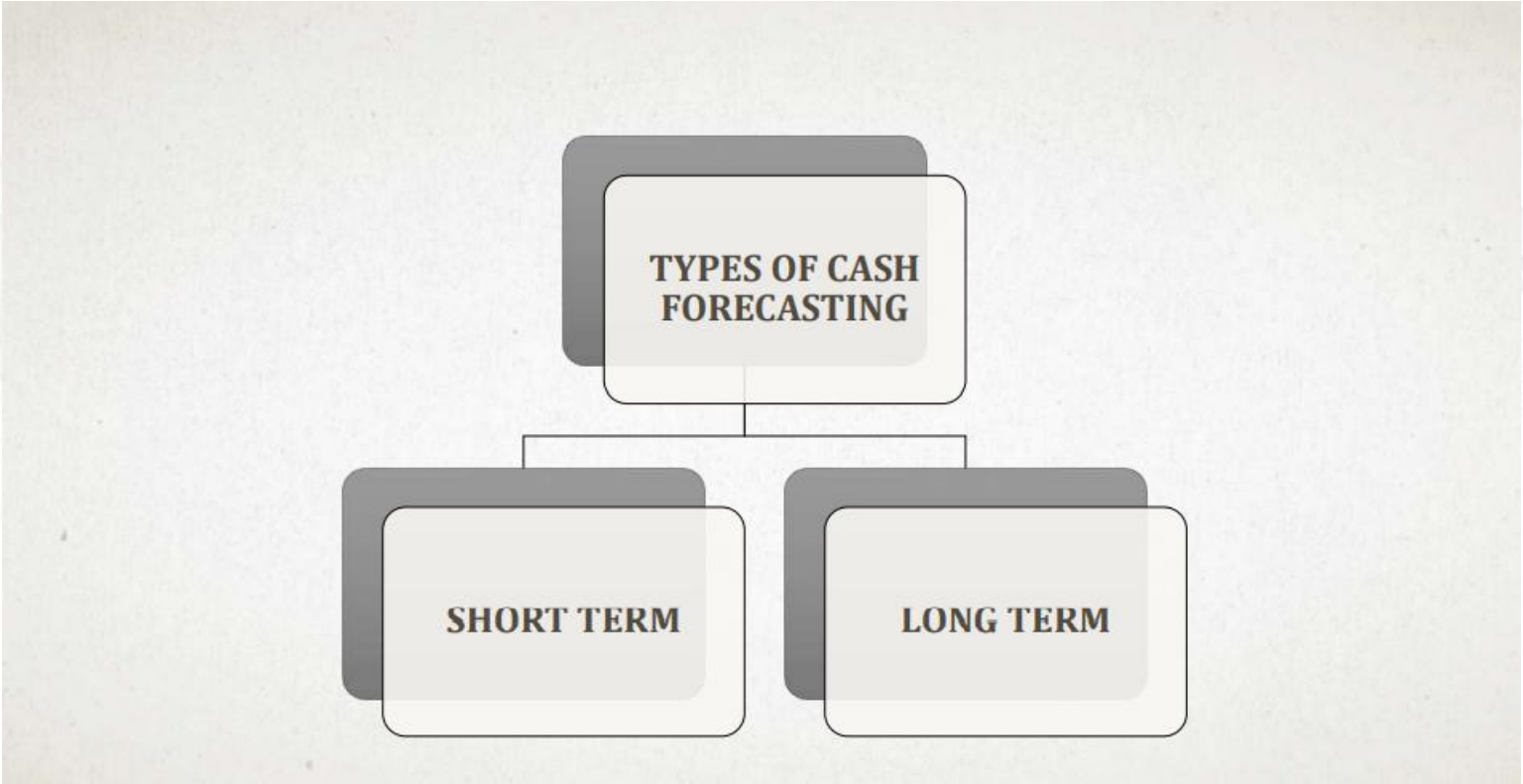
  Precautionary Motive

  Speculative Motive

CASH PLANNING

- Cash Planning is a technique to plan and control the use of cash

- Cash Forecasting and Budgeting
  - Cash budget is the most significant device to plan for and control cash receipts and payments
  - Cash forecasts are needed to prepare cash budgets


TYPES OF CASH FORECASTING
SHORT TERM
LONG TERM

METHODS OF CASH BUDGETING

- **Receipts and Payments Method**

Shows timing and magnitude of expected cash receipts and payments over forecast period

Advantages:

It gives a complete picture of all the items of expected cash flows.

Limitations:

- Its reliability is reduced because of the uncertainty of cash forecasts
- It fails to highlight the significant movements in the working capital items

	Month	Month	Month
Balance b/d (1)			
Receipts			
Cash Sales			
Credit Sales			
Bank Loans			
Other Receipts			
Total Receipts (2)			
Payments			
Cash and Credit Purchases			
General and Admin Expenses			
Tax payments			
Interest payments			
Dividends			
Investment in short term securities			
Total Payments (3)			
Net Cash Flow (2 - 3)			

ADJUSTED NET INCOME METHOD

- **Adjusted Net Income Method**
  - This method involves tracing of working capital flows
  - It is also called as the Sources & Uses approach
  - It generally has 3 sections: Sources, Uses & Adjusted cash balance

Objectives:

- To project company's need for cash at a future date
- To show whether company can generate funds internally

	Year	Year	Year
Cash beginning of year			
Sources of Cash			
Net Income			
Non cash charges			
Increase in Borrowing			
Sale of equity shares			
Miscellaneous			
Total (1)			
Uses of Cash			
Capital Expenditures			
Increase in Current Asset			
Repayment of borrowings			
Dividends Payments			
Total (2)			
Surplus/ Deficit (1 – 2)			

Advantages:

It highlights the movements in the working capital items, and thus helps to keep a control on a firm's working capital

Limitations:

It fails to trace cash flows, and therefore, its utility in controlling daily cash operations is limited

CASH COLLECTIONS AND DISBURSEMENTS

FLOAT

Float : Difference between the available balance and book balance of company

Float Time is the time between a customer initiating a payment and the company being informed that it has obtained value at the bank

- Types of Float:
  - Payment or Disbursement Float
  - Availability or Collection Float
  - Net Float

- Cheques issued by a firm creates **Disbursement Float**

Eg : Bharat Company

	On 31st March
Book Balance	Rs. 4 million
Bank Balance	Rs. 4 million

- On 1st April it pays 1 million by cheque to one of its suppliers

	On 1st April
Book Balance	Rs. 3 million
Bank Balance	Rs. 4 million

- Disbursement Float = Firm's available balance – Firm's book balance
  = Rs 1 million

- Cheques received by a firm creates **Collection Float**

Eg : Bharat Company

	On 30th April
Book Balance	Rs. 5 million
Bank Balance	Rs. 5 million

- On 1st May it receives a cheque for 1.5 million from customer

	On 1st May
Book Balance	Rs. 6.5 million
Bank Balance	Rs. 5 million

- Collection Float = Firm's available balance – Firm's book balance
  = Rs -1.5 million

- Net Float = Disbursement Float + Collection Float

Disbursement float > Collection float.

Positive Float, Available balance > Book Balance

Disbursement float < Collection float

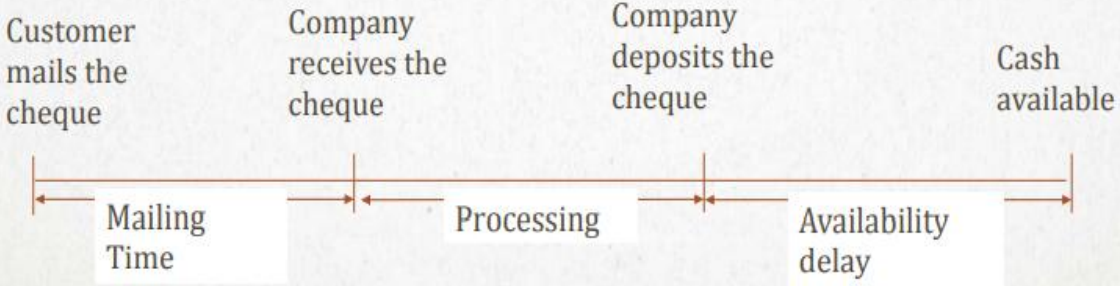
Negative Float, Available balance < Book Balance

If the company has a positive net float, it may issue more cheque amounts, even though the balance as per its book is lower.

So, a company that has a positive net float at a point of time can effectively use and manage the float in such a way that it can maintain a smaller cash balance.

SPEED UP COLLECTIONS

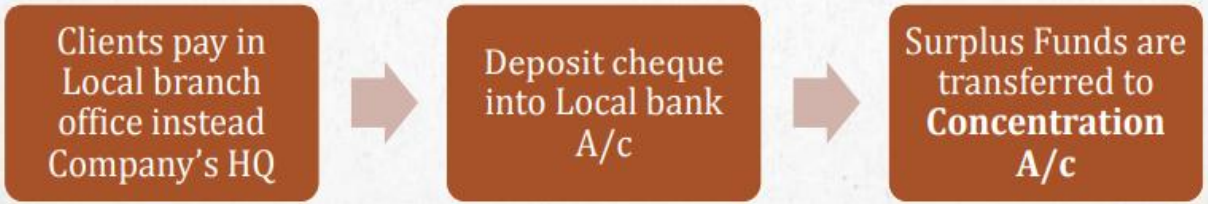
- Collection Time



SPEED UP COLLECTIONS

- **Concentration banking**

Company asks its customer in a particular area to send payments to a local branch office rather than to the corporate HQ

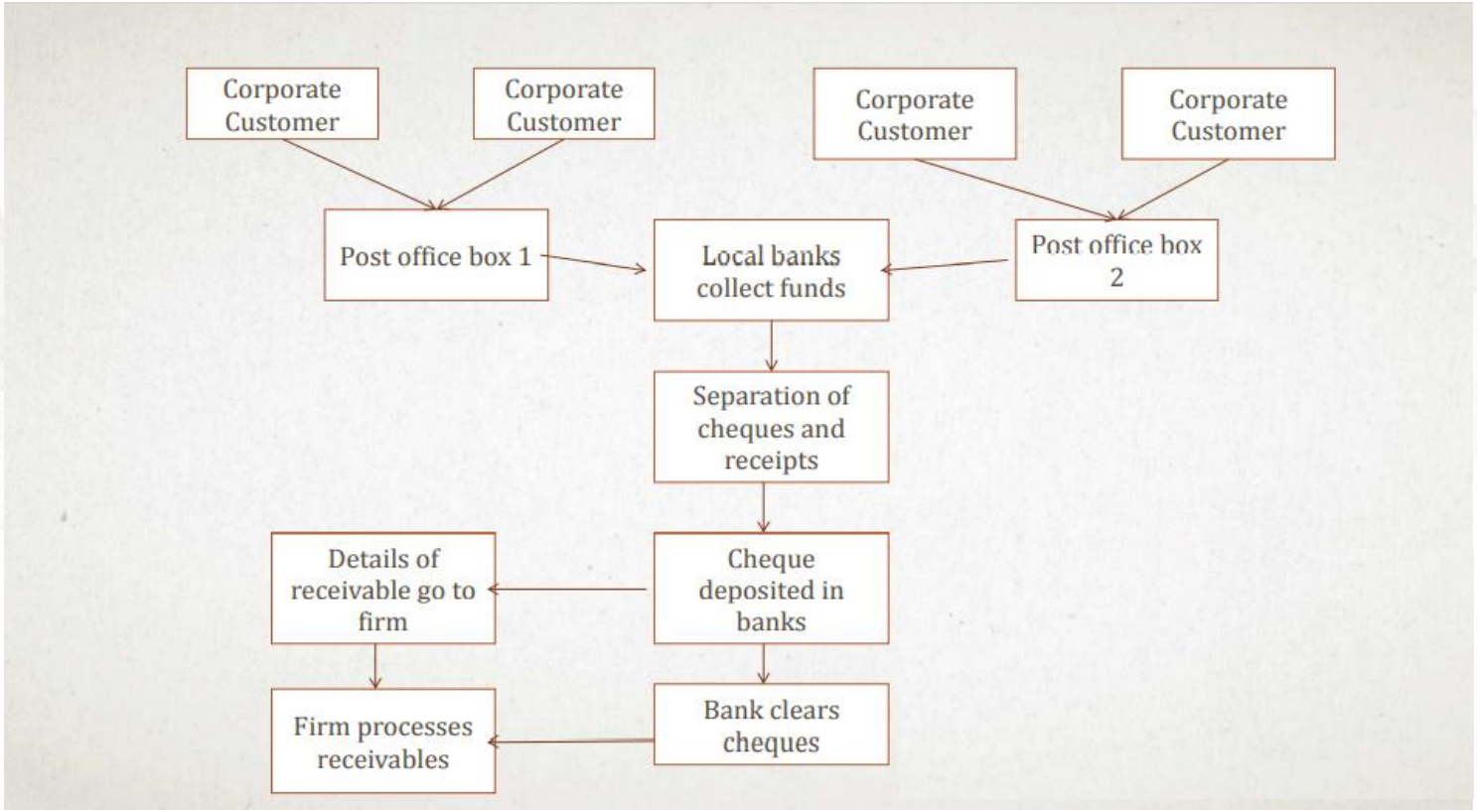


SPEED UP COLLECTIONS

- **Lock boxes**

Customers are advised to mail their payments to special post office boxes called lockboxes, which are attended to by local collecting banks, instead of sending them to corporate headquarters

- Cuts down the mailing time
- Reduce the processing time
- Shortens availability of delay


Corporate Customer
Corporate Customer
Corporate Customer
Corporate Customer
Post office box 1
Local banks collect funds
Post office box 2
Separation of cheques and receipts
Details of receivable go to firm
Cheque deposited in banks
Firm processes receivables
Bank clears cheques

Favorable to have Lock Box

Avg. number of daily payments to Lock Box	150
Avg. size of payments	Rs. 1200
Rate of Interest per day	0.02 %
Saving in Mailing time	1.2 days
Saving in Processing time	0.8 day

Thus, the Lock Box would increase the collected balance by:
150 (payments per day) * Rs. 1200 (Avg. Payment) * (1.2 + 0.8) days saved = Rs.360,000

Invested at 0.02% per day, gives a daily return of:
0.0002 * Rs. 360,000 = Rs. 72

If bank charges 0.26 per check , i.e. 0.26 * 150 = Rs. 39 per day

Net gain is Rs.72 – Rs. 39 = Rs. 33

SPEED UP COLLECTIONS

- **Electronic Fund Transfer**
  - Online based transaction from one bank account to another
  - Reduces the time taken to carry out a transaction
  - RTGS and NEFT
  - Wire transfer for International transactions (SWIFT)

OPTIMUM CASH BALANCE

- Enough in order to make payments when needed
- Additional cash for unexpected requirements

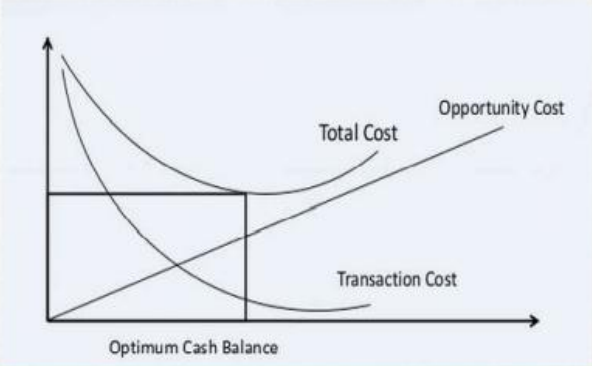
Two Models for Optimum Cash Balance

- Under certainty –

  Baumol's model

- Under uncertainty -

  Miller-Orr model



BAUMOL'S MODEL

- William J. Baumol developed a model (The transactions Demand for Cash : An Inventory Theoretic Approach) which is usually used in Inventory management & cash management.
- It Trade off between opportunity cost or carrying cost or holding cost & Transaction cost
- As such firm attempts to minimize the sum of the holding cash & the cost of converting marketable securities to cash

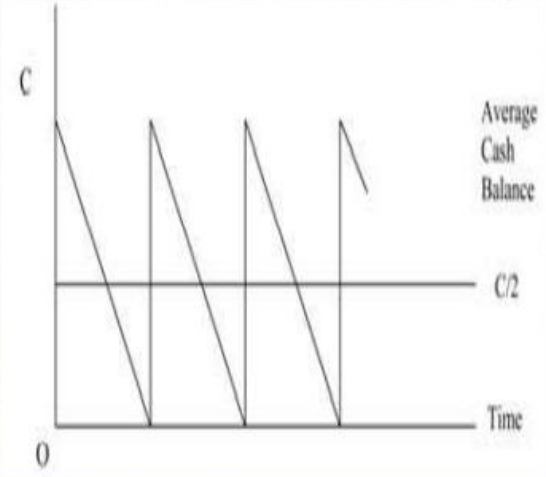
Baumol's Model–Assumptions

- The firm is able to forecast its cash needs with certainty
- The firm's cash payments occur uniformly over a period of time
- The opportunity cost of holding cash is known and it does not change over time
- The firm will incur the same transaction cost whenever it converts securities to cash

F = The fixed cost of selling securities to raise cash

T = The total amount of new cash needed

K = The opportunity cost of holding cash: this is the interest rate.



If we start with $\$C$, spend at a constant rate each period and replace our cash with $\$C$ when we run out of cash, our average cash balance will be $\frac{C}{2}$

The opportunity cost of holding $\frac{C}{2}$ is $\frac{C}{2} \times K$

F = The fixed cost of selling securities to raise cash

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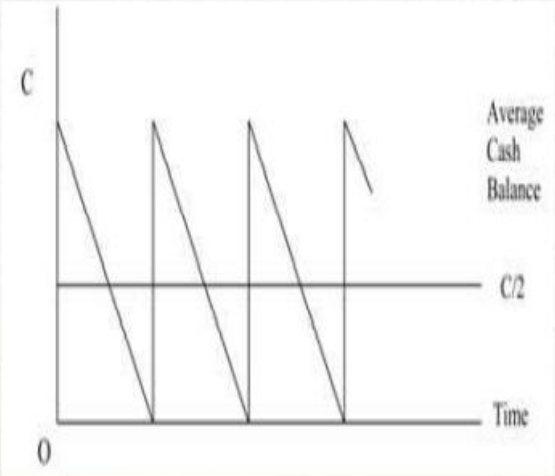
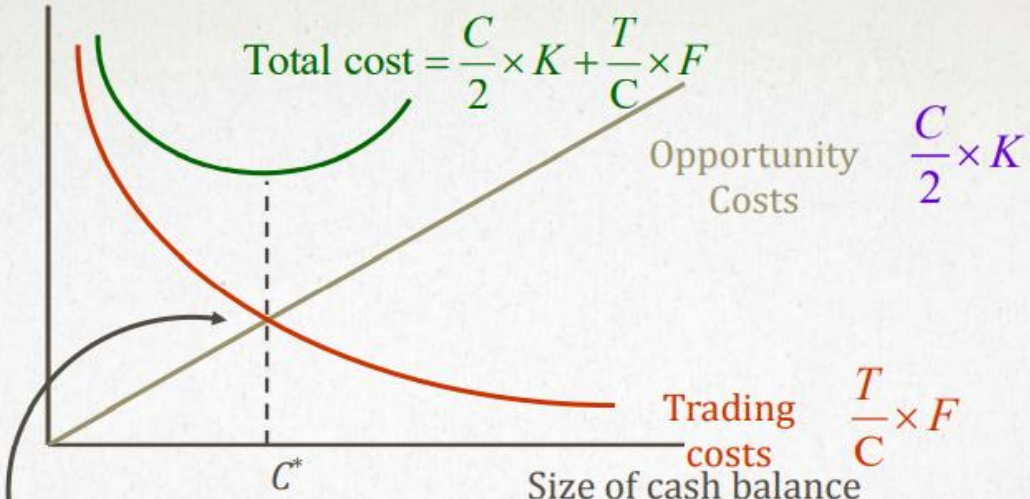


As we transfer $\$C$ each period we incur a trading cost of F each period. If we need T in total over the planning period we will pay $\$F$, $T \div C$ times.

The trading cost is $\frac{T}{C} \times F$



The optimal cash balance is found where the opportunity costs equal the trading costs

$$C^* = \sqrt{\frac{2T}{K} \times F}$$

Limitations :

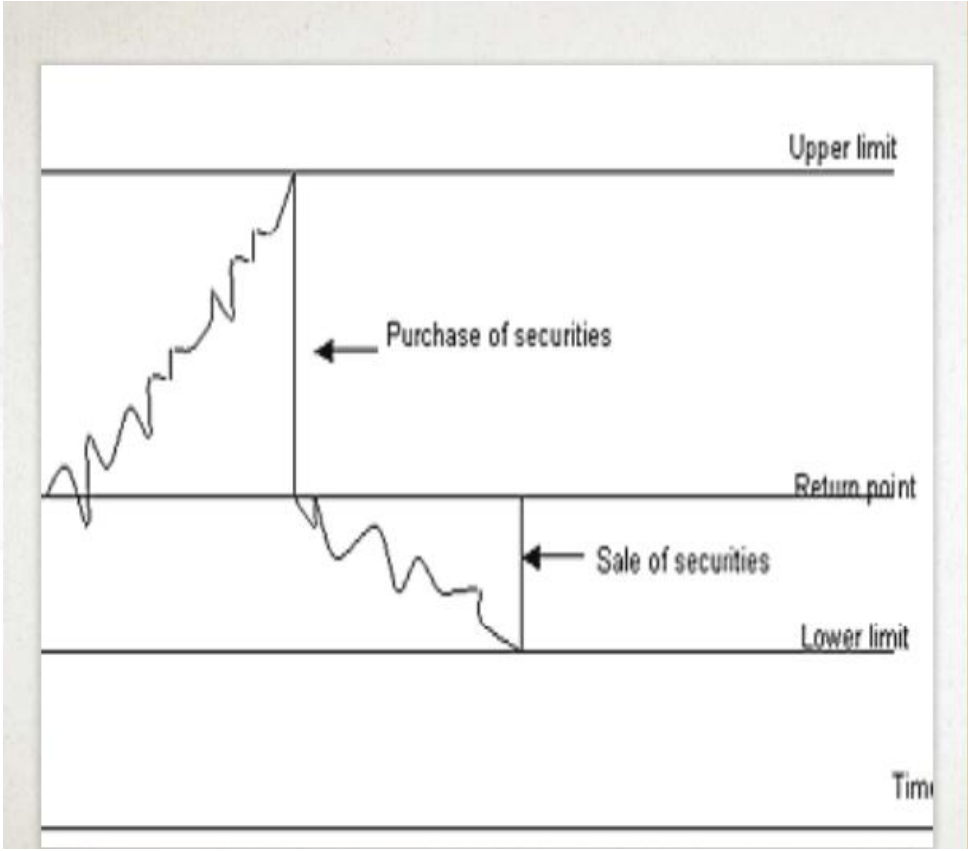
- The model assumes the firm has a constant disbursement rate
- The model assumes there are no cash receipts during the projected period
- Treasurers may want a 'safety stock' for cash

THE MILLER-ORR MODEL

The firm allows its cash balance to wander randomly between upper and lower control limits.

- **The models answers the following questions:**
  - When should transfers be effected between marketable securities and cash?
  - What should be the magnitude of these transfers?

- **Assumptions:**
  - There is no underlying trend in cash balance over time
  - The optimal values of LL and RP depend not only on the fixed and opportunity costs but also on the degree of likely fluctuations in cash balances



LL – Set By Management

$$RP = \sqrt[3]{\frac{3b\sigma^2}{4I}} + LL$$

$$UL = 3RP - 2LL$$

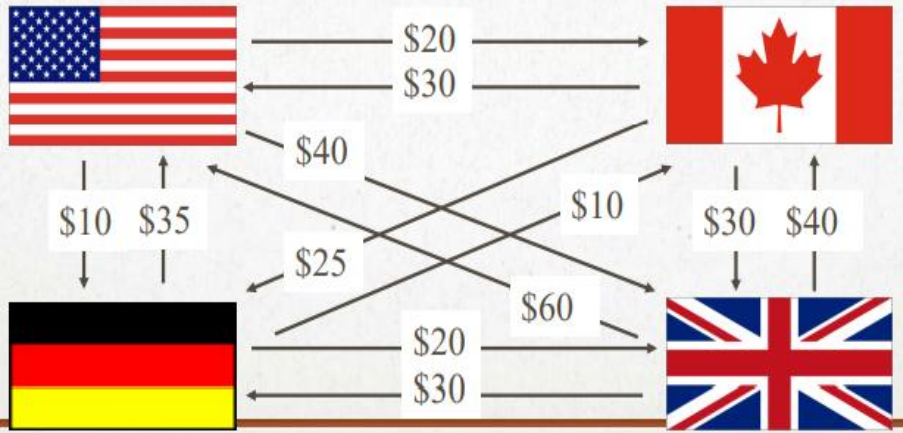
CASH MANAGEMENT TOOLS

NETTING

- A process where instead of settling each separate transaction, the company creates a netting center
- This acts like a clearing house that adds & subtracts the various amount of inter subsidiary payables & receivables
- At the end of month, each subsidiary pays or collects one net payment from the netting center.

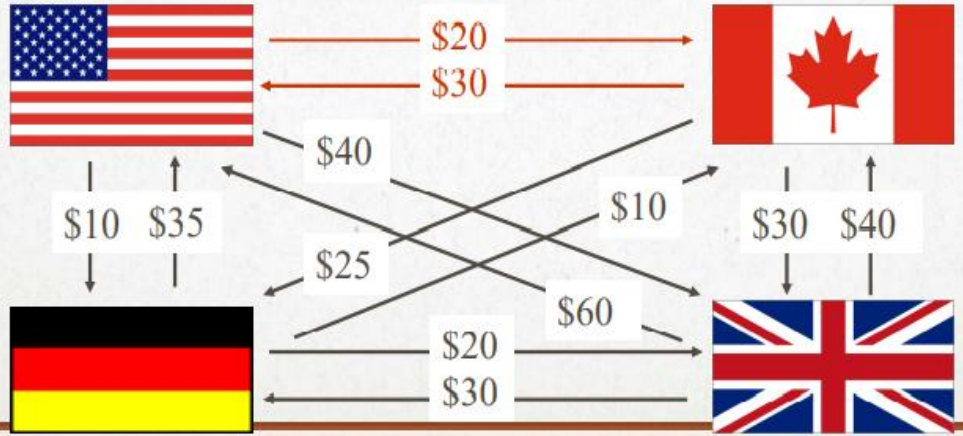
BILATERAL NETTING: AN EXAMPLE

Consider a U.S. MNC with three divisions and the following foreign exchange transactions:



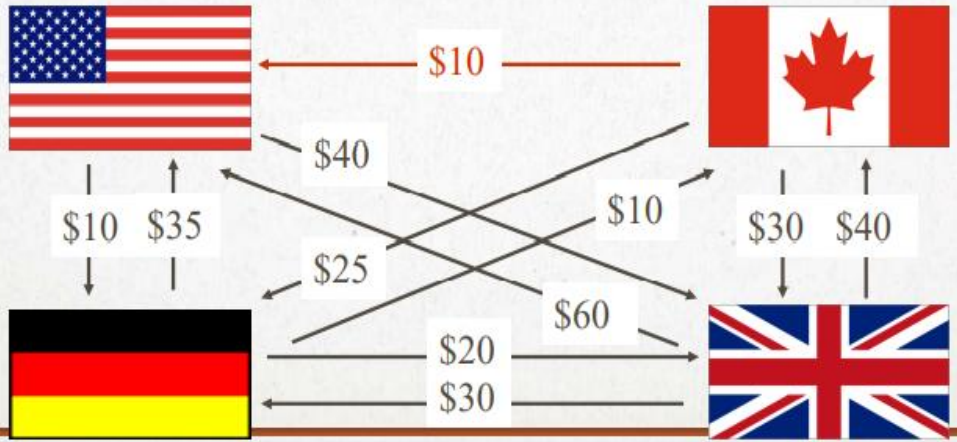
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting would reduce the number of foreign exchange transactions as follows; Examine U.S and Canadian affiliate



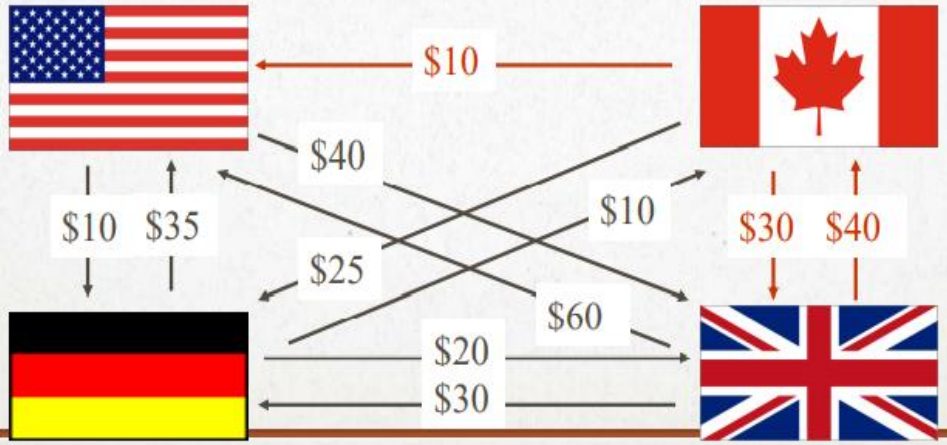
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.S. and Canada net out at $10



BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: Canadian and U.K. affiliates.



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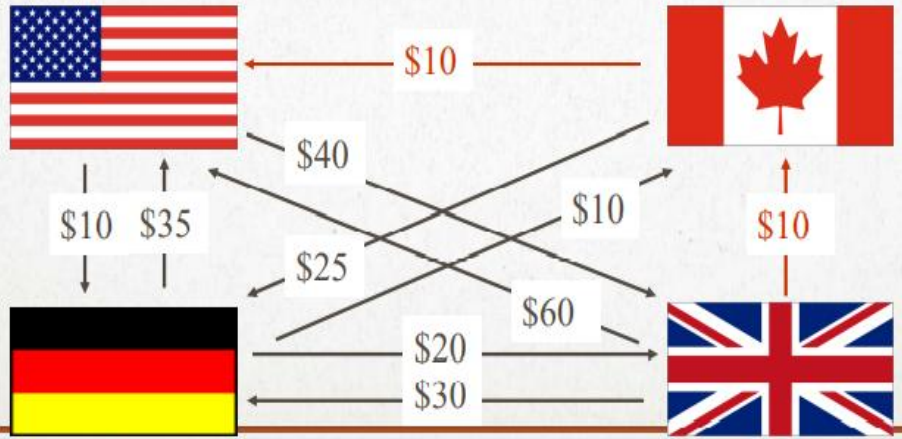
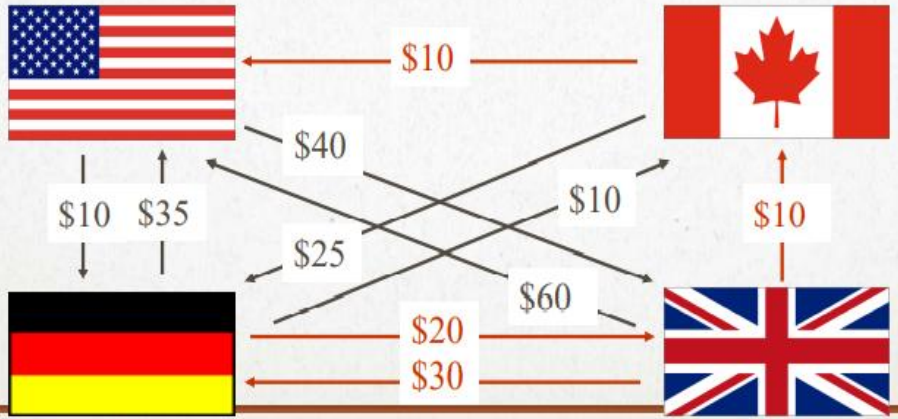


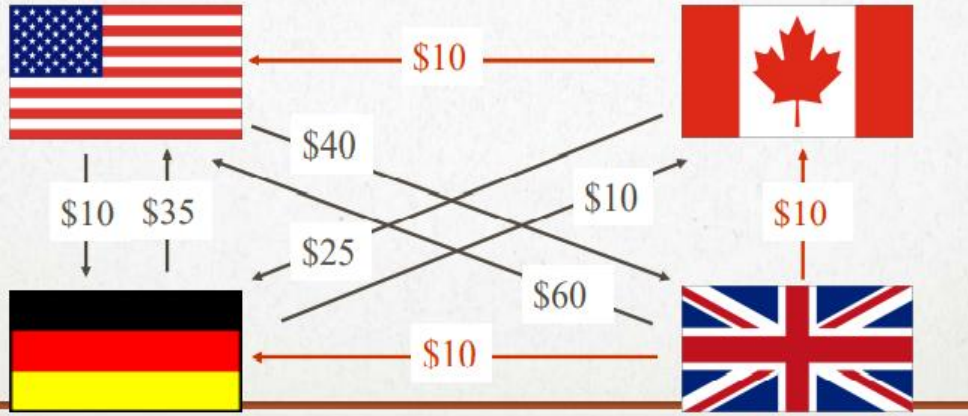
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.K. and German affiliates.



BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.K. and German affiliates net out at $10



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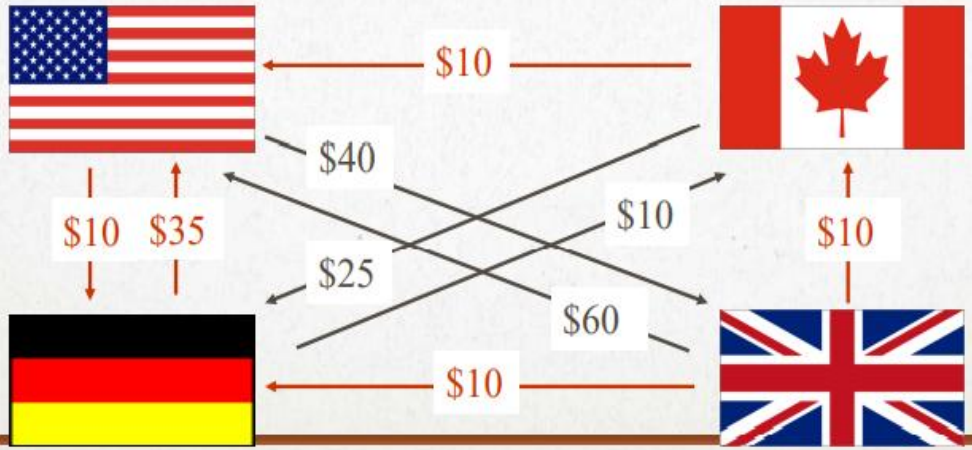
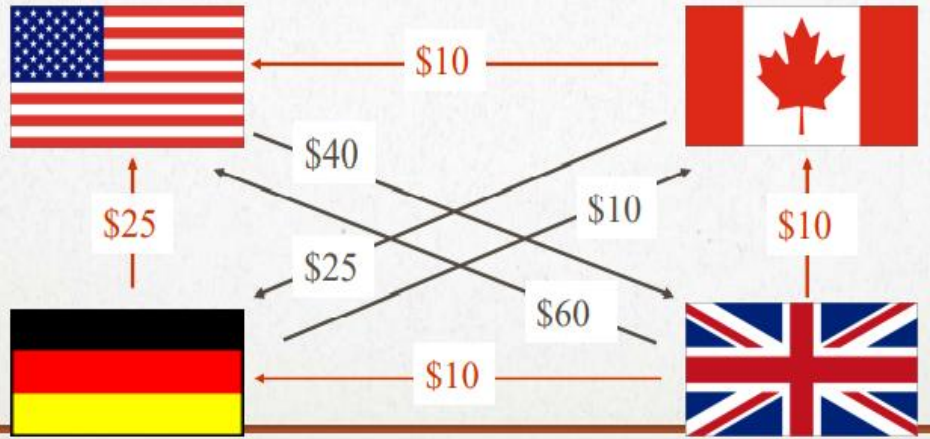


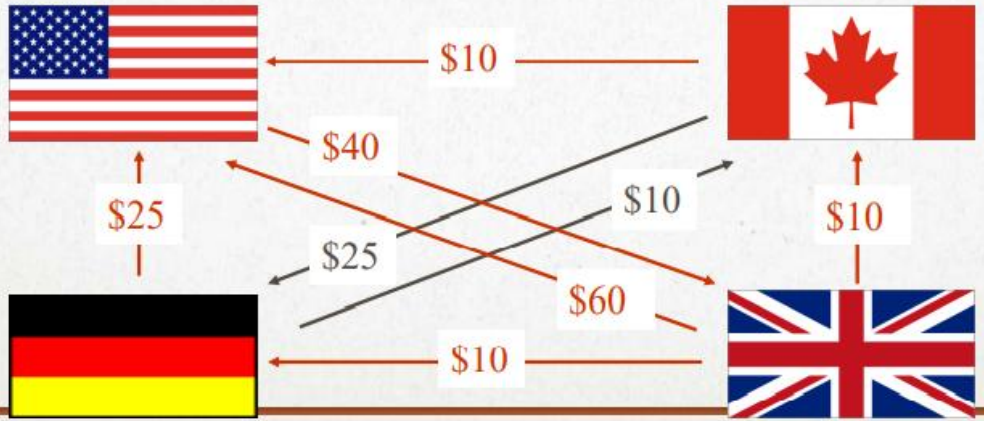
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.S. and German affiliate net out at $25.



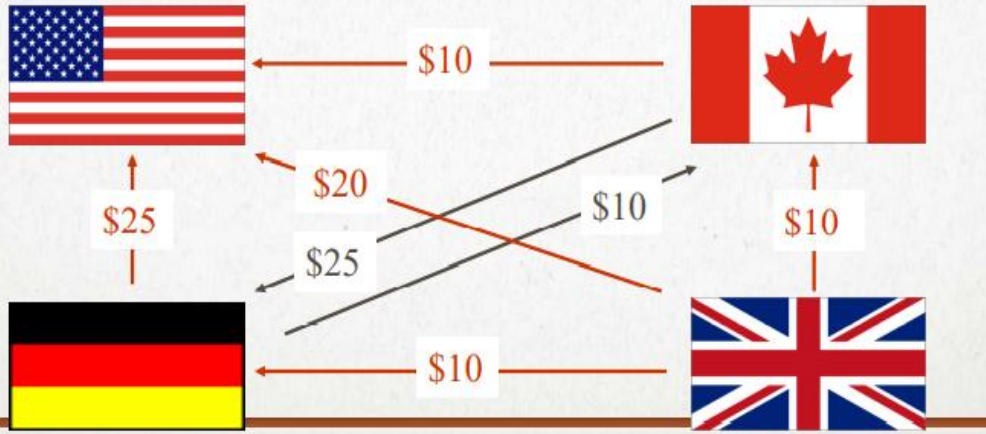
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.S. and U.K. affiliate.



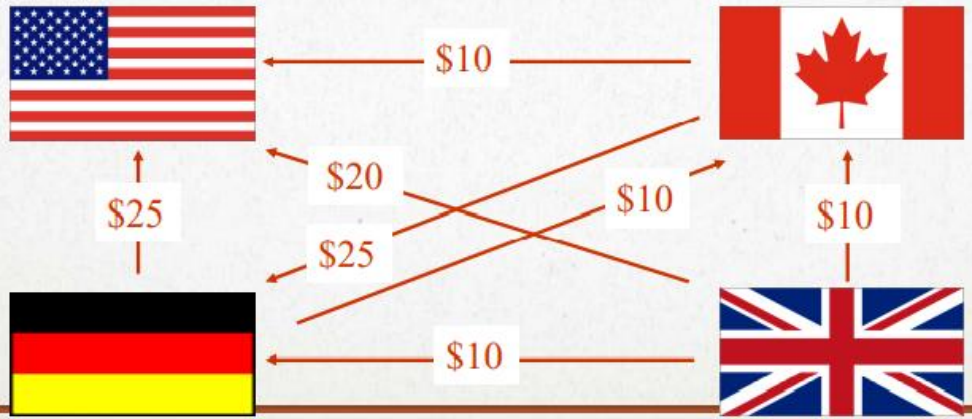
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: U.S. and U.K. affiliate net out at $20.



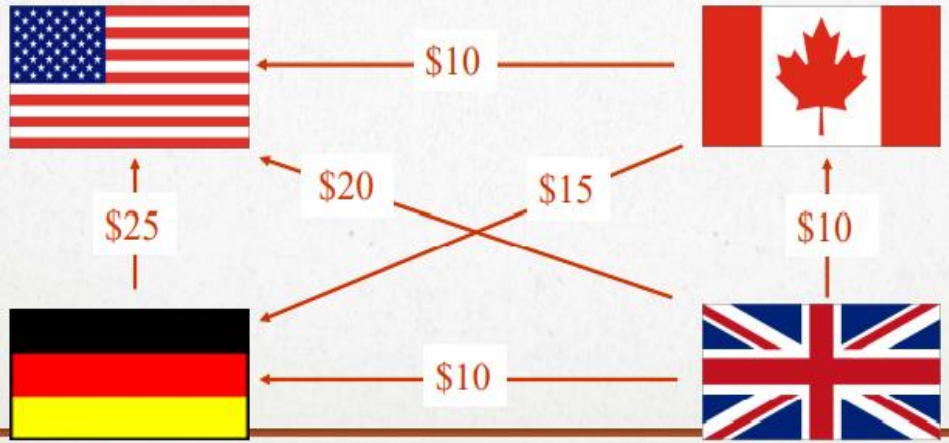
BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: German and Canadian affiliates.



BILATERAL NETTING: AN EXAMPLE

Bilateral Netting: German and Canadian affiliates net out at $15

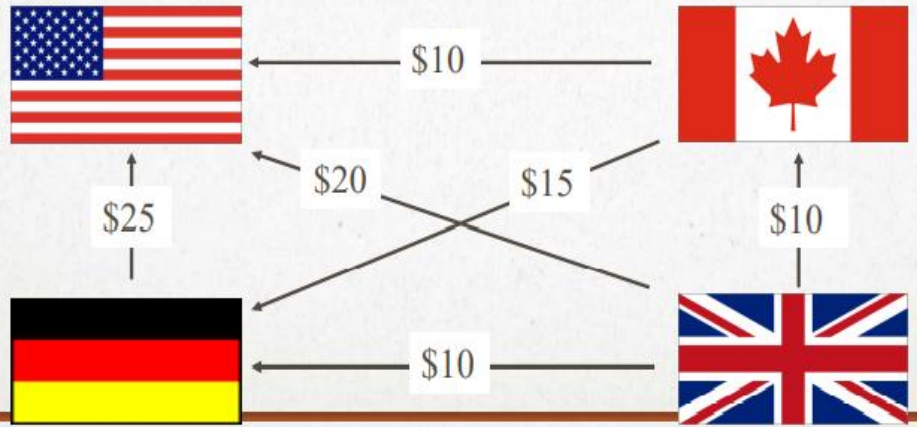


BILATERAL NETTING

- Before bilateral netting:
  - Total funds (gross) to be moved: $350
- With bilateral netting:
  - Total funds (net) to be moved: $90
- This is a reduction of $260 in foreign exchange transactions.

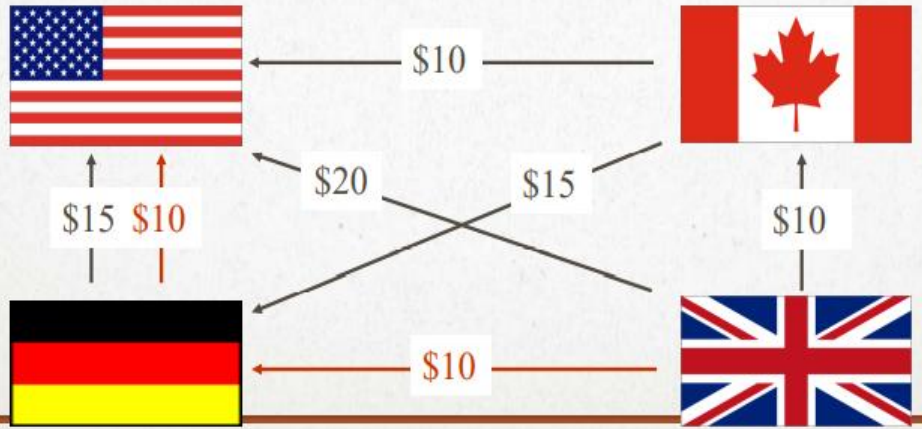
MULTILATERAL NETTING: AN EXAMPLE

Consider simplifying the bilateral netting with multilateral netting: Start with the bilateral amounts.



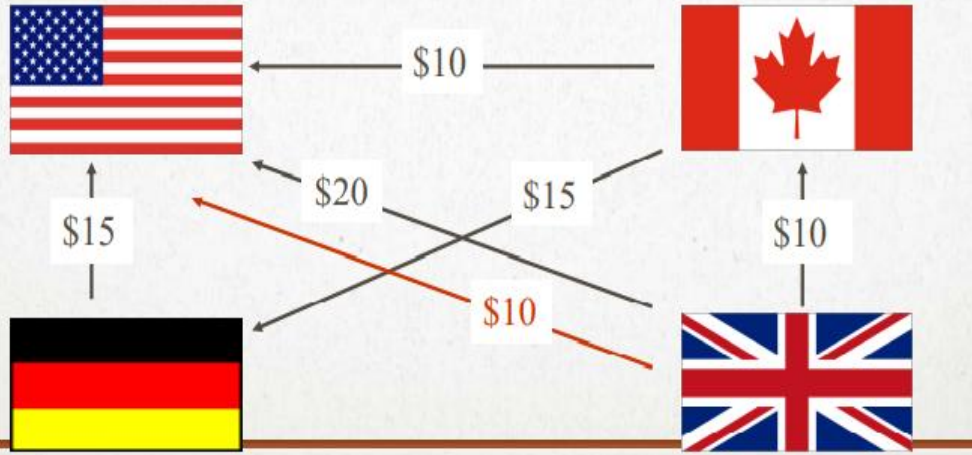
MULTILATERAL NETTING: AN EXAMPLE

U.K. affiliate owes the German affiliate $10; the German affiliate owes U.S. $10.



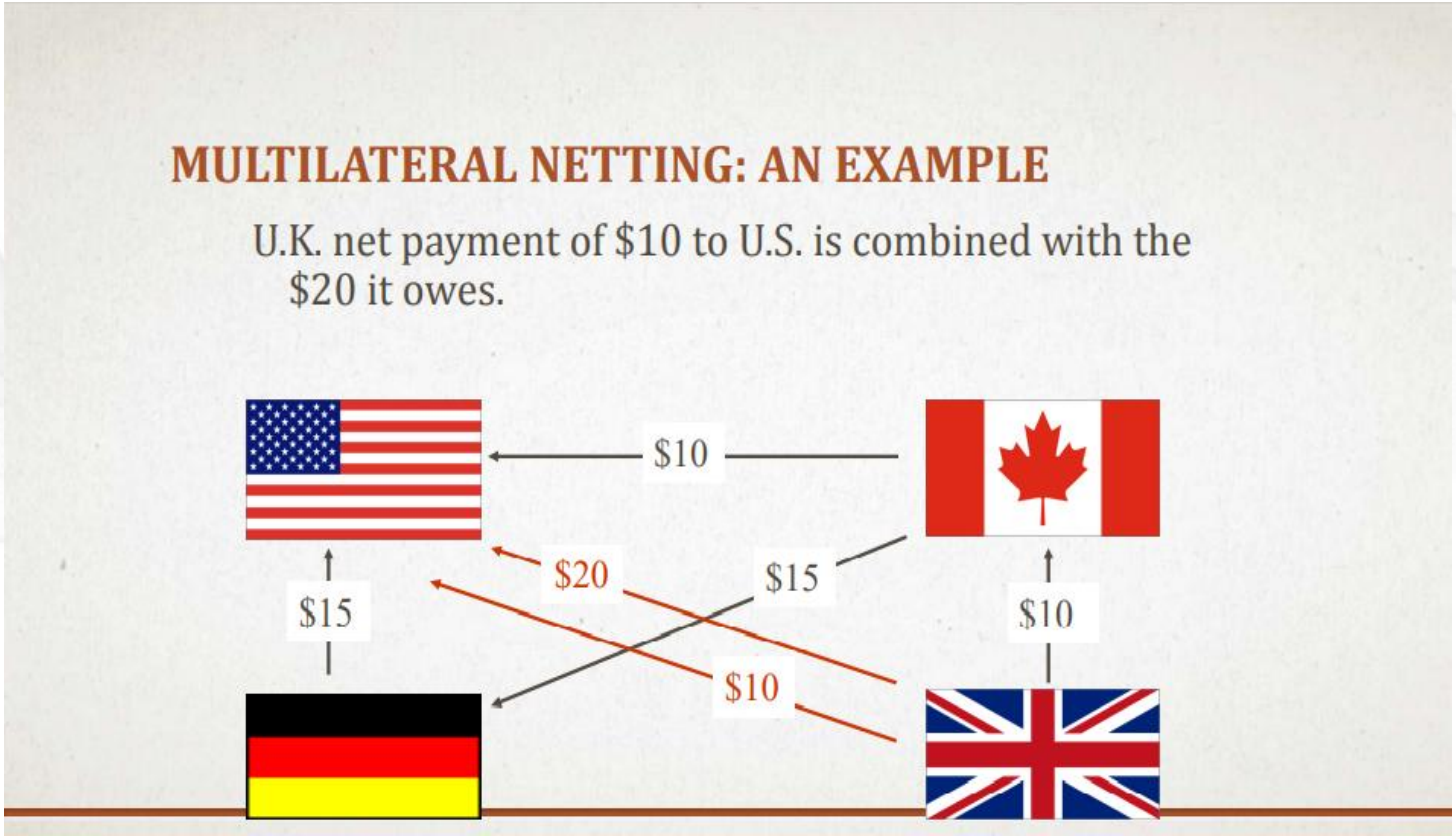
MULTILATERAL NETTING: AN EXAMPLE

Thus, the U.K. affiliate nets its payment to the U.S. of $10.



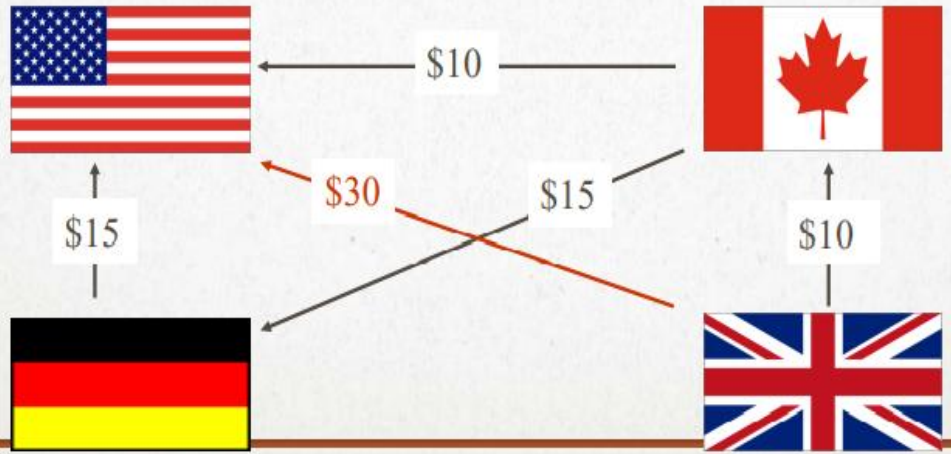
MULTILATERAL NETTING: AN EXAMPLE

U.K. net payment of $10 to U.S. is combined with the $20 it owes.



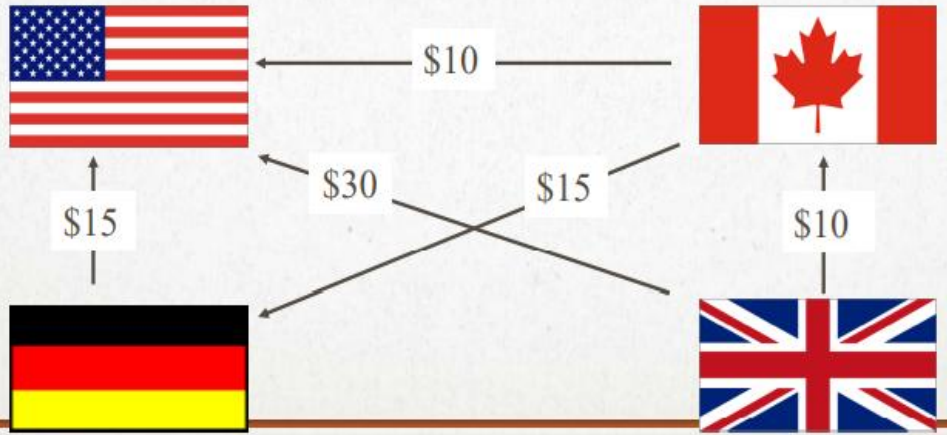
MULTILATERAL NETTING: AN EXAMPLE

U.K. affiliates owes $30 to U.S.



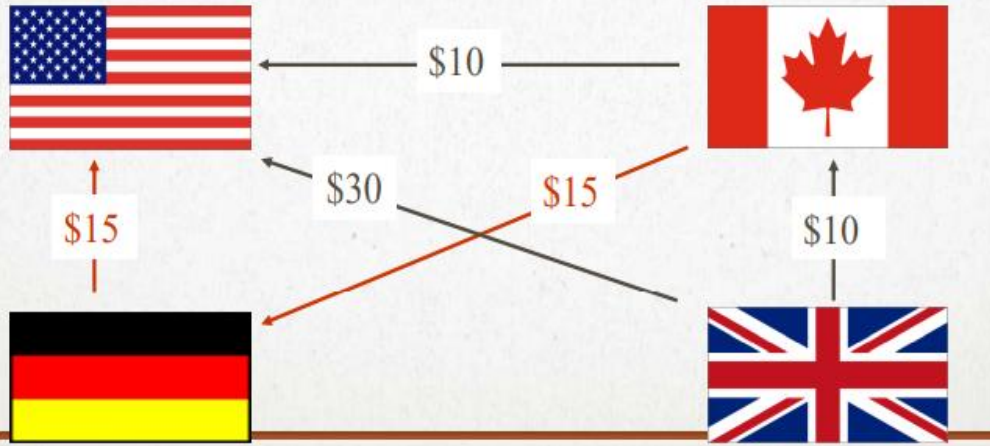
MULTILATERAL NETTING: AN EXAMPLE

Consider Canadian and German affiliates.



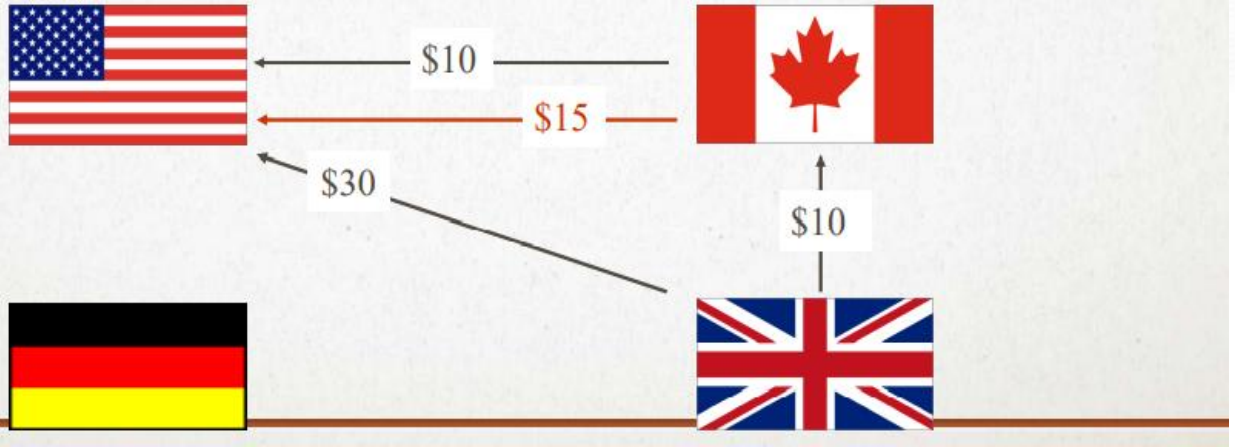
MULTILATERAL NETTING: AN EXAMPLE

Canadian affiliate owes German affiliate $15 and the German affiliate owes the U.S. $15.



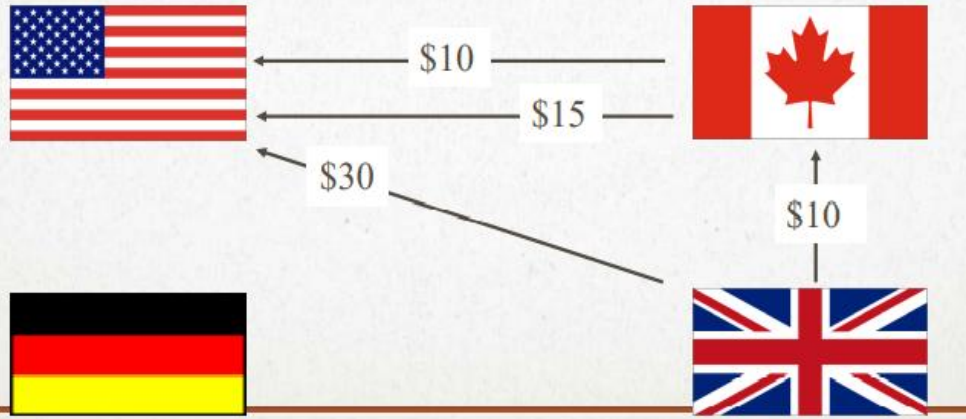
MULTILATERAL NETTING: AN EXAMPLE

Canadian affiliate nets its payment to the U.S. of $15;
total Canadian affiliate payment to U.S. $25.



MULTILATERAL NETTING: AN EXAMPLE

Consider Canadian and U.K. affiliate



MULTILATERAL NETTING: AN EXAMPLE

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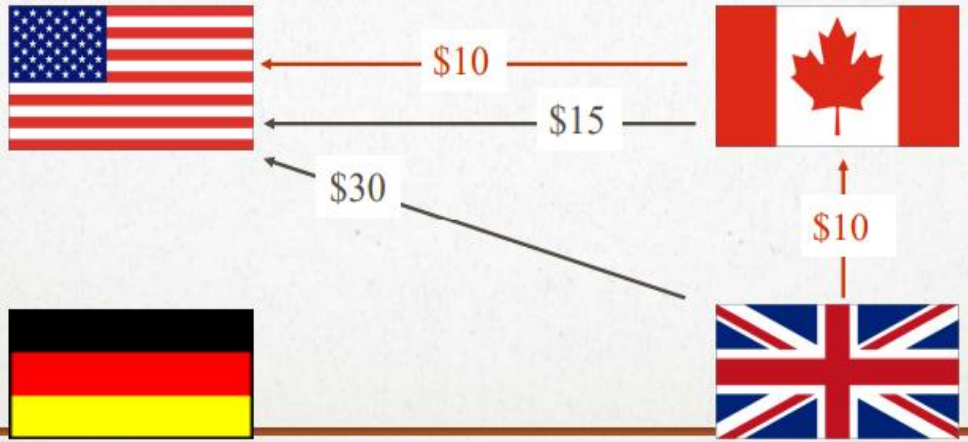


MULTILATERAL NETTING: AN EXAMPLE

U.K. affiliate nets its payment to the U.S. of $10.

MULTILATERAL NETTING: AN EXAMPLE

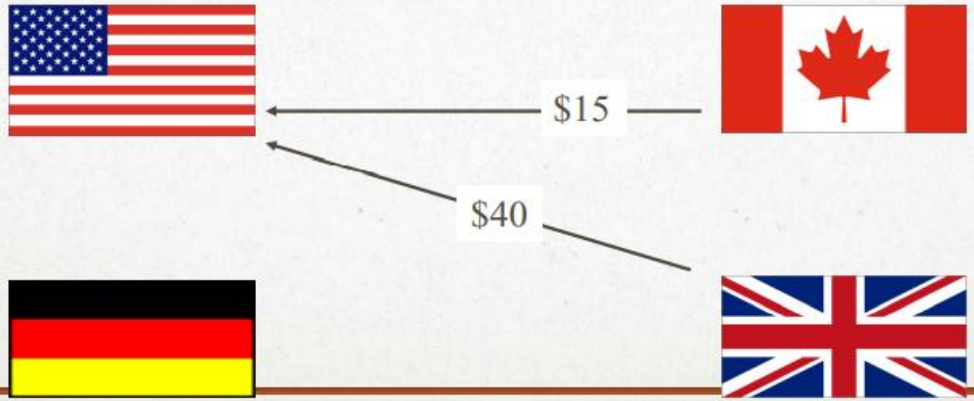
Combine this $10 with the $30 the U.K. affiliate owes the U.S.

MULTILATERAL NETTING: AN EXAMPLE

U.K. affiliate owes the U.S. $40.

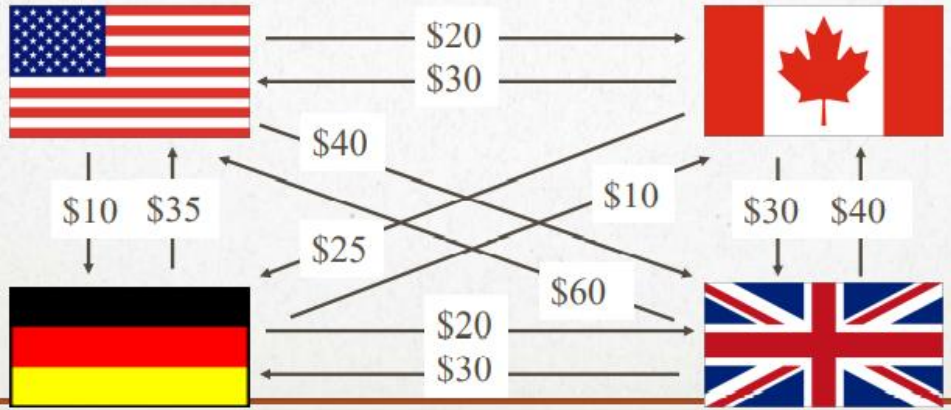
MULTILATERAL NETTING: AN EXAMPLE

Total funds to be moved under multilateral netting is $55.



SUMMARY OF NETTING

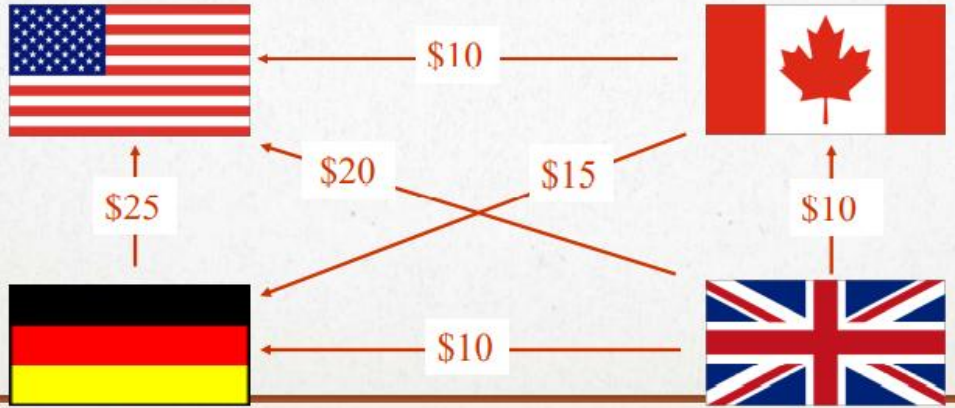
Compare this (before netting).



BILATERAL NETTING

To this.

Bilateral Netting: Total funds moved = $90



Benefits of Netting

- Decrease in the expenses associated with moving funds internationally
- Decrease in the number of foreign exchange transactions (also reduces costs)
- Reduction in intra-company float (wire transfers can take up to 5 days)

Financial rewards

- Favorable foreign exchange rates due to consolidation of several smaller payments to one large payment
- Reduces administration cost

Control advantages

- Forces tighter control over information on transaction between subsidiaries
- Reduces time spent on administration & simplifies the reconciliation process

Investing Surplus cash

- **Cash in excess of operating requirement may be held for two reasons**
  - To meet fluctuations in working capital
  - As a buffer to meet unpredictable financial needs

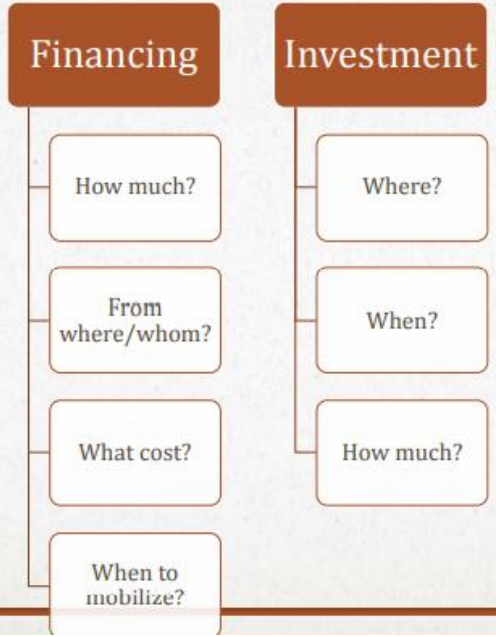
- **Selecting Investment Opportunity**
  - Safety
  - Maturity
  - Marketability

INVESTING OF SURPLUS CASH

Instruments	Safety	Maturity
Treasury Bills	Safe	91 days & 364 days
Commercial Papers	Risky	Min 7 days & Max 1 year from date of issue
Certificates of Deposits	Safe	7 days to 1 year
Bank Deposits	Safe	Min 14 days
Inter-corporate deposits	Risky	Min 1 day, Max 1 year
Money market mutual funds	Risky	15 days

CORPORATE FINANCIAL MANAGEMENT

CAPITAL DECISIONS



WORKING CAPITAL MANAGEMENT

WORKING CAPITAL MANAGEMENT

- Working capital management is the management of the short-term investment and financing of a company.

- Working capital management is to do with management of all aspects of both current assets and current liabilities, so as to minimize the risk of insolvency while maximizing return on assets

GOALS:

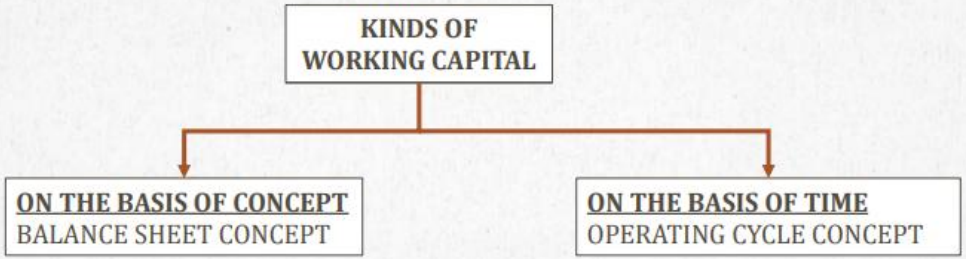
- Adequate cash flow for operations
- Most productive use of resources
- Satisfy maturing short term debt

DETERMINANTS OF WORKING CAPITAL

- Nature of the business
- Sales and demand conditions
- Manufacturing policy
- Credit policy
- Availability of credit
- Operating efficiency
- Price level changes
- Growth and expansion plan

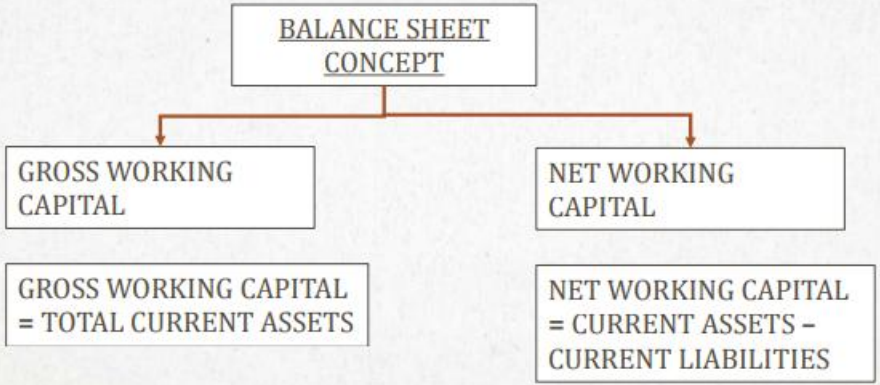
CLASSIFICATION OF WORKING CAPITAL

- There are two possible interpretations of working capital concept

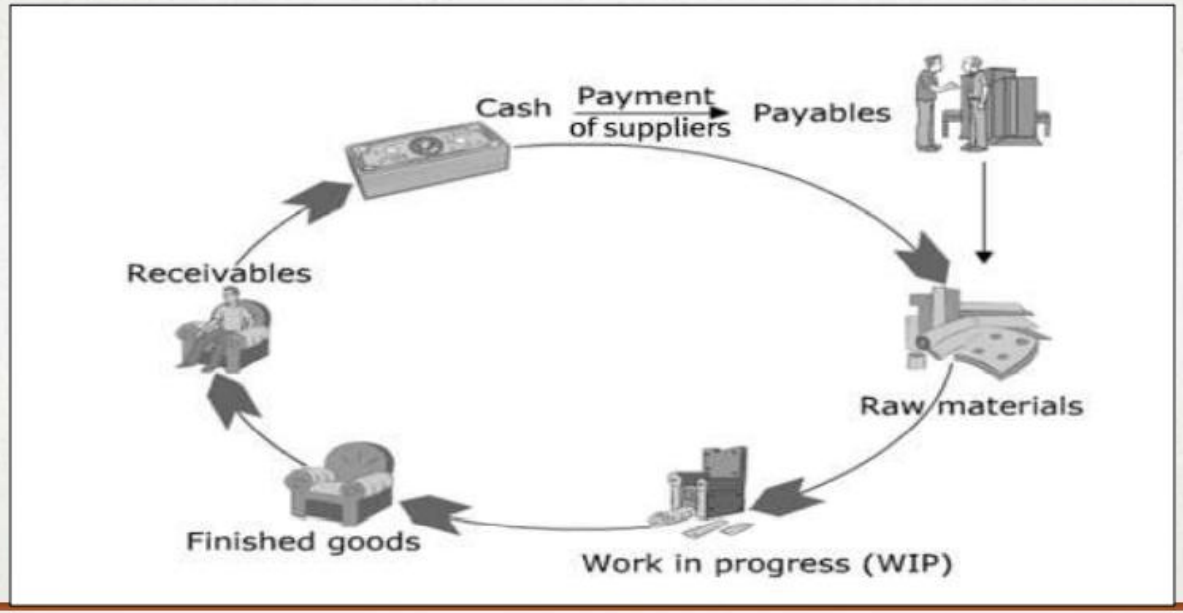


BALANCE SHEET CONCEPT

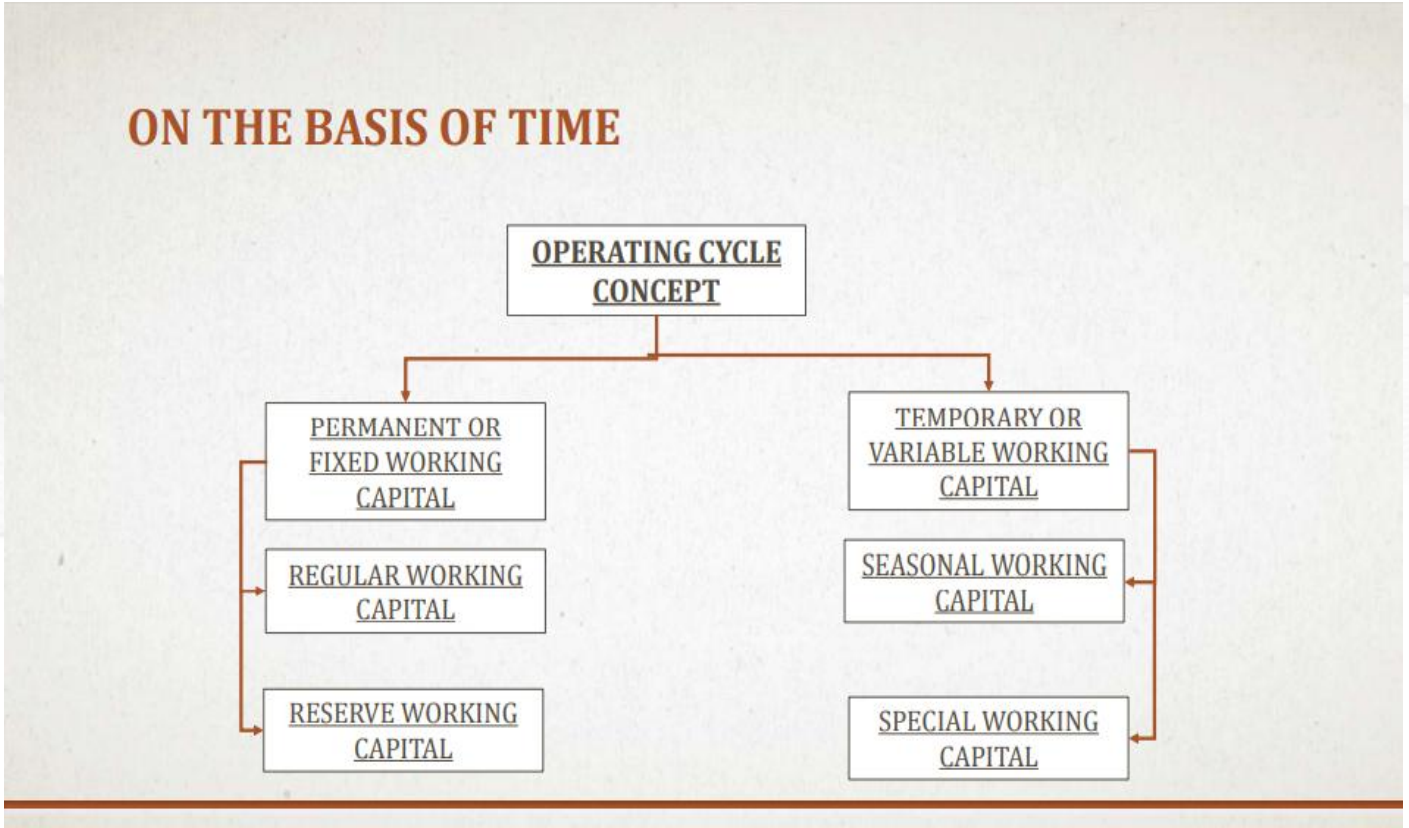
- There are two interpretations of working capital under the balance sheet concept



WORKING CAPITAL CYCLE



ON THE BASIS OF TIME



ON THE BASIS OF TIME

➢ **PERMANENT WORKING CAPITAL**

It is the minimum level of current assets that the firm maintains

Permanent Working Capital can be further divided into:

- **Regular working capital:**

It is the minimum amount of liquid capital required to keep up the circulation of the capital from cash to inventories to receivables and back again to cash.

- **Reserve margin or cushion working capital:**

It is extra capital required to meet unforeseen contingencies that may arise in future.

➢ TEMPORARY OR VARIABLE WORKING CAPITAL

It is the extra working capital required to support the changing production and sales activities of the firm

Variable Working Capital can be further divided into:

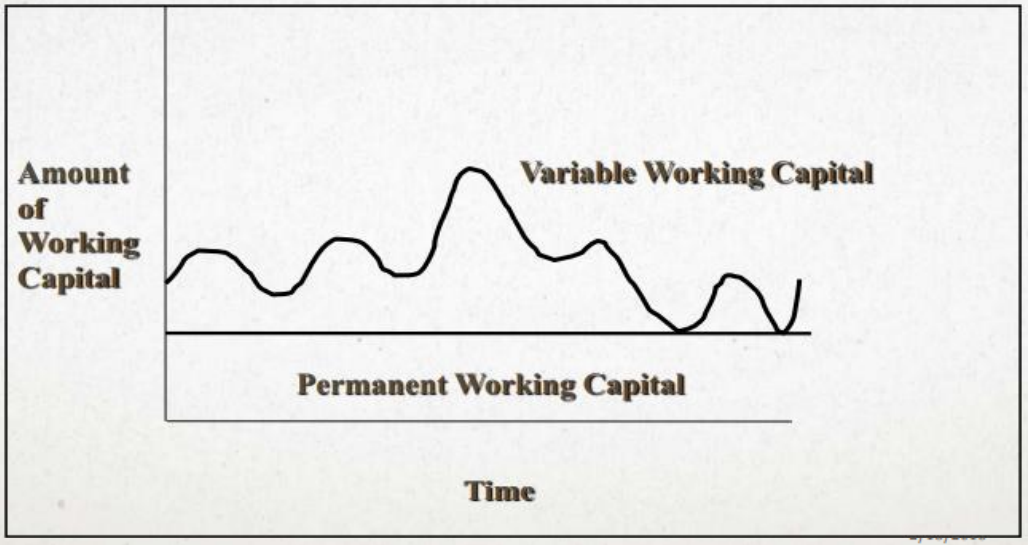
- **Seasonal working capital:**

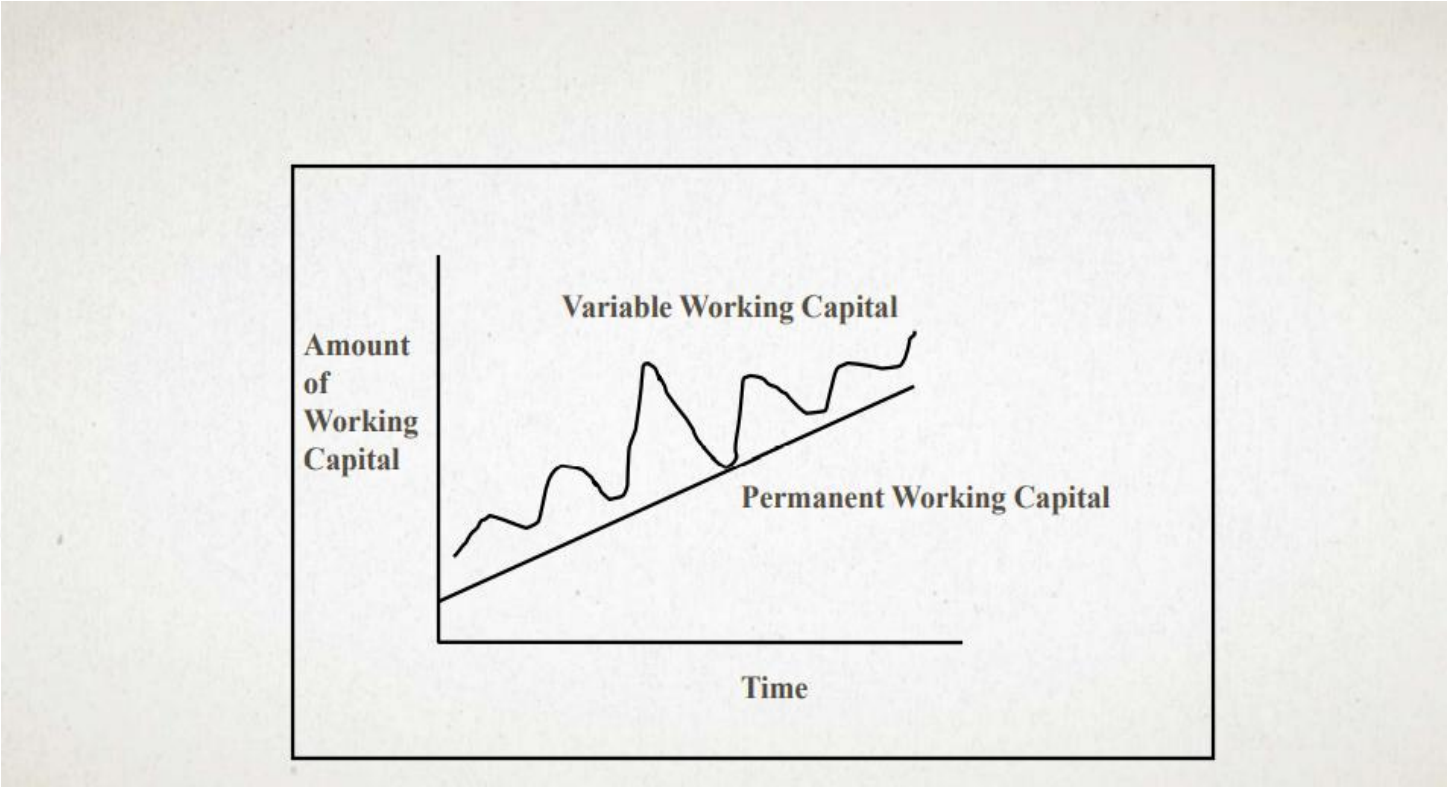
It refers to liquid capital needed during the particular season.

- **Special working capital:**

It is that part of the variable capital which is needed for financing special operations

DIFFERENCE BETWEEN PERMANENT & TEMPORARY WORKING CAPITAL




Variable Working Capital
Amount of Working Capital
Permanent Working Capital
Time

DANGERS OF INSUFFICIENT WORKING CAPITAL

- Full utilization of fixed assets is not possible
- Difficulty in the Maintenance of Machinery
- Decrease in Credit Rating
- Non utilization of favourable opportunities
- Decrease in Sales
- Difficulty in distribution of dividends

DANGERS OF EXCESSIVE WORKING CAPITAL

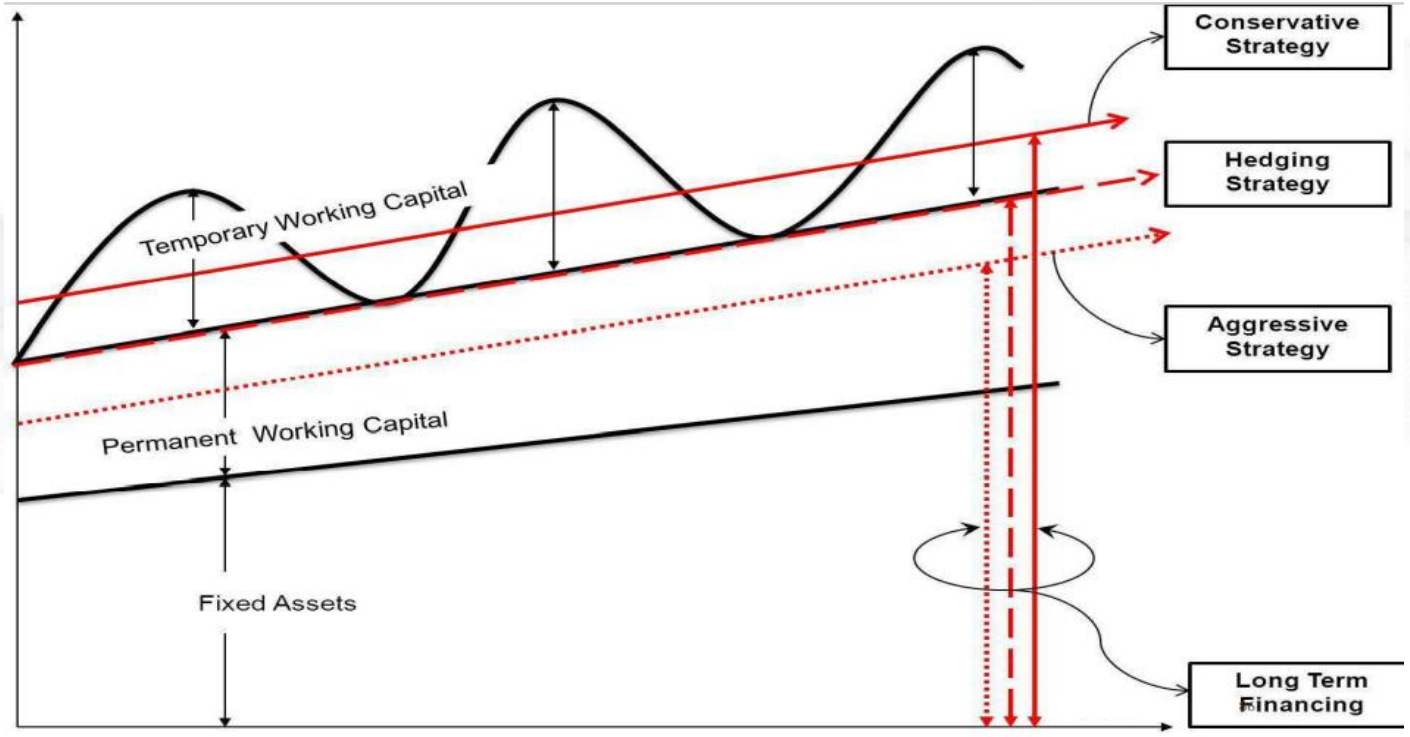
- Excessive Inventory
- Excessive Debtors (liberal Credit policy)
- Adverse effect on profitability

FINANCING WORKING CAPITAL

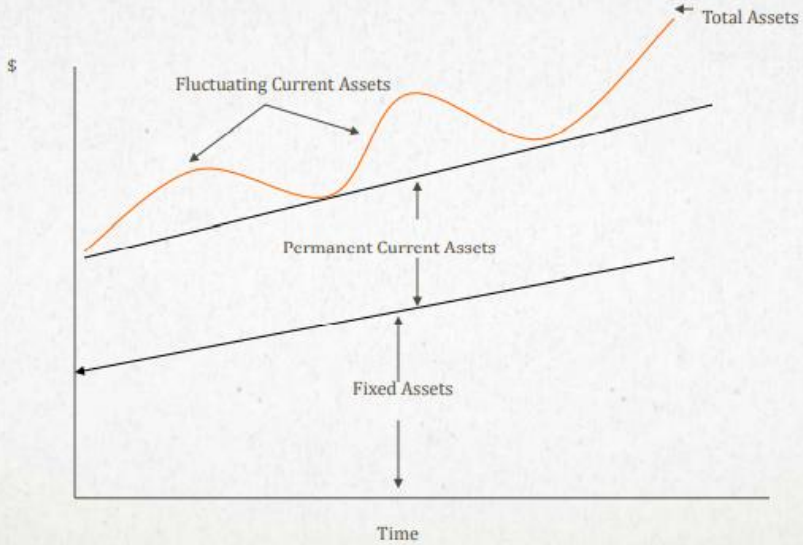
- Long Term Financing
- Short Term Financing

APPROACHES TO DETERMINE AN APPROPRIATE FINANCING-MIX

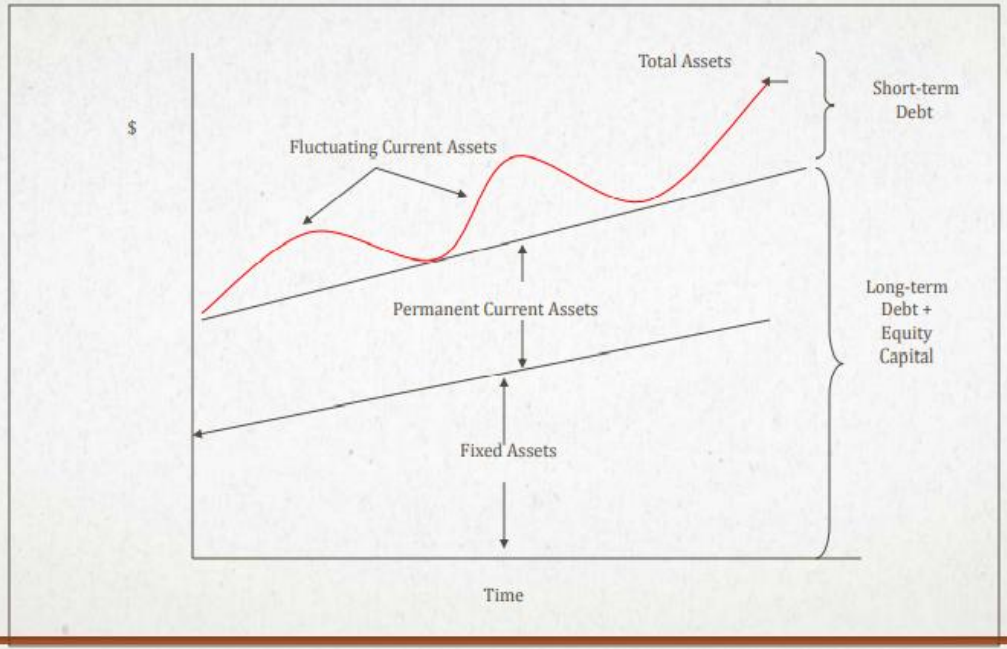
- The Matching approach
- Conservative approach
- Aggressive approach


Conservative Strategy
Hedging Strategy
Aggressive Strategy
Temporary Working Capital
Permanent Working Capital
Fixed Assets
Long Term Financing

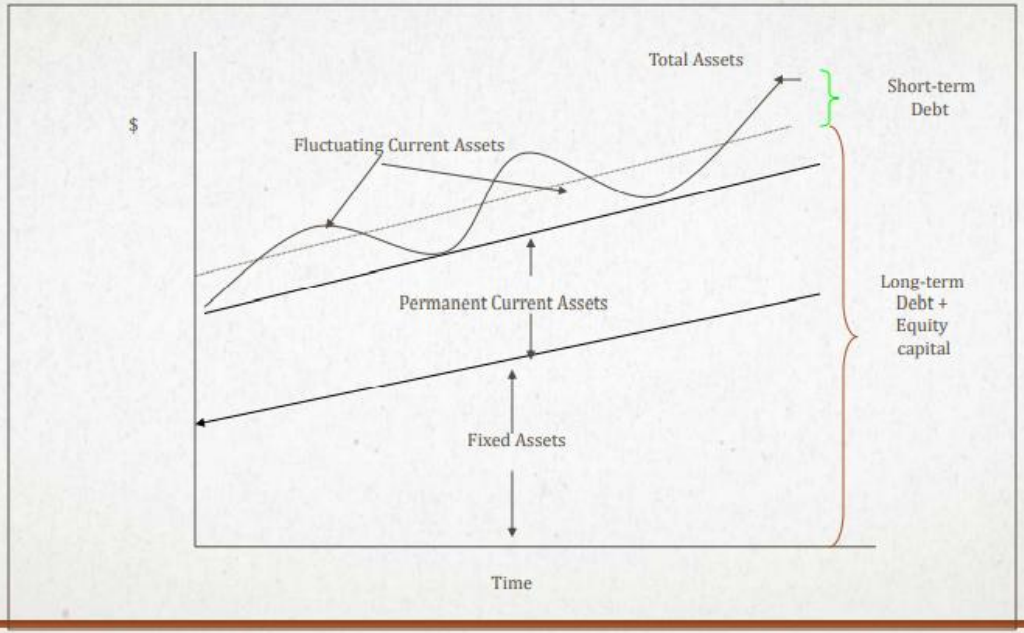
FINANCING NEEDS OVER TIME



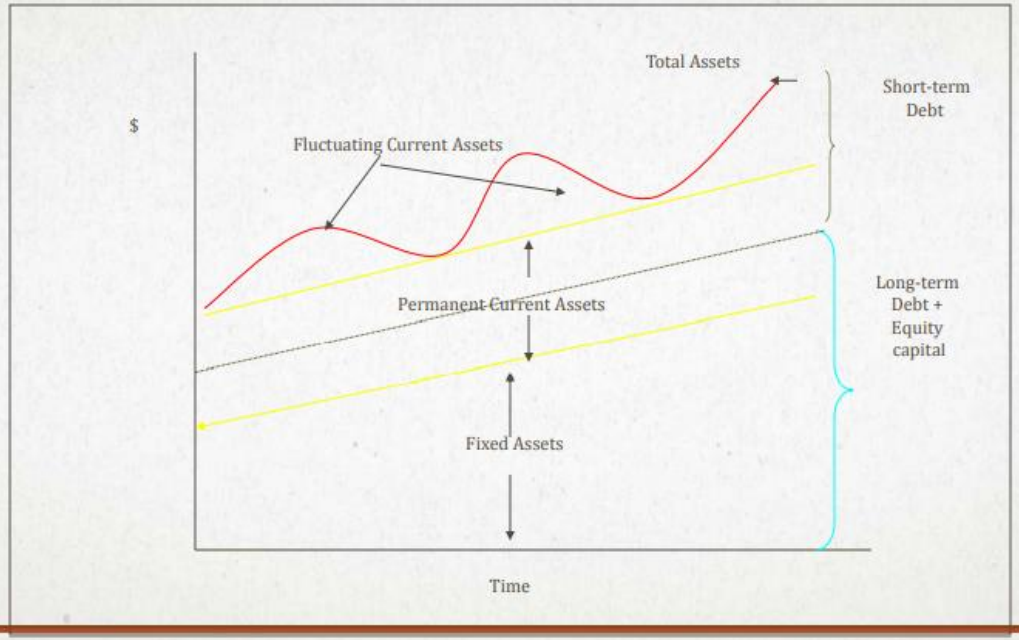
MATCHING APPROACH TO ASSET FINANCING



CONSERVATIVE APPROACH TO ASSET FINANCING



AGGRESSIVE APPROACH TO ASSET FINANCING



RELATIVE PROPORTION OF LONG TERM AND SHORT TERM DEBT

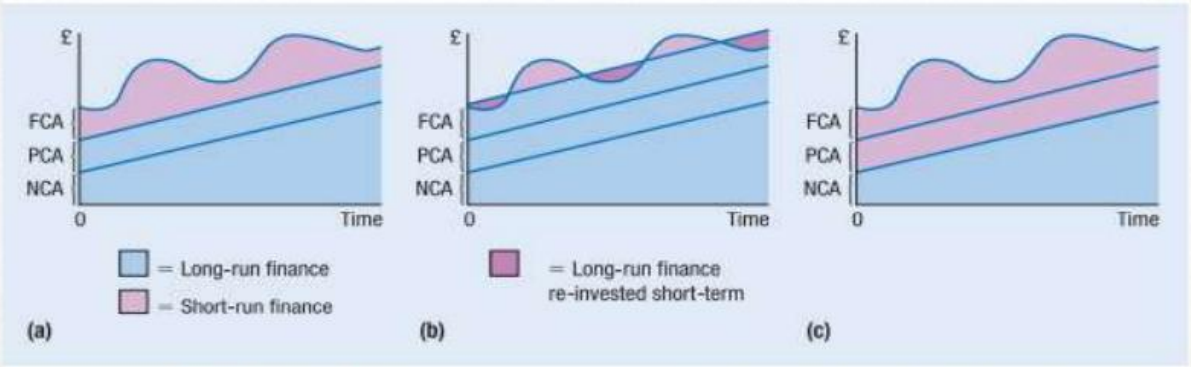


Figure 3.2 The (a) matching, (b) conservative and (c) aggressive approaches to the relative proportions of the long- and short-term debt used to finance working capital

COMPARING THE THREE STRATEGIES OF WORKING CAPITAL FINANCING

FACTORS	CONSERVATIVE	AGRESSIVE	MATCHING
LIQUIDITY	HIGH	LOW	BALANCED
PROFITABILITY	LOW	HIGH	BALANCED
RISK	LOW	HIGH	BALANCED
ASSET UTILIZATION	LOW	HIGH	MODERATE
WORKING CAPITAL	HIGH	LOW	MODERATE

Thank You