DEPARTMENT OF COMMERCE AND FINANCIAL STUDIES
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MBA (Financial Management)

Course Code and Name: FMSC3/21 -WORKING CAPITAL MANAGEMENT

Unit – III/ Topic: CASH MANAGEMENT

Scheme of Presentation

Cash Management

Importance

The right proportion

Factors influencing cash balance

Determining optimum cash balance

Cash Budgeting

Controlling and monitoring collections and disbursements

Cash management models.

Cash Management

- Cash management is the corporate process of collecting and managing cash, as well as using it for (short-term) investing.
- Cash, the most liquid asset, is of vital importance to the daily operations of business firms.

Goals of Cash Management:

- Precisely speaking, the primary goal of cash management in a firm is to trade-off between liquidity and profitability to maximise long-term profit this is possible only when the firm aims at optimizing the use of funds in the working capital pool.

(i) To satisfy day-to-day business requirements;

(ii) To provide for scheduled major payments;

(iii) To face unexpected cash drains;

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(iv) To seize potential opportunities for profitable long-term investment

(v) To meet requirements of bank relationships;

(vi) To build image of creditworthiness;

(vii) To earn on cash balance

(viii)To minimize the operating cost of cash management

Functions of Cash Management:

- Finance manager has to ensure that investment in cash is efficiently utilised. For that has to manage cash collections and disbursements efficaciously, determine the appropriate working cash balances and invest surplus cash.
- Efficient cash management function includes cash planning, evaluation of benefits and costs, evaluation of policies, procedures and practices and synchronization of cash inflows and outflows.

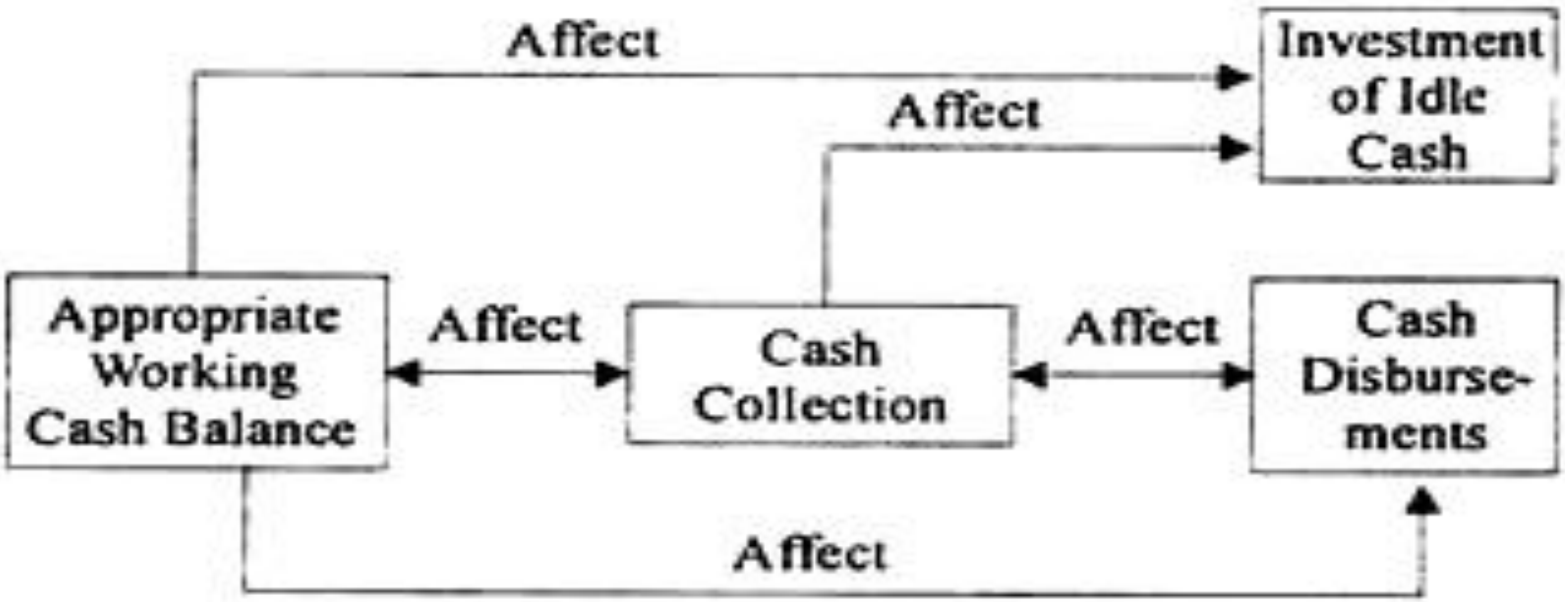


Fig. 36.1. Cash Management Functional Relationship

Source:https://www.slideshare.net/godfreouseph/cash-management-model

Optimum Cash Balance

- If a firm maintains a small cash balance, it has to sell its marketable securities (and perhaps buy them later) more frequently than if it holds a large cash balance. Hence the trading or transaction costs will tend to diminish if the cash balance becomes larger. However, the transaction costs of maintaining cash rise as the cash balance increases.

Cash Management Models to Determine the Level of Cash Balance

Cash Management Model # 1. Inventory Model:

- The economic-order quantity (EOQ) basically used in inventory decision, now popularly used in incurred the font size to determine the optimal level of cash holding for the firm. William Baumol was the first man who applied the inventory model to the problem of cash management
- According to the EOQ model, optimum level of cash should be determined by balancing the carrying cost of holding cash against the fixed cost of transferring marketable securities to cash or vice-versa so as to minimize total costs.

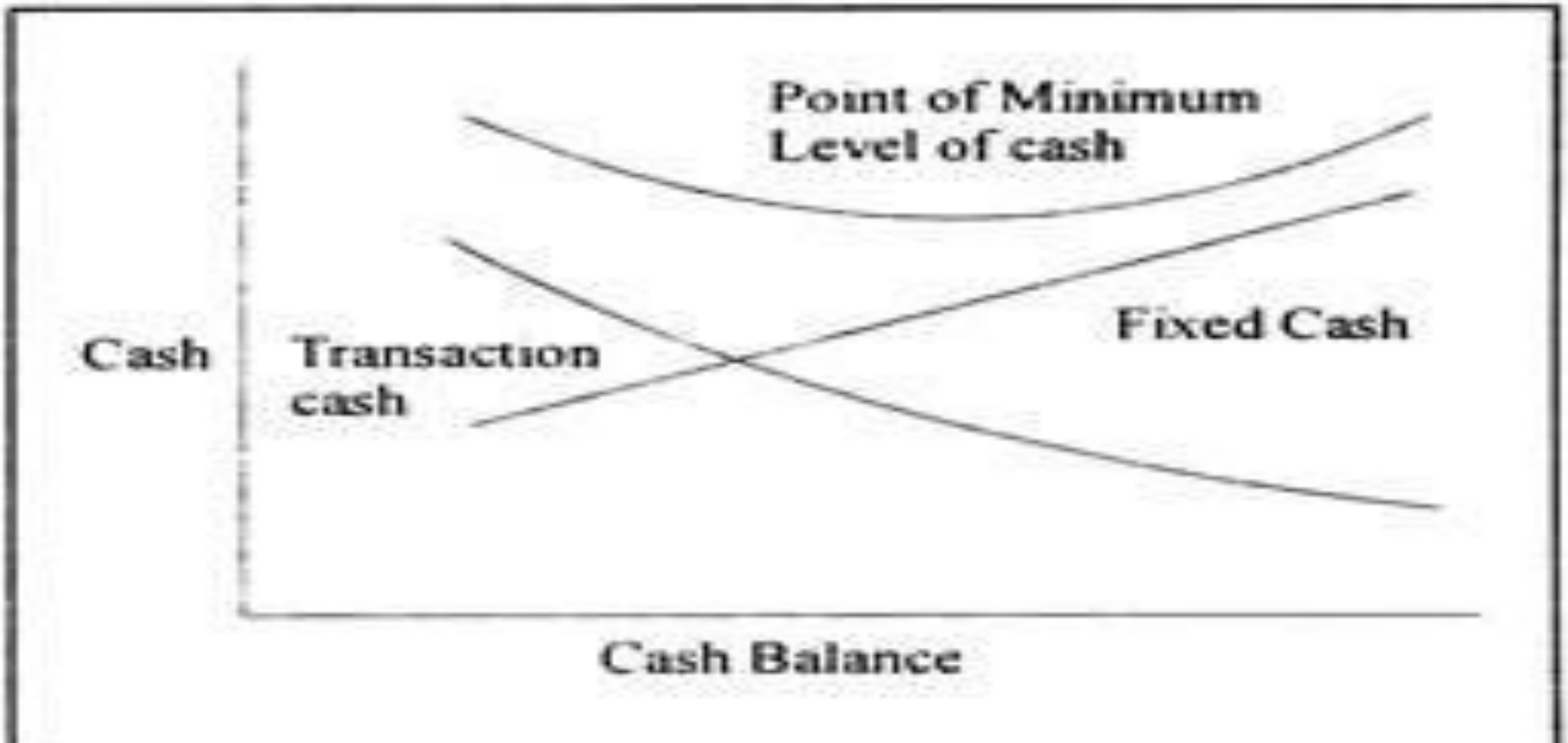


Fig. 36.2. The Optimal Cash Level

- [Source:https://www.slideshare.net/godfreouseph/cash-management-model](https://www.slideshare.net/godfreouseph/cash-management-model)

Optimal level of cash can also be determined algebraically by using the following formula:

where Q = Optimum size of cash inventory

C = Average fixed cash for securing cash from market

B = Total amount of transaction demand for cash over the period of time involved.

K = Cost of carrying the inventory of cash i.e., interest rate on marketable securities for the period.

Evaluation of Inventory Model:

- Inventory model of cash management is very useful to the firm as it helps in determining optimum level of cash holding.
- By using this model, finance manager can minimize costs of carrying and maintaining cash.
- This model clearly indicates the idle cash balance which can be gainfully employed in securities.
- It also saves the firm from dangers of illiquidity by furnishing advance signal and advising when the securities of the firm have to be sold to obtain cash.

Cash Management Model

2. Stochastic Model:

This model is based on the basic assumption that cash balances change randomly over a period of time both in size and direction and form a normal distribution as the number of periods observed increases.

The model prescribes two control limits—upper limit and lower limit when cash balances reach the upper limit a transfer of cash to investment account should be made and when cash balances reach the lower point a portion of securities constituting investment account of the firm should be liquidated to return the cash balances to its normal point.

The optimal value of Z is determined by the following formula:

Where b = fixed cost associated with a security transaction,

σ^2 = variance of daily net cash flows,

K = interest rate per day on marketable securities.

The optimal value of ‘h’ is simply three times of z.

3. Probability Model:

Probability model for controlling cash was developed by Willian Bernek. Bernels observed that cash flows of a firm are neither completely predictable nor stochastic rather they are predictable within a range this occurrence calls for formulating the demand for cash as a probability distribution of possible outcomes.

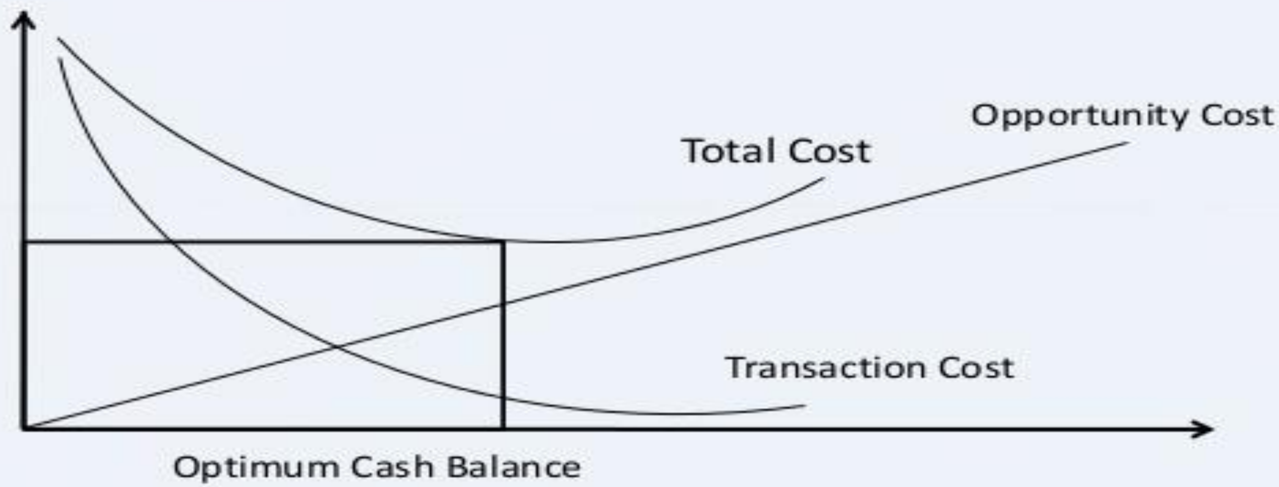
- In probability model, a finance manager has to estimate probabilistic outcomes for net cash flows on the basis of his prior knowledge and experience he has to determine what is the opening cash balance for a given period, what is the expected net cash flow at the end of this period what is the probability of occurrence of this expected closing net cash flow.

The model is based on the following assumptions:

1. Cash is invested in marketable securities at the end of the planning period.
2. Cash inflows take place continuously throughout the planning period.
3. Cash inflows are of different sizes.
4. Cash inflows are not fully controllable by the management of a firm.

5. Cash disbursements take place on certain days because the management control majority of the disbursements.
6. A finance manager can prognosticate a firm's need for a given planning period and can use a part of cash.
7. Sale of marketable securities and other short-term investments will be effective at the end of the planning period.

William J. Baumol's Inventory model



(Baumol's Model : Tradeoff Between Holding cost and transaction cost)

Source: http://www.yourarticlelibrary.com

Cash Budgeting

Cash budgeting or short-term cash forecasting is the principal tool of cash management. Cash budgets, routinely prepared by business firms, are helpful in

- Estimating cash requirements
- Planning short-term financing
- Scheduling payments in connection with capital expenditure projects.
- Planning purchases of materials
- Developing credit policies
- Checking the accuracy of long term forecasts.

Cash Collection and Disbursement

- Cash balance shown by a firm on its books is called the book, or ledger, balance whereas the balance shown in its bank account is called the available, or collected, balance.
- The difference between the available balance and the ledger balance is referred to as the float.
- There are two kinds of float viz., disbursement float and collection float. Cheques issued by a firm create disbursement float.

Cash management model

- The cash budget of the firm indicates periods when the firm is expected to have shortage of funds and surplus of funds. If a shortage is expected, ways and means of overcoming the shortage must be explored on the other hand, if a surplus is projected, it has to be determined how if should be split between marketable securities and cash holdings. Several cash management models have addressed this issue of split between marketable securities and cash holdings.

Miller and Orr Model

- Expanding on the Baumol, ,Miller and Orr consider a stochastic generating process for periodic changes in cash balance. Baumol Model, ,Miller and Orr assume that the changes in cash balance over a given period are random, in size as well as direction.

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