

- **Transaction Motive for Holding Cash** A firm needs cash to make payments for acquisition of resources and services for the normal conduct of business.
- **Precautionary Motive for Holding Cash** A firm keeps additional funds to meet any emergency situation.
- **Speculative Motive for Holding Cash** Some firms may also maintain cash for taking advantages of speculative changes in prices of input and output.
- **Optimum Balance of Cash** A firm should hold an optimum balance of cash, and invest any temporary excess amount in short-term (marketable) securities. In choosing these securities, the firm must keep in mind safety, maturity and marketability of its investment.
- **Management of Cash** involves three things: (a) managing cash flows into and out of the firm, (b) managing cash flows within the firm, and (c) financing deficit or investing surplus cash and thus, controlling cash balance at a point of time. It is an important function in practice because it is difficult to predict cash flows and there is hardly any synchronisation between inflows and outflows.
- **Cash Budget** Firms prepare cash budget to plan for and control cash flows. Cash budget is generally prepared for short periods such as weekly, monthly,

quarterly, half-yearly or yearly. Cash budget will serve its purpose only if the firm can accelerate its collections and postpone its payments within allowed limits. The main concerns in collections are: (a) to obtain payment from customers within the credit period, and (b) to minimise the lag between the time a customer pays the bill and the time cheques etc. are collected. The financial manager should be aware of the instruments of payments, and choose the most convenient and least costly mode of receiving payment. Disbursements or payments can be delayed to solve a firm's working capital problem. But this involves cost that, in the long run, may prove to be highly detrimental. Therefore, a firm should follow the norms of the business.

- **Receipts and Disbursements Method** is employed to forecast for shorter periods. The individual items of receipts and payments are identified and analysed. Cash inflows could be categorised as: (i) operating, (ii) non-operating, and (iii) financial. Cash outflows could be categorised as: (i) operating, (ii) capital expenditure, (iii) contractual, and (iv) discretionary. Such categorisation helps in determining avoidable or postponable expenditures.

- **Adjusted Income Method** uses proforma income statement (profit and loss statement) and balance sheet to work out cash flows (by deriving proforma cash flow statement). As cash flows are difficult to predict, a financial manager does not base his forecasts only on one set of assumptions. He or she considers possible scenarios and performs a sensitivity analysis. At least, forecasts under optimistic, most probable and pessimistic scenarios can be worked out.
- **Concentration Banking and Lock-Box System** methods followed to expedite conversion of an instrument (e.g., cheque, draft, bills, etc.) into cash.
- **Marketable Securities** The excess amount of cash held by the firm to meet its variable cash requirements and future contingencies should be temporarily invested in marketable securities, which can be regarded as near moneys. A number of marketable securities may be available in the market. The financial manager must decide about the portfolio of marketable securities in which the firm's surplus cash should be invested.
- **Baumol Model of Cash Management** considers cash management similar to an inventory management problem. The formula is

$$C^* = \sqrt{\frac{2cT}{k}}$$

where C^* is the optimum cash balance, c is the cost per transaction, T is the total cash needed during the year and k is the opportunity cost of holding cash balance. The optimum cash balance will increase with increase in the per transaction cost and total funds required and decrease with the opportunity cost.

- **Miller-Orr Model** If the firm's cash flows fluctuate randomly and hit the upper limit, then it buys sufficient marketable securities to come back to a normal level of cash balance (the return point). Similarly, when the firm's cash flows wander and hit the lower limit, it sells sufficient marketable securities to bring the cash balance back to the normal level (the return point). The formula for determining the distance between upper and lower control limits (called Z) is as follows:

$$(\text{Upper Limit} - \text{Lower Limit}) = (3/4 \times \text{Transaction Cost} \\ \times \text{Cash Flow Variance/Interest Rate})^{1/3}$$

$$Z = (3/4 \times c\sigma^2 / i)^{1/3}$$