

Cash Management

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Financial Management

University Elective

Topics

- + Overview
- + Motives for holding cash
- + Cash budgeting
- + Optimal cash balance
- + Investment of surplus funds
- + Cash management models
- + Numericals

Overview

- +Cash – most liquid asset
- +Daily operations of business
- +Efficient management of cash for solvency of the business
- +Life blood of a business

Motives for Holding Cash

- + Why does a firm need cash?
- + Transaction motive – meet their transaction needs
- + Precautionary motive – uncertainty about the magnitude and timing of cash inflows and outflows
- + Speculative motive – profit making opportunities like fluctuations in commodity prices, security prices, interest rates and foreign exchange rates
- + Cash has an opportunity cost – liquidity provided by cash holding is at the expense of profits sacrificed from alternative investment opportunities

Cash Budgeting

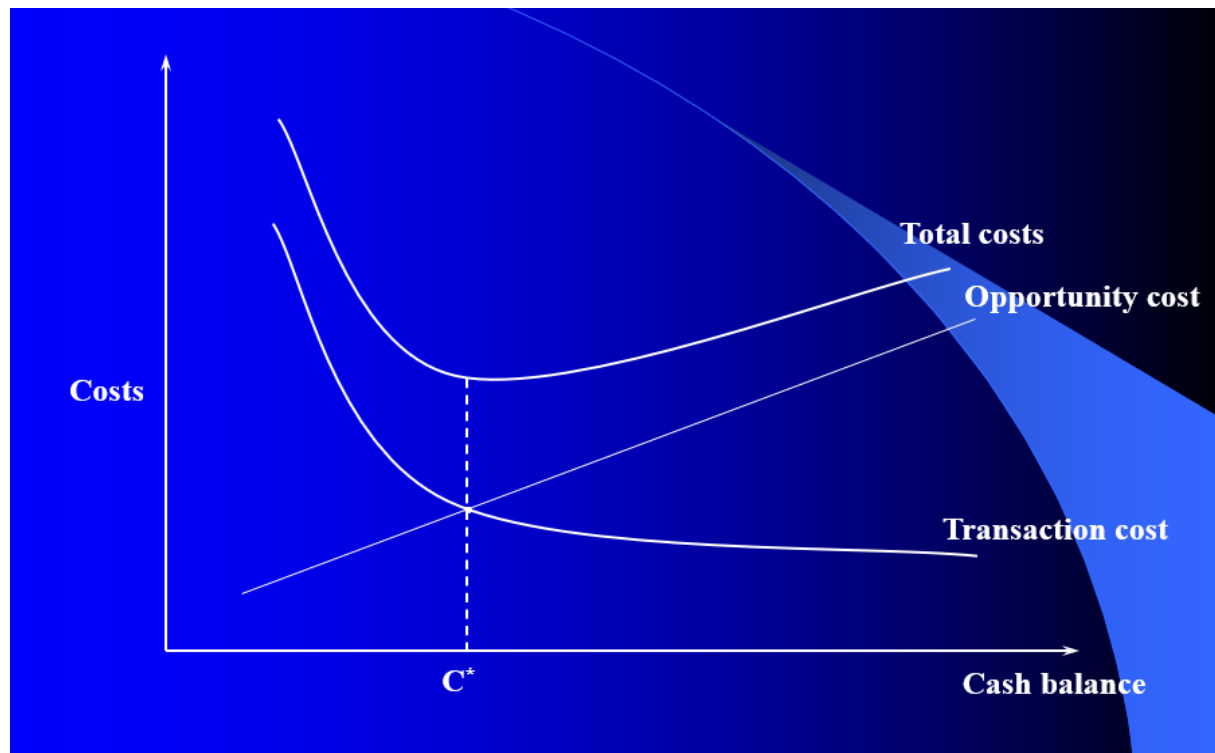
- + Short term cash forecasting
- + Principal tool of cash management
- + Helps in:
 - + Estimating cash requirements
 - + Planning short term financing
 - + Scheduling payments in connection with capital expenditure
 - + Planning purchases of materials
- + Multiple short term forecasts of varying length and detail – one year divided into quarters or months; one quarter divided into months

Receipts and Payments Method

- + Method of preparing cash budget
- + Shows timing and magnitude of expected cash receipts and payments over the forecast period
- + Information on estimated sales, production plan, purchasing plan, financing plan and capital expenditure budget
- + Items of cash receipts and payments and the basis of their estimation
- + Forecast cash receipts and payments

Optimal Cash Balance

- +Cash balance and marketable securities
- +Trading/transaction costs and opportunity costs



Investment of Surplus Funds

- + Surplus funds are invested in short term instruments instead of accumulating it in current account
- + It may be useful to divide a firm's short-term investment portfolio into three segments:
- + Ready cash segment – highly liquid (unanticipated operational needs)
- + Controllable cash segment – known future cashflows
- + Free cash segment – generate income, without an excessive concern for liquidity

Criteria for Evaluating Investment Instruments

- Safety
- Liquidity
- Yield
- Maturity

Investment Options

- Fixed deposits with banks
- Treasury bills
- Mutual fund schemes
- Money market schemes
- Commercial paper
- Certificates of deposit
- Inter-corporate deposits
- Bill discounting

Cash Management Models

- +Cash budget highlights the surplus and deficit
- +In case of surplus, it has to be determined how it should be split between marketable securities and cash holdings
- +Cash management tools are used for the same
- +Baumol model
- +Miller and Orr model

Baumol Model

$$C = \sqrt{\frac{2bT}{I}}$$

where: C = amount of marketable securities converted into cash per order

I = interest rate per planning period on investment in marketable securities.

T = Projected cash requirements during the planning period

Miller and Orr Model

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

$$UL = 3RP - 2LL$$

where: RP = return point

b = fixed cost per order for converting marketable securities into cash.

I = daily interest rate earned on marketable securities

σ^2 = variance of daily changes in the expected cash balance

LL = the lower control limit

UL = the upper control limit