FINANCE FOR CIRCULAR ECONOMY

Manipadma Datta
Professor
Business and Sustainability
TERI School of Advanced Studies
New Delhi, India

BASIC CONCEPTS:

- Investment;
- Funding;
- Sources of Fund;
- Risk-Return Relationship;
- Financial Instruments;
- Return on Investments (ROI);
- Surplus Management;
- Balance Sheet;
- Securities Market;
- Time Value of Money

BASIC CONCEPTS: *contd.*

- Investment:
  - Long Term
  - Short Term
    - Long term to create long term assets
    - Short term to create short term assets
      - In Finance, long term refers to an accounting period more than one year
      - Conversely, short term means one accounting year.

BASIC CONCEPTS: *contd.*

- Funding:
  - It means financing the investment idea;
  - Funds are known as Capital.
  - Financing have basically two sources:
    - Own; and,
    - Loan.
      - Own capital is called Equity;
      - Loan is called Debt.
        - Equity providers are the enterprise owners;
        - Debt providers are lenders.

BASIC CONCEPTS: *contd.*

- Sources of Funds:
- Equity and/or Debt;
  - Both the sources have costs;
    - Cost of equity;
    - Cost of debt;
      - Cost of equity is the expected earnings from investment;
      - Cost of debt is the interest paid on debt;
        - Equity is more risky, hence cost is higher;
        - Debt is with lesser risk, so cost is lower.

BASIC CONCEPTS: *contd.*

- Risk-Return Relationship:
  - Relationship is positive;
  - So, higher the risk, higher the gain, and *vice versa;*
    - This is called the Risk-Return Trade-off ;
      - Risk is not necessarily bad;
      - If risk is managed properly, income will grow up;
        - Risk is generally the quantum of uncertainly attached to the business profit;
        - It is the standard deviation of the historical earnings of the firm;
          - Therefore, Risk moves both-way, upward and downward;
          - However, there is another approach to risk that measures only the downward risk;
          - This is called Value at Risk (VaR).

BASIC CONCEPTS: *contd.*

- Financial Instruments:
  - Refers to those helping the project to raise finance;
  - They are of three types:
    - Equity instruments;
    - Debt instruments;
    - Hybrid instruments;
      - Equity instruments generally refer to equity stock;
      - Debt to bonds;
      - Hybrid to the class that have features of both equity and bond.

BASIC CONCEPTS: *contd.*

- Return on Investment (ROI):
  - ROI refers to the rate earning on money invested;
  - It is calculated on annual basis;
  - ROI is expected to be greater than weighted average cost of capital(WACC) of the project;
    - WACC is estimated by taking both weights and costs of all the types of finances used for funding the firm/ project.

BASIC CONCEPTS: *contd.*

- Surplus Management:
  - Surplus is the difference between total income and total expenditure in a year;
  - It is called profit when it is positive, and, loss when negative.
  - Profit or Loss is estimated by making a Profit & Loss Statement;
    - Profit is the claim of the owners of the company;
    - Generally it is taxable;
      - However in case of a company form of business, how much is to be given back would depend on the Board of Directors.

BASIC CONCEPTS: *contd.*

- Balance Sheet:
  - Is the statement that contains all the assets and liabilities balances of the firm on a particular day;
  - However, it is used generally at the end of year;
    - It is a very important and comprehensive document of the firm;
      - Assets are income earners;
      - Liabilities are money due to outsiders;
      - Capital is the difference between assets and liabilities.

BASIC CONCEPTS: *contd.*

- Securities Market:
  - Where financial instruments are traded;
  - Two segments are there:
    - Primary
    - Secondary;
      - Primary refers to the IPO, FPO and Rights;
      - Secondary to stock exchanges;
      - Both markets are closely interrelated.

BASIC CONCEPTS: *contd.*

- Time Value of Money:
  - Money loses value over time for time risk , inflation and other factors;
  - The rate of loss in value is called the discounting factor;
    - In a project appraisal present value of future earnings is estimated by using this discounting factor;
    - WACC is the discounting factor in a project.

Traditional Financing

- Public and Multilateral;
- Private.

Traditional Financing *contd.*

- Public and Multilateral Financing:
  - Refers to financing by governments and multilateral development banks (MDB) like World Bank Group of Institutions, International Fund for Agricultural Development(IFAD), Asian Development Bank (ADB), and the like.
  - Requirement for transition is huge, in trillion of USD. So huge finance is needed.
  - MDBs provide concessional finance.
  - Cheaper finance from MDBs is very much needed to provide support system to the developing nations help them build up resilience to worsening climate impacts.
  - MDB funding is critical to catalyzing private sector climate investment in the developing nations.

Traditional Financing *contd.*

- Private Financing:
  - Method of providing private funds for major capital investments;
  - In a private finance initiative (PFI), private firms are contracted to complete and manage public projects;
  - Public-Private-Partnership is an example.
  - Private finance includes financing by high-worth individuals, private equity(PE) investors, venture capital (VC) funds and the like.
  - Because of higher growth rate in Asian countries, particularly in south-eastern part of the continent, in 2017 huge funds of USD23.5 billion, from global PE and VC firms, has flown in.
  - This is the first time the number is larger than funds thus received by Europe.
  - An appropriate strategy thus to mobilize funds is critical.

Emerging Avenues

- Crowdsourcing;
- Venture Capital;
- Peer-to-Peer;
- Initial Coin Offering.

Emerging Avenues *contd.*

- Crowdsourcing:
  - Mainly sourcing finance and ideas from a large number of internet users;
  - It is very critical component of the emerging Fintech industry;
  - Huge pool of resource mobilization possible;
  - In case of circular economy crowdsourcing platforms could be immensely useful;
  - Innovative digitization of services these platforms offer can lower transaction costs and enhance the convenience for end users;
  - Also increases access to credit and investments for underserved segments of the population and businesses;
  - Still remains a less regulated sector.

Emerging
- Crowdsource
- Venture capital
- Peer to peer
- Initial coin offering

Emerging Avenues *contd.*

- Venture Capital:
  - Basically a high-potential and high-risk sector;
  - Investors provide finance to startup companies and small businesses that are believed to have long-term growth potential;
  - Venture capital funds play a critical role to emerging innovative and emerging firms in an economy;
  - Venture capital funds generally are limited period firms, ten years on average;
  - Venture capitalists would get their reward through the exit route of IPOs.

Emerging Avenues *contd.*

- Peer-to-Peer (P2P:
  - Mainly an online lending service;
  - Also known as *Crowdlending;*
  - Lending is done with online services that match lenders with borrowers;
  - P2P lending firm is the intermediary and hence charges a fee for matching;
  - Cost of transaction and interest rate is lower, hence borrowing is cheaper;
  - However, there is higher risk of default too.

Emerging Avenues *contd.*

- Initial Coin Offering (IC):
  - It is a blockchain based financing technique;
  - Blockchain is a public chain of records in which each new transaction is logged.
  - All parties who have access to the blockchain will have the same copy of the record, which is updated each time a new transaction is made and collectively verified;
  - Relatively less regulated than IPO;
  - But greater transparency, immutability, consensus-building and traceability are the qualities of this route;
  - Unlike IPO, instead of stock virtual coins or tokens are issued in exchange for a cryptocurrency;
  - Ethereum is the most popular platform used to create ICO.
  - Over 80% of the ICOs are happening on Ethereum.
  - ICO is one of the less complex easier route to public funding.

Innovative Approaches

- Green Finance;
- Green Bonds;
- Microfinance;
- Public-Private-Partnership.

Innovative Approaches *contd.*

- Green Finance:
  - Also known as Socially Responsible Investment (SRI) and Impact Investment;
  - Investors prefer to invest in new technologies that are less carbon emitters and sustainable development oriented;
  - The investing entities even profit on investments too;
  - They leverage on the emerging trend of world business toward green centricity;
  - Green finance has played a crucial role in renewable energy financing globally.

Innovative Approaches *contd.*

- Green Bonds:
  - Are debt instruments;
  - Are issued to use the proceeds for green projects;
  - Bonds are issued to finance and refinance green projects;
  - Ring-fenced for the particular purpose only;
  - Have some additional costs for tracking and monitoring;
  - However following benefits are also there:
    - Green assets are highlighted;
    - Market becomes positive;
    - Lending market gets expanded;
    - Lender-borrower beneficial relationship grows up.

<u>Innovative Approaches *contd.*</u>

- Microfinance:
  - Also known as microcredit;
  - Evolved as an alternative to traditional banking;
  - Microcredit helps those who do not have access to traditional banking sector or traditional investment markets;
  - Is a financial service that offers loans, savings and insurance to entrepreneurs and small business owners.
  - The goal of microfinancing is to provide individuals with money to invest in themselves or their business;
  - So, small but potentially innovative projects can fetch finance from microfinance firms;
  - Cost of finance tends to be higher;
  - However essential access to liquidity would be very helpful.

<u>Innovative Approaches *contd.*</u>

- Public-Private-Partnership(PPP, 3P, P3):
  - This is a cooperative arrangement to leverage on a partnership between government and private sectors.
  - Both the sectors join hands to ensure the best in building up strategic public assets and infrastructure;
  - Mostly it is a quite long-term agreement;
  - Appropriate PPP project risks allocation enables to reduce the risk management expenditures;
  - In case of transition to circular economy, this kind of cooperative exercise can play a key role.

THANK YOU!