# Art'o'val Advisors

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## Valuation Series
## 2 – Valuation of Financial Services Firms

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# Financial Service Firms

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## What are financial service firms ?

- The financial service sector provides financial services to people and corporates.
- Financial service firms include banks, investment houses, lenders, finance companies, and insurance companies.
- Broadly a financial services company seeks to foster economic growth by bringing together those who can supply money through saving accounts, and those who need capital through loans.
- However, the financial industry has developed into a sophisticated pool of products.
- Therefore, nowadays financial services companies are offering more than intermediary services.

## Types of financial service firms

### Based on the Kind of Activity

**Banks**

**Insurance Companies**

**Securities Brokerage**

**Mutual Funds**

**Assets Finance Company**

**Investment Company**

**Non-Banking Financial Company**

# Peculiarities of Valuation of Financial Services Firms

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**1 Regulatory Framework**

- Financial service firms are required to maintain regulatory capital ratios
- Mergers between existing firms are controlled by the regulatory authorities
- These firms are often constrained in terms of where they can invest their funds
- From a valuation perspective, assumptions about growth are linked to assumptions about reinvestment, however, for financial service firms these assumptions are scrutinized to ensure that they pass regulatory constraints

**2 Capital Structure**

- Financial service firms treat debt as raw materials rather than treating as a source of capital
- The definition of debt in a financial service firm is ambiguous. For instance, deposits made by customers into their checking account at a bank be treated as debt by that bank?
- If debt can define as a source of capital and measure precisely, there is a final dimension on which financial service firms differ from other firms. They tend to use more debt in funding their businesses and thus have higher financial leverage than most other firms

**3 Defining Debt**

- If short-term and long-term borrowings are treated as debt then, the debt ratio for banks will be stratospheric.
- If we combine such high debt ratios with low cost of debt, that results in a small (4%) or lower cost of capital for banks.
- Thus, we can decide to include only long-term debt in the cost of capital computation and end up with more realistic numbers, but there is no logical rationale for the choice.

# Widely Used Valuation Methods (1/2)

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## Relative Valuation Method

- There are various multiples used to value firms, however EV/EBITDA or EV/EBIT would be difficult to compute for financial service firms. Therefore ideal multiple to value such firms would be equity multiples.
- The three most widely used equity multiples are price earnings ratio, price to book value ratio and price to sales ratios. Since sales or revenues are not really measurable for financial service firms, price to sales ratio cannot be estimated or used for these firms

### Price to Book Value Ratio

$$\frac{\textit{Price Per Share}}{\textit{BV of Equity Per Share}}$$

- Higher price to book value ratio is a function of four variables:
  - Higher growth rate in earnings
  - Higher pay-out ratio
  - Lower cost of equity
  - Higher return on equity
- The strength of the relationship between price to book ratios and returns on equity should be stronger for financial service firms than for other firms, because the book value of equity is much more likely to track the market value of equity invested in existing assets
- Similarly, the return on equity is less likely to be affected by accounting decisions

### Price Earning Ratio

$$\frac{\textit{Price Per Share}}{\textit{Earnings Per Share}}$$

- Price earnings ratio is a function of three variables:
  - Expected growth rate in earnings
  - Pay-out ratio
  - Cost of equity
- As with other firms, the price earnings ratio should be higher for financial service firms with higher expected growth rates in earnings, higher pay-out ratios and lower costs of equity
- An issue that is specific to financial service firms is the use of provisions for expected expenses
- For instance, banks routinely set aside provisions for bad loans. These provisions reduce the reported income and affect the reported price earnings ratio

# Widely Used Valuation Methods (2/2)

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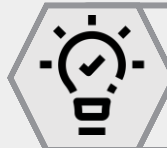
## Assets Based Valuation Method

In asset-based valuation, we value the existing assets of a financial service firm, net out debt and other outstanding claims and report the difference as the value of equity

With a Financial services firm, this would require valuing the loan portfolio of the bank which would comprise its assets and subtracting outstanding debt to estimate the value of equity

How would you value the loan portfolio of a bank?


One approach would be to estimate the price at which the loan portfolio can be sold to another financial service firm, but the better approach is to value it based upon the expected cash flows, but the better approach is to value it based upon the expected cash flows

**Following are the constrains in valuing loan portfolio**

It does not assign any value to expected future growth and the excess returns that flow from that growth.

It is difficult to apply when a financial service firm enters multiple businesses

# Challenges in Adopting DCF Method

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## Estimating Equity Value of Financial Service Firm

- Estimating cash flows prior to debt payments at a weighted average cost of capital is problematic, when debt and debt payments cannot be easily identified
- Equity can be valued directly, however, by discounting cashflows to equity at the cost of equity
- To value the equity in a firm, we normally estimate the free cashflow to equity

***Free Cashflow to Equity*** = ***Net Income*** − ***Net Capex*** − ***Changes in Non-Cash Working Capital*** − ***(Debt Repaid − Net Debt Issued)***

**If we cannot estimate net capital expenditures or non-cash working capital, we clearly cannot estimate the free cashflow to equity. Since this is the case with financial service firms, we have three choices:**

| | |
|---|---|
| **Dividends** | • To use dividends as cash flows to equity and assume that firms over-time pay out their free cash flows to equity as dividends<br>• Since dividends are observable, we therefore do not have to confront the question of how much firms reinvest |
| **Excess Returns** | • To keep the focus on excess returns, rather than on earnings, dividends and growth rates, and to value these excess returns |
| **Free Cashflow to Equity** | • To adapt the free cashflow to equity measure to allow for the types of reinvestment that financial service firms make |

# Challenges in Adopting DCF Method (cont'd)

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**Due to following aspects analysts are not adopting DCF for valuing financial service firms**

### Earnings as Cash Flows

- Analysts valuing banks by discounting their earnings back to the present argues that banks have little or no net capex and working capital needs
- The problem, is that the analysts couple the discounting of earnings with a positive or even high expected growth rate in these earnings which is clearly not feasible in the long term
- That is why reinvestment has to include investments in regulatory capital, acquisitions and other such investments that banks need to make to continue to grow

### Pseudo Cash Flow

- If analysts uses conventional definition of cash flow, they generate measures of cash flows that are even more skewed than earnings
- The net capital expenditures at a financial service firm, at least as defined by conventional accounting statements, will be a very small or negative number
- However, defining working capital as the difference between non-cash current assets and non-debt current liabilities is difficult considering banks treat cash as inventory

# Challenges in Adopting DCF Method (cont'd)

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**If we define reinvestment as necessary for future growth, measuring reinvestment with financial service firm would be difficult. Reinvestment for Financial Service Firms includes following items:**

**Net Capital Expenditures**

- Unlike manufacturing firms that invest in plant, equipment and other fixed assets, financial service firms invest primarily in intangible assets such as brand name and human capital
- Consequently, financial service firms investments for future growth often are categorized as operating expenses in accounting statements

**Working Capital**

- If we define working capital as the difference between current assets and current liabilities, a large proportion of a bank's balance sheet would fall into one or the other of these categories
- We cannot estimate cash flows without estimating reinvestment
- Further, estimating expected future growth becomes more difficult, if the reinvestment rate cannot be measured

# Overcoming Challenges while Adopting DCF Method

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**In order to solve reinvestment valuing problem, the investment in regulatory capital; this is the capital as defined by the regulatory authorities, which, in turn, determines the limits on future growth**

**FCFE Financial Service Firm** = **Net Income** − **Reinvestment in Regulatory Capital**

**To estimating the reinvestment in regulatory capital, we have to define two parameters:**

**Book equity capital ratio**

- The book equity capital ratio that will determine the investment; this will be heavily influenced by regulatory requirements but will also reflect the choices made by a bank
- Conservative banks may choose to maintain a higher capital ratio than required by regulatory authorities whereas aggressive banks may push towards the regulatory constraints

**Profitability of the activity**

- The profitability of the activity is defined in terms of net income. We have to specify how much net income the bank will generate with the additional loans

# Conclusion

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**The basic principles of valuation apply just as much for financial service firms as they do for other firms. Following are the aspects related to value financial service firm:**

| | |
|---|---|
| **Defining and Measuring Debt is Difficult** | For a financial service firm, debt is difficult to define and measure, making it difficult to estimate firm value or costs of capital |
| **Equity Valuation** | It is easier to value the equity directly in a financial service firm, by discounting cash flows to equity at the cost of equity |
| **Capex and Working Capital** | Capex and Working capital are the inputs required to estimate cashflow, which is often not easily identified at financial service firms |
| **Operating Expenses** | The reinvestment that occurs at such firms are categorised as operating expenses. Therefore, to estimate cashflow either use dividend (and assume amount not paid as dividend is the reinvestment) or modify reinvestment definition |
| **Equity Multiples are Ideal for Valuing such Firms** | Difficulties associated with defining debt make equity multiples such as price earnings or price to book value ratios better suited for comparing financial service firms than value multiples. In making these comparisons, we have to control for differences in fundamentals – risk, growth, cash flows, loan quality – that affect value |
| **Regulatory Considerations and Constraints** | Regulatory authorities significantly impact financial service firms returns and valuation |

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## Thank You


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