FAIR RETURN STANDARD and the "MARKET:BOOK" Controversy

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Outline

- Why is there a problem?
- The Opposing Positions
- Is there a role for Market:Book?

The Problem Illustrated

- Idealized basic conditions:
  - Utility all equity-financed
  - Traded shares
  - “Steady state”, no-growth
    - Depreciation allowances sufficient to maintain book value of rate base at original cost
    - All earnings distributed as dividends

Book value rate base (assets) = $100/share
Current earnings (EPS)= $16/share
Current share price (P_0) = $200

Investors' required rate of return (R)

= EPS/P_0 = div/P_0

= $16/$200

= 0.08 or 8%

Approved EPS for next period

= Rate base x R

= $100 x 0.08 = $8/share

Revised share price ($P_{0'}$) = approved EPS/R

= $8/0.08 = $100

Consequences

Market: Book Ratio:

Initial = $200/$100 = 2

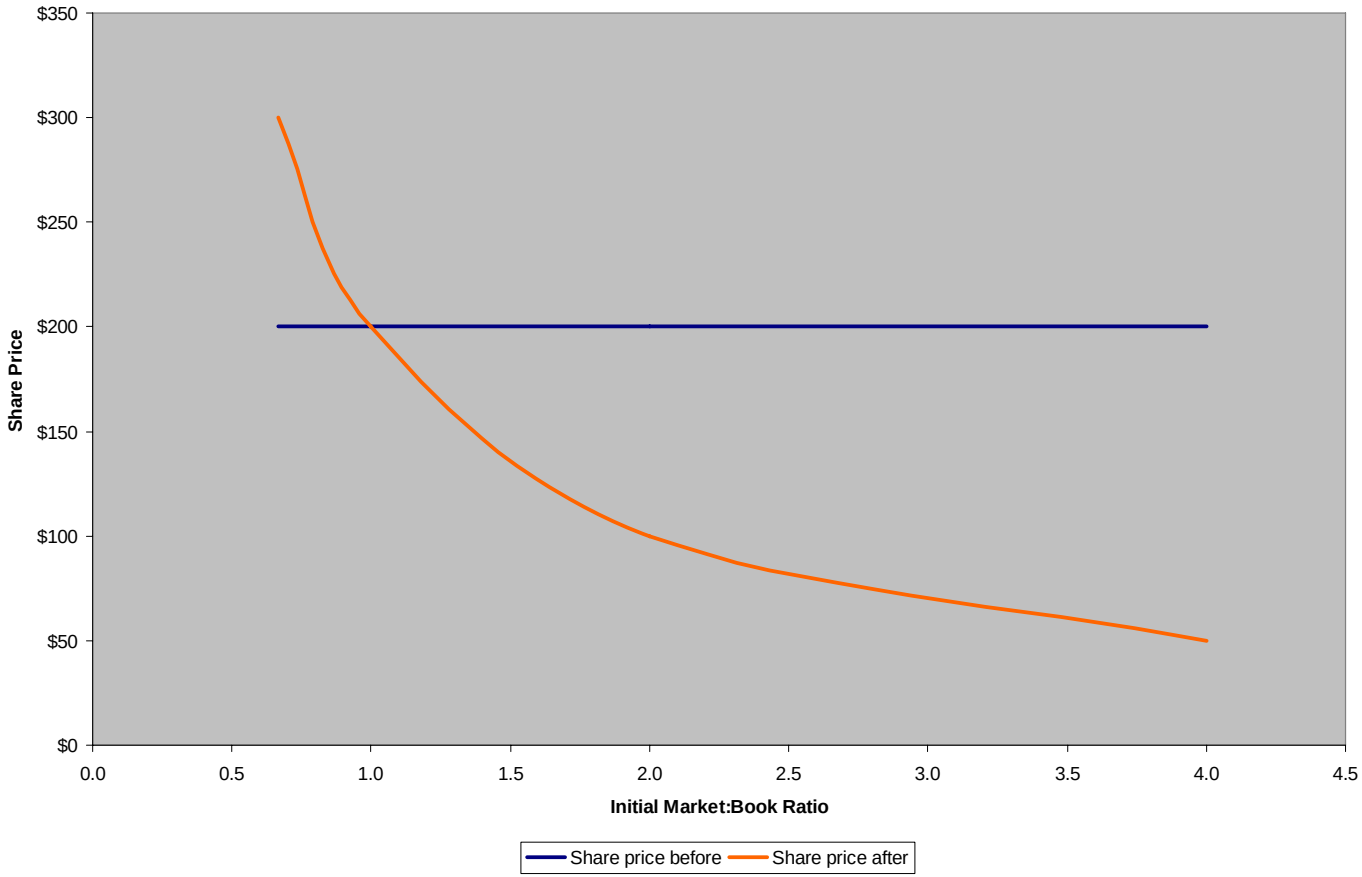
Post-decision = $100/$100 = 1

Applying market-based ROE to book value rate base when initial M:B > 1 (or < 1):

1. Reduces (increases) earnings
2. Reduces (increases) share price
3. Drives market value down (up) to book value if investors view regulator's decision as permanent

Utility's market value equals book value when regulator allows ROE equal to investors' required return

Share Price and Market:Book Ratio



Problems for FRS

Is it fair to investors that the regulator's decision reduces the value of their shares?

Is it the regulator's job to ensure that investors do not incur capital losses? (or capital gains when share price < book value?)

Can utility attract new equity if investors believe the regulator will reduce allowed earnings when market value rises above the book value of their investment?

"Section 12.5 critically evaluates the role of M/B ratios in regulation and concludes that *regulators should largely remain unconcerned with such ratios* because they are determined by exogenous market forces and are outside the direct control of regulators. M/B ratios are largely the end result of the regulatory process itself rather than its starting point."

R. Morin, New Regulatory Finance, Public Utilities Reports, Inc. 2006 p. 359.

Finance Theory Perspective

Valuation of new issue of perpetual preferred shares of unregulated industrial issuer:

- Face value = $25/share
- Investors' required annual rate of return (R_p) of 8%, the "going rate" on sample of similar preferreds
- If issuer sets $2.00 annual coupon, market will capitalize expected dividend stream at $2/0.08 = $25 and issuer will receive proceeds equal to face value

Principle for Capital Attraction Preferred Share

- Coupon rate = \$2.50/\$25 = 10% > R_p
  - Preferred share market value \$31.25> face value
  - Issuer receives \$25
  - Issue “oversold”: immediate capital gain
- Coupon rate = \$1.50/\$25 = 6% < R_p
  - Preferred share market value \$18.75< face value
  - Issuer gets nothing

General rule: set coupon rate = R_p

$\Rightarrow$Preferred share market value = face value

Principle for Capital Attraction Regulated Utility

Set allowed ROE = R of equity investors

$\Rightarrow$ Equity market/book = 1.0

Suppose utility earnings greater than allowed ROE

$\Rightarrow$ stockholders receive more than R

$\Rightarrow$ Equity market/book > 1.0 in secondary market

$$\frac{M}{B} = \frac{AllowedEPS \big/ R}{B} = k$$

$$\therefore AllowedEPS = k(R \times B)$$

Factors in High M:B ratios

- Transitory earnings changes have insignificant effect on M:B ratio
- “Permanent” earnings changes will be capitalized and could lead to high ratios
  - e.g. allowed returns greater than R

Concerns

- Must measure the rate base accurately
  - ❑ Holding company
  - ❑ Impact of accounting rules on rate base
  - ❑ Jurisdictional differences in rate base accounting
- Industrials M:B ratio not comparable to utility M:B ratio
  - ❑ e.g.TSE Index ratio = 1.6 - 2.1
- Inflation (?)
  - R is nominal return
  - includes expected inflation
  - Compensate investors for higher-than-expected experienced inflation AND penalize for lower
- What about innovation & increased efficiency?

Conclusions

1. Market:Book ratio of 1:1 deserves attention
2. Promotes “capital attraction” and “commensurate earnings” standards
3. Gives investors required return
4. Allow small premium e.g. 1.05 - 1.1