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April 19, 2012

Mr. Mike Isbell
Administrator
Public Service Section Oklahoma Tax Commission
P. O. Box 269060
Oklahoma City, OK 73126-9060

RE: Comments Concerning the Draft Capitalization Rate Study April 2012

Dear Mr. Isbell:

Thank you for the opportunity to provide input related to the 2012 Draft Study. I now have two documents prepared by Dr Heaton that discuss current issues with regard to estimating the cost of capital for the Incumbent Local Exchange Carriers (ILECs). Unfortunately these documents were not available at the time of the Capitalization Rate Hearing last month. The first document is provided as and additional attachment is his 2012 PowerPoint presentation that discusses the relevant issues that should be recognized in estimating the cost of capital for Southwestern Bell Telephone (SWBT). The second document, which will be provided under separate cover, is his cost of capital study for SWBT. His determination of the cost of capital for a mid-cap ILEC company such as Southwestern Bell Telephone Company was 13.2%.

As I reviewed the Ad Valorem Division's 2012 study with regard to the Telecommunications Industry I noted that it was essentially consistent with the methodology that was used in 2011. That being the case I reviewed the comments submitted last year and found them to be applicable to this year's study as well.

It is still problematic to me that the 2012 cost of capital is lower than the Ad Valorem Division's estimate of the cost of capital prior to the financial crisis in 2008. The financial markets, although slowly moving in a positive direction, still have not recovered, and capital is still difficult to obtain for all but the most credit worthy companies. Moreover, the traditional wire line telephone companies are far from the most credit worthy. The incumbent local exchange carriers and long distance carriers such as Southwestern Bell Telephone and AT&T Communications are companies that have lost a substantial portion of their customer base and are facing aggressive competitors on virtually all aspects of there business. They should not be confused with

their much larger and more diversified parent holding companies. Likewise the wireless segment of the industry is among the most intensely competitive industries in the country with an ever increasing needs for massive capital outlays to remain in business. All of these factors add it risk and must be reflected in the cost of capital estimate.

I call your attention to Dr. Heaton's discussion of Beta in the attached PowerPoint presentation. This is an issue that has not been previously addressed, but is one that without some modification to the Betas creates a situation wherein the Capital Asset Pricing Model does not provide meaningful results. He explains why the telecommunications Betas are biased and must be adjusted to have a meaningful estimate of the cost of capital through use of the CAPM.

The capital structure issue is still very relevant in that the Divisions proportion of debt still reflects significantly more debt than was found to be appropriate in the Division's 2008 Capitalization Rate Study which was prior to the financial crisis. The debt components in the 2012 study are 27.73% for Telecommunications Services as compared to 18.82% in 2008. Again, debt was more generally more difficult to obtain in January 2012, and this was particularly true of the wire line telephone companies.

In addition, the issue of the size premium should be recognized in the estimates of the cost of equity. There is wide agreement among virtually all experts in the area of finance that there is a relationship with the cost of capital and size. Some suggest that the size premium is related to liquidity. In any case, this issue is widely acknowledged among valuation practitioners. SWBT would fit the size criteria of a mid-size company. As such, the estimated cost of equity should be adjusted based on size. Moreover, this would in part recognize the liquidity issue that has been raised by Dr. Heaton the last several years (See the Heaton discussion of illiquidity in the attached presentation). The criteria with which to make the appropriate size adjustments can be found in the Morningstar Valuation Yearbook, which is indicated as a source of information that is used within the study.

I still find that it troubling that that Oklahoma has not adequately addressed the floatation cost issue. To simply dismiss the issue with a statement in the Executive Summary of the study indicating "companies do not typically issue new common equity as a matter of common practice" is simply inadequate. Moreover, I have provided specific examples that in the case of the major AT&T acquisitions new securities were issued in each instance. It is not practical to deduct the floatation expenses from the income stream because in the telecommunications industry such costs are typically incurred at the holding company level for the benefit of all of the divisions. Therefore, we simply do not see the expenses show up on the individual entities, but they absolutely occur in most significant acquisitions. Accordingly, the only practical way to address the issue is through an adjustment to the debt and equity components of the capitalization rates. See additional comments on floatation in Attachment 2.

Finally, if you simply look across the various industries for which you have estimated the cost of capital, the conclusions as to the cost of capital reflected in the Ad Valorem Division's study suggest that the wire line telecommunications industry segments are among the less risky, which suggests the predictability of future cash flows is far more certain than that of the Railroad Industry, Fluid Pipelines, Gas Transmission, and Pipeline MLPs. That is simply not the case. How many of those industries are impacted by intense competition to the degree that wire line telecommunications is from technology substitution, the cable TV industry, Google, Skype, Vonage, and many others. The local exchange segment is bleeding access lines at an unprecedented rate of more than 12% annually and cumulatively they have lost more than 50% since the year 2000. The long distance segment is so competitive that it loses hundreds of millions of dollars annually with little hope of recovery in the near term if at all. The cost of capital is a measure of risk, and at this time the wire line telecommunications industry is far more like the airlines than it is the electric companies or the water companies.

Again, I appreciate the opportunity to provide input.

Best regards,

Attachments

Additional Comments on Floatation Costs

Floatation costs, and/or deal costs are a part of every transaction. There are always financing costs associated with issuing debt and equity that a purchaser/owner recognizes in measuring his required return. This premise is widely accepted by experts as well as financial reference sources such as text books and other treatises on the cost of capital (See Tegarden whitepaper attached for a number of references). Moreover, given the holding company corporate structure of the major telecommunications companies the only practical way to recognize the issuance cost associated with securities is in the cost of capital.

The comment in the Draft's Executive Summary concerning floatation cost is as follows: "Financial theory suggests and evidence supports that firms do not typically issue new common equity as a matter of common practice. Therefore in determining a capitalization rate, no adjustment will be made in the capitalization rate or the income stream for hypothetical floatation cost. Floatation costs actually incurred may be accounted for in the income stream." Unless a much larger company is purchasing a smaller company new equity is typically issued in the case of the telecommunications industry. For example, when SBC acquired AT&T Corp it issued 632M new shares of stock. In addition, when AT&T purchased Bell South it issued 2.4B shares of stock. New shares were issued in conjunction with both of these deals and others in the industry. The matter is most recently discussed in the 2008 AT&T Annual Report on Page 41 in the explanation of the year over year increase in dividends. There are also more complete discussions in the 2005 and 2006 AT&T Annual Reports.

However, whether new debt and equity is issued in conjunction with a purchase is not necessarily the critical issue. The point is that even in a steady state utilities issue new securities and pay various issuing costs on an ongoing basis that must be recognized. As Dr. Roger Morin points out in his book *Utilities Cost of Capital*, PP 102-112. "A typical utility is continuously issuing stock through its dividend reinvestment plan and employee stock option plan, or sells new shares to the public on a regular basis in order to maintain its construction program and meet its mandated service requirements. The costs of issuing securities are just as real as operating and maintenance expenses or the cost to build utility plants, and fair regulatory treatment must permit the recovery of these costs."…… "If investors were to expect continuing confiscation of their equity investment with each new stock issue, the utility's cost of capital would reach unacceptably high levels"

The problem of course is that such costs are not reflected in the expenses on a company's income statement. They are simply deducted from the proceeds provided by the securities. Moreover, in the case of the telecommunications industry the debt and equity are routinely issued by the parent holding company. Accordingly, it is not clear exactly what businesses are being financed by a specific securities issuance. Therefore, the preferable way to address the problem is to include the cost of issuing the securities in the cost of capital calculation as do most of the recognized experts in the field.

Tom Tegarden's discussion of floatation is included as another attachment. It reflects a very thorough analysis of the floatation adjustment issue with a number of authoritative references. A

similar paper was published in the *Journal of Property Tax Assessment and Administration, Volume 5, Issue 1* 2008.*

I urge you to strongly consider adjusting the 2010 Oklahoma Capitalization Rate for floatation costs. The matter has been thoroughly vetted and there is agreement among the foremost experts in finance that it is a necessary adjustment. Moreover, this would be at least a nominal step to take in recognizing the liquidity issue that has become an important consideration in today's marketplace.

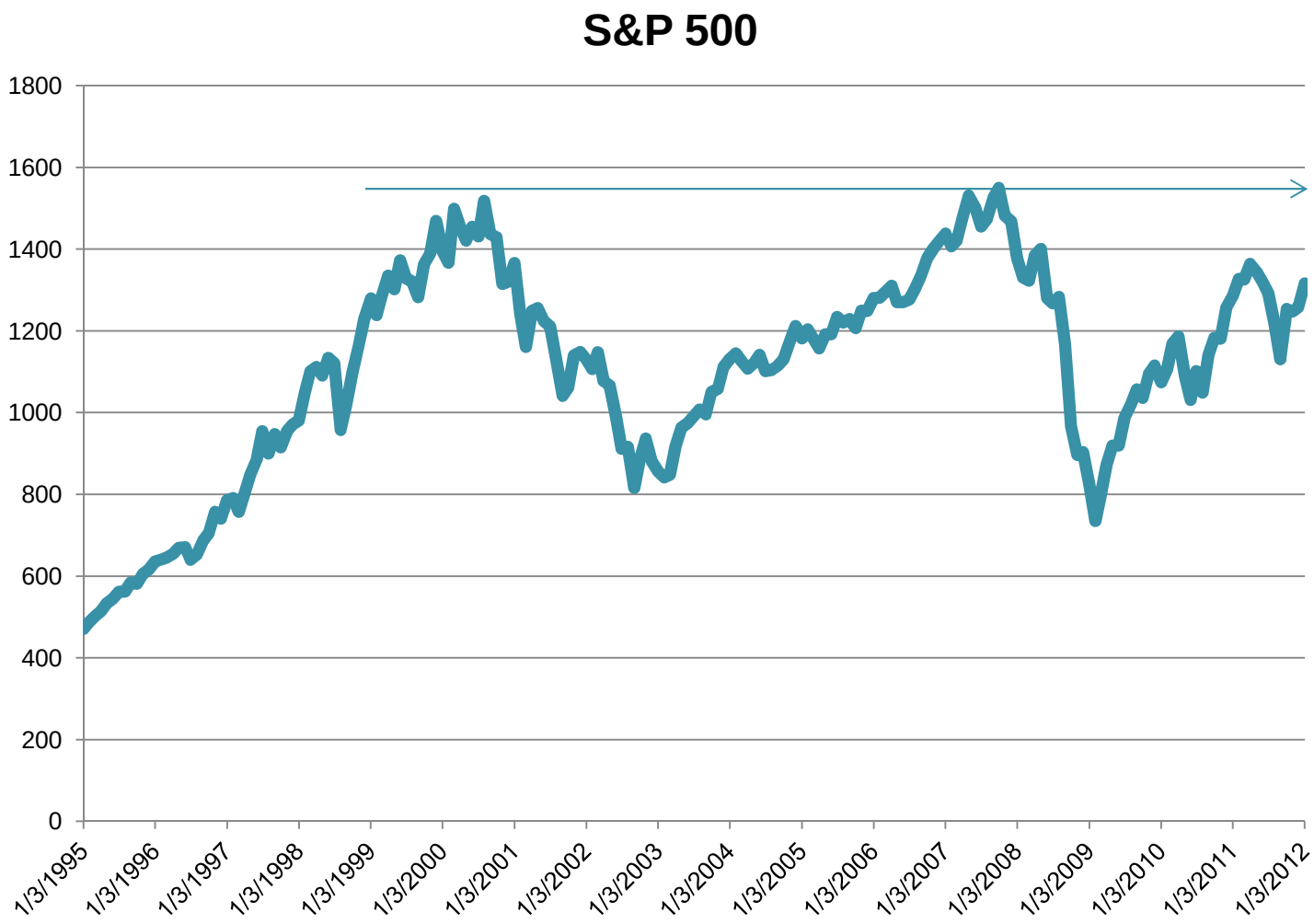
SWBT Cost of Capital Issues: January 1, 2012

Hal Heaton, PhD

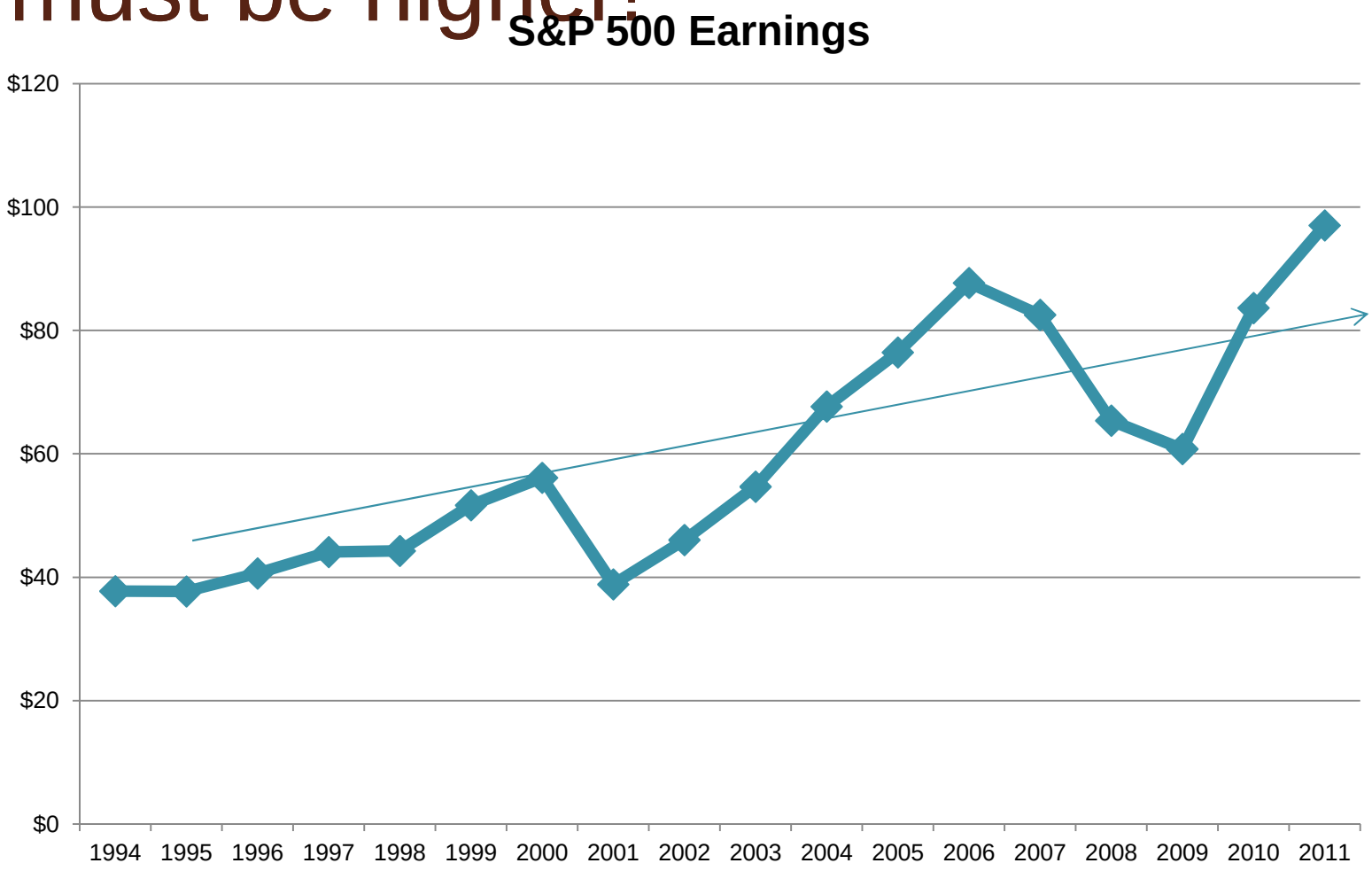
Issues in 2012

- In typical capitalization model, parameters must be long term
  - Must not reflect short term distortions
  - NOI/k requires that ***both*** NOI and k be long term
- Debt as percent of capital
  - Debt less available for landline telco with declining customer base
- Appropriate risk premiums
  - Historical average still biased low due to massive negative return in 2008
  - Market evidence suggests investors require higher risk premiums than historically
- CAPM estimates unacceptably low
- Dividend Growth Model better
- Decomposing the beta
- Liquidity is a critical issue
  - Adjustments to final value or discount rates essential
- Estimated Cost of Capital

The stock market is lower than 12 years ago…



But earnings have risen dramatically … discount rates must be higher!



Headlines are clear that obtaining credit is difficult …

- Wall Street Journal: February 24, 2010

"**Lending Falls at Epic Pace**

U.S. banks posted last year their sharpest decline in lending since 1942, suggesting that the industry's continued slide is making it harder for the economy to recover. … According to the FDIC, the number of U.S. banks at risk of failing hit a 16-year high at 702. More than 5% of all loans were at least three months past due, the highest level recorded in the 26 years the data have been collected. And the problems are expected to last through 2010. … …The struggling U.S. banking industry remains a problem for policy makers eager for banks to lend again."

Smaller, undiversified properties have greater difficulty obtaining debt

- "Company size and diversification often plays role. While we have no minimum size criterion for any given rating level, company size tends to be significantly correlated to rating levels. This is because larger companies often benefit from economies of scale and/or diversification, translating into a stronger competitive position. Small companies are, almost by definition, more concentrated in terms of product, number of customers, and geography. To the extent that markets and regional economies change, a broader scope of business affords protection."

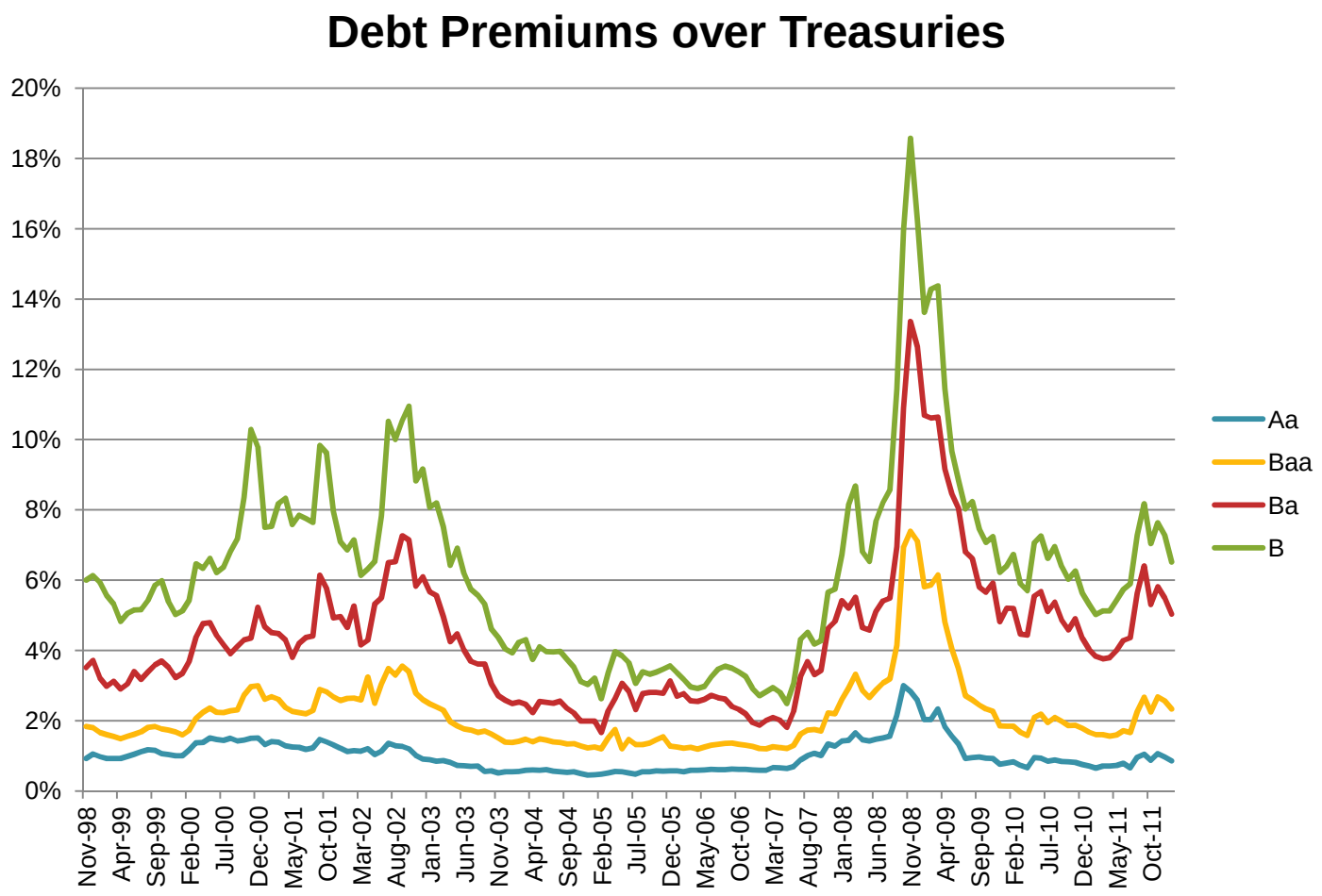
[Standard and Poor's, "Corporate Ratings Criteria" page 22.]

Ibbotson risk premium still biased by 2008 return

- Return on large stocks in 2008: -37.0%
- Return on long term Treasury bonds in 2008: +25.9%
- One year risk premium

  = Rm – Rf = 37.0% - 25.9% = -62.9%
- Historical average risk premium fell almost a full 1% as a result of one year's number

Risk spreads for debt elevated …



CAPM Data

	Share Price 12/31/2011	Shares Outstanding (millions)	Market Value of Equity ($millions)	Debt ($millions)	Percent Debt	Bloomberg Beta	Unlevered Beta*
Alaska Communications	$3.01	45.3	$136	$570	80.7%	0.74	0.21
Cincinnati Bell	$3.03	195.2	$591	$2,534	81.1%	1.13	0.31
Consolidated Communications	$19.05	29.9	$570	$885	60.8%	1.00	0.51
CenturyLink	$37.20	618.5	$23,009	$21,836	48.7%	0.78	0.49
Frontier Communications	$5.15	995.1	$5,125	$8,300	61.8%	0.98	0.49
Metro PCS	$8.68	362.5	$3,146	$4,744	60.1%	1.08	0.56
Sprint Nextel	$2.34	2996.0	$7,011	$20,274	74.3%	1.24	0.45
AT&T	$30.24	5926.5	$179,218	$64,753	26.5%	0.82	0.67
Verizon Communications	$40.12	2835.5	$113,761	$55,152	32.7%	0.79	0.61
Windstream	$11.74	586.3	$6,883	$9,150	57.1%	0.90	0.50

CAPM Estimate

- ***Required Return*** $= R_f + \beta(R_m - R_f)$
- **Morningstar/Ibbotson**
  - **2.48% + .58 x 6.62% = 6.3%**
- **Treasury Rates absurdly low**
  - **Lower than inflation**
  - **Due to demand from foreign banks**
  - **…and foreigners terrified of European meltdown**
  - **…Foreign governments keeping currencies low for employment reasons**
- **6.3% equity rate is lower than the rate on long term AT&T debt—impossible!**
- **As shown earlier, these results not supported by the market evidence.**

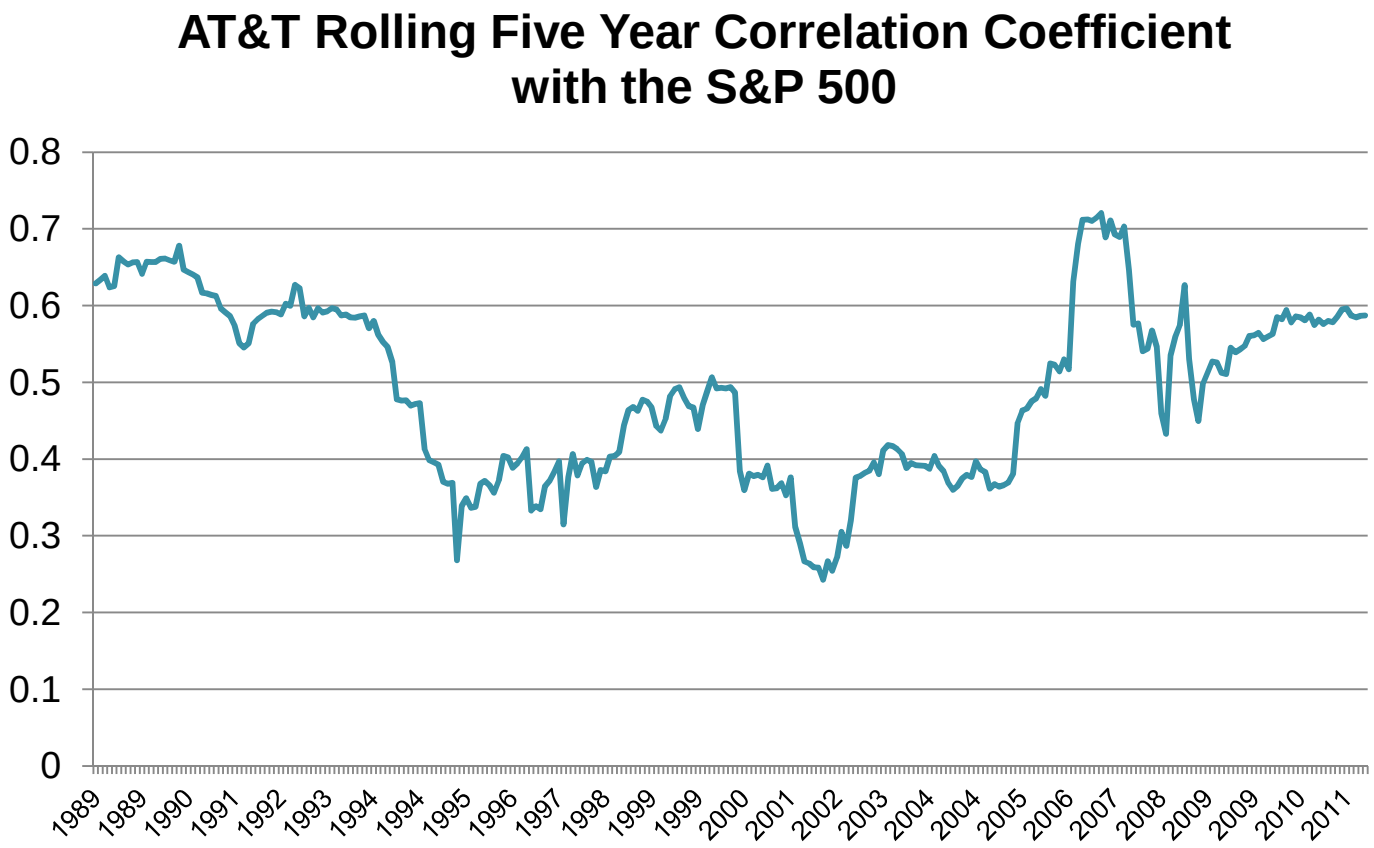
Dividend Growth Model

	Share Price 12/31/2011	Bloomberg 2012 Cash Distribution Forecast	Yield	Value Line Projected Growth	Bloomberg Projected Growth	Estimated Return
Alaska Communications	$3.01	$0.20	6.6%	NMF	9.0%	15.6%
Cincinnati Bell	$3.03	$0.00	0.0%	18.4%	3.0%	10.7%
Consolidated Communications	$19.05	$1.55	8.1%	10.8%	1.5%	14.3%
CenturyLink	$37.20	$2.90	7.8%	16.1%	-1.3%	15.2%
Frontier Communications	$5.15	$0.75	14.6%	21.4%	-5.9%	22.3%
Metro PCS	$8.68	$0.00	0.0%	15.3%	19.5%	17.4%
Sprint Nextel	$2.34	$0.00	0.0%	NMF	4.0%	4.0%
AT&T	$30.24	$1.77	5.9%	9.9%	4.9%	13.2%
Verizon Communications	$40.12	$2.05	5.1%	11.5%	8.8%	15.3%
Windstream	$11.74	$1.00	8.5%	17.8%	0.2%	17.5%
Average						14.6%

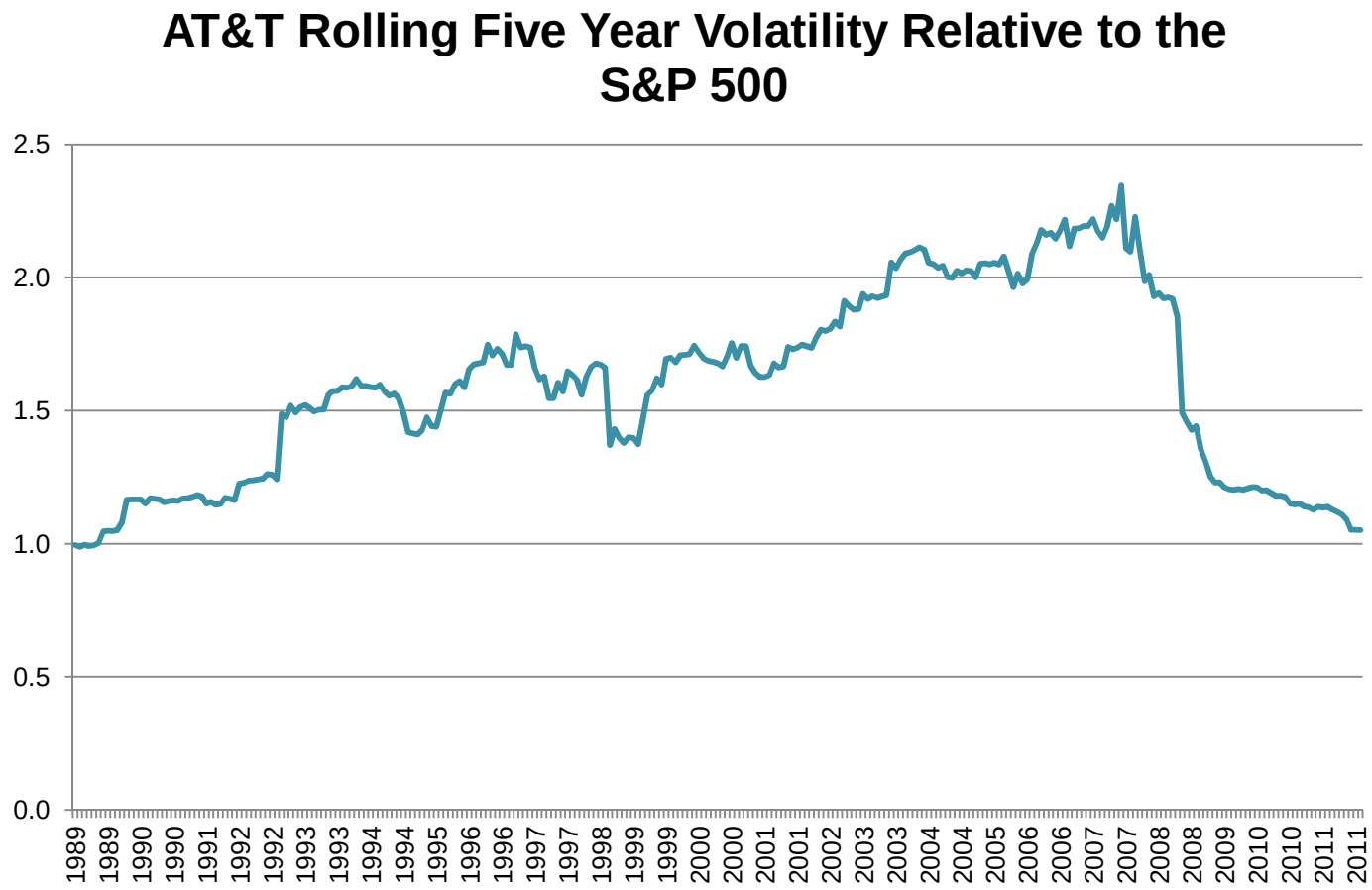
Deeper analysis of beta

- DGM model estimates better, but still not very reliable
  - Growth estimates exhibit wide range
  - Affected by extreme leverage of some telcos
- Beta estimates composed to two elements:
  - $\boldsymbol{\beta_i = \rho_{im} \times (\sigma_i/\sigma_m)}$
  - $\boldsymbol{\rho_{im}}$ ***= correlation with the market***
  - $\boldsymbol{\sigma_i/\sigma_m}$ ***= volatility relative to the market***

AT&T rolling five year correlation to the S&P 500



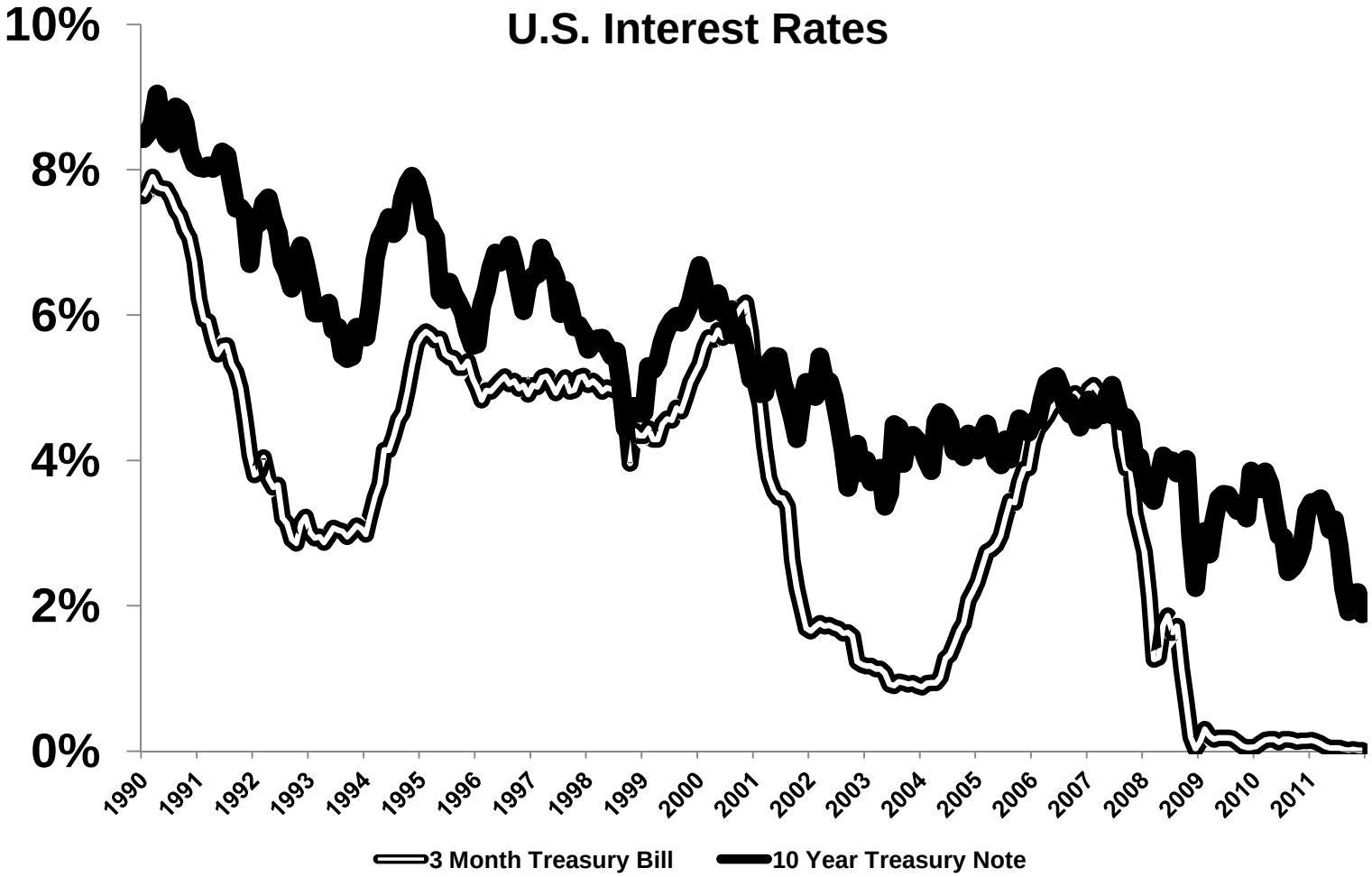
AT&T rolling five year relative volatility to the S&P 500



Discussion of beta

- Correlation fell during the merger mania of the 1990's
- …But came back to normal levels
- Relative volatility rose as competition intensified but plunged with economic meltdown in late 2008
  - Why?

Treasury Rates



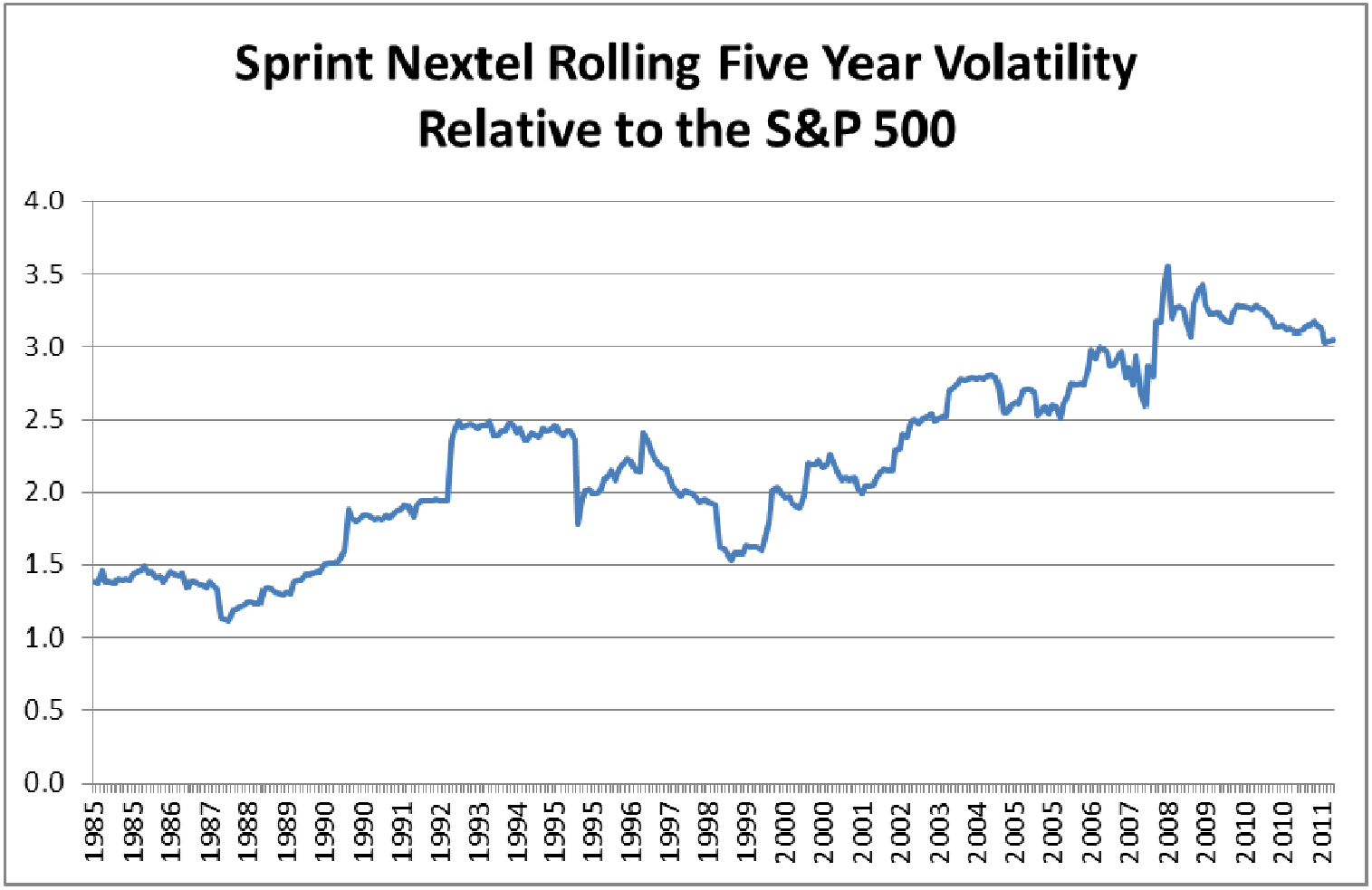
Investors buying AT&T for yield

- "With tens of millions of people -- particularly retiring baby boomers -- looking for investment income and fed up with dismally low interest rates on bank accounts and bonds, brokerages and money managers believe there's a huge and growing audience for the dividend pitch." [Los Angeles Times February 26, 2012]
- "Dividends are winning new respect now that yields on U.S. Treasuries are near record lows. …The focus on dividend-paying stocks could intensify, as investors look to Inflation protection. …AT&T, for instance, has a dividend yield of more than 6% …" [USA TODAY August 24, 2011]
- "THE first security I was ever aware of was a dividend-paying stock, the AT&T shares that my grandfather, a retired postman, owned when I was little. … So when I heard recently that some advisers were using dividend-paying stocks to coax people who still hold their money in cash or low-yielding bonds back into the equity markets, my ears perked up. …These stocks also offer at least some sort of hedge against inflation. " [The New York Times June 4, 2011]
- We need SWBT's Beta—Not AT&T's.
  - We need to adjust for long run effects for SWBT

AT&T Relative Volatility

- Investor's treating AT&T more like a bond
  - Inflation protection
  - Will end when Treasury rates rise
  - Long run, relative volatility will reflect risk of telecommunications industry
- Low relative volatility applies even less to SWBT
  - Declining demand as consumers shift to cellular
  - Other telecoms showing increasing

Other telecoms show rising relative volatility …



SWBT beta estimate

- $\beta_i = \rho_{im} \times (\sigma_i/\sigma_m)$
  - Historically telecommunications have a correlation of about .6 with the S&P 500
  - Telecoms are historically about 2 to 3 times as volatile as the (diversified) S&P 500
  - ***SWBT β = .6 x 2.5 = 1.5***
  - ***Cost of Equity (for security)***
    - ***CAPM 2.48% + 1.5 x 6.62% = 12.4%***
    - ***DGM 14%***
    - ***Choose 13%***
  - ***WACC (for securities)***
    - ***.2 x 5.43% x (1-.39) + .8 x 13% = 11.0%***

Using Securities Data

- Securities are very liquid
- Securities can be sold in small or large amounts
- Operating property requires dealing with management hassles
- Securities have absolute limited liability
- Securities represent ownership in companies than can expand, enter new businesses
- Securities capture value from assets that do not even exist on the lien date
- Securities capture all intangible values

Assessors recognize need for liquidity adjustments

- California State Board of Equalization, *Assessors' Handbook*, Section 502, Advanced Appraisal, p. 63.
  - "Most financial assets are liquid. Real estate and most business assets, however, are relatively illiquid, and real estate investors must be compensated for this reduced liquidity."
- California State Board of Equalization, *Assessors' Handbook*, Section 502, Advanced Appraisal, pp. 183-184.
  - "The argument based on lack of liquidity is a much stronger one. There is no question that financial assets are significantly more liquid than real estate assets. ... An adjustment for lack of liquidity can be made in two ways: (1) consider lack of liquidity as an added risk factor and add a premium for it to the cost of equity estimated by the CAPM; or (2) value the real estate asset using the CAPM/WACC without any liquidity adjustment, and then apply a liquidity discount to the estimated value."

Appraisal texts require adjustment:

- 13th Edition Appraisal of Real Estate
  - “If there are differences between a comparable property and the subject property that could affect the overall capitalization rate concluded, the appraiser must account for these differences.”

Size premium represents a minimum adjustment …

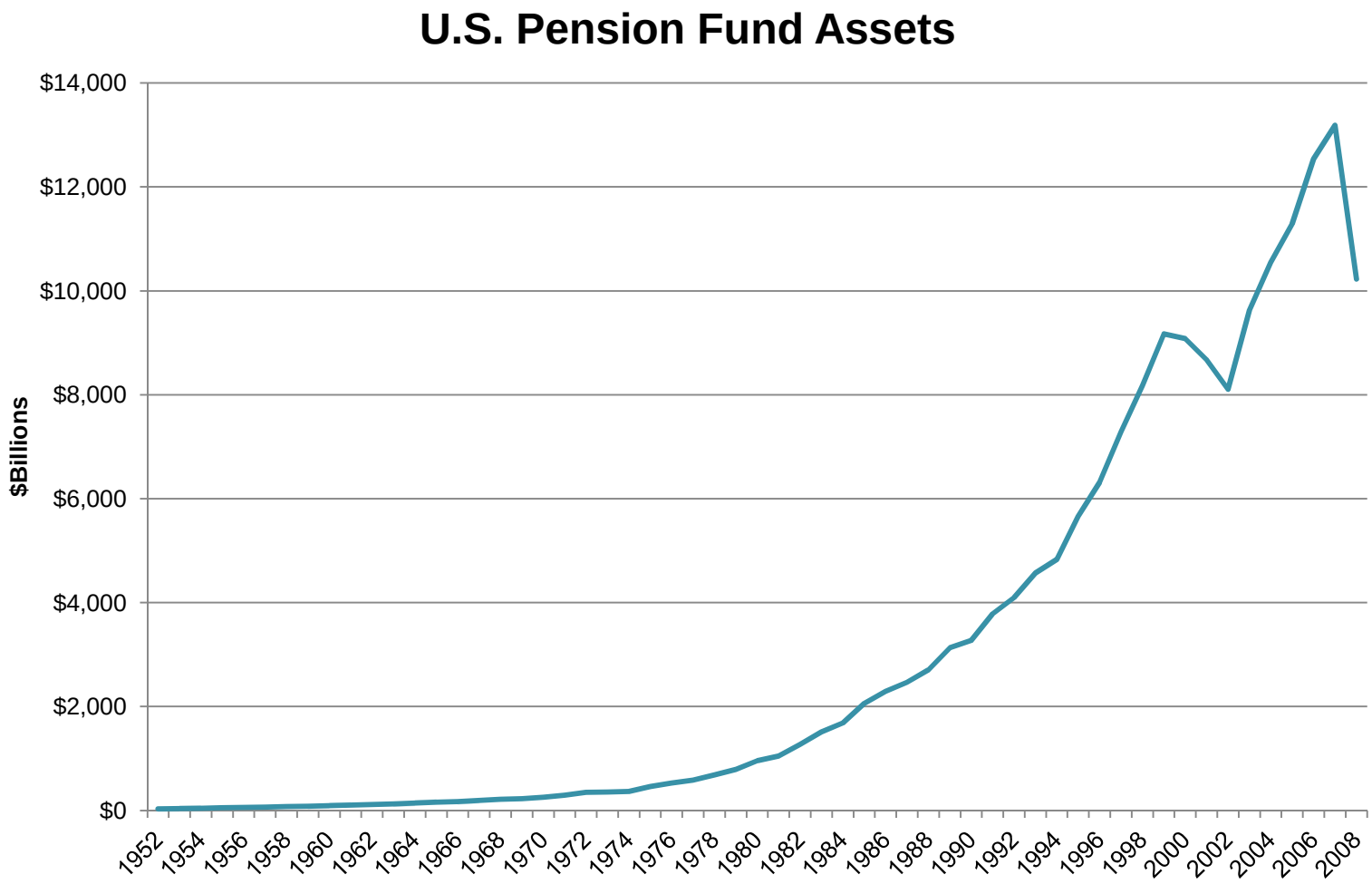
Size Premia (market capitalization in millions) [4]

Decile	Smallest Company		Largest Company	Size Premium (Return in Excess of CAPM)
Mid-Cap (3–5)	$1,621.096	–	$6,896.389	1.14%
Low-Cap (6–8)	422.999	–	1,620.860	1.88
Micro-Cap (9–10)	1.028	–	422.811	3.89

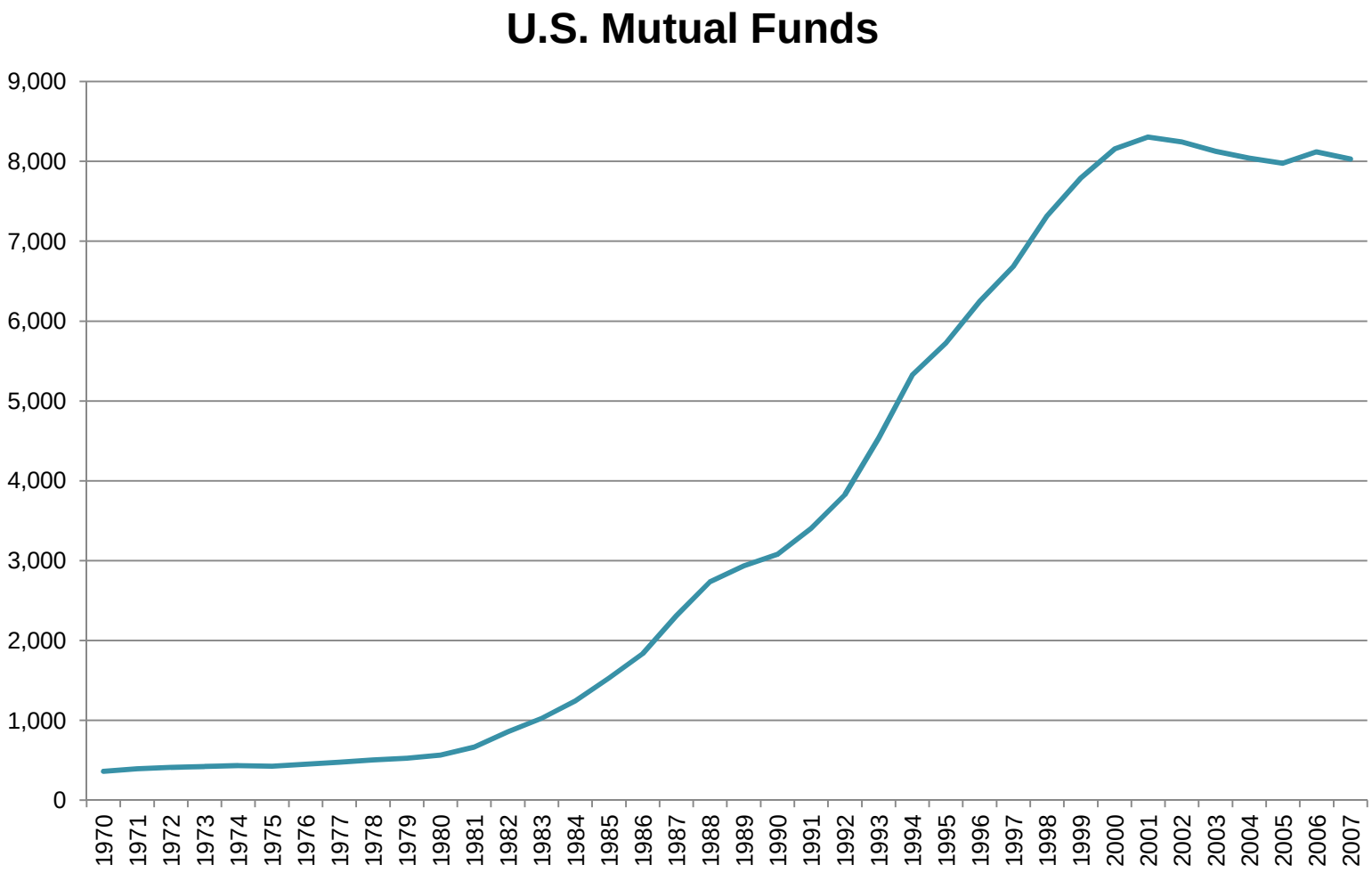
Breakdown of Deciles 1-10				
1-Largest	15,484.940	–	354,351.912	-0.38
2	6,927.557	–	15,408.314	0.78
3	3,596.535	–	6,896.389	0.94
4	2,366.464	–	3,577.774	1.17
5	1,621.096	–	2,362.532	1.74
6	1,090.652	–	1,620.860	1.75
7	683.059	–	1,090.515	1.77
8	422.999	–	682.750	2.51
9	206.802	–	422.811	2.80
10-Smallest	1.028		206.795	6.10

Datasource: Morningstar/Ibbotson Annual Yearbook 2012

Why is liquidity becoming such a critical issue now?



Why is liquidity becoming such a critical issue now?



Damadoran Liquidity Adjustment

- Capital Asset Pricing Model (CAPM)
  - Required return

    = Risk Free Rate + Beta x Market Risk Premiur
- Beta = $\beta_i = \rho_{i,m} \times (\sigma_i / \sigma_m)$
- Adjusted Beta = $\beta_i / \rho_{i,m}$
- Adjustment =
  - (Adjusted Beta – Beta) x Market Risk Premium

Damodaran liquidity adjustment

	Bloomberg Beta	R-squared	Damodaran Adjusted Beta	Difference in Equity Return	Percent Debt	Difference in WACC
Alaska Communications	0.74	0.114	1.20	3.03%	80.7%	0.58%
Cincinnati Bell	1.13	0.381	1.82	4.60%	81.0%	0.87%
Consolidated Communications	1.00	0.383	1.61	4.06%	60.8%	1.59%
CenturyLink	0.78	0.284	1.45	4.50%	49.1%	2.29%
Frontier Communications	0.98	0.443	1.47	3.25%	61.5%	1.25%
Metro PCS	1.08	0.222	2.30	8.04%	60.1%	3.20%
Sprint Nextel	1.24	0.220	2.64	9.28%	72.6%	2.55%
AT&T	0.82	0.482	1.18	2.39%	28.4%	1.71%
Verizon Communications	0.79	0.462	1.16	2.46%	32.7%	1.65%
Windstream	0.90	0.490	1.29	2.56%	51.7%	1.24%
Average	0.94		1.61	4.47%		1.69%

Discount rate for SWBT

- ***Select 1% Liquidity Premium***
  - ***.94% Size premium***
  - ***1.69% Damodaran adjustment***
- ***After- Tax Cost of Capital***
  - ***Assumes no adjustment for tax deductibility of interest in cash flows***
  - $w_d k_d(1-T) + w_e k_e$
  - $= [.20 \times 5.43\% \times (1-.39)] + [.80 \times 13\%] + 1\%$
  - $= 12.0\%$
- ***Regulatory Model***
  - ***Assumes tax deductibility of interest reflected in cash flows***
  - $w_d k_d + w_e k_e$
  - $= .20 \times 5.43\% + .80 \times 13\% + 1\%$
  - $= 12.5\%$

Summary

- Prevailing debt/equity ratios in early 2012 biased high
  - Must tie debt capacity to subject property
  - Comparable companies are large, diversified corporations
- CAPM approach does not produce credible results
  - Must adjust beta for unusual economic circumstances
  - Long run cash flows require long run risk measure
- CAPM approach still low even after adjustment
  - Treasury rate not realistic
  - Equity risk premium still biased low
- DGM expected growth estimates very wide
- Must adjust for differences between securities and illiquid property
  - Illiquidity/Size adjustment
  - Damodaran approach