NCCI Holdings, Inc.

Gauging the Economy

December 2007

Gauging Current Conditions:
The Economic Outlook and Its Impact on Workers Compensation

The gauges below indicate the economic outlook for the current year and for 2008 for factors that typically impact workers compensation. Each gauge also provides some context for the outlook, relative to a historical average of the previous five years.

Slowing Job Growth May Foster Continued Frequency Declines

Job growth is expected to slow in 2008, as the combination of weakness in housing, the recent turmoil in financial markets, and high oil prices undercut growth in both consumer spending and business investment. Slower job growth suggests less upward pressure on claim frequency since fewer inexperienced/less trained workers are added to payrolls. The actual direction of claim frequency will depend on the balance between such employment-related effects and a wide range of other forces that have contributed to the ongoing decline in frequency since the early 1990s.

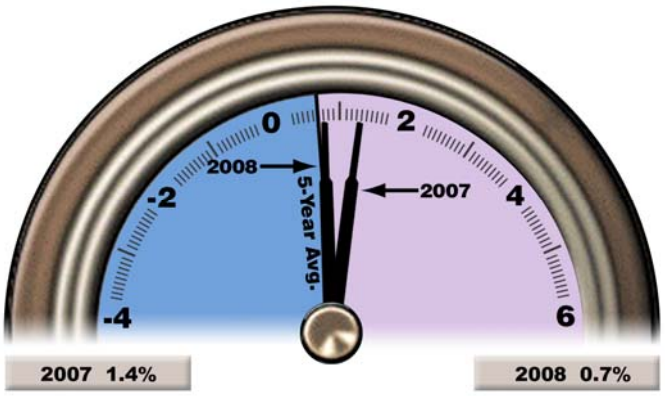


Exhibit 1—Private Sector Employment Growth Slowing

Continued Wage Gains Suggest Further Increases in Indemnity Severity

Wage gains are expected to moderate in 2008, reflecting the expected slowing in both job growth and the overall economy (reflected in a rise in the unemployment rate to 5.0% in 2008, up from an average of 4.6% in 2006 and 2007). The rise in wages suggests further increases in indemnity severity since indemnity benefits are linked to wages.

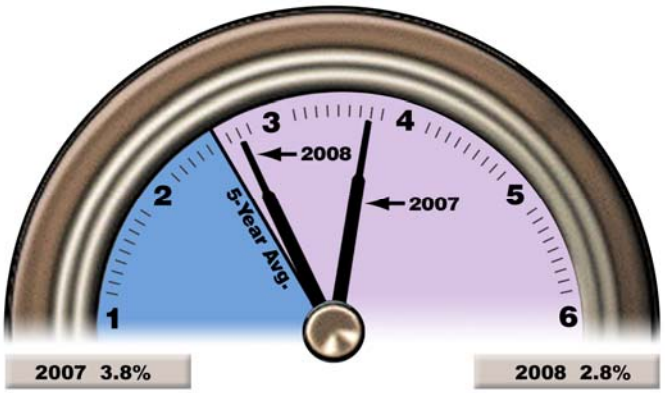


Exhibit 2— Wage Growth Moderates

The Quickening Pace of Medical Care Prices Suggests Further Increases in Medical Severity

Medical care price increases (as measured by the Medical Care component of the Consumer Price Index (CPI)) are expected to accelerate in 2008, in part reflecting increases in both labor and energy costs. Increases in the Medical CPI this year (through October) have been led by hospital services, which are up 6.3% from 2006. In contrast, price increases for professional services are up 3.9% while prices for medical care commodities (which include prescription drugs) are up just 1.2%. The increase in medical care prices is likely to be reflected in additional upward pressure on medical severity.

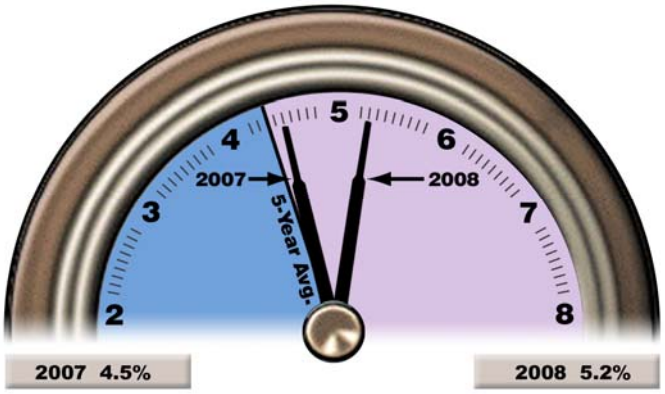


Exhibit 3— Medical Care Price Increases Continuing

Challenging Times for Investment Income

The Federal Reserve's recent reductions in the federal funds interest rate provided only fleeting calm to financial markets. Indeed, as of this writing (in early November), the stock market is again exhibiting marked volatility, reflecting ongoing write-downs at major financial companies and concerns about the impact of $95+ per barrel oil prices on the economy. Clearly, the ability of carriers to meet their targets for both fixed income returns and realized capital gains will be tested in light of the recent volatility in financial markets and the ongoing uncertainties in the economic outlook. (The interest rate forecast shown assumes that the economic expansion will survive the recent turbulence. The "gauge" shows the rate of the seven-year Treasury note because the average maturity of Treasury securities held by P/C carriers is roughly seven years.)

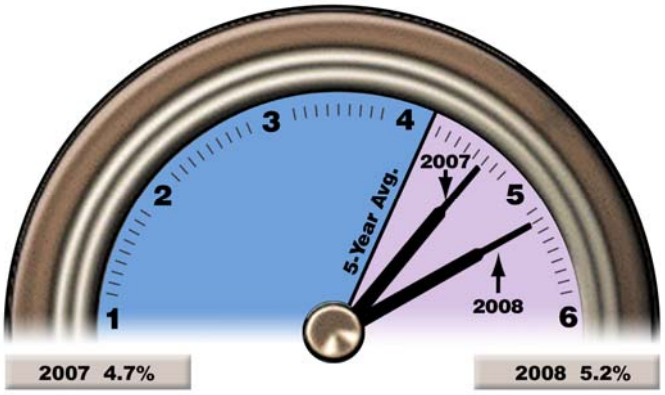


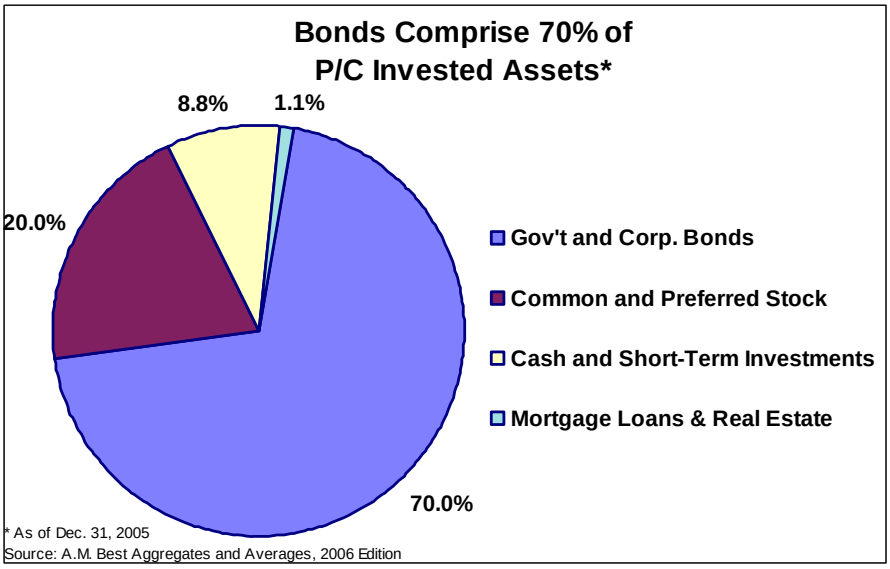
Exhibit 4—Interest Rates—Heightened Uncertainties in the Outlook

Behind the Gauges:
Financial Markets

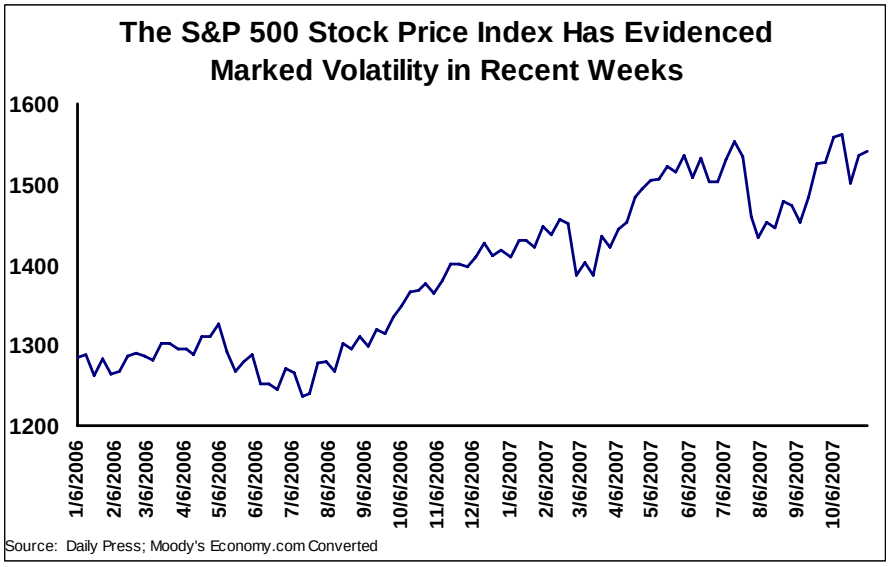
The following set of charts focuses on financial market conditions and their implications for the P/C industry.

Portfolio Composition of Invested Assets—Limited Exposure to Subprime Mortgage Problems
As of year-end 2005, private P/C carriers had nearly $1.1 trillion in invested assets, 70% (some $770 billion) in fixed income securities and 20% in common and preferred stocks. Most of the balance was in cash and other short-term investments. The value of mortgaged-back securities held by P/C carriers was roughly $20 billion as of mid-2007 (according to the Insurance Information Institute), roughly 2% of the industry's investment portfolio.

The P/C industry's exposure to a mark-to-market write-down in its mortgage-backed investments equals about 3% to 10% of policyholder surplus according to III. However, a Lehman Brothers analysis indicates that the effect of any write-downs could be "counterbalanced by the benefit of lower interest rates on the overall bond portfolio." In addition to these balance-sheet effects, the industry faces possible losses relating to Directors and Officers and Errors and Omissions insurance (III indicates such losses have been variously estimated at $1 billion to $3 billion based on experience in past financial crises.)

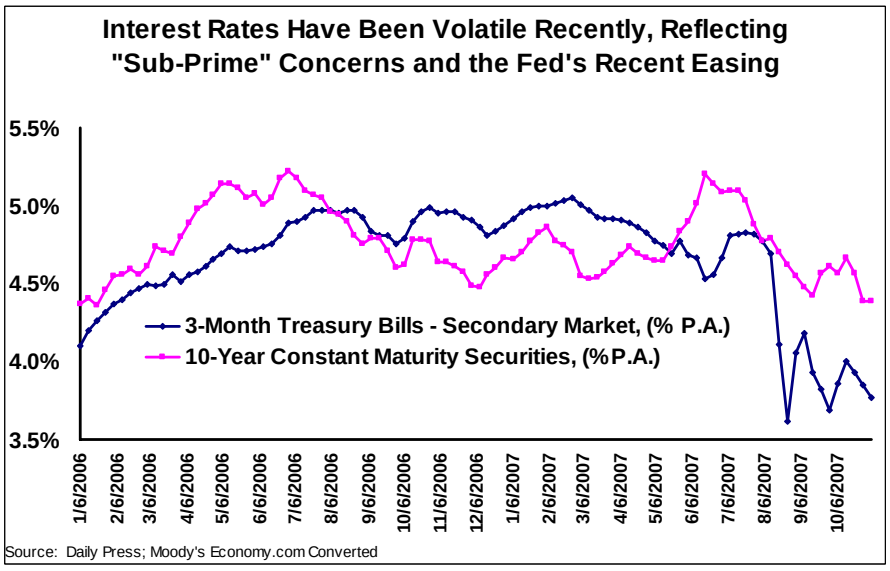


Stock Market
The equity markets have shown marked volatility in recent months—rebounding after Federal Reserve cuts in the federal funds interest rate and then declining sharply on news of yet another multi-billion dollar write-down. Concerns about the health of the economy, with oil prices soaring and consumer confidence plunging, are also weighing on stock prices. All of this suggests a most challenging time for property and casualty industry investment managers.



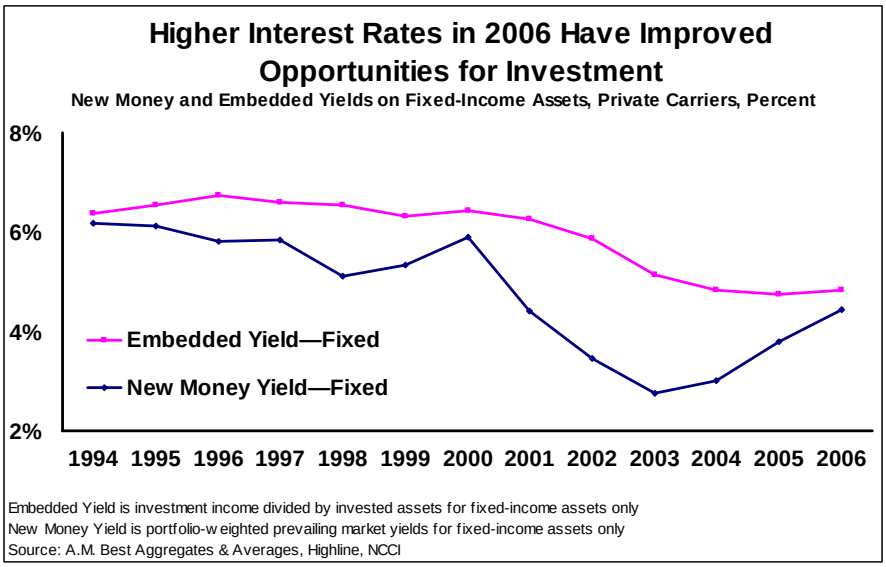
Interest Rates
Short-term rates have been volatile in recent weeks, reflecting the financial markets' initial reaction to the sub-prime meltdown and the Fed's forceful actions in reducing key lending rates.

Long-term rates, which had trended decidedly higher between early March and mid-June on signs of an improving economy and rising inflationary expectations, turned lower with the plunge in short-term yields. Recent stock-market volatility has also been a factor depressing long-term rates, as investors shifted into the "safe-haven" of government bonds.



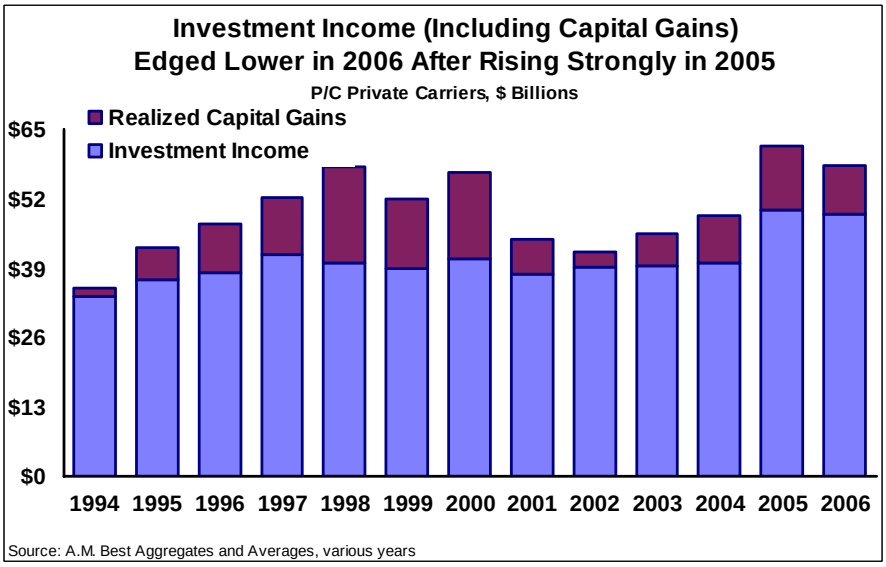
New Yields vs. Embedded Yields
The rise in interest rates in 2006 boosted new money yields available to P/C carriers, building upon stronger gains in 2005. (The new money yields shown in the chart are based on the portfolio distribution of fixed-income assets among private carriers.)

With new money yields rising, embedded yields stopped declining and edged higher in 2006. Even so, as shown in the next chart, investment income edged lower. (Note that data specific to workers compensation is not available for this and the following two charts.)



Components of P/C Investment Returns
Investment income (from interest and dividends) declined slightly in 2006, following an out-sized 25% gain in 2005. Rising long-term interest rates through mid-year suggested that investment income was on an ascending path in 2007. However, long-term rates began declining in late June, initially on signs of a slowing in the economy and later, as investors reacted to the Fed's rate cuts and the after-effects of the sub-prime mortgage meltdown.

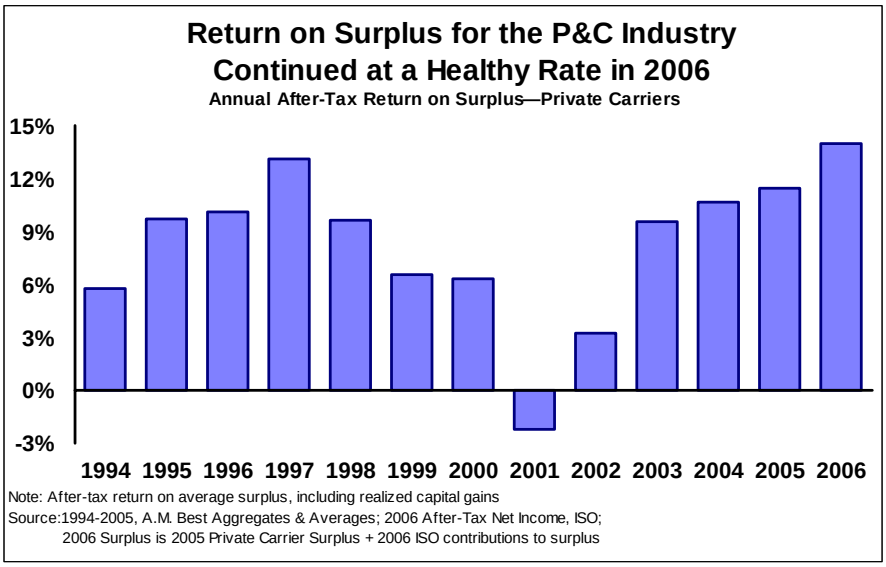
Last year, realized capital gains declined 24% following a 34% rise in 2005. Prospects for 2007 are guarded in light of the stock market's recent volatility.



Return on Surplus

The P/C industry's return on surplus (ROS) increased for the fifth consecutive year in 2006. At 13.9%, it is well above the average 7.8% return posted between 1994 and 2005.

Last year's results in no small part reflected the strong improvement in the calendar-year combined ratio, which declined to 93 in 2006 vs. 101 in 2005.



IMPLICATIONS

What's Fair Is Fair: Measuring the Cost of Capital in the Property and Casualty Insurance Industry

For investors, life used to be a lot less complicated. Back in the "good old days," where there were just stocks and bonds (instead of securitized pools of sub-prime mortgages and complex derivative instruments), it was relatively easy to determine the intrinsic (underlying) value of one's holdings. All that needed to be done was to look at the relevant cash flows from a security and calculate the present value of those cash flows using an appropriate discount rate. The calculated present value could be viewed as the underlying value of the security. This approach to valuation, commonly referred to as Discounted Cash Flow (or DCF) analysis, has generated increasing interest in light of recent tax law changes that reduced the tax rate on dividend income.

The DCF technique is also an important tool for workers compensation because it is used to calculate the cost of capital used to support rate filings, especially in full-rate states. Within a regulated environment, the cost of capital is viewed as the "fair rate of return." The US Supreme Court has set forth two basic standards of fairness:

1. An investor in the regulated industry should be provided with the opportunity to earn a return equal to that which can be expected from other businesses of similar risk
2. The rate of return for the regulated industry must be sufficient to retain and attract capital

When reasonably applied, these two standards balance the interests of consumers of the regulated product or service with investors who provide the capital to operate the enterprise.

In this article, we provide a nontechnical overview of how NCCI has adapted the DCF method, what our analysis suggests is an appropriate estimate of the cost of capital for the property/casualty insurance industry,[1] and how the NCCI estimate for the P/C industry compares with estimates of the cost of capital for other industries.

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[1] Although this article focuses on the DCF method, in practice, NCCI uses both the DCF and the Capital Asset Pricing Model approaches in developing its estimates of the cost of capital in the property/casualty insurance industry. Periodically, NCCI reviews that methodology in light of new research findings. The latest such review was completed in May 2007 and resulted in a number of significant changes. For a detailed discussion of those changes (including a technical appendix), please see the NCCI study "Measuring the Cost of Capital in the Property and Casualty Insurance Industry," available on **ncci.com**.

Using the Gordon Dividend Growth Model to Estimate the Cost of Capital

Underlying the DCF approach is the Gordon dividend growth model—a model described in many corporate finance textbooks. That model indicates that the value of a common stock can be estimated by just three inputs:

1. The effective dividend yield on the stock
2. The expected "steady-state" rate of growth in those dividends
3. A discount factor (the cost of capital) that is reflective of the risk characteristics inherent in the company

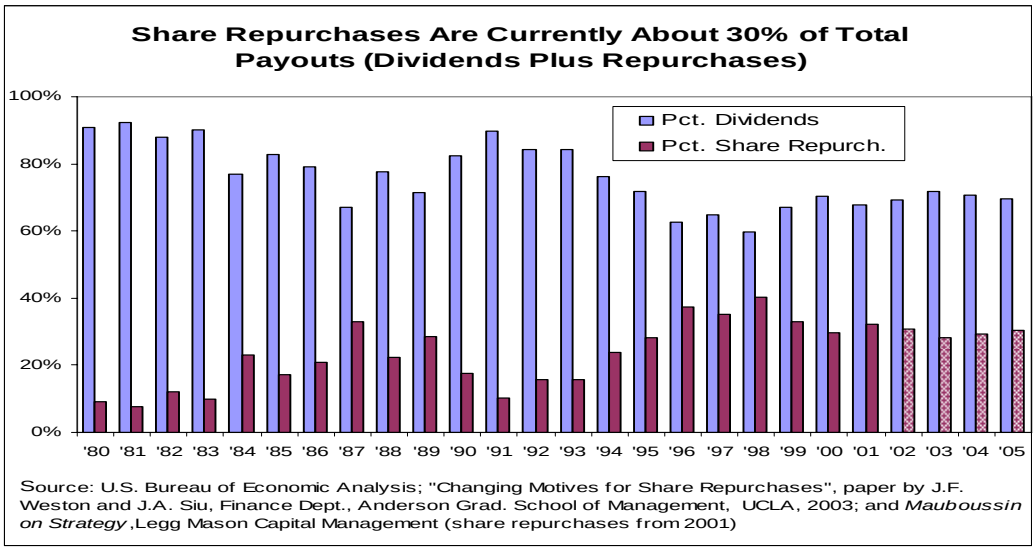
The model can be manipulated to solve directly for the cost of capital given knowledge of the company's dividend yield and expectations about future dividend growth.

NCCI's financial economists use a similar approach in estimating the cost of capital in the property/casualty industry due to the fact that estimates are made of the industry's effective dividend yield as well as the industry's prospective dividend growth rate. Using those inputs, the model is solved for the industry's cost of capital. Following is a brief overview of how these various estimates are developed.

Effective Dividend Yield. NCCI's estimate of the effective dividend yield takes into account that cash paid to shareholders can come from dividend payments as well as from share repurchases (provided such repurchases are retained by the corporation and not paid out to executives or other employees via stock options and related incentives).

- Estimates of dividend payments are obtained from a sample of 32 P/C companies from the Value Line *Investment Survey.* Value Line (VL) data are developed in a consistent manner and are used in many regulatory settings, especially in the insurance and utilities sectors. Companies included in the sample are those from VL's P&C Industry and Diversified Financial Services Groupings. The unweighted average of the dividend yield of those companies that either currently pay dividends or have paid dividends at some point in the past five years runs at 1.8%.
- Dividends are not the only means through which companies return cash to shareholders. As shown in Chart 1, share repurchases have become an important factor since the mid-1980s and currently account for about 30% of all cash returned to shareholders. NCCI estimates that net share repurchases add about half a percentage point to the dividend yield.[2]

Chart 1



Source: U.S. Bureau of Economic Analysis; "Changing Motives for Share Repurchases", paper by J.F. Weston and J.A. Siu, Finance Dept., Anderson Grad. School of Management, UCLA, 2003; and *Mauboussin on Strategy*, Legg Mason Capital Management (share repurchases from 2001)

[2] Quantifying the impact of share buybacks is not straightforward. Compared with dividends, where management tends to maintain steady payment patterns over time, share repurchases are "lumpy" and vary with overall stock market conditions. Another complicating factor is that such share repurchases tend to be concentrated in a relatively small number of companies. Finally, not all shares that are repurchased are also retired; instead, repurchased shares may be handed out to employees or executives as part of their compensation. When repurchased shares are passed on to employees or executives, there is no cash returned to shareholders in the aggregate. NCCI's methodology in estimating the effect of net share repurchases is detailed in the NCCI research paper cited in Footnote 1.

Taken together, direct dividend payments and net share repurchases render an effective dividend yield of 2.3% (1.8% plus 0.5%).

Prospective Rate of Growth in Dividends. The basic Gordon model assumes that dividends grow at a constant rate in perpetuity. NCCI uses a more general version of the model, which differentiates between short-term dividend growth (which is influenced by the current state of the underwriting and business cycle) and long-term (sustainable) dividend growth.

- For the near term, NCCI employs the average of VL 5-year-ahead forecasts for the rate of growth of dividends per share for the same P/C companies used in the dividend yield sample. These forecasts, which averaged 11.2% as of late May 2007, reflect the current strong profitability of the industry.
- After this 5-year period, the dividends are assumed to increase at the long-term average growth rate of the industry, as gauged by the growth rate of the Total Financial Assets (TFA) of the P/C industry. That rate is estimated by NCCI at 7.7%.[3]

This approach seems especially prudent at this time, in light of signs of a softening in workers compensation markets and a possible slowing in the rate of growth of the economy as a whole.

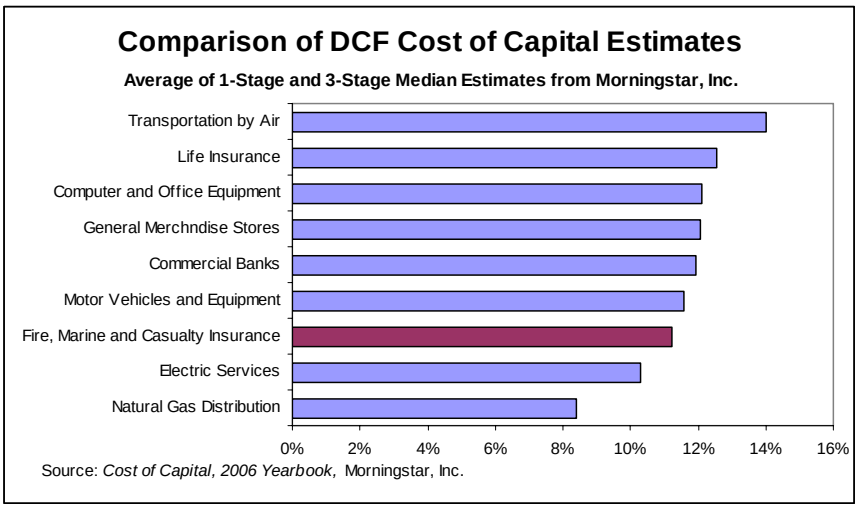
Overall DCF Cost of Capital. Taken together, these various inputs to the Gordon model deliver an estimate for the cost of capital of 10.6%, based on data available through late May 2007.

NCCI's DCF Estimates in Perspective

The DCF method is one of two widely-used methods that NCCI employs to calculate the cost of capital. The other technique is the Capital Asset Pricing Model, or CAPM. The latter method focuses on the riskiness of investing in a company's stock relative to the stock market as a whole. As detailed in the NCCI paper cited in Footnote 1, the CAPM estimate of the cost of capital is 11.0% as of late May 2007, slightly higher than the 10.6% estimated using the DCF approach. In practice, NCCI averages both its DCF and CAPM estimates to determine the overall cost-of-capital estimate. That average, as of late May, was 10.8% (average of 10.6% and 11.0%).

NCCI's 10.6% DCF estimate of the cost of capital is also in line with median DCF estimates developed by Morningstar, Inc. for the "Fire, Marine and Casualty Insurance" industry (SIC Code 633). That estimate, using data for a sample of 35 companies, showed a median DCF cost of capital of 11.2%.[4] Morningstar also provides DCF estimates for a wide range of other industries, both regulated and unregulated (see Chart 2). As shown, the median DCF measure of the cost of capital for the Fire Marine and Casualty Insurance industry is slightly higher than that of the electric services industry (which is also subject to rate regulation). However, it is lower than that of the life insurance industry and a wide range of other industries that are not subject to rate regulation.

Chart 2



[3] Specifically, NCCI estimates the rate of growth rate of the real (that is, inflation-adjusted) TFA for the period 1952–2005 and then computes a nominal (that is, non-inflation-adjusted) future rate of growth by adding the current expected long-term rate of inflation. The yield spread between conventional and inflation-indexed 10-year Treasury notes is used as the gauge of such long-term inflation expectations.

[4] "Cost of Capital," *2006 Yearbook,* Morningstar, Inc. The sample of companies included by Morningstar includes 16 companies in the Value-Line-based sample used by NCCI. The DCF estimate cited for "Fire Marine and Casualty" insurance, as well as the estimates for other industries shown in Chart 2, is the average of Morningstar's median 1-stage and 3-stage DCF estimates.