



Review of Current Conditions: The Economic Outlook and its Impact on Workers Compensation

The exhibits below are updated to reflect the current economic outlook for factors that typically impact workers compensation. Each exhibit also provides some context for the outlook, relative to the historical data. Forecasts are derived from Moody's Analytics.

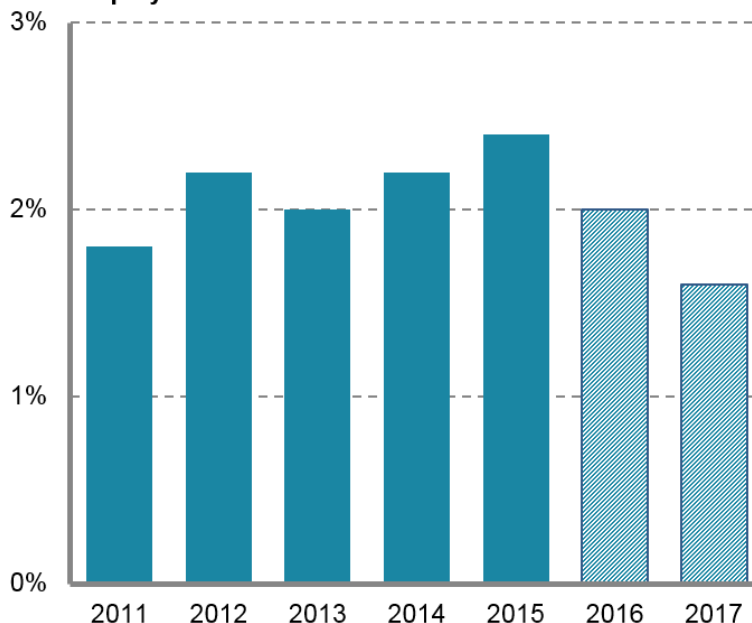
Employment Growth

Last year, private nonfarm payrolls added 221,000 jobs on average each month, contributing to the strongest growth rate—2.4%—since the recession. This year, private employment growth has slowed from last year's pace to an average of 162,000 new jobs each month through September. As mentioned in the June edition of the *Quarterly Economics Briefing (QEB)*, growth slowed considerably in May, but revised data shows private employment actually fell by 1,000 jobs that month. Hiring rebounded in June and July to an average gain of 230,000 per month, but slowed again in August and September to an average increase of 156,000.

Education and healthcare, and professional and business services, have added the most jobs this year, while employment in mining and manufacturing has declined. The manufacturing industry group accounts for 16% of manual premium in NCCI states, so the drop in manufacturing employment is concerning for workers compensation. Construction is also important to workers compensation since the contracting industry group, which has posted a small increase this year, makes up 24% of premiums in NCCI states.

Employment: Forecast Is for Growth to Slow to 2% or Less

Growth Rate:
Private Employment



Sources: US Bureau of Labor Statistics; Moody's Analytics

After slowing for the past three quarters, real gross domestic product (GDP) growth ticked up in the second quarter to a 1.4% seasonally adjusted annual rate from 0.8% in the first quarter. Growth posted in the second quarter is below the annualized growth rate of 2% or above for the first three quarters of 2015, but above the 0.9% posted in the fourth quarter. Results for all four quarters of 2015 and First Quarter 2016 have been revised from those reported in the June *QEB* due to annual revisions performed at the Bureau of Economic Analysis in July. The acceleration in the second quarter is due to increases in consumer spending and exports.

As seen in the graph above, Moody's forecasts that employment growth will slow to 2.0% this year and 1.6% next year. These are down one and three tenths of a percentage point, respectively, from the 2.1% and 1.9% forecast in the June *QEB*. They are also slightly below the average increase of 2.1% countrywide for the past five years.

An increase in employment will lead to increased premium. However, inexperienced workers may also put upward pressure on claim frequency.

Wage Growth

Final average weekly wage data for 2015 is available and shows wages increased by 3.1% during 2015, the same rate as 2014. Average weekly wages are forecast to increase by 2.2% this year and by 4.2% next year. The forecast for this year is a decrease from 3.0% forecast in the June *QEB*, while the forecast for 2017 is down from the earlier 4.5% forecast.

Preliminary values for First Quarter 2016 have been released since the June edition and are incorporated into the new forecast.

The forecast for accelerating wage growth stems from a stronger labor market, as measured by the declining unemployment rate. In response to the tighter labor market, employers will likely start offering higher wages to attract workers. The unemployment rate has averaged 4.9% through September 2016, down from 5.3% in 2015. Last quarter, we noted the decline in May was due to people dropping out of the labor force, but the labor force has increased since then. The broader measure of unemployment including discouraged workers and part-time workers who would prefer a full-time schedule is also declining. It has averaged 9.7% this year compared to 10.5% in 2015. However, it remains almost double the headline unemployment rate.

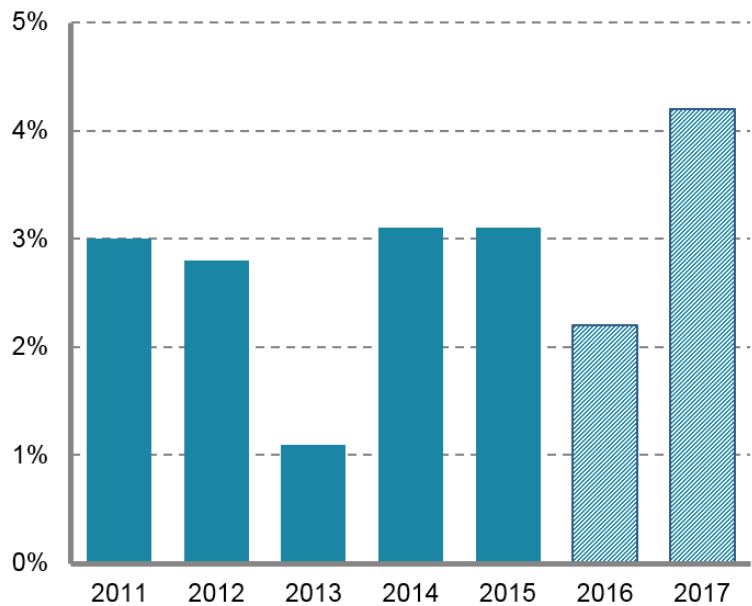
Growth in both the average weekly wage and in employment will lead to increases in private-sector payrolls and premiums. Wage growth also increases indemnity severity.

Medical Inflation

Changes in medical severity are driven by changes in price and utilization. In 2015, workers compensation medical severity declined for NCCI states¹, but medical inflation—measuring the price component of that equation—increased by 2.6%. This implies that workers compensation medical utilization decreased last year. The surprising decline in utilization is an area we are currently researching—see our upcoming *Issues Report* on ncci.com in November.

Wages: Forecast to Accelerate Significantly Next Year

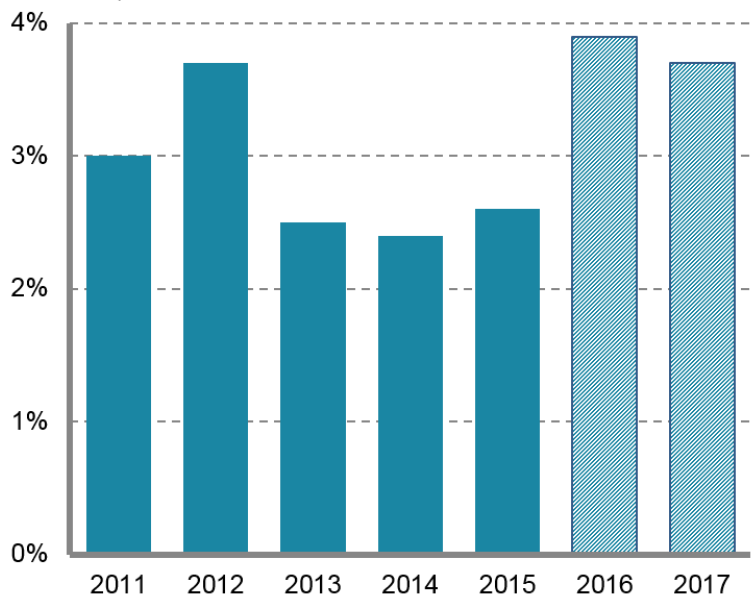
Growth Rate:
Average Weekly Wage



Sources: US Bureau of Labor Statistics; Moody's Analytics; NCCI

Medical Inflation: Forecast to Accelerate to Above 3%

Growth Rate:
Medical CPI, Urban Consumers



Sources: US Bureau of Labor Statistics; Moody's Analytics

¹ NCCI states include AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, and WV.

Moody's forecasts medical inflation of 3.9% this year and 3.7% next year. Both of these numbers outpace Moody's forecasts for general inflation at 1.2% in 2016 and 2.4% in 2017. Moody's forecasts imply upward pressure on medical cost per claim. However, if medical utilization continues to decline, as it did in 2015, then the overall change in workers compensation medical severity could be quite different from medical inflation.

Interest Rates

Low interest rates continue to constrain investment income in the property/casualty (P/C) industry.

The Federal Open Market Committee (FOMC) has left rates unchanged at all six of its 2016 meetings (including in September) after increasing the target range of the federal funds rate by 25 basis points to 0.25%–0.50% in December 2015. Prior to that increase, the Fed had maintained the rate at 0%–0.25% for seven years since December 2008.

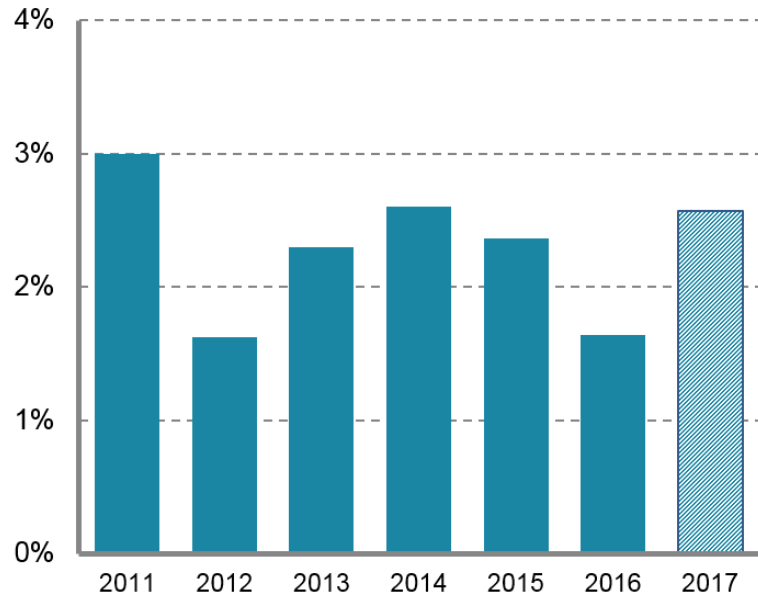
Statements released after Fed meetings this year have indicated future increases will be gradual. However, the statement released after the September meeting indicated “that the case for an increase in the federal funds rate has strengthened.” Projections released in September also indicate that the Fed expects to raise the federal funds rate by a quarter percentage point at one of its two remaining meetings this year.

Interest rates for 10-year Treasury notes as of June each year are shown in the chart at right. The rate has been at or below 3% for the last six years, and declined to 1.6% this year. The low rate this June was influenced by uncertainty surrounding the British vote to exit the European Union. (For more information about Brexit and its potential impact on the US economy and the workers compensation market, see the report on ncci.com.) Moody's expects interest rates on 10-year Treasury notes to increase to 2.6% in the second quarter of next year, down significantly from the 3.6% projected in the June *QEB*.

Low investment yields mean that P/C insurers will likely continue to focus on underwriting profitability.

Interest Rates: Forecast to Increase Next Year

Interest Rate as of June:
10-Year Constant Maturity Securities



Sources: Federal Reserve Board; Moody's Analytics

Drilling Down: P/C Insurance Investment Portfolios and Returns

In this edition, we focus on investment portfolios and returns for the P/C insurance industry between 2000 and 2015. Our analysis is based on statutory accounting data from *Best's Aggregates and Averages*. While there are important differences between accounting and economic rates of return, we use accounting data because it is readily available and widely used in other reports, including NCCI's annual **State of the Line Report**. The Appendix sketches some major distinctions between accounting and economic notions of the rate of return on investment.

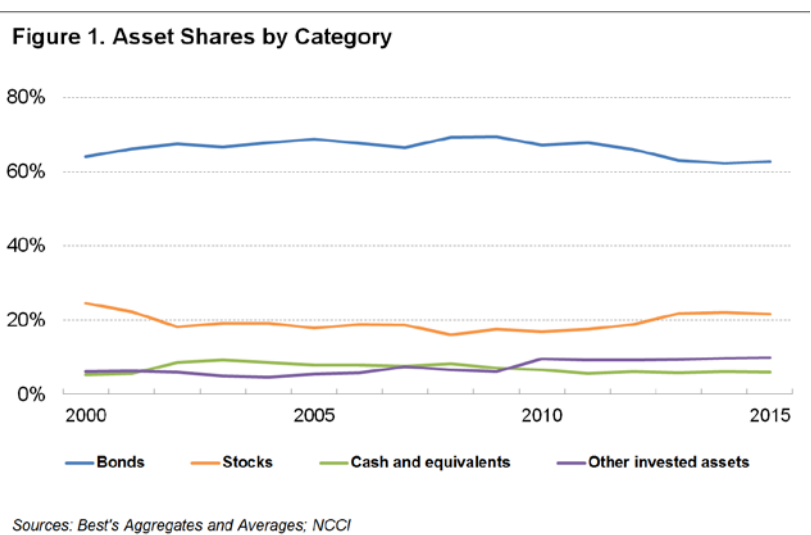
Investment Shares by Asset Category

Figure 1 shows shares of the P/C industry investment portfolio by major asset category from 2000 to 2015. Investment shares for each year are calculated using net admitted assets from the Assets page of the National Association of Insurance Commissioners' (NAIC) Annual Statement for the Total US P/C Industry from *Best's Aggregates and Averages*. We aggregate assets into four major categories:

- **Bonds:** All bonds with maturity dates greater than one year from the acquisition date.
- **Stocks:** Common and preferred stocks of both affiliated and non-affiliated corporate entities, as well as derivatives. A derivative is a contract that derives its value from an underlying asset. We assume that derivatives are maintained primarily as hedges for the stock portfolio. The most common types of traded stock derivatives are puts and calls.
- **Cash and equivalents:** Cash, undeposited funds, and other investments whose maturities at the time of acquisition were one year or less.
- **Other invested assets:** This category includes mortgages, real estate, oil and gas leases, transportation equipment, mineral rights, investments in leveraged buy-out funds and venture capital funds, direct loans, low-income housing tax credit investments, and investments financing working capital.

At the end of 2015, the P/C industry had more than \$1.5 trillion in invested assets. This level is unchanged from 2014, but up 15% from 2010. The industry's investment portfolio is heavily weighted toward bonds, which make up 63% of invested assets. Slightly more than 20% of assets are stocks and derivatives. Other invested assets make up about 10% of the portfolio, and cash and equivalents contribute about 6%.

As seen in Figure 1, these asset shares have held relatively steady over time, but with some changes from year to year. For example, from 2000 to 2002, the investment shares of bonds and cash rose while the share of stocks fell. Asset shares for all categories held fairly constant from 2002 until 2007, the year before the financial crisis that began the Great Recession.



During the recessionary period from 2008 through 2009, the share of bonds increased and the share of stocks fell. There are several reasons why this can happen. First, even without changing the portfolio composition, the stock market falls during a recession and stocks are marked to market annually. Prices for corporate bonds may fall too, but in statutory accounting, bonds are valued on the basis of amortized acquisition cost and not marked to market unless they are judged to be impaired. Second, companies may decide to shift portfolio holdings from stocks to bonds during a recession.

Beginning in 2010, the shift to bonds reversed. Since then, investment shares of bonds and cash have declined, and shares of stocks and other invested assets have increased. In part, the shift since 2010 away from bonds and toward stocks is a simple artifact of stock prices recovering from the recessionary lows of 2008. However, our analysis indicates the P/C industry also actively rebalanced its stock portfolio between 2000 and 2015, reducing stock holdings following years with gains and increasing stock holdings following years with losses to counteract changes in the portfolio share of stocks caused by price changes. For example, we estimate the nearly 39% drop in the stock market during 2008 (as estimated by the S&P 500 index) would have caused the P/C industry's equity investment share to fall about 6.3% from 2007 to 2008 if the industry had neither purchased nor sold stocks during this period. In fact, the industry's equity investment share dropped only about 2.6%, which shows P/C insurers actively bought stocks at the depressed prices

prevailing during 2008. During 2009–2010 and 2012–2014 when the stock market went up (the S&P 500 index stayed flat in 2011 and declined in 2015), similar calculations show P/C insurers continued to rebalance their equity holdings, selling stocks (and harvesting gains) in every year the stock market went up, thus maintaining rough stability of the share of stocks in their investment portfolios.

For the last three to five years, the shares of most asset categories have been remarkably stable. The investment share of bonds has held constant between 62% and 63% and that of stocks has stayed at 22% since 2013. The share of cash and other short-term investments has remained around 6% since 2011. Overall, the share distribution among these investment categories in 2015 is fairly similar to what it was back in 2000.

An apparent anomaly is other invested assets, whose investment share jumped from 6% in 2009 to 10% in 2010 and has remained at 9%–10% since then. One very large insurance company accounted for 84% of the share increase in other invested assets from 2009 to 2010. Since 2010, that company’s contribution to this increase has declined, but still remains substantial. As of annual reporting for last year, it alone accounted for 36% of the total P/C industry’s increase in other invested assets from 6% in 2009 to 10% in 2015.

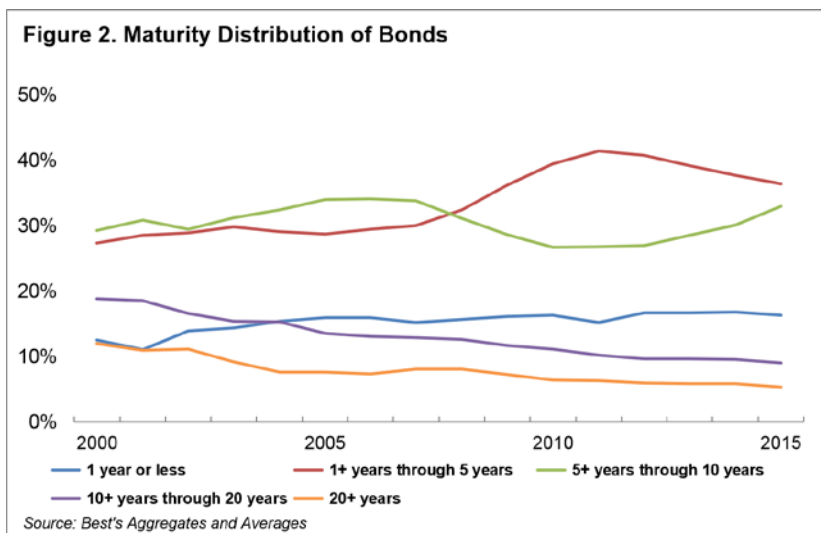
The Maturity Distribution of Bond Holdings

As we have seen, bonds make up the largest share of the P/C industry’s investment portfolio. In this section, we take a closer look at the maturity distribution of bond holdings for the 2000–2015 period. Figure 2 shows the share of bond holdings by maturity buckets of:

- 1 year or less
- 1+ years through 5 years
- 5+ years through 10 years
- 10+ years through 20 years
- 20+ years

Data is from Schedule D, Part 1A, Section 1 of the NAIC Annual Statement in *Best’s Aggregates and Averages* for the total US P/C industry.

An evident trend is that the share of the longer maturity bonds has fallen steadily over the entire period. The share of bonds with maturities of 20+ years fell from 12% in 2000 to 5% in 2015, while the share of bonds with maturities of 10+ years through 20 years fell from 19% to 9%. These declines might be due to an increase in the practice of matching the duration of assets to liabilities since liability durations for most lines of P/C insurance are substantially less than 10 years.



A 2001 report by the Casualty Actuarial Society’s (CAS) Valuation, Finance, and Investments Committee found that longer duration investment portfolios perform better than matched duration portfolios.² This finding obviously favored holding long-dated bonds. But the Committee’s follow-up analysis in 2002 revised its findings to conclude long-duration investments perform no better or worse than duration-matched portfolios.³ In a 2003 presentation at the CAS Risk and Capital Management Seminar, the Committee’s answer to the question asking whether duration matching makes sense for a P/C insurer was “it depends.”⁴ In 2012, a Towers Watson survey of CFOs of P/C insurance companies found a third of companies match the durations of assets and liabilities and 30% invest in assets shorter than liabilities. Only 38% of the surveyed CFOs reported having assets with longer average durations than liabilities.⁵

In addition to the secular shift away from long-dated bonds, the Great Recession impacted the investment shares of bonds at the shorter end of the maturity spectrum. From 2007 to 2011, the investment share of bonds in the 5+ years through 10 years maturity bucket declined, while the share of bonds in the 1+ years through 5 years maturity bucket increased by

² “Interest Rate Risk: An Evaluation of Duration Matching as a Risk-Minimizing Strategy for Property/Casualty Insurers,” CAS Valuation, Finance, and Investments Committee, December 2001, pg. 156.

³ Quintilian, Ken, “Interest Rate Risk and Duration Matching,” CAS Valuation, Finance, and Investments Committee, presented to CAS Loss Reserve Seminar, September 23, 2002.

⁴ Suchar, Chris, “Asset/Liability Management,” CAS Committee on Valuation, Finance, and Investments, presented to CAS Risk and Capital Management Seminar, July 28, 2003.

⁵ “Property & Casualty Insurance CFO Survey #3, Investment Strategies,” Insights, Towers Watson, September 2012.

almost the same amount. The shift to shorter maturities during and immediately after the recession was probably due to uncertainty about the timing of recovery, and with it an expected increase in nominal interest rates from their low post-recessionary levels. Interest rates and bond prices move in opposite directions. As interest rates go up, bond prices fall; and longer maturity bonds are more price-sensitive to interest rate changes than shorter maturity bonds. Under the expectation that interest rates would re-normalize quickly after the recession officially ended in 2009, it made sense for insurers to shorten the duration of their bond portfolios in order to reduce interest rate risk.

The portfolio shift from 5+ year through 10 year bonds to shorter maturity 1+ year through 5 year bonds began to reverse in 2012. By the end of 2015, the respective shares of both maturity buckets returned to near pre-recessionary levels. The reversal coincides with the Fed's indication in mid-2011 that it expected to keep the federal funds rate near zero through mid-2013. The following January, the Fed pushed that timeframe out until late 2014. Ultimately, the Fed first increased the federal funds rate in December 2015. The extended post-recessionary period of low interest rates has reduced the perception that significant interest rate increases are imminent, as evidenced by Moody's downward revisions to its interest rate forecasts over the past several years.

Historical Return on Investment

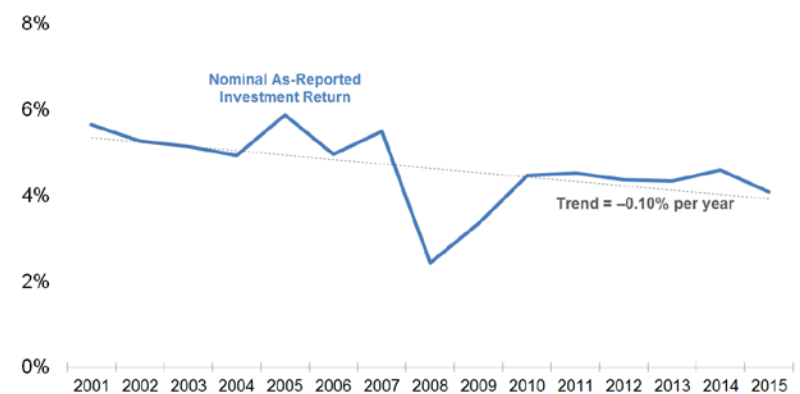
In this section, we consider historical rates of return earned on the P/C industry's portfolio of invested assets. We first look at as-reported rates of return, both overall and by asset category, from 2000 to 2015. Next, we define and discuss an "embedded yield" return for the overall portfolio. Finally, we compare as-reported and "embedded yield" returns in nominal and real terms. The real investment return is the nominal investment return minus the rate of inflation.

As mentioned at the outset, we use accounting rates of return throughout our analysis. Accounting rates of return are different from economic rates of return. Pertinent distinctions between the two concepts are outlined in the Appendix.

As-Reported Investment Return

Figure 3 shows as-reported investment returns for the P/C industry from 2001 to 2015. Investment return is aggregated across all four asset categories and is calculated by dividing the sum of calendar year investment income and capital gains or losses by average total invested assets for the year. It also includes deductions for investment expenses, investment taxes, licenses, and fees, interest expense, and depreciation. However, unrealized gains are excluded. As-reported investment returns exhibited a statistically significant downward trend of 0.10% (10 basis points) per year from 2001 to 2015. In addition, returns were quite volatile from 2005 to 2010—the years leading up to and including the financial crisis and recession.

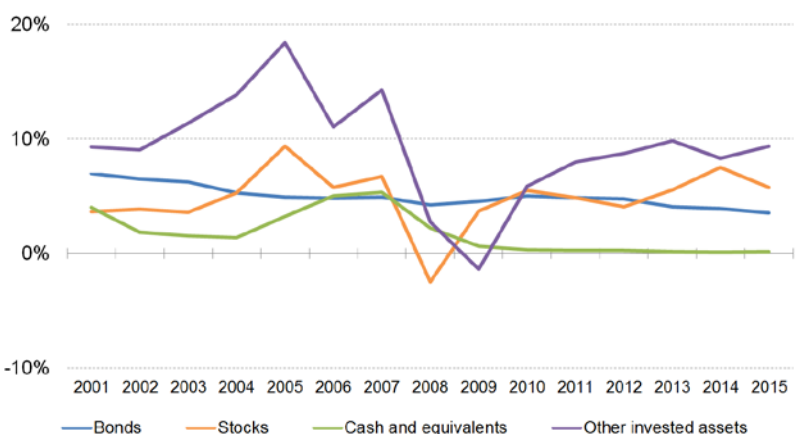
Figure 3. As-Reported Investment Return



Sources: Best's Aggregates and Averages; NCCI

Figure 4 shows as-reported investment returns for each of the four asset categories (Figure 4 does not include deductions). Investment returns for the four asset categories are further broken down into returns from investment income and returns from capital gains or losses in Figures 5 and 6.

Figure 4. As-Reported Investment Return by Asset Category



Sources: Best's Aggregates and Averages; NCCI

previous year. Separating investment categories and distinguishing investment income return and capital gains return allows us to better understand overall as-reported investment returns in Figure 3.

First, we look at bond returns, since bonds make up more than 60% of the P/C investment portfolio. Bond returns in Figure 4 have tended down from a high of 7% in 2001 to 3.6% in 2015. This is primarily driven by declining investment income rates of return (Figure 5), since capital gains to bonds are small (Figure 6). The insignificance of realized capital gains to bonds suggests that P/C carriers did not liquidate their bond holdings during the recessions of 2001 and 2008–2009.

Stocks comprise slightly more than 20% of the P/C investment portfolio. As-reported stock returns are volatile but display no discernible trend over the period from 2001 to 2015, as displayed in Figure 4. Over that period, stock returns have ranged from a high of more than 9% in 2005 to a low of –2.5% in 2008. Investment income from stocks, typically their dividend return, has hovered between 2% and 4% for most of the period (Figure 5). Stock returns via capital gains show volatility—from almost 6% in 2005 to –5.4% in 2008—but no discernible trend (Figure 6).

The share of other invested assets rose in 2010 to near 10% from 6% in 2009 and has stayed at that level since. As discussed earlier, one large insurance company accounted for 84% of the jump that year, although its share of the increase has declined each year through 2015. The return on other invested assets in Figure 4 is the most volatile among the four asset categories, ranging from a high of more than 18% in 2005 to a low of –1.4% in 2009. Both investment income and capital gains contribute to the volatility. Interestingly, the as-reported return to other invested assets is often the highest of all asset categories, driven by investment income returns that exceed those for the other three investment categories every year.

The asset category of cash and equivalents constitutes the smallest portfolio share at 6%. Investment income returns for this category were temporarily high from 2005 to 2007. However, since 2009, short-term investment income has been just above zero due to the Fed’s sustained post-recessionary policy of maintaining the Federal Funds rate near zero. Capital gains have been close to zero for the entire period, an unsurprising observation for short maturity assets.

“Embedded Yield” Investment Return

In this section, we extend the concept of bond “embedded yield” from NCCI’s **State of the Line Report** to the P/C industry’s total investment portfolio. For the portfolio version of “embedded yield,” we exclude realized capital gains for both bonds and other investments, focusing on investment income exclusively for these two investment categories. We do not exclude realized capital gains for stocks and cash and equivalents. Our rationale is that equities and derivatives, unlike bonds, do not provide contractual income streams and are marked to market at each accounting period. For cash and equivalents, capital gains are negligible due to their maturities of one year or less.

“Embedded yield” is an attempt to take a partial step toward a new money rate of return that is consistent with economic theory. The new money concept of rate of return on investment is based on current—not historical—asset prices and, as such, excludes both realized and unrealized capital gains. New money rates cannot be derived directly from accounting data that relies on historical acquisition prices. As a practical matter, the difference between the new money and

Figure 5. Investment Income Return by Asset Category

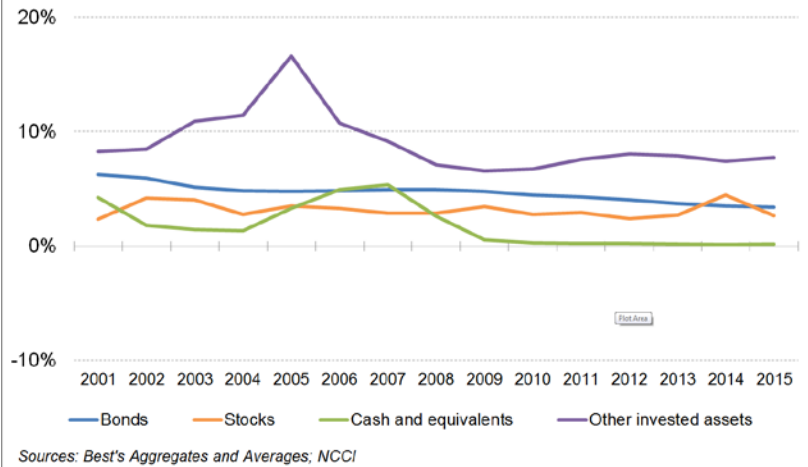
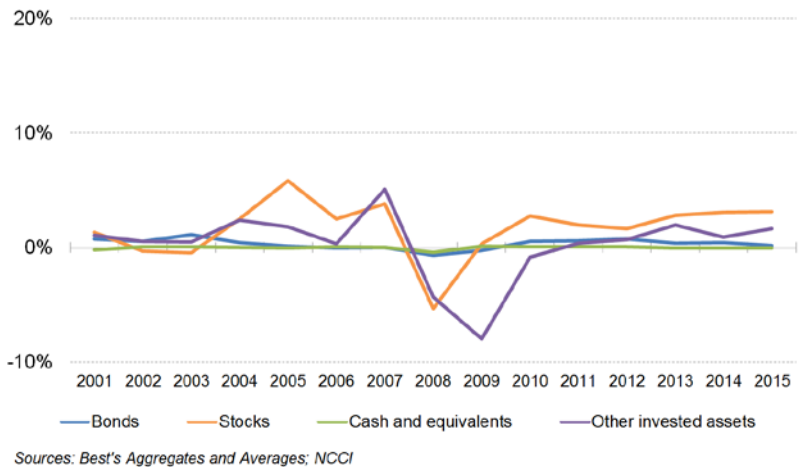


Figure 6. Capital Gains Return by Asset Category



“embedded yield” measures of the rate of return is most significant for bonds. During 2013 and 2014, the “embedded yield” bond return exceeded the new money bond return by about two percentage points.⁶ This difference is attributable to unrealized capital gains that are incorporated in the “embedded yield” but excluded from the new money yield (by marking bond holdings to market in the new money yield but not in the “embedded yield”).

The solid line in Figure 7 is the resulting “embedded yield” investment return for the P/C industry from 2001 to 2015. “Embedded yield” investment return is aggregated across all four asset categories and includes deductions. Like as-reported investment return (from Figure 3 and also included in Figure 7 as the long-dashed line), the “embedded yield” return exhibits a statistically significant downward trend of 0.09% (9 basis points) per year over the entire period.

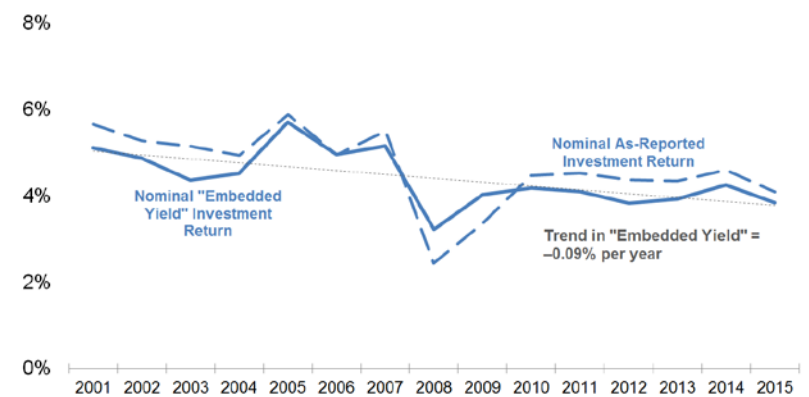
Comparing the two measures, “embedded yield” investment return has behaved similarly to as-reported investment return over the past 15 years, but with less year-to-year variability. During the 2008–2009 recessionary period, “embedded yield” investment returns were higher than as-reported returns, but lower in the following years. This makes sense. The “embedded yield” return excludes sales of bond-like assets, which are likely to involve capital losses during recessionary periods, but likely to involve capital gains as markets recover following a recession.

Nominal versus Real Investment Return

In Figures 8 and 9, we compare the nominal and real as-reported investment returns and “embedded yield” investment returns, respectively. The blue lines in the graphs are the nominal returns from Figures 3 and 7, while the red lines are the corresponding real returns. The real rate of investment return is obtained by subtracting realized inflation from the corresponding nominal rate of investment return. For our measure of inflation, we use the change in the gross domestic product implicit price deflator from the Bureau of Economic Analysis.

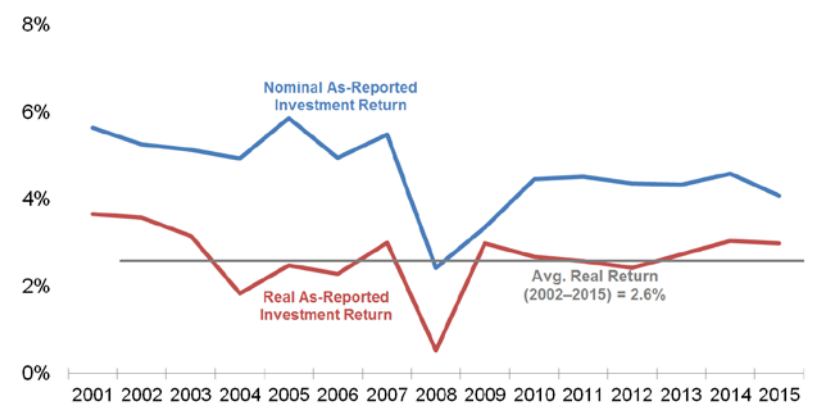
As we noted in the preceding sections, both types of nominal investment return—as-reported and “embedded yield”—exhibited quantitatively similar and statistically significant downward trends from 2000 to 2015. However, after accounting for inflation, there is no trend in either real as-reported investment return or real “embedded yield” investment return. Regressions run over the entire 2001–2015 period and also the 2002–2015 sub-period (excluding the brief recession of 2001) yield trend coefficients that are close to zero and statistically insignificant for both real investment returns.

Figure 7. “Embedded Yield” Investment Return



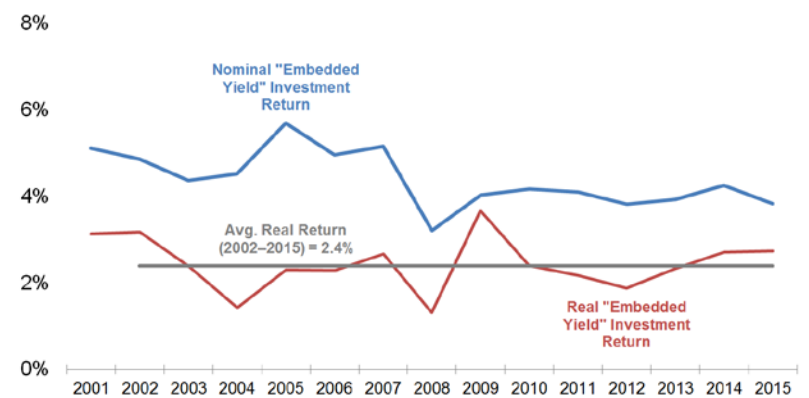
Sources: Best's Aggregates and Averages; NCCI

Figure 8. As-Reported Investment Return



Sources: Best's Aggregates and Averages; U.S. Bureau of Economic Analysis; NCCI

Figure 9. “Embedded Yield” Investment Return



Sources: Best's Aggregates and Averages; U.S. Bureau of Economic Analysis; NCCI

⁶ See the discussion of slide 7 in NCCI’s 2016 State of the Line Guide, pp. 7–8, available at ncci.com.

For the years 2002–2015, the average real as-reported return is 2.6% (Figure 8) and the average real “embedded yield” return is 2.4% (Figure 9). Extending the time period back to 2001, the real as-reported average is slightly higher—at 2.7%—and the real “embedded yield” average is the same—at 2.4%. Real rates of investment return for the last couple of years are above both benchmarks. The real as-reported investment returns were 3.0% in 2014 and 2015, while the real “embedded yield” investment returns were 2.7% for both years.

Our analysis shows nominal and real investment returns tell different stories. Nominal investment returns have fallen from 2001 to 2015, but this is mainly due to declining inflation. While varying from year to year, real investment returns have shown no downward trend over the same period and indeed appear to have been above average during the past couple of years. As a caveat, we should note our analyses have relied on as-reported or “embedded yield” rates of investment return, both of which incorporate components of capital gains that depend on historical acquisition prices not available to “new money.” Historical rates of investment return presented here should not be interpreted as economic rates of investment return during the same time period, nor as forecasts of investment rates of return that may be realized in the future.

Conclusions

Our review of P/C industry investment patterns and returns offers the following takeaways:

- **The P/C industry investment portfolio is heavily weighted toward bonds** (63% share) with stocks in second place (22% share). Investment shares by asset category have shown some variation over the 2000–2015 period, but in 2015 were quite similar to 2000.
- **The maturity distribution of bond holdings has shortened from 2000 to 2015.** In particular, the share of bonds with maturities 10 years and above has trended down over this period. In the immediate aftermath of the Great Recession, P/C investment portfolios temporarily reduced holdings of bonds in the 5–10 year maturity bucket in favor of shorter maturities, but that trend has reversed since 2012.
- **Nominal and real investment returns tell different stories.** Nominal “embedded yield” investment returns have fallen from 2001 to 2015, mainly due to declining inflation. Real “embedded yield” investment returns vary from year to year but show no discernible downward trend over the same period, and indeed appear to have been above average during the past couple of years.
- **Nominal and real new money rates of return for bond investments, the largest share of the P/C industry investment portfolio, have been roughly two percentage points lower than corresponding “embedded yield” rates** of return over the past several years.

Appendix: Statutory Accounting Return on Investment vs. Economic Return on Investment

The statements here also apply to generally accepted accounting principles (GAAP). Thinking about asset returns is not simple. Accounting rates of return are based on historical asset valuations, whereas economic rates of return are based on current asset valuations. This general distinction carries with it a number of practical consequences.

The accounting return on investment is defined as investment income plus realized capital gains (or losses) divided by the carrying basis of assets.

- Investment income consists of interest, dividends, and other cash payments generated by an asset.
- Under an accounting standard, capital gains or losses usually occur only if they are realized. A capital gain or loss is realized when an asset is sold or matures. An exception is capital losses that result from writing down the value of assets judged to be impaired. Decisions about asset impairment are subject to accounting guidelines, but nonetheless allow for substantial management discretion.
- An asset's carrying basis (the denominator in rate of return calculations) differs for bonds and stocks. Under statutory accounting, bonds are valued at amortized acquisition cost (unless the asset is re-valued because of impairment), while stocks are valued at their current market price. Accordingly, bonds stay at their historical acquisition value (net amortization) unless impaired, whereas stocks are re-marked to market in successive accounting statements.

The economic return on investment may be thought of as investment income plus implied capital gains divided by the beginning of period mark-to-market asset value.

- Investment income means cash payments generated by the asset, identical to the accounting definition.
- Capital gains or losses result from changes in an asset's market value from the beginning to the end of the time period under consideration. Capital gains or losses count whether they are realized or not.
- The valuation basis for rate of return is an asset's beginning of period market value. The mark-to-market valuation standard applies to all assets, including both bonds and stocks. The economic standard for re-marking asset valuations to market in successive periods may also be thought of as a "new money" standard.