

## 2. Introduction

### 2.1 Goals of the Paper

This paper is intended to address the following questions:

- How would a typical U.S. property and casualty insurance company's financial statements be impacted by the change in accounting from current U.S. GAAP to the International Accounting Standards Board's (IASB's) or the Financial Accounting Standards Board's (FASB's) proposed fair value accounting paradigm?
- What are the practical issues associated with the measurement of property and casualty insurance claim and defense cost liabilities on a fair value basis?
- How useful would the resulting property and casualty insurance company financial statements be, and would the change to fair value achieve the desired objectives of greater relevance, reliability and transparency?

To answer these questions, we have attempted to restate the historical published financial results of a sample of insurance companies over the past 11 years to illustrate how those results might have looked if their claim and defense cost liabilities (referred to by many within the industry as loss reserves) had been presented at fair value. Rather than restating the financial results for the entire company, we have restated each company's published results for three major insurance products (Personal Auto Liability, Workers Compensation, and Medical Professional Liability) using publicly available information drawn from each company's financial reports to regulators. (U.S. regulators require insurers to report detailed financial results by product line.) For each of the three products we restated the published results for each company, ultimately producing *pro forma* financial statements for each product and company on both a current U.S. GAAP and a proposed fair value basis. By focusing on these three lines, we are able to compare and contrast the impact of fair value accounting on (a) insurance products where claims are paid relatively quickly versus products where they are paid out over an extended period of time, and (b) insurance products with relatively low volatility in claim experience versus products with high volatility.

By performing illustrative fair value calculations on a set of companies, we can understand and explore, at a practical level, the implementation issues that would arise for preparers of financial statements if the fair value proposal was adopted for property and casualty insurers. In addition, our analysis provides empirical evidence as to the likely magnitude of two of the key building blocks of fair value: time value of money and market risk margins. We analyze how these two components vary by product, by company and over time.

Finally, we examine the impact that reporting on a fair value basis would have on the published performance of the sample companies and explore the implications for users of financial statements of a change to fair value in property and casualty insurance. The paper is intended to help all parties in their evaluation of the extent to which fair value accounting meets its intended objectives, i.e., greater transparency, reliability and relevance to the users of financial information.

As discussed more fully in subsequent sections, our research project was intentionally limited in its scope. Rather than attempting a comprehensive analysis, we have intentionally limited

our focus to a subset of key issues. *Perhaps most importantly our goal was not to develop a definitive methodology for measuring the fair value of insurance policy liabilities; while the methods presented are reasonable and consistent with our interpretation of fair value concepts, they are intended only to be illustrative of the types of calculations that could be performed by preparers of financial statements using available data, and some of the practical issues that they will face.*

Writing this paper has posed a daunting challenge, due to the diversity of potential readers. Some may have expertise in financial accounting principles, but have only a limited knowledge of the property and casualty insurance industry. Others may have a deep knowledge of the insurance industry with a more limited background in financial accounting, particularly in the emerging area of fair value. This situation has caused us to include more in the paper than any individual reader might find necessary. Section 2.4 provides a roadmap to the paper; we would encourage readers to review it and develop a strategy for reading the paper that suits their circumstance. This should help to make the paper more digestible.

## **2.2 Who We Are**

Towers Perrin is a global professional services firm that helps organizations around the world optimize performance through effective people, risk and financial management. The Tillinghast business of Towers Perrin provides global actuarial and management consulting to insurance and financial services companies and advises other organizations on risk financing and self-insurance. We help our clients with issues relating to mergers, acquisitions and restructuring; financial and regulatory reporting; risk, capital and value management; and products, markets and distribution.

We are the largest employer of property and casualty actuaries and operate a global practice through a network of 42 offices in 20 countries. Our actuaries hold leadership positions in professional organizations, have contributed extensively to the actuarial literature and are frequent speakers on leading-edge subjects.

The authors, Robert F. Conger, James D. Hurley, and Stephen P. Lowe, are all principals and consulting actuaries with Tillinghast. Each has been a consultant for roughly 20 years and has helped a variety of insurance company clients with financial reporting issues, particularly in the context of property and casualty insurance claim reserves.

In addition to the three authors, the project team included a number of individuals who worked very hard in a very short timeframe to develop the underlying data, program the calculations, and assist in the drafting and editing of the paper. Consulting actuaries Emmanuel Bardis, Christina Gwilliam, and Joseph Lebens supported the analysis effort by designing the discounting and risk margin calculations, reviewing the detailed results, and preparing initial drafts of the analysis sections; Jeanne Hollister provided project management; and Julian Leigh and Peter Wright served as peer reviewers. Michele Bacik assisted in the accounting research and prepared an initial draft of the background sections. Benoit Derval, Richard Hayes, Feng Sun, and Yi Zhang performed the extensive data extractions and manipulations. Without the effort of this team, the paper would not have been possible.

## **2.3 Funding for the Study**

The Casualty Actuarial Society provided initial seed funding for this research project. In addition, the CAS established a project steering committee that provided constructive

suggestions and editorial advice. The authors are grateful for this support and assistance as well.

## 2.4 Roadmap to the Paper

The balance of the paper is divided into six sections, each of which is described below.

- The *Background* section of this report discusses the definition of fair value, how fair value might be applied in a property and casualty insurance context, the status of fair value deliberations at the two principal accounting standards bodies (the IASB and FASB), and the accounting principles relevant to the evaluation of the fair value proposal. This section will be primarily of use to those readers who are not familiar with financial accounting and the emerging fair value proposal. With the possible exception of Section 3.2, which discusses fair value in the context of property and casualty insurance, this section can be skimmed or skipped entirely by those familiar with fair value.
- The *Scope of Inquiry* section describes how the scope of our research was limited, either by design to focus our inquiry, or by practical considerations such as available data, time and resources. Understanding these limitations is important, as they provide important context to our conclusions.
- The Research Approach section:
  - Describes the database used for analysis purposes and the sources of the information in that database.
  - Describes the GAAP adjustments that we made for each of the selected companies, to convert the published results from a regulatory accounting basis to a current U.S. GAAP basis.
  - Discusses alternatives for selecting interest rates and claim payment patterns and describes our approach to calculating a discount for the time value of money applicable to the claim and defense cost liabilities associated with each product. The results of these calculations are shown and analyzed.
  - Discusses alternatives for calculating market risk margins and describes two alternative approaches selected for illustrative purposes. The results of applying these two calculation approaches are shown and analyzed.
- The *Impact of Fair Value on Reported Financial Results* section presents and analyzes the impact of adjusting the claim and defense cost liabilities from a nominal to a fair value basis. The overall magnitude of the fair value adjustments, and the variation between products, across companies and over time are presented and analyzed. The composite financial results presented on a fair value basis are displayed and compared to the results on a U.S. GAAP basis. The range of impacts between companies and the progression of results from year to year are analyzed. The interaction between underwriting and investment is analyzed by comparing results under two alternative investment strategies.
- Finally, the *Conclusions and Implications* section (a) discusses the degree to which the results of our study suggest that fair value estimates either pass or fail the tests of improved transparency, reliability and relevance; and (b) identifies issues that are likely to arise if fair value accounting were adopted for the property and casualty insurance industry.

- A *Technical Appendix* provides additional details as to the development of the financial data, the time-value-of-money adjustment, and the market risk margin.