

# ....CPS BULLETIN....

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## Introduction

From time to time a matter arises that requires more space than usual in our newsletter. We then take the unusual step of devoting nearly the whole newsletter to the topic. This issue of **CPS Bulletin** introduces Principles Based Reserves, a subject both important and complex. This method of reserving for life insurers is currently under discussion by the NAIC and is likely to replace, in the not too distant future, the current approach to calculating life insurance reserves.

We have tried to present the subject as simply as possible, yet we are aware that the reader will still find it heavy going. The reward will be that after the subject is introduced we shall be addressing the central questions: **What impact will this have on my society's reserves?** and **When will it be adopted?**

If you would like to be pro-active in this process and believe that the changing of the reserve method will be a burden to your society, you may wish to contact the NFCA and ask if they can begin lobbying for a small-company exemption to this new regulation. We will update you in future issues of **CPS Bulletin** regarding places you can write to at the NAIC once the draft regulation is exposed for comments.

We hope that you enjoy receiving this newsletter. If you have any comments or suggestions on how we can improve **CPS Bulletin**, please contact us by visiting our company web site at [www.cpsincorp.com](http://www.cpsincorp.com). ❖

## With Principles Like These...

There is a movement that's gaining a lot of steam that will dramatically change the way that life insurance reserves are calculated. Many of you may have heard the phrases "Principles Based Approach" or "Principles Based Reserves" (PBR). This article will try and explain the reasons for the change as well as to outline some of the differences between the PBR method and the current reserve method.

**Reserves have been calculated using the current method for 100+ years. Why change now?**

It is the belief of some experts that the PBR approach is better suited than traditional reserve methods to keep up in a world of rapidly changing products. Changing to the PBR method will bring the US in line with the approach being used in the UK and Canada. Our July 2005 and October 2005 issues of this Newsletter explained why the reserves as currently calculated for annual statement purposes may not be adequate in a merger situation. Similar concerns raised in those articles apply not just to M&A activity but also in other situations, such as demonstrating solvency. Also, the current approach causes discrepancies when applied to variable annuities and similar products. All of those issues, coupled with a global trend towards Enterprise Risk Management ("ERM"), have been driving the current reserve reform.

**What is Enterprise Risk Management (ERM)?**

ERM is one of the new corporate buzz-words which may be thought of as a system of managing risk across an entire company. ERM helps companies improve the way they handle the risks that businesses face every day and to avoid bad investments. For a good discussion of ERM, you might wish to read the Nov 1, 2004 Issue of CIO Magazine (<http://www.cio.com/archive/110104/risk.html>)

All of us are familiar with ERM to some degree even if we do not know it. For example, when a response to the

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predicted Y2K threat was prepared, or when reserves were established for possible AIDS claims, or when various scenarios were reviewed as part of an asset adequacy testing or when a disaster recovery plan is developed – these are all part of a company's ERM.

**What would be an example of the dangers of not having an appropriate ERM mindset when running a fraternal?**

Suppose a fraternal with a small surplus has Canadian operations and has more Canadian assets than it needs (i.e., in excess of the assets required to cover the Canadian liabilities in the US statement). If the Canadian dollar's value increases markedly, as some people expect, then this society will see an increase in its surplus. However, if the Canadian dollar's value were to fall, that society's overall solvency might be compromised. Thus, a proper ERM approach would be for the society to largely match Canadian assets to Canadian liabilities. This approach would reduce gains if the Canadian dollar's value increased but would not jeopardize overall solvency if the Canadian dollar's value decreased.

**Who is the driving force behind the PBR reserves?**

Like most new insurance rules and regulations, it is the NAIC that is behind the movement. In particular, it is the Life and Health Actuarial Task Force ("LHATF") that has developed a proposed Model Regulation. LHATF is a subgroup of NAIC regulators from 15 states. NY and CA are always on the subgroup but 3 other states rotate out every year.

**How does a Model Regulation developed by LHATF get to become the law of the land?**

LHATF will expose its draft model regulations for public comment and once agreement is reached, the regulation will go to the full NAIC. If it is adopted by the NAIC, the baton passes to the individual states who may decide to adopt the model for their own state as it stands or with certain modifications or not at all. Once 26 states adopt the new model, it becomes mandatory after 3 years.

**What are some of the differences between the PBR reserves and the current reserve methods?**

Reserve methods will no longer be set in stone but will

be subject to the judgment of the appointed actuary. Under the current reserve method, reserves for a whole life policy are calculated using a valuation interest rate in effect in the year the policy is issued; reserves are then calculated using this interest rate without regard to what changes may occur in interest rates in the future. Under the PBR method, the interest rate used to calculate the reserves will change annually. The mortality table used under the current reserve method is set by the Standard Valuation Law (currently it's the 1980 CSO table, but it will be changing to the 2001 CSO table beginning January 1, 2009) and remains the same throughout the life of the policy. Under the PBR method, the appointed actuary will be required to review the society's expenses and demographic experience (e.g., mortality, lapse rates) in setting the assumptions used to calculate the reserves. Expenses and lapses, which are ignored under the current reserve method, will be used for the PBR method.

**How will the reserve assumptions be set under the PBR method?**

The PBR reserve assumptions should be set on a "prudent best estimate basis that contains an appropriate level of conservatism when viewed in the aggregate". To produce that prudent best estimate, the Model requires the reserve to be the larger of a stochastic reserve (based on many scenarios) and a deterministic reserve (based on a single set of parameters). Once the assumptions are established, the reserve for each policy is then computed using a Gross Premium Valuation ("GPV") approach.

**What is a Gross Premium Valuation (GPV)?**

The GPV calculates reserves by taking the present value of benefits and expenses less the present value of gross premiums. This is very different from the current valuation approach, which determines the reserve as the present value of benefits (with no explicit consideration for expenses) less the present value of net premiums. Since the GPV uses realistic actuarial assumptions, the calculation will include a lapse assumption, which is a major departure from current practice.

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**Is there only one way to perform a GPV?**

There are a couple of methods that can be used to perform a GPV. However, the GPV style chosen by the LHATF is called the Greatest Value of Projected Accumulated Deficiencies (GPVAD). Under this method, each policy's reserves are projected forward and the accumulated reserves and the *accumulated assets backing that policy* are compared at each future valuation point. The largest difference in that comparison is then discounted back at the valuation discount rate to form the GPVAD for that policy. All the values for all policies are then aggregated.

**How much work is involved in switching over to a PBR approach?**

There will be a substantial amount of work to set up the systems to do the initial calculation. For those societies that perform an asset adequacy analysis, a lot of the work that is used for setting the assumptions in that analysis can be used for developing the PBRs. Another factor for determining the amount of work will be whether your society can use a deterministic calculation instead of a stochastic calculation.

**What are the differences between a deterministic calculation and a stochastic calculation?**

A deterministic calculation uses one projection and employs the actuary's best estimates with a margin. The stochastic reserve is a complicated calculation that involves projecting under numerous scenarios (1) assets, (2) benefits (including cash surrender benefits), (3) expenses (including commissions, general expenses and premium taxes), and (4) gross premiums. The actuary will vary not only the discount rate but also lapse rates, mortality rates and any other assumptions that may impact the results. Once you've run all the scenarios, the final version of the regulation will specify which of the scenarios to use for determining the stochastic reserve. The current thinking is that the NAIC will want to use the 35<sup>th</sup>-percentile (i.e., if you run 100 scenarios, you would ignore the 65 best results and use the next one for setting the reserve). If it can be demonstrated that the stochastic approach does not significantly differ from the deterministic approach, then you can rely on the deterministic approach for your PBRs.

**How will assets be used to calculate the PBR?**

Asset values will have to be projected to calculate the PBRs since future asset values will be needed in order to determine the GPVAD. Assets will have to be partitioned for each sector of the business (e.g., assets will have to be separated for those backing life insurance from those that back deferred annuities). Since assets must equal liabilities when the projection begins, the actuary must determine which specific assets to use and which ones to allocate to surplus.

**How will reserves under the PBR method compare with the current reserve method?**

Our "crystal ball prediction" is that reserves will be larger under the PBR method than they are under the current reserve method because of the fact that expenses need to be incorporated into the calculation. Certain factors such as the ability to use (a) a higher interest rate, (b) a current mortality table, and (c) lapses in the calculations will probably reduce reserves. However, inclusion of expenses will offset most of those items. When coupled with the cash value floor (which will limit the amount by which reserves can be reduced), we therefore think reserves will increase under the PBR method.

**When will all this take place?**

The ball is currently in LHATF's court. The current aspiration is that it will be approved by the NAIC in 2007 at which time the states will begin adopting it. We feel that this is highly optimistic and we agree with other observers that feel that 2010 or later is a more realistic target date for state adoption of such a dramatic change.

Many issues are still unaddressed, such as:

- Will the model apply to some or all blocks of business?
- Will there be a small company exemption?
- Which scenarios should be chosen given the overall mandate for prudence?
- Will the Model apply to all business or only future business?

The above changes certainly are dramatic and make for interesting times. But is the Chinese greeting "may you live in interesting times" a blessing or a curse? ❖

## Regulatory Update - I

### New York Disaster Response Filing

If you have not already done so, it is time to file your disaster response and business continuity plans with New York State. To do this, you must complete the Disaster Response Plan Questionnaire and the Business Continuity Planning Questionnaire. Copies of both questionnaires can be completed online at <http://www.ins.state.ny.us/dprcldoc.htm>.

NY wants your disaster plan to be based on a risk analysis of all possible disasters that may affect your ability to service your NY policyholders. While you do not have to file the analysis with the Department at this time, they may request it in the future. The disaster plan must be reviewed and approved by senior management or the Board of Directors and a Primary and Secondary coordinator appointed to lead the response.

The questionnaires should have been filed by June 1, 2006 and will have to be updated annually thereafter on June 1<sup>st</sup>. Even if there is no change in your disaster plan from one year to the next, a null return

## About CPS

*CPS Actuaries and Computer Programming & Systems, Inc.*

CPS is an independent company with over 35 years of client service. We offer a wide range of computer and actuarial services, including the following:

- Actuarial valuations
- Annual and quarterly statement preparation
- Policy administration software
- NAIC compliant illustration software
- Web site hosting, instant messaging and e-mail
- Design, install and maintain local and wide area networks
- Hardware & software installation and upgrades

For more information regarding our services, please call us at **203-324-9203**, or visit our web site at [www.cpsincorp.com](http://www.cpsincorp.com)

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## Regulatory Update - II

### Update on the Valuation Interest Rate

In our July 2005 we advised our readers that a decline in the Moody's index rate during the period July 2004-June 2005 to 3.97% triggered a fall in the minimum valuation interest rate to 4%. Despite the increases in 2006 in the general level of interest rates, the mean rate for the period July 2005-June 2006 was only 4.00% which is virtually unchanged from the previous year. As such, the maximum life insurance valuation interest rate will remain at 4% for 2007.

### Illinois requires resubmission of annuity contracts:

The IL Insurance Department has adopted modifications to the Standard Non-Forfeiture Law (SNFL) for annuity products beginning July 1, 2006. Even if your forms already comply with the new law (e.g., the minimum guaranteed interest rate is 3% or higher), annuity forms must be re-filed with the IL Department.

Since the beginning of this year, IL's filings are all paperless and electronic filing requires an officer's signature in .gif or similar format. Please feel free to contact us if you require assistance with IL filings.

### New York Replacement Regulation #60 Filing

The NY Department has set up a formal system at [www.ins.state.ny.us/reg60/reg60report.xls](http://www.ins.state.ny.us/reg60/reg60report.xls) for you to advise them of any replaced insurers who have been notified of a replacement but have not provided you with necessary information to complete the Disclosure Statement. The initial return is due on August 1, 2006 for the period April 1, 2006 to June 30, 2006; subsequent filings will be required to be completed annually by February 1<sup>st</sup>. This new filing replaces the current method of filing a letter quarterly to notify the NY Department about the insurers that do not provide the necessary information. ❖

## Interest Rate Monitor

The following are some key interest rate benchmarks:

<i>Benchmark</i>	<i>Current</i>	<i>3 Months Ago</i>	<i>1 Year Ago</i>
Fed Funds	3.19%	2.81%	1.25%
Prime Rate	6.25%	5.75%	4.25%
30 yr mortg	5.28%	5.35%	5.61%

Source: [www.bloomberg.com](http://www.bloomberg.com) as of July 13, 2005.