

PBA: The big picture



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By now, the vast majority of actuaries are probably at least somewhat familiar with the concept of the principle-based approach (PBA) to calculating statutory reserves for insurance liabilities. Although it has yet to be fully implemented, it will be soon, and the topic makes endless rounds at conferences, continuing education seminars, and insurance journals.

One place that PBA may not be as well-known is in the executive boardroom. Directors and managers may know that change is coming, but not understand it well enough to deal with the consequences of that change. A basic understanding would include what PBA is, why it exists, and how it will affect corporate governance and the day-to-day business of the organization. Since those effects may be profound in many cases, actuaries need to find ways of communicating the characteristics of PBA and the reasoning behind it to individuals with little time on their hands and varying degrees of actuarial knowledge. With the PBA initiative gaining momentum, now is the time to begin this process.

The purpose of this paper is to provide these two critical elements: a relatively easy-to-understand narrative of what PBA is and why it came about, along with a discussion of its likely impact on corporate governance—couched in language that accurately communicates the essence of PBA without becoming bogged down in the typical highly detailed language of actuarial textbooks. It is not necessarily intended to be given to management in its entirety, but to be used as a way to prepare for talking with those individuals and groups who need an understanding of PBA that is not available from the standard materials. It will also serve as an overview of the history and effects of PBA for actuaries who find themselves drowning in technical overload. Finally, it provides a preview of what PBA regulations will likely require from company officers and managers.

THE HISTORY OF PBA

After the National Association of Insurance Commissioners (NAIC) establishes a model for the statutory framework for reserve calculations, that framework is then adopted by states, often in somewhat modified form. Today, the NAIC is moving resolutely toward allowing and encouraging the use of PBA as part of its new statutory framework. To understand why this is happening, it's important to understand what came before PBA: the rules-based approach. Rules-based and principle-based approaches share the same goal—to calculate the reserves required to make sure that insurers remain solvent even in the case of unexpected adverse

events. However, the methods differ substantially in how they arrive at that goal.

The rules-based approach, as its name applies, sets out specific rules for calculating each type of reserve. It is prescriptive and highly standardized, requiring all companies to perform the calculations the same way. It uses standard, industry-wide mortality tables. It prescribes the use of an interest rate taken from the average returns on long-term bonds. For most policies, it does not take lapse rates into account but requires companies to hold the full reserve on every policy in force, and the reserve cannot be less than the cash surrender value of all in-force policies. In theory, rules-based approaches are easier to administer and apply (though we'll see why they aren't always so, in a moment).

Assuming that the industry remains fairly standardized, that companies share roughly the same experience, and that risk-management approaches are more or less constant across the industry and over time, the rules-based approach is attractive. It makes it easy to judge whether companies are following the rules, because the rules are the same for everyone. It is quite conservative, which on its face would appear to be good for insureds who don't want to be left with worthless policies from an insolvent insurance company. And it would appear to provide a level playing field for insurers.

The rules-based approach worked for a long time, because insurance was, for the most part, a conservative business that changed very slowly. However, as insurers started to create more innovative products (partly in response to the go-go economy and financial markets of the 1980s and 1990s), the system grew increasingly unwieldy.

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EXTRA CREDIT: REINSURANCE UNDER PBA

Rules-based methods create “mirror-image reserves” for most reinsurance contracts, in which the credit gained by the ceding company equals the reserve of the assuming company. PBA treats ceding and assuming companies differently from one another, enabling each party to adopt margins and assumptions appropriate to its business. The ceding company uses assumptions that match those used to calculate reserves for the reinsured policies. The assuming company uses experience relevant to the lines of business of which the reinsured policies are part. Both the ceding company and the assuming company take into account the terms of the reinsurance agreement. Allowing different approaches is consistent with PBA; each company can calculate reserves in a manner that most closely matches the realities of its business.

EXTRA CREDIT: DERIVATIVES UNDER PBA

Derivatives, though commonly used in the insurance industry, are famously difficult to understand. Fundamentally, they are financial instruments whose value is dependent on and changes according to inherent variables. PBA sets out specific criteria under which derivatives can be included in cash flow projections. If the criteria are met, the derivatives are considered to be part of what is called a “clearly defined hedging strategy.” The strategy must include the risks being hedged, the risks not being hedged, the objectives of the hedge, the financial instruments used, the applicable hedge trading rules, and more. The intricacy of hedging strategies and the underlying derivatives makes them difficult to include in actuarial projections. To resolve this issue, PBA allows companies to model the effects of hedging separately from cash flow results and then combine the two using methods that are consistent with the objectives of the valuation manual. This is yet another example of how PBA can be used to manage complex situations that would break rules-based approaches entirely. As long as the methods are deemed consistent with the objectives of the regulation (and certified as such by qualified actuaries), they can probably be used.

call in the actuaries to interpret the regulations. By 2005, there were more than 40 actuarial guidelines related to the SVL for everything from non-level death benefits to immediate payment of claims. Clearly, the assertion of simplicity as an advantage of rules-based approaches had become suspect.

Another important reason for change was the use of standard mortality tables. At first glance, this would appear to be the simplest and most equitable basis for calculating reserves. As well, one could consider that data as comprehensive as those that form the basis of the Commissioner’s Standard Ordinary Mortality Table would be widely applicable. However, another industry shift rendered these assumptions inaccurate. Increasingly sophisticated underwriting practices and growing competition led companies to market to ever-healthier populations, causing those companies’ risk profiles to differ significantly from average. Forcing those companies to use

standard mortality tables rather than individual experience made the calculation of accurate reserves more difficult rather than less, potentially requiring companies to hold excessive reserves that would not reflect the true risk profile of their population. On the other hand, companies with less healthy populations would gain a balance-sheet advantage from using standard mortality tables, which would provide an optimistic view of their risks and lead them to have lower reserve requirements than they ought to. The system simply couldn’t keep up with the changing underwriting practices.

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One might also think that rigid rules are at least easier to enforce than flexible ones. However, this, too, proved not to be the case. Relying on inflexible rules in a fast-changing market can create situations where following the letter of the law produces results not intended by regulators. Take guaranteed level-term life plans as an example. Under the rules-based Commissioner’s Reserve Valuation Method, gross premiums over the life of the policy were used to calculate patterns and levels of reserving. This allowed companies to set the level term rates low during the initial level-term portion of the policy, making up the difference after the level-term period expired. These products, while attractive to consumers, tended to be inadequately reserved for during the latter portion of the level-term period as mortality rates climbed but the premiums remained static.

Faced with these issues—the growing body of interpretations needed to sustain the regulations’ relevance, the lag between standard mortality tables and individual company experience, and the growing number of products that responded creatively to the rules to minimize reserves—the NAIC developed the regulation commonly known as Triple X (Valuation of Life Insurance Policies Model Regulation). It provided insurers with a valuation mortality rate that matched their experience more closely. It also required them to value the level-term period separately from the tail period through the segmented methodology.

However, it was still a rules-based approach, attempting to address multiple products and risk-management strategies in a uniform way. The words of the regulation did not prevent companies from issuing secondary guarantee universal life policies with creative, reserve-minimizing designs. Reacting to this development, an actuarial guideline was issued requiring these companies to reserve for those policies in the same segmented fashion applied to term life. The resulting reserve requirements were widely seen in the industry as excessive, and insurers began looking for a new approach.

With practically everyone in the insurance industry—regulators, insurers, and actuaries alike—recognizing the inadequacy of the rules-based approach, the time was right for PBA. A more flexible system would allow regulators to address all types of insurance,

even products not yet invented. It would be easier to maintain, because the principles would remain constant even as the details of implementation changed with the industry. And, if properly constituted, it could meet the objective of ensuring solvency without being so conservative as to punish those companies who maintain a lower risk profile or want to design innovative products not strictly covered by the rules. In short, adopting PBA was widely agreed to be not only a good step, but a necessary one.

WHERE WE ARE TODAY

We can look at the principles that form the basis of PBA to understand the differences between it and the rules-based approach. They are laid out in the NAIC's SVL. Instead of dictating exactly how to calculate reserves, PBA describes principles that form the basis of this methodology. It is hoped that PBA will fix some of the problems with rules-based approaches discussed above.

For example, the new approach requires companies to "capture all benefits, guarantees, and...risks...associated with each product and the funding of the risks." Instead of prescribing which benefits, guarantees, and risks companies must capture, it simply says they must capture all of them. A company can no longer avoid accountability and still follow the letter of the law simply by designing products that have risks other than those required to be accounted for in a regulation; under PBA, *all* risks must be captured. It goes on to say that the reserve calculations must "reflect a level of conservatism consistent with the objectives of statutory financial reporting"—enshrining in law the notion that companies must follow the spirit of the law and leaving the letter of it open for interpretation.

Additionally, it takes care of the issues inherent in requiring the use of a specified set of mortality tables. The SVL allows companies to use their own "anticipated experience to establish assumptions for risks specific to the company." Companies must submit experience data to a central database, enabling even companies without statistically credible data to find experience appropriate to their risk profile.

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THE IMPACT OF PBA ON CORPORATE GOVERNANCE

Just because PBA is somewhat more open-ended than rules-based approaches does not mean it creates a free-for-all. In fact, PBA

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calls for even more stringent reporting standards than rules-based approaches. In a way, it shifts the burden of determining the fitness of a reserve calculation approach from regulators to insurers. This is where company officers and managers will feel the most impact—and why it is important for them to understand PBA in as much detail as necessary to fulfill their responsibilities to the enterprise.

Moreover, the SVL contains explicit requirements of company management. It dictates that they must "adopt internal controls consistent with the requirements of the NAIC Model Audit Rule," ensuring that all material risks are included and valued according to the Valuation Manual (VM), which contains the detailed requirements for valuation of reserves under PBA. A yearly evaluation of the controls must be presented to the company's board of directors as well as the insurance commissioner. Beyond that, the NAIC is debating the possibility of issuing specific requirements detailing the responsibilities of directors, managers, and actuaries in companies using PBA.

These requirements would give boards significant new tasks. They will have to review the alignment between PBA infrastructure and other risk-management processes. Not only will they be required to review PBA valuation results, but they will also have to make judgments about how conservative the results are, understand unusual findings, and sign off on results or order modifications to results that are not in compliance. There will be additional certifications and reports related to PBA and governance. Directors will be responsible for appointing an independent actuary responsible for peer review. Senior managers will have new responsibilities; they will have to execute the tasks that will be reviewed by the board. They must implement the controls necessary to ensure complete coverage of risks and harmony with the VM.

The better managers are educated in the realities of PBA, the better they will be able to carry out their duties under the new regulations. Given the potential effects on a company's reserve requirements and regulatory compliance, those responsible for the company's success should have sufficient incentive to familiarize themselves with the topic.

And, as the regulations are actuarial in nature, actuaries should bear some of the responsibility for guiding the way. Admittedly, guiding anyone through one of the most rigorous analytical disciplines in the business world is not an easy task. By providing some easy-to-grasp context for how and why PBA came about and why directors and managers should care, we hope that this paper has helped clear the way.

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