

## Budget Change Proposal - Cover Sheet

DF-46 (REV 08/15)

Fiscal Year 2016-17	Business Unit 0845	Department California Department of Insurance	Priority No. LEG - 1
Budget Request Name 0845-011-BCP-BR-2016-GB		Program 0520 – Regulation of Insurance Companies and Insurance Producers	Subprogram 0520019 - Regulatory

Budget Request Description  
Principle-Based Reserving

## Budget Request Summary

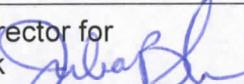
The California Department of Insurance (CDI) is requesting an increase in special fund expenditure authority of \$925,000 for Fiscal Year (FY) 2016-17 and \$894,000 for FY 2017-18 and ongoing to fund 5.0 positions to address the increased workload related to Principle-Based Reserving (PBR) that resulted from the enactment of Senate Bill (SB) 696 (Chapter 658, Statutes of 2015). Additionally, the CDI is requesting approval of Budget Bill Language so that in the event the super majority states do not adopt PBR, resources previously approved for PBR implementation will be reconsidered.

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed	
Does this BCP contain information technology (IT) components? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO	Date

For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance.

FSR  SPR Project No. Date:

If proposal affects another department, does other department concur with proposal?  Yes  No  
*Attach comments of affected department, signed and dated by the department director or designee.*

Prepared By Jamison LaCasse	Date 12/14/2015	Reviewed By Crista Hill 	Date 12/14/2015
Department Director for Erika Sperbeck 	Date 12/14/2015	Agency Secretary N/A	Date

## Department of Finance Use Only

Additional Review:  Capital Outlay  ITCU  FSCU  OSAE  CALSTARS  Dept. of Technology

BCP Type:  Policy  Workload Budget per Government Code 13308.05

PPBA Original signed by Jeff Carosone	Date submitted to the Legislature 1-7-16
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2015 DEC 15 AM 11:40

DEPARTMENT OF FINANCE  
COR/JUD

# BCP Fiscal Detail Sheet

BCP Title: Principle-Based Reserving (SB 696)

DP Name: 0845-100-BCP-DP-2016-GB

## Budget Request Summary

	FY16					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Positions - Permanent	0.0	5.0	5.0	5.0	5.0	5.0
<b>Total Positions</b>	<b>0.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>
Salaries and Wages						
Earnings - Permanent	0	539	539	539	539	539
<b>Total Salaries and Wages</b>	<b>\$0</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>
Total Staff Benefits	0	260	260	260	260	260
<b>Total Personal Services</b>	<b>\$0</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>
Operating Expenses and Equipment						
5301 - General Expense	0	30	4	4	4	4
5302 - Printing	0	1	1	1	1	1
5304 - Communications	0	3	3	3	3	3
5320 - Travel: In-State	0	6	6	6	6	6
5320 - Travel: Out-of-State	0	10	10	10	10	10
5322 - Training	0	3	3	3	3	3
5324 - Facilities Operation	0	46	46	46	46	46
5344 - Consolidated Data Centers	0	2	2	2	2	2
5346 - Information Technology	0	25	20	20	20	20
<b>Total Operating Expenses and Equipment</b>	<b>\$0</b>	<b>\$126</b>	<b>\$95</b>	<b>\$95</b>	<b>\$95</b>	<b>\$95</b>
<b>Total Budget Request</b>	<b>\$0</b>	<b>\$925</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>
<b>Fund Summary</b>						
Fund Source - State Operations						
0217 - Insurance Fund	0	925	894	894	894	894
<b>Total State Operations Expenditures</b>	<b>\$0</b>	<b>\$925</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>
<b>Total All Funds</b>	<b>\$0</b>	<b>\$925</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>
<b>Program Summary</b>						
Program Funding						
0520019 - Regulatory	0	925	894	894	894	894
<b>Total All Programs</b>	<b>\$0</b>	<b>\$925</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>	<b>\$894</b>

**Personal Services Details**

Positions	Salary Information			CY	BY	BY+1	BY+2	BY+3	BY+4
	Min	Mid	Max						
1367 - Sys Software Spec III (Tech) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
1583 - Sr Programmer Analyst (Spec) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
5553 - Statistical Methods Analyst III (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
6086 - Sr Life Actuary (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
VR00 - Various (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
<b>Total Positions</b>				<b>0.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>
Salaries and Wages				<b>CY</b>	<b>BY</b>	<b>BY+1</b>	<b>BY+2</b>	<b>BY+3</b>	<b>BY+4</b>
1367 - Sys Software Spec III (Tech) (Eff. 07-01-2016)				0	89	89	89	89	89
1583 - Sr Programmer Analyst (Spec) (Eff. 07-01-2016)				0	81	81	81	81	81
5553 - Statistical Methods Analyst III (Eff. 07-01-2016)				0	65	65	65	65	65
6086 - Sr Life Actuary (Eff. 07-01-2016)				0	114	114	114	114	114
VR00 - Various (Eff. 07-01-2016)				0	190	190	190	190	190
<b>Total Salaries and Wages</b>				<b>\$0</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>	<b>\$539</b>
Staff Benefits									
5150900 - Staff Benefits - Other				0	260	260	260	260	260
<b>Total Staff Benefits</b>				<b>\$0</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>
<b>Total Personal Services</b>				<b>\$0</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>	<b>\$799</b>

## Analysis of Problem

### A. Budget Request Summary

The California Department of Insurance (CDI) is requesting an increase in special fund expenditure authority of \$925,000 for Fiscal Year (FY) 2016-17 and \$894,000 for FY 2017-18 and ongoing to fund 5.0 positions to address the increased workload related to Principle-Based Reserving (PBR) that resulted from the enactment of Senate Bill (SB) 696 (Chapter 658, Statutes of 2015). Additionally, the CDI is requesting approval of Budget Bill Language so that in the event the super majority states do not adopt PBR, resources previously approved for PBR implementation will be reconsidered.

### B. Background/History

Reserve calculations for life insurance have been unchanged for many decades. Currently, insurers use a formula-based static (one-size-fits-all) approach to calculate reserves for products. However, insurance products have increasingly grown in sophistication and complexity which has led to a need for a new reserve method. Discussions held among various state Insurance Commissioners and the insurance industry (through the National Association of Insurance Commissioners [NAIC]) resulted in the adoption by the NAIC of a PBR Model in September 2009.

During the FY 2014-15 budget cycle, CDI sought and received conditional approval from the Administration and the Legislature for resources to prepare for the implementation of the PBR. The spending authority of \$463,000 in FY 2015-16 for 4.0 new positions is currently authorized and triggered (Item 0845-001-0217 Provision 2) by the enactment of SB 696. These resources were based on initial estimates and intended to cover the workload associated with preparing the Department to act when the Standard Valuation Law was enacted and are insufficient to implement the PBR functions required by SB 696.

This principle-based model was introduced into the Legislature as SB 696 with the joint support of Insurance Commissioner Dave Jones and the insurance industry. Currently, 37 states representing 67 percent of United States (U.S.) premium have adopted the PBR law. PBR will be prospectively effective only because PBR has to be nationally adopted. Policies issued prior to the adoption of PBR, or not covered by PBR, will still be covered by the current standard valuation laws. PBR will become operative and the standard for life insurance reserves on January 1 after legislative adoption by 42 states representing at least 75 percent of total U.S. premium.

The Commissioner worked with the Legislature and the insurance industry during the course of discussions on SB 696 to obtain language in the bill to provide additional resources for the Department to implement the more complex review required for PBR. This language is contained in Section 24 of SB 696 with the addition of Section 10489.992. A dedicated funding source from all life insurance companies that are subject to PBR is also authorized in Section 24.

PBR is a stochastic model tailored to insurer product designs and risks. It requires forecast based mathematical models which rely on credible past company experience. A stochastic model is a test of insurance variables to measure future liabilities based on past company experience with policyholders. PBR introduces the use of actuarial judgment in allowing insurers to determine life insurance reserves. The stochastic reserve is based on net cash flows projected under multiple economic scenarios based on randomly generated future interest rates and equity return assumptions. The introduction of stochastic PBR models adds a need to review different programming platforms to generate future modeled reserves which are not formula driven, in addition to review of reserve assumptions.

The Department's current life insurance reserve methodology is changing significantly from a calculation that has been used for over 100 years to a new actuarial methodology that is based on stochastic reserves and equity return assumptions. This new methodology uses predictive modelers to manage data in a variety of contexts. The CDI's role is changing from ensuring that reserves are based on the pre-established formula to determining if the data used to conduct the analytics is correct/relevant as a sample for analysis; that tools used to conduct the analysis are appropriate; and that the results and patterns provided by the insurance company genuinely reflect the trends that the reserves are based on.

## Analysis of Problem

### Financial Surveillance Branch (FSB) - Actuarial Office Resource History (Dollars in thousands)

Program Budget	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Authorized Expenditures <sup>1/</sup>	\$1,396	\$1,452	\$1,942	\$1,992	\$2,530
Actual Expenditures <sup>2/</sup>	\$1,377	\$1,339	\$1,974	\$2,100	\$2,530
Authorized Positions <sup>3/</sup>	15.0	15.0	15.0	18.0	22.0
Filled Positions <sup>3/</sup>	14.0	15.0	15.6	14.0	22.0
Vacancies <sup>4/</sup>	1.0	0.0	0.0	4.0	0.0

<sup>1/</sup> Based on allotment.

<sup>2/</sup> Based on FM 13 year-end budget reports.

<sup>3/</sup> Based on Salaries & Wages (7A).

<sup>4/</sup> Vacancies as of year-end.

### Information Technology Division (ITD) – ITD Office Resource History (Dollars in thousands)

Program Budget	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Authorized Expenditures <sup>1/</sup>	\$323	\$345	\$583	\$577	\$482
Actual Expenditures <sup>2/</sup>	\$332	\$399	\$548	\$647	\$482
Authorized Positions <sup>3/</sup>	2.0	2.0	4.0	4.0	3.0
Filled Positions <sup>3/</sup>	1.9	2.4	3.9	3.0	3.0
Vacancies <sup>4/</sup>	0.1	0.0	0.1	1.0	0.0

<sup>1/</sup> Based on allotment.

<sup>2/</sup> Based on FM 13 year-end budget reports.

<sup>3/</sup> Based on Salaries & Wages (7A).

<sup>4/</sup> Vacancies as of year-end.

#### C. State Level Considerations

Maintenance of a viable, competitive, and fair insurance marketplace is one of the Commissioner's highest priorities. This proposal is consistent with the Department's strategic goal to ensure the solvency of insurance companies and to provide transparent, consistent, timely communications, and oversight of the insurance industry. It is also consistent with the NAIC's mission to assist state insurance regulators, individually and collectively, in serving the public interest and achieving the fundamental insurance regulatory goals in a responsive, efficient, and cost effective manner. Holding more reflective insurance liabilities is expected to result in lower insurance premiums. It is not expected that this proposal will have an effect on other State agencies.

#### D. Justification

California Insurance Code (CIC) Section 10489.992 (a)(1) as adopted under SB 696, states that the Commissioner may hire and assign department staff, and retain non-department actuaries and other consultants, to assist the Commissioner with preparing and implementing, directly or indirectly principle-based valuation.

From the submittal of CDI's FY 2014-15 BCP in 2013 to the enactment of SB 696 on October 8, 2015, PBR has evolved which required the Department to re-evaluate responsibilities and workload. CDI now has a better understanding of all that is required as a result of the enacted legislation. The enactment of PBR requires that additional resources be established to support the implementation of this new process. As a result, the Department is requesting an increase in special fund expenditure authority to fund 5.0 positions to address the increased workload that will result from the enactment of SB 696. The Department is requesting one Chief

## Analysis of Problem

Systems Actuary (CSA), Senior Life Actuary (Sr. LA), Statistical Methods Analyst III (SMA III), Systems Software Specialist III (SSS III), and Senior Programmer Analyst (Sr. PA). See Attachment A – Workload Analysis.

Pursuant to CIC Section 10489.992 (a)(2) the Commissioner may appoint a person to serve as an expert in preparing to implement and implementing, directly or indirectly, principle-based valuation. That person may be an employee of the department exempt from the state civil service system within the meaning of Section 4 of Article VII of the California Constitution. The person's salary or compensation shall be fixed by the Commissioner and effective and payable without approval of the Department of Human Resources, pursuant to Section 19825 of the Government Code. The Department proposes to appoint a CSA to implement this requirement.

The Sr. LA will design the audit plan and oversee the company audit schedules and timelines. They will attend NAIC meetings and actively work with NAIC staff experts and other regulators charged to review Principle Based calculations. They will coordinate comparable testing of Principle Based reserves with NAIC staff for specific life insurers.

The SMA III will review PBR modeling programs of sizeable authorized California life insurers to ensure the modeling programs do as described in company documentation. The analysts will read and test company statistical models and software and documentation to make sure it will accomplish what is intended by the Standard Valuation Law and the company.

The introduction of stochastic PBR models adds a staffing need to review different programming platforms to generate future modeled reserves, which are not formula driven. This will require FSB – Field Examinations Division (FED) to partner with the Administration and Licensing Services Branch - ITD to provide this technical support.

The PBR Information Technology (IT) activities will be led by a newly created Master Data Manager (SSS III) whose functions will include assisting the actuaries in evaluating data structures, relevance, and organization. The SSS III will also perform all system setup, data governance and architecture, and data extracts. They will transform the extracted data from homogeneous or heterogeneous data sources and load the transformed data into the database or data warehouse for the actuaries to use.

The Sr. PA will be responsible, as needed, for evaluating the software scripts and small applications used by the examinees to evaluate capabilities, and develop custom reports for the examiners. This position will also be required to provide back-up support and expertise to the SSS III.

Once PBR is operative, the NAIC Valuation Manual allows up to a three-year transition to give insurers time to implement PBR for future sales. This protracted implementation will allow the CDI to formulate policies and procedures, recruit and train the necessary staff on insurance stochastic modeling. Typically, it would take 5-10 years for a recent college graduate to become skilled in evaluating life insurance liabilities. From that point forward, life insurers will begin to set policy reserves using PBR rules in the updated Valuation Manual. It is possible the initial PBR submissions will arrive in March 2017 with a significant number arriving in March 2018. It is imperative that CDI hire and train new staff as current actuarial staff in the Actuarial Office is already fully committed annually to reviewing the current deterministic reserve methodology for about 100 life insurers and cannot absorb the new workload associated with PBR. If this workload had to be absorbed, it would significantly reduce the number of reviews they could complete each year. If reviews were not completed timely, CDI would be less able to identify potential insolvencies.

The ITD is currently fully allocated and all staff are committed to working on CDI's priority IT project, the CDI Menu Modernization Project (CMMP), or supporting existing CDI application systems. Additionally, the CDI does not currently have technical staff with the expertise required for the stochastic PBR models. The ITD would require that these technical staff be familiar with the traditional software that life and annuity actuaries use and can develop and/or maintain pricing models, valuation models, and other functionalities. Ideally, they will also have experience with predictive modelers, catastrophe risk modelers, and actuaries.

The PBR methodology is beneficial to insurers/industry because it will allow life insurers to set and hold insurance liabilities which are more reflective of their life insurance past experience. Insurers expect this will result in a significant reduction in policy reserves for Term Insurance and right-sizing of reserves for Universal

## Analysis of Problem

Life insurance. Some insurers expect to provide a lower priced life insurance to consumers because they will have a lower cost of capital.

Without ITD's technical support, implementation of the PBR model will be at risk for delays, reduced data quality, and ultimately, failure to perform the evaluations adequately, which would also negatively impact California consumers. In addition, failure to add actuarial staff as described above will require existing Department actuaries to continue to do a more limited review of the Actuarial Opinion Memorandum without time or the ability to review stochastic models and sample output.

As previously indicated, PBR will be effective only after the revisions to the law have been adopted by the super-majority of states representing 75 percent of total U.S. premium. Therefore, CDI is proposing the following Budget Bill Language to stipulate that resources previously approved for PBR implementation will be reconsidered should PBR not be adopted.

*Of the funds appropriated in this item under Schedule (1) 0520 – Regulation of Insurance Companies and Insurance Producers, \$1,388,000 and 9.0 positions are available to prepare to implement and/or implement Principle Based Reserve (PBR) actuarial methodology pursuant to Chapter 658, Statutes of 2015 (SB 696). PBR will become effective only after a supermajority of states, representing 75 percent of written premium, adopts the law. If the requisite number of states fail to adopt PBR by June 30, 2017, then this appropriation shall be reconsidered. The Department of Insurance shall periodically update the Department of Finance and the Legislature on national adoption.*

It is critical this BCP and requested resources are approved in order to comply with the mandates of SB 696; otherwise, the Department will not be able to adequately prepare for the industry shift to PBR, leaving California behind changing technology in the industry and thus puts California insurance consumers at risk. The inability to adequately review principle-based reserves may result in insolvencies which could result in delays or reductions in payments being made to policyholders and claimants.

### E. Outcomes and Accountability

The PBR team will determine if life insurer models operate as expected and prescribed in the pending Standard Valuation Law. Their mission will be to identify programming errors or conclude if PBR programs will correctly operate. Success will be measured by the number of insurer reviews completed and minimizing potential insolvencies.

The ITD team will partner with the PBR team with implementing and supporting PBR and providing technical expertise that will ensure quality outcomes and program success.

### F. Analysis of All Feasible Alternatives

**Alternative 1** - Approve as requested.

#### Pros:

- Provides necessary resources to comply with the mandates of SB 696 without compromising existing workload.
- CDI will be able to efficiently and effectively serve and protect consumers.
- Provides a consistent revenue source for PBR activities.
- Proposed Budget Bill Language provides the opportunity to reconsider previously approved resources for PBR in the event PBR is not adopted by the super majority.

#### Cons:

- Additional costs passed on to insurers.
- Growth in State government.

## Analysis of Problem

**Alternative 2** - Employ consulting firm(s) with the ability to review PBR program logic and documentation.

Pros:

- Provides resources to comply with the mandates of SB 696.
- No position growth in State government.

Cons:

- Increased costs - Outside actuarial consultation is much more expensive than utilizing State personnel.
- Increased costs - \$400,000 annually to employ an external technical consulting firm(s) with the ability to provide master data management and evaluate examinee software.
- No internal State expertise will be developed, causing a long-term need for consulting services.

**Alternative 3** – Approve the request as limited-term.

Pros:

- Temporarily provides resources to comply with SB 696.
- Temporarily assures that insurer reviews are completed and minimizes potential insolvencies.
- Temporarily provides technical resources that will assist the actuaries in evaluating data structures, relevance, and organization.

Cons:

- Not a sustainable solution.

**Alternative 4** - Deny the request.

Pros:

- No increased costs to CDI or insurers.
- No position growth in State Government.

Cons:

- Inability to comply with mandates of SB 696.
- Increase review time for large insurers and creates backlog in workload.
- Actuarial staff will not be able to review company Actuarial Memorandum utilizing PBR based reports due to greater complexity.
- Actuarial staff will not review program logic and documentation diminishing quality of output.

### **G. Implementation Plan**

CDI will begin the hiring process for the additional 5.0 positions in April 2016 to ensure the positions are filled effective July 1, 2016. The hiring would be contingent upon approval of the positions included in the FY 2016-17 Budget Act.

### **H. Supplemental Information**

None.

## Analysis of Problem

### I. Recommendation

**Alternative 1** – This is the only alternative that will allow CDI to address the new workload required by SB 696. Denial of this proposal will not provide the resources necessary to comply with the mandate of the bill. As a result the Department will not be able to adequately prepare for the industry shift to PBR, leaving California behind changing technology in the industry and thus puts California insurance consumers at risk.

**Principle-Based Reserving (SB 696)  
 Workload Analysis  
 (in hours)**

	FY 2016-17 and Ongoing				
	Senior Life Actuary	Statistical Methods Analyst III	Chief Systems Actuary	Senior Programmer Analyst	Software Systems Specialist III
1. Review PBR Modeling Programs of California Life Insurers	1,560				
2. Staff and Lead Responsibilities	520				
3. Review PBR Modeling Programs of Large California Life Insurers		1,820			
4. Continuous training on more complex life insurance products and practices		260	260		
5. Review PBR Modeling Programs of Sizable California Life Insurers			1,820		
6. System Analysis and Design Evaluation				754	
7. System Performance				160	
8. System Administration				204	
9. Reports				532	
10. Script Evaluation				183	
11. Data Extract Transform and Load					60
12. Master Data Functional Expert					1,052
13. Configuration and Customization of PBR Program					220
14. Data Architecture					178
15. Data Analysis					320
<b>Total Hours <sup>1/</sup></b>	<b>2,080</b>	<b>2,080</b>	<b>2,080</b>	<b>1,833</b>	<b>1,830</b>
<b>Position Equivalent <sup>2/</sup> (Hours/1,778)</b>	<b>1.17</b>	<b>1.17</b>	<b>1.17</b>	<b>1.03</b>	<b>1.03</b>

<sup>1/</sup> Amounts shown reflect the Department needs.

<sup>2/</sup> CDI is requesting 5.0 positions to support these activities.