

THE FUTURE OF CALIFORNIA'S PUBLIC PENSION SYSTEM:
RIDING THE RETIREMENT WAVE OR WIPING OUT?

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THE FUTURE OF CALIFORNIA'S PUBLIC PENSION SYSTEM:
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A Thesis

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Abstract

of

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Statement of Problem

Defined benefit pension plans for private sector employees have been transitioning to defined contribution pension plans over the last 30 years. Some states have followed this trend to transition their public sector employee pension plans from defined benefit to defined contribution as well. California, a state currently offering defined benefit pensions to its employees, is in an economic position of growing deficit shortfalls and rising employer contribution rates. In the event California is unable to fulfill its fiduciary obligations, the state's taxpayers will bear the full burden of following through. Should California follow suite with the private sector and other states that have made the switch, and shift its existing pension system? What is then the best route for California's taxpayers to pursue: a defined benefit plan, a defined contribution plan, or some other alternative?

Conclusions Reached

Outcome matrix analysis helped to reach the conclusion that California's taxpayers should pursue a hybrid model for the public pension system. Extensive comparisons of transition factors, advantages, and disadvantages of multiple policy options help support this recommendation.

_____, Committee Chair
Robert Wassmer, Ph.D.

Date

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Chapter 1

INTRODUCTION & BACKGROUND

Introduction

Over the past century, saving for retirement has become a central part of the employers' promise to an employee, but times are certainly changing. Private pension funds have gone bankrupt, retirement benefits for private and public employees are being reduced or disappearing from employment contracts, and the projected depletion of the Social Security system means it can no longer be relied upon for guaranteed supplemental income at the levels paid out in the past. As a result, the risk and responsibility of retirement saving and investing is shifting from the employer to the employee. This changeover has already taken place to a large degree in the private sector and is now making its way into the public sector.

Across the United States, public pensions are transitioning from defined benefit (DB) plans, those that guarantee a lifelong retirement payout regardless of market change, to 401(k) style defined contribution (DC) plans, those with fluctuating values mirroring market variability. The National Association of State Retirement Administrators (NASRA) state that DC plans threaten to replace DB plans because the size and cost of unfunded pension liabilities are provoking a response in some states that the solution is to terminate the DB plan (Brainard and Fabry, 2005, p. 26). Brainard and Fabry (2005) also highlight the fact that if public entities continue to run huge unfunded liabilities through their defined benefit plans, they cannot maintain their financial position without major tax increases (p. 27).

The purpose of this thesis is to examine how other state and local governments have evaluated the desirability of a defined benefit versus a defined contribution plan, and how some have made the switch. I will use lessons learned from this examination to offer advice to the people of California on the path they should pursue on this issue. In the event that California voters desire a change in the pension system, they can achieve it in one of two ways. First, the Legislature can propose a bill, which both houses would vote on. It would require a 2/3 vote to pass and then be subject to Governor approval by signature in order to enact the bill as a constitutional amendment. Second, California's voters can engage the initiative process to bring upon the change they desire. The proposal will be subject to voter approval and passage by majority vote in order to enact the constitutional amendment.

Definition of Terms: DB, DC, Hybrid

Traditionally, there are two categories of pension plans, defined benefit and defined contribution. A defined benefit pension plan is one where at the time of hire an employee is guaranteed a lifetime annuity payment based on a pre-defined calculation, usually including factors such as age, years of service and highest salary earned by retirement. The benefit amount will not change with the market value of plan contributions. A defined contribution plan is one where the employee receives the market value of their plan contributions at the time of retirement. The amount depends on the return on investment and can be higher or lower than the total contribution amount. At the time of retirement, the DC employee will receive the total of their

contributions plus or minus any market fluctuations resulting from their fund investments.

For a defined benefit plan, the employer and sometimes the employee contribute funds over the span of employment. For a defined contribution plan, the opposite is true; the employee and sometimes the employer contribute funds over the span of employment. In a defined benefit plan, the employer pools and invests the contribution funds into a professionally managed trust account in order to maximize growth and fully fund the pension liabilities the employer has promised. For a defined contribution plan, the individual employee is responsible for the investment and management of their funds, and assumes the risk and reward of their investment decisions¹.

In addition to the two traditional forms of pension plans, DB and DC, there is a third and more recently introduced form of pension plan offering called a hybrid. Employers can offer hybrid plans with various combinations of benefits, but they come in two basic forms. The first form combines features of both DB and DC plans into a single plan, and resembles what is often recognized as a cash balance plan. A cash balance hybrid behaves in part like a DB plan by providing benefits based partly on the employee's length of service, and operates much like a DB plan in that the employer invests plan assets as a whole and bears the risk of investment gains and losses. This type of hybrid also behaves in part like a DC plan in that the employee benefit is based partly on the plan's investment return, and resembles a DC plan to the employee in that the

¹ Though with a DC plan, the employee is responsible for choosing and managing their individual investment account, there is usually a financial advisor available with certain DC plans that the employee can seek advice from.

employee typically has an individual account and receives the balance as a lump sum at separation (Cahill and Soto, 2003). The second form of hybrid plan contains two distinct and separate plan types: a traditional DB plan, normally with a lower multiplier; combined with mandatory participation in a traditional DC plan, though sometimes the employees are given the option of participating in the DB plan (NASRA, 2008). Sponsors do retain the investment risk with hybrid plans, but typically guarantee an investment return to employees so that the expected return on plan assets should cover the cost of these risks. Hybrid benefits also tend to grow more gradually and constantly over the employees career, similar to the growth in a defined contribution plan (Clark and Shieber, 2000).

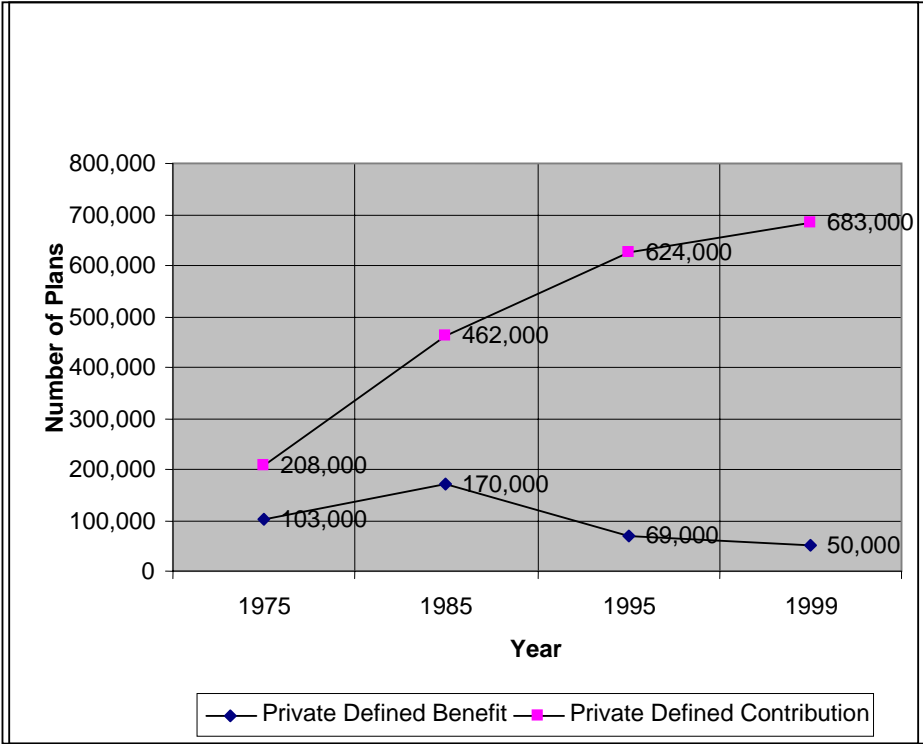
History & Background

In the United States, private sector pensions in the form of DB plans gained popularity in the late 1800s when railroads used them in an attempt to attract a stable and loyal workforce source. Spreading through America's largest private employers, by the 1920's pensions came to be an almost expected benefit of employment. Over the next six decades, defined benefit pension plans grew exponentially in popularity and practice, but in 1981 that began to change. In 1981, Johnson Companies designed and implemented the first 401(k) salary reduction retirement plan and a few months later the Internal Revenue Service sanctioned the use of employee salary reductions as a way to fund 401(k) plans. A 401(k), and other types of defined contribution accounts, is an employer sponsored retirement plan that allows employees to make limited pre-tax contributions, generally with an employer match up to a specified percentage (Murray, 2009). It did not

take long before this new wave of DC pension plans began to overtake the offerings of defined benefit plans altogether. In the 20th Century alone, private sector DB plan offerings declined by roughly half, while defined contribution plans increased threefold (McCourt, 2006). Figure 1.1 below shows the changes in the number of private pension plans since 1975.

Figure 1.1

Changes in the Number of Private Pension Plans



The California Public Employees Retirement System (CalPERS) established its defined benefit pension plan in 1932 during the Social Security era. At its inception, participation in the plan was only available to employees of the state, and later expanded to public agencies and classified school employees in 1939 (CalPERS, 2009). Other

states have also traditionally offered defined benefit pension plans as a retirement benefit to their employees, but these too have slowly begun to mirror the transition toward defined contribution and hybrid plans as shown in the private sector. Since the 1981 passage of the 401(k), roughly a dozen states and municipalities have moved away from offering traditional defined benefit pensions as their primary benefit plan (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). Table 1.1 below shows selected states that have made the switch.

Table 1.1

Selected State Pension System Switches by Year (Rajnes, 2002, September; Munnell *et al.*, 2008, January).

State (year)	Description of Change to State System
West Virginia (1991)	Closed teachers DB plan to new hires and created a DC plan due to unfunded liability (Changed back to DB plan in 2005).
Washington (1995)	Created a third retirement plan for members of Teachers Retirement System, consisting of a hybrid (combined DB and DC) with employer funding the DB portion and the employee funding the DC portion.
Colorado (1995)	Created a voluntary hybrid plan to better attract and retain employees and to satisfy local government demands for a DC option.
Michigan (1996)	Replaced the DB plan with a DC plan for both state employees (SERS) and public school employees (PSERS) hired after March 31, 1997, but membership for PSERS members was later repealed; conversion of previous employee balances permitted under certain circumstances; initiated a DC plan for participating local governments in the municipal retirement system.
Indiana (1997)	Both the Teachers Retirement Fund and the Public Employees Retirement Fund instituted a mandatory combined plan where employees were required to join a hybrid plan with both DB and DC plan components.
Vermont (1998)	Created an optional DC plan for new hires and then-current employees choosing to join at that time; the goal of the new plan was to assist in the hiring and retention of talented workers.
Ohio (1998)	Created a new alternative retirement DC plan for new education employees and to existing employees with less than five years' service.

Table 1.1
Selected State Pension System Switches by Year (Continued) (Rajnes, 2002, September; Munnell *et al.*, 2008, January).

State (year)	Description of Change to State System
Colorado (1999)	Allowed statewide elected officials, legislators, staff of the governor, and legislative staff to choose a DC plan in lieu of the existing DB plan.
North Dakota (1999)	Created a DC plan for elected and appointed officials and non-classified state employees; the predominant DB plan was modified to (1) include an employee 457 match (401(a) account) to encourage participation and (2) allow departing employees to take both employer and employee contributions to make the DB plan more portable.
Montana (1999)	Created an optional DC plan for PERS members effective in 2002; PERS includes state, municipal, and school district employees other than teachers.
South Carolina (2000)	Created optional DC plan for teachers and school administrators in the state's K-12 system; available to all state workers hired after June 30, 2002.
Florida (2000)	Created an optional DC plan for all state and local government employees, teachers, and school employees; it allowed current and new public employees a one-time option to switch between the DB and the new (401(a) DC plan; the new plan is 100 percent funded by the employer at the same rate as the co-existing DB plan; a key consideration in taking this step was to increase the public employers' ability to compete with the private sector in attracting and retaining workers.
Washington (2000)	Created a mandatory retirement plan for employees of state agencies, higher education, and local governments consisting of DB and DC portions; employers' contributions fund the DB portion while employee's contributions fund the DC portion; the arrangement is similar to one created for teachers in 1995.
Ohio (2000)	Both the Teachers Retirement Fund and the Public Employees Retirement Fund instituted a choice plan where members were able to choose between a DB, DC, or hybrid plan.
Oregon (2003)	Oregon Public Employees Retirement System introduced a combination hybrid plan made up of a defined benefit plan funded by the employer and a defined contribution plan funded by the employee. It required employees to join a plan with both a defined benefit and defined contribution component.

Table 1.1

Selected State Pension System Switches by Year (Continued) (Rajnes, 2002, September; Munnell *et al.*, 2008, January).

State (year)	Description of Change to State System
Colorado (2004)	Colorado Public Employees Retirement Association added a defined contribution option to their primary plan, which allowed employees to pick either a primary defined contribution plan or a primary defined benefit plan.
Alaska (2005)	Alaska Public Employees Retirement System and Alaska Teachers Retirement System both switched to a mandatory defined contribution plan, which required all employees to join.

Washington DC was one of the first municipalities to transition from a DB to a DC plan when they switched in 1987 (NASRA, 2008). Michigan in 1996 and Alaska in 2005 transitioned fully to DC plans, which required all new hires to join the defined contribution plan. Oregon in 2003 and Indiana in 1997 both adopted forms of combined hybrid plans where employees are required to participate in both a defined benefit and a defined contribution plan. Another eight states, Colorado, Florida, Montana, North Dakota, Ohio, South Carolina, Vermont, and Washington, retained their defined benefit plan and added the defined contribution plan as an option to their employees (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). These transitions were attributed to states having high numbers of workers who were not covered by Social Security and occurring in times of Republican control, leading some to think that Republican values of individual control over your investments and plan portability were driving factors (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). I will explore transition indicators further in the following chapter.

Recent Legislation

Beginning in 2005, California really became a battleground for those fighting over transitioning the state's pension system from a DB to a DC plan. In the 2004-2005 legislative year, two bills were introduced to transition the CalPERS DB plan to a 401(k) style DC plan for all future employees (CalPERS, 2008). Proponents claimed that increasing pension costs imposed by the DB plan benefit could not be sustained in times of dropping tax revenues. Opponents argued against the DC plan, stating the existing DB plan was less risky and that benefits should not be reduced for future employees (Batti, 2004). Then-Governor Arnold Schwarzenegger supported the transition, arguing that the current DB system was unfair to taxpayers due to the fact that pensions were promising benefits that were not able to be kept (Passantino and Summers, 2005, p 30).

In the 2005-2006 legislative year, nine additional pieces of legislation were introduced to reduce or eliminate the defined benefit pension plan offered by CalPERS. Six of these bills were introduced by then-Assemblyman Keith Richman, while then-Senator Roy Ashburn introduced three. Although supported by the Governor, Arnold Schwarzenegger, this was seen as a political move during a time when then-President Bush was pushing the privatization of Social Security (Gallagher, 2005). CalPERS along with public employee unions opposed the bills due to concern about the proposals' negative impact on the financial security of future retirees and the lack of death and disability benefits for CalPERS members (CalPERS, 2008). All failed to pass.

Passantino and Summers (2005) state that the fire California came under in regards to transitioning CalPERS from a DB to a DC plan is due to rising benefit levels in

times of market downturn, resulting in increased contribution costs (g. 51-57). Research states further that the benefit levels offered by CalPERS are higher than those of other state pension DB plans (Passantino and Summers, 2005, p. 62) and higher than those awarded to pensioners in the private sector (Center for Government Analysts, 2007).

Timeliness of the Issue

Paul McCauley, a Certified Public Accountant from Santa Monica, California, has most recently targeted the CalPERS pension system. In January 2009, he obtained permission to collect petition signatures for a measure he is calling *The McCauley Public Employee Pension Reform Act* (Bowen, 2009). If passed, this initiative will allow for public employee pension contracts to be renegotiated and existing and prospective retirees' vested benefits to be reduced. As the 2009 year begins, it is not surprising that CalPERS has come under fire again in light of the current market conditions and budget crisis for the state. As of February 2009, the market was down over 40 percent since its all-time high in October of 2008 (du Plessis, 2009). There has no doubt been a comparative reflection in enumerable individual 401(k) and defined contribution accounts. Likewise, with an announced \$42 billion combined budget deficit for the current and upcoming fiscal year in the state of California (Yi, 2009), public employers are undoubtedly wondering where they are going to get the funds to pay their soon to be increasing employer rates.

During an economic downturn, it is common for investment gains to slow with the economy, along with tax revenues (Archie and Ferrara, 2006). California, as is the nation, is in the midst of what some would call a recession, and most certainly times of

economic slowing. This means that in California, a state that offers and operates a defined benefit plan to over 1.5 million public employees (CalPERS, 2009, January), systems like CalPERS will most likely endure pension deficit problems due to drops in market performance, at a time when the state can least afford to make up the difference (Archie and Ferrara, 2006).

Sides of the Issue

Making the decision of which pension plan to implement has to take into account the affects of that choice on all the groups of people involved: the employees who are the members and beneficiaries, the employers who sponsor the plan, as well as the public, represented by taxpayers and the legislature. Each plan affects each group differently, and each group has their own interests to consider when considering the advantages and disadvantages of each. A defined benefit plan offering guaranteed benefit levels and set employee contributions may be favorable for a long-term worker. However, a defined contribution plan that relieves employer fiduciary responsibility and limits their contributions may be favorable to the employer. The public bears the burden of fulfilling the payments promised by defined benefit plans in the case CalPERS is not able to do so, which may lead some taxpayers to favor defined contribution plans by associating less risk with them. The public can show their voice directly through the initiative system, or representatively through the legislature.

Though there are differences in opinion, research literature has consistently exposed advantages and disadvantages for both defined benefit and defined contribution plans. First, DB plans produce higher investment results than DC plans (Almeida and

Fornia, 2008). This is based on the premise that DB plans are managed professionally, while the account holder, who usually has little investment knowledge, manages DC plans. Second, DB plans are less costly than DC plans on both the administrative and the investment side (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). Even in the case of an underfunded DB plan, it would be costlier to transition to a DC plan than to fund the DB plan properly (Olleman, 2007, 2009). Third, DB plans require lower fund accumulation than DC plans (Almeida and Fornia, 2008; Waring and Seigel, 2007). This is the result of longevity risk pooling, where participants in DB plans need only accumulate enough funds to support their average life expectancy, as opposed to funding closer to maximum life expectancy for DC plan holders. Fourth, DC plans are more mobile than DB plans (Murphy, Sonnanstine and Zorn, 2003; Findlay, 1997). With a DC plan, employees who sever employment are more able to take their accumulated pension funds with them when they leave. Fifth, the employer and the employee share risk disproportionately in both DC and DB plans. With DB and hybrid plans, the employer holds the risk that investment earnings will not meet the benefit promised (Munnell, Aubry and Muldoon, 2008, November; Clark and Shieber, 2000). Whereas, in a DC plan, the employee bears the burden of the investment decisions (McCourt, 2006). These claims, which I will discuss much more in depth in the next chapter, will help to develop the framework used to judge which plan California should pursue.

My Client: State of California

California offers a defined benefit pension plan for the employees of participating state and public agencies, administered by CalPERS. Therefore, upon retirement, the

qualified employees will receive a lifelong monthly annuity payment based on a calculation including their years of service, age, and highest monthly salary by the time of retirement. During the employee's duration of employment, they and their employer pay a percentage of the employee wages into the CalPERS system on a monthly basis in pre-tax dollars. CalPERS invests the funds with the goal of maximizing investment return over the long-term at the lowest possible risk. The employee's contribution portion never changes. However, the investment performance of the holdings chosen by CalPERS and their investment professionals dictate the employer contribution portion. If CalPERS realizes high investment returns, the employer contribution portion can decrease. Conversely, if the CalPERS investments perform poorly, the employer contribution portion can increase to make up for the loss.

Under a defined benefit plan, California taxpayers hold the full risk and responsibility of meeting defined payment commitments to the CalPERS members. Should CalPERS come up short; the difference will come out of the state's General Fund, putting California's taxpayers in a position to bear the burden of any market fluctuations or poor investment decisions. A defined contribution plan will shift this risk and responsibility to the individual account holder. California currently faces a dilemma similar to that which many other retirement systems are encountering about the most appropriate plan type for the circumstances. What is the best route for California's public to pursue: DB, DC, or some form of hybrid plan?

In this thesis, I will employ outcome matrix analysis to investigate what form of pension system California should pursue: maintaining the status quo with the defined

benefit, transitioning to a defined contribution, or implementing a form of hybrid plan. In California's case, a change to the pension system would require a constitutional amendment, and therefore would need to be ratified by the voters and/or the Legislature. I will evaluate the components needed for these decision makers to make an informed judgment on the topic, such as the alternatives available, the criteria they should use to weigh the alternatives, and the advantages and disadvantages for the three likely options.

Organization of the Thesis

I organize the remainder of this thesis into four chapters. Chapter 2 will review relevant research literature and present transition indicators, specifically on the state and individual levels, as well as advantages and disadvantages of DB and DC plans. Chapter 3 will explain the use of outcome matrix analysis as the methodology I will use to examine which policy alternative will be the most appropriate for California to pursue. Chapter 4 will present the outcome matrixes and explain their results. Finally, in Chapter 5, I will finish this thesis with any conclusion I can draw from the data results and make a recommendation for California regarding which pension system will be most successful.

Chapter 2

LITERATURE REVIEW

Introduction

Over the last thirty years, public sector pension plans have remained primarily defined benefit, while those offered in the private sector have transitioned in large degree to defined contribution plans. In 1975, 88 percent of private sector workers with pensions were covered by defined benefit plans, but this decreased dramatically by 2005 when only 33 percent of these same workers had DB plan coverage (Munnell, Haverstick and Soto, 2007). Though it is true that public sector pensions have also responded to the opportunity of offering defined contribution plans, they have done so at a much lower degree than the private sector. In 1975, 98 percent of public sector workers with pensions had defined benefit plan coverage and in 2005, 92 percent of these workers remained covered by defined benefit plans (Munnell, Haverstick and Soto, 2007).

There are many reports for why there is a much lower prevalence of defined contribution (DC) plans replacing defined benefit (DB) plans in the public sector than the private sector. One given by Anderson and Brainard (2004) claims that public plans remain DB because the public sector needs to attract and retain specialized employees, and because the value added to local economies with DB investments is greater than with DC investment (Anderson and Brainard, 2004). California is in line with those states who have continued to offer defined benefit plans to its public sector workers. However, there have been a number of legislative attempts to switch the currently offered DB plan to a DC pension system. Many other states have struggled with the same issue California

is facing, and of them, roughly a dozen have made the switch from DB to DC pensions systems in their public sector. This chapter of the thesis will conduct a review of relevant literature and research to report the characteristics and environment that supported the transitions for these state's plans. I will also present the advantages and disadvantages reported in the literature for both defined benefit and defined contribution plans, and use this information to build the outcome matrixes in Chapter 4 that I will use to justify which path is better for California.

General Transition Indicators

Several reports studied state and public workforce characteristics to decipher what makes a state plan more likely to make a pension switch. Munnell *et al.* used regression analysis to distinguish the factors most likely to influence a switch from a DB plan to a DC plan (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008, January). They found that the most important factor for why changes occurred in the states where they did was political concluding that states most likely to introduce defined contribution plans were those with Republican Party control in both the legislature and the governorship. Fore (2001) also reports political factors as being a decisive factor in state plan transitions. He reports that states with term limits are more likely to switch to DC plans suggesting that legislators with limited tenure in office are not provided retirement income security with DB plans and thus more amenable to making changes (Fore, 2001). An economic factor presented to motivate states to switch from a DB to a DC plan is that states that chose DC plans want to shift the risk of investing from the taxpayers to the employees, with the goal of cutting the state's pension burden (Fore, 2001).

Hu (2005) notes that one main reason pensions are shifting from DB to DC is over the dislike of corporations and executives, stating that corporate people who do not like pension fund activists hope to use DC plans to erode investor powers by breaking up large pension funds (2005). Defined benefit plans pool contributions and as a result, the plan's investors have control over large sums of monies. Meanwhile, in DC plans, the contributions are invested per individual accounts at much lower accumulation rates (Hu, 2005).

Studies also reported what makes a state plan less likely to make a pension switch. Brainard and Anderson (2004) state that defined benefit plans remain the predominant form of pension system in the public sector for two reasons. First, DB plans better help public employers to attract and retain a large workforce than DC plans. This is important because the public sector workforce is more specialized and has fewer peers in the private sector, for instance, fire fighters and police officer (Brainard and Anderson, 2004). Second, DB plans offer superior value-added to state economies based on investment return than DC plans do (Brainard and Anderson, 2004). Brainard and Anderson (2004) state that a beneficial aspect of public DB plans is that their assets promote economic growth and vitality. Through their size, broad diversification, and focus on long-term investment returns, public pension funds stabilize and add liquidity to US and foreign financial markets (Brainard and Anderson, 2004). States primarily interested in adding to their local economies through investment would be less likely to switch to DC plans for this reason.

Looking at workforce characteristics, states were less likely to add defined contribution plan components if a high percentage of participants were union members (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008, January). Munnell *et al.* (2008, January) states that public sector unions have repeatedly resisted efforts to introduce a defined contribution plan because state and local employees tend to have longer tenures than their private sector counterparts and defined benefit plans provide a more secure retirement than defined contribution plans do.

In a separate study, Munnell *et al.* reports that the public sector is less likely to transition because of three factors: the nature of the workforce, the nature of the employer, and the regulatory environment (Munnell, Haverstick and Soto, 2007). According to Munnell *et al.*, the public sector workforce is older, less mobile and more risk-averse than workers not in state and local government (Munnell, Haverstick and Soto, 2007). Munnell (2007) reports that the nature of the public sector employer is fundamentally different from those in the private sector – states and local governments are perpetual entities, less concerned with financial volatility associated with DB plans, and better able to increase employee contributions (Munnell, Haverstick and Soto, 2007). Lastly, the regulatory environment in the public sector is not subject to the federal regulation of the Employment Retirement Income Security Act (ERISA) that the private sector is, this as a result lowers administrative costs and enables better vesting for the public sector (Munnell, Haverstick, Soto, 2007; Brainard and Anderson, 2004).

State Transition Indicators

Additional studies have examined the factors affecting the plan transitions of specific states. Since 1990, 13 states have introduced some form of defined contribution plan (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008)². Of these states, only three – West Virginia, Michigan and Alaska – instituted plans that required all new hires to join a defined contribution plan as their primary pension (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008; Rajnes, 2002), and West Virginia has since switched back from their primary defined contribution plan to a primary defined benefit plan. The others offer some kind of DB-DC plan combination, or offered a choice between the two plans to employees. It is rare that DC plans fully replace DB plans; it is more common for them to be a supplement (Rajnes, 2001; Papke, 2004).

In the case of West Virginia, Peng (2004) reported that throughout the 1980's and 1990's, the state's legislature under funded the state pension plans due to the state's structural budget problems caused by revenue shortfall from the effects of deindustrialization. In an attempt to help balance the budget, the state made dramatic cuts in state pension contributions. Additionally, at the time of West Virginia's budget problems, the state was also prohibited by their constitution from investing in the stock market. This severely limited the investment returns the state was able to make on the contributions (Peng, 2004). This combination of under funding and poor investment options led to West Virginia being the worst funded state pension plan in the country

² The thirteen states are Michigan, Alaska, Oregon, Indiana, Washington, Vermont, North Dakota, Montana, Florida, South Carolina, Ohio, Colorado, and West Virginia (which has since switched back to DB).

(Peng, 2004), and in 1992 the West Virginia Teachers Retirement System (WV TRS) plan closed its defined benefit plan to new hires in an attempt to solve their funding problems (NASRA, 2008).

However, Olleman (2007; 2009) believes this funding solution overlooked important considerations, most importantly, that no unfunded obligations for existing members are reduced when new members go into a DC plan. In fact, he states that the loss of new members made it more difficult to finance the unfunded obligations of WV TRS. In 2003 in West Virginia, the 4,500 members who transferred from the DB to the DC plan in 1991 found it hard to retire after the bear market of 2000-2002 and the average returns with the DC accounts were lower than with the DB accounts (Olleman, 2007; 2009). As a result, in 2005, the WV TRS decided that all new hires would once again go into a DB plan.

In 2005, Alaska transitioned its DB plan to a DC plan for all future hires. The environment at the time brought together three main factors that eventually led to the state's transition. First, the effects of big investment losses during three years of bear markets, from 2000 to 2003; second, medical costs rising faster than had been anticipated; and third, the fact that retirees are living longer than they used to (Bradner, 2004). The state believed that plan was not able to meet its financial obligations and as a result closed its DB plan to all new hires and mandated participation in a primary DC plan instead.

In 1996, Michigan replaced its DB plan with a DC plan for all new hires (Rajnes, 2001). At the time of the state's switch, Republican John Engler, who served from 1991

to 2002, governed Michigan (State of Michigan, 2004). This may have influenced that state's transition. However, suffering from a state economic downturn does not seem to play a factor since the pension reform occurred in the state's second largest plan, the Michigan State Employees Retirement System (MSERS), which was actuarially sound and fully funded at the time (Papke, 2004, January). There is very little literature that accounts for what led up to the switch or why the transition occurred. However, there are many papers reporting the dynamics of the DC plan once it was established. Papke (2004, January) theorizes that the resulting pension situation could have been the ultimate goal of the switch,

The DC Plan offers several advantages to both employer and employee. For the state, shorter vesting periods, benefit portability, and investment flexibility enhances recruitment in an increasingly mobile workforce. Fewer employees will be forced to stay in a position in order to vest. Retirement budget predictability should potentially improve under the DC Plan, as all liabilities are fully funded. Program proponents expect the DC Plan to stabilize and reduce future retirement costs (p. 421).

Individual Transition Indicators

Studies also investigate what role employee choice makes in plan transitions. Fore (2001) claims that a motivation for states to switch from DB to DC plans is that public employee's desire the superior mobility and investment choice afforded them by 401(k) plans. Rajnes (2000) reports that employee choice is a major reason for introducing DC plans as well as for retaining employees. However, this motivation offered by Fore and Rajnes, that providing employees with plan choice is a cause for states to switch plans, is countered by the experience of defined contribution plans in the public sector. Multiple researchers have concluded the contrary with empirical evidence;

that if given the choice, plan participants will in fact choose defined benefit over defined contribution (Olleman, 2007; Munnell *et. al*, 2008; Papke, 2004; Mercer, 2004).

Mark Olleman (2007) looks at six pension systems that have transitioned to offer some form of DC plan option and finds that public employees prefer DB plans³. The percent of new employees selecting DC plans range from 3.3 percent for Ohio Public Employee Retirement System to 21 percent for Florida Retirement System. Munnell *et al.* report that defined contribution plans seem to be less attractive to new employees than defined benefit plans (2008, January). They report similar numbers to Olleman, stating that the percent of new employees electing DC plans range between 21 percent for FRS and 6 percent for Ohio Public Employees Retirement Systems (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). A report released in 2004 by Mercer Human Resource Consulting, Inc. echoes these reports' same findings, stating that when traditional plans have converted to DC plans and employees are given the choice between a DB or a DC plan, employees, including younger ones, often stay with the DB plan (Mercer, 2004).

Olleman does point out that those who choose DB plans often do so by default, because if no election is submitted by the participant, they are automatically enrolled in the DB plan. Default DB elections for new employees range from 87 percent for Florida Retirement System (FRS) to 33 percent for Colorado Public Employees Retirement Administration (PERA); whereas, active DB elections range from 5 percent for FRS and

³ The six systems are the Florida Retirement System, South Carolina Retirement System, Montana Public Employee System, Colorado Public Employee Retirement Administration, Ohio Teachers, and Ohio Public Employees.

55 percent for PERA. Olleman reports Washington as the only state where DB is not the default, and shows that 63 percent of members have still elected an all DB plan over a DB-DC plan hybrid (Olleman, 2007). Munnell (2008, January) also acknowledges the fact that the majority of the plans automatically enroll employees into DB plans by default if no choice is elected. Even so, Munnell *et al.* state that though evidence does not suggest that the presence of a DC plan is a major deciding factor for employees to enter the public sector, it could serve as a recruitment tool (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008).

Papke (2004, June) used regression analysis to study the choices made by correctional officer in the Michigan state pension transition, whereby in fiscal year 1998, existing employees had the opportunity to transfer from the DB plan to the newly established DC plan. She found that the likelihood of choosing to switch from a DB to a DC plan increases with vesting, and is less likely to occur without vesting. Additionally, becoming eligible for retirement increased the likelihood of switching to a DC plan, as well as being a higher salaried worker (Papke, 2004, June). In the end, Papke finds a relatively low switch rate, with only 1.6 percent of those eligible making the choice to transition from their DB to the new DC plan (Papke, 2004, June; Yang, 2005). Among other employees, Papke reported similar low rates of voluntary plan changes, with slightly over 5 percent of active state employees transferring to the DC plan (Papke, 2004, January).

Advantages & Disadvantages

The fact that research indicates employees often choose DB plans over DC plans may indicate that once employees know the pros and cons of each plan type, they prefer the employer to make the investment decisions and bear the risk of those decisions (Mercer, 2004). This section will look deeper into the advantages and disadvantages researchers find that add to or take away from DB and DC plans. Though there are many, I will focus on the ones that literature consistently supports as advantages and disadvantages.

Investment Returns

DB plans produce higher investment returns than DC plans (McCourt, 2006; Almeida and Forna, 2008). Literature attributes this to three reasons. First, DB plans are more likely to realize higher returns on investment because they are professionally managed and overseen by fiduciary trustees, while DC plans are not (Almeida and Forna, 2008). Waring and Seigel (2007) report that investment professionals who are able to allocate assets and earn the highest return at the lowest possible risk to the participant often manage DB plans. Meanwhile, DC plan investors are employees managing their own contribution funds and often lack the knowledge or tools needed to build a portfolio equivalent to those in DB plans (Waring and Seigel, 2007). In DC plans, the individual has administrative control over their investments, and as a result has the ability to reach higher possible investment returns due to the fact they are not limited to a benefit cap. However, studies have shown a trend that supports lower realized returns in DC plans, often attributed to poor investment knowledge by the individual

(Almeida and Fornia, 2008; McCourt, 2006). Lifestyle funds, which are made up of “pre-mixed strategic asset allocation fund families,” were originally developed to address this issue, but are still only used by a small portion of the DC plan offerings (Waring and Seigel, 2007). In addition to lacking adequate investment knowledge, it is common that DC plan investors lack appropriate asset-classes or have limited fund options (Waring and Seigel, 2007).

Second, because there is a constant stream of incoming contributions in DB plans, investments can be held in long-term holdings like stocks and other equities that yield higher returns, without having to shift the majority of portfolio holdings to lower risk sectors, such as bonds, as is what normally occurs in DC plans as participants age (McCourt, 2006). Third, because DC plans, such as 401(k)s allow for early withdrawals as long as penalties are paid, and for participants to take loans against their accounts, a practice known as seepage (McCourt, 2006) occurs. The seepage results in DC plans having less accumulated contribution funds to invest than DB plans. Because DB plans have been more effective at investing large pools of money than DC plans, they can fund larger benefits with the same contribution or the same benefit with a smaller contribution (AAA, 2006).

Cost

DB plans are less costly overall than DC plans. Assuming that the same level of benefits are going to be offered in both a DB plan and DC plan, it would be less expensive to participate in a DB plan for both the employer and the employee (Almeida and Fornia, 2008). This is most likely due to three factors. First, a DB plan participant

would be subject to lower investment-end fees because they are disbursed among the entirety of plan participants. Meanwhile, DC plans, which are funded on an individual basis, require the individual to cover all the associated investment fees themselves (Almeida and Fornia, 2008). Second, because of the higher returns associated with DB plans, DB participants would be subject to lower contribution amounts required to meet actuarially determined funding values. DC plan participants would likely have to contribute more to make up for lower investment returns (AAA, 2006). Third, because of the DB account pooling, the DB plan is able to purchase assets in bulk, making DB plan members eligible for Institutional Class prices, or volume pricing (Waring and Seigel, 2007). Since a DC plan participant is investing their funds on an individual basis, they are less likely to receive volume-pricing discounts and instead purchase assets at an increased rate (Murphy, Sonnanstine and Zorn, 2003).

As Olleman (2007, 2009) reported in the instance of West Virginia's transition from a DB to a DC in 1992 and back to a DB plan in 2005, West Virginia found that if you fund a DB plan properly, it would be less expensive than a DC plan at providing equivalent benefits. Munnell *et al.* (2008, January) and her team take this one step further and report that for any given level of benefits, defined contribution plans generally have higher investment and administrative expenses than defined benefits plans and therefore, introducing a DC plan is unlikely to reduce plan costs. Further, even if the introduction of a new plan reduces pension costs going forward, it does nothing to solve any current funding problems (Munnell, Golub-sass, Haverstick, Soto and Wiles, 2008). Almeida and Fornia (2008) report parallel findings, stating that to deliver the same level

of retirement benefits, a DB plan can do so at almost half the cost of a DC plan.

Therefore, for most DC plans to compete with DB plan pricing, benefit levels have to be lowered. The question then becomes which plan type delivers the highest net benefit to society.

Longevity Risk Pooling

DB plans require lower fund accumulation than do DC plans because of longevity risk pooling. Longevity risk is the risk that the participants will outlive their benefits (Waring and Seigel, 2007). As a result of longevity risk pooling, the large number of participants who contribute to the trust pool afford DB plans the ability to only accumulate enough money to fund annuity payments for the average life expectancy of those participants (Almeida and Fornia, 2008; Waring and Seigel, 2007). On the other hand, DC plans participants run the risk of under funding if they only save for their average life expectancy. If the participant lives beyond this age, they have already run out of money. In order to compensate for this unknown, practice shows that most DC plan participants over-fund their DB accounts in anticipation of a longer than average life (Almeida and Fornia, 2008). Additionally, DC plan participants tend to under spend because they are unable to precisely divide substantially equal payments over their actual retirement span (Almeida and Fornia, 2008). Olleman (2007, 2009) states that the loss of longevity risk pooling is probably the hardest obstacle for defined contribution plans to overcome, because the consequences of outliving one's benefits are severe.

Plan Mobility

DC plans are fully portable and offer greater retirement plan mobility to non-career employees than DB plans. Since a DC plan holds employee's fund contributions in an individual account, in the case an employee severs employment the funds can easily be rolled into other qualifying retirement accounts for the individual. Nothing other than poor investment returns can take away the value that an employee has set aside (Waring and Seigel, 2007). However, in DB plans, rolling out individual funds is a limited option, usually resulting in the loss of employer portion contributions and the associated market gains (Murphy, Sonnanstine and Zorn, 2003). Findlay (1997) sees this lack of mobility as a tool for employers offering DB plans to retain employees. This practice is referred to as using "golden handcuffs" to hold onto employees by making it too disadvantageous for them to sever employment prior to retirement.

An additionally acknowledged DC plan benefit is that at the time of retirement, DC plan monies can be withdrawn in a lump sum, while DB plan monies almost always have to be distributed in monthly payments over a lifetime (NCSL, 2005). However, though DC plan monies are considered more mobile for these two reasons, Findlay (1997) considers this a drawback because as employees move from job to job, they are less likely to roll over their DC plan savings and instead withdrawal their funds, contributing to the seepage theory that limits investment return.

Risk Association

Risk is not shared evenly in either a DB or a DC plan. A primary characteristic that differentiates defined benefit and defined contribution plans is who assumes the risk

(McCourt, 2006). In a defined benefit plan, the employer assumes the risk that pooled trust assets may not provide sufficient investment returns to support the promised retirement payout (Munnell, Aubry and Muldoon, 2008, November). The American Academy of Actuaries acknowledges that defined benefit plans can more effectively reduce the different types of risk for employees than defined contribution plans can (AAA, 2006). This can be an advantage for the employee in the DB plan and a disadvantage for the employer who sponsors the DB plan. On the other hand, in a DC plan, the employee assumes the risk that their return on investment will not provide sufficient income for retirement. This can be an advantage for the employer because they are not held liable for investment decisions, while be a disadvantage for the employee because they are fully responsible for their own return of investment (McCourt, 2006; Munnell, Aubry and Muldoon, 2008, November).

Forced Savings

Defined benefit plans require employees to save, while defined contribution plans operate as voluntary saving vehicles. Waring and Seigel (2007) report that a large portion of employees contribute little or nothing to the DC plans they are offered and as a result will have to rely on Social Security benefits because they will lack sufficient retirement income from their DC plans. This can act as a disadvantage to both the employee and the taxpayer. On the other hand, defined benefit plans mandate a certain percentage of employee participation, which goes toward their lifetime annuity payment at retirement. This can act as a disadvantage to employees who would prefer to invest

less than the mandated amount, but as an advantage to taxpayers from the reduced likelihood these participants will use social services during retirement.

Conclusion

There is a much lower prevalence of DB to DC plan transition in the public sector than the private sector. Researchers have identified general, overarching factors that influence states to make the switch, as well as focused in on state specific indicators and trends in individual choice. At the macro level, political pressure, the nature of the workforce, and federal legislation play a role in transitioning statewide pension systems. Additionally, state budget deficits and inability to meet funding liabilities have stemmed as state-specific factors influencing the adoption of DC plans. At the individual level research shows that employees prefer DB plans to DC plans, although this may be skewed due to employees being placed in DB plans by default.

Defined benefit advantages outnumber those for defined contribution plans, though there are pros and cons for both plan types. When compared to a defined contribution plan offering the same benefit level, a defined benefit plan show higher investment returns, lower costs, and lower longevity risk due to contribution fund pooling. On the other hand, defined contribution plans have higher plan mobility. Depending on the stakeholder, risk and forced savings are both a benefit and a cost. Research does show that though the majority of public state plans have remained defined benefit through the years, there can be a time and a place for defined contribution plans as well.

Chapter 3:
METHODOLOGY

Introduction

I have discussed the history and background of pension plan trends for both the private and public sectors in the previous two chapters of this thesis. Further, I have presented relevant legislation from past years as well as current proposals that aim to alter California's public pension system. These proposals, paired with the previously presented sides and perspectives of all involved, help contribute to the timeliness of addressing the best route for California to take. In this chapter, I will revisit the problem posed by California's public pension system and why intervention is now warranted to investigate the best route for providing pension benefits to public sector employees. This chapter will present Bardach's (2000) Eightfold Path, which I will employ for my policy analysis, primarily focusing on the identification of policy alternatives and criteria to evaluate the proposed outcomes of those alternatives. I will present relevant literature and research also utilizing the use of evaluating policy alternatives with criteria to support the strength of this method. I will conclude with the selection and explanation for appropriate policy alternatives and weighted criteria to evaluate the best approach to address California's public pension system.

Why Intervention is Warranted

The California Public Employees Retirement System (CalPERS) has offered a defined benefit (DB) pension plan to public sector employees in the state of California's since 1932 (CalPERS, 2009). Pension plans in the private sector also traditionally

offered defined benefit plans, but transitioned in large part to defined contribution (DC) plans beginning in the early 1980's. Since this time, roughly a dozen state DB plans followed suit and transitioned to offer DC plans as either a compliment to the existing DB plan or as a replacement completely. Legislators, Governor Schwarzenegger, and political activists have attempted since 2005 to pass legislation to change California's DB plan to incorporate DC plan components. Each time, attempts failed to gain the support necessary to make the switch.

Now, in light of the economic climate of California, which has not only affected the state's fiscal health, but citizen's retirement health as well, attention has been directed toward California's DB pension system once again with the proposal brought forward in the *McCauley Public Employee Pension Reform Act*. This initiative, if passed, will allow for public employee pension contracts to be renegotiated and for existing and prospective retirees' vested benefits to be reduced – an unprecedented action in California (Bowen, 2009). The initiative's author, Paul McCauley, is in the processes of securing the nearly 700,000 signatures required to place the measure on a statewide ballot.

To alter the CalPERS plan offerings, a constitutional amendment is required. In this case, the power to amend the CalPERS DB plan system lies with California's voters. Plan changes can be proposed and passed both within the Legislature and through the initiative system for direct democracy passage. The opportunity to make changes to the existing plan is here, and for this reason, it is important to investigate the alternative policy options and to evaluate them against relevant, weighted criteria. Those with the

power to impact change need the information to be able to identify a best fit for California's current pension climate.

Methodology

In analyzing any policy or policy issue, there are necessary steps an analyst should take to progress toward an understanding of the problem and review how to potentially solve or mitigate that problem. I have employed an approach already in this thesis that will be furthered in this chapter, which is known as the Eightfold Path (Bardach, 2000). This method employs eight steps of policy analysis to ensure important tasks and choices are not overlooked in the process. Bardach suggests that the steps be approached in the following order: 1) Define the problem, 2) Assemble some evidence, 3) Construct the alternatives, 4) Select the criteria, 5) Project the outcomes, 6) Confront the trade-offs, 7) Make a decision, and 8) Tell the story (2000, p. xiv).

Addressing the first step of this process, defining the problem, is a crucial step because it provides the basis for research and a direction for that research to go. In creating the problem definition, I have to be mindful that different people may view the problem differently by the way they each evaluate the facts. Therefore, it is important that the definition be evaluative to include why the problem warrants public intervention, while being careful not to incorporate possible causes or solutions into the statement (Bardach, 2000, p. 1-7). Chapter one in this thesis helped to frame a definition of the problem California is facing: The state holds too much risk with the current public pension system. This is because in a defined benefit plan the risk of delivering pension benefits is placed on the employers. More specifically, in the case of California, the

financial burden of fulfilling the promises of the CalPERS pension system is placed on the taxpayers. California's deteriorating fiscal condition, illustrated by an exponentially increasing budget deficit, amplifies this risk. This condition can be attributed to a domino affect caused by the national economic state – plummeting stock markets, falling housing markets, raising unemployment, increasing need for social programs, and an increasing population of retirees with the aging of the Baby Boomer generation.

After arriving at a problem definition, the next step is to focus on utilizing time to collect data that can be turned into information and used as evidence. The data are the raw numbers and facts, which then become information when they have meaning to help sort out the problem at hand. This information becomes evidence when it affects the existing beliefs about significant features of the problem (Bardach, 2000, p. 8). Though the collection of data and the thinking about how this data can become information and possibly evidence doesn't ever really end, I have assembled and presented a large part of the relevant, existing evidence in Chapter two of this thesis. The literature review presents the professional and academic research done on the purposes of pension systems, how they function, and their perceived attributes and drawbacks. In addition to pension plan logistics, case studies of pension plan transitions also presented applicable evidence. Bardach (2000) explains that evidence is needed for three purposes: 1) To assess the nature and extent of the problem; 2) To assess the features of the policy situation; and, 3) To assess policies believed to be effective in addressing policy problems similar to the one I am investigating (p. 8). The literature examined and

explained in my review will help me to produce realistic projections of possible policy outcomes.

Now that I have defined the problem and gathered evidence to investigate the problem, I can construct policy alternatives to represent options for courses of action. The initial list of alternatives should begin comprehensively and later become more defined. To begin, I will start with alternatives that policy makers have already proposed by drawing from legislation and literature. I will then propose alternatives that may not have already been explored based on my own understanding of the issue. I will also investigate the alternative of “letting present trends continue” because the world around the problem is constantly changing due to factors outside of anyone’s control. These naturally occurring environmental changes may be enough solve or mitigate aspects of the problem (Bardach, 2000, p. 13). I will finalize the key alternatives by conceptualizing the basic components of each alternative and presenting them in simplified terms that differentiate the basic alternative from its variants. I present the alternatives and reasoning for choosing them further on in this chapter.

The next step is to select criteria to evaluate my alternatives. Bardach (2000) explains that selecting criteria is an essential step to allow values to be brought to the policy analysis process (p. 19). Not only will criteria let me reason if each alternative is likely to happen, but also to rationalize if each alternative adds to or takes away from the larger environment affected. In other words, the criteria act as evaluative standards used to judge the goodness of the projected policy outcomes associated with each of the

alternatives (Bardach, 2000, p. 19). I present the criteria I selected and reasoning for choosing them further on in this chapter.

After I have identified my alternatives and selected criteria to evaluate them, the process requires me to produce realistic projections of policy outcomes that can be used to evaluate each alternative. A way to come to these projections is to combine models with evidence: $\text{Projection} = \text{Model} + \text{Evidence}$ (Bardach, 2000, p. 28). These outcomes should include specific magnitude estimates, or break-even estimates that consider what is known and what can be reasonable assumed in order to draw meaningful conclusions from uncertainty (Bardach, 2000, p. 29). Additionally, I will balance being optimistic in projected outcomes with noting possible undesirable side effects to consider any unintended consequences. Depending on the model and evidence available, the outcomes can be shown in both qualitative and quantitative measures. To organize the outcomes, I will present the projections in matrixes in the results chapter of this thesis.

It is possible that after projecting outcomes, there is one dominant alternative that is expected to out perform every other alternative against each selected criterion. However, it is more likely that different alternatives will fare better when evaluated against different criteria. In this case, it is necessary to confront the trade-offs associated with the outcomes for each policy option.

Another way to help confront the trade-offs is to apply weights to the varying criteria. The weights will help apply a value judgment for the level of political importance relative to each criterion. In a quantitative matrix, the weights will contribute to the total score each alternative earns and better help to identify the policy outcome

most likely to solve or mitigate the problem. In a qualitative matrix however, I will instead try to simplify the outcomes available. First, I will eliminate any alternative that has a clearly dominated outcome. Second, I will eliminate any alternatives that I believe would be dominated if I weighted any one criterion more than another. I will further explain the trade-offs for my projected policy outcomes in the results chapter of this thesis.

At the point I have completed confronting trade-off and considering policy outcomes that dominate others, I will be in a position to make a decision for which alternative shows to be most suitable for the issue being considered. If it is difficult for me to do this, I will revisit the outcomes to clarify my trade-offs more sufficiently. When choosing a policy alternative, I will consider why it hasn't been attempted – or if it has been attempted – why I think the outcome will be different, and successful. At the point in which I am comfortable making a decision on what policy alternative will be most suitable for California to pursue, I will complete Bardach's Eightfold Path by telling my story and making my case. The policy decision and story will be explained in depth in the conclusion chapter of this thesis.

Choosing Alternatives

The alternatives are the applicable policy options and strategies that can be used to solve or mitigate the problem (Bardach, 2000, p. 12). In this case, they are the alternative courses of action that California can take to address what pension system is best. To begin, California can go one of three basic alternative routes. First, it can offer a defined benefit plan. This option would be maintaining the status quo, as California

already operates a DB plan administered through CalPERS. Some literature would suggest this option to be a viable one due to the advantages afforded to the employees participating in the plan. Second, it can offer a defined contribution plan. This option would be in line with the actions taken by Michigan and Alaska, both switched to a mandatory defined contribution plan requiring all employees to join. Third, it can offer a hybrid plan that combines both DB and DC aspects. This is the route most commonly taken by states that institute a pension system transition away from traditional DB plans. To break these three options down into their variants, I have looked at previously proposed legislation, as well as what other states have enacted. The most common and supported policy options are presented in Table 3.1 below, accompanied by a brief description of each. A more in depth explanation of each alternative follows.

Table 3.1
Selection of Alternatives

	Alternative	Brief Description
I.	Status Quo	Let the existing DB plan to exist as is; maintain present trends.
II.	Close DB, Open DC	Close the existing DB plan to future hires and instead provide a DC plan option. Existing members can remain in the DB plan.
III.	Freeze DB, Open DC	Close the existing DB plan to all current and future members. Mandate participation in a DC plan only.
IV.	Implement Hybrid	Implement a cash balance plan that combines both DB and DC plan components.
V.	Reduce DB Benefits	Maintain existing DB plan with reduced benefit level for future members.

Alternative 1: Maintain the Status Quo and Let Present Trends Continue.

In California's situation, this will call for the continuation of the existing defined benefit pension plan, offered to all existing and future members, maintaining the current

benefit levels. Though some analysts feel that a status quo alternative should not be a viable option to consider, California's public employee unions are a strong lobbying force fighting to maintain the existing DB plan and therefore I am treating it as a baseline option in this thesis.

Alternative 2: Close the Existing DB Plan and Implement A DC Plan for all Future Employees.

This would set up a two-tier system, one tier comprised of employees and retirees who are members of the CalPERS system at the point of the switch, and a second tier comprised of future employees and retirees. The existing members of the DB system will continue to pay into their DB plan and receive the benefits promised by that plan. All future members will be placed automatically in the DC plan and will not be eligible for the DB plan. Existing members will be given the irrevocable option to voluntarily switch their DB status to the new DC plan. The DB plan will eventually cease to exist when the last member who had entered the plan has completed collection of their pension.

Alternative 3: Freeze the Existing DB Plan and Implement A DC Plan for all Current and Future Employees.

This will close the DB plan to current members, requiring them to shift all future contributions to the DC plan. Future members will also be required to join the DC plan. This will result in some members having both a DB and a DC plan, and some members only having a DC plan. This DB plan, like the one in alternative two, will eventually cease to exist when the last member who had entered the plan has completed collection of their pension.

Alternative 4: Implement a Hybrid Plan.

Due to the large extent of available types of hybrid plans, this alternative will incorporate the most common components of hybrid plans, as well as omit elements put forward by previously introduced legislation in California, which failed. This hybrid plan will resemble a cash balance plan by incorporating elements of both DB and DC plans into one single plan. This plan will provide benefits based partly on the employee's length of service like a DB plan, have the employer invest plan assets as a whole and bear the risk of investment gains and losses also like a DB plan. However, similar to a DC plan, the employee benefit will be based partly on the plan's investment return, the employee will have an individual account, and the employee can choose to receive the balance as a lump sum at separation. Future hires will be required to participate in the hybrid plan post implementation date.

Alternative 5: Reduce DB Benefit Level.

This option will maintain the current DB plan, but will lower the level of benefits offered to both existing and future members, beginning at the time of the change. Retirees already drawing their annuity pension payments will not see a decrease in benefit level.

Selecting Criteria

Selected criteria judge the *outcome* of each alternative, not the alternative itself (Bardach, 2000, p. 19). Bardach (2000) notes that there are two categories of criteria: evaluative, and practical or analytical. Evaluative criteria require the analyst to apply value judgments to assess the alternatives, while practical or analytical criteria rely on

facts to assess the alternatives. The evaluative criteria I have selected are equity, efficiency, and sustainability. The practical criteria I have selected are administrative feasibility and political feasibility.

In addition to considering the two types of criteria available, MacRae (1993) and MacRae and Whittington (1997), as presented in Munger (2001), argue that effective criteria need also satisfy five meta-criteria:

1. Criteria should focus on ends, not means
2. Criteria should be plainly stated so it is clear how they will evaluate the success or lack thereof in satisfying the alternative
3. Criteria should attempt to quantify tradeoffs presented by the alternatives
4. Criteria should collectively encompass all policy concerns of stakeholders
5. Criteria should address multiple aspects of the problem, so the satisfaction of each criterion is mutually exclusive

The table below lists the criteria I have selected based on these guidelines.

Following the table is a more in depth explanation of what the criteria measures and how.

Table 3.2
Selection of Criteria and Type

	Criterion	Type
I.	Equity	Evaluative
II.	Cost Efficiency	Evaluative
III.	Administrative Feasibility	Practical
IV.	Political Feasibility	Practical

Criteria 1: Equity

Does the pension system equally distribute its impacts among the stakeholders involved? This will evaluate how evenly the costs and risks of each alternative will be

dispersed among the stakeholders: members, employers, and taxpayers. This will take into account the economic costs required to implement the alternatives, who will be responsible for implementing the alternatives, how management responsibilities are shared, how implemented elements will impact members, and how risk is distributed between the participants. This criterion will explicitly consider any unintended consequences resulting from possible shifts in responsibility or risk, specifically looking at changes in employee retention or employment attractiveness due to shifts in risk and cost. The more shared the pension system impacts are, the more equitable the alternative is. The less shared the impacts are, meaning the more an impact is condensed upon a specific group, the less equitable the alternative is.

Criteria 2: Cost Efficiency

Do the net-benefits of the state balance the long-term costs of the pension system? This will evaluate how well the alternative addresses the policy issue relative to its cost for implementation, including initial transition costs as well as those carried for the long-term. Cost efficiency will consider the relationship between dollars needed to implement and transition the policy alternative, changes in workforce as a result, as well as any implications on local economy budding from shifts in investment strategies (i.e. Less/more invested in local business). The higher the degree of balance between the alternative imposed costs and net-benefits, the more efficient the alternative is. The lower the degree of balance between the alternative imposed costs and net-benefits, the less efficient the alternative is.

Criteria 3: Administrative Feasibility

Can the state efficiently implement the alternative pension plan? This is a measurement of administrative feasibility because it focuses on the ease of implementation in relation to the cost associated to implement the alternative. This will look at federal regulation, changing organizational structure, and the need for resource allocation. The lower the cost associated with implementing the alternative, the more administrative feasibility it has. The higher the cost associated with implementing the alternative, the lower administrative feasibility it has.

Criteria 4: Political Feasibility

Will key decision makers support the pension plan alternative? This is a measurement of political feasibility because it will evaluate if the political climate is conducive to the pension system change proposed in the alternative. It will look at past and present legislative proposals, current policy agenda items, and windows of opportunity. Higher levels of support in the political environment will indicate a higher level of political feasibility. Lower levels of support will indicate lower political feasibility.

Applying Weights

Each criterion plays a role in assessing the relative level of success each alternative will have in addressing the policy problem. However, each alternative may be more or less politically influential in the decision process. To address the fact that some criteria will play a larger role in valuing alternative success, I have applied weights to each criterion based on how I think the California taxpayer would value the criteria. I

have applied these weights based on the perspective of the citizens of California because they act as the decision makers to initiate any public pension policy change in California – either by direct vote or through the legislature. To better help me formulate the perspective of California’s public opinion on the pension system, I am utilizing survey results for four questions gathered by the Public Policy Institute of California over the course of 2003-2005. The table below shows the question asked and answers given:

Table 3.3:
Selected Survey Results from PPIC on Public Pension Opinion

Date Range	Question	Answer	Survey Source
1/11/2005 – 1/18/2005	Would you favor or oppose changing the pension systems for new public employees from defined benefits to a defined contribution system similar to a 401(k) plan?	Favor (61%) Oppose (25%) Don't know (14%)	PPIC Statewide Survey: Special Survey on the California State Budget, January 2005
1/11/2005 – 1/18/2005	At this time, how much of a problem for state and local government budgets is the amount that is being spent on their public employee pension or retirement systems? Is this a big problem, somewhat of a problem or not a problem in California today?	Big problem (31%) Somewhat of a problem (41%) Not a problem (17%) Don't know (11%)	PPIC Statewide Survey: Special Survey on the California State Budget, January 2005
5/22/2003 – 6/1/2003	Do you or anyone in your immediate family work as a public employee or receive a pension as a former public employee - that is for federal, state, or local government, a state college or university, or a public school?	Yes (27%) No (73%)	PPIC Statewide Survey: Special Survey on the California State Budget, June 2003

Table 3.3:
Selected Survey Results from PPIC on Public Pension Opinion (Continued)

Date Range	Question	Answer	Survey Source
2/6/2003 – 2/17/2003	Do you or anyone in your immediate family work as a public employee or receive a pension as a former public employee—that is for federal, state, or local government, a state college or university, or a public school?	Yes (28%) No (72%)	PPIC Statewide Survey: Californians and Their Government, February 2003

Survey respondents were asked the first two questions in January 2005. The response rate indicated that about 60 percent would favor implementing a DC plan, and roughly 70 percent thought that the amount of funds being spent on DB plans caused a problem for state and local budgets. At that time, the Dow Jones Industrial Average was averaging around 10,500 points (Yahoo Finance, 2009). In January 2009, the Dow was averaging around 8,000 points (Yahoo Finance, 2009). This change in market performance paired with California’s budget deficit may indicate a slight shift away from respondents supporting a 401(k) style DC plan, while strengthen the feelings of public pension funds causing problems on local governments’ budgets.

The third question was asked of respondents twice in 2003, in February as well as in May. The response rates indicated that at that time, between 27 and 28 percent of respondents were themselves or had immediate family who worked as public employees, or received pension funds from being a former public employee. This reveals that about a quarter of respondents would be directly affected by any changes in the pension plan offerings. However, this number has likely grown because from January 2008 to January

2009, the state of California has increased its full time work force by over 1,000 employees, which may influence how some taxpayers feel about the pension system (Sacramento Bee, 2009).

Based on the philosophy of public opinion, I have separated the criteria into three tiers of influence relative to the policy outcome and weighted them accordingly. Because each of the four criteria previously chosen is fundamentally important in identifying an alternative that can be implemented successfully, they have been weighted nearly equal. However, there is a slight separation in the degree of influence recognized. Table 3.4 below shows the weights associated with each criterion, represented as a decimal, with all adding to one, and the tier of influence I have assigned to them. Following is a more in depth explanation for criteria weight.

Table 3.4:
Criteria and Corresponding Weighting

Tier of Influence	Criterion	Weighting
Tier 1	Cost Efficiency (EF)	.35
Tier 2	Equity (EQ)	.25
Tier 3	Administrative Feasibility (AF)	.20
	Political Feasibility (PF)	.20
Total		1.0

$$EF (.35) + EQ (.25) + AF (.20) + PF (.20) = 1.0$$

The criterion in the first tier of influence and with the highest weighting is cost efficiency (weighting = .35). This criterion is considered the most essential for successful policy implementation because it embodies why most pension plan changes are introduced: out of a desire to limit public pension liability and as a results shift cost. In California's case, the taxpayer is going to be looking for a policy outcome that seeks to

find a greater balance between long-term costs and net benefit to the state, as well as a way to reduce the fiduciary liability held by taxpayers. The optimal policy outcome will not be successful without this element, and therefore cost efficiency has been assigned a higher weight of influence to reflect this philosophy of public opinion.

The criterion in the second tier of influence and with the second highest weighting is equity (weighting = .25). This criterion is still considered an essential element for a successful alternative, but slightly less so than cost efficiency. The taxpayers will value a policy option that attempts to distribute that costs and risks of each alternative, especially when considering an option that reducing their existing risk. More evenly sharing the elements, specifically the disadvantages of the plan options, so that they are not concentrated on a specific group is important in selecting a successful alternative.

The two criteria in the third tier of influence and thus with the third highest weighting are administrative and political feasibility (weighting = .20). These two criteria are also essential to the successful implementation of an alternative, and only slightly less so than cost efficiency and equity. This is based on the argument that the feasibility of the administrative and political elements need not necessarily be totally acceptable, but instead not totally unacceptable. Any change that is initiated should be approved and endorsed by state government and legislators in particular, as well as have long-term success. However, these are areas where changing environmental conditions can alter the level of feasibility over time, making them less influential (but still important) in the decision process.

Outcome Matrix

The process for assessing each alternative uses the criteria to evaluate the projected outcomes for each policy option. A method to organize the projected outcomes is with an outcome matrix, or a criteria-alternative matrix. Munger (2000) advocates the use of outcome matrixes for policy analysis for organizing the process of analysis (p. 9). Reiterating Bardach's (2000) steps for effective problem solving, Munger (2000) shows how alternatives and criteria can be used to compare and measure policy outcomes. A report commissioned by the California Integrated Waste Management Board (CIWMB) effectively utilized matrix analysis to investigate viable alternatives for the practices of scrap tire disposal (Wassmer, 2002).

This method calls for the selection of alternatives and an identification of criteria to measure and evaluate the policy problem. Weights are applied to the criteria according to relative importance in the decision-making process. The weights are meant to describe the trade-offs between the criteria for each alternative. These are then organized in a matrix where alternatives are listed in the first row and the criteria are listed in the first column. By filling in the matrix with either qualitative or quantitative outcome information, the sides are compared and the alternatives' success in satisfying the corresponding criteria can be measured. Ultimately, the matrix acts as a tool to organize the possible decisions for an issue and rank their possible success in doing so.

In a qualitative matrix analysis, each alternative is discussed in relation to each criterion with the projected policy outcome described with words. This method is used to describe and discuss how the alternative would affect the criteria as opposed to simply

applying numbers to rank the outcome. In a quantitative matrix analysis, the relationship between each alternative and criteria is assessed in numeric findings. This method is used to apply a numeric rating to each selected alternative in order to measure the projected policy outcome. The ratings are representing in numbers one (1) through five (5), with one being the weakest and four being the strongest. A higher rating will represent a “strong” relationship between the alternative and the criterion it is being judged against. A lower rating will represent a “weak” relationship between the alternative and the criterion it is being judged against. The alternative-criterion rate will be multiplied by the criteria weights I previously denoted in order to achieve an overall numeric value for each alternative-criterion combination. Each alternative-criterion combination rate will be totaled to establish an overall score for each alternative. This score will be used to evaluate the alternative’s relative success in address the policy issue.

Table 3.5 that follows explains how I will interpret the applied ratings for each criterion.

Table 3.5
Selected Criteria with Rating

Criterion	Weak Rating	Strong Rating
Equity	Costs and benefits are not evenly shared; the employer/taxpayer or employee holds all of the risk.	Costs and benefits are shared evenly; risk is distributed between the employer/taxpayer and the employee proportionately.
Cost Efficiency	Low net benefits to state, long-term costs outweigh the benefits, lack of incentive for workforce, decreasing local utility from divestment.	High net benefits to state, long-term benefits surpass costs, incentive for workforce, increasing local utility from investment.
Administrative Feasibility	High costs incurred to implement; no long-term viability.	Low costs incurred to implement; viable over the long-term.

Table 3.5
Selected Criteria with Rating (Continued)

Criterion	Weak Rating	Strong Rating
Political Feasibility	Lack of foreseeable support from key decision makers and stakeholders.	Supported likely from key decision makers and stakeholders.

Conclusion

In the next chapter, I will apply this method to present both a qualitative and quantitative outcome matrix. Each alternative will be judged against the selected criteria to illustrating initial findings. I will address methods to project outcomes and confront tradeoffs, and explain the preliminary results of each policy outcome. These outcomes will lay the foundation for assessing each alternative's success and making a policy recommendation, which I will presented in the results chapter of this thesis.

Chapter 4

ANALYSIS AND RESULTS

Introduction

The previous chapters have laid the framework for methodically assessing the best policy option to pursue in addressing California's public pension problem. I have devised policy alternatives, chosen applicable criteria, and applied weights to confront possible trade-offs. In this chapter, I will input these components into outcome matrixes and systematically analyze which of the alternatives pose the best outcome for California given the weighted criteria chosen to pursue at the present point in time. Further, this chapter will specifically discuss each policy alternative outcome, as well as how the alternatives will affect the various stakeholders involved.

The first portion of this chapter will offer a discussion of the optimal policy outcome. This will provide an understanding of how to identify the 'best' alternative option. The second portion revisits the alternative policy options to describe their components in further detail. This section will also describe the anticipated outcome of that alternative, were it applied to the policy problem. The third portion will include a qualitative discussion of each alternative as it compares to each criterion formed in the previous chapter, also presented in matrix form. This fourth portion of this chapter will consist of quantified results, incorporating each criterion's weighted influence and corresponding outcome rating. Chapter 5, the next and final chapter of the thesis, will present recommendations and conclusions drawn from these analytical outcomes.

Identifying the Optimal Outcome

The optimal outcome for each policy option I analyze is to obtain a “Very Strong” rating against each weighted criteria. The criteria, originally presented in Chapter 3, are: 1) Cost Efficiency, 2) Equity, 3) Political Feasibility, and 4) Administrative Feasibility. As discussed in previous chapters, California currently offers a defined benefit pension plan to qualifying public sector employees in the state, administered by CalPERS. This plan promises a fixed benefit at retirement, delivered in lifetime annuity payments, based on a pre-determined formula. CalPERS collects contributions from both employees and employers, with the purpose of investing the funds to pay for the benefits promised. As it stands, employees contribute a set percentage of their wages; however, the employer portion is based on a variable percentage of the employee’s wages, which changes each year. The employer rate change correlates directly to the investment returns realized by CalPERS. In years of high performance, rates decrease and in years of poor performance, rates increase. If at any time CalPERS became unable to deliver the level of benefits promised, the taxpayers of California would be held liable for fulfilling the pension contracts. In order to effectively address this problem, the most favorable alternative will be successful in each of the criterion areas; imposed costs will net a benefit to the state, further the costs will be shared relatively equally among all parties involved, and the policy option will be feasible on both the political and administrative levels.

In addition, optimal options have to be realistic in their application. In analyzing the outcomes, it is possible that one alternative will be a good choice according to one

criterion, another alternative may be a good choice according to a different criterion, but they are both poor choices according to yet another criterion. Additionally, some alternatives may be just okay choices according to all the criteria, but never be the worst or best option. In order to identify the optimal outcome, it is necessary to be realistic about related costs and benefits. Even if the alternative is optimistically the best, realistically it could be the most expensive or with the least amount of reward.

Projected Outcomes of Policy Alternatives

Chapter 3 presented five possible policy options for addressing the public pension problem in California. This section will describe each of these options in more detail and present the projected outcomes for each in terms of the various criteria used. The alternatives explored are: 1) Maintaining the status quo, 2) Closing the existing defined benefit plan and implementing a defined contribution plan to replace it, 3) Freezing the existing defined benefit plan and implementing a defined contribution plan to replace it, 4) Implementing a hybrid plan in the form of a cash balance plan, and 5) Reducing the current benefit level of the existing defined benefit plan to all future employees.

Alternative 1: Maintain the Status Quo

The first alternative put forward is to maintain the existing defined benefit plan administered by CalPERS. In this plan, employees are divided among five retirement classifications based on their type of work. Each of these classifications contains varying benefit components, which include the benefit factor, and employee and employer contribution rates. Generally, to be eligible for retirement benefits based on service (as opposed to disability), employees must be at least 50 years of age and have worked a

minimum of five years (CalPERS, 2008 March). Table 4.1 below shows these classifications, the standard retirement benefit for each plan, along with the 2008-2009 rate requirements.

Table 4.1
State Retirement Plan by Classification (LAO, 2004, February; CalPERS, 2008, October).

Plan/Classification	Basic Benefit ⁴		Employee Contribution ⁵	2008-2009 State Employer Contribution ⁶
	Per Year of Service ⁷	When Retiring at Age		
Miscellaneous:				
Tier 1	2.0%	55	5%	16.574%
Tier 2	1.25%	65	0%	16.470%
Industrial	2.0%	55	5%	17.236%
Safety	2.5%	55	6%	18.411%
Peace Officer/ Firefighter	3.0%	55	8%	26.064%
Highway Patrol	3.0%	50	8%	32.149%

This option will keep all benefit components intact and will not affect benefit levels offered to current retirees, existing members, or future hires. The assumption with letting the present trend persist is that employers will continue to be subject to unpredictable and fluctuating contribution rates. In the coming years, employers can expect their rates to continue to rise resulting from the poor market performance of 2008 and 2009, and subsequent investment loss in CalPERS fund balances. However, employers can also expect that in times of greater investment performance, contribution rates can return to zero. It should be made clear that because CalPERS represents public

⁴ Benefits vary by age, with smaller percentages at younger ages and higher percentages at ages above those listed in some cases.

⁵ Pursuant to collective bargaining agreements, some employees at the present time are not required to pay or are only required to pay a portion of the amount shown.

⁶ Employer rate is subject to change on an annual basis. In past years this rate has been zero.

⁷ Percent of highest salary for 12 consecutive months.

employees, the employers are also public entities. Therefore, the contributions made by employers are ultimately made by the state and taxpayers.

At the same time, the taxpayers will continue to hold 100 percent of the risk involved with guaranteeing the benefit levels promised to employees. A presumable trade-off is that members will not be subject to the possibility of large losses imposed on their retirement benefits, as is the possibility present with defined contribution plans. If DC plan members make poor investment decisions or are subject to account balances based fully off market fluctuations in poor years, it is possible post-retirement income (aside from Social Security) may quickly diminish, hence increasing the demand on social programs. On the other hand, a DB plan can provide a level of financial security to retirees that may lessen, but not eliminate, their need for social support programs, such as Food Stamps or Medi-Cal, which directly affect taxpayers.

The advantages and disadvantages also remain unchanged. Member's still lack account mobility should they sever employment. However, members also maintain advantages, such as having a guaranteed lifetime payment at retirement, having trained investment professionals manage their funds, and being free from risk and responsibility.

Alternative 2: Close Existing DB Plan and Replace With New DC Plan

The second alternative put forward is to close the existing DB plan to new public employees. New hires will instead be offered a DC plan; however, the DB plan will be maintained for those employees already participating. The DC plan will be comprised of individually controlled accounts, whereby the member will have control to choose their investment positions from a pool of prospective funds. Depending on the employee's

preferences, each member will choose between a 457(b)⁸, and a 401(k)⁹ style DC plan. These options are based off those currently offered by Alaska and Michigan, the only two states currently offering a full DC plan to public employees. Alaska currently provides new employees a 457(b) plan with employer contribution rates set at five percent of the employee's wages (State of Alaska, 2009). Michigan offers new employees a 401(k) plan with the option to participate in a separate and additional 457(b) plan. For Michigan, employers contribute a total combined amount of up to four percent of the employee's wages and will match an additional three percent of employee contributions per pay period – making a maximum seven percent contribution (State of Michigan, 2008). This DC plan offering will provide for employer contribution of up to six percent each year.

Participation in this plan will be made mandatory to all new hires, but also be made available to existing employees who wish to transition to the DC plan on a voluntary basis. If existing members elect to switch from the existing DB plan to the new DC plan, their decision to do so is irrevocable. Employees who transition to the DC plan will have their benefits from the DB plan converted to the DC plan. This way, they only receive benefits based on the DC calculation at their time of retirement, and do not

⁸ A 457(b) plan is a non-qualified tax-deferred compensation plan that covers employees of a state. Eligible employees can include: local and state government workers, fire fighters, police personnel, and public school employees. Public governmental 457 plans are required to be fully funded. As required by IRC section 457(g), those funds must be held in trust for the exclusive benefit of plan participants and their beneficiaries. Employees set aside money for retirement on a pretax basis through a salary deferral agreement with their employer. Under this arrangement, the employee agrees to take a reduction in salary. The money reduced is directed into an investment company offered by the employer. The 457(b) contributions grow tax free until withdrawal at retirement or termination of employment (457(b)wise).

⁹ A 401(k) is available to all employees. It is a tax-deferred investment and savings plan that acts as a personal pension fund for employees. You pay taxes on your investment gains when you withdraw money from the plan, which you can begin doing without penalty at age 59 1/2. When you leave a company, you can roll over funds to an alternate retirement plan (Accounting Glossary, 2007)

receive partial benefits from both plans. This will attempt to limit the extent to which two tiers of members exist in a single system, but it will not eliminate it.

The need to implement a second pension plan will force California to adapt its current practices to service both types of members. This will either oblige CalPERS to expand its expertise, or put the task of administering the DC plan on another state agency – new or existing. It is possible that the role of administering such a plan could be outsourced to the private sector, but it is highly unlikely due to the loss of public jobs that would result. Both plans will have to operate simultaneously until the last eligible DB plan members conclude the collection of their DB annuity payments. As this phase out occurs, it is assumed that maintenance costs will fall also. However, any unfunded liabilities that exist in the DB plan will not go away by the implementation of the DC plan. Therefore, during the time that both plans exist, there is still the same element of fiduciary risk held by the taxpayers that existed at the time of the switch. This risk only falls as retirees conclude their benefit collection or transfer their benefits to the DC side.

The DC plan will offer plan complete mobility to employees should they ever cease employment with the state. In addition, the DC plan places the fiduciary risk of maintaining the contracted benefits onto the employee from the taxpayer. The DC plan also eliminates any guaranteed level of benefit at retirement previously offered by the DB plan. Existing employees who are given the option to switch are able to choose which combination of pros and cons will better meet their needs.

Alternative 3: Freeze Existing DB Plan and Replace With New DC Plan

The third alternative put forward is to freeze the existing DB plan offered to current and future employees, and instead offer retirement benefits through a DC plan. By freezing the DB plan, no new contributions are allowed into the plan. All contributions that are made after the 'freeze' are directed into the DC plan instead. This option is only different from alternative two in the sense that in addition to closing the DB plan to all future hires, existing members are no longer allowed to make additional contributions to their DB plan. Like the previous, this option will also require new hires to join the DC plan, as well as allow existing DB participants to transfer their benefits irrevocably to the DC plan side on a voluntary basis.

This option will form two tiers of employees. The employees who exist at the time of the switch and do not transfer their DB benefits will have both DB and DC benefits at the time of retirement. Meanwhile, new employees will only have DC benefits at the time of retirement. Like the previous alternative, this option will also require the simultaneous operation of both plans. However, because no new DB contributions will be accepted, members will have fewer funds to build the retirement investment pool up from. This option will also require the need for CalPERS or another state agency to take on the responsibility of maintaining a second retirement plan.

This policy alternative reflects the associated risk from the previous option in that any unfunded liability existing in the DB plan remains there, even with the addition of a DC plan. Risk also remains with the taxpayers as long as the DB plan is required to operate. The DC plan will offer plan mobility to participating employees should they

ever cease employment with the state. However, the DC plan will also eliminate any guaranteed level of benefit at retirement previously offered by the DB plan. In this case, existing employees who have the option to switch are able to choose which plan's advantages and disadvantages best suit them, but only to an extent. Even those who do not choose to transfer their DB plan benefits are subject to DC plan benefits from the 'freeze' going forward. This may affect the way the state is able to attract and retain employees.

Alternative 4: Implement a Cash Balance Hybrid Plan

The fourth alternative put forward is to offer a hybrid plan in the form of a cash balance plan. Like alternatives two and three, participation in this plan will be made mandatory to all new hires, with the option to participate made available to existing employees who wish to voluntarily transition their DB benefits irrevocably to the hybrid plan. This will attempt to limit the existence of two tiers of members within the same system, but will not eliminate it. The cash balance plan will incorporate elements of both the DB and the DC plan, which will provide a level of guaranteed benefit to the employee, while increasing plan mobility at separation of employment.

Additionally, like the previous two options, both the DB and the hybrid plan will have to be maintained simultaneously until the last eligible DB retiree concludes the collection of their annuity payments. Due to this aspect, this option will also call for CalPERS or another state agency to expand their expertise in order to maintain both plans. Since the hybrid plan incorporates perceived advantages of both the DB and DC plans, it can be assumed that more employees will voluntarily transition from the DB

plan to the hybrid plan, than with alternatives two or three. This may decrease the amount of time the DB plan will have to be maintained in conjunction with the new hybrid plan.

Though benefits of both DB and DC plans are combined in the hybrid – such as plan mobility, an option for a lump sum payment at the time of retirement, a portion of retirement benefit based on years of service while a portion is based on market performance, and having an individual account – the aspect of risk is still not balanced. With the cash balance hybrid, the employer will retain the fiduciary responsibility for meeting any benefit obligations.

Alternative 5: Reduce the Existing DB Plan Benefit Level

The fifth alternative put forward is to reduce the benefit level offered for future hires under the existing DB plan. This can be done in three ways, by decreasing the benefit factor in the retirement formula, by increasing the age of retirement in the benefit formula, or by a combination of the two. This option will employ decreasing the benefit factor in the retirement formula as the method to reducing the benefit level. The changes are reflecting in Table 4.2 below.

Table 4.2
Reduced Benefit Factor at Retirement

Plan/Classification	Current Benefit Factor	Reduced Benefit Factor	When Retiring at Age
Miscellaneous:			
Tier 1	2.0%	1.25%	55
Industrial	2.0%	1.25%	55
Safety	2.5%	2.0%	55
Peace Officer/ Firefighter	3.0%	2.25%	55
Highway Patrol	3.0%	2.25%	50

This is based on the assumption that by decreasing the employee benefit level, the cost associated with employer contribution rates will also decrease. This is a way to approach the lower overall costs associated with operating defined contribution plans, while still maintaining a level of guaranteed benefit for employees. However, this could have potentially detrimental affects on the state's ability to attract and retain employees. In addition to lowering the cost associated with maintaining higher benefit levels, it also represents a decrease in incentives for employees who work for the state. The cost reduction mirrors a DC advantage for employers, but there are no additional incentives offered to employees to make up for the loss in benefits, such as added portability or control over investment choices.

Analysis of Policy Outcomes by Criteria

In this section, each of the policy options are judged against the criteria formulated in Chapter 3. These criteria are: 1) cost efficiency, 2) equity, 3) administrative feasibility, and 4) political feasibility. The outcomes are presented below in narrative format and in the outcome matrix shown by Table 4.2.

Alternative 1: Maintain the Status Quo

I find that letting present trends continue without change is moderately cost efficient. This is so because no initial transition or implementation costs will be incurred. However, as the plan currently stands, employer contribution rates can range from zero percent of employee wages to more than 30 percent. Due to the fact the rates change on an annual basis, it makes it difficult for employers to accurately plan their financial responsibility with DB retirement contributions. A net benefit to the state with the DB

plan is that the investment professionals invest billion of dollars annually in the state economy (Applied Research Center, 2007, September). The Applied Research Center (2007, September) reported that CalPERS' total investment impact on the state's economy was slightly more that \$15.1 billion in 2006¹⁰.

The current DB plan also moderately distributes and shares the impacts of this pension system. Contribution costs are shared between employers and employees. Although employer and employee rates are not consistently the same, they are comparable when considered over longer periods. Employee rates stay steady and employer rates can be above or below that of the employee, thus balancing out over market trends. The one equity disparity is when it comes to sharing the aspect of risk. With this option, 100 percent of the fiduciary risk is placed on the employer and subsequently on the taxpayer.

Administrative feasibility is very strong for maintaining the current DB plan. CalPERS has operated in an administrative capacity since 1932 and will most likely continue to do so for as long as the DB plan stays in operation. CalPERS is a highly respected entity in the investment field, especially within government, and has a long history and experience to draw from moving forward.

Considering the series of past attempts to implement DC and hybrid elements that have failed, it can be assumed that there is strong political feasibility to continue the operation of the existing DB plan. A consideration to make is that Democrats currently

¹⁰ That total economic impact includes the amount of the initial investments, the impact of those investments when they are then used in the local economy, and the induced impact or the ripple effect of tertiary economic activity (Applied Research Center, 2007, September).

control the state's legislature and this group traditionally shows support for DB plans. Additionally, in times of poor financial and/or economic condition it can further be assumed that political support will strengthen for an option that provides retirement security, as this option does.

Alternative 2: Close Existing DB Plan and Replace With New DC Plan

Cost efficiency of closing the existing DB plan and opening a new DC plan to replace it will be moderate. This will entail the implementation of an entirely new and additional pension plan, requiring large initial government expansion to accommodate the needs associated with offering both plans simultaneously. The initial financial costs associated with the transition will be large. There will be an increased need for workforce personnel, information, facilities, and experts to initiate concurrently operating plans. The long-term financial costs will continue through the life of the DB plan. As the DB plan members begin to fade out, it is possible that the financial costs associated with them will also decrease. However, as more members exit the DB plan, the consequence may be a decreased amount of funds available for longevity risk pooling. This can lead to unfunded liabilities that are difficult to recover from as the last group of participants close in on retirement. The ability of the DB side to invest in the local economy adds to the overall net benefits to the state. It is assumed that those professionally managing the DB accounts will be able to maintain a level of economic stimulus to the state through local investment, but at a lower rate associated with the level realized with maintaining the status quo. Discontinuing the DB plan as an incentive may also affect the state's ability to attract and retain employees. This can impose a cost of

losses in workforce, either by employees severing employment or by a lessened ability to recruit new employees. Conversely, this transition also has the ability to attract younger workers who may be more interested in DC plan benefits. However, the detraction from the loss of DB benefits is assumed to be greater than the attraction by newly available DC plan benefits.

The equity associated with discontinuing the existing DB plan and replacing it with a DC plan is moderate. The stakeholders will share the costs associated with this transition. Having to make choices about employment desirability offered by the state impacts the employees. There will be some who prefer the pros and cons of the previous DB plan, while some who prefer those of the new DC plan. For those employees who are given the opportunity to transfer their DB plan benefits to the DC plan at the time of the transition, the choice is theirs to weigh. Additional financial costs associated with the initial implementation of the new plan will be imposed on both the employers and the taxpayers because the majority of the funds used will most likely be taken out of the Public Employees' Retirement Fund (PERF). The PERF is where the employer and the employee contributions are held, so in turn fewer funds to invest can lead to increasing employer rates, or even to compromising the integrity of the DB employee benefit security – putting addition risk on the taxpayers. However, this policy option would transition all future risk from the taxpayer to the individual employee.

Transitioning public benefits from DB to DC involves a moderate level of complexity in terms of administrative feasibility. CalPERS is a resource that can be built upon to increase services for the DC plan members. They are an entity that has existing

knowledge and capabilities to deliver pension benefits; they will however be required to expand this base for the addition of the DC members. There will also be a need to incorporate Federal regulation components, specifically the ERISA. This expansion of services, knowledge and regulation will change the organization of CalPERS but they have the capability to do so.

Now (Spring 2009) in California, political support for transitioning toward a DC plan is fading. This is in part because massive market failures resulted in many DC account holders absorbing large drops in their retirement portfolios. Those close to retirement who depend on a DC plan are most likely forced to work longer or to depend on other financial resources. Weak political feasibility is also a reflection of the democratically controlled legislature. Traditionally, DB plans are favored more so by liberals than are DC plans. These all play into making the transition to a DC plan more difficult due to a lack of support by key decision makers.

Alternative 3: Freeze Existing DB Plan and Replace With New DC Plan

Freezing the existing DB plan and replacing it with a new DC plan will maintain moderate levels of cost efficiency. Financial costs associated with the transition will be comparable to those in alternative two. This option will also require the implementation of a new and separate pension plan, which will call for large initial government expansion to accommodate the needs associated with offering both plans simultaneously. This option will require an increase in the workforce, the need for the creation and dissemination of information, an expansion of facilities, and additional subject matter experts to initiate the transition and maintain the dual operating plans. Though long-term

financial costs will continue through the life of the DB plan, it is possible that the financial costs associated with them will also decrease as the DB plan members begin to leave. It is a threat in this policy option that as more members exit the DB plan, the consequence may be a decreased amount of funds available for longevity risk pooling. This can lead to unfunded liabilities that are difficult to recover from as the last group of participants close in on retirement. However, this cost may be set-off some by the ability of the DB side to invest in the local economy, adding to the overall net benefits to the state. With this option, I also assume that the professional managers for the existing DB accounts will be able to maintain a level of economic gains to the state through local investment, but at a rate lower than that associated with the status quo. The state's ability to attract and retain workers may also be impacted because of the changes in benefit incentives. However, workers who prefer DC plans may not be deterred, those who prefer DB plan benefits may be. In this option, it is also assumed that the detraction from the loss of DB benefits is greater than the attraction by newly available DC plan benefits.

The equity associated with freezing the existing DB plan and replacing it with a DC plan is considered to be moderate. Employees, employers and taxpayers share the costs associated with this transition. Having to make choices about the desirability of employment offered by the state impacts employees. Attractiveness will be targeted to those who favor the advantages in DC plans or who have no preference between DC and DB plans. Also, in this case, existing employees are not given the choice to continue participating in their DB plan. Though they will receive the portion of DB benefits accrued up until the point of the 'freeze', existing employees are required to participate in

the DC plan along with new hires. This rather inequitable cost of the transition placed on employees is balanced by the rather inequitable cost placed on employers and taxpayers. Additional financial costs associated with the initial implementation of the new plan will most likely be taken out of the PERF. Funding the transition with these dollars makes for fewer funds available to fulfill the fiduciary liabilities of the DB contracts. This can lead to increasing employer rates, or even to putting additional risk on the taxpayers. This policy option will also transition all future risk from the taxpayer to the individual employee.

The effects of this option considering administrative and political feasibility are nearly identical to that for alternative two. Freezing the DB plan and imposing a DC plan for both existing and future employees will impose moderate administrative complexity. This option will be able to use CalPERS as an existing resource that can be expanded to accommodate the additional needs in services for DC plan members. CalPERS also has existing knowledge and capabilities to deliver pension benefits that can be increased to incorporate Federal regulation components like ERISA. This expansion of services, knowledge and regulation will change the organization of CalPERS, but they have the capability to do so. Political support for transitioning toward a DC plan is fading and therefore feasibility is lacking for this policy option. Poor political feasibility is a result of poor market performance in 2008 and 2009, which led to large drops in DC plan account levels. Additionally, a lack of support is reflected by the democratically controlled legislature, which tends to favor DB plans. These all play into making the transition to a DC plan more difficult due to a lack of key decision maker buy in.

Alternative 4: Implement a Cash Balance Hybrid Plan

Implementing a cash balance hybrid plan is one of the most cost efficient options under consideration. Cost efficiency is considered to be strong for this option because it incorporates a majority of the benefits from both DB and DC plans. Under this plan type, investment professionals will still be employed to make informed investment decisions in order to maximize profits at the lowest possible risk to the employees – as is the case with DB plans. It is assumed that investments in the local economy will continue, but at a reduced level. Because fiduciary liability on the DB side does not disappear by implementing a hybrid offering, this continued professional management will help to maintain PERF integrity and keep the risk of defaulting on providing benefits low. At the same time, a hybrid will help assure that the state can continue to offer DB plan benefit components paired up with DC plan elements, such as plan mobility. This will help to attract workers who favor this DC plan component and still favor DB elements, such as benefit guarantee. Financial costs will be similar to those in alternative two. There will need to be an expansion of resources, facilities and information. However, at a rate more readily absorbed due to the similarities that the hybrid account shares with the existing DB plan. This policy option allows for a higher net benefit to the state than the previously explored options.

Implementing this hybrid plan is considered to have a strong level of equity. The impacts imposed as a result of the switch will be shared among employers, employees and taxpayers. A majority of the initial transition costs and subsequent maintenance costs for this option will also most likely come from the PERF. The consequences of this,

which are explained in alternative two, will be shared amongst employers, employees and taxpayers. Employers and employees will still share a role in contributing to maintain that funds are available to provide benefits. The one element that keeps this option from receiving a very high rating of equity is the fact that in the case of a cash balance hybrid, the employer and subsequently the taxpayers still solely maintain the risk. Therefore, the taxpayers will bear the ultimate burden for both the DB plan benefits and the new hybrid plan benefits. A possible positive aspect is that due to plan mobility and the option to withdrawal retirement benefits in a lump sum at the time of retirement, hybrid plan participants are fully exiting the hybrid system and in turn reducing the amount of fiduciary liability held by the taxpayers as a whole.

Administrative feasibility for implementing a cash balance hybrid plan is considered to be strong. CalPERS will continue to administer the DB services and benefits for the existing members, which can also be applied to the DB aspects offered on the hybrid plan side. CalPERS has the capabilities to further specialize for the added aspects of the DC plan. There will be a need for shifting organizational culture as well as structure, but to a smaller degree than is required for alternatives two and three.

The implementation of a hybrid plan will have more political support than would closing or freezing the DB plan and replacing it with a full DC plan. Though there would still be some opposition to implementing a hybrid in the economic times presented by the 2008-2009 investment market, there will be more political support and buy in because it also incorporates DB elements. Therefore, this option will offer moderate political

feasibility because some democrats will be compelled to support it and it will provide for more security than options two or three.

Alternative 5: Reduce the Existing DB Plan Benefit Level

The cost efficiency associated with reducing the benefit factor for future employees in the existing DB plan is weak. There will be minimal financial costs associated with implementing the change, and there will be higher associated savings by paying out lower benefit levels to future employees at their time of retirement. However, the workforce costs will be tremendous. Benefits offered in DB plans act as ways to counteract the lower pay when compared to comparable career fields in the public sector. These benefits act as incentives to attract workers to the state and to serve as long-term civil servants. By reducing the benefit level and without balancing this reduction by increasing a benefit of another kind, the workforce will be impacted. There will be a decrease in the ability of the state to attract and retain employees, as well as a possible drop in morale in existing employees. Though existing employees' benefit level will not be altered, the affect on the state may lower their morale and in tern their productivity. It is assumed that the additional costs imposed by workforce impacts outweigh the benefits that result from cost savings associated with lower retirement benefit levels. Therefore, this option results in a low net-benefit to the state overall.

Equity associated with reducing the benefit factor to future employees is considered to be moderate. A majority of the minimal cost increases will most likely be taken out of the PERF. However, because of the relatively low amount needed, the additional strain placed on the fund is also minimal, limiting affects on employers and

taxpayers. Costs associated with the workforce are also disproportionately distributed, as these costs will primarily affect the state by inhibiting their ability to hire and retain workers. Likewise, benefits resulting from cost savings associated with reducing the benefit level are also distributed disproportionately, primarily targeting employers who receive lower rates. Additionally, with this policy option, risk remains 100 percent on the taxpayers. The mix of evenly and unevenly distributed costs and risk result in only a moderate equitable rating.

There is a very high level of administrative feasibility for decreasing the benefit factor for future employees. There would be essentially no change to CalPERS' ability to incorporate this policy option, as it has been done in the past with the incorporation of Tier 2 Miscellaneous employees. On the other hand, political feasibility for this policy option is weak. Although it is in the interest of the taxpayers to reduce their fiduciary liabilities, it is unlikely that reducing benefit factor without countering it with another incentive will gain support from key decision makers in this democratically controlled legislature or by the unions who act as strong lobbying forces.

Table 4.3
Qualitative Outcome Matrix

Criterion	Alternatives				
	Alternative 0 Maintain Status Quo	Alternative 1 Close DB, Open DC	Alternative 2 Freeze DB, Open DC	Alternative 3 Open Cash Balance Hybrid	Alternative 4 Reduce DB Benefit Level
Criterion 1: Cost Efficiency	Moderate; no initial transition or implementation costs; annual employer rate changes make planning difficult; billions of dollars invested in local economy.	Moderate; large initial transition costs continue for life of DB and then drop; risk in lowering longevity risk pooling; some local economic investment; alter workforce recruitment.	Moderate; large initial transition costs continue for life of DB and then drop; risk in lowering longevity risk pooling; some local economic investment; less able to recruitment workforce	Strong; moderate transition costs; investment professionals maintain PERF integrity; create increased workforce incentives.	Weak; minimal initial transition and implementation costs; large workforce costs from lowered incentives; lowers morale and subsequent productivity.
Criterion 2: Equity	Moderate; employee and employer contribution rates balance over time; employer/taxpayer hold 100 percent of risk.	Moderate; costs and risks shared with employees, employers/taxpayers; shifts to employees when DB closes fully.	Moderate; costs and risks shared with employees, employers/taxpayers; shifts to employees when DB closes fully.	Strong; costs shared with employees, employers/taxpayers; employer/taxpayer hold risk; amount of fiduciary responsibility reduced.	Moderate; minimal financial impact shared evenly; workforce cost on state, cost savings on employer.
Criterion 3: Administrative Feasibility	Very strong; continue with current operations; long history and high experience level.	Moderate; ability to expand on current CalPERS framework; need to incorporate Federal DC regulations.	Moderate; ability to expand on current CalPERS framework; need to incorporate Federal DC regulations.	Strong; ability to expand on current CalPERS framework; minimal need for expansion.	Very strong; continue with current operations; long history and high experience level.
Criterion 4: Political Feasibility	Strong; past legislative attempts to alter plan failed; democratically controlled legislature adds support to trend.	Weak; poor economic climate and democratically controlled legislature lack support.	Weak; poor economic climate and democratically controlled legislature lack support.	Moderate; DB security factor supported by economic climate and democratically controlled legislature	Moderate; unlikely to gain support without counter incentive; opposition by unions.

Quantified Alternative Results

I quantitatively analyzed each of the policy alternatives against the criteria. Ratings were applied to each option based on a scale of “Very Weak” (1) to “Very Strong” (5). Outcomes were calculated by multiply the alternative rating again the outcome weighting. Table 4.4 shows the results on the following page. In the next chapter, I will offer my conclusions and recommendations based on the results from both qualitative and quantitative outcome matrixes.

The outcome with the highest total based on the outcome matrix was implementing a hybrid pension system in the form of a cash balance plan, with an overall score of 3.8. This option was considered to be “Strong” when evaluated against the cost efficiency, equity, as well as administrative feasibility criteria. The policy option that scored the second highest total based on the outcomes matrix was maintaining the status quo and letting present trends continue, with an overall score of 3.6. This alternative scored “Moderate” on both the cost efficiency and equity criteria, and a “Very Strong” on the administrative feasibility criterion.

Reducing the benefit level of future DB plan members by imposing a benefit factor reduction ranked third on the outcome matrix, with a total score of 3.05. This policy option was “Weak” when evaluated for its cost efficiency. However, it received a “Very Strong” rating when compared to the administrative feasibility criterion due to its ability to maintain the existing CalPERS administrative framework.

Alternatives to close or freeze the existing DB plan and replace it with a DC plan both received the lowest totals according to the outcome matrix, with overall scores of

2.8. Each of these policy options received a “Moderate” when evaluated against the cost efficiency, equity, as well as administrative feasibility criteria. However, they received a “Very Weak” rating for the political feasibility criterion due to the fact that the current economic climate is shifting political support away from DC plans. This paired with California having a democratically controlled legislature severely limited any support given to these options by key decision makers.

Table 4.4
Quantitative Outcome Matrix

Criterion	Alternatives				
	Alternative 1 Maintain Status Quo	Alternative 2 Close DB, Open DC	Alternative 3 Freeze DB, Open DC	Alternative 4 Open Cash Balance Hybrid	Alternative 5 Reduce DB Benefit Level
	Ratings: 1(very weak), 2 (weak), 3 (moderate), 4 (somewhat strong), 5 (very strong)				
	R x W=Total	R x W=Total	R x W=Total	R x W=Total	R x W=Total
Criterion 1: Cost Efficiency	3 x .35 = 1.05	3 x .35 = 1.05	3 x .35 = 1.05	4 x .35 = 1.40	2 x .35 = 0.70
Criterion 2: Equity	3 x .25 = 0.75	3 x .25 = 0.75	3 x .25 = 0.75	4 x .25 = 1.00	3 x .25 = 0.75
Criterion 3: Administrative Feasibility	5 x .20 = 1.00	3 x .20 = 0.60	3 x .20 = 0.60	4 x .20 = 0.80	5 x .20 = 1.00
Criterion 4: Political Feasibility	4 x .20 = 0.80	2 x .20 = 0.40	2 x .20 = 0.40	3 x .20 = 0.60	3 x .20 = 0.60
Total Score	3.60	2.80	2.80	3.80	3.05

Chapter 5:

CONCLUSION AND RECOMMENDATIONS

Brief Summary

Since the 1980s, entities offering defined benefit (DB) pension plans to their employees have been shifting benefits to defined contribution (DC) plans. This transition has occurred largely in the private sector, while more sparingly and slowly in the public sector. California has maintained in large part their DB plan offerings to public sector workers. However, the 2008-2009 economic climate may be influencing the benefit packages offered by California's public employers. Large budget deficits and poor performance by investment markets has put the state in a position where the current level of offered benefits may be too high to sustain. This paired with the state's current possession of risk and fiduciary liability could force benefit contracts to be unfulfilled and for the state's taxpayers to pick-up the tab.

The purpose of this thesis was to examine the practices engaged in by other state governments for assessing the desirability of defined benefit and defined contribution pension plans, and the factors present for states who committed to making the switch from one type of benefit to the other. These lessons learned were then applied to California and considered in conjunction with California's unique set of circumstances to help evaluate the best path the state should pursue for its own public pension benefits, specifically from the perspective of the Legislature (as taxpayer representatives).

This thesis took into account current environmental factors such as the state's political and economic climate to evaluate alternatives proposed for California's public

pension system. Because taxpayers hold the ultimate burden in fulfilling the state's pension contracts, the approach taken was to assess the route California should pursue from the perspective of these stakeholders. Therefore, the evaluation process judged policy success based on how legislators and taxpayers would be affected and offer their support.

Organization of Thesis

The organization of this thesis was broken down into five chapters, including this current chapter. Chapter 1 introduced the history and background of the public pension system in California, as well as trends and transitions from other states. Key terms were defined and recent statewide legislation on the topic was introduced. Chapter 1 concluded with the explanation of why this topic is a timely one to address, in addition to introducing the relevant sides and stakeholders of the issue.

The second chapter of this thesis was devoted to an in depth look at relevant research literature that exists on the topic of public pensions and transitions from DB plans to DC plans. The first half of this chapter specifically summarized transition indicators on general, statewide, and individual levels. Literature also revealed various advantages and disadvantages for DB and DC plans, which I presented in the second half of Chapter 2.

Chapter 3 introduced the outcome matrix as the decision making tool used in this thesis to assess the various policy alternatives as they relate to weighted criteria. This chapter further presented formulated policy options to be evaluated, identified criteria to evaluate them against, and justified weights for each criterion. This chapter concluded

with an explanation of how the outcome matrix is used as an evaluation tool and what constituted a strong and weak outcome.

The fourth chapter applied Bardach's (2000) outcome matrix tool to the already formulated policy alternatives and weighted criteria. This chapter explained how to identify the optimal policy outcome, and offered more in depth descriptions of the policy options to offer greater understanding of the choices. Chapter 4 concluded with verbal details and numerical ratings for the alternative-criteria relationships, as well as matrixes of both the qualitative and quantitative outcomes.

The current chapter will summarize the results initially presented in Chapter 4, based on the analysis from all preceding chapters. In the first section of this chapter, each alternative will be revisited and discussed in terms of the trade-offs for implementing each particular alternative over another. This is followed by a sensitivity analysis to account for possible changes in results by alterations in criteria weights. Based on the previous analysis, outcome matrix results, the trade-off examinations, and sensitivity analysis, the second part of this chapter will discuss the best options California should pursue and conclude by offering applicable recommendations.

Confronting Trade-offs and Unintended Consequences

The evaluation process applied in the previous chapter assessed the policy alternatives against the weighted criteria using outcome matrix analysis. By first evaluating the policy options' success qualitatively, I was able to discuss how each option addressed the variables of cost efficiency, equity, as well as political and administrative feasibility. These conclusions were then translated into ratings that could be applied in

quantitative contexts. The ultimate results assigned a numerical value that identified the most successful policy options based on the applied set of variables, from the perspective of California's taxpayers.

However, the policy option with the highest total value derived from the quantitative matrix may not be the best choice when trade-offs are taken into account. There may also be unforeseen consequences that occur, creating a different set of policy problems to be addressed out of the alternative's implementation. The following section will discuss each policy alternative as a whole in relation to the trade-offs and possible consequences presented if they were to be adopted and applied over the other alternatives.

Open Cash Balance Hybrid

The implementation of a cash balance hybrid plan seems to provide the best of both worlds, and as a result appears to be the most equitable policy option. This is the only alternative to combine the desirable elements of both defined benefit and defined contribution plans, providing a system whereby both the employees and employers can be satisfied. This option also provides strong levels of cost efficiency, as well as administrative feasibility by building off the existing CalPERS system. One main drawback is that the risk remains on the side of the employer and by default the taxpayer.

Possible trade-offs to implementing a hybrid plan option as opposed to the other options explored in this analysis are that this alters the existing pension system without really addressing the main issue of shifting risk away from the taxpayers. This plan does incorporate aspects of both DB and DC plans, and as a result has the ability to lower the

overall amount of liability held by the state because fund contribution requirements are lower for employers. As a result, though taxpayers still ultimately hold the risk, the level of risk has dropped without having to shift it completely to the individual account holders. The consideration to make here is if this drop is substantial enough to consider implementing this policy option, or if total risk shifting is the more desirable outcome.

Maintain Status Quo

Maintaining the current defined benefit system presents a very strong option in terms of administrative feasibility because of the existing CalPERS system for implementation and delivery of benefits. Politically, the DB system may also be rounding up more support than in the past due to the down market adversely affecting those with DC plans. However, distribution of risk and responsibility would remain unchanged, resting in the hands of employers and ultimately on the shoulders of the taxpayers.

The trade-off with this option would be that there is no direct action being taken to address the current policy situation. By continuing with the current system, the only changes sustained would be those resulting from environmental changes overtime. These environmental changes could cause both positive and negative influences on the existing issue. For instance, this means that current moderate levels of cost efficiency could increase to strong levels if market performance increased. Likewise, levels could also weaken if market performance worsened still, causing for even higher employer contribution rates. Additionally, the current level of strong support could continue to gain momentum, or the opposite could result. This option, as compared to the others,

waits out the existing situation warranting action, betting that the changing outside factors will continue to support the option. However, it is possible that factors will shift away from the current levels of support and point to an alternative plan.

Close DB, Open DC

The option to close the existing DB plan to future hires and to instead replace it with a DC plan introduces an option comparable to what Alaska, Michigan and West Virginia have done in their past pension plan transitions. Something to consider here is that West Virginia later reversed their decision and switched back to DB plan offerings. This option does shift future risk from the taxpayer to the individual participants, but requires the dual maintenance of both DB and DC plans for years to come. Therefore, this option may not shift enough of the risk to relieve the taxpayers from the burden of higher taxes in the future. It may also support circumstances later down the road, which support switching back to the DB plan, such as the need to recruit employees.

As presented in the Chapter 2 literature review, it has been shown that if given the choice, most employees will choose defined benefit plans over defined contribution plans. This shows a tendency for workers to favor the DB plan and as a result may negatively affect the state's ability to recruit new employees. Another consequence of implementing this option over the others is that the existing members may not choose to make the switch from the DB plan to the new DC plan. This could result in the two plans needing to be maintained simultaneously for a prolonged period, adding to dual administrative and investment costs. A possible upside is that depending on individual

preferences, DB plan employees will transition their membership over to the DC side and relieve some risk from the taxpayers, but this will not be substantial.

Freeze DB, Open DC

Freezing the DB plan (as opposed to closing it), makes for an alternative that is somewhat equitable, cost efficient and administratively feasible. This option's success lays in its ability to shift a large degree of fiduciary liability and risk away from the taxpayers and onto the individual participants. However, it forces both existing and future employees into a DC plan. Unlike the previous option, this alternative does not provide the choice for existing employees to transfer their participation, but it requires it of them. Consequently, this could result in large loss of employment and derail future recruitment efforts by the state. The moderate levels of success in the various criteria that this option is judged against does not outweigh the undesirability of this option for employees, and ultimately the state.

Reduce DB Benefit Level

By maintaining the current DB system, but reducing the benefit level offered to new employees, the fiduciary liability imposed on the state decreases because of the lower pension promised. This would also be an option that would require minimal administrative change and next to maintaining the status quo, be one of the easiest alternatives to implement. In terms of sharing impacts, it seems that the positive impacts are targeted solely on one group, the employers and taxpayers, while the negative impacts are targeted solely on another group, the employees.

The consequence with this option is that it has great potential to harm the state's ability to recruit and retain employees. Those who are in the system may continue to work, but many more may be deterred from entering for a lower level of benefits. This option would need to provide some kind of substitution to compensate those affected by the reduced benefit level. For instance, providing the option for voluntary participation in a 401(k) plan so that employees have the opportunity to save additional retirement funds could counteract some negative recruitment affects. However, even with a substitution to compensate for the loss in benefits, this alternative when compared to the two previous still may be the poorest option overall, as is also reflected in its total score on the qualitative matrix.

Sensitivity Analysis

In the outcome matrix shown in table 4.4, I multiply the weights applied to each criterion against the ratings for each policy alternative to get an overall score of success for that particular option. However, the total scores are dependent upon the values applied for both ratings and weights. Applying different criteria weights can alter the total score for each alternative, and subsequently change the overall score determining the best policy option. Therefore, in order to account for possible variations in criterion importance from taxpayer perspective, I will conduct a series of sensitivity analyses to determine a range of outcomes for varying criteria weights.

In Table 5.1 below, I alter each criterion's weight by .5 percent in either direction to account for possible variants in criteria importance. The first weight changes create equal weights for the criteria of cost efficiency and equity at .30 percent, while making

political feasibility a higher weight at .25 percent, and administrative feasibility lower at .15 percent. The second weight changes increase the weight for the cost efficiency criterion to .40 percent, and decrease the equity criterion weight to .20 percent. The administrative feasibility weight increases to .25 percent, while the political feasibility weight decreases to .15 percent.

Table 5.1
Criteria Weight Changes

Criteria	Original Weight	First Altered Weight	Second Altered Weight
1. Cost Efficiency	.35	.30	.40
2. Equity	.25	.30	.20
3. Administrative Feasibility	.20	.15	.25
4. Political Feasibility	.20	.25	.15

Table 5.2
First Altered Quantitative Outcome Matrix

Criterion	Alternatives				
	Alternative 1 Maintain Status Quo	Alternative 2 Close DB, Open DC	Alternative 3 Freeze DB, Open DC	Alternative 4 Open Cash Balance Hybrid	Alternative 5 Reduce DB Benefit Level
	Ratings: 1(very weak), 2 (weak), 3 (moderate), 4 (somewhat strong), 5 (very strong)				
	R x W=Total	R x W=Total	R x W=Total	R x W=Total	R x W=Total
Criterion 1: Cost Efficiency	3 x .30 = .90	3 x .30 = .90	3 x .30 = .90	4 x .30 = 1.20	2 x .30 = .60
Criterion 2: Equity	3 x .30 = .90	3 x .30 = .90	3 x .30 = .90	4 x .30 = 1.20	3 x .30 = .90
Criterion 3: Administrative Feasibility	5 x .15 = .75	3 x .15 = .45	3 x .15 = .45	4 x .15 = .60	5 x .15 = .75
Criterion 4: Political Feasibility	4 x .25 = 1.0	2 x .25 = .50	2 x .25 = .50	3 x .25 = .75	3 x .25 = .75
Total Score	3.55	2.75	2.75	3.75	3.0

Table 5.3:
Second Altered Quantitative Outcome Matrix

Criterion	Alternatives				
	Alternative 1 Maintain Status Quo	Alternative 2 Close DB, Open DC	Alternative 3 Freeze DB, Open DC	Alternative 4 Open Cash Balance Hybrid	Alternative 5 Reduce DB Benefit Level
	Ratings: 1(very weak), 2 (weak), 3 (moderate), 4 (somewhat strong), 5 (very strong)				
	R x W=Total	R x W=Total	R x W=Total	R x W=Total	R x W=Total
Criterion 1: Cost Efficiency	3 x .40 = 1.20	3 x .40 = 1.20	3 x .40 = 1.20	4 x .40 = 1.60	2 x .40 = .80
Criterion 2: Equity	3 x .20 = .60	3 x .20 = .60	3 x .20 = .60	4 x .20 = .80	3 x .20 = .60
Criterion 3: Administrative Feasibility	5 x .25 = 1.25	3 x .25 = .75	3 x .25 = .75	4 x .25 = 1.0	5 x .25 = 1.25
Criterion 4: Political Feasibility	4 x .15 = .60	2 x .15 = .30	2 x .15 = .30	3 x .15 = .45	3 x .15 = .45
Total Score	3.65	2.85	2.85	3.85	3.10

In Tables 5.2 and 5.3, these weights are applied to recalculate total scores. This is meant to reveal any affects on outcome matrix totals, and if a different policy alternative ranks better now than in the previous matrix. What these two new matrixes show is that regardless of the weights applied, in all cases, each alternative remained in the existing rank order as they did with the previous outcome matrix calculations. With all three matrixes, the best ranking alternative was to implement a hybrid plan, followed by maintaining the status quo. Closing or freezing the DB plan to open a DC plan continually tied for the third and fourth ranked alternatives, while reducing the benefit level received the lowest total score in each outcome matrix scenario. Table 5.4 below shows a comparison of the total scores for each alternative organized by the three criteria weights scenarios.

Table 5.4
Outcome Matrix Total Score Comparison

Alternative	Original Outcome Matrix Total	First Altered Outcome Matrix Total	Second Altered Outcome Matrix Total
1. Implement Hybrid	3.80	3.75	3.85
2. Maintain Status Quo	3.60	3.55	3.65
3. Close DB, Open DC	2.80	2.75	2.85
4. Freeze DB, Open DC	2.80	2.75	2.85
5. Reduce Benefit Level	3.05	3.00	3.10

Recommendations

The preceding chapters of this thesis helped to lay the groundwork for analyzing multiple policy alternatives poised at identifying the most appropriate pension system for California in the current conditions. Through reflecting on relevant research literature that revealed past trends and transition indicators present in other states, and by

employing outcome matrix analysis to test formulated options against applicable criteria, I was able to derive quantitative and qualitative results. By considering potential trade-offs and consequences of each policy option when compared to implementing it over another, I gained further understanding of the best fit for California from the perspective of its taxpayers. With that, I have concluded that there are two appropriate paths for the state to pursue in offering a public pension system. The recommendations that I discuss in further detail in the coming section outlines that implementing a cash balance hybrid plan would be the most optimal and best fit, followed by maintaining the status quo.

Recommendation #1

The three policy options evaluated of lowering DB benefit levels, closing the DB plan and opening a DC plan, and freezing the DB plan, and opening a DC plan are all options that reap lower net benefits to the state than the current DB plan. Using the status quo as a baseline measurement, these three options all support benefit returns lower than what is currently being enjoyed by the state. By implementing any one of these three alternatives, it is possible that aspects currently deemed disadvantages under the existing plan could be remedied. However, the overall net benefits to the state would decrease when considering the larger picture. It is therefore my recommendation that California not pursue these three policy options.

Recommendation #2

Maintaining the status quo is the policy option that scored second highest in each quantitative matrix. The aspects of this option as a defined benefit plan are also gaining more support in the current economic and political climate. If current environmental

trends continue, maintaining the status quo is a viable option to continue with the present level of benefits and costs. However, from the perspective of the taxpayers, this option does nothing to relieve the level of risk and responsibility held by them. Therefore, although this option is a better fit than the three previously discussed, it is my recommendation that this option only be pursued as a second approach, after the hybrid plan.

Recommendation #3

It is my recommendation for the taxpayers of California to support a transition from the traditional defined benefit pension plan to a cash-balance hybrid pension plan. This option scored the highest total score on each quantitative matrix and when considering the trade-offs previously discussed, they do not deter a significant amount of benefits away from this option. Although it has already been determined that this option does not shift complete risk away from the taxpayers, some does shift. However, the alternative's ability to incorporate advantageous aspects of both DB and DC plans balances this drawback. Though some potential employees may pass on state employment because the pension system has changed from a traditional DB plan, there is potential for greater recruitment by attracting those who value the combined benefits, which should counteract any poor affects on recruitment ability.

Recommendation #4

I further recommend that Legislators and taxpayers be especially mindful of the factors involved in political feasibility when shaping any future initiatives and bills to enact change toward recommendation #3. To be successful at passing a constitutional

amendment to pursue a hybrid pension plan for California's public employees, there has to be political support, as well as union support. If these two elements are present, it is more likely that a bill or initiative will pass.

Conclusion

In taking the information and recommendations made in this thesis, it is important to understand the context of factors influencing the outcomes, and that these outcomes can change as the context changes. The research, history, trends, and current environmental aspects I presented in the thesis tested a specific set of variables at a specific point in time. Further, I assessed the policy options based on a set of circumstances that can change depending on the opportunities presented in the timing of assessing the policy outcomes. The groups of people involved in the policies and the differing priorities of those involved can affect the outcomes. These factors all play into how I constructed the alternatives for this analysis, as well as which criteria I used to evaluate their relative success in addressing California's issue. These same alternatives and criteria may not be appropriate in five years from now or when taken into other communities. It is the goal of this thesis to provide a timely and relevant framework that can be applied to aid California's taxpayers in making informed decisions on what the best route is for them to pursue now.

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