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# The Government of Alberta's Fiscal Future: Possibilities and Pitfalls

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## **PREFACE**

The energy sector has been a dominant factor in Alberta's development and growth over the last half-century. The large capital investments and operating expenditures associated with finding and producing oil and gas have directly provided a major stimulus to the economy. But the indirect and induced impacts have been equally important. The development of many other industries supplying inputs to the energy sector, the generation of substantial export and government revenues, and the stimulus for large inflows of people have resulted in large 'multiplier' effects. In combination, these have also played a major role in shaping Alberta's 'character' which is generally distinguished by its highly educated, adjustable and entrepreneurial labour force, low unemployment and high labour force participation rates, strong work ethic and sense of self reliance, and its optimistic outlook.

In recent years the energy sector has become even more dominant and has increasingly made Alberta a key driver of the national economy. In a world with a rapidly growing demand for energy, having one of the largest concentrations of energy resources in the world might seem to translate into an assured, prosperous future. There is clearly huge potential associated with unconventional oil and gas, coal, remaining conventional resources and with alternative and renewable energy. However, translating this potential into reality will be daunting. Increasing constraints related to resource access, environmental impacts, infrastructure requirements, and availability of highly qualified people need to be addressed. Other challenges include the massive long-term investments in developing and implementing new technologies and making the right changes in the policy and regulatory framework. Indeed, the fact that relatively few nations have managed to convert resource wealth into high standards of societal welfare is a useful reminder of the magnitude of the challenges.

Alberta is in many respects at a crossroads. On the one hand complacency will almost certainly mean a dimming of the province's long-term prosperity. Declines in the conventional oil and gas sector will significantly dampen growth and prosperity. There are no other sectors of the province's economic base that could realistically expand sufficiently to offset significant declines in the dominant energy sector. On the other hand, visionary, strategic investments today can unlock non-conventional and other energy resources critical to securing a strong and prosperous long-term, sustainable future for the province.

It is in this context that ISEEE has undertaken a series of papers focused on Alberta's energy futures. The intent is to take a longer term look at the challenges, opportunities and choices and what they mean for Alberta's future.

# The Government of Alberta's Fiscal Future: Possibilities and Pitfalls\*

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## 1. Introduction

The purpose of this chapter is to provide the reader with an appreciation for the possibilities that are available to the government of the province of Alberta due to its access to royalties it collects from the sale of non-renewable fossil fuel resources. Gaining an appreciation for these possibilities requires that I also make the reader aware of the pitfalls that await the government should it fail to establish a long-term plan for how to best use the non-renewable resource revenues that providence has made available to it. The chapter is broken into four additional sections.

In Section 2, I describe the recent efforts by the government of the province of Alberta to deal with volatile revenues and the consequent volatility in its budget balance via the use of budgetary rules; rules as defined in legislation and as reflected in budgeting behaviour. The focus here will be on how the Progressive Conservative government of Premier Ralph Klein reacted to the dramatic changes to the amount of non-renewable resource revenue made available to it. Examining this recent period of economic history provides insight into which budgetary rules have proved successful and which might prove successful at guiding budgeting behaviour in the future.<sup>1</sup>

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\* Funding for this research was provided by the Institute for Sustainable Energy, Environment and Economy (ISEEE).

<sup>1</sup> See Kneebone (2006a) for a detailed examination of this period. Kneebone notes that contributing to interest in this period is the fact that the evolution of fiscal rules in response to wide swings in the amount of non-renewable

In Section 3, I examine the details of Alberta's provincial budgets and provide measures of the government's success at balancing demands to save non-renewable resources with demands for lower tax rates and higher levels of government spending.

Section 4 looks to the future. It begins with an examination of recent budgetary decisions and on the basis of that produces three scenarios describing future possibilities for the Government of Alberta's fiscal future. These three scenarios are used to illustrate the medium-term implications of recent budgetary choices and to outline some policy changes that might enhance the government of Alberta's fiscal future.

Finally, in Section 5 I offer a conclusion. Anticipating that conclusion, I find that the government of Alberta has traditionally faced, continues to face, and will in the future face, a difficult task of budgeting. Governments of jurisdictions which collect large sums from the sale of non-renewable resources typically face conflicting demands. On the one hand is the voting public which observes large amounts of revenue accruing from the sale of non-renewable resources and demands lower taxes and/or more generous government spending. On the other hand are analysts who emphasize to those governments the need for them to save at least some part of non-renewable resource revenues so that this wealth can be shared with future generations. Balancing those competing demands and interests is a challenge to policymakers who are politically-motivated and so focussed on short-term interests but who are also concerned with longer-term issues that determine the well-being of future generations. While challenged in this way, the government has in recent years shown an aptitude for balancing these competing demands. It has done so with the uses of fiscal policy rules which have guided the government in its short-term plans in a way that have kept it on a path leading to longer-term benefits. Very recently, however, the government has been required to reformulate its fiscal rules and we find it has been seemingly unable or unwilling to do so in a manner which will guide the province toward outcomes which will maximize the benefits Albertans are able to derive from their ownership of non-renewable resources. Looking to the future I emphasize the importance to Albertans of their government formulating and following a long-term plan for dealing with volatility in its revenues by showing how the possible long-term trends in energy prices will affect the fiscal choices, possibilities, and opportunities available to the government.

## **2. Early and Recent Efforts at Budgeting**

The government of Alberta is both blessed and cursed by the fact it collects royalties and other revenues based on the sale of non-renewable natural resources, particularly oil and natural gas. It is blessed in that those revenues comprise a sizable fraction of total provincial government revenue and so enables the government to finance program expenditures without the need to

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resource revenue made available to the government occurred during the life of a single government, the Progressive Conservative government of Premier Ralph Klein. The evolution of fiscal rules during this period was not, therefore, affected by changes in the governing political party or by changes in political or economic ideology as might happen, for example, should a right-wing government be replaced by a left-wing government, or a more populist leader replaced by a more autocratic leader.

impose anything more than moderate rates of income and excise taxes on Alberta taxpayers.<sup>2</sup> It is cursed in that those revenues have tended to be quite volatile making it difficult for the government to commit to financing its programs and to maintaining low tax rates while at the same time commit to balanced budgets.

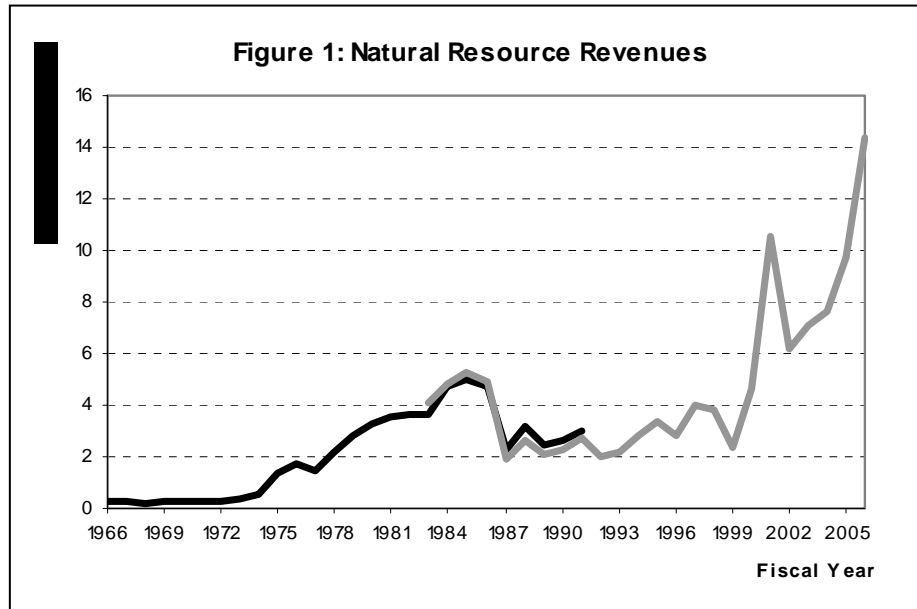


Figure 1 plots data showing resource revenue collected by the government of Alberta over the period from fiscal year 1966 to fiscal year 2006.<sup>3</sup> In the eight years prior to the first OPEC oil price shock in 1974, resource revenues averaged \$260 million (\$0.260 billion). While small in comparison to what would be realized in later years, these revenues nonetheless financed an average of 28% of provincial government expenditures over that period. The increase in oil prices, which impacted the Alberta budget beginning with fiscal year 1974, contributed to a dramatic increase in resource revenues. In the eight years following the first OPEC oil price shock, a period taking us to the end of fiscal year 1981, resource revenues averaged \$2.1 billion per year. Despite a dramatic increase in program spending over this same period, the percentage of program expenditures financed by resource revenues nonetheless almost doubled, to 54%.

The rapid growth in resource revenues, recognition of a need to save revenue generated by the sale of a non-renewable resource, and an awareness that the flood of resource revenue was driving expectations for even higher levels of provincial government spending all contributed to the establishment of the Alberta Heritage Savings Trust Fund (AHSTF) by the government of

<sup>2</sup> The revenues to which I refer are identified in provincial accounts as *Non-Renewable Resource Revenue*. These revenues consist mainly of royalties received on sales of natural gas (67% of total resource revenues collected in 2005), crude oil (12%), synthetic oil and bitumen (7%), but also include revenues from the sale of exploration leases (12%), a small royalty on the sale of coal, and other rentals and fees.

<sup>3</sup> The government's fiscal year runs from April 1<sup>st</sup> to March 31<sup>st</sup> of the following year. I follow the convention of referring to the fiscal year ending March 31<sup>st</sup>, 2000 (for example) as fiscal year 2000. Observations for 1966 to 1991 are from Boothe (1995) while those for 1983-2006 are from Government of Alberta (1999) and (2006). The two series differ slightly in definitions but, as the period of overlap shows, they tell a similar story.

Premier Peter Lougheed in 1976.<sup>4</sup> Established with a special appropriation of \$1.5 billion, the government further committed to depositing 30% of resource revenue collected into the AHSTF. By the end of fiscal year 1982, the AHSTF had received \$8.3 billion of resource revenue and had earned \$2.65 billion in investment income. Despite \$1.3 billion of spending on capital projects, the AHSTF was valued at \$9.7 billion in 1982.<sup>5</sup> During this period, the provincial government also implemented another savings strategy, this one directed toward the province's municipalities. In fiscal year 1980 the province purchased the debts of municipalities, an expenditure of roughly \$1 billion.

By the end of the 1970s, then, the province had in place a strategy for saving a significant portion of the revenue it collected from the sale of its non-renewable resources. Its major concerns were the continued growth in resource revenues and the effect this was having on expectations for still further increases in program spending; spending that had increased by an average of over 20% per year over the period 1971 to 1980. Near the end of the decade, the provincial Treasurer, noting satisfaction with low levels of taxation, high levels of government services, and on-going budget surpluses, could afford to raise the possibility of increasing from 30% the share of resource revenue committed to the AHSTF.<sup>6</sup>

## 2.1 The 1980s

Like all good things, the 1970s and the rosy budgetary picture that period painted for the finances of the government of Alberta, came to an end. A deep recession during fiscal years 1982 and 1983, in conjunction with the effects of the National Energy Program (NEP) introduced in fiscal year 1981, combined to produce new challenges to provincial budget makers. The NEP slowed the growth in resource revenues to the province and prompted the provincial government to increase spending in the form of support to the energy industry.<sup>7</sup> The effects of these events on the budget surplus were mitigated by the decision in 1982 to divert the investment income earned by the AHSTF to general revenues and to reduce the percentage of resource revenue deposited in the AHSTF from 30% to 15%; two fiscal adjustments which at the time were envisioned to be temporary measures lasting only for two fiscal years (but which would prove to be longer lasting, as explained below). These measures, plus a gradual increase

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<sup>4</sup> Saving non-renewable resource revenue for the benefit of future generations of Albertans was one of the three goals identified for the AHSTF upon its establishment. The other goals were to provide benefits to the current generation of Albertans and to diversify the provincial economy. On concerns about how large and increasing resource revenues were driving expectations for increased spending, see Boothe (1995) who reports the results of interviews with policy-makers in power at the time. The consensus of policy-makers was that the diversion of resource revenues to the AHSTF was useful and effective at taming expectations for increased spending. Doern and Toner (1985, p. 101) note that the federal government, under Prime Minister John Turner, was also strongly supportive of the establishment of the AHSTF as a way of keeping Alberta's resource revenues out of the revenue formula governing the federal equalization program.

<sup>5</sup> Data on AHSTF finances are from the *2005 Annual Report of the Alberta Heritage Savings Trust Fund*, March 31, 2005.

<sup>6</sup> Budget address of Treasurer Marv Leitch, March 17, 1978. Cited in Boothe (1995).

<sup>7</sup> Provincial support for the industry included a \$5.4 billion program, introduced in 1982, consisting of royalty reductions and grants designed to increase the flow of revenue to the industry (Doern and Toner, (1985, p. 114).

in Canadian oil prices<sup>8</sup>, caused resource revenues to recover (see Figure 1) and enabled the provincial government to remain in budgetary surplus to 1985.

The budget for fiscal year 1987 felt the brunt of the next challenge to provincial budget-makers; the collapse of oil prices in 1986.<sup>9</sup> Resource revenues in fiscal year 1987 (\$1.9 billion) were just 38% of what they were a year earlier (\$4.9 billion). The commitment to saving some fraction of non-renewable resource revenues was now completely abandoned; all resource revenue would now enter general revenues, as would all investment income earned on the now moribund AHSTF. Despite these measures, the budget plunged into deficit in 1986 and would remain in deficit for the next nine fiscal years. During those nine years, to the end of fiscal year 1994, the provincial government moved from a net asset position of \$12.6 billion in 1985 to a net debt position of \$8.4 billion by the end of fiscal year 1994.<sup>10</sup>

The 1980s proved to be a disastrous decade for provincial budget-makers. Resource revenues failed to recover following their collapse in 1986 and the provincial government abandoned completely the goal of saving resource revenues, even to the extent of spending the investment income earned on the AHSTF. Despite these efforts to support revenues, the spending side of the budget seemed stubbornly unable to respond strongly enough to return the budget to balance. The provincial Premier, Don Getty, remarked that trying to control spending after the prolonged period of strong revenue growth was akin to “turning the Queen Mary.”<sup>11</sup> Budget deficits over this period averaged over \$2 billion per year.

## 2.2 The Klein Years

Concern over these deficits, which over the 1986-94 period averaged 16% of spending on programs, provided the focus of the election campaign in the summer of 1993. The 1993 provincial election in Alberta was fought over how to respond to the extraordinarily rapid accumulation of debt that had occurred over the previous nine years. All three major political parties supported taking strong steps to eliminate the deficit and both the Liberal and Progressive Conservative parties advocated deep cuts to government spending in order to achieve it. The Progressive Conservatives, led by new leader Ralph Klein, were elected to a majority government in June 1993 on a platform of a 20% cut to spending.

The new Premier proclaimed that Alberta had a spending problem, not a revenue problem so that the elimination of the deficit would come from cuts to spending, not from increases in taxes. Since the deficit (\$3.3 billion in fiscal year 1993) was then equal to 20% of expenditures a dramatic cut in program spending was required. The first budget of the new government called for not only a deep, but also a speedily implemented 20% cut in spending to be completed by the end of fiscal year 1996. The promise to eliminate the deficit via a cut in program expenditures

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<sup>8</sup> Following its introduction in October 1980, the NEP controlled oil prices in Canada. Through a series of negotiated settlements between the province of Alberta and the federal government prices of “old oil” (discovered prior to 1980) were set as a percentage of the world price. The price of “new oil” was allowed to rise to the world price in an agreement signed in 1983.

<sup>9</sup> The price of a barrel of oil in Edmonton fell from an average of \$37.28 in 1985 to \$20.49 in 1986. Calculated using data reported in Natural Resources Canada (2002).

<sup>10</sup> All budget figures reported in this paragraph are from Government of Alberta (2006).

<sup>11</sup> Cited in Boothe (1995, page 92).

was kept. Relative to values at the end of fiscal year 1993, program expenditures had fallen by 21.6% in nominal terms by the end of 1996 and the deficit had been eliminated.<sup>12</sup> The theme of spending control would prove to be an enduring one for the government.

While the most public of the new government's efforts to regain control of its finances, the cuts to program spending were not the only measures taken. The *process* of budgeting in Alberta would also change in the 1990s. Important in that period was the easily identified and understood target – a zero deficit – an unwavering dedication to meeting that target by both the Premier and the Treasurer, and the speed with which it was accomplished.<sup>13</sup> Most important of all, however, were the changes in legislation that provided a method for the government to build credibility by systematically meeting pre-announced deficit targets on the way to the goal of a zero deficit, and which enabled the government to manage a long-standing budgeting problem, the volatility of its revenues.

### 2.2.1. Legislated Rules

The new Klein government introduced two key pieces of legislation the purpose of which was to introduce a new budgeting philosophy by constraining the budgetary choices of the provincial government. The *Deficit Elimination Act (DEA)* of 1993 laid out a four-year plan to eliminate the deficit. It introduced annual deficit targets for fiscal years 1994 (\$2.5 billion), 1995 (\$1.8 billion), 1996 (\$0.8 billion), and 1997 (\$0), and it required that higher than expected revenues be used to reduce debt. A key element of the *DEA* was the imposition of a requirement that the amount of resource revenue upon which the government could base spending could be no greater than the average amount of resource revenue available during the five fiscal years prior to the current fiscal year. This stipulation, coupled with the requirement that resource revenues in excess of that amount had to be used to reduce debt, was intended to ensure that resource revenue windfalls could not be used to finance new expenditures. An upward spike in resource revenue beyond the 5-year average in the current budget year would be required by legislation to be saved. The effect on the current budget of an upward spike in any of the previous five years would, by averaging it with four other years, have a minimal effect on the current budget plan. With resource revenues in excess of the 5-year moving average being required to be put toward debt reduction, the *DEA* represented a partial and limited return to the government's commitment to save some part of resource revenue. The *DEA* guided budgeting in fiscal years 1994 and 1995.

With the elimination of the deficit in 1995 – two years ahead of the *DEA*'s schedule -- the *DEA* was supplemented by the *Balanced Budget and Debt Retirement Act* of 1995 (*BBDRA*). The *BBDRA* specified a plan to eliminate the province's net debt over a 25-year period and it prohibited the provincial government from running an annual budget deficit. The *BBDRA*

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<sup>12</sup> In fact, the deficit was eliminated by the end of fiscal year 1995. The promised program of spending cuts continued nonetheless. In real per capita terms, program spending fell by 31% over this period. See Bruce, Kneebone, and McKenzie (1997) for data on the size of spending cuts by ministry and by year.

<sup>13</sup> Kneebone and McKenzie (1997) report the results of interviews conducted with Premier Klein, six cabinet ministers, seven MLAs, thirteen senior civil servants, and twenty-one representatives of school boards, colleges, universities, health authorities, and social service agencies. Interviewees were consistent in identifying the commitment to the zero deficit target and the unswerving commitment to spending cuts as being instrumental in minimizing opposition and easing their implementation.

required that any surplus be used to reduce debt and it required a minimum payment (\$100 million) toward debt reduction each year. Like its legislative predecessor, the *BBDRA* constrained the amount of resource revenue the government could use to fund program expenditures though the details of this calculation changed slightly.<sup>14</sup> As Boothe (1997) notes, the *BBDRA* continued the goal of the *DEA* of constraining the amount of resource revenue that could be used to support new spending. The government's experience with unexpected and possibly temporary upward spikes in revenue was that they lead to permanent increases in spending and so this was considered an important budgetary control measure.<sup>15</sup> The *BBDRA* guided budgeting in fiscal years 1996 to 1999, inclusive.

The problem of the budgetary implications of a downward spike in resource revenues became apparent in 1999. In that year, resource revenues fell to \$2.4 billion from \$3.8 billion the year previous. Thus, the demands of the no-deficit rule would have required a sizable cut in program spending were the government not running sizable surpluses at the time. In recognition of this problem an adjustment to the budgetary rules was made in the *Fiscal Responsibility Act (FRA)* of 1999 the passage of which was accompanied by the repeal of the *DEA* and the *BBDRA*.

As was now becoming tradition, the legislative prohibition against annual budget deficits was restated in the *FRA* and it repeated the schedule for debt elimination previously defined in the *BBDRA*. The *FRA* continued to limit the amount of resource revenue that could be used to finance program expenditures in the same way as the *BBDRA*. New with the *FRA* was the requirement that an "economic cushion" be built into the budget. The cushion was required to be equal to at least 3.5% of forecast revenue; an amount equal to \$600 million in 1999. In this way the budget, and in particular program spending, was to be protected from unexpected losses in revenue and the demands of the no-deficit rule.<sup>16</sup> The *FRA* guided budgeting in fiscal years 2000 to 2003, inclusive.

The rule regarding how much resource revenue could be made available for budgetary purposes again became problematic after 2001. In that year, resource revenues came in at an unprecedented \$10.6 billion; an amount more than \$7 billion higher than the average level of resource revenue realized over the previous five years. This extraordinary financial windfall would, for the next five years, dramatically increase the 5-year moving average of resource revenue and cause much more resource revenue to enter the budget and be made available to finance program spending. With resource revenues expected to remain high after 2001, fiscal

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<sup>14</sup> The *BBDRA* limited the amount of resource revenue which could be used to finance program spending to be the lower of the average amount of resource revenue available during the five fiscal years prior to the current fiscal year (as under the *DEA*) and 90% of the amount forecast for the current fiscal year. It required the same constraint on the amount of corporation income tax revenue that could be used to finance programs.

<sup>15</sup> Kneebone and McKenzie (2000) identify this behaviour econometrically. They report that over the period 1962-93, prior to the introduction of the *DEA*, unexpected increases in revenue tended to be treated as permanent by provincial budget-makers and used to justify new spending. Unexpected decreases in revenue, on the other hand, tended to be treated as temporary and caused no corresponding spending response. Such behaviour leads to a ratcheting up of program spending; spending which quickly obtains a constituency to defend it against cuts. See the interviews reported by Boothe (1995) which support these econometric results.

<sup>16</sup> The requirement for a minimum debt payment, introduced in the *BBDRA*, was retained in the *FRA*. The *FRA* also established that no more than 25% of any unused part of the economic cushion and any unexpected revenue gains could be used to finance new spending. The remaining 75% of any unused economic cushion would have to be allocated to balance sheet improvements – either reducing gross debt or adding financial assets.

rule defined in the *FRA* would allow a very large influx of resource revenue into the budget. Given the fear that the government might begin to base expenditure decisions on what might prove to be temporarily high resource revenues, the fiscal rule needed to be modified once again to accommodate the dramatic increase in resource revenues.

The *Financial Statutes Amendment Act, 2003* introduced a number of important amendments to the *FRA*. The first of these key amendments was a new version of the fiscal rule. Beginning with the budget for fiscal year 2004, the amount of resource revenue allowed to remain in the budget and so be made available to finance government spending was specified to be the lesser of a fixed amount and a variable amount. In particular, the amount of resource revenue remaining in the budget – defined in the legislation as “non-renewable resource revenue for fiscal policy purposes” -- was specified to be the lesser of \$3.5 billion and the average of (i) the forecast of resource revenue for the previous fiscal year and (ii) the actual resource revenue for each of the two fiscal years preceding the fiscal year referred to in (i). As forecasts of resource revenues remained high and actual resource revenues realized over the previous two years were also high (thanks in particular to the \$10.6 billion realized in 2001), the fixed amount (\$3.5 billion) proved to be easily the lesser of the fixed and variable amounts.<sup>17</sup>

The second key amendment to the *FRA* was the creation of the Alberta Sustainability Fund. The *Financial Statutes Amendment Act* specified that all amounts of resource revenue in excess of the amount defined as non-renewable resource revenue for fiscal policy purposes (effectively, the \$3.5 billion fixed amount of the resource revenue rule) had to flow into the Sustainability Fund. Should actual amounts of resource revenues fall below the amount defined as non-renewable resource revenue for fiscal policy purposes, the difference could be allocated from the Sustainability Fund to the budget. In this way, then, the purpose of the Sustainability Fund was to act as a budgetary shock-absorber in the face of fluctuations in resource revenues.<sup>18</sup>

Effective with each of the next two budgets the rule determining the amount of resource revenue left in the budget was adjusted again although its basic design was left intact; only the size of the fixed amount was adjusted. Thus, the *Fiscal Responsibility Amendment Act, 2004*, adjusted the fixed amount from \$3.5 to \$4.0 billion and made this change effective for fiscal year 2005. The *Financial Statutes Amendment Act, 2005* adjusted the fixed amount again, to \$4.75 billion effective for the 2006 fiscal year.<sup>19</sup> Despite these increases, the new higher fixed component remained less than the variable component and so governed the amount of resource revenue which would be retained in the budget. With these adjustments the government also indicated that it would monitor short to medium term trends in energy prices and their implications for

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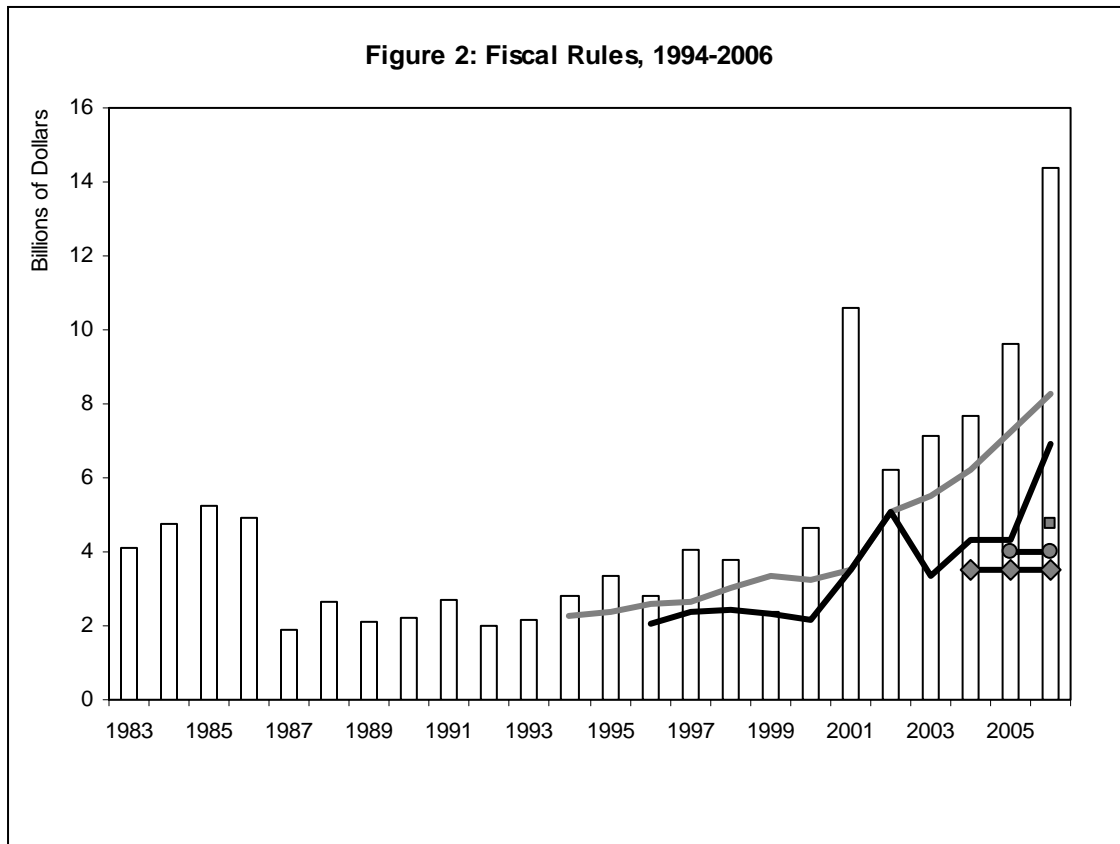
<sup>17</sup> The amount of resource revenue remaining in the budget would be determined by the variable amount only if the forecast of resource revenues plummeted or if realized amounts remained below \$3.5 billion for two or more years.

<sup>18</sup> In recognition of the shock-absorber role to be played by the new Sustainability Fund, the size of the economic cushion, first introduced in the *FRA*, was reduced from 3.5% to 1% of forecast revenues. Another source of “shock absorption” was introduced with a modification to the no-deficit requirement. Effective in 2003, actual expenses could not exceed actual revenue (no deficit) but actual expense would not include amounts to pay the cost of emergencies or disasters, or the cost of financing the *Natural Gas Price Protection Act*; an Act which provided for rebates to be paid to Alberta consumers of natural gas when the price of natural gas exceeded a specified trigger price.

<sup>19</sup> The 2006 Budget, released in March 2006, announced the government’s intention to increase the fixed amount once again. Effective with fiscal year 2007, the fixed amount is to be increased to \$5.3 billion.

resource revenues and make appropriate adjustments to the amount of resource revenues to be made available to fund current expenditures.

The implications of these various rules can perhaps be best illustrated with the use of Figure 2. In Figure 2 the height of the bars measures the amount of resource revenue collected by the provincial government in each fiscal year from 1983 to 2005 and an estimate of what it will collect in 2006. The lines show the amounts of resource revenue made available to finance government spending under alternative pieces of legislation passed since 1993. The vertical distance between the line representing legislation relevant for that fiscal year and the bar for that year shows the amount of resource revenue that was saved and so not allowed to influence program spending. These amounts were used to retire previously accumulated debt or to purchase financial assets. While each of the various fiscal rules guided budget policy for only certain periods, the lines describing the implications of each rule have been extended to describe what would have been their implication for the budget had each remained in effect to the end of fiscal year 2006.



The two lines without markers show the amount of resource revenue made available to fund spending under the 1993 *Deficit Elimination Act (DEA)* (the grey line) and the 1995 *Balanced Budget and Debt Retirement Act (BBDRA)* and 1999 *Fiscal Responsibility Act (FRA)* (the black line), both of which specified the same rule governing resource revenues in the budget. As noted above, these pieces of legislation differed in their implications for the amount of resource revenue upon which the government could budget when the forecast of resource revenues fell

below the 5-year moving average of resource revenue realizations.<sup>20</sup> In those cases, the *BBDRA/FRA* would allow less resource revenue into the budget than would have been the case under the *DEA*. In those years when the *BBDRA/FRA* was in force (1996-2002) it kept considerably more resource revenue out of the budget (and, hence, forced more saving) than would have been the case under the *DEA* in all years but 2001 and 2002. The different impact on these two rules beyond 2002, had they been guiding budget policy, would have been even larger. In fiscal year 2006, for example, had the *BBDRA/FRA* been in force it would have specified only \$6.9 billion of resource revenue could be retained in the budget while the *DEA*, had it been in force, would have allowed \$8.2 billion.

These two lines also show that while effective at keeping significant amounts of resource revenue out of the budget and unavailable for financing spending, the budget rules defined in the *DEA* and the *BBDRA/FRA* were not effective at eliminating volatility in budget revenues, particularly when resource revenues boomed. This was worrisome to policy-makers because keeping the government from basing expenditure decisions on what might prove to be temporarily high revenues was a key ingredient in the government's efforts to maintain spending at levels that were affordable over the long-term.

The two lines with markers in Figure 2, along with the single marker for 2006, show the implications for budgeting of the most recent fiscal rules; those announced as being effective with the 2004, 2005, and 2006 budgets. While each of these pieces of legislation have guided budgeting for only one year these lines have also been extended to describe what would have been their implications had each remained in effect to the end of fiscal year 2006. In fiscal years 2004 to 2006 these rules kept far more resource revenue out of the budget and hence, available for saving, than would have been the case under the rule specified by the *DEA*. The effect on saving of the new rules relative to what would have been the case under the *BBDRA/FRA* was smaller but still significant. The new rule caused saving to be higher by \$798 million, \$306 million, and \$2,200 million in 2004, 2005, and 2006, respectively.

### 2.2.2. *The No-Deficit Commitment*

As well as legislating rules by which resource revenues would be treated for budgetary purposes, the Klein government also established a commitment to avoiding deficits. This was, as discussed previously, a commitment established by legislation, but perhaps more importantly, it was also a political commitment.

No-deficit commitments have become a common part of Canadian government finances. All provincial governments now regularly espouse this as a goal of their budgeting, if not for the current period then as a near-term target. The federal government has committed to avoiding deficits ever since then-Minister of Finance Paul Martin's 1995 commitment to avoid deficits "come hell or high water." Such commitments, while politically attractive, put government

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<sup>20</sup> The *BBDRA/FRA* allowed 90% of the *forecast* of resource revenue to enter the budget. In Figure 2 the height of the bars measure the *actual* amount of resource revenue collected. Because the forecast amount was typically less than the actual amount (this is discussed further below) the black line is less than 90% of the height of the bars. The exception is 1999 when the forecast of resource revenues turned out to be an over-estimate of what would be observed (see Table 1 below).

budget-makers in an awkward position. The state of the economy is far from perfectly predictable – a problem that is, as we have seen, especially acute in Alberta. Since the government’s revenues and expenditures are sensitive to the state of the economy, then unexpected changes in the state of the economy affect the budget and the budget balance. Given a legislative and political commitment to avoid deficits such a promise forces a government to base expenditure plans on conservative revenue forecasts. By “low-balling” revenue estimates and by limiting expenditure commitments to those revenue estimates, the government makes sure that deficits are avoided. In this way the legislative and/or political commitment to the no-deficit rule can be met.

Kneebone (2006a) presents evidence to show that throughout the Klein era, from fiscal year 1994, the first fiscal year of the Klein regime and the first year committing the provincial government to its promise of deficit elimination, through to fiscal year 2005, the government has in its budgets consistently and substantially under-estimated what would be the actual size of the surplus. On average, the forecast error of the budget surplus has equalled \$2,178 million. Easily the most important source of the forecast errors in the budget surplus has been the forecast error with respect to resource revenues. On average, the forecast error of resource revenues equalled \$1,914 million.

Plourde and Reid (2002) show that prior to the no-deficit commitment announced with the *DEA* in 1993, budget-makers in Alberta exhibited an ability to forecast the budget reasonably accurately. They report that over the period from fiscal years 1982 to 1994, forecast errors for personal and corporate income taxes were quite small. On average personal income tax revenue was forecast to be 0.4% larger than what was actually realized. Corporation income tax revenue was, on average, forecast to be an amount that proved to be 1.4% larger than what was actually realized. Over this period, resource revenue was, on average, forecast to be 8.9% larger than what was actually realized. For all three of these revenue sources, then, the provincial government tended to err on the side of *over-estimating* revenue. Given the average size of these three revenue sources over this period, the average forecast errors translated into average overestimates \$8.7 million on personal income tax revenue, \$28.7 million on corporate income tax revenue and \$279 million on resource revenue. These are all very small, and opposite in sign, to the consistently large under-estimates of revenues which characterized budgeting during the Klein regime.

The appropriate conclusion, then, is that the no-deficit commitment of the government of Alberta has forced it to forecast revenues very conservatively so as to guarantee actual revenues are always more than sufficient to meet expenditure commitments. This is a sensible response to a prohibition on deficits resulting either from legislation or, possibly even more importantly, by a political commitment to avoid deficits. To meet its no-deficit commitment, the government must budget on the basis of conservative revenue forecasts. Unless a catastrophic revenue loss occurs, the government will fulfill its promise to avoid deficits. The annual ritual of the government of Alberta forecasting modest surpluses in the years ahead only to have the surplus prove to be much larger than that is a “surprise” only to those who fail to appreciate the difficult position the

no-deficit commitment has put the government and just how conservative must be its revenue projections to guard against unexpected revenue losses.<sup>21</sup>

### 2.3 Early and Recent Efforts at Budgeting: Conclusion

The purpose of this section was to describe the efforts by the government of the province of Alberta to deal with volatile revenues and the consequent volatility in its budget balance. Since the mid 1970s the provincial government has alternately had to deal with the budgetary consequences of abnormally high and abnormally low non-renewable resource revenues. The budgetary rules it has developed to deal with this revenue volatility have evolved a good deal reflecting the experience the government gained throughout the 30-year period 1975-2005.

Over time, the government's fiscal rules have evolved in such a way that they have become less of a rule dependent upon an automatic adjustment to the economic environment and more of a rule dependent upon the judgement of policy-makers. Thus, the latest version of the fiscal rule allows a greater degree of discretion than was the case under the *DEA*, *BBDR* or *FRA*. The government has used this discretion to increase the size of the fixed amount every year; from \$3.5 billion in 2004, to \$4.0 billion in 2005, to \$4.75 billion in 2006. As Figure 2 shows, the size of the fixed component has ratcheted upward in virtual lock-step with increases in the observed amounts of resource revenue. The government has justified these increases by suggesting they are warranted given their medium to long term projections for energy prices. The question is whether politicians, empowered with the discretion to adjust the fixed component of the fiscal rule and with an electoral time horizon of just four years, will be able to resist the temptation to treat what may prove to be temporary increases in resource revenues as being permanent and so base new, permanently higher levels of program spending on them. Will they be able to ratchet the size of the fixed component down, should observed amounts of resource revenue fall, as quickly as they ratcheted it up?<sup>22</sup>

The fact that no fiscal rule has had a very long life suggests that in some sense, they have not been rules at all, but rather annual justifications for a purely discretionary change in budget policy. Political economists are generally suspicious of such behaviour. Their experience has shown that when push comes to shove politicians tend to be overly optimistic about increases in revenues being permanent and decreases in revenues being temporary. Indeed, as noted previously, Kneebone and McKenzie (2000) identified precisely this sort of behaviour in Alberta politicians prior to the election of Premier Klein. What this suggests is that the rules may have proved to be successful only because they have been in the hands of a government with an *a priori* commitment to spending control. In the hands of a government not so committed the ease with which the rules have been changed from year to year suggests that the outcome might not have been so successful.

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<sup>21</sup> The role of the zero-deficit commitment in explaining the fact the federal government has reported seven consecutive larger-than-forecast budget surpluses is emphasized in a recent report commissioned by the federal government. Guided by then Minister of Finance Paul Martin in 1995 to avoid deficits "come hell or high water", federal budget-making has been similarly forced into making conservative revenue forecasts so as to guarantee the government meets its no-deficit commitment. See O'Neill (2005).

<sup>22</sup> We may not have long to wait to find out. As noted previously, in its April 2006 budget the government increased the amount of non-renewable resource revenue to be used for budgetary purposes from \$4.75 billion to \$5.3 billion for that fiscal year. Since the budget energy prices – particularly for natural gas – have softened considerably.

In the next section I offer an evaluation of the effectiveness of the government's fiscal rules to this point. I evaluate the success or failure of these rules along the two closely related dimensions along which the government's fiscal rules have been designed: Expenditure control and saving. I then return to the question of the design of the fiscal rule. In particular I will ask whether the rules the government has used are appropriate for the long-term fiscal health of governments in Alberta.

### **3. An Evaluation of Recent Budgeting Efforts**

In this section I examine the details of Alberta's provincial budgets and provide measures of the government's success at balancing demands to save non-renewable resources with demands for lower tax rates and higher levels of government spending. I conclude this section with an evaluation of the role played by the government's fiscal rules in guiding budget outcomes.

#### **3.1 The Issue of Saving Non-Renewable Resource Revenue**

Governments of jurisdictions which collect large sums from the sale of non-renewable resources typically face conflicting demands. On the one hand is the voting public which observes large amounts of revenue accruing from the sale of non-renewable resources and demands lower taxes and/or more generous government spending. It is the nature of politics, where decisions are often driven by the short time horizons of politicians elected for 4-5 year terms, to heed those demands from the voting public.

On the other hand are analysts who stress that an equitable sharing across generations of the benefits realized from the exploitation of non-renewable resources requires that the current generation save a very considerable portion of the revenues gained from the sale of those resources. This recommendation is based on the so-called Hartwick Rule which states that an economy dependent upon the extraction of non-renewable resources should transform the declining resource stock into a new productive stock of capital that will generate a perpetual stream of pay-offs to future generations. The government, in other words, must save a considerable portion of the revenue it earns from the sale of non-renewable resource revenues so that future generations may enjoy the benefits available from the investment income earned on those savings.<sup>23</sup>

The governments of a number of jurisdictions reliant upon the revenues gained from the sale of non-renewable resources have established rules that require they save a portion of those revenues. The Alaska Permanent Fund (APF), established at the same time as the Alberta Heritage Savings and Trust Fund (AHSTF) in 1976, has been built on the basis of a rule requiring that 25% of non-renewable revenues received by the state government be saved. Norway's Petroleum Fund, established in 1994/95, is newer but has grown much more quickly than the other two funds due to a commitment to save roughly 60% of non-renewable resource

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<sup>23</sup> A discussion of the Hartwick Rule and other considerations related to the question of saving the revenues earned on the sale of non-renewable resources is discussed in Kneebone, McKenzie and Taylor (2004). They conclude that at least 33% of the revenue collected from the sale of non-renewable resources should be saved and prefer to see a saving rate closer to 50%.

revenue.<sup>24</sup> The Canada West Foundation (2006) has recently suggested that the government of Alberta establish a goal to save 50% of the revenues it earns on non-renewable resources.

The ability of the government to save a portion of the revenue it collects from the sale of non-renewable resources is limited by the fact governments, like individuals and families, must satisfy a budget constraint. If spending exceeds income the difference must be financed via borrowing and a debt is incurred. If revenue exceeds spending the excess is called saving and can be used to retire previously accumulated debt or purchase new assets. These relationships between spending, income, borrowing, and saving are the same for governments as they are for individuals. The following equation defines the relationship for government:

$$\textit{Spending} - (\textit{Taxes} + \textit{Total Amount of Resource Revenue}) = \textit{Deficit (+) or Surplus (-)}$$

or, equivalently,

$$(\textit{Spending} - \textit{Taxes}) - (\textit{Total Amount of Resource Revenue}) = \textit{Deficit (+) or Surplus (-)}.$$

A deficit occurs if spending exceeds all sources of revenue; taxes plus resource revenue.<sup>25</sup> In the case of a deficit, the total amount of resource revenue is insufficient to balance the budget; the government must borrow to finance its deficit. A surplus occurs if all sources of revenue exceed spending. In the case of a surplus, the government does not need to use all of its resource revenue to balance its budget; some of it can be saved. That is, the surplus consists of resource revenue not required to balance the excess of spending over taxes;

$$\begin{aligned} (\textit{Spending} - \textit{Taxes}) - (\textit{Resource Revenue required to balance the budget}) \\ = \textit{Surplus} \\ = \textit{Resource Revenue available to be saved.} \end{aligned}$$

Now let's consider a hypothetical example. Assume that the government has committed to spending \$3.5 billion more than it collects in tax revenue. Thus,  $(\textit{Spending} - \textit{Taxes}) = \$3.5$  billion. To meet its no-deficit commitment, the government must commit \$3.5 billion of the resource revenue it collects to finance spending and so maintain budget balance. Thus  $(\textit{Resource Revenue required to balance the budget}) = \$3.5$  billion. If the total amount of resource revenues come in at \$7 billion, the \$3.5 billion required to balance the budget means that \$3.5 billion, or 50% of resource revenues, can be saved. If, however, resource revenues are just \$4 billion, meeting the no-deficit commitment means only \$0.5 billion, or 12.5%, of resource revenue is available to be saved. Finally, if resource revenues are \$10 billion, the \$3.5 billion required for the no-deficit commitment means that \$6.5 billion, or 65% of resource revenues, can be saved.

That simple example serves to illustrate why it is problematic for the government to commit to a simple rule that it must save, each and every year, a particular percentage of all revenue realized

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<sup>24</sup> See Emery (2006) for a discussion and comparison of these funds.

<sup>25</sup> The government of Alberta collects revenue from various types of taxes, from user fees, from investment income, in the form of transfers from the federal government, and in the form of resource royalties, fees and leases. For simplicity, I denote as "tax revenue" all revenue the government collects other than from the sale of non-renewable resources.

from the sale of non-renewable resources.<sup>26</sup> Having said that, there is no reason why a government cannot commit to saving a certain percentage of resource revenue over the medium to long-term. Thus, in some years it might save 10% of resource revenues and in other years it might save 70% so that over the medium to long-term it may save its targeted amount of, say, 50% of resource revenue.

The purpose of this section was to lay out the issues with the aid of a simple example. It is now time to turn to data describing the government of Alberta's budget. In so doing we can obtain a measure of the amount of resource revenue the government has managed to save and we can gain a better understanding of the percentage of resource revenue the government of Alberta might feasibly commit to saving.

### 3.2 Saving With and Without Fiscal Rules

In laying out the issues in the previous section I noted that due to volatility in resource revenue the best we can expect of the government is that it hit a target for a saving rate that is met over the medium to long-term. With those lessons in mind, I examine only average values, defined over a period to time, of the financial data describing the government's budget. In this way I will be able to form an idea of what is the size of government spending commitments and tax collections over the medium to long-term. By doing so, I can gain some insight into the feasibility of any particular savings rule.<sup>27</sup>

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<sup>26</sup> It is worth stressing that while simple, the example is based on implicit assumptions that are an important part of the proper design of such a rule. In particular, in our example we assumed that in the face of fluctuations in resource revenues the government chose to hold constant the level of taxation and the level of government spending. An alternative would have been for the government to vary spending and/or taxes and in so doing always save a fixed percentage of resource revenue. For example, when resource revenues fell from \$7 billion to \$4 billion the no-deficit commitment and a commitment to save 50% (say) of resource revenue could have both been satisfied had tax rates been increased sufficiently to generate an addition \$3 billion in tax revenue. While varying tax rates and the design of spending programs from year-to-year is a possible response for a government it is not a desirable one. Like most governments the government of Alberta has followed the advice of economists that it is bad economic policy to make frequent changes to tax rates and levels of government spending. The logic of this advice is straightforward and compelling. Suppose, for example, the economy sinks into recession. The cost of income support programs will increase because more people will be collecting monthly social assistance cheques than previously. It would be bad policy for the government to reduce the size of monthly social assistance payments in order to offset the extra costs of their being more people collecting benefits. On the tax side, economists emphasize that varying tax rates from year-to-year is also costly to society; a cost they refer to as *excess burden*. These costs are minimized if tax rates are held constant. Our example also implicitly assumed that spending and tax revenue, and hence the gap between them, is constant. In fact, the cost of the government's spending plans and the amount of tax revenue it collects are both influenced by the state of the economy. A booming (stagnant) economy requires a smaller (larger) expenditure on social assistance and generates higher (lower) income tax revenue. For these reasons, the difference between tax revenue and government spending – and so the amount of resource revenue that will be needed to close this gap and cause the no-deficit commitment to be satisfied – will vary by the state of the economy. This consideration means that even if the amount of resource revenue the government collects is constant over time, the percentage of resource revenue it can save in any year varies because the size of the gap between spending and tax revenues varies from year-to-year.

<sup>27</sup> Kneebone (2006) approaches the problem differently. He employs an approach often used by institutions such as the IMF and the OECD to strip away the effects of short-run economic fluctuations from the data describing the government's budget revenues and expenditures. The two approaches yield very similar conclusions.

Column (1) presents the result of calculating the average size of the gap between the level of government spending and the level of tax revenue for three sub-periods. Column (1), then, measures the average size of the (*Spending – Taxes*) calculation presented in the equations above. Column (2) presents data on the average amount of resource revenue collected by the government over each period.<sup>28</sup> Column (2), then, measures the average size of the (*Total Amount of Resource Revenue*) calculation presented in the equations above. These amounts were available to finance the gap identified in column (1) and enable the government to meet its no-deficit commitment. Column (3) calculates what percentage of resource revenue collected was required to fill the gap between long-term spending and tax revenue. Column (3), then, measures (*Resource Revenue required to balance the budget*) as a percentage of (*Total Amount of Resource Revenue*). Finally, column (4) reports the average amount of resource revenue that was saved during each period. Column (4), then, measures (*Resource Revenue available to be saved*) as a percentage of (*Total Amount of Resource Revenue*).

**Table 1: Medium to Long-Term Budgetary Measures**

Average for the period	Gap between Long-Term Spending and Tax Revenue (millions of dollars)	Observed Amount of Resource Revenue (millions of dollars)	Percentage of Resource Revenue Required to Balance Budget	Percentage of Resource Revenue Available to be Saved
	(1)	(2)	(3)	(4)
<b>1983-1994</b>	7,697	5,210	148%	-48%
<b>1995-2000</b>	2,204	4,356	51%	49%
<b>2001-2006</b>	5,246	9,857	53%	47%

Source: Author's calculations based on data reported in Alberta budgets. Dollar figures are measured in real, fiscal year 2006, dollars.

It is noteworthy that the figures in column (1) show that the gap between the medium to long-term spending commitments of the government and its access to all sources of revenue other than resource revenues (what I call “tax revenue” for convenience) were positive in all three sub-periods. This indicates that medium to long-term spending has always been larger than medium to long-term tax revenue. It is also noteworthy that the gap grew significantly smaller following 1994. This reflects the impact of the 20% cut in program spending imposed by the first Klein government. The gap has grown wider since 2000 as the result of a significant cut in the income tax rate in 2001 (resulting in a \$1.1 billion loss in revenue), a number of cuts to business tax rates, and a rapid expansion in program spending, particularly in the area of health care which has grown by an average of (9% per year (in real dollar terms) during the period 2000-2006, inclusive.

During the period 1983-1994 resource revenues were insufficient to cover the gap between long-term spending and long-term tax revenue. Resource revenues typically fell short of doing so by a considerable margin and as a consequence, the government ran budget deficits over this period. Over this period then, the government's tax and spending programs were such that it was unable save any of the resource revenue it collected. In fact, as reported in column (4), the government

<sup>28</sup> The values in columns (1) and (2) are measured in terms of fiscal year 2006 prices. They are, then, real (or inflation-adjusted) dollars.

was dis-saving (borrowing) over this period an amount that averaged 48% the amount of resource revenue collected.

The period 1995-2000 was markedly different. The aforementioned cut to spending during the first Klein government reduced the size of the gap between spending and tax revenue so that during this period resource revenue was more than sufficient to finance it. Despite a fall in the real value of resource revenue, on average the government proved able to save 49% of the non-renewable resource revenue it collected. During the period 2001-2006, the real value of resource revenue collected more than doubled. However, the combination of tax cuts and fast growing spending caused the gap between spending and tax revenue to more than double as well. Thus, although resource revenues were more than sufficient to finance the gap between medium to long-term spending and tax revenue, government saving fell slightly as a percentage of resource revenues collected.

### **3.3 An Evaluation of Recent Budgeting Efforts: Conclusion**

The purpose of this section was to examine the details of the government of Alberta's budgets since 1983. I did so with the intent of evaluating the government's success at using the fiscal rules described in Section 2 to promote saving of resource revenue and to promote expenditure control. What can I conclude?

With respect to saving, the government's fiscal rules must be judged to have been a dramatic success when compared to the 10 year period (1983-1994) which preceded their introduction. Since 1994 the government has managed to save nearly 50% of the revenue it collects from the sale of non-renewable resource revenue. That compares to the earlier period when the government was saving none of the resource revenue it collected and indeed was borrowing amounts equal to (on average) 48% of those revenues. This dramatic turnaround was due to the effect of the government's fiscal rules on the gap between spending and tax revenue as resource revenues were actually lower (in real terms) during this period than they were during the period 1983-1994.

Since 2000, however, the government's ability to save a significant percentage of resource revenues has been due only to the dramatic increase in those revenues. Had resource revenues not more than doubled relative to the period 1995-2000, a dramatic increase in the size of the gap between spending and tax revenue would have caused the government to move into a deficit position and no saving of resource revenue would have occurred.

In Section 2 our examination of the government's fiscal rules showed that the rules regarding the amount of resource revenue the government could rely upon when financing expenditures actually became tighter over time. Thus, the latest rules admit less resource revenue into the budget – and hence demand more resource revenues be saved – than the government's earlier fiscal rules would have allowed. However, as illustrated in Figure 2, the actual amounts allowed into the budget have nonetheless increased. Indeed, as noted earlier, over the past 3 years these amounts have increased in lock-step with increases in the actual amount of non-renewable resource revenue collected. This has been necessitated by the dramatic increase in the size of the gap between government spending and its tax revenue during the period 2001-2006 and the

consequent need to admit more resource revenue into the budget to finance that growing gap. *Were the government able to have maintained the gap between spending and tax revenue at levels realized during the earlier period 1995-2000, it would have been able to save 78% of the non-renewable resource revenue it collected during the period 2001-2006.* What happened between these two periods, 1995-2000 and 2001-2006, that might explain this change?

The answer lies with the failure of the government to control the growth of its spending during the latter period. Spending has never been directly subject to the government's fiscal rules. Instead, spending has been affected by the fiscal rules only indirectly. To the extent that the fiscal rules limited access to resource revenue and demanded that attention be paid to deficit or debt elimination, spending decisions would be affected by those restrictions. When in 2000, the provincial government succeeded in eliminating its net debt, it lost an important part of the fiscal discipline that had up to that point guided its spending decisions.

The Alberta government's greatest budgeting successes have come from identifying easy to understand and easy to measure "fiscal anchors" which have acted to keep annual budgets from drifting off a long-term course toward outcomes that enable Albertans to derive the maximum benefits from their ownership of non-renewable resources. First was the fiscal anchor in the form of a no-deficit commitment. Once achieved, the government adopted a new fiscal anchor in the form of a zero-debt commitment. Since achieving that goal in 2000, however, the government has been seemingly unable or unwilling to reformulate its fiscal rules in a manner that will guide the province toward outcomes which will maximize the benefits Albertans are able to derive from their ownership of non-renewable resources. It has had, since 2000, no anchor to which it can tie its annual budgets and as a result the government and its budgets have drifted without a long-term plan of how to put to best use the gift of the non-renewable resource revenues providence has given to Albertans.

## 4. Looking Ahead

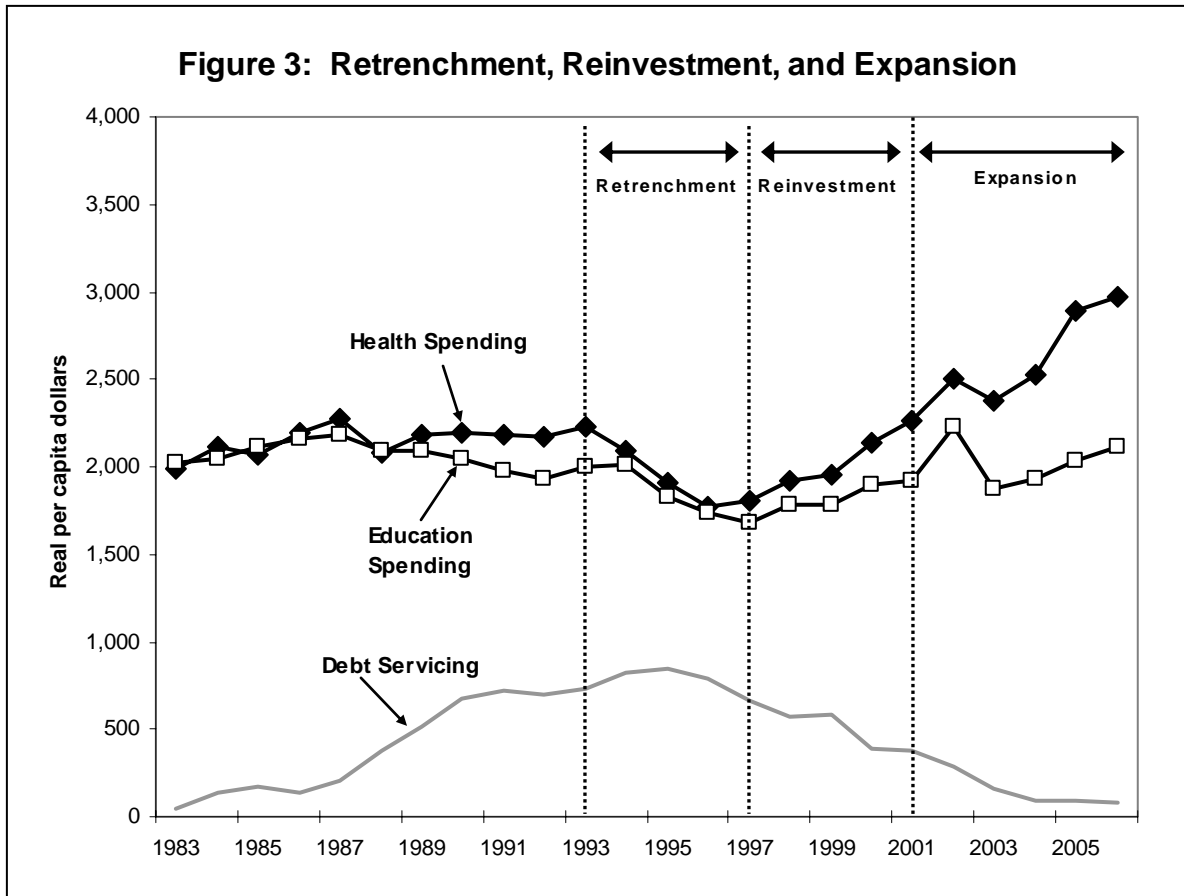
In this section I look to the future. I begin with an examination of recent budgetary decisions and on the basis of that suggest three scenarios describing future possibilities for the Government of Alberta's fiscal future. These three scenarios are used to illustrate some possible fiscal futures of the Government of Alberta.

Figure 3 plots measures of provincial government spending by three major categories. Values are measured in real per capita terms. The first pair of vertical dashed lines defines the period of fiscal retrenchment associated with the first government of Premier Ralph Klein. This period was witness to substantial cuts to key spending areas. Real per capita spending on health care fell 19% (from \$2,228 to \$1,806) and that on education fell 16% (from \$1,998 to \$1,685). These cuts were not only large but they were also speedily implemented demanding a very rapid adjustment by the institutions involved and by those members of the public reliant upon these services. Other areas of program spending fell even further; by 45% in real per capita terms from \$4,054 in 1993 to \$2,234 in 1997.<sup>29</sup> As noted earlier, cuts to spending had the effect of

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<sup>29</sup> This fall in spending reflects in part a substantial reduction in spending on social assistance; a reduction due in part to cuts to the dollar amounts of social assistance paid to individuals, in part to changes to eligibility rules, and in part due to the fall in social assistance rolls resulting from strong economic growth over the period.

eliminating the government's budget deficit in quick order and to cause its gross debt to begin to fall. Combined with a fall in interest rates, the debt charges paid by the government fell by 9%; from \$726 per capita in 1993 to \$659 in 1997. The replacement of deficits with annual surpluses would have a cumulative effect on debt charges. By 2006 the government was spending only \$79 per person on the interest payments due on its gross financial liabilities.



Since 1997 the government has increased program spending. This can in part be interpreted as an effort to recover from earlier cuts to spending made necessary to quickly eliminate deficits and so generate savings on debt charges. Thus, real per capita spending grew at an accelerated rate during this period of reinvestment. By 2001 real per capita spending on health and on education had returned to 1993 levels. The third vertical dashed line separates this period of “reinvestment” from the period since, a period during which real per capita spending on health and education has expanded beyond 1993 levels. Relative to 2001 levels, by 2006 spending on health had increased by \$705 in real per capita terms and spending on education had increased by \$195. While partially offset by a \$294 fall in debt charges these changes were nonetheless part of a 15% expansion of total real per capita spending (\$1,100 per capita).

It is, of course, difficult to determine precisely what these patterns suggest for spending in the future. However, three scenarios suggest themselves:

- Scenario A assumes that in each spending category, the annual rate of increase in real per capita spending observed during the 1997-2006 period will continue.
- Scenario B assumes that in each spending category, the annual rate of increase in real per capita spending will return to the long-run trend defined by the period 1983-2001.
- Scenario C assumes zero growth in real per capita spending in all categories of program spending.

The implication of Scenario A is that total program spending, measured in real per capita terms, grows at a rather aggressive 4.4% annual rate.<sup>30</sup> Understanding the implications of this scenario is interesting if only to impress upon elected officials the implications of continuing recent spending trends. Scenario B reflects an implicit assumption that the changes in spending during the period 1993-2006 were an aberration and that the rate of growth in spending will return to a long-run historical trend. The implication of Scenario B is that total program spending shrinks, in real per capita terms, by 0.8% per year. Scenario C is similar to scenario B in that it assumes elected officials understand recent trends in spending are not sustainable. It differs only in the assumption regarding what will be the lower trend rate of spending increase. The assumption in scenario C is that the government will allow nominal spending to increase at the rate of inflation plus the rate of population growth. In this way, real per capita spending is held constant. This scenario is consistent with one envisioned by analysts hoping to impose discipline on government finances by restricting the growth of government spending to that rate.

Figure 4 shows the implication of each of the three scenarios for the provincial government's health care spending, education spending, and total program spending. Under Scenario A health care spending, measured in real per capita dollars, soars from \$2,971 in 2006 to \$8,980 in 2026. Scenario B assumes a more modest rate of annual increase so that by 2026 health care spending has increased to \$3,431. Scenario C, of course, assumes no change in real per capita health care spending; it remains at the 2006 level of \$2,971 per capita. As was true for health spending, scenario A results in a rather dramatic increase in education spending. Scenario B suggests a modest decline over time, a decline many might judge appropriate given an aging population. Finally, Figure 4c shows the implications of the three scenarios for total program spending.<sup>31</sup>

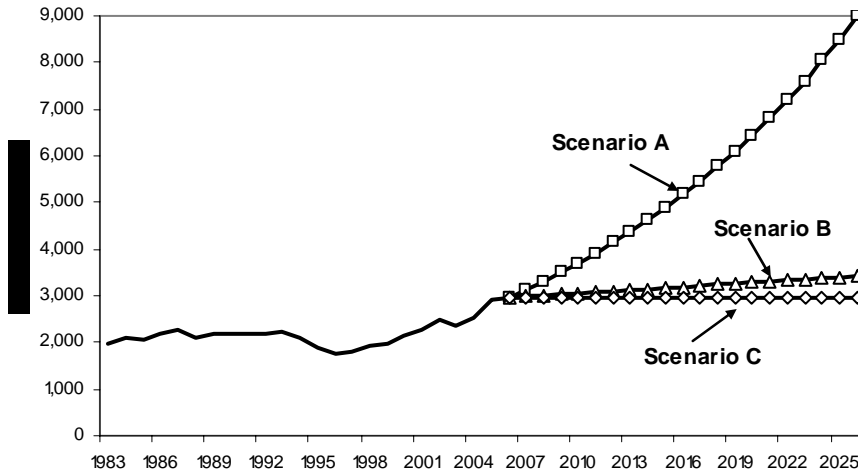
In a similar way we can apply these same three scenarios to sources of provincial government revenue. Figure 5, for example, shows their implications for the amount of revenue the government might collect from the personal income tax. Recent changes to the provincial income tax (the adoption of a flat rate) and cuts to the tax rate explain the implications of scenario A. Figure 6 shows the implications of the three scenarios for total own source tax revenue. In this graph, then, intergovernmental transfers, investment income, and non-renewable resource royalties are all excluded.

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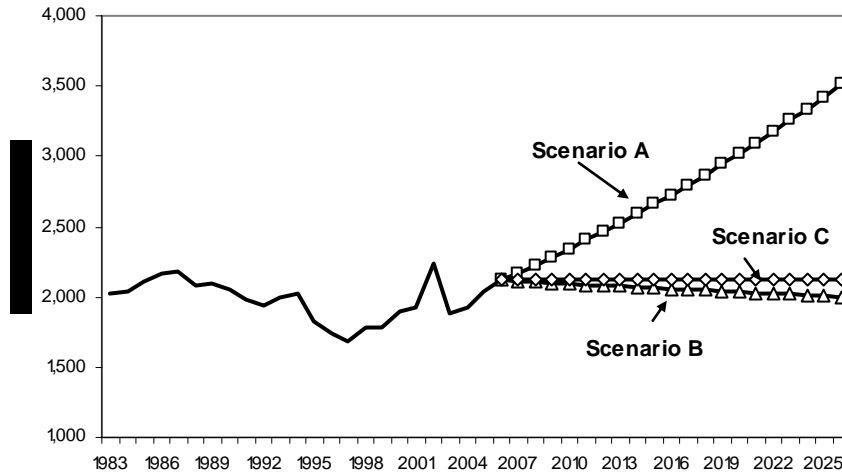
<sup>30</sup> I describe this is a rather aggressive rate of spending growth on the basis of the fact that over the period 1990-2006, for example, program spending *shrank* by an average of 0.1% in real per capita terms. Over a still longer period, 1983-2006, real per capita program spending shrank by an average of 0.6% per year.

<sup>31</sup> This is calculated by summing the values for each scenario for each of four spending sub-categories: Health, Basic/Advanced Education, Social Services, and Other Program Expenses.

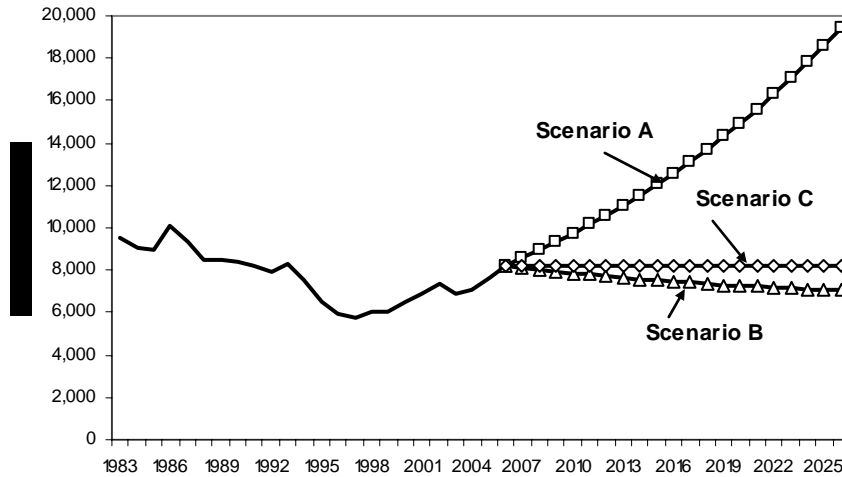
**Figure 4a: Three Scenarios for Provincial Health Care Spending**

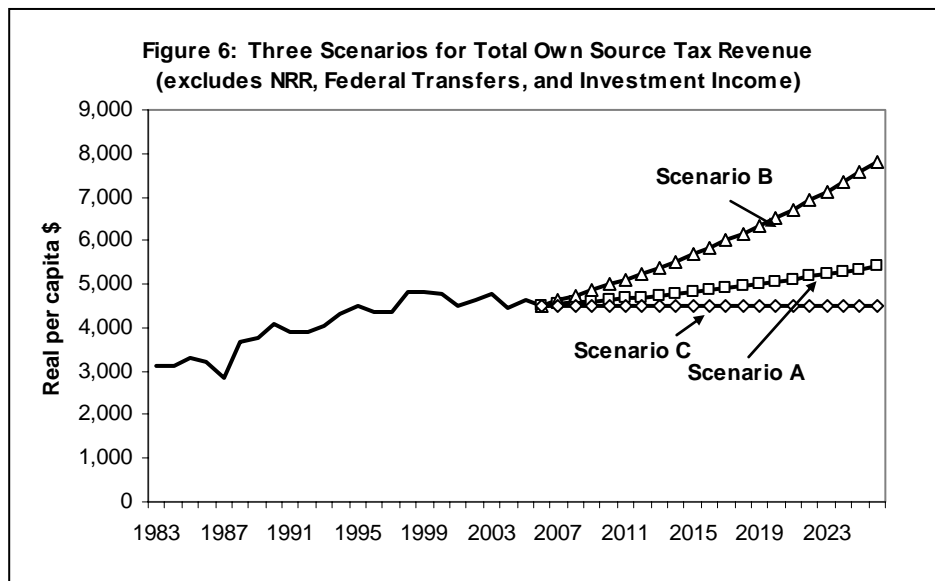
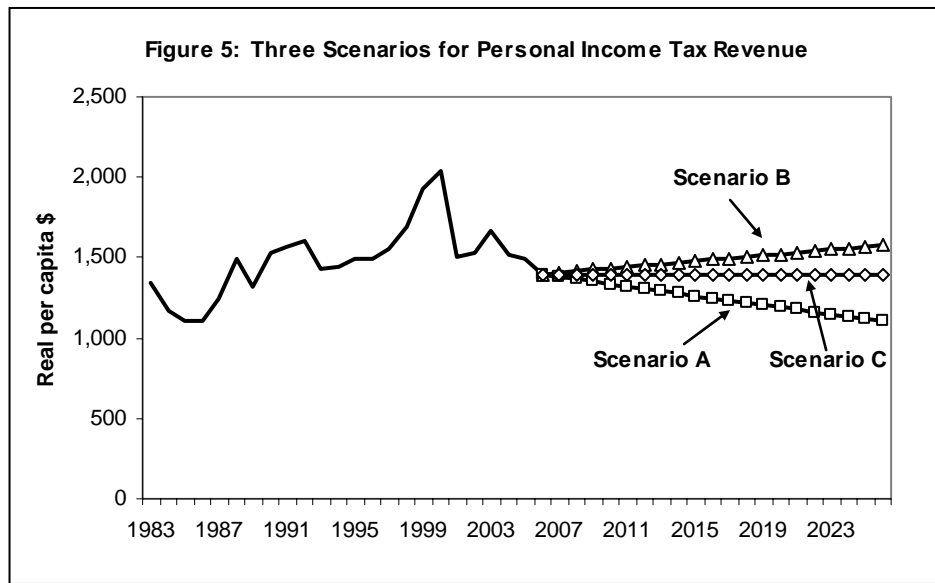


**Figure 4b: Three Scenarios for Provincial Education Spending**



**Figure 4c: Three Scenarios for Total Program Spending**



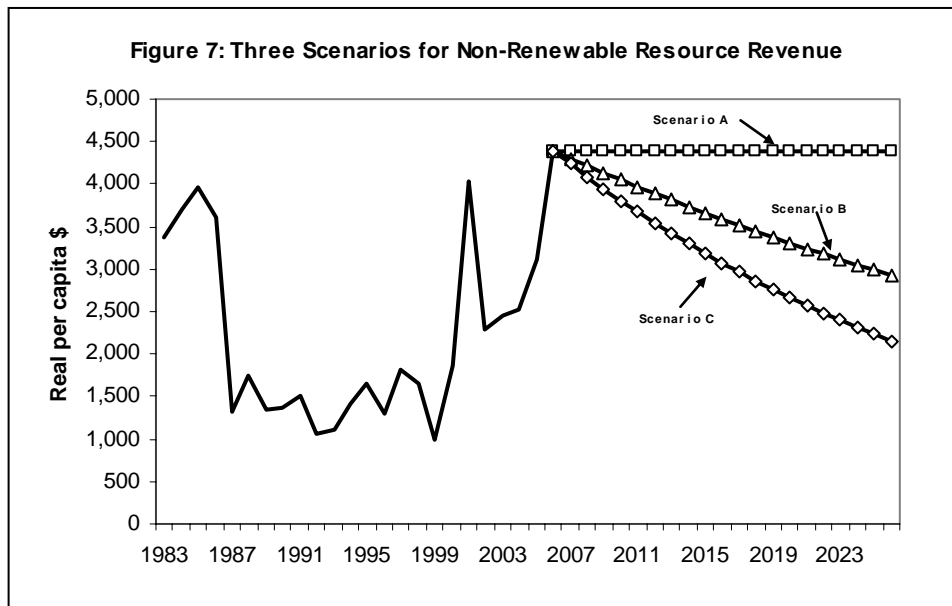


Before we can understand the implications of these three scenarios for total spending, total revenue, and future budget balances, we need to make some judgement about how those future budget balances will be dealt with. If, for example, the government realizes a budget surplus, it may use that surplus to (i) retire financial liabilities or (ii) purchase financial assets. The choice determines what happens to total spending in the form of debt servicing costs (which is reduced if choice (i) is made) and what happens to total revenue in the form of investment income (which increases if choice (ii) is made).<sup>32</sup> We need also make some decision about reasonable scenarios for non-renewable resource revenue.

<sup>32</sup> This choice matters for the size of the budget balance because the interest rate paid on financial liabilities differs from the rate of return earned on financial assets. In the scenarios, for the period 2006-2026 I assume that the interest rate paid on financial liabilities is a constant 3% while the rate of return earned on financial assets is a constant 5%. Those values equal to the averages realized over the period 2000-2006.

In what follows, I assume that any budget surplus is divided evenly between retiring financial liabilities and purchasing financial assets. I assume this continues until such time that all financial liabilities have been retired. After that point, annual surpluses are used solely to purchase new financial assets. Similarly, one-half of any budget deficit is assumed to be financed by the sale of financial assets and one-half by the purchase on new liabilities.<sup>33</sup>

The last assumption about future tendencies is the most important: What will be the future course of revenues collected as the result of the sale of non-renewable resources? Figure 7 shows the implications of three scenarios for non-renewable resource revenues.



The intent of what I have called scenario A is to show the budgetary implications of recent trends (defined as the trend over the period 1997-2006). Assuming the recent rate of growth in non-renewable resource revenue will continue as it has over that period, however, is simply not realistic. That assumption results in a prediction of resource revenues equal to \$31,138 in real per capita terms in 2026; a 600% increase over the amount collect in 2006 (\$4,391). In keeping with the intent of scenario A as showing the budgetary implications of recent trends, but with an eye to considering a more feasible outcome, I modify that scenario by assuming resource revenues remain at the historically high level of 2006 but show no increase in real per capita terms thereafter.

The remaining scenarios for non-renewable resource revenue will assume that those revenues fall from the historically high level of 2006. Scenario B assumes they fall by 1.5% per year. That assumption leaves non-renewable resource revenues, measured in real per capita terms, at \$2,931 in 2026. While that is only 67% of the 2006 value it is nonetheless significantly greater than the

<sup>33</sup> Since 1994 the emphasis of the government has been to use budget surpluses to retire financial liabilities. This emphasis was necessitated by the *BBDRA* which demanded the retirement of debt. With the elimination of the debt defined by the *BBDRA*, the emphasis has switched to using surpluses to purchase new financial assets. These have appeared in the form of endowment funds and, recently, as contributions to the AHSTF.

average realized for the entire period 1983-2006; \$2,233. Scenario C assumes non-renewable resource revenues fall by 3.5% per year after 2006. That assumption leaves those revenues at \$2,153 in 2026; slightly below the average realized over the period 1983-2006.

Table 2 shows the implications of scenario A for future values of key components of the provincial government's budget. The 2006 value represents the observed value of these key components in that year.

**Table 2: The Future of Alberta's Budget under Scenario A**

	<b>Program Spending</b>	<b>Debt Charges</b>	<b>Tax &amp; Transfer Revenue</b>	<b>Natural Resource Revenue</b>	<b>Investment Income</b>	<b>Budget Surplus</b>	<b>Net Assets</b>
<b>2006</b>	8,244	79	5,543	4,391	644	2,255	6,647
<b>2007</b>	8,592	164	5,632	4,391	606	1,873	8,519
<b>2008</b>	8,957	136	5,726	4,391	653	1,677	10,196
<b>2009</b>	9,339	111	5,826	4,391	695	1,462	11,658
<b>2010</b>	9,738	89	5,932	4,391	732	1,227	12,885
<b>2011</b>	10,157	71	6,044	4,391	762	969	13,854
<b>2012</b>	10,595	56	6,162	4,391	787	688	14,542
<b>2013</b>	11,054	46	6,287	4,391	804	382	14,924
<b>2014</b>	11,535	40	6,420	4,391	813	48	14,973
<b>2015</b>	12,039	40	6,559	4,391	815	-314	14,659
<b>2016</b>	12,567	44	6,707	4,391	807	-707	13,952
<b>2017</b>	13,120	55	6,862	4,391	789	-1,133	12,819
<b>2018</b>	13,700	72	7,026	4,391	761	-1,594	11,226
<b>2019</b>	14,307	96	7,199	4,391	721	-2,092	9,134
<b>2020</b>	14,944	127	7,382	4,391	669	-2,630	6,503
<b>2021</b>	15,612	167	7,574	4,391	603	-3,211	3,292
<b>2022</b>	16,313	215	7,777	4,391	522	-3,838	-546
<b>2023</b>	17,047	272	7,990	4,391	427	-4,512	-5,058
<b>2024</b>	17,818	340	8,215	4,391	314	-5,238	-10,297
<b>2025</b>	18,626	419	8,452	4,391	183	-6,019	-16,316
<b>2026</b>	19,474	509	8,701	4,391	32	-6,858	-23,174

Scenario A causes the government budget to return to a deficit position by 2015. This is despite the assumption of that non-renewable resource revenues remain at the historically high level (in real per capita terms) of 2006 and is due mainly to the assumption of very rapid growth in program expenditures. Reflecting positive but shrinking surpluses, the government's net asset position grows until 2014 but then begins to fall quickly. Indeed, by 2020, the government's net asset position has fallen below, in real per capita terms, what it was in 2006 and in 2022 the government's net asset position is replaced by net debt. On the expenditure side, debt servicing costs initially fall, reach a minimum in 2015, and increase thereafter. Investment income peaks in 2015 but falls thereafter reflecting the assumption that 50% of any deficit is financed by the sale of financial assets. Finally, although the government begins by saving just over 50% of resource revenue ( $= \text{Budget Surplus} \div \text{Resource Revenue}$ ) this saving rate falls precipitously until by 2015 deficits return and the government is forced to sell financial assets to maintain program spending.

It is important to remember that this scenario assumes a very aggressive expansion of program spending. As noted previously, this scenario is interesting if only to impress upon elected officials the implications of continuing recent spending trends. The lesson to be learned from this scenario is that unless the current (2000-2006) growth rate of program spending is curtailed, the province will return to deficit reasonably quickly. This is so despite an assumption that non-renewable resource revenues remain at the historically high level achieved in 2006 and despite an assumed annual increase in tax and transfer revenue. Clearly, *the current rate of growth in program expenditures is not sustainable for even extremely favourable assumptions about revenue growth.*

**Table 3: The Future of Alberta's Budget under Scenario B**

	<b>Program Spending</b>	<b>Debt Charges</b>	<b>Tax &amp; Transfer Revenue</b>	<b>Natural Resource Revenue</b>	<b>Investment Income</b>	<b>Budget Surplus</b>	<b>Net Assets</b>
<b>2006</b>	8,244	79	5,543	4,391	644	2,255	6,647
<b>2007</b>	8,144	164	5,636	4,303	606	2,237	8,883
<b>2008</b>	8,049	131	5,733	4,217	662	2,431	11,315
<b>2009</b>	7,960	94	5,834	4,132	723	2,635	13,950
<b>2010</b>	7,876	55	5,941	4,050	789	2,849	16,799
<b>2011</b>	7,797	12	6,053	3,969	860	3,073	17,608
<b>2012</b>	7,722	0	6,170	3,889	880	3,218	20,826
<b>2013</b>	7,652	0	6,293	3,812	1,041	3,494	24,320
<b>2014</b>	7,585	0	6,422	3,735	1,216	3,788	28,107
<b>2015</b>	7,523	0	6,557	3,661	1,405	4,099	32,207
<b>2016</b>	7,465	0	6,698	3,587	1,610	4,431	36,638
<b>2017</b>	7,410	0	6,845	3,516	1,832	4,783	41,421
<b>2018</b>	7,359	0	7,000	3,445	2,071	5,158	46,579
<b>2019</b>	7,311	0	7,162	3,376	2,329	5,557	52,136
<b>2020</b>	7,266	0	7,331	3,309	2,607	5,982	58,117
<b>2021</b>	7,224	0	7,509	3,243	2,906	6,434	64,551
<b>2022</b>	7,185	0	7,694	3,178	3,228	6,915	71,465
<b>2023</b>	7,149	0	7,888	3,114	3,573	7,427	78,893
<b>2024</b>	7,115	0	8,091	3,052	3,945	7,973	86,865
<b>2025</b>	7,084	0	8,303	2,991	4,343	8,553	95,419
<b>2026</b>	7,055	0	8,525	2,931	4,771	9,172	104,591

Table 3 shows the implications of scenario B for future values of key components of the provincial government's budget. The effect of allowing expenditures to grow as quickly as I allowed in scenario A becomes apparent when we consider the budgetary implications of scenario B. While in this scenario the key spending area of health care continues to grow (though less quickly than in scenario A) spending on education is assumed to slowly shrink in real per capita terms (recall Figure 4). Summing across all expenditure programs, total program spending slowly shrinks so that by 2026 it is \$1,189 lower than in 2006. Resource revenues are assumed to shrink in real per capita terms but even so the budget remains in surplus in this scenario and indeed the surplus grows over time. As a consequence, financial liabilities are retired by 2010 and so the cost of servicing that debt falls to zero. After 2010 all surpluses are

assumed to be used to purchase financial assets with the result that both net assets and investment income grow substantially. In 2026, investment income is easily the largest single source of revenue for the government; surpassing even resource revenues in size.

It is noteworthy that scenario B allows for substantial growth in real per capita tax and transfer revenues. Thus, Alberta taxpayers are assumed to carry a steadily increasing tax burden. It is also noteworthy that under this scenario the government saves a larger and larger percentage of resource revenue. Indeed, by 2014 the government is saving over 100% of resource revenue.

**Table 4: The Future of Alberta’s Budget under Scenario C**

	<b>Program Spending</b>	<b>Debt Charges</b>	<b>Tax &amp; Transfer Revenue</b>	<b>Natural Resource Revenue</b>	<b>Investment Income</b>	<b>Budget Surplus</b>	<b>Net Assets</b>
<b>2006</b>	8,244	79	5,543	4,391	644	2,255	6,647
<b>2007</b>	8,244	164	5,543	4,237	606	1,979	8,625
<b>2008</b>	8,244	135	5,543	4,089	656	1,909	10,535
<b>2009</b>	8,244	106	5,543	3,946	704	1,843	12,377
<b>2010</b>	8,244	78	5,543	3,807	750	1,778	14,156
<b>2011</b>	8,244	52	5,543	3,674	794	1,716	15,872
<b>2012</b>	8,244	26	5,543	3,546	837	1,656	17,528
<b>2013</b>	8,244	1	5,543	3,422	878	1,598	17,608
<b>2014</b>	8,244	0	5,543	3,302	880	1,482	19,090
<b>2015</b>	8,244	0	5,543	3,186	954	1,440	20,530
<b>2016</b>	8,244	0	5,543	3,075	1,027	1,401	21,931
<b>2017</b>	8,244	0	5,543	2,967	1,097	1,363	23,294
<b>2018</b>	8,244	0	5,543	2,863	1,165	1,328	24,622
<b>2019</b>	8,244	0	5,543	2,763	1,231	1,294	25,916
<b>2020</b>	8,244	0	5,543	2,666	1,296	1,262	27,177
<b>2021</b>	8,244	0	5,543	2,573	1,359	1,232	28,409
<b>2022</b>	8,244	0	5,543	2,483	1,420	1,203	29,612
<b>2023</b>	8,244	0	5,543	2,396	1,481	1,176	30,788
<b>2024</b>	8,244	0	5,543	2,312	1,539	1,151	31,940
<b>2025</b>	8,244	0	5,543	2,231	1,597	1,128	33,067
<b>2026</b>	8,244	0	5,543	2,153	1,653	1,106	34,174

Scenario C is based on the assumption that the government has come to understand that recent growth rates in program spending are not sustainable and so commits to holding spending at 2006 levels in real per capita terms. It is worth stressing that this restriction does not required draconian measures; it requires that the government commit to allowing program spending to grow only at the combined rates of inflation and population growth. For reasonable guesses at the latter two growth rates, the requirement that program spending be held constant in real per capita terms requires only that nominal spending be held to a 5% annual increase.<sup>34</sup>

<sup>34</sup> This reflects an assumption of, say, a 2% annual growth rate in population and a 3% annual rate of inflation. The former roughly reflects current trends and the latter reflects the mid-point of the Bank of Canada’s target band for inflation (2%) plus an allowance for Alberta experiencing a higher rate of average than the national average. While limiting the growth of nominal spending to 5% per year does not involve draconian measures, this will require more spending restraint than the government has shown recently. Over the period 2000-2006 the government has allowed

A commitment to hold program spending constant in real per capita terms is a scenario often envisioned by analysts hoping to impose discipline on government finances. The scenario also imposes the assumption that tax and transfer revenue remains constant in real per capita terms. Thus, unlike in scenario B where Alberta taxpayers carry a steadily large tax burden, here that burden is held constant. Resource revenues are assumed, as in scenario B, to shrink over time but here they shrink even more quickly; by 3.5% per year in real per capita terms.

The implications of these assumptions are shown in Table 4. Because we start in a surplus position and because we assume that surplus is used to retire financial liabilities (50%) and purchase new financial assets (50%), debt charges fall and investment income increases over time. By 2013 all financial liabilities are retired and so debt charges fall to zero. After that date, 100% of surpluses go to purchasing financial assets and so the rate of increase in investment income grows. By 2022 investment income has grown to be the second largest single revenue source for the government and by 2026 it is fast approaching in size the largest single source of revenue, non-renewable resource revenue.

The percentage of resource revenue the government is able to save falls slowly from 51% in 2006 to 45% in 100% by 2014 but then rises again so that by 2026 the government is able once again save 51% of non-renewable resource revenue. Of course, as non-renewable resource revenue is assumed to be shrinking, the dollar amount of saving falls. As a consequence, net financial assets grow only slowly over time.

## **4.1 Looking Ahead: Conclusion**

What have consideration of these scenarios taught us? I would say the following three lessons should be stressed.

*First*, the rate of growth in program spending that has occurred since 2000 is simply not sustainable. Scenario A shows us that even with an historically high level of non-renewable resource revenues and even with growth in other sources of revenue, should program spending continue at the current pace then budget deficits are inevitable and not far-off. In the not-too-distant future the province would experience a repeat of the late 1980s when the provincial government's net asset position was replaced by a large and growing net debt position. The first lesson, then, is that controls must be placed on the rate of growth in program spending.

*Second*, if the rate of growth in program spending can be controlled, it is entirely feasible for the provincial government to commit to saving quite a large percentage of the revenue it earns from the sale of non-renewable resources. In effect, the government could define a new spending category called "Saving" and commit to defining the size of that "spending" category as a percentage of non-renewable resource revenue. Scenario C, which imposes a limit on the rate of

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program spending to increase by an average of 8.7% per year in nominal dollar terms. Over a longer time frame, however, the government has shown an ability to keep the growth of program spending to more moderate rates on increase. Over the period 1990-2006, for example, program spending grew by an average of 4.3% in nominal dollar terms. A restriction to 5% in the rate of nominal increase in program spending is therefore neither draconian nor outside the realm of recent behaviour.

growth in program spending, shows that projected budget surpluses are sufficient to allow the government to commit to saving a large percentage of non-renewable resource revenues – in excess of 45% -- without fear of running a budget deficit. It is important to note that the figures presented in tables 2, 3, and 4 are all based on trends; they do not allow for temporary deviations from those trends. The size of the saving commitment is negatively correlated with a lack of tolerance for temporary deficits and with the size of negative shocks to revenues and the size of positive shocks to spending. The government's intolerance for even temporary deficits is well-documented and the government has in the past experienced large negative shocks to non-renewable resource revenue.<sup>35</sup> For both these reasons, the saving commitment needs to be more modest than otherwise. Nonetheless, the calculations presented in Table 4 suggest that combined with spending control measures which limit program spending to grow only at the combined rate of inflation and population growth, a commitment to save 30% or 40% of non-renewable resource revenue is easily attainable without exposing the government to serious threat of even temporary budget deficits. A government willing to defend the efficacy of the small deficits which might arise during a temporary economic downturn would be able to commit to an even larger saving rate.

*Third*, just as they suffered the pain of the power of compound interest when the provincial government ran strings of large deficits, the government and Alberta taxpayers can enjoy the benefits of the power of compound interest if it commits to expenditure control and to saving. Scenario C illustrates that a commitment to holding the growth of program spending to no faster than the combined rates of growth in inflation and population, combined with the same assumption regarding the growth of tax revenue and despite a fairly rapid decline in non-renewable resource revenue, can nonetheless enable the government to build a sufficiently large wealth of financial assets that investment income can easily surpass income taxation as a source of revenue.

All three of these lessons rely on effective measures to control the rate of growth in program expenditures. This brings us full circle as it raises the question of the nature of fiscal rules.

## **5. Summary and Conclusion**

The government of the province of Alberta enjoys the benefits of having access to substantial revenues earned on the production of non-renewable resources. An unfortunate characteristic of those revenues is that they have tended to be highly volatile. Alberta's is the only provincial government in Canada which has in recent years had to deal with a sudden and unexpected loss in revenue of 31% (in real per capita terms) in a single year (fiscal year 1987). It has, of course, also enjoyed sudden and unexpected positive shocks to its revenue such as the 21% real per capita increase in 2001.

Both types of shocks have caused problems for budget-makers. The positive shocks to non-renewable resource revenues caused by the actions of the OPEC cartel created demands from

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<sup>35</sup> It is worth noting, however, that most analysts agree that the potential for large negative shocks to non-renewable resource revenues is less than in previous years because the current level of high prices is due to high demand emanating from the rapidly developing economies of China and India rather than due to restrictions on supply emanating from the behaviour of the OPEC supply cartel.

Alberta taxpayers for improved government services and low taxes. Those positive shocks were the catalyst for a rapid expansion of provincial program spending. That response to positive shocks would prove challenging when non-renewable resource revenues took a turn for the worse. The negative price shock of 1987 demanded a response in the form of spending cuts, tax rate increases, and/or a tolerance for deficit finance and debt accumulation. Finding it difficult to reverse spending it had previously put in place governments of the late 1980s developed a tolerance for deficit finance and debt accumulation. The result was a rapid dissipation of the financial assets the provincial government accumulated during the 1970s and early 1980s.

These experiences formed the backdrop for the actions and policies of the governments of Premier Ralph Klein, beginning in fiscal year 1994. Identifying Alberta as “having a spending problem, not a revenue problem,” the Premier led the government in imposing a cut to program spending equal to 31% in real per capita terms. These cuts were accompanied by legislation prohibiting budget deficits, requiring that debt be eliminated, and limiting the amount of non-renewable resource revenue upon which the government could base spending.

The budgeting rules established what are sometimes referred to as “fiscal anchors.” The prohibition against deficits, followed by the requirement to eliminate debt, established guideposts that enabled budget-makers to set annual budgets in ways consistent with hitting medium to long-term targets. The implementation of budgetary rules proved to be a success. After abandoning the policy (introduced in 1976 at the time of the establishment of the AHSTF) to save 30% of non-renewable resource royalties in 1987, the government was able, with the aid of fiscal rules, to return to saving a significant fraction of non-renewable resource revenue. Over the period 1995-2006, the government has been able to save nearly 50% of the non-renewable resource revenue it has collected.

Since 2000, however, the 50% saving rate has been maintained due only to extraordinarily and historically high levels of non-renewable resource revenue. Coincident with the elimination of its net debt, the government has allowed program spending to grow at a rapid pace, even allowing for inflation and for population growth. The loss of its fiscal anchor has seemingly left the government less able to control its spending and annual budgets are no longer guided along a path toward a long-term fiscal target.

Looking ahead, I considered three scenarios for the government’s budget prospects. Three key results fell out of that analysis. *First*, the rate of increase in program spending observed over the period 2000-2006 is simply not sustainable. Even assuming non-renewable resource revenues remain at historically high levels and even assuming a rising tax burden on Albertans, the current pace of spending increase will result in a return to deficits in the near future. Soon after, the provincial government will again move into debt. If this occurs, the government will repeat its experience of the late 1980s and early 1990s when it dug itself into a debt hole; a hole from which escaped only after enduring the pain of a 31% cut to program spending in the mid 1990s. *Second*, assuming the rate of increase in program spending can be limited to a reasonable rate, then even with a steady decline in non-renewable resource revenue the government is easily capable of returning to its earlier commitment to save 30% of non-renewable resource revenue without a realistic fear of incurring budget deficits. In fact, a commitment to save 50% of non-renewable resource revenues is feasible though here the government may need to show a

tolerance for temporary budget deficits during economic downturns. *Third*, the benefit of returning to the commitment to save a sizable fraction of non-renewable resource revenue enables the government to amass, in short-order, a large pool of financial assets. Assuming even a modest rate of return, this pool of assets will quickly yield investment income in excess of the revenue generated by the personal income tax. This outcome would enable the government to contemplate significant tax cuts and/or government program enhancements. This opportunity, however, requires that the government impose constraints on the rate of growth in its program spending.

Commitments by governments to save revenue gained from the sale of non-renewable resources are not unusual. The Alaska Permanent Fund (APF), established at the same time as the Alberta Heritage Savings and Trust Fund (AHSTF) in 1976, has been built on the basis of a rule requiring that 25% of non-renewable revenues received by the state government be saved. Norway's Petroleum Fund, established in 1994/95, is newer and has grown much more quickly than either the AHSTF or the APF due to a commitment to save roughly 60% of non-renewable resource revenue. These examples show that it is feasible for governments to commit to high rates of saving and in so doing ensure that future generations of citizens can enjoy the benefits of the non-renewable resources bestowed on their country, state, or province even after those resources are gone.

The purpose of this chapter was to provide the reader with an appreciation for the possibilities that are available to the government of the province of Alberta due to its access to royalties it collects from the sale of non-renewable fossil fuel resources. Both the failures and successes of the government's budgeting efforts have stemmed from issues to do with controlling spending. Failures have resulted from the government failing to adjust spending sufficiently quickly when non-renewable resource revenues have fallen. Successes have been realized when spending has been constrained by a desired to hit medium- to long-term fiscal targets. In the past, the fiscal anchors of deficit and debt elimination have acted to constrain spending growth. Having satisfied those targets, and so made irrelevant those fiscal anchors, the provincial government has floundered and allowed its spending to grow at unsustainable rates. A new fiscal anchor, one which imposes a constraint directly on spending, is required. The scenarios I have presented here show that a fiscal anchor restricting program spending to grow by no more than the combined rates of growth in population and prices would enable the government to realize budgetary outcomes that yield very attractive possibilities for significant tax cuts and/or program enhancements. Such a commitment does not involve draconian measures; it requires only that the government maintain spending a constant real (after inflation) amount on each Albertan. Nor does the commitment require behaviour not previously experienced. In the recent past, the government of Alberta has limited spending to less than this rate of growth. In return for this mild restraint on government program spending Albertans can in short-order enjoy a menu of attractive policy options.

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