

Proposal for Management of the Elliott State Forest to Provide Adequate Returns for Oregon Schools

Eric Fruits, Ph.D.
President & Chief Economist

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Economics
International

503-928-6635

info@econinternational.com

www.econinternational.com

Executive Summary

A large portion of the Elliott State Forest is managed by the State Land Board as Common School Fund lands. These 85,000 acres of Common School Fund lands are known as *Trust Lands*. A trust is a legal arrangement whereby control over property is transferred to a person or organization (the trustee) for the benefit of someone else (the beneficiary). As trustee, the State Land Board has a fiduciary responsibility to act solely in the interest of the Oregon K-12 schools who are beneficiaries of the Common School Fund.

This report updates analysis presented to the State Land Board in December 2009. Based on economics, financial, and statistical principles applied to a range of investment possibilities, this report makes the following findings regarding the state's management of the Elliott State Forest for the benefit of Oregon schools.

- **Department of State Lands management of the Elliott State Forest now yields negative returns and is expected to experience financial losses for years to come.** Even "risk free" investments, such as U.S. Treasuries, yield superior returns than the state is earning under its management of the Elliott. Had the State Land Board sold or leased the Elliott State Forest at the beginning of 2010, investment of the proceeds would have provided more than \$40 million a year of funding to Oregon schools through 2013.
- **Rather than benefiting Oregon K-12 schools, current management of the Elliott is taking away funding from the state's schools.** Because of the losses experienced under Department of State Lands management, continued state management of the forest could raise questions whether the state is neglecting its fiduciary duty to Oregon schools.
- **A superior alternative to continued state ownership and management of the forest would be to sell or lease the forest assets and place the proceeds under the management of the Oregon Investment Council.** Even accounting for potentially wild swings in investment returns, this alternative would in many cases:
 - Provide stable funding to support Oregon schools of approximately \$40 million to \$50 million a year, and
 - Maintain a fund balance that would provide school funding for generations into the future.
 - With the state's expectation of future losses on its management of the forest, even low-risk/low-return investments such as U.S. Treasuries would be superior to current strategies.

About the author

Eric Fruits, Ph.D. is president and chief economist at Economics International Corp., an Oregon based consulting firm specializing in economics, finance, and statistics. He is also an adjunct professor at Portland State University, where he teaches in the economics department and edits the university's quarterly real estate report. Dr. Fruits has been engaged by private and public sector clients, including state and local governments, to evaluate the economic and fiscal impacts of business activities and government policies. His economic analysis has been widely cited and has been published in *The Economist*, the *Wall Street Journal*, and *USA Today*.

Dr. Fruits has been invited to provide analysis to the Oregon legislature regarding the state's tax and spending policies. He has been involved in numerous projects involving natural resources and Oregon forest products such as analysis for *Ross-Simmons v. Weyerhaeuser*, an antitrust case that was ultimately decided by the United States Supreme Court. His testimony regarding the economics of Oregon public employee pension reforms was heard by a special session of the Oregon Supreme Court.

His statistical analysis has been published in top-tier economics journals and his testimony regarding statistical analysis has been accepted by international criminal courts. Dr. Fruits has produced numerous research papers in financial economics, with results published in *Advances in Financial Economics* and the *Municipal Finance Journal*.

Contact:

Eric Fruits, Ph.D.
Economics International Corp.
Tel: 503-928-6635
info@econinternational.com
www.econinternational.com

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Economics International Corp. was commissioned by Cascade Policy Institute to evaluate whether—and the extent to which—the State Land Board could provide adequate returns to Oregon K–12 schools under a management program that would sell or lease the Elliott State Forest, with the proceeds invested by the Oregon Investment Council on behalf of the Common School Fund.

This report updates analysis presented to the State Land Board in December 2009, and published as *Future Management of the Elliott State Forest: Providing Adequate Returns for Oregon Schools*. Had the State Land Board sold or leased the Elliott State Forest at the beginning of 2010, investment of the proceeds would have provided more than \$40 million a year to Oregon schools through 2013.

1 Introduction and background

Approximately 2.3 million acres of state-owned lands and mineral rights are managed by the State Land Board as Common School Fund lands. The Oregon Department of State Lands acts as the administrative arm of the Land Board. Common School Fund lands managed by the Department include about 131,000 acres of forest lands, primarily in the Elliott State Forest (about 85,000 acres) in the Coast Range northeast of Coos Bay.¹

¹State Land Board (2006).

1.1 Fiduciary duty and the management of Trust Lands

The Common School Fund lands managed by the Department of State Lands are known as *Trust Lands*. A trust is a legal arrangement whereby control over property is transferred to a person or organization (the trustee) for the benefit of someone else (the beneficiary). In this case, the trustee is the State Land Board, whose members are the Governor, the Secretary of State, and the Treasurer. The beneficiary is Oregon's K-12 school system. As trustee, the State Land Board has a fiduciary responsibility to act solely in the interest of the beneficiary. That is, it is required to act as a prudent investor and is not permitted to divert trust resources to anyone other than the beneficiary.

1.2 Losing money from shrinking revenues

Figure 1 shows that since peaking in 2000, incomes from the Elliott State Forest have declined. In fiscal year 2013 the Elliott State Forest experienced a net loss of \$3 million which reduced the value of the Common School Fund.² The Department of State Lands expects the losses to continue into the next several fiscal years.

The decline is a result of reduced revenues combined with increasing costs.³ Even during the housing boom of the mid-2000s, income from the Elliott had been trending downward.

At one time, the Elliott State Forest made up 75 percent to 85 percent of the total revenue generated from Common School Fund lands.⁴ In 2013, however, the Elliott's share had declined to approximately 45 percent of timber sales revenue.⁵

1.3 The Elliott State Forest is a valuable asset

Figure 2 shows that the Elliott State Forest has an estimated value ranging from \$139 million to more than \$800 million. At the December 10, 2013, State Land Board meeting, the Land Board unanimously voted to take bids on five land parcels at the Elliott State Forest. Assuming these parcels are representative of the forest as a whole, then appraisals of the

²Department of Forestry (2013) reports \$410,000 in revenues from the Elliott State Forest and \$3.4 million in total costs, resulting in a loss of \$3.0 million.

³Department of Forestry (2005, 2009, 2013); Department of State Lands (2009); Departments of Forestry and State Lands (2009).

⁴Departments of Forestry and State Lands (2009).

⁵Department of Forestry (2013).

parcels indicate a value of \$139 million to \$750 million for the Elliott State Forest.⁶ In 2009, information provided by Department of State Lands staff indicated a value \$802.7 million for the Elliott.⁷ Research presented to the State Land Board in 2006, valued the Elliott between \$359 million and \$747 million.⁸

Department of State Lands management of the Elliott State Forest now produces negative yields and is expected to generate losses in years to come. In contrast, yields on 5-year U.S. Treasuries are 1.49 percent and yields on 30-year U.S. Treasuries are 3.61 percent per year.⁹ Treasuries often are considered “risk free” because there is almost no risk of default by the issuer. For this reason they are also considered a “safe” investment.

2 Proceeds from the sale of rights to the Elliott State Forest would produce superior yields and maintain the asset for future generations

Rather than continuing to experience losses under state ownership and management of the Elliott State Forest, the state could sell the forest and place the proceeds in the Common School Fund where they could earn a greater return.¹⁰ An alternative investment would be U.S. Treasuries, which would provide relatively low yields that are nevertheless superior to those earned by Department of State Lands and would be relatively risk-free.

The Oregon Investment Council invests all State of Oregon funds, including the Common School Fund, the Oregon Public Employees Retirement Fund (PERS), and the State Accident Insurance Fund. It maintains a diversified portfolio over a wide range of investments including privately held enterprises, publicly traded securities, and real estate. Its compound annual (mean) return on the PERS Fund is 7.45 percent, with a standard deviation of 14.8 percent.¹¹ Its annual (mean) return on the Common School Fund investments is 4.90 percent, with a standard deviation of 16.58 percent.¹²

⁶Foster and Witler (2013a,b,c).

⁷Lilly (2009).

⁸Ragon (2007) provides a summary of the research. Lord (2005) estimates that the value of the Elliott State Forest was \$489 million in 2005.

⁹U.S. Department of Treasury (2014).

¹⁰Another alternative would be a long-term lease arrangement. While leasing allows the State to maintain ownership of the Elliott State Forest, it may also maintain the state’s costs and obligations associated with ownership.

¹¹Larrabee and Preppernau (2013).

¹²State Land Board (2013).

3 Projections of Common School Fund balance and transfers to schools under Oregon Investment Council management

While an actuarial approach tends to assume an annual return that does not vary from year-to-year, in reality investment returns can vary substantially from year-to-year. For investments in which an annual payment is mandated or expected—such as the annual transfers from Department of State Lands to the Common School Fund or from Common School Fund to school districts—variations in returns can have significant impacts on the annual payments as well and the fund’s balance.¹³ Thus, instances in which Oregon Investment Council returns differ from the actuarially assumed rate of return in any year could result in liabilities far larger than those predicted by an actuarial model that assumes the same rate of return in each and every year.

To understand the effect of variability in Oregon Investment Council returns on the transfers to the Common School Fund and the annual balance in the fund, this analysis uses a Monte Carlo technique to apply a large number of possible sequences of returns, all drawn from a distribution of possible returns with an expected value equal to the returns historically achieved by the Oregon Investment Council. By analyzing the distribution of possible outcomes, it is possible to better evaluate a range of scenarios.

In finance, Monte Carlo methods are used to value and analyze complex investments by simulating the uncertainty affecting their value, and then determining their value over the range of resultant outcomes. The technique is employed as follows.

1. The mean and standard deviation of Oregon Investment Council returns are used to produce a random draw from normal distribution of returns over the next 50 years. This process is repeated 200 times, to provide a range of potential outcomes and transfers that vary with the year-to-year variations in returns. We considered two different distributions of returns:
 - (a) Hypothetical returns match those achieved by the PERS Fund investments, ($\mu = 0.0745$, $\sigma = 0.148$), and
 - (b) Hypothetical returns match those achieved by the Common School Fund investments, ($\mu = 0.0490$, $\sigma = 0.1458$).

¹³For example, failure to accurately anticipate such statistical possibilities contributed to the ongoing PERS crisis.

2. The Elliott State Forest is assumed to sell for \$750 million in 2015, an amount that is in line with several estimates of the forest's market value.
3. Schools are assumed to be credited with a share of the outstanding balance in the fund at the end of each year, as follows:
 - (a) For simulations using PERS Fund investment returns, schools would be credited with 5 percent of the outstanding balance,
 - (b) For simulations using returns achieved by the Common School Fund investments, schools would be credited with 3 percent of the outstanding balance.

These parameters were chosen so that, on average, the annual transfer to schools would grow at the rate of inflation projected by the Oregon Office of Economic Analysis.¹⁴

4 Results and conclusions

Even under a “worst case” scenario, management of proceeds from the sale of the Elliott State Forest managed by the Oregon Investment Council would produce positive fund transfers to Oregon schools for at least 50 years. Indeed, placing the proceeds in “risk free” U.S. Treasuries would be superior to the losses incurred under current management.

4.1 Income transferred to Oregon K–12 schools

Figures 3 and 4 show the annual payments to schools from the Common School Fund if the Elliott State Forest were sold and the proceeds managed by the Oregon Investment Council.

- **Figure 3:** The median result for simulations using PERS Fund investment returns provides for an average of \$53 million a year to schools in the first 5 years and would grow with projected inflation to an average of \$73 million a year 45–50 years in the future. The “worst case” result—the result with the smallest total transfers to schools—would provide no less than \$8 million a year to Oregon K–12 schools.

¹⁴Office of Economic Analysis (2013).

- **Figure 4:** The median result for simulations using Common School Fund investment returns provides for an average of \$25 million a year to schools in the first 5 years and would grow with projected inflation to an average of \$39 million a year 45–50 years in the future. The “worst case” result—the result with the smallest total transfers to schools—would provide a minimum of approximately \$2 million a year to Oregon K–12 schools.

4.2 End-of-year balances

Because the annual amount transferred to Oregon schools is smaller than the average annual rate of growth in investment returns, the balance in the fund would increase over time, which would provide a stable source of investment returns to provide for education funding to future generations.

- For the median result for simulations using PERS Fund investment returns, the ending balance 50 years in the future would be approximately twice the size of the beginning balance.
- For the the median result for simulations using Common School Fund investment returns, the ending balance 50 years in the future would be approximately 50 percent larger than the beginning balance.

This analysis demonstrates that a superior alternative to continued state ownership and management of the forest would be to sell or lease the forest assets and place the proceeds under the management of the Oregon Investment Council. Even accounting for potentially wild swings in investment returns, this alternative would in many cases provide stable funding to support Oregon schools of approximately \$40 million to \$50 million a year, and maintain a fund balance that would provide school funding for generations into the future.

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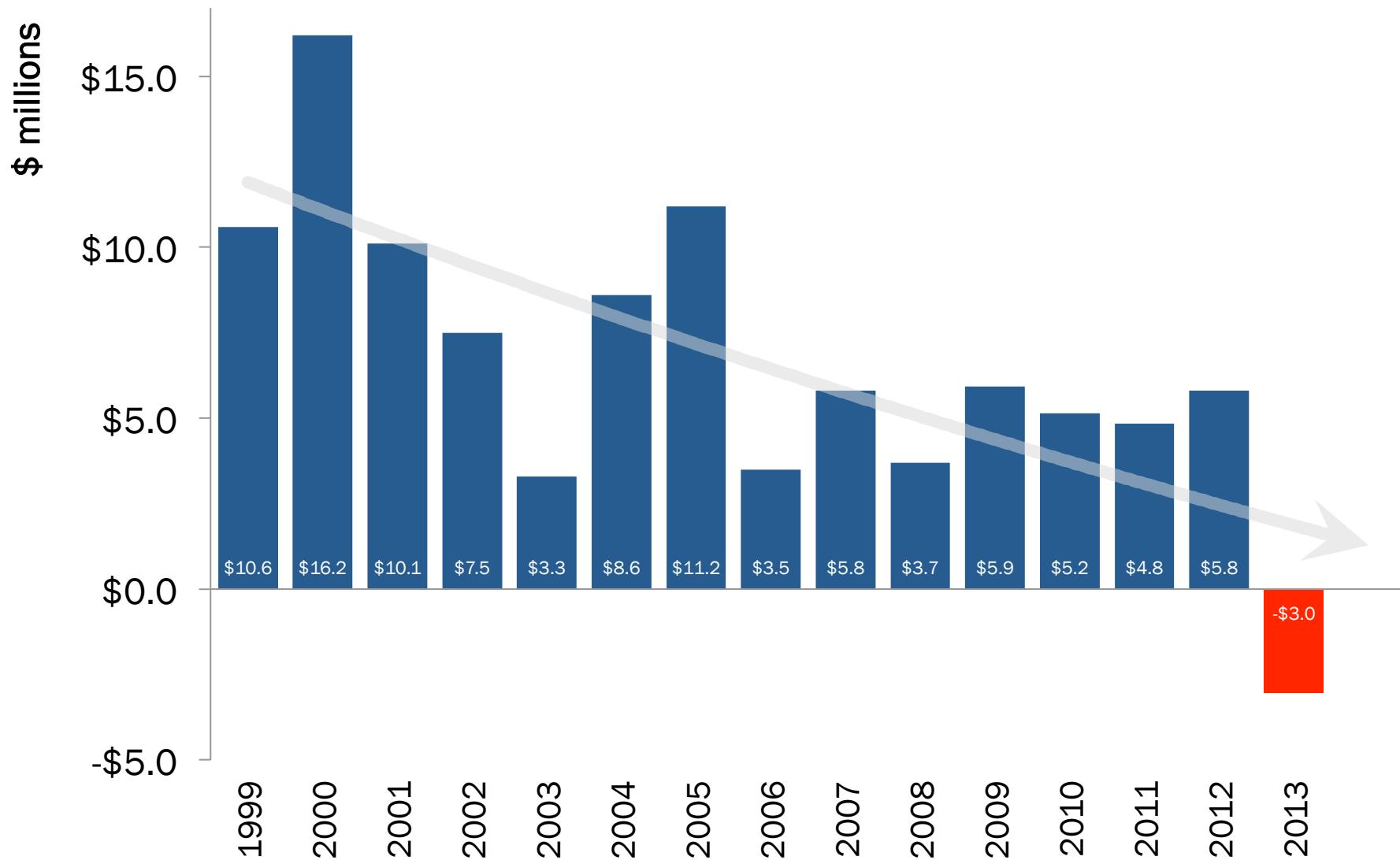
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Figure 1

Net revenue to Common School Fund from Elliott State Forest

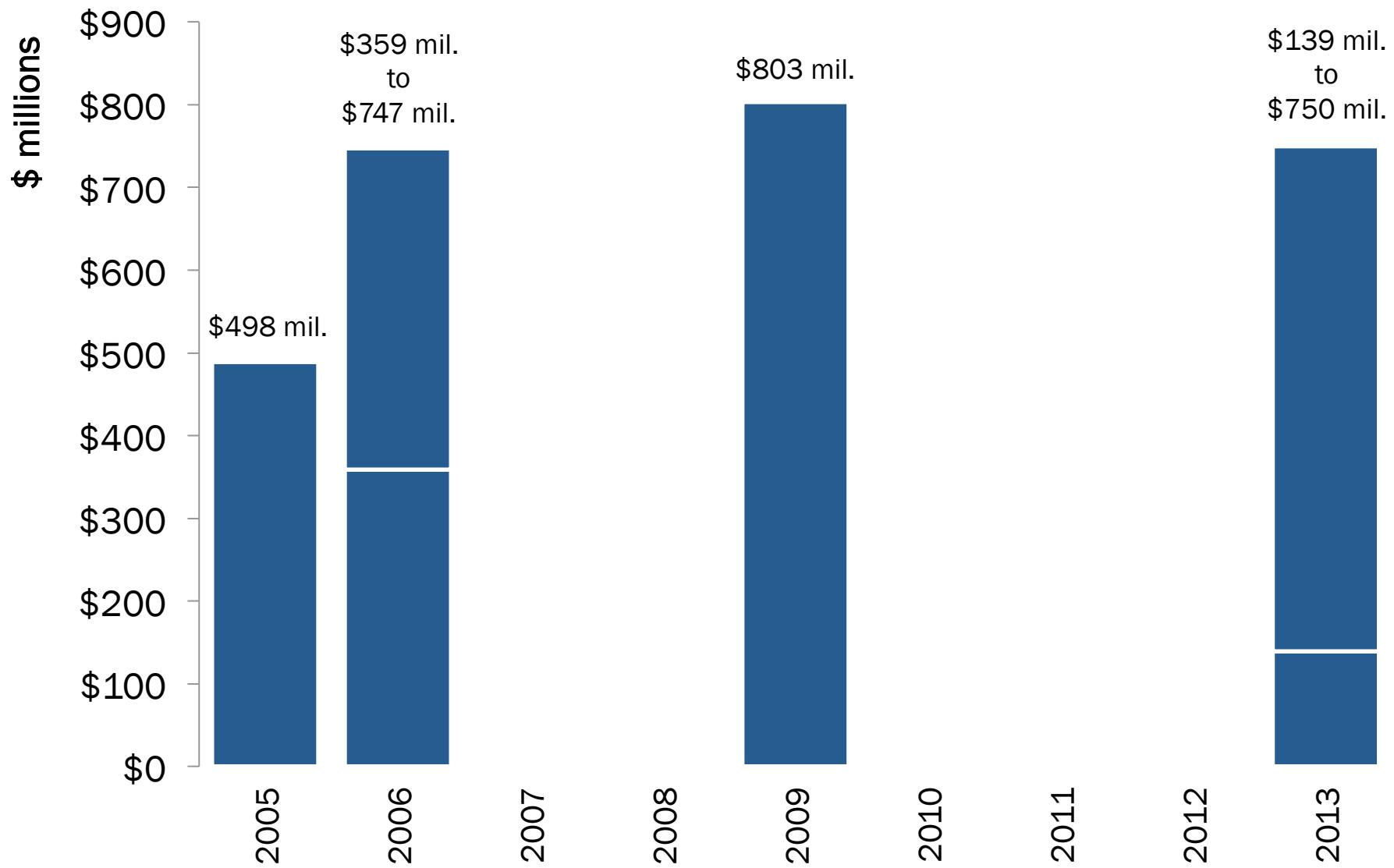
Revenue, less total costs, fiscal years 1999–2013



Source: Author's calculations based on Department of Forestry (2005, 2009, 2013); Department of State Lands (2009); Departments of Forestry and State Lands (2009).

Figure 2

Estimated Value of Elliott State Forest



Source: Foster and Witler (2013a,b,c); Lilly (2009); Ragon (2007); Lord (2005).

Figure 3

Projected Annual Transfers to Oregon Schools: PERS Investments

Median result from Monte Carlo simulation of 200 scenarios

Oregon PERS Fund investments, mean = 7.45%, standard deviation = 14.80%, 5% of fund balance transferred to schools

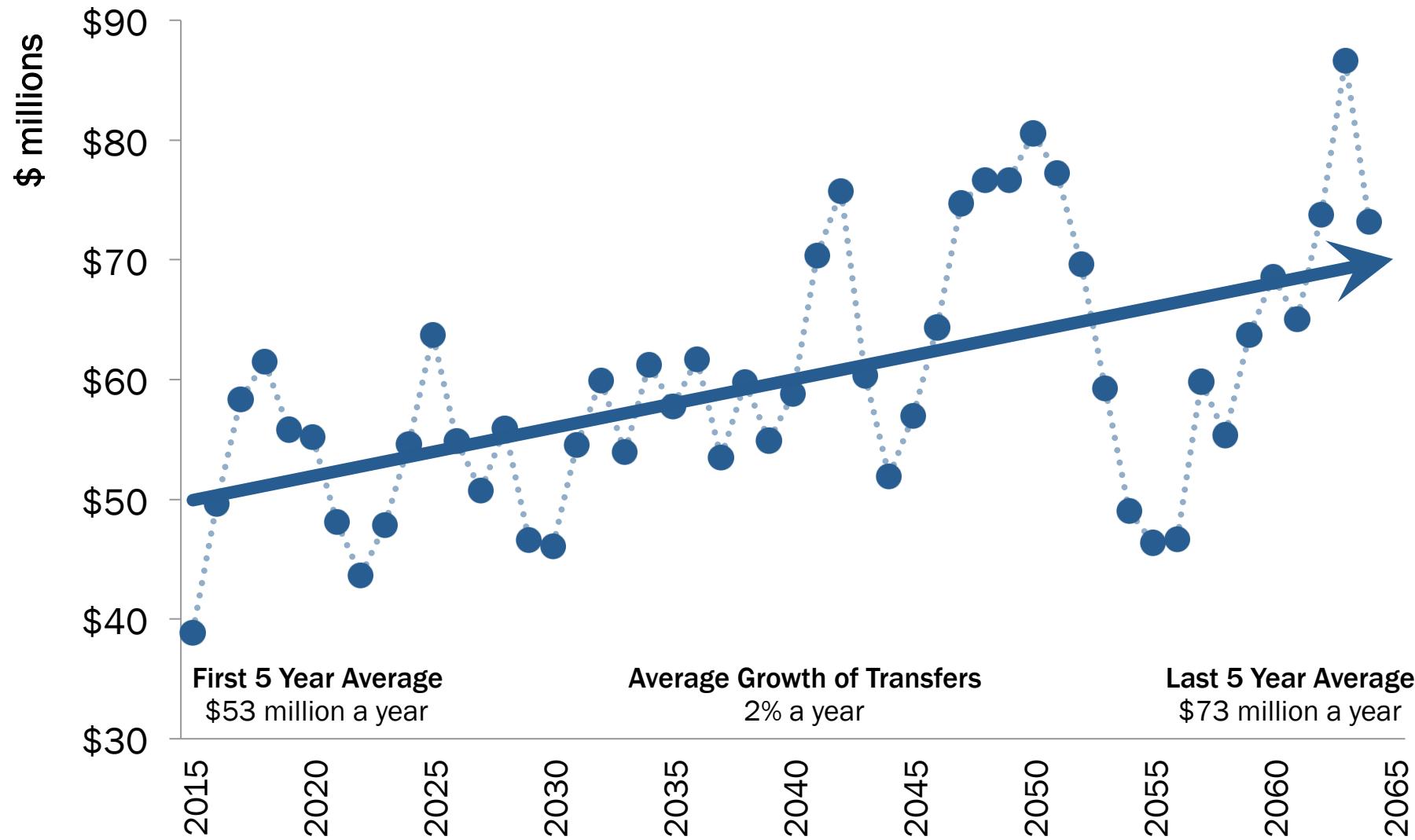


Figure 4

Projected Annual Transfers to Oregon Schools: CSF Investments

Median result from Monte Carlo simulation of 200 scenarios

Oregon CSF investments, mean = 4.90%, standard deviation = 16.58%, 3% of fund balance transferred to schools

