



*Andrew Junkin, CFA, CAIA  
President*

September 5, 2018

Mr. Henry Jones  
Chair of the Investment Committee  
California Public Employees' Retirement System  
400 Q Street  
Sacramento, CA 95814

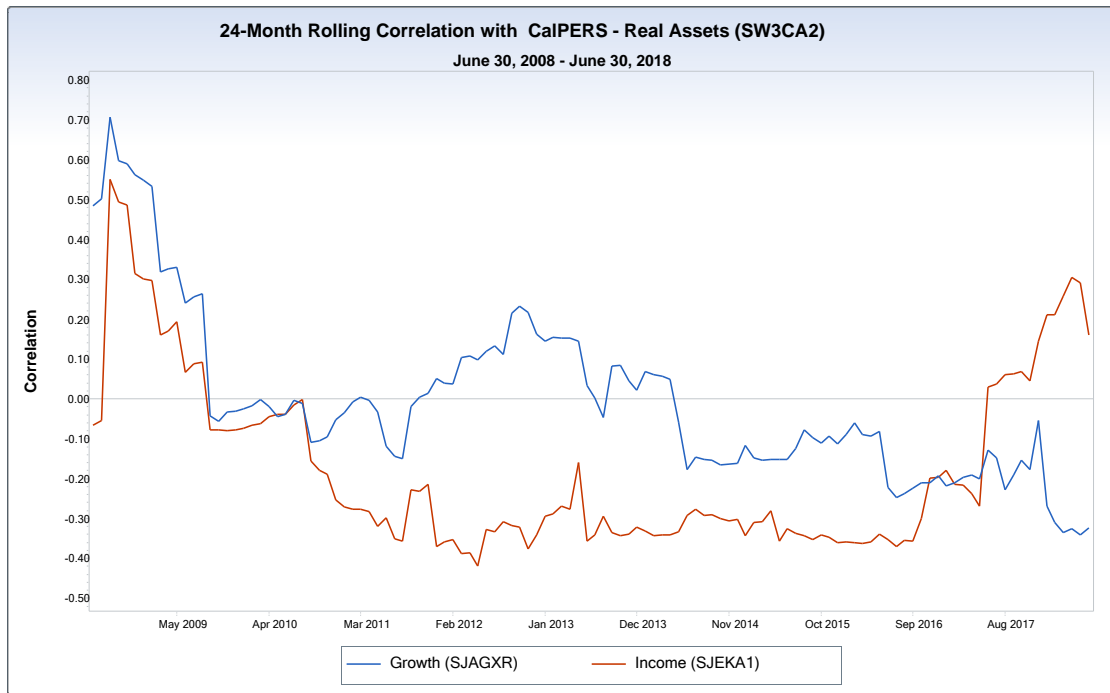
Re: Real Assets Program Review

Dear Mr. Jones:

You requested Wilshire's opinion with respect to the Real Assets Program Update. In addition to our duties as the General Pension Consultant to the Investment Committee, Wilshire acts as the Investment Committee's Forestland Consultant. Therefore, Wilshire is providing comments on the total Real Assets Program and the Forestland Program.

### **Strategic Role and Investment Beliefs**

The strategic role of the Real Assets Program is to provide stable cash flows while serving to provide long-term inflation protection and as an equity risk mitigant. For the past five years, the Real Assets Program has consistently produced a net income return of approximately 3.5% with total returns outpacing inflation. In addition, the 5-year correlation between the returns of the Real Assets Program and global equities has been low, measured at 0.02. It is important to note that asset class correlations are notoriously unstable and that in times of crisis they tend to increase. This is evident in the following chart that plots the rolling 2-year correlation of the Real Assets program relative to both the Growth and Income portfolios. Broadly, each has exhibited low levels of correlation outside of the late 2008, early 2009 period.



However, based on the changes in the implementation of the Real Assets Program in the last several years, Wilshire believes that the program is positioned more defensively than during the Global Financial Crisis and, therefore, should provide the PERF greater diversification against an equity drawdown risk.

The Real Asset Program is supported by a number of CalPERS' Investment Beliefs. First, Investment Belief 1 states that "Liabilities must influence the asset structure." This is evident in the Real Asset Program's strategic role. The Program requires a long-term investment horizon and thus corresponds well with Investment Belief 2, which states, "A long time investment horizon is a responsibility and an advantage." The Real Assets Program also addresses Investment Belief 4 regarding multiple forms of capital – notably, in terms of how environmental practices can impact the long term returns of the Program.

### Real Assets Program Overview

The performance of the Real Assets Program exceeded its benchmark during the past fiscal year, led by significant excess returns from Infrastructure. As we have noted in the past, Forestland continues to lag its benchmark – our review of the Forestland program follows. The bulk of the Real Assets Program is invested in Real Estate, which slightly lagged its benchmark over the past year.

As a result of the newly adopted benchmark for the program, Forestland and Infrastructure are out-of-benchmark positions going forward. Previously, Infrastructure was judged against a

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CPI-plus benchmark, which did not provide meaningful information for comparison in the short term. A good way to conceptualize the implications of this new framework is to recognize that Infrastructure and Forestland now have to compete with Real Estate opportunities for positioning in the portfolio on a prospective risk-adjusted return basis.

Wilshire continues to believe that the Real Assets Program is appropriately structured and implemented to benefit the entire portfolio.

### **Forestland Program**

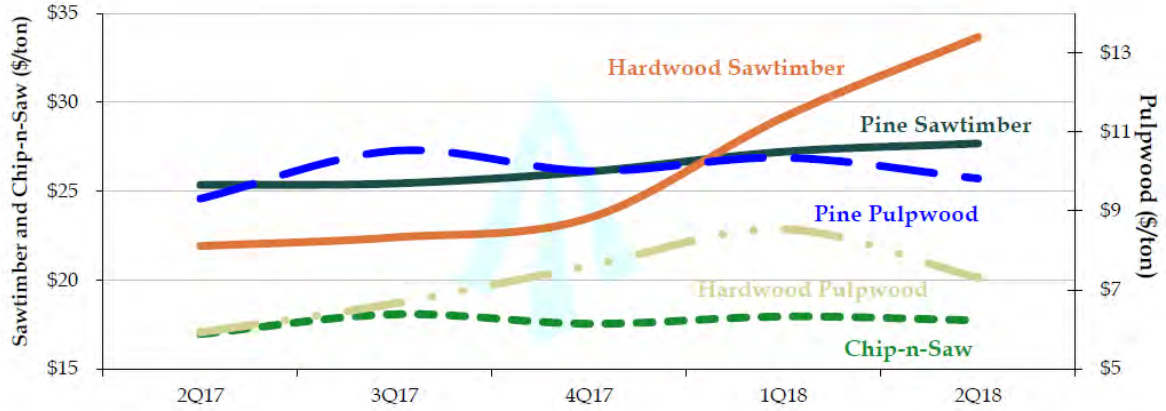
The strategic role of the Forestland Program is to provide cash flow and capital appreciation while serving as a long-term hedge against inflation. The Forestland Program has continued to have poor absolute and relative performance, which will be discussed in greater detail below.

### **Background**

As has been the case for several years, the Forestland Portfolio consists of two assets. However, because the assets hold multiple parcels of forestland, the total portfolio is diversified across the U.S., Latin America, and Asia Pacific markets. Within the U.S., the portfolio has been concentrated in the Southern markets, with no exposure to the Northeast or Pacific Northwest. Recent price changes for Southeastern, Northeastern and Pacific Northwest timber prices are shown in the graphs below.<sup>i</sup> Timber prices in the Southeast and Northeast have largely held steady over the past year, whereas Northwestern timber prices have increased.

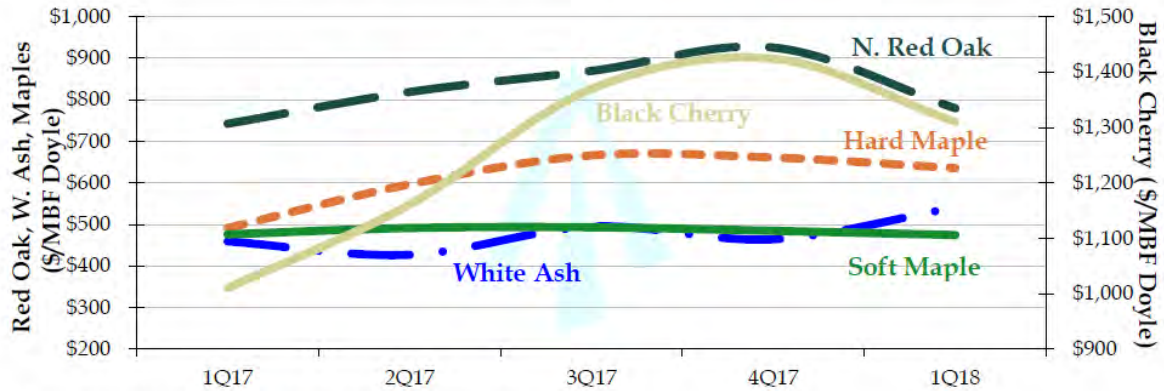


### Southeastern Timber Prices

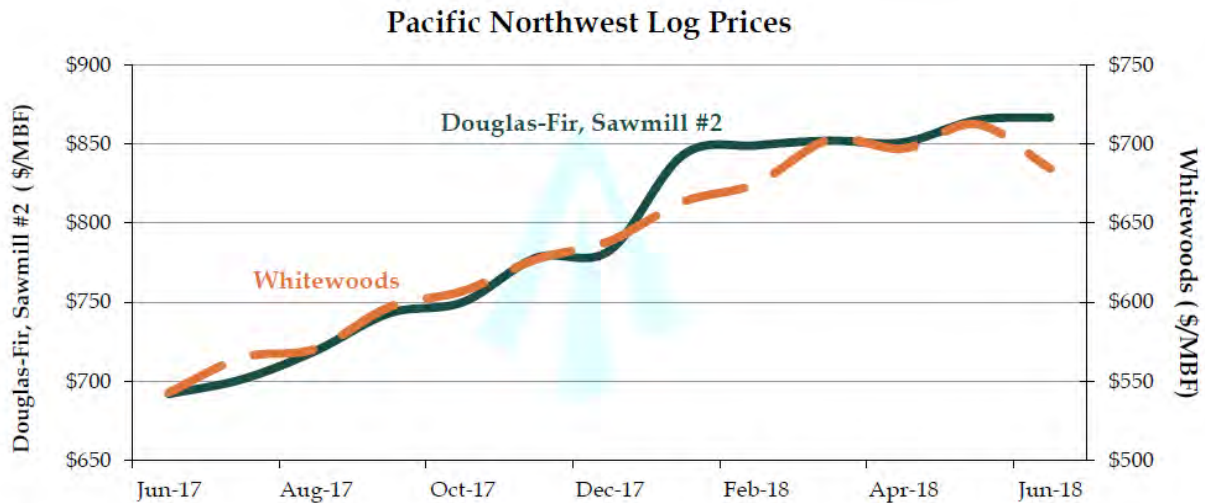


Source: Forest2Market®

### Northeastern Hardwood Timber Prices



Source: Pennsylvania Woodlands Timber Market Report - Northwest Region



Source: Log Lines®

Performance for the Forestland portfolio has been impacted by several issues. First, the leverage in the Program has magnified some poor performance versus the Program's unlevered benchmark. Second, the cost of financing, itself, has created its own issues, as timber has been harvested to service the debt. Consequently, assets that would have otherwise been allowed to grow and appreciate have been harvested to manage the debt. Lastly, the geographic concentration in the Southeast has historically positioned the portfolio in a challenging portion of the market.

As we noted in the August Investment Committee meeting, CalPERS recently sold its interest in Crown Pine. This sale recognized the challenging financial and governance issues around that particular asset. The sale will be recorded on CalPERS' books during FY2018-2019. The immediate result is a significant reduction in the exposure to the Southeast timber market and a near elimination of debt on the Forestland portfolio.

The remaining Forestland assets remain geographically diversified and have stronger governance. Staff now has the flexibility to properly manage the remaining assets and retain or sell based on whether the assets are a fit with the Strategic Plan for the Real Assets Program.

## Conclusion

The returns of the Real Assets Program have exceeded its benchmark over the past year. Measurable progress has been made and continues to be made in positioning the portfolio to best serve CalPERS. The Forestland portfolio has been significantly remade but faced several structural issues – lack of regional exposure to the U.S Northeast and Pacific Northwest, leverage, and the timing of the original purchases – during FY2017-2018 that continued to act

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as headwinds. Wilshire believes that the Crown Pine sale meaningfully addresses and remediates these issues.

Should you require anything further or have any questions, please do not hesitate to contact us.

Best regards,

A handwritten signature in black ink, appearing to read 'Alan J. ...'.

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<sup>i</sup> Source: Forest Investment Associates, Quarterly Update, 2<sup>nd</sup> Quarter 2018