



***Andrew Junkin, CFA, CAIA
President***

October 18, 2016

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, in addition to providing comments on the total Real Assets Program, we specifically discuss the Forestland Program. The Investment Committee has been extensively briefed on the current and future states of the Real Assets Program through the strategic planning process that occurred during the spring of 2016.

Strategic Role and Investment Beliefs

As we noted in our review of the Real Asset Strategic Plan during the spring, 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. The Real Assets 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 Assets 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



While the performance of the Real Assets Program has not met its benchmark in the past year, the performance over the past five years demonstrates that the Program has changed significantly after the Real Estate portfolio was restructured following the Global Financial Crisis – moving toward higher Core exposure and a heightened focus on income. 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 appreciation while serving as a long-term hedge against inflation. The Forestland Program has had poor absolute and relative performance, which is discussed in greater detail below.

Background

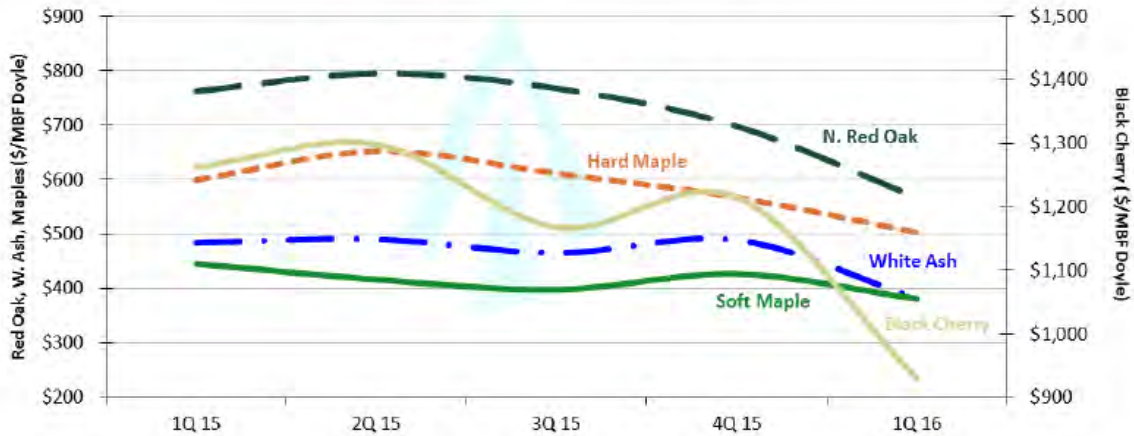
As has been the case for several years, the Forestland Portfolio consists of two assets. However, because the assets hold multiple parcels of forestland, the total portfolio is diversified across the U.S., Latin America, and Asia Pacific markets. Within the U.S., the portfolio is concentrated in the 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.¹ Timber prices in the Southeast have largely held steady over the past year, whereas Northeastern timber prices have declined, and Pacific Northwest timber prices have shown recent upticks.



Source: Forest2Market®

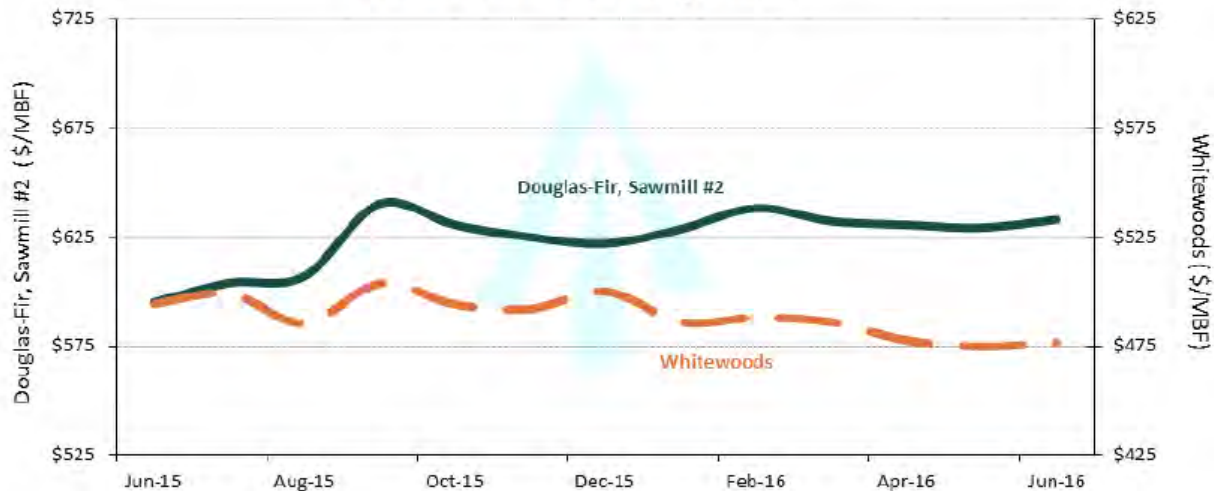


Northeastern Hardwood Timber Prices



Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

Pacific Northwest Log Prices



Source: Log Lines®

The Forestland Portfolio's performance has been impacted by several issues. First, the leverage in the Program has magnified some poor performance relative to the Program's unlevered benchmark. Second, the level of leverage has impacted the management of the portfolio, whereby assets that would have otherwise been allowed to grow and appreciate have by necessity been harvested to manage debt levels. Lastly, the geographic concentration in the Southeast has historically positioned the portfolio in a challenging portion of the broader market. Staff continues to proactively and aggressively manage the assets to address these structural issues.

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As we have noted in a number of prior reviews, the current size of the program is not sufficient to meaningfully affect the performance characteristics of the total fund. Increasing the scale of the program to a meaningful size is challenging, given the recent pace of transactions and the total size of the institutionally owned forestland market. Moving to a 5% target, which would be meaningful, would require tens of billions of dollars of transactions and would likely take years to accomplish. Staff continues to assess the efficacy of the program in light of these constraints.

Conclusion

The returns of the Real Assets Program have not met its benchmark over the past year. However, measurable progress has been made and continues to be made in positioning the portfolio to best serve CalPERS. The Forestland Program faces several structural issues – lack of regional exposure to the U.S Northeast and Pacific Northwest, leverage, and the timing of the original purchases – that continue to act as headwinds for the Forestland Program to meet its strategic goals. Wilshire believes that Staff is acting diligently to address these structural 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 'Ann Jain'.

ⁱ Source: Forest Investment Associates, Quarterly Update, 2nd Quarter 2016