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Will Recent Economic Headwinds Threaten U.S. Timberland Returns?

Current Insights for Timberland Investors

Chung-Hong Fu, Ph.D., *Managing Director*

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Economic Uncertainty Clouds Timberland Outlook

Recent monetary and market signals show increasing headwinds facing the United States economy. Inflation in the United States has reached a 40-year high. In response, the U.S. Federal Reserve is aggressively raising interest rates and is reversing the easy monetary policy that has been in place since the Global Financial Crisis. Combined with the global fallout from the Russia-Ukraine war and persistent supply-chain disruptions, many economists are projecting a downturn or even an outright recession for the U.S. before the end of 2023.

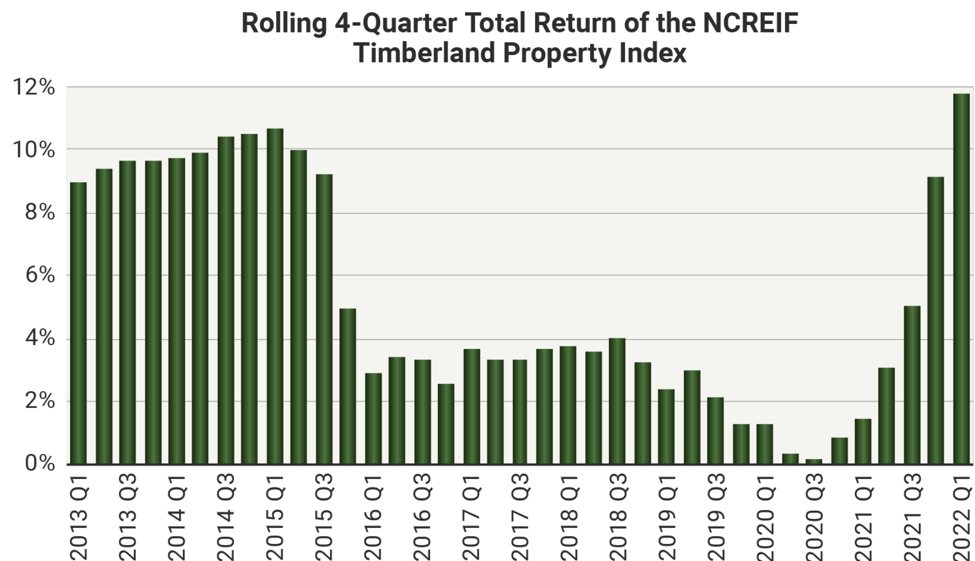
Any slowdown or recession will obviously hurt the U.S. housing market. Already, several key housing indicators have turned negative. Home mortgage rates in June have reached their highest level in 13 years (Figure 1). This may have helped cause housing starts to fall in May and home builder confidence to decline in the second quarter.[1] The health of the housing market bears watching because home construction is the leading consumer of wood products such as lumber, plywood, and oriented strandboard. Three-quarters of the 53 billion board feet of softwood lumber consumed last year in the United States, for example, went into equal parts building new homes or repairing and remodeling existing homes.

Figure 1. Source: Freddie Mac *Primary Mortgage Market Survey*

1 U.S. housing starts were down 14% in May from the previous month to 1.549 million, on a seasonally adjusted annualized basis. Home builder confidence, as tracked by the National Association of Home Builders and Wells Fargo in the Housing Market Index, fell to 67 in June, the sixth consecutive month that builder sentiment has declined.

The concern is that a correction in lumber and panel markets could translate into weakened timber prices. This has worried some investors as timberland returns in the United States have only recently turned the corner following an extended period of below-average performance from 2016-2020 (Figure 2). In the year ending first quarter of 2022, the NCREIF Timberland Property Index returned 11.92%, the best one-year performance since 2008. That recovery now may be under threat. The question is this: *Will the rising economic headwinds push the timberland asset class into another long cycle of weak performance?* We argue that this is unlikely, and our reasons are as follows.

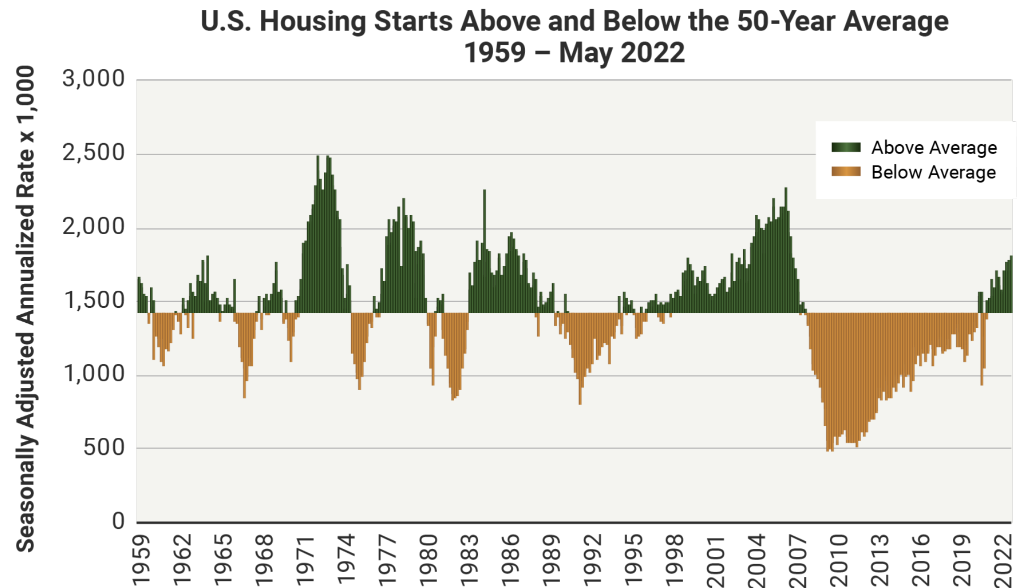
Figure 2. Source: National Council of Real Estate Investment Fiduciaries (NCREIF)



Housing Correction Likely To Be Mild and Short Lived

One reason we believe timberland returns will hold up well against the coming economic downturn is because a correction to the U.S. housing market likely will be mild and relatively brief. This is based on historic experience. Over the past 50 years through May 2022, housing starts averaged 1.42 million a year in the United States. If we define a housing downturn as three or more consecutive months of below-average starts, then the U.S. has experienced 14 slowdowns in home construction since 1959 – the year when the U.S. federal government began reporting housing starts (Figure 3). The average length of those 14 housing slumps was 23 months – effectively less than two years. If one were to exclude the major housing crash of 2007, which coincided with the Global Financial Crisis, then the average housing recession lasted only 13 months.

Figure 3. Source: U.S. Census Bureau



A Large Housing Backlog Creates a Case for a Mild Housing Downturn

In May 2022, a record 1.67 million homes were under construction (822,000 are single-family homes), breaking the previous record of 1.63 million in 1973. The large backlog of homes yet to be completed indicates that it is supply, not demand, that is the limiting factor in the market for newly built homes. This accumulation of yet-to-be-built homes can help buffer the effects of a housing downturn.

Fortunately, a housing correction of similar magnitude to the 2007 housing bubble is unlikely to occur. The 2007 crash, from which the market required more than a decade to recover, was the result of (a) excessive overbuilding of homes above fundamental demand; (b) very lax lending standards for home mortgages; and (c) the inaccurate profiling of credit risk of mortgage-backed derivatives. None of those factors, however, exist in the current housing market. To the contrary, demographic growth has created an estimated housing deficit of 3 or 4 million[2]; mortgage underwriters have maintained strict lending standards on home buyers; and the mortgage-backed securities markets face rigorous issuance standards to prevent underestimation of credit risk.

Hence, a dramatic, long-lasting collapse of home construction is not anticipated; the conditions that created the last housing bubble – due to excessive overbuilding and very weak lending and credit-rating standards – does not exist in this cycle. Timberland investors with long-term horizons should stay invested over a possible 1-or-2-year housing downturn. Thereafter, investors could reap the benefits of rising timber markets as the housing market rebounds.

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[2] Freddie Mac: "Housing Supply: A Growing Deficit" (May 7, 2021)

Timberland Investments in a Down Cycle

Although most housing corrections are relatively short in length, it may be of little comfort to an institutional investor whose portfolio of forest assets sinks in value in the face of falling housing starts and weak economic growth. To test this risk, we reviewed all of the housing downturns since the inception of NCREIF's Timberland Property Index (Table 1).

Table 1. Time-weighted geometrically linked compound annualized return. Since returns reported by the NCREIF Timberland Property Index are reported on a quarterly basis, the values are segmented into monthly returns to better match up with housing starts which are reported on a monthly basis.

U.S. Timberland Returns During Housing Downturns

(Qualified as Three or More Consecutive Months of Below 50-Year Average for Housing Starts)

Downturn in U.S. Housing Starts	Cumulative Starts Below Historic Average	Timberland Total Annualized Return Amid Downturn	Timberland Total Annualized Return w/2-Quarter Lag
Apr 1989 – Jun 1989	4.3%	**71.6%**	53.2%
Aug 1989 – Dec 1989	6.5%	**36.6%**	12.1%
Mar 1990 – Nov 1993	18.6%	**23.3%**	23.3%
Jan 1995 – Jun 1995	7.9%	**14.8%**	12.9%
Aug 1995 – Oct 1995	2.3%	**22.5%**	21.7%
Jul 2007 – Nov 2019	32.5%	**5.0%**	3.9%
Mar 2020 – Jun 2020	20.2%	**0.4%**	1.8%

During the life of the timberland benchmark from 1987 to today, there have been eight periods of depressed housing starts. Interestingly, timberland performed strongly in six out of the eight periods – either concurrently with the housing downturn or with a two-quarter (six-month) lag. In fact, those six cases exhibited returns well above the average return of 10.76% for the life of the Index. The two exceptions were the 2007 housing crash, which helped trigger the Global Financial Crisis, and the 2020 collapse, which was caused by the Covid-19 pandemic lockdowns. During those two events, timberland produced returns of 5.0% and 0.4% respectively. Of course, the 2020 event relating to the coronavirus pandemic only lasted four months and preceded a rush of demand for new housing.

The mixed performance of timberland against housing cycles indicates that there are other market factors at play. Home construction (and the lumber demand that results from it) is just one of several economic forces that affect timberland returns. Supply is another major factor. In fact, the exceptionally high returns recorded during the late 1980s and early 1990s were due to a supply shock when harvests on publicly owned forestlands in the U.S. Pacific Northwest were halted to protect the endangered Spotted Owl.

While the Spotted Owl timber crisis was a *black swan* event, the North American forest products sector is now experiencing another form of supply shock. As with Spotted Owl court decree, which dramatically reduced access to timber in the Pacific Northwest three decades ago, North America is now facing another timber

supply deficit because of evolving circumstances in the western Canadian province of British Columbia. Actions to protect old-growth forests, combined with losses from forest fires and beetle outbreaks, and with efforts to protect the endangered woodland caribou, are projected to result in timber harvest rates in the province dropping over the coming decade. As a result, 2.2 billion board feet of sawmill capacity is projected to close by 2026. This will represent a decline of 18% of the region's lumber production potential. Bear in mind that Canada exports around 25% of the lumber that the U.S. consumes, and British Columbia produces roughly 40% of that lumber. As with the Spotted Owl event of the late 1980s, British Columbia's timber losses could mitigate the downside effects of a housing correction for U.S. timberland investors.

Housing is not the only economic force to which timberland investors should be paying attention. Two other major economic forces that are at play include: (1) declining economic growth and (2) inflation. One could assume that periods of economic weakness – such as those caused by recession – would result in timberland returns declining. Along with recessions, inflation is another risk that can harm the long-term performance of a portfolio. In order to protect the purchasing power of a portfolio, timberland returns should scale with inflation. To test these two theories, the chart in Figure 4 matches the rolling average of five-year timberland returns with the corresponding U.S. economic growth rate. A similar chart was developed for inflation in Figure 5.

Figure 4. Sources: NCREIF, U.S. Commerce Dept.

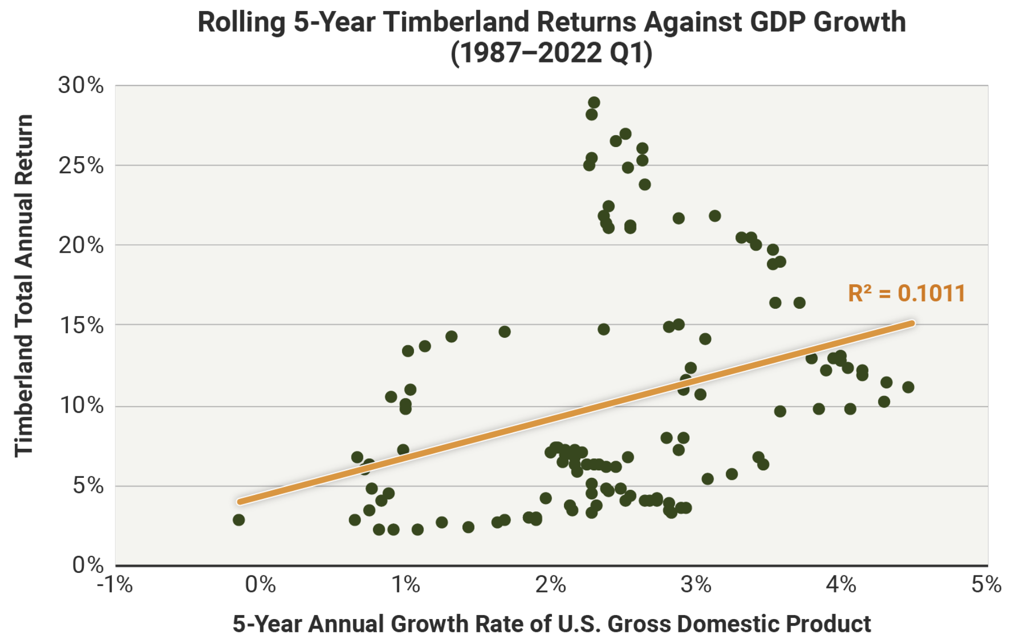
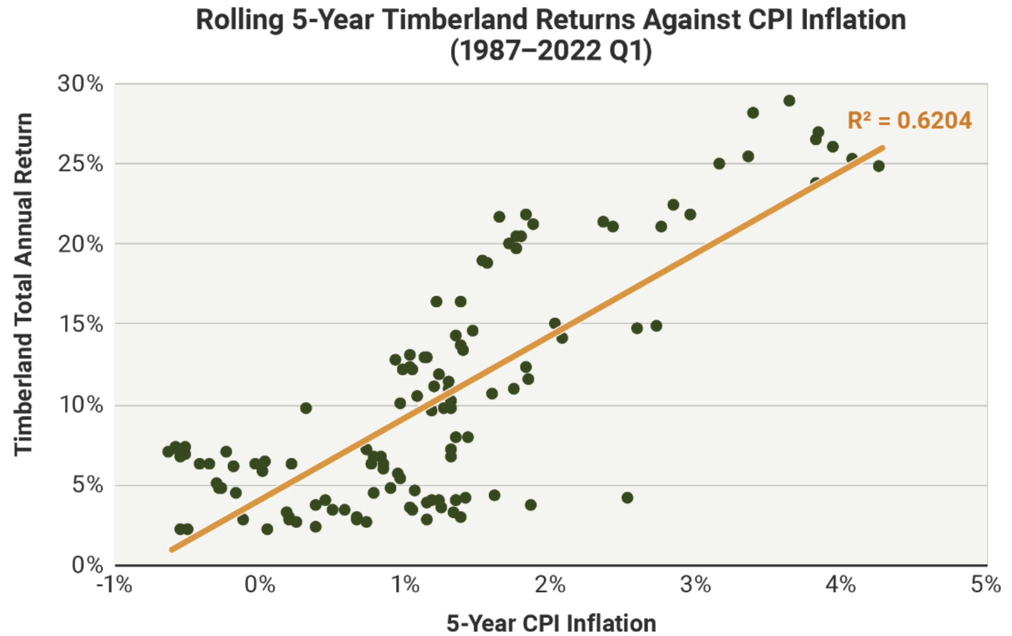


Figure 5. Sources: NCREIF, U.S. Census Bureau



Reasons for Weak Association Between the Economy and Timberland Returns

The chart in Fig. 4 suggests that over the long run, there is only a moderate connection between economic health and timberland returns in the United States. The limited link is due in part to the biological growth of trees, which drives a significant portion of returns for timberland. In addition, many end-use markets for wood are resilient to a slowing economy, such as packaging, tissue, wood pellets and infrastructure (e.g., railroad ties, utility poles). That helps buffer timberland against economic downturns.

The conclusion we can draw from these two charts is that timberland returns are only mildly linked with the health of the overall economy, but strongly linked with inflation. A regression line was drawn in both charts. The strength of that regression is measured by the R-square (R^2), where a 1.0 value indicates a perfect association, but a zero (0) value shows complete independence. With that in mind, an R-square of 0.10 between economic growth and timberland returns suggests a relatively weak connection (Figure 2). In comparison, the inflation and timberland return are closely intertwined with a R-square 0.62 (Figure 3). This implies that between the two economic forces, inflation has a stronger effect than economic growth on timberland returns. This attribute of the asset class could work to the benefit of timberland investors when they are facing periods of high inflation combined with anemic economic growth (which economists sometimes term as *stagflation*).

Conclusions and Recommendations

We are facing a series of economic and market signals that indicate a housing downturn and an economic slowdown – or even recession – could be imminent. If either or both occur, the concern among investors is that the nascent recovery of timberland asset class in the United States could be reversed. While the risk does exist, there are four good reasons timberland investors should nevertheless remain committed to their timberland portfolios for the long-term:

1. **Housing corrections typically are short lived**, often lasting less than two years. A long correction such as the decade of depressed housing starts following the 2007 housing crash is unlikely to occur due to the large, pent-up demand for homes, which is a result of years of accumulated demographic growth exceeding rates of new home construction.

2. **A fall in home construction does not always lead to weak timberland returns.** Timber markets are a balance of supply and demand. Falling demand could be mitigated by falling supply. In this case, lumber capacity in British Columbia is expected to decline by close to 20% over the coming decade, which could help ameliorate the effects of falling lumber usage from a weak U.S. housing market.

3. **Timberland is a defensive asset play.** Timberland is, of course, not immune to the effects of a recession or slow economic growth. Nevertheless, wood goes into many defensive sectors that hold up well against challenging macroeconomic environments, such as the demand for packaging papers (e.g., shipping boxes), tissue (e.g., toilet paper, paper towels), bioenergy (e.g., wood pellets), and industrial activity (e.g., pallets, railroad ties, and utility poles). In addition, the biological growth of trees invariably generates value regardless of the market. This helps partially insulate timberland investments against economic shocks and market volatility.

4. **Inflation risks can be hedged,** as timberland has, over the long-run, shown an ability to react positively to rising inflation pressures. In a strong inflationary environment, an allocation to timberland can help buffer a portfolio's real returns.

In summary, a short-turn setback in the U.S. housing market or economy does not alter the long-term fundamental outlook for timberland investments. We may see several quarters of weaker returns in this economic cycle, but that may create a window of opportunity for investors to build or add to their portfolios of forest assets, which will enable them to take advantage of the recovery that will naturally follow.

TIMBERLAND INVESTMENT RESOURCES LLC

For questions and additional information, contact:

Chung-Hong Fu
Managing Director of Economic Research and Analysis
Timberland Investment Resources, LLC
1330 Beacon St., Suite 311
Brookline, MA 02446
Phone: (617) 264-4767
E-mail: fu@tirllc.com

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