Earnings Quality: A Look at the Homebuilding Industry

EXECUTIVE SUMMARY

Over the past few years, much of the homebuilding industry has seen negative earnings quality as rising net income has not translated into increasing operating cash flow. With deferred tax valuation allowance reversals driving earnings up and inventory increases driving operating cash flow down, a closer look into the financials suggest a positive outlook for the industry.

Due to the long conversion process from home construction to sale, it is common for inventories to be held between one and two years, driving delays in recognizing sales from increased inventories. It should not be alarming that cash flow is down due to increasing inventory levels, as the revenue trends suggest these inventories will be converted into future sales. Additionally, because the valuation allowances related to tax loss carryforwards are being reversed throughout the industry, homebuilding management expects these inventory buildups to not only contribute to further growth in revenues but increased earnings as well.

As the economy continues to improve from the recession, it will be important to monitor the strength of the homebuilding industry and its ability to convert inventory into cash.

Data were provided by Cash Flow Analytics, LLC in which Charles Mulford is a principal.

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The Georgia Tech Financial Analysis Lab conducts unbiased research on issues of financial reporting and analysis. Unbiased information is vital to effective investment decision-making. Accordingly, we think that independent research organizations, such as our own, have an important role to play in providing information to market participants.

Because our Lab is housed within a university, all of our research reports have an educational quality, as they are designed to impart knowledge and understanding to those who read them. Our focus is on issues that we believe will be of interest to a large segment of stock market participants. Depending on the issue, we may focus our attention on individual companies, groups of companies, or on large segments of the market at large.

A recurring theme in our work is the identification of reporting practices that give investors a misleading signal, whether positive or negative, of corporate earning power. We define earning power as the ability to generate a sustainable stream of earnings that is backed by cash flow. Accordingly, our research may look into reporting practices that affect either earnings or cash flow, or both. At times, our research may look at stock prices generally, though from a fundamental and not technical point of view.

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Earnings Quality: A Look at the Homebuilding Industry

Earnings Quality: Background and Definition

Earnings quality is an evaluation of the extent to which a firm’s earnings are generated from sustainable sources that are backed by cash flow. There are two dimensions to earnings quality: the persistence and cash flow dimensions. In examining the persistence dimension of earnings quality, we identify whether reported earnings have been boosted by nonrecurring items. For example, earnings increased by a nonrecurring gain from an asset sale or a one-time reduction in the effective tax rate due to a tax-loss carryforward would impair earnings quality on the persistence dimension. In evaluating the cash dimension of earnings quality, we seek to determine whether reported earnings are supported by cash flow. For example, cash flow would lag earnings for a company that has provided its customers with extended payment terms or that has accumulated inventory in anticipation of increased future sales. Such lagging cash flow would impair earnings quality on the cash dimension.

Earnings that are of low quality increase the likelihood that future earnings will decline from current levels. This is not to say that future earnings will decline, but the likelihood of a decline is increased for companies with low earnings quality. For example, in the case of the nonrecurring gain or the low effective tax rate, future earnings will decline when that gain is excluded or the tax-loss carryforward is no longer available. For the firm that has provided extended payment terms or that has accumulated inventory, future earnings will decline if the resulting receivables or accumulated inventory cannot be realized and write-downs ensue.

In assessing earnings quality, the balance sheet also plays an important role. We use the term position quality to refer to the effects of the balance sheet on earnings quality. We say that position quality is impaired when assets are carried at amounts that exceed fair value or when obligations are carried at less than the amounts needed to liquidate them. Companies that accumulate overvalued assets or undervalued liabilities will see their earnings decline when those overvalued assets are written down or those undervalued liabilities are written up. For example, at some point an investment in a debt security of a financially-troubled issuer that is held to maturity and carried at cost will need to be written down. Similarly, a charge will be needed to increase the balance of an under-accrued warranty obligation. In both instances future earnings will suffer.

The purpose of our summary reports on individual companies is to enable us to focus our attention on one or more dimensions of earnings quality. For example, we might identify nonrecurring gains that we think have impaired a company’s earnings on the persistence dimension. Or, declining cash flow may be our focus, impairing earnings quality on the cash dimension. Finally, for some firms we may look at the balance sheet where position quality may be impaired due to overvalued assets or undervalued liabilities.

A Caveat

In our reports we are not saying that we believe that the earnings or stock price of the company in question will decline. Rather, we are pointing out what we have found in publicly available filings that we think is worthy of closer scrutiny by analysts and investors.
KB Home

KB Home (“KBH” or “the company”) is one of the largest and most recognized homebuilding companies in the U.S. The company’s homebuilding operations offer a variety of new homes designed primarily for first-time, move-up and active adult homebuyers. Their homes include attached and detached single-family residential homes, townhomes and condominiums. KBH offers homes in development communities, at urban in-fill locations and as part of mixed-use projects. The company offers property and casualty insurance and title services in the majority of its markets. However, revenues from these ancillary businesses account for less than 1% of total revenues.

The Cash Flow Shortfall with Reported Numbers

Net income from continuing operations attributable to KB Home was $918.35 million for the trailing-twelve month (“TTM”) period ending November 30, 2014, up from $39.96 million for the trailing-twelve month period ending November 30, 2013, an increase of 2198%. Normalizing for the reversal of a $825.2 million deferred tax asset valuation allowance, net income increased 133% from $39.96 million in 2013 to $93.15 million in 2014.

![Net Income Chart](image)

Operating cash flow fell to ($630.69 million) during the TTM ending November 30, 2014 from ($443.49 million) during the TTM ending November 30, 2013, a decrease of 42.2%.

![Operating Cash Flow Chart](image)
Net income from continuing operations has steadily improved over the past few years, while operating cash flow has steadily fallen. Operating cash flow has fallen at an even faster pace than net income has risen, and this is reflected in the Earnings Quality Indicator (EQI). EQI measures the quality of earnings on the cash dimension. The metric incorporates changes in operating cash flow and net earnings in a single measure.

**Earnings Quality Indicator (EQI)**

Calculated as (Operating Cash Flow – Income from Continuing Operations) / Revenue  
*Source: Cash Flow Analytics, LLC*

**Key Factors Contributing to the Cash Flow Shortfall**

**Operating Receivables**

In 2014, operating receivables increased by $49.74 million to $125.49 million in the period ending November 30, 2014, up from $75.75 million in the period ending November 30, 2013, an increase of 65.7%. The increase in receivables from 2013 to 2014 accounts for 7.9% of the decrease in operating cash flow.

Operating receivables days have been growing over the past couple years. Receivables days are up to 19.08 in 2014 from 13.18 in 2013 and 15.17 in 2012, suggesting that it is taking the Company longer to close on its home sales.
Inventories
Inventories increased by $919.81 million to $3,218.39 million in the period ending November 30, 2014 from $2,298.58 million in the period ending November 30, 2013.

TTM inventory days spiked in Q3 2014 to 531.93 days, bringing 2014 average inventory days to 489.27, up from 400.06 in 2013 and 399.26 in 2012. The increase in inventory accounts for almost the entirety of the fall in operating cash flow, so it will be important to see if the company is able to convert its inventory into cash.

Cash & Equivalents
The Company has supported its principal source of liquidity, its operating cash flow, with its existing cash and cash equivalents. The Company’s balance sheet recorded $356.37 million in cash and cash equivalents in the period ending November 30, 2014, down 32.8% from $530.10 million in the period ending November 30, 2013. The chart below presents the Company’s cash and short-term investments, which shows a similar decline.

Beyond the 32.8% decrease in cash and equivalents and a 42.2% decline in operating cash flow, we looked at the Company’s investing cash flow and financing cash flow. From the Company’s 2014 10-K report, we see a $44.8 million investing outflow, primarily for contributions to unconsolidated joint ventures. We also...
see a financing inflow of $501.7 million due to $400 million in proceeds from debt issuance (five-year note) and $137.0 million in proceeds from issuance of common stock. In effect, the company is borrowing to support a significant run up in inventory.

Hovnanian Enterprises, Inc.

Hovnanian Enterprises, Inc. (“HOV” or “the company”) is one of the nation’s largest builders of residential homes. The company designs, constructs, markets, and sells single-family detached homes, attached townhomes and condominiums, urban infill and active adult homes in planned residential developments. The company also has financial services operations, providing mortgage loans and title services to the customers of its homebuilding operations. HOV’s operations span all significant aspects of the home-buying process, from design, construction and sale to mortgage origination and title services.

The Cash Flow Shortfall with Reported Numbers

Net income from continuing operations attributable to Hovnanian Enterprises was $307.14 million for the trailing-twelve month (“TTM”) period ending October 31, 2014 (Q4, 2014), up from $31.30 million for the trailing-twelve month period ending October 31, 2013, an increase of 881%. Normalizing for the reversal of a $287.0 million deferred tax asset valuation allowance, net income decreased 49.6% from $31.30 million in 2013 to $20.14 million in 2014.

Net Income (from Continuing Operations)

Source: Cash Flow Analytics, LLC.
Operating cash flow fell to -$190.59 million during the TTM ending October 31, 2014 from 9.27 million during the TTM ending October 31, 2013, a decrease of $199.85 million, or 2155.9%.

Net income from continuing operations has steadily improved over the past few years, while operating cash flow has steadily declined. Operating cash flow has fallen at an even faster pace than net income has risen, and this is reflected in the Earnings Quality Indicator (EQI). EQI measures the quality of earnings on the cash dimension. The metric incorporates changes in operating cash flow and net earnings in a single measure.

Earnings Quality Indicator (EQI)

Calculated as (Operating Cash Flow – Income from Continuing Operations) / Revenue

Source: Cash Flow Analytics, LLC
Key Factors Contributing to the Cash Flow Shortfall

Operating Receivables

In 2014, operating receivables increased by $47.46 million to $92.55 million in the period ending October 31, 2014, up from $45.09 million in the period ending October 31, 2013, an increase of 105.3%. The increase in receivables from 2013 to 2014 accounts for roughly one-quarter of the decrease in operating cash flow.

Operating receivables days have been growing over the past couple years. Receivables days are up to 65.81 in 2014 from 8.89 in 2013 and 15.18 in 2012, suggesting the Company is having more difficulty converting sales into cash, despite improved economic conditions.

![Operating Receivables Days](source)

Inventories

Inventories increased by $265.55 million to $1,344.31 million in the period ending October 31, 2014 from $1,078.76 million in the period ending October 31, 2013.

TTM inventory days have been steady but slightly increasing over the last couple years. Inventory days were 252.17 in 2014, up from 212.69 in 2013 and 241.18 in 2012. Like KB Home, the increase in inventory accounts for almost the entirety of the fall in operating cash flow, so it will be important to see if the company is able to convert its inventory into cash.

![Inventory Days](source)
Cash & Cash Equivalents
The Company has supported its principal source of liquidity, its operating cash flow, with its existing cash and cash equivalents. The Company’s balance sheet recorded $255.12 million in cash and cash equivalents in the period ending October 31, 2014, down 20.1% from $319.14 million in the period ending October 31, 2013. A chart of cash and short-term investments shows a similar decline.

Cash and Short-Term Investments

Source: Cash Flow Analytics, LLC

Beyond the 20.1% decrease in cash and equivalents and the 2155.9% decline in operating cash flow, we looked at the Company’s investing cash flow and financing cash flow. From the Company’s 2014 10-K report, we see a $14.2 million investing outflow, primarily for investments in unconsolidated joint ventures. We also see a financing inflow of $137.4 million due to $150 million in proceeds from debt issuance (five-year note). Like KB Homes, Hovnanian is using borrowed funds to support increasing inventory.

Other Homebuilders
With both KB Home and Hovnanian reporting TTM positive net income due to valuation allowance reversals but negative operating cash flow due to inventory purchases, we looked at a number of other homebuilding companies and see similar stories. PulteGroup, Toll Brothers, Lennar Corp, and DR Horton all recognized periods with higher earnings due to valuation allowance reversals within the last few years and lower operating cash flow in 2014 due to substantial increases in inventory. PulteGroup increased inventories by $346.60 million in 2014 and recorded valuation allowance reversals of $45.6 million in 2014 and $2.1 billion in 2013. Toll Brothers increased inventories by $271.98 million in 2014 and recorded a $394.7 million valuation allowance reversal in 2012. Lennar Corp increased inventories by $1,367.41 million in 2014 and recorded a $491.5 million valuation allowance reversal in 2012. And DR Horton increased inventories by $918.2 million in 2014 and recorded a $753.2 million valuation allowance reversal in 2012. Two other homebuilders, Beazer Homes USA and NVR Inc., increased inventories by $230.14 million and $127.73 million, respectively but did not record valuation allowance reversals in the last few years.

Revenue
Because we see large increases in homebuilders’ inventories, it is important to take a deeper look into industry trends. Many companies in the industry are seeing modest or significant revenue increases. Although these revenues are nowhere near the pre-recession highs in 2005 and 2006, they are trending in the right direction and seem to be driving the increases in inventory.
Revenue:

**PulteGroup**

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**Toll Brothers**

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**Lennar Corp**

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Inventory Days
Since the large inventory increases across the industry are apparently being driven by revenue trends, it is important to take a look at inventory days, which measures the degree to which companies are converting inventory to cash. We see that a number of companies are seeing steady or improving levels of converting inventory into sales, representing a positive industry trend.

Inventory Days:
PulteGroup
Valuation Allowances

The valuation allowances recorded by the homebuilding industry over the last few years represents a positive outlook on future sales. Because the bulk of these valuation allowances were initially recorded due to the low likelihood of realizing net operating loss carryforwards, the reversal of
these allowance signals that management puts a high probability on future earnings being sufficient enough to realize these future tax benefits.

**Conclusion**

Over the past few years, much of the homebuilding industry has seen negative earnings quality as rising net income has not translated into increasing operating cash flow. With deferred tax valuation allowance reversals driving earnings up and inventory increases driving operating cash flow down, a closer look into the financials suggest a positive outlook for the industry.

Due to the long conversion process from home construction to sale, it is common for inventories to be held between one and two years, driving delays in recognizing sales from increased inventories. It should not be alarming that cash flow is down due to increasing inventory levels, as the revenue trends suggest these inventories will be converted into future sales. Additionally, because the valuation allowances related to tax loss carryforwards are being reversed throughout the industry, homebuilding management expects these inventory buildups to not only contribute to further growth in revenues but increased earnings as well.

As the economy continues to improve from the recession, it will be important to monitor the strength of the homebuilding industry and its ability to convert inventory into cash.