

November 30<sup>th</sup>, 2022



## Toll Brothers

America's Luxury Home Builder™

As Rates Continue to Decline, Toll Brothers Face Steep Demand Decline & Market Uncertainty in High-End Housing Segment

We are issuing **Toll Brothers Incorporated (TOL)** a **Hold** rating. We assign the public homebuilder a price target of **\$55 USD**. A decline in favorable housing segment factors, as well as uncertain region-specific macroeconomic and managerial dynamics will provide headwinds to TOL's earnings, though TOL is well positioned to weather any headwinds.

### INVESTMENT THESIS

- 1) The recent passing of CEO and Co-Founder, Mr. Robert I. Toll, has since prompted many questions by company stakeholders. **Uncertainties regarding current business strategy and the future direction of managerial and C-Suite leadership** remain at the forefront of concern. That said, the top 3 current executives have a combined total of 72 years of Toll Brothers experience and thus, are likely to weather any headwinds to TOL's earnings – especially as demand in key regions decline.
- 2) **We are in the camp that believes TOL revenue and sales volume since 2020 were accelerated due to the transient demographic patterns observed during the global pandemic.** Toll, having been highly concentrated regionally in these rural/suburban “*Boom*” markets, had likewise been afforded a short span of extremely high pricing power and contract negotiation leverage relative to peers. However, as the fleeting exodus from city hubs continue to wane, these same markets have slowly faded to “*Bust*.” We think these developments will cause TOL sales volume and pricing to normalize through 2024.
- 3) The US homebuilders continue to revamp their business models. Seeking to avoid another potential Great Financial Crisis, a majority of these players have significantly deleveraged their balance sheets to mitigate exposure to excessive debt and land impairment risk. **TOL remains an industry laggard on both fronts, and while likely equipped to handle a housing recession, a repeat of 2008 will expose the company to unnecessary default risk.**

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**Company:** Toll Brothers, Inc. (TOL)

**Industry:** Public Homebuilding

**Current Price:** \$47

**Price Target:** \$55

**Investment Horizon (months):** 12 - 18

**P/E Multiple:** 5.58x

**P/B Multiple:** 1.05x

**Avg. Daily Volume (millions):** 1,746

**52-Week Range:** \$39.53 - \$75.61

**Dividend Yield:** 1.50%

**Rolling Beta:** 1.5x

### PERFORMANCE RATING

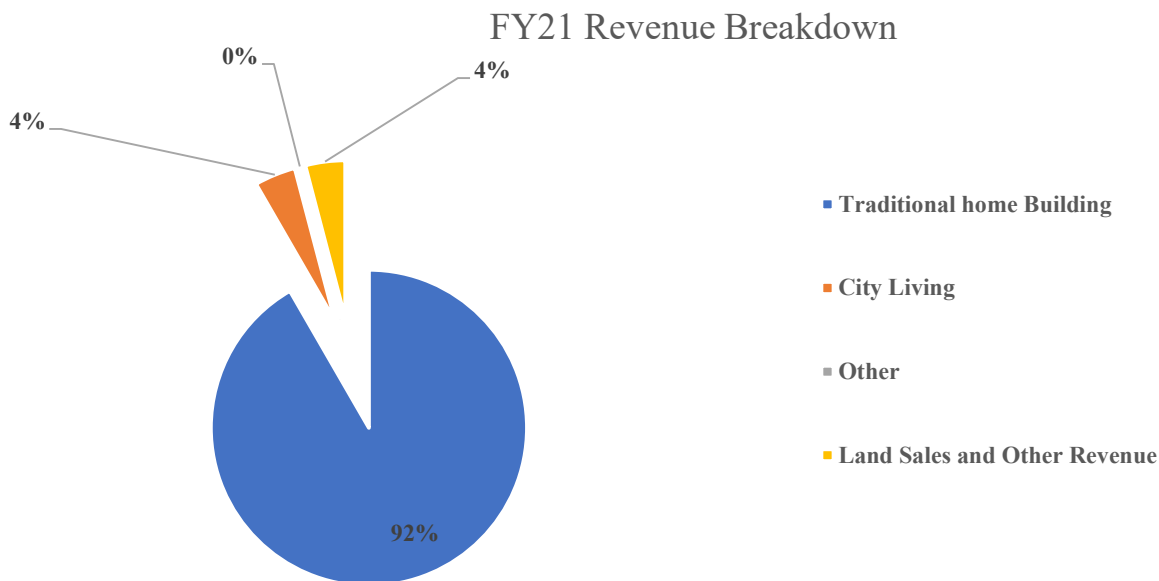
**HOLD**

## Company Overview & Business Model

**History:** The Toll Brothers was founded by Bob and Bruce Toll in Southeastern PA in 1967. In 1975, they built their first planned community, taking advantage of the suburb culture around the newly built I-95. In 1982, the Toll Brothers expanded outside of Pennsylvania and into New Jersey. They went public in 1986 (listed on New York Stock Exchange as: TOL). They quickly expanded across the Northeast corridor thanks to their in-house marketing firm, *Toll Architecture*, and their mortgage company, *Westminster Mortgage*. In 1991, they entered into the golf and resort market. After expanding in the Northeast and Mid-Atlantic, they opened communities in California (1994), and Florida and Texas (1995). In 1998, they expanded into rental communities and in 2003, they launched their *City Living Division*.<sup>1</sup>

**Executive Team:** The Chairman and CEO, the CFO, and President and COO of Toll Brothers have a combined 72 years at Toll Brothers. The President and CEO, Douglas C. Yearley Jr., has held a variety of rolls at the company, first starting in project management before moving into a Vice President position in 1994. The CFO, Martin P. Connor, joined that position in 2010 after 20 years at EY running their Real Estate Practice in Philadelphia. President and COO, Robert Parahus, joined Toll Brothers in 1986 and helped lead the company’s expansion into New York and Connecticut.<sup>2</sup> On October 7 2022, Toll Brothers cofounder Bob Toll passed. While Bob Toll stepped down as CEO in 2010 (a position he held since the company’s founding), he served as Chairman of the Board until October 2018, and remained on the board through March 2022.<sup>3</sup> Through Bob Toll’s tenure, the company went through major expansion, and won several awards including Builder of the Year awards – it remains to be seen how much influence and legacy Bob Toll had on the direction of the company.

**Business Model:** Toll Brothers differentiates itself from the rest of the homebuilding construction firms through its unique luxury offering (and price points). Toll Brothers focuses primarily on the homebuilding segment, though earns about ~4% of its revenue via its *City Living* division, in which its sells units out of mid and high-rise communities. This segment currently focuses on New York City and the surrounding areas, with plans to expand further in the Mid-Atlantic. <sup>4</sup>



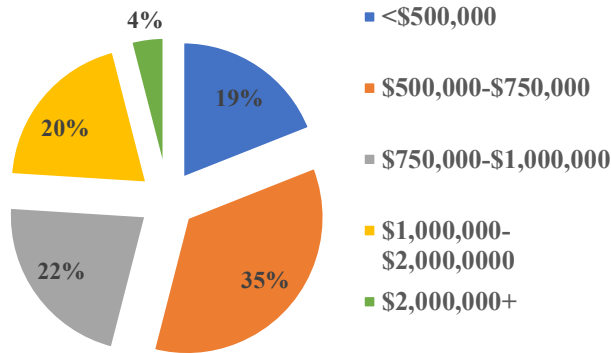
<sup>1</sup> “About Toll Brothers”. Toll Brothers Website. <<https://www.tollbrothers.com/about>>

<sup>2</sup> “Corporate Governance.” Toll Brothers Website. <<https://investors.tollbrothers.com/corporate-governance/senior-management>>

<sup>3</sup> Robert I. Toll Obituary. *The Philadelphia Inquirer*. <<https://www.inquirer.com/obituaries/robert-toll-obituary-brothers-philadelphia-home-builder-20221013.html>> and “Toll Brothers Announces Co-Founder Robert I. Toll to Transition to Emeritus Role”. *GlobeNewswire*. <<https://www.globenewswire.com/en/news-release/2022/01/27/2374729/1924/en/Toll-Brothers-Announces-Co-Founder-Robert-I-Toll-to-Transition-to-Chairman-Emeritus-Role.html>>

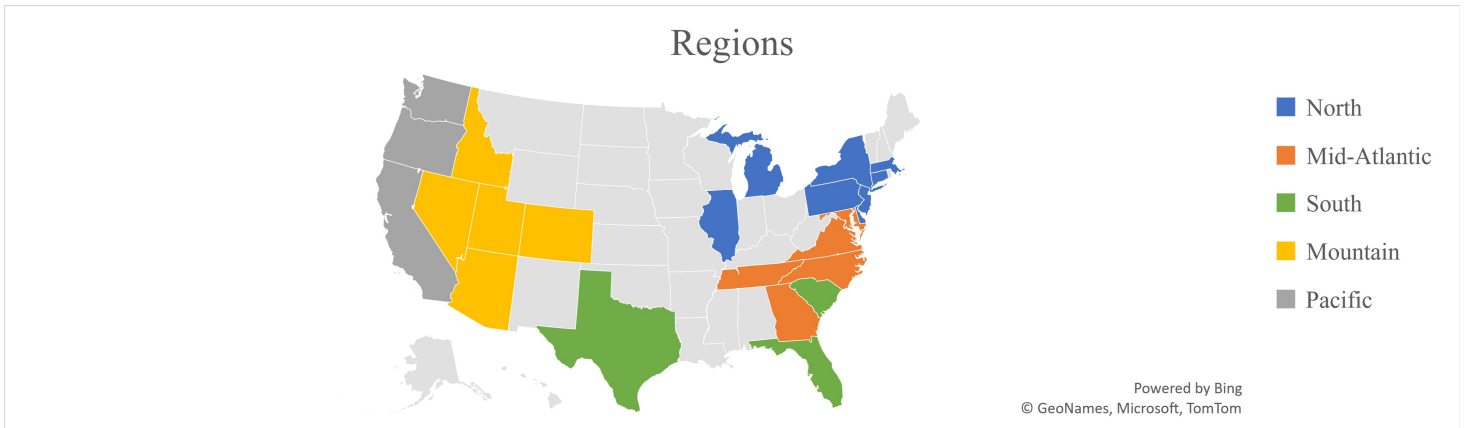
<sup>4</sup> “Our Communities and Homes.” Toll Brothers 2021 10K.

## Percentage of Homes Delivered by ASP FY21



56

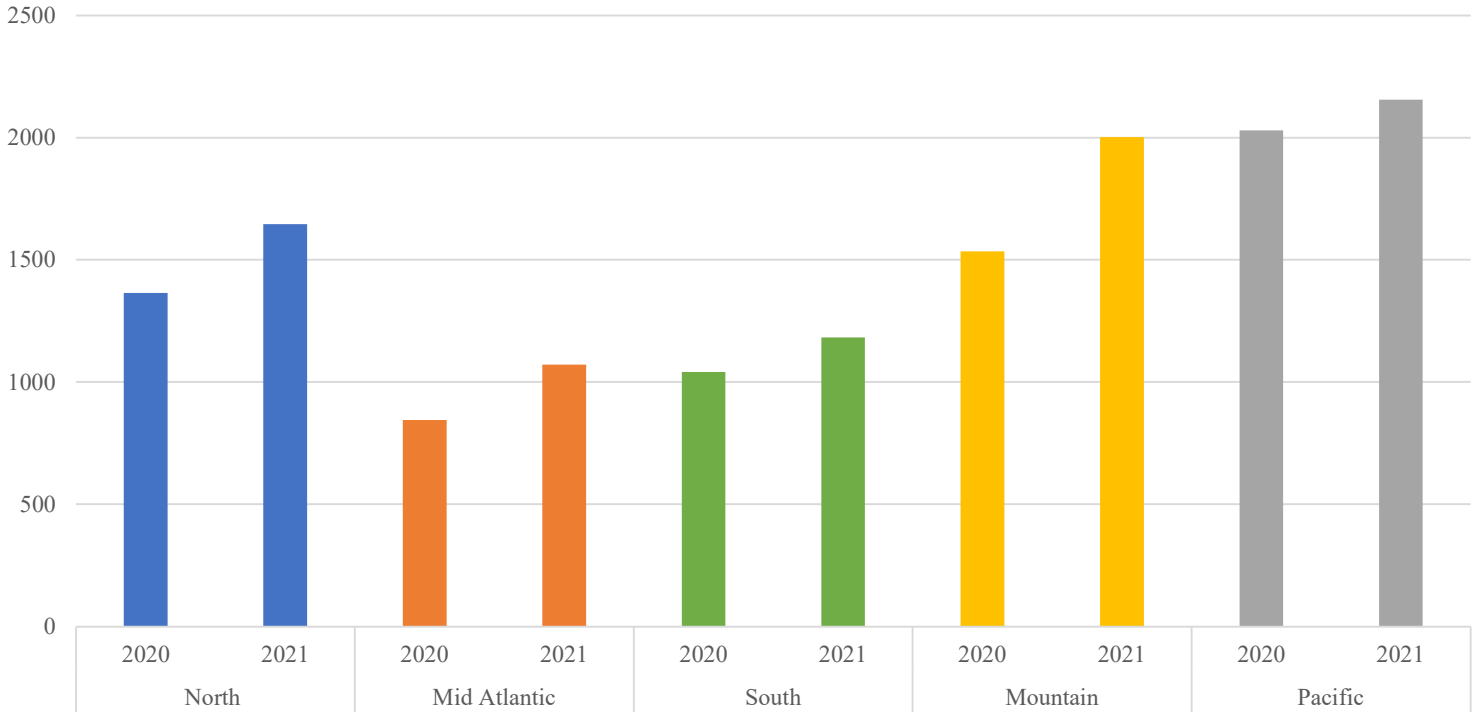
**Market Segments:** Similar to other firms covered in the Homebuilding Industry, Toll Brothers looks at its revenue through six different segments (*City Living* not included on the map), spanning 24 states and the District of Columbia. The report will go into each of the six segments in depth, but the primary driver of growth is homes delivered – not variations in price points.



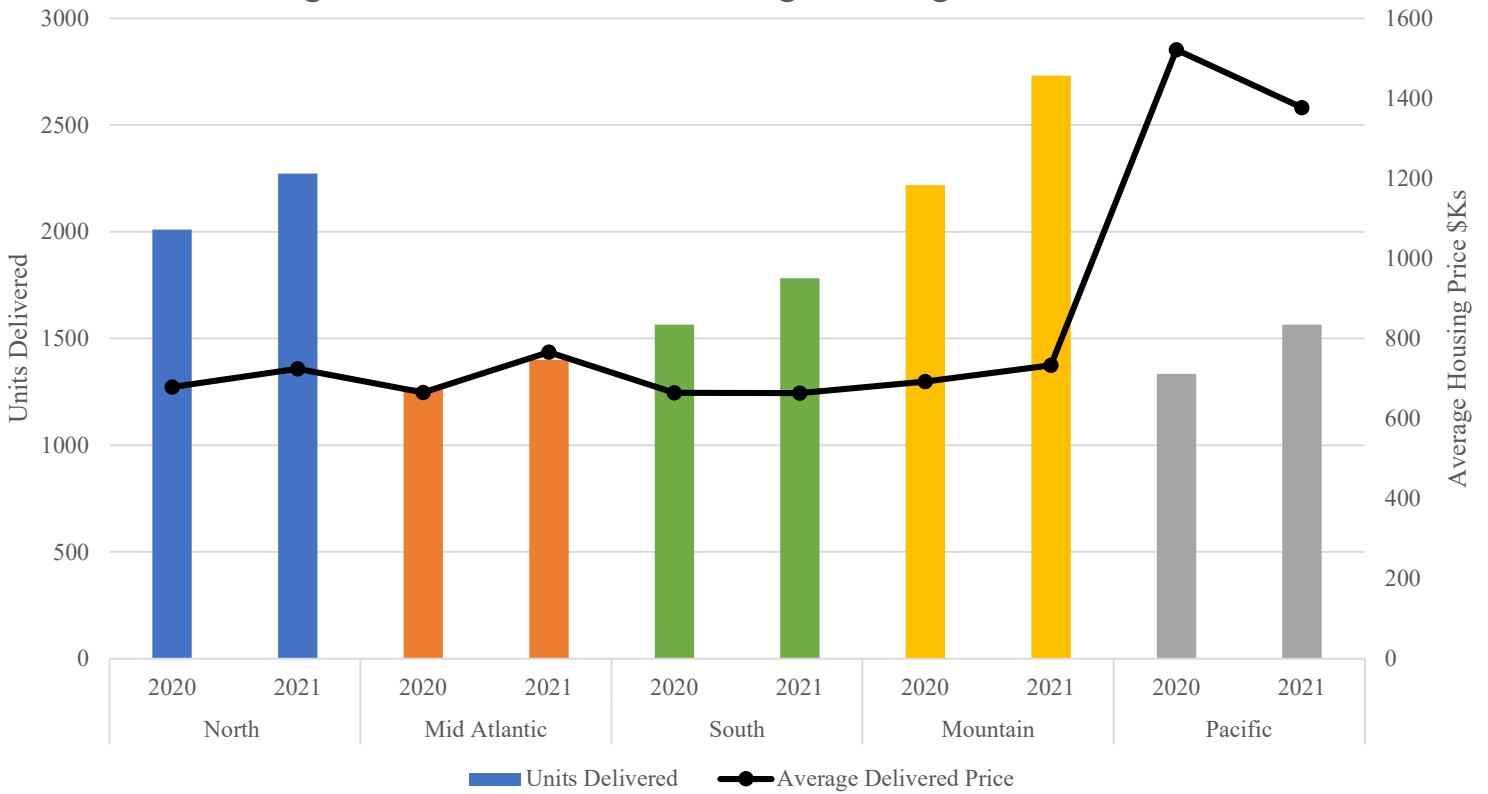
<sup>5</sup> Enclave at Daniels Farm Site Plan, Trumbull Connecticut. <<https://www.tollbrothers.com/luxury-homes-for-sale/Connecticut/Enclave-at-Daniels-Farm/Saybrook>>

<sup>6</sup> “About Toll Brothers”. Toll Brothers Website. <<https://www.tollbrothers.com/about>>

### Revenue by Region



### Regional Units Delivered & Average Housing Price



## Business Segments Revenue Forecast

**Traditional Homebuilding:** FY22 Q3 (7/31) results fell short of expectations for Toll Brothers. Surprisingly, management saw a (55)% Y/Y drop in *Units Ordered*. Cumulatively, *New Orders* fell to 1,285 Units in August from 2,867 Units - just a year prior. Toll would even experience regional demand declines as steep as (75)% Y/Y in Q3. We acknowledge that other large homebuilders and players in this space did not experience such a drastic falloff in demand as did Toll. Therefore, our financial model thus bakes in the assumptions and conditions similar to the housing recession 2008.

During The Great Financial Crisis of '08, Toll Brothers *Home Sales Revenue* declined ~ (33)% Y/Y – with *Sales Volume* declining ~ (28)%, and *Pricing Power* reduced by ~ (5)% during that same period. To address the potential risk of an even more draconian economic outlook in 2023, we take into consideration a bear scenario where significant volume and pricing decline necessitate temporary margin compression for the company.

<b>Toll Brothers</b> <small>America's Luxury Home Builder™</small> USD - Millions Fiscal Year - 10/31	2022E				2022	2023E				2023
	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>										
<b>Consolidated Earnings Drivers</b>										
<b>Home Sales Revenue</b>	\$1,649	\$2,170	\$2,253	\$3,741	\$9,813	\$1,723	\$1,571	\$1,653	\$1,617	\$6,564
% Change	18%	22%	10%	32%	19%	4%	-28%	-27%	-57%	-33%
<b>Units Closed</b>	1,909	2,398	2,413	3,936	10,656	2,068	1,875	1,924	1,796	7,662
% Change	8%	8%	-3%	20%	9%	8%	-22%	-20%	-54%	-28%
<b>Average Selling Price (Sales)</b>	864	905	934	951	951	833	838	859	901	901
% Change	10%	14%	13%	12%	10%	-4%	-6%	-6%	-2%	-5%
<b>Net Orders Value</b>	\$2,971	\$3,193	\$1,607	\$1,515	\$9,286	\$1,501	\$2,261	\$2,108	\$2,229	\$8,099
% Change	20%	29%	-46%	-48%	-18%	-49%	-29%	31%	47%	-13%
<b>Units Ordered</b>	2,876	2,910	1,299	1,285	8,370	1,426	1,930	1,593	1,915	6,865
% Change	10%	11%	-59%	-55%	-28%	-50%	-34%	23%	49%	-18%
<b>Average Selling Price (Orders)</b>	1,033	1,097	1,238	1,179	1,179	1,053	1,171	1,323	1,164	1,164
% Change	9%	16%	31%	7%	15%	1%	4%	8%	-2%	-1%
<b>Sales Order Backlog</b>	\$10,795	\$11,704	\$11,129	\$8,902	\$8,902	\$8,681	\$9,371	\$9,826	\$10,437	\$10,437
% Change	48%	38%	19%	-6%	-6%	-20%	-20%	-12%	17%	17%
<b>Ending Backlog Units</b>	11,065	11,615	10,617	8,026	8,026	7,385	7,440	7,110	7,230	7,230
% Change	34%	21%	4%	-20%	-20%	-33%	-36%	-33%	-10%	-10%
<b>Average Selling Price (Backlog)</b>	997	1,035	1,063	1,102	1,102	1,133	1,200	1,290	1,401	1,401
% Change	15%	16%	15%	14%	14%	14%	16%	21%	27%	27%
<b>Backlog Conversion Rate</b>	19%	22%	21%	37%	37%	26%	25%	26%	25%	25%

SUMMARY FINANCIALS	2020	2021	2022E	2023E	2024E	2025E	2026E	TTM
<b>Revenue</b>	7,050	8,730	10,397	7,087	8,367	8,556	8,662	9,605
% Δ in Growth	-	24%	19%	-32%	18%	2%	1%	10%
<b>Gross Profit</b>	1,439	1,994	2,790	1,440	1,881	2,154	2,183	2,221
Margin %	20%	23%	27%	20%	22%	25%	25%	11%
<b>EBITDA</b>	1,663	2,227	2,980	1,575	2,042	2,318	2,349	1,335
Margin %	24%	26%	29%	22%	24%	27%	27%	-40%
<b>Operating Income</b>	1,337	1,842	2,329	1,107	1,435	1,676	1,688	1,259
Margin %	19%	21%	22%	16%	17%	20%	19%	-32%
<b>Net Income</b>	700	1,134	1,547	325	653	856	878	1,021
Margin %	10%	13%	15%	5%	8%	10%	10%	-10%
<b>EPS</b>	3.66	7.46	11.93	1.45	4.78	7.21	8.08	8.46
% Δ in Growth YoY	-	104%	60%	-88%	230%	51%	12%	13%
<b>Book Value</b>	4,876	5,294	6,305	6,778	7,304	7,804	8,317	5,060
% Δ in Growth YoY	-	9%	19%	8%	8%	7%	7%	-4%
<b>Dividend/Share</b>	0.44	0.62	0.68	0.84	0.88	0.93	0.97	0.74
% Δ in Growth YoY	-	41%	10%	24%	5%	5%	5%	19%

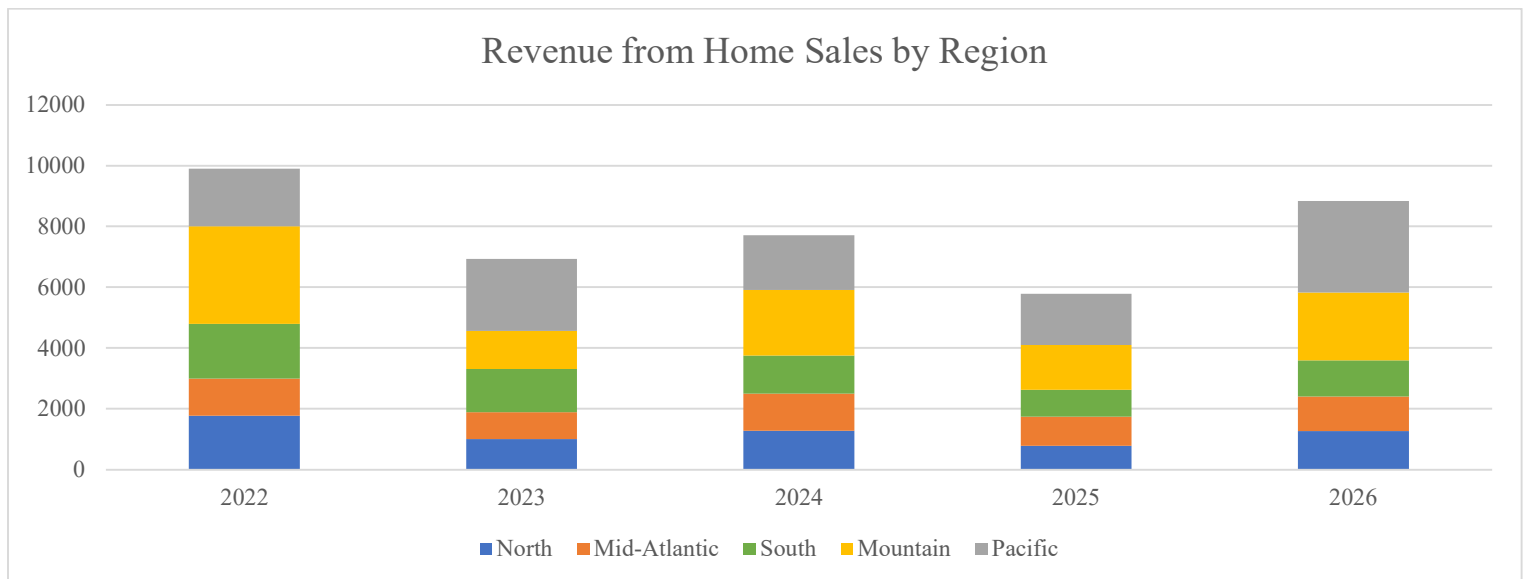
**Regional Drivers** – We are firmly in the camp that Toll’s sales revenue had been artificially elevated due to the ‘COVID-Effect’. As we all had observed, the ramifications and aftereffects of the Global Pandemic had drastically changed not only the global business landscape, but also short-run migration patterns. This new WFH environment, combined with the near zero-interest rate environment from 2020 – 2022, prompted many of the affluent to refinance homes and move out of crowded city hubs. The resulting ‘Mass Exodus’ facilitated an almost immediate and steep increase in demand for more rural/suburban luxury housing.

TOL was able to accommodate such demand, operating at the high-end segment of the housing market. Almost immediately, Toll Brothers reaped the benefits of this demographic trend. Many affluent and high-income families began to migrate westward, enabling cities such as Las Vegas, Phoenix, and Austin to become the new ‘Boom Markets’ in housing. Luckily for Toll, these cities were firmly situated within the firm’s *Mountain* and *Pacific* regions. Concentrated heavily in these regions, Toll management was afforded significant leverage in negotiating costs with subcontractors and temporary pricing power – as the quasi monopoly player within the “High-End” and “Affordable Luxury” segments of these regional housing markets.

Additionally, TOL’s revenue figures were not only exaggerated from 2019 – 2022 due to this sharp demand increase and housing price appreciation, but also largely due to inorganic growth. The influx of capital gave TOL management leeway and liquidity to close a slew of major M&A deals during this period – acquiring: **Sharp Residential**, **Sabal Homes LLC**, **Thrive Homes LLC**, **Keller Homes, Inc.**, and finally **StoryBook Homes** in 2021 for ~ \$39 million in cash.

We believe that this temporary influx granted Toll highly inflated and transient revenue figures. We think that TOL’s sales volume and pricing in these regions will normalize through 2023 and 2024 as demand and other macroeconomic headwinds increase. We have already started to see evidence of this in the latter half of 2022: **1) Units Ordered** for the Pacific and Mountain regions were down (57)% and (72)% respectively in Q3; and **2) In Q3 alone**, TOL saw a 10ppt increase in *Contract Cancellations* ~13% that was 400bps higher than the Q2 group average. The industry viewed this spike in cancellations and instantaneous decline in demand as a major surprise to the downside since consumers in these markets historically have had little issue with TOL’s average \$75k deposit.<sup>7</sup>

As a luxury homebuilder, TOL and similar rivals will not typically utilize incentives or base price cuts to incentivize increased sales volume or demand. Instead, management will wade methodically through the backlog to ensure homes at these higher price points are finished if new order demand in a particular region is waning. Given these factors, both the **Pacific** and **Mountain** regions are modeled with ~ (5)% pricing decline assumptions through mid-2024 – also in line with our ‘08 simulation figures. Through 2023, we model an annual average 3% increase in *Units Ordered* for both regions. We assume that consumers at these price points will rejoin the market earlier than consumers at the mid-lower end markets – causing a steep increase in *Net Orders*.



<sup>7</sup> Patterson, Truman et al., “TOL First Look: Orders Slide Down the Mountain.” Wolfe Research. August 2022.

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	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>															
<b>Pacific Region</b>															
Home Sales Revenue	\$385	\$541	\$507	\$470	\$1,903	\$218	\$268	\$331	\$1,554	\$2,371	\$303	\$400	\$533	\$560	\$1,797
% Change	16%	18%	-3%	-44%	-4%	-43%	-50%	-35%	230%	22%	39%	49%	61%	-64%	-13%
Units Closed	285	376	321	297	1,279	170	196	221	1,034	1,620	263	308	339	339	1,248
% Change	26%	8%	-17%	-51%	-18%	-41%	-48%	-31%	248%	27%	55%	57%	53%	-67%	-23%
Average Selling Price (Sales)	1,351	1,440	1,578	1,582	1,582	1,283	1,368	1,499	1,503	1,503	1,155	1,300	1,574	1,654	1,654
% Change	-8%	9%	16%	14%	14%	-5%	-5%	-5%	-5%	-5%	-10%	-5%	5%	10%	10%
Net Orders Value	\$824	\$829	\$447	\$466	\$2,566	\$791	\$810	\$689	\$978	\$3,268	\$720	\$699	\$606	\$873	\$2,898
% Change	28%	17%	-37%	-20%	-8%	0%	0%	50%	105%	27%	0%	-10%	-10%	-10%	-11%
Units Ordered	543	523	221	244	1,531	434	445	309	488	1,676	565	511	340	512	1,929
% Change	15%	7%	-57%	-50%	-22%	-20%	-15%	40%	100%	9%	30%	15%	10%	5%	15%
Average Selling Price (Orders)	1,518	1,585	2,023	1,908	1,908	1,822	1,823	2,225	2,004	2,004	1,275	1,367	1,780	1,703	1,703
% Change	11%	9%	47%	30%	30%	20%	15%	10%	5%	5%	-30%	-25%	-20%	-15%	-15%
Sales Order Backlog	\$2,453	\$2,740	\$2,683	\$2,678	\$2,678	\$3,252	\$3,794	\$4,151	\$3,575	\$3,575	\$3,992	\$4,290	\$4,363	\$4,676	\$4,676
% Change	44%	40%	25%	33%	33%	33%	38%	55%	33%	33%	23%	13%	5%	31%	31%
Ending Backlog Units	1,702	1,849	1,749	1,696	1,696	1,961	2,209	2,298	1,752	1,752	2,054	2,257	2,259	2,432	2,432
% Change	32%	29%	12%	17%	17%	15%	19%	31%	3%	3%	5%	2%	-2%	39%	39%
Average Selling Price (Backlog)	1,441	1,482	1,534	1,612	1,612	1,692	1,763	1,892	2,098	2,098	1,996	1,956	2,021	1,929	1,929
% Change	9%	9%	12%	16%	16%	17%	19%	23%	30%	30%	18%	11%	7%	-8%	-8%
Backlog Conversion Rate	20%	22%	17%	17%	17%	10%	10%	10%	45%	45%	15%	15%	15%	15%	15%

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	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>															
<b>Mountain Region</b>															
Home Sales Revenue	\$463	\$654	\$661	\$1,432	\$3,209	\$148	\$170	\$200	\$741	\$1,259	\$388	\$455	\$487	\$833	\$2,163
% Change	22%	51%	19%	124%	54%	-68%	-74%	-70%	-48%	-65%	162%	168%	144%	12%	74%
Units Closed	603	814	802	1,722	3,941	203	223	260	959	1,645	561	590	623	1,045	2,819
% Change	15%	35%	6%	103%	44%	-66%	-73%	-68%	-44%	-58%	176%	165%	139%	9%	71%
Average Selling Price (Sales)	767	803	824	832	832	729	763	766	773	773	692	770	782	797	797
% Change	7%	12%	12%	10%	10%	-5%	-5%	-7%	-7%	-7%	-5%	1%	2%	3%	3%
Net Orders Value	\$758	\$943	\$344	\$374	\$2,419	\$455	\$651	\$387	\$393	\$1,885	\$657	\$820	\$489	\$476	\$2,442
% Change	1%	2%	-59%	-35%	-28%	-30%	-25%	25%	20%	-22%	55%	25%	25%	20%	30%
Units Ordered	799	1,002	263	308	2,372	400	601	395	463	1,858	679	721	454	509	2,363
% Change	-18%	-18%	-72%	-65%	-41%	-50%	-40%	50%	50%	-22%	70%	20%	15%	10%	27%
Average Selling Price (Orders)	949	941	1,307	1,214	1,214	1,139	1,082	980	850	850	968	1,136	1,078	935	935
% Change	23%	24%	48%	30%	30%	20%	15%	-25%	-30%	-30%	-15%	5%	10%	10%	10%
Sales Order Backlog	\$3,320	\$3,608	\$3,292	\$2,234	\$2,234	\$2,541	\$3,022	\$3,209	\$2,861	\$2,861	\$3,130	\$3,495	\$3,497	\$3,140	\$3,140
% Change	62%	42%	16%	-26%	-26%	-23%	-16%	-3%	28%	28%	23%	16%	9%	10%	10%
Ending Backlog Units	3,794	3,982	3,443	2,030	2,030	2,226	2,605	2,739	2,243	2,243	2,361	2,492	2,323	1,786	1,786
% Change	39%	19%	-3%	-44%	-44%	-41%	-35%	-20%	10%	10%	6%	-4%	-15%	-20%	-20%
Average Selling Price (Backlog)	875	906	956	987	987	1,031	1,072	1,128	1,160	1,160	1,208	1,286	1,400	1,510	1,510
% Change	17%	19%	20%	18%	18%	18%	18%	18%	18%	18%	17%	20%	24%	30%	30%
Backlog Conversion Rate	17%	21%	20%	50%	50%	10%	10%	10%	35%	35%	25%	25%	25%	45%	45%

The remaining **North**, **Mid-Atlantic**, and **South** regions were modeled in accordance with the 2022 Full-Year Guidance provided by TOL management during the company's latest earnings call: *Closings* 10.0K to 10.3K (11.0K to 11.5K prior) - reduced 1.1K at mid-point | *Revenue* at \$9.3B at *ASP* \$915K to \$925K (\$890K to \$910K prior) | *Gross Margin* ~ 27.5% | *SG&A* ~ 10.5%

Toll Brothers America's Luxury Home Builder™ USD - Millions Fiscal Year - 10/31	2022E				2022	2023E				2023	2024E				2024
	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>															
<b>North Region</b>															
Home Sales Revenue	\$315	\$381	\$479	\$599	\$1,774	\$86	\$97	\$121	\$787	\$1,090	\$364	\$324	\$346	\$285	\$1,319
% Change	1%	-3%	19%	11%	11%	-73%	-75%	-75%	31%	-43%	325%	236%	185%	-64%	29%
Units Closed	398	485	554	661	2,098	114	131	151	914	1,309	460	400	392	300	1,552
% Change	-12%	-14%	0%	-7%	-8%	-71%	-73%	-73%	38%	-38%	304%	206%	159%	-67%	19%
Average Selling Price (Sales)	792	785	864	907	907	752	738	804	861	861	790	812	884	948	948
% Change	14%	13%	19%	19%	19%	-5%	-6%	-7%	-5%	-5%	5%	10%	10%	10%	10%
Net Orders Value	\$416	\$448	\$251	\$360	\$1,475	\$274	\$345	\$185	\$472	\$1,277	\$395	\$496	\$234	\$570	\$1,695
% Change	16%	-1%	-44%	-15%	-15%	-30%	-20%	-25%	30%	-13%	40%	40%	25%	20%	33%
Units Ordered	472	474	235	331	1,512	283	332	165	414	1,194	326	382	189	476	1,373
% Change	5%	-14%	-56%	-40%	-28%	-40%	-30%	-30%	25%	-21%	15%	15%	15%	15%	15%
Average Selling Price (Orders)	881	946	1,069	1,086	1,086	969	1,041	1,122	1,141	1,141	1,211	1,301	1,235	1,198	1,198
% Change	11%	15%	28%	25%	25%	10%	10%	5%	5%	5%	25%	25%	10%	5%	5%
Sales Order Backlog	\$1,566	\$1,635	\$1,408	\$1,169	\$1,169	\$1,357	\$1,606	\$1,669	\$1,355	\$1,355	\$1,386	\$1,557	\$1,445	\$1,730	\$1,730
% Change	11%	11%	-8%	-20%	-20%	-13%	-2%	19%	16%	16%	2%	-3%	-13%	28%	28%
Ending Backlog Units	1,798	1,787	1,468	1,139	1,139	1,308	1,509	1,523	1,023	1,023	888	870	668	843	843
% Change	-6%	-6%	-22%	-34%	-34%	-27%	-16%	4%	-10%	-10%	-32%	-42%	-56%	-18%	-18%
Average Selling Price (Backlog)	871	915	959	966	966	992	1,041	1,102	1,219	1,219	1,331	1,450	1,572	1,770	1,770
% Change	17%	17%	18%	14%	14%	14%	14%	15%	26%	26%	34%	39%	43%	45%	45%
Backlog Conversion Rate	23%	27%	31%	45%	45%	10%	10%	10%	60%	60%	45%	45%	45%	45%	45%

Toll Brothers America's Luxury Home Builder™ USD - Millions Fiscal Year - 10/31	2022E				2022	2023E				2023	2024E				2024
	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>															
<b>Mid-Atlantic Region</b>															
Home Sales Revenue	\$243	\$268	\$254	\$452	\$1,217	\$118	\$149	\$168	\$452	\$887	\$267	\$301	\$328	\$322	\$1,218
% Change	48%	23%	-8%	10%	11%	-51%	-45%	-34%	0%	-29%	126%	102%	96%	-29%	40%
Units Closed	276	276	267	468	1,287	142	161	185	492	980	305	296	316	304	1,221
% Change	22%	-9%	-26%	-8%	-8%	-49%	-42%	-31%	5%	-24%	115%	84%	70%	-38%	25%
Average Selling Price (Sales)	880	972	951	967	967	836	923	903	919	919	878	1,016	1,039	1,057	1,057
% Change	22%	35%	24%	19%	19%	-5%	-5%	-5%	-5%	-5%	5%	10%	15%	15%	15%
Net Orders Value	\$361	\$399	\$225	\$143	\$1,127	\$223	\$288	\$234	\$145	\$888	\$240	\$293	\$286	\$170	\$989
% Change	10%	23%	-29%	-55%	-14%	-40%	-30%	10%	10%	-21%	10%	5%	22%	17%	11%
Units Ordered	366	354	186	137	1,043	238	283	242	185	948	285	340	290	211	1,127
% Change	-2%	-8%	-48%	-60%	-29%	-35%	-20%	30%	35%	-9%	20%	20%	20%	14%	19%
Average Selling Price (Orders)	985	1,128	1,208	1,041	1,041	936	1,015	966	780	780	842	863	986	804	804
% Change	12%	34%	39%	5%	5%	-5%	-10%	-20%	-25%	-25%	-10%	-15%	2%	3%	3%
Sales Order Backlog	\$1,122	\$1,140	\$1,111	\$801	\$801	\$905	\$1,044	\$1,110	\$803	\$803	\$776	\$768	\$726	\$575	\$575
% Change	20%	10%	3%	-20%	-20%	-19%	-8%	0%	0%	0%	-14%	-26%	-35%	-28%	-28%
Ending Backlog Units	1,143	1,120	1,039	709	709	805	927	983	677	677	658	702	676	583	583
% Change	1%	-8%	-15%	-33%	-33%	-30%	-17%	-5%	-4%	-4%	-18%	-24%	-31%	-14%	-14%
Average Selling Price (Backlog)	982	1,018	1,069	1,073	1,073	1,083	1,108	1,126	1,123	1,123	1,126	1,085	1,088	960	960
% Change	19%	19%	21%	12%	12%	10%	9%	5%	5%	5%	4%	-2%	-3%	-15%	-15%
Backlog Conversion Rate	26%	24%	24%	45%	45%	20%	20%	20%	50%	50%	45%	45%	45%	45%	45%

Toll Brothers America's Luxury Home Builder™ USD - Millions Fiscal Year - 10/31	2022E				2022	2023E				2023	2024E				2024
	1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31		1/31	4/30	7/31	10/31	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
<b>REVENUE BUILD</b>															
<b>South Region</b>															
Home Sales Revenue	\$244	\$326	\$353	\$879	\$1,802	\$342	\$313	\$365	\$393	\$1,414	\$297	\$315	\$361	\$283	\$1,256
% Change	12%	16%	21%	123%	50%	40%	-4%	4%	-55%	-24%	-13%	0%	-1%	-28%	-6%
Units Closed	347	447	469	1,191	2,454	513	477	540	592	2,121	494	504	518	413	1,930
% Change	2%	10%	8%	99%	38%	48%	7%	15%	-50%	-14%	-4%	6%	-4%	-30%	-9%
Average Selling Price (Sales)	702	730	752	738	738	667	657	677	664	664	600	624	697	684	684
% Change	10%	6%	12%	12%	12%	-5%	-10%	-10%	-10%	-10%	-10%	-5%	3%	3%	3%
Net Orders Value	\$612	\$573	\$341	\$172	\$1,698	\$291	\$327	\$226	\$131	\$975	\$366	\$427	\$280	\$159	\$1,231
% Change	57%	2%	-42%	-85%	-20%	-55%	-45%	-35%	-25%	-43%	30%	35%	25%	21%	26%
Units Ordered	737	616	313	264	1,930	369	370	219	212	1,169	516	536	285	254	1,590
% Change	30%	-23%	-57%	-60%	-30%	-50%	-48%	-30%	-20%	-39%	40%	45%	30%	20%	36%
Average Selling Price (Orders)	830	931	1,088	651	651	789	884	1,034	618	618	710	796	982	625	625
% Change	21%	33%	37%	-25%	-25%	-5%	-5%	-5%	-5%	-5%	-10%	-10%	-5%	1%	1%
Sales Order Backlog	\$2,334	\$2,581	\$2,636	\$1,928	\$1,928	\$1,877	\$1,891	\$1,752	\$1,490	\$1,490	\$1,559	\$1,671	\$1,589	\$1,465	\$1,465
% Change	93%	73%	48%	-2%	-2%	-20%	-27%	-34%	-23%	-23%	-17%	-12%	-9%	-2%	-2%
Ending Backlog Units	2,860	3,029	2,978	2,051	2,051	1,907	1,800	1,479	1,099	1,099	1,120	1,152	918	759	759
% Change	67%	44%	24%	-17%	-17%	-33%	-41%	-50%	-46%	-46%	-41%	-36%	-38%	-31%	-31%
Average Selling Price (Backlog)	816	852	885	916	916	928	970	1,034	1,132	1,132	1,154	1,206	1,329	1,464	1,464
% Change	16%	20%	19%	15%	15%	14%	14%	17%	24%	24%	24%	24%	29%	29%	29%
Backlog Conversion Rate	14%	16%	15%	40%	40%	25%	25%	30%	40%	40%	45%	45%	45%	45%	45%



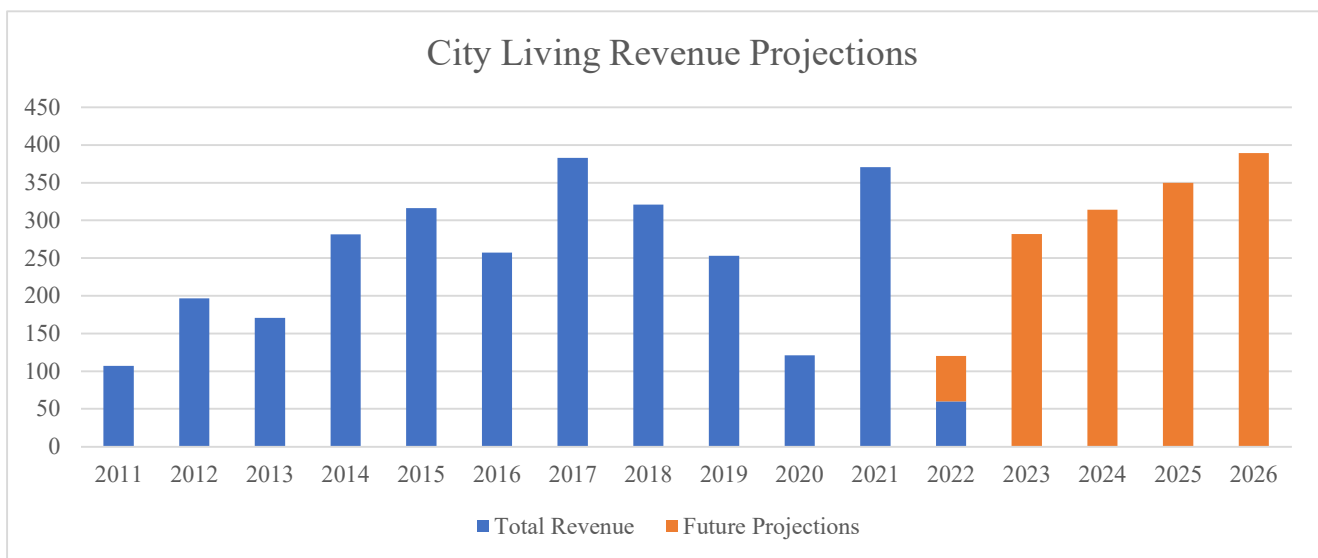
**City Living** – As TOL’s smallest business segment, comprising only ~ 4% of company wide sales - the City Living arm engages primarily in the construction and operation of **Multi-Family (MF)** unit builds, Luxury Condos, and Custom Projects. Despite generating only a minute fraction of the sales volume attributed to TOL’s primary homebuilding segment, we are optimistic of TOL’s near-term prospects. In line with our investment thesis narrative, we are in the camp that City Living does appear poised to reap benefits borne of potential tailwinds fresh on the horizon. As society continues to normalize post-pandemic. As the recent urban flight continues to wane, we foresee many families returning to many familiar *Northern* and *Mid-Atlantic* urban hubs and major cities. While the *Traditional Homebuilding* segment has faced significant declines sales volume and demand – we view this failure as a window of opportunity for the *City Living Division*.



<sup>8</sup>November housing market data revealed that **Multi-Family (MF)** unit builds are currently outperforming their **Single-Family (SF)** counterparts. Surprisingly, of the ~ 1.74 million *Total Units Under Construction* in the US, ~ 927 million units (53%) are MF builds.<sup>9</sup> Interestingly, City Living multi-family units don the highest average delivered price (in 2021, the average unit was ~1.6 million). Toll Brothers has a track record of completed developments and joint ventures – 45 total with over 7,200 units offered. Further, while City Living currently is only offering condos in three locations: New York City, New York; Hoboken, New Jersey; and Jersey City, New Jersey. Toll Brothers has planned future developments in New York City; Northern New Jersey; Philadelphia, PA; Washington DC Suburbs; Los Angeles, CA; and Seattle, Washington.<sup>10</sup>

City Living was reported as a separate line item in Toll Brother’s financial documents starting in 2011. The *CAGR* between 2011 and 2019 is ~ 11%, with 2020 and 2021 excluded given the lack of city living in 2020 and then the higher demand in 2021. Our financials project City Living *Total*

*Revenue* to increase 3x – from ~ 225 million by FY2022 to ~ 400 million through FY 2025. We optimistically forecast City Living *Annual Revenue* expanding to ~ 6% - ~8 % as a *Percentage of TOL Total Sales* – both creating and capturing value.



<sup>8</sup> Floor plan from a Toll Brothers City Living Apartment, 121 E 22<sup>nd</sup> Street

<sup>9</sup> Patterson, Truman et al., “Housing Starts and Permits: SF Starts -6.1% MoM, -20.8% YoY.” Wolfe Research. November 2022.

<sup>10</sup> “Toll Brothers City Living”. <https://www.tollbrotherscityliving.com/> and “Our Communities and Homes”. 2021 Toll Brothers 10K.

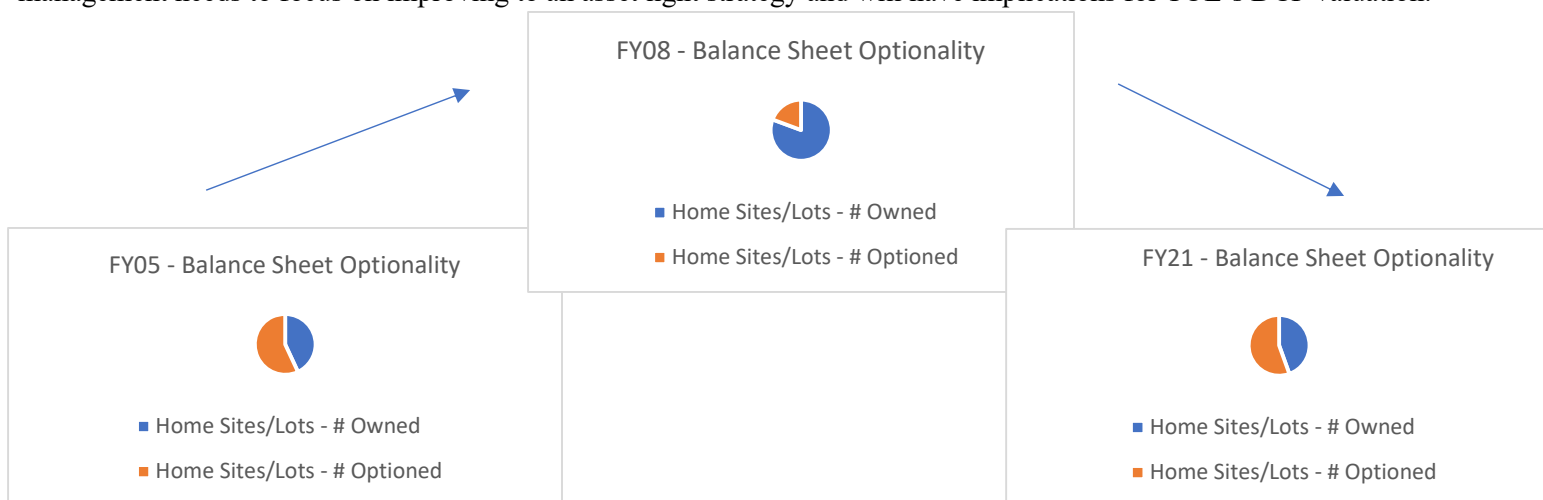
## Balance Sheet Mechanics & Optionality

**Liquidity and Leverage** – US homebuilders endured three years of inventory destocking and negative growth in the aftermath of The Great - Financial Crisis of 2008 (GFC). The homebuilders that survived learned to optimize their balance sheet mechanics, which in turn facilitated tertiary effects such as more efficient *Inventory Turnover*, higher normalized *ROE*, and more consistent *Free Cash Flow*. Maintaining the “*Asset Light*” model helped the public builders significantly reduce exposures to high levels of debt and lank risk. Instead of buying land lots outright and maintaining these full assets on the balance sheet, the builders would instead opt to purchase various *Land Bank Options*. For a premium, builders were granted the right, but not the obligation, to develop land at a set date and lot price in the future – or walk away completely from the deal if development would not prove conducive to current business strategy/timeline.

As of Q3 FY22, TOL’s *Cash Balance* of \$316 million is the lowest this figure has been since 2006.<sup>11</sup> TOL’s cash- management strategy is made evident given the fact TOL’s current levels of fiscal year cash (FY21 ~ \$1,639 million) are identical to the levels observed during GFC (FY08 ~\$1,652 million), but only AFTER the company had already written off significant impairment costs. Also troubling is the company’s 0.63x *Net Debt/Total Equity Ratio* – about ~3x higher than the current industry average of 0.23x. This is reflected in our model, assuming a lower price (15%) and sales volume (50%) floor, relative to peers.

Toll Brothers, Inc.		OCT '05	OCT '06	OCT '07	OCT '08	OCT '09	OCT '10	OCT '11	OCT '12	OCT '13	OCT '14	OCT '15	OCT '16	OCT '17	OCT '18	OCT '19	OCT '20	OCT '21
TOL 889478103 2896092 NYSE Common stock																		
Source: FactSet Fundamentals																		
<b>Assets</b>																		
Cash & Short-Term Investments		689.2	632.5	934.7	1,652.4	1,926.5	1,319.2	1,174.5	1,294.7	857.5	616.7	945.8	665.0	715.3	1,182.2	1,286.0	1,370.9	1,638.5
<b>Liquidity</b>																		
Current Ratio		3.00	3.26	4.53	4.76	5.36	5.02	5.50	6.06	4.08	5.92	6.17	4.14	4.42	4.94	5.12	4.14	3.63
Quick Ratio		0.48	0.50	0.81	1.45	2.21	1.70	1.55	1.75	0.84	0.72	0.73	0.34	0.40	0.67	0.72	0.63	0.62
Cash Ratio		0.34	0.29	0.62	1.32	1.91	1.35	1.36	1.48	0.60	0.49	0.73	0.34	0.40	0.67	0.72	0.63	0.62
<b>Leverage</b>																		
LT Debt/Total Equity		56.60	57.20	62.06	64.86	83.89	64.12	61.77	69.84	61.67	85.86	87.39	84.30	68.41	77.69	77.32	81.19	67.29
LT Debt/Total Capital		34.05	33.90	37.79	39.07	45.36	38.41	37.67	40.57	35.22	45.62	46.05	44.54	39.99	43.72	43.60	44.19	39.70
LT Debt/Total Assets		24.66	25.77	30.32	31.88	37.42	31.68	31.60	35.27	30.11	39.32	40.08	36.62	32.82	36.10	36.21	35.77	30.88
Total Debt / Total Assets (%)		28.85	30.96	31.38	32.46	37.90	33.08	32.74	36.45	36.67	40.39	41.17	38.78	34.09	36.10	36.21	36.90	31.89
Net Debt / Total Equity (%)		41.29	50.21	37.74	15.00	8.31	15.33	18.57	30.69	49.39	72.20	67.36	73.55	55.28	52.85	51.96	55.63	38.54
Total Debt / Total Equity (%)		66.23	68.73	64.24	66.03	84.97	66.95	63.99	72.17	75.12	88.20	89.76	89.27	71.06	77.69	77.32	83.75	69.49
Net Debt/Total Capital		24.84	29.76	22.98	9.03	4.49	9.18	11.33	17.83	28.20	38.36	35.50	38.86	32.31	29.75	29.30	30.27	22.74
Total Debt/Total Capital		39.84	40.73	39.11	39.77	45.94	40.10	39.02	41.92	42.90	46.87	47.30	47.17	41.54	43.72	43.60	45.58	41.00

Lastly, and somewhat misleading, TOL has appeared increased its number of *Optioned Lots* from 7,703 (~19% *Optionality*) in FY08 to 44,800 (~ 54% *Optionality*) in FY21 – a ~ 600% increase in absolute terms. However, further historical data reveals that TOL held 47,288 *Optioned Lots* (~ 57% *Optionality*) in FY05. The steep decline observed in 2008 had only been due to the significant impairment charges and land bank options that management opted to write off and walk away from. We think that TOL management needs to focus on improving to an asset light strategy and will have implications for TOL’s DCF valuation.

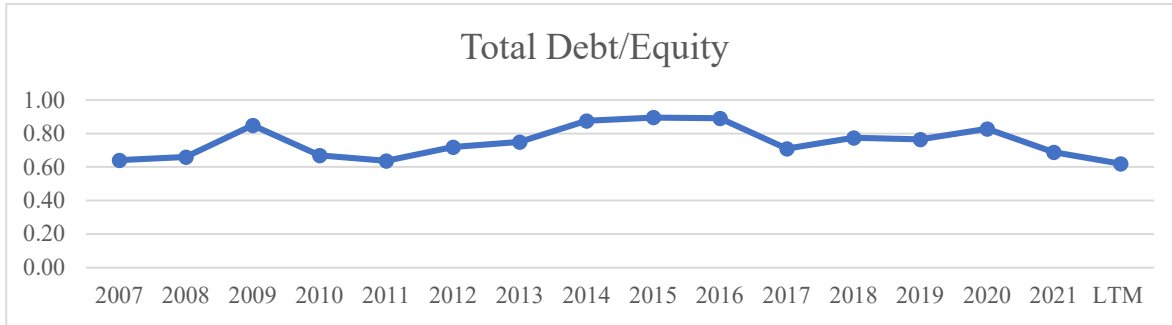


<sup>11</sup> Patterson, Truman et al., “TOL First Look: Orders Slide Down the Mountain.” Wolfe Research. August 2022.

## DCF Analysis & Fair Value

To analyze Toll Brother’s valuation, we took two scenarios: the first uses a DCF to calculate the fair value of Toll Brothers given the above projections, and the second looks at Toll Brothers future Free Cash Flows if they faced the same decline in housing market as 2008. Given five recessions over the last 40 years, a 20% probability is assigned to the second scenario.

### Scenario 1: DCF



Given a relatively stable D/E ratio over the last decade, a review of their upcoming debt payments, and few mentions of deleveraging in recent earnings calls, we believe that the debt-to-equity ratio will remain relatively stable. Thus, a DCF valuation is used with a D/E ratio of 0.62.

### Projected Cash Flows:

	2022 Q4E	2023E	2024E	2025E	2026E
EBIT	662	1128	1426	1259	1917
Depreciation	91	69	77	58	88
Taxes	166	282	357	315	479
Capex	73	68	68	68	68
Change in WC	256	125	-74	-151	-34
Cash Flow	259	722	1153	1085	1492

### Inputs in Cash Flow:

- **Depreciation:** Straight line depreciation of 1% per annum as a Percentage of Total Revenue since 2019.
- **Tax Rate:** According to the Q3 FY22 earnings call, the tax rate for FY22 should be 25%.
- **CAPEX:** Consistent PP&E in an asset light model keeps CAPEX consistent over the span of the timeframe.
- **Change in Working Capital:** Using TOL’s financial model as an anchor, we derive the firm’s Net WC<sub>Δ</sub> by calculating Toll’s Total Assets<sub>Δ</sub> + Total Liabilities<sub>Δ</sub> from Q4 FYE22 – FYE26. Using the line items displayed below, we project WC swings and FCF to stabilize in FYE24.

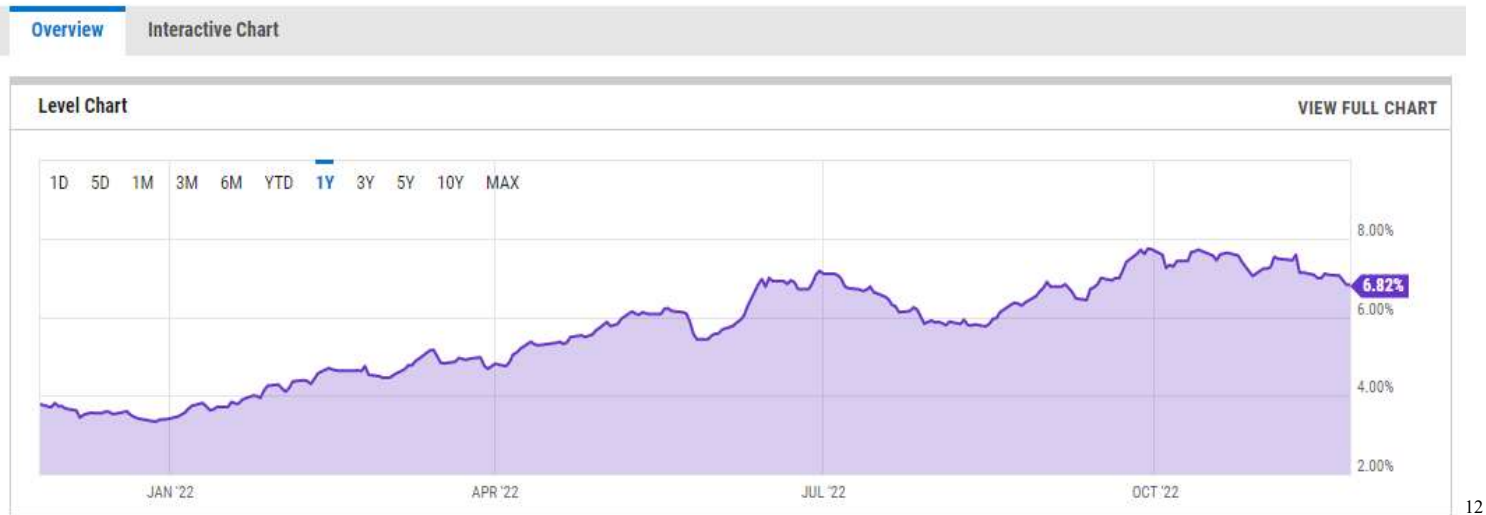
Δ in Net Working Capital - Increases/Decreases
Inventory
Origination of Mortgage Loans
Sale of Mortgage Loans
Receivables, Prepaid Expenses, and Other Assets
Income Taxes Receivable
Customer Deposits
Accounts Payable and Accrued Expenses

- **Terminal Cash Flow Growth Rate:** A review of the CAGR for revenue for Toll Brothers returns a 13.02% CAGR between 1990 and 2021. We used a more conservative future growth rate of 1%, given general uncertainty in the housing industry.

- Cost of Debt: S&P rates Toll Brother's credit as a BB+, which as of 29 November 2022, was 6.82%.

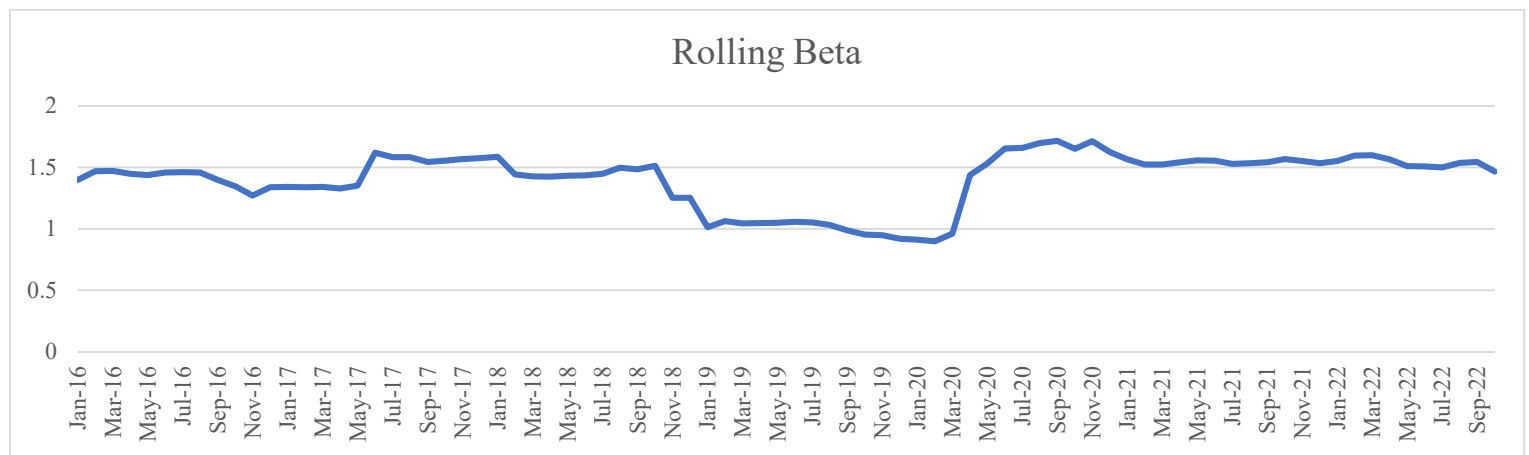
## US High Yield BB Effective Yield

6.82% for Nov 24 2022



12

Beta: Toll Brother's  $\beta$  has stayed relatively stable at 1.5 over the last five years and this  $\beta$  is used in projections.



Risk Free Rate: The risk free rate is 3.83%, which is based off of the 10 year Treasury rate.

Beta Equity	1.5
D/E Ratio	0.62
Risk Free Rate	3.83%
Cost of Debt	6.82%
Market Premium	6.00%
Tax Rate	25%
WACC	9.88%
Terminal Cash Flow Growth Rate	2.25%

This analysis returns an equity value of \$7,871 (millions), with cash holdings of \$316 million, with a price per share of \$69.66, which falls within the 52 week range.

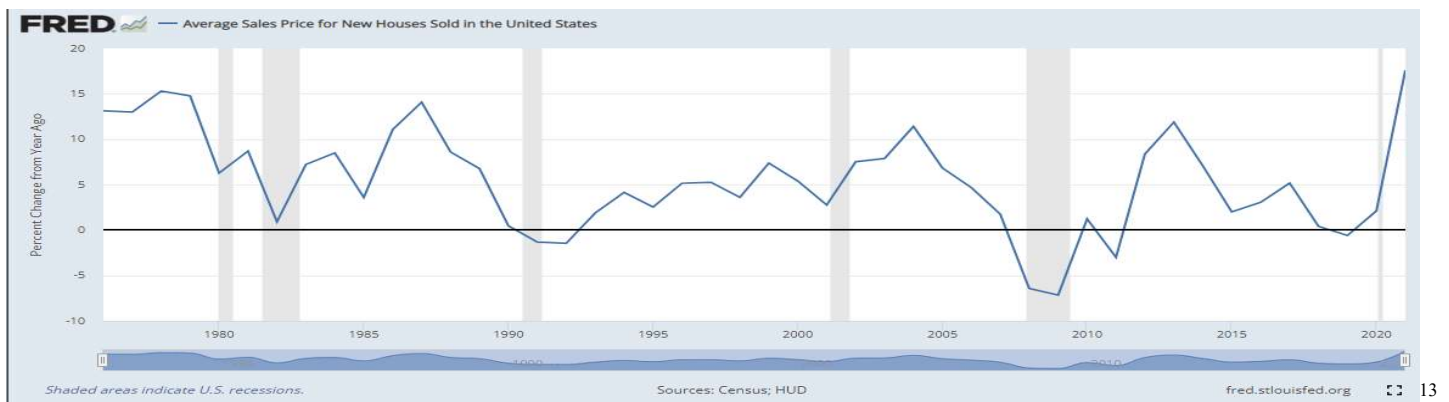
<sup>12</sup> [https://ycharts.com/indicators/us\\_high\\_yield\\_bb\\_effective\\_yield](https://ycharts.com/indicators/us_high_yield_bb_effective_yield)

## Scenario 2:

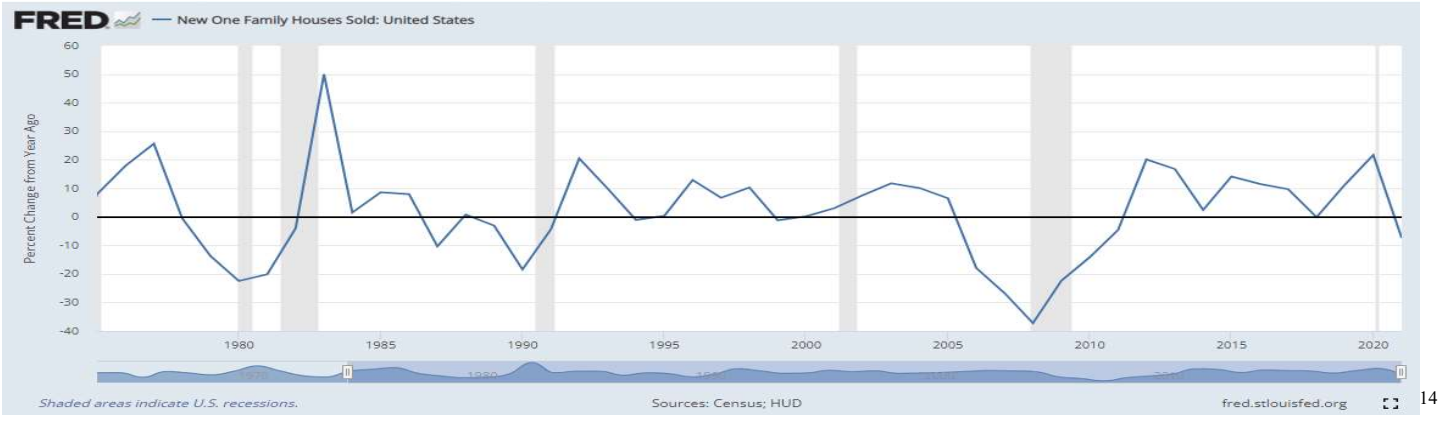
The above scenario recommends a buy rating, but Toll Brothers has significant debt payments due in the next few years: notably, \$492 million in 2023 and \$471 million in 2026. This is 68% of total cash flows in 2023 and 32% of total cash flows in 2026. While the above projections loosely model the 2008 financial crisis, we modeled what would happen if Toll Brothers had to weather the same YoY change in sales price and change in units sold as 2008-2012. When modeled to mirror 2008 exactly, Toll Brothers is in significant danger of defaulting on their loans given severe depression in revenues.

	2020	2021	2022E	2023E	2024E	2025E	2026E
<b>Revenue</b>	6,863	8,237	9,963	6,934	7,711	5,785	8,836
<b>Average Sales Price</b>	817	844	901	903	879	963	1,007
<b>Units Closed</b>	8,400	9,754	11,058	7,675	8,771	6,007	8,778
<b>YoY Change Sales Price</b>		3.3%	6.3%	0.3%	-2.8%	8.7%	4.3%
<b>YoY Change Units Closed</b>		14%	12%	-44%	12%	-46%	32%
<b>Using 2008 Projections for Revenue</b>				5847	4210	3656	3383
<b>Average Sales Price</b>				843	783	792	768
<b>Units Closed</b>				6933	5380	4616	4404
<b>2008 YoY Change Sales Price</b>				-6.4%	-7.2%	1.2%	-3.0%
<b>2008 YoY Change Units Closed</b>				-37%	-22.4%	-14.2%	-4.6%
<b>% Difference Between Scenario 1 And 2008</b>				-16%	-45%	-37%	-62%

The 2008 Projections were used after a review of average price of new houses sold and number of new houses sold during various recessions dating back to 1980. 2008 was the worst case scenario and thus, used as a projection to see whether Toll Brothers could weather another 2008 recession. Similar projections were used with the early 2000s, 1990s, the 1981-1982, and the 1980 recessions – in these four recessions, Toll Brothers would have generated enough free cash flows to maintain solvent. Thus, we assign a 20% likelihood to scenario 2 (and an 80% scenario to Scenario 1). This gives us an expected Equity Value of \$6,297 and a price per share of \$55.72.



<sup>13</sup> “Average Sales Price for New Houses Sold in the US.” FRED Economic Data. < <https://fred.stlouisfed.org/series/ASPNSUS>>



<sup>14</sup> “New One Family Houses Sold: US”. FRED Economic Data. < <https://fred.stlouisfed.org/series/HSN1F#0> >

**APPENDIX – Abbreviated Financials**

<b>Toll Brothers</b> <i>America's Luxury Home Builder™</i> USD - Millions Fiscal Year - 10/31	2020	2021	2022	2023	2024	2025	2026
<b>INCOME STATEMENT</b>	Annual	Annual	Annual	Annual	Annual	Annual	Annual
<b>Revenue</b>							
Traditional Homebuilding	6,863	8,237	9,963	6,934	7,711	5,785	8,836
City Living	186	493	526	536	547	558	569
Corporate and Other	1	0	0	0	0	0	0
<b>Total Revenue</b>	<b>\$7,050</b>	<b>\$8,730</b>	<b>\$10,488</b>	<b>\$7,470</b>	<b>\$8,258</b>	<b>\$6,343</b>	<b>\$9,405</b>
<b>Cost of Sales</b>							
Traditional Homebuilding	5,611	6,736	7,625	5,627	6,251	4,570	6,980
City Living	0	0	46	375	137	84	85
Corporate and Other	0	0	0	0	0	0	0
<b>Total Costs of Goods Sold</b>	<b>\$5,611</b>	<b>\$6,736</b>	<b>\$7,671</b>	<b>\$6,002</b>	<b>\$6,388</b>	<b>\$4,654</b>	<b>\$7,066</b>
<b>Gross Profit</b>							
Traditional Homebuilding	1,252	1,501	2,338	1,307	1,460	1,215	1,856
City Living	186	493	479	161	410	474	484
Corporate and Other	1	0	0	0	0	0	0
<b>Total Gross Profit</b>	<b>\$1,439</b>	<b>\$1,994</b>	<b>\$2,817</b>	<b>\$1,468</b>	<b>\$1,870</b>	<b>\$1,689</b>	<b>\$2,339</b>
<b>Selling, General, and Administrative Expenses</b>							
SG&A	867	922	943	946	947	947	947
<b>Total SG&amp;A</b>	<b>\$867</b>	<b>\$922</b>	<b>\$943</b>	<b>\$946</b>	<b>\$947</b>	<b>\$947</b>	<b>\$947</b>
<b>Operating Income</b>							
Traditional Homebuilding	1,252	1,501	2,338	1,307	1,460	1,215	1,856
City Living	186	493	479	161	410	474	484
Corporate and Other	1	0	0	0	0	0	0
<b>Total Operating Profit</b>	<b>\$1,439</b>	<b>\$1,994</b>	<b>\$2,817</b>	<b>\$1,468</b>	<b>\$1,870</b>	<b>\$1,689</b>	<b>\$2,339</b>
<b>Other Income and Expenses</b>							
Unconsolidated Entities	2	75	31	12	12	12	12
Corporate and Other	36	39	25	32	31	31	31
<b>Total Other Income and Expenses</b>	<b>\$38</b>	<b>\$114</b>	<b>\$56</b>	<b>\$44</b>	<b>\$43</b>	<b>\$43</b>	<b>\$43</b>
Goodwill Impairment	0	0	0	0	0	0	0
Loss (Gain) On Early Retirement of Debt	0	-34	0	0	0	0	0
<b>Income Before Income Taxes</b>	<b>\$1,477</b>	<b>\$2,108</b>	<b>\$2,873</b>	<b>\$1,512</b>	<b>\$1,913</b>	<b>\$1,732</b>	<b>\$2,382</b>
Income Tax Expense (Benefit)	140	266	523	385	486	473	465
<b>Net Income (Continued Operations)</b>	<b>\$1,337</b>	<b>\$1,842</b>	<b>\$2,350</b>	<b>\$1,128</b>	<b>\$1,426</b>	<b>\$1,259</b>	<b>\$1,917</b>
Inventory Write-Downs	56	27	11	12	12	12	12
Converted Interest Add-Back	174	187	186	183	170	149	155
Adjustments & Non-Recurring Items	0	0	0	0	0	0	0
<b>Net Income (GAAP)</b>	<b>\$700</b>	<b>\$1,134</b>	<b>\$1,567</b>	<b>\$346</b>	<b>\$644</b>	<b>\$510</b>	<b>\$994</b>
<b>Share Buybacks and Dividends</b>							
Shares Outstanding	127	122	114	108	100	93	86
Shares Repurchased	11	5	8	7	7	7	7
Repurchase Principal	634	378	436	407	421	414	418
Average Purchase Price	16	231	283	293	284	287	285
Average Dividend	0.44	0.62	0.68	0.84	0.88	0.93	0.97
<b>EPS</b>	<b>3.66</b>	<b>7.46</b>	<b>12.11</b>	<b>1.74</b>	<b>4.71</b>	<b>3.64</b>	<b>9.37</b>
<b>Adjusted Operating Profit</b>	<b>\$1,439</b>	<b>\$1,994</b>	<b>\$2,817</b>	<b>\$1,468</b>	<b>\$1,870</b>	<b>\$1,689</b>	<b>\$2,339</b>
(+) COGS Amortized Interest	175	189	187	139	154	116	177
(+) Other Income	49	44	5	4	4	4	4
<b>EBIT</b>	<b>\$1,215</b>	<b>\$1,761</b>	<b>\$2,625</b>	<b>\$1,326</b>	<b>\$1,712</b>	<b>\$1,569</b>	<b>\$2,159</b>
(+) Depreciation and Amortization	69	76	92	69	77	58	88
<b>EBITDA</b>	<b>\$1,663</b>	<b>\$2,227</b>	<b>\$3,009</b>	<b>\$1,611</b>	<b>\$2,028</b>	<b>\$1,809</b>	<b>\$2,520</b>
<b>NOPAT</b>	<b>\$1,073</b>	<b>\$1,487</b>	<b>\$2,101</b>	<b>\$1,095</b>	<b>\$1,394</b>	<b>\$1,260</b>	<b>\$1,744</b>
<b>Margin Analysis</b>							
Traditional Homebuilding Margin	18%	18%	22%	20%	19%	21%	21%
City Living Margin	100%	100%	88%	30%	75%	85%	85%
Corporate and Other Margin	50%	75%	0%	0%	0%	0%	0%
Gross Margin	20%	23%	27%	20%	23%	27%	25%
Operating Margin	20%	23%	26%	20%	22%	27%	25%
<b>Revenue Analysis % Δ Y/Y</b>							
Traditional Homebuilding	0%	20%	20%	-37%	47%	-26%	56%
City Living	0%	216%	13%	2%	2%	2%	2%
Corporate and Other	0%	0%	-75%	0%	0%	0%	0%
<b>Total Revenue % Δ Y/Y</b>	<b>0%</b>	<b>24%</b>	<b>20%</b>	<b>-29%</b>	<b>11%</b>	<b>-23%</b>	<b>48%</b>

<b>Toll Brothers</b> <i>America's Luxury Home Builder™</i>	2020	2021	2022	2023	2024	2025	2026
USD - Millions Fiscal Year - 10/31							
<b>BALANCE SHEET</b>	Annual	Annual	Annual	Annual	Annual	Annual	Annual
<b>Assets</b>							
Cash and Cash Equivalents	1,371	1,639	662	309	178	106	217
Inventory	7,659	7,916	10,917	28,325	14,426	11,786	17,010
Property, Construction, and Office Equipment	316	310	304	300	300	300	300
Receivables, Prepaid Expenses, and Other Assets	956	738	775	783	822	896	985
Mortgage Loans Held for Sale	232	247	135	133	132	132	132
Customer Deposits Held in Escrow	77	89	143	154	153	153	153
Investments in Unconsolidated Entities	431	599	711	725	726	725	725
Income Taxes Receivable	24	0	29	25	26	26	26
<b>Total Assets</b>	<b>\$11,066</b>	<b>\$11,538</b>	<b>\$13,676</b>	<b>\$30,753</b>	<b>\$16,762</b>	<b>\$14,124</b>	<b>\$19,549</b>
<b>Liabilities</b>							
Loans Payable	1,148	1,012	1,164	1,338	1,539	1,770	2,035
Senior Notes	2,662	2,404	2,765	3,179	3,656	4,205	4,835
Mortgage Company Loan Facility	149	148	110	112	112	112	112
Customer Deposits	460	636	785	800	799	799	799
Accounts Payable	411	562	646	743	855	983	1,130
Accrued Expenses	1,111	1,220	1,232	1,231	1,231	1,231	1,231
Income Taxes Payable	199	216	224	226	226	226	226
<b>Total Liabilities</b>	<b>\$6,140</b>	<b>\$6,198</b>	<b>\$6,926</b>	<b>\$7,630</b>	<b>\$8,418</b>	<b>\$9,325</b>	<b>\$10,369</b>
<b>Stockholder's Equity</b>							
Common Stock	2	1	53	460	881	1,295	1,712
Additional Paid-in-Capital	717	714	716	716	716	716	716
Retained Earnings	5,164	4,970	5,571	5,663	5,755	5,847	5,939
Treasury Stock	-1,000	-392	-52	-77	-64	-71	-68
Accumulated Other Comprehensive Gain/Loss	-7	1	17	17	17	17	17
Noncontrolling Interest	52	45	16	16	16	16	16
<b>Total Equity</b>	<b>\$4,876</b>	<b>\$5,294</b>	<b>\$6,305</b>	<b>\$6,778</b>	<b>\$7,304</b>	<b>\$7,804</b>	<b>\$8,317</b>
<b>P &amp; L Items (TTM)</b>							
Sales (Homebuilding)	2,546	3,041	3,925	3,939	2,349	1,835	2,542
COGS (Homebuilding)	2,039	2,342	2,729	3,219	1,803	1,387	1,944
Operating Income	507	699	1,196	720	545	448	598
Net Income (Continuing Operations)	1,337	1,842	2,350	1,128	1,426	1,259	1,917
Shares Outstanding	127	122	114	108	100	93	86
Tax Rate	25%	25%	25%	25%	25%	25%	25%
Adjusted EBIT	1,663	2,227	3,009	1,611	2,028	1,809	2,520
Adjusted EBITDA	1,732	2,303	3,102	1,680	2,105	1,867	2,608
<b>Capital Structure</b>							
Total Cash	1,371	1,639	662	309	178	106	217
Net Debt	3,810	3,416	3,928	4,518	5,195	5,975	6,871
Total Stockholder Equity	4,876	5,294	6,305	6,778	7,304	7,804	8,317
Tangible Book Value	4,926	5,340	6,749	23,123	8,344	4,799	9,180
Total Assets	11,066	11,538	13,676	30,753	16,762	14,124	19,549
Total Capital	8,686	8,710	10,234	11,296	12,500	13,778	15,187
Invested Capital	7,256	8,122	9,747	26,236	11,567	8,149	12,678
Total Inventory	7,659	7,916	10,917	28,325	14,426	11,786	17,010
<b>Average Balances</b>							
Average Cash	1,161	1,155	300	173	87	115	217
Average Inventory	7,792	8,250	8,636	19,648	10,428	14,503	17,010
Average Tangible Assets	9,805	10,256	10,712	21,744	12,565	16,716	19,332
Average Total Assets	10,966	11,411	11,013	21,917	12,653	16,831	19,549
Average Debt	3,717	3,277	3,769	4,334	4,984	5,731	6,871
Average Shareholder Equity	4,832	5,275	6,343	6,828	7,348	7,851	8,317
Average Total Capital	8,549	8,552	10,111	11,162	12,332	13,582	15,187
Average Invested Capital	7,249	8,134	9,744	17,583	7,669	11,100	12,678
Average Receivables	932	741	748	759	801	876	985
<b>Book Value per Share</b>	<b>38.39</b>	<b>43.40</b>	<b>55.31</b>	<b>63.05</b>	<b>72.86</b>	<b>83.57</b>	<b>96.35</b>
<b>Key Ratios</b>							
Days in Inventory	0	0	0	0	0	1	1
YoY Δ in Net Receivables	0%	-2%	-2%	-1%	0%	0%	0%
YoY Δ in Net Payables	0%	-12%	15%	15%	15%	15%	15%
<b>Leverage Analysis</b>							
Net Debt/Equity	0.76x	0.62x	0.60x	0.64x	0.68x	0.73x	0.83x
Net Debt/EBITDA	6.27x	4.19x	2.87x	5.18x	8.12x	11.43x	10.22x
Inventory Turnover	0.26x	0.28x	0.32x	0.16x	0.17x	0.10x	0.11x
Asset Turnover	0.23x	0.26x	0.29x	0.13x	0.14x	0.13x	0.13x
<b>Returns Analysis</b>							
ROIC	23%	28%	38%	15%	21%	22%	19%
ROE	10%	18%	167%	3%	7%	4%	10%
ROA	4%	8%	12%	0%	3%	2%	4%



<b>Toll Brothers</b> <i>America's Luxury Home Builder</i>	2020	2021	2022	2023	2024	2025	2026
USD - Millions Fiscal Year - 10/31							
CASH FLOW	Annual	Annual	Annual	Annual	Annual	Annual	Annual
<b>Cash Flows from Operating Activities</b>							
Net Income	447	834	1,308	182	480	345	830
Δ in Gross Working Capital							
Depreciation and Amortization	69	76	91	69	77	58	88
Stock-Based Compensation	24	23	1	-32	-32	-32	-32
Income from Unconsolidated Entities	-1	-74	-31	-12	-12	-12	-12
Distributions of Earnings from Unconsolidated Entities	27	83	32	4	4	4	4
Income from Foreclosed Real Estate and Distressed Loans	-1	0	15	16	16	16	16
Deferred Tax Provision	98	12	18	28	28	28	28
Inventory Impairments and Write-Offs	56	27	7	0	0	0	0
Gain on the Sale of Golf Club Property   Debt Retirement Expenses	-13	-4	0	0	0	0	0
Other	-3	0	3	0	0	0	0
Δ in Net Working Capital - Increases/Decreases							
Inventory	353	-196	-859	-234	-429	-507	-390
Origination of Mortgage Loans	-1,816	-2,178	-1,853	-1,890	-1,883	-1,883	-1,883
Sale of Mortgage Loans	1,806	2,160	2,019	1,995	1,996	1,996	1,996
Receivables, Prepaid Expenses, and Other Assets	-176	136	43	69	69	69	69
Income Taxes Receivable	-3	24	-40	-14	-19	-19	-19
Customer Deposits	70	166	128	64	66	67	67
Accounts Payable and Accrued Expenses	72	215	89	134	126	127	127
Income Taxes Payable	-1	1	0	0	0	0	0
<b>Net Operating Cash Flow</b>	<b>\$1,008</b>	<b>\$1,305</b>	<b>\$971</b>	<b>\$380</b>	<b>\$486</b>	<b>\$255</b>	<b>\$888</b>
<b>Cash Flows from Investing Activities</b>							
Purchase of Property, Construction, and Office Equipment	-110	-67	-73	-68	-68	-68	-68
Investments in Unconsolidated Entities	-72	-222	-233	-224	-224	-224	-224
Return of Investments in Unconsolidated Entities	47	204	132	88	88	88	88
Investment in Foreclosed Real Estate and Distressed Loans	-1	0	0	0	0	0	0
Return of Investments in Foreclosed Real Estate and Distressed Loans	2	0	0	0	0	0	0
Proceeds from the Sale of a Golf Club Property	16	80	56	112	112	112	112
Acquisition of a Business and Other	-60	1	0	0	0	0	0
<b>Net Investing Cash Flow</b>	<b>-\$178</b>	<b>-\$4</b>	<b>-\$118</b>	<b>-\$92</b>	<b>-\$92</b>	<b>-\$92</b>	<b>-\$92</b>
<b>Net Cash and Cash Equivalents</b>							
Increase (Decrease) in Cash & Cash Equivalents	76	290	11,865	23,846	23,937	23,713	24,342
Cash & Cash Equivalents at Beginning of Period	520	1,371	1,639	7,460	31,305	55,243	78,956
Cash & Cash Equivalents at End of Period	1,371	1,639	7,460	31,305	55,243	78,956	103,298
Operating Cash Flow	1,008	1,305	971	380	486	255	888
PP&E Capex	-110	-67	-73	-68	-68	-68	-68
Intangible Capex	0	0	0	0	0	0	0
<b>Net Free Cash Flow</b>	<b>\$898</b>	<b>\$1,238</b>	<b>\$898</b>	<b>\$312</b>	<b>\$418</b>	<b>\$187</b>	<b>\$820</b>
FCF Conversion (EBITDA)	54%	56%	30%	19%	21%	10%	33%
<b>P&amp;L Items</b>							
Sales (TTM)	7,050	8,730	10,488	7,470	8,258	6,343	9,405
Net Income (TTM)	1,337	1,842	2,350	1,128	1,426	1,259	1,917
Average Shares Repurchased (TTM)	11	5	8	7	7	7	7
<b>Cash Flow Items</b>							
Depreciation and Amortization (TTM)	69	76	91	69	77	58	88
Capex (TTM)	110	67	73	68	68	68	68

## APPENDIX – ESG Metrics and Materiality

# Environmental

### BY THE NUMBERS—2021

At Toll Brothers, we are dedicated to minimizing our impact on the environment by embracing responsible land development and planning processes and building homes that more efficiently utilize resources. Some of our fiscal year 2021 highlights include:

SASB   PERFORMANCE INDICATOR	FY 2020	FY 2021
<b>LAND USE AND ECOLOGICAL IMPACTS</b>		
<i>IF-HB-160a.1</i> Number of lots and homes delivered on redevelopment sites	395	990
<i>IF-HB-160a.2</i> Number of lots and homes delivered in regions with High or Extremely High Baseline Water Stress	2,232	4,702
<i>IF-HB-160a.3</i> Total amount of monetary losses as a result of legal proceedings associated with environmental regulations	\$0	\$0
<i>IF-HB-160a.4</i> Discussion of process to integrate environmental considerations into site selection, site design, and site development, and construction		<a href="#">Click here</a>
<b>DESIGN FOR RESOURCE EFFICIENCY</b>		
<i>IF-HB-410a.1</i> (1) Number of homes that obtained a certified HERS Index Score and (2) average score	N/A	(1) 2,681 (2) 60
<i>IF-HB-410a.2</i> Percent of installed water fixtures certified to WaterSense specifications	N/A	80%**
<i>IF-HB-410a.3</i> Number of homes delivered certified to a third-party multi-attribute green building standard:		
LEED*	355 units	32 units
Green Globes*	434 units	444 units
Green by NGBS*	87 units	
<i>IF-HB-410a.4</i> Description of risks and opportunities related to incorporating resource efficiency into home design and description of how benefits are communicated to customers		<a href="#">Click here</a>
<b>COMMUNITY IMPACTS OF NEW DEVELOPMENTS</b>		
<i>IF-HB-410b.1</i> Description of how proximity and access to infrastructure, services, and economic centers affect site selection and development decisions		<a href="#">Click here</a>
<i>IF-HB-410b.2</i> Number of lots and homes delivered on infill sites	1,400 lots	1,374 lots
<i>IF-HB-410b.3</i> Number of homes delivered in compact developments		
Multi-family rental units*	1,432	1,488
Multi-family for-sale units*	140	259
<i>IF-HB-410b.3</i> Average density of compact developments		
Multi-family rental units/acre*	105	65
Multi-family for-sale units/acre*	273	285
<b>CLIMATE CHANGE ADAPTATION</b>		
<i>IF-HB-420a.2</i> Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks		<a href="#">Click here</a>
<b>ENERGY EFFICIENCY</b>		
Number of homes delivered that received an energy efficiency tax credit*	4,656	6,282
Number of Energy Star Appliances delivered	8,832	3,029
<b>SUSTAINABLE PRODUCTS</b>		
Number of units delivered in calendar year with solar panels selected by buyers	488	1,339
Number of electric car charging options enabled	456	891
<b>CORPORATE OPERATIONAL EFFICIENCIES</b>		
Decrease in marketing projects that generate print	18%	19%
Reduction in transit miles for production/shipping of printed marketing materials		
Orders diverted to local vendors	309	260
Reduction of transit miles per order	2,000	2,000
Paper recycled company-wide	145.9 tons	98.2 tons

# Social

## BY THE NUMBERS—FY 2021

Small steps, big impact—our collective efforts add up to meaningful results. Some of our FY 2021 highlights include:

SASB   PERFORMANCE INDICATOR	FY 2020	FY 2021
<b>BOARD DIVERSITY</b>		
Women	20%*	20%*
Racial/Ethnic minority	20%*	30%*
<b>EMPLOYEE DIVERSITY</b>		
Women - Employee	40.3%	41.0%
Women - Manager+	30.0%	30.2%
Racial/Ethnic minority - Employee	21.0%	22.5%
Racial/Ethnic minority - Manager+	12.5%	13.4%
<b>HEALTH &amp; SAFETY</b>		
<i>IF-HB-320a.1</i> Total recordable incident rate (TRIR, employees)*	2.46	2.55
<i>IF-HB-320a.1</i> Fatality rate (employees)	0%	0%
<b>EMPLOYEE ENGAGEMENT</b>		
Average tenure (excludes temporary employees)	5.9 years	6.3 years
<b>EMPLOYEE ENGAGEMENT SURVEY</b>		
% that said Toll Brothers is a great place to work	86%	87%

\*TRIR = Total Number of Recordable Cases x 200,000 divided by total hours worked by all employees during the year covered

# Financial

SASB   PERFORMANCE INDICATOR	FY 2020	FY 2021
<i>IF-HB-000.a</i> Number of controlled lots	63,182	80,867
<i>IF-HB-000.b</i> Number of homes delivered	8,496	9,986
<i>IF-HB-000.c</i> Number of active selling communities	317	340
Average delivered home price	\$816,500	\$844,400
Average price in backlog	\$818,200	\$992,100
Home sales revenues	\$6.9B	\$8.4B
Net signed contract value	\$8.0B	\$11.5B
Number of homes under contract	9,932	12,472