

Government Regulation in the Price of a New Home: 2021

Appendix I: Assumptions Used in the Calculations

Land Acquisition and Development of the Lot

- The finished lot purchased by a builder accounts for 21.4 percent of the final price of a single-family house, based on the average of [NAHB Construction Cost surveys](#) conducted between 2002 and 2019. A long run average is used to produce an estimate with a significant shelf life and allow for the possibility that the relatively small sample of homes captured in the latest survey may not be perfectly typical.
- A 20.8 percent mark-up on lots sold to builders, based on the difference between business receipts and the cost of goods sold for the land subdivision industry from the most recent (2013) [SOI tax stats](#) published by the IRS. Without a competitive return on investment, developers will not be able to attract capital or get loans underwritten to finance the project, and the lots will not be developed
- The previous two bullets imply that total lot acquisition and development costs account for $(1-.208) \times .214$ —or 17.0 percent—of the final price of a single-family home.
- Of all land acquisition and lot development costs, 75 percent is financed by a loan. Since 2018 NAHB has collected data on terms for these loans in its quarterly [AD&C Financing Survey](#). Over that span, the average loan-to-cost ratio on A&D loans in the survey has been 75 percent.
- A 6.96 percent interest rate on all land acquisition and development (A&D) loans. Since 2018 the spread over prime (a common way to set interest rates on the loans) has averaged 1.46 percent on A&D loans in NAHB's [AD&C Financing Survey](#). To obtain estimates with a significant shelf life, that spread is applied to a prime rate of 5.5 percent—300 basis points above the median appropriate longer term policy path for the federal funds rate [projected by Federal Reserve Board members and Bank presidents](#).

- An initial fee of 90 basis points, based on the average on A&D loans since 2018 in NAHB's [AD&C Financing Survey](#).

Construction of the Single-family Structure

- Construction costs account for 56.6 percent of the house price, based on the average of [NAHB Construction Cost surveys](#) conducted between 2002 and 2019.
- A loan is used to finance 86 percent of total construction costs, based on the average loan-to-cost ratio on loans for both speculative and pre-sold single-family construction in NAHB's [AD&C Financing Survey](#) since 2018.
- A 6.65 percent interest rate on all land acquisition and development (A&D), based on the 1.15 percent post-2018 average spread above prime on speculative and pre-sold single-family construction loans in [AD&C Financing Survey](#), and a 5.5 percent prime rate consistent with the median appropriate longer term policy path for the federal funds rate [projected by Federal Reserve Board members and Bank presidents](#).
- An initial fee of 76 basis points, based on the post-2018 average on loans for speculative and pre-sold single-family construction in NAHB's [AD&C Financing Survey](#). Due to the short duration of typical single-family construction loans, the initial points can often be more economically significant the actual interest rate on the outstanding loan balance.
- A 9.6 percent gross profit rate for builders and developers, based on the average rate on [NAHB Construction Cost surveys](#) conducted between 2002 and 2019. Without a competitive return above costs, builders will typically be unable to get construction loans underwritten to build the homes.
- A broker's fee of 2.9 percent, based on the ["non-construction" cost factor](#) the Census Bureau applies to single-family homes built for sale.

Average Time Lags

Zoning application to start of site work: 16.6 months
NAHB 2021 Land Developer Survey of Regulatory Costs

Start of site work to sale of lot to builder: 10.0 months
NAHB 2021 Land Developer Survey of Regulatory Costs

Sale of lot to start of construction: 1.0 month
Average length of time from [authorization by building permit to start](#) (U.S. Census Bureau with partial funding from HUD) for single-family homes built for sale in 2020, assuming the builder seeks authorization for construction at the same time as purchasing the lot.

Start of construction to completion: 5.9 months
Average length of time from [start to completion](#) (U.S. Census Bureau with partial funding from HUD) for single-family homes built for sale in 2020.

Completion to closing: 0.8 months
NAHB tabulation of [Survey of Construction microdata](#) (U.S. Census Bureau with partial funding from HUD) indicates that 60 percent of single-family homes built for sale and completed in 2019 were sold before they were completed. These homes are assumed to close at the same time as the completion. The other 40 percent are assumed to close slightly more than 2 months after completion, based on the average time it takes to sell an existing home reported by [Zillow](#).

Impact of Costs on House Price

The above assumptions imply the following mark-up percentages that vary depending on when a particular cost is imposed on a developer, builder or home buyer:

Additional Charges Passed on to the Home Buyer Depending on When a Cost is Incurred	
0.00%	Cost imposed directly on buyer at closing
14.94%	Cost incurred by builder during construction
16.35%	Cost Incurred at start of construction
16.82%	Cost incurred when applying for building permit
27.63%	Cost incurred during site development
30.17%	Cost incurred when applying for development approval