



Housing Market Index (HMI)

Special Questions on Availability of Materials
and Change in Material Prices

May 2018

Economics & Housing Policy Group



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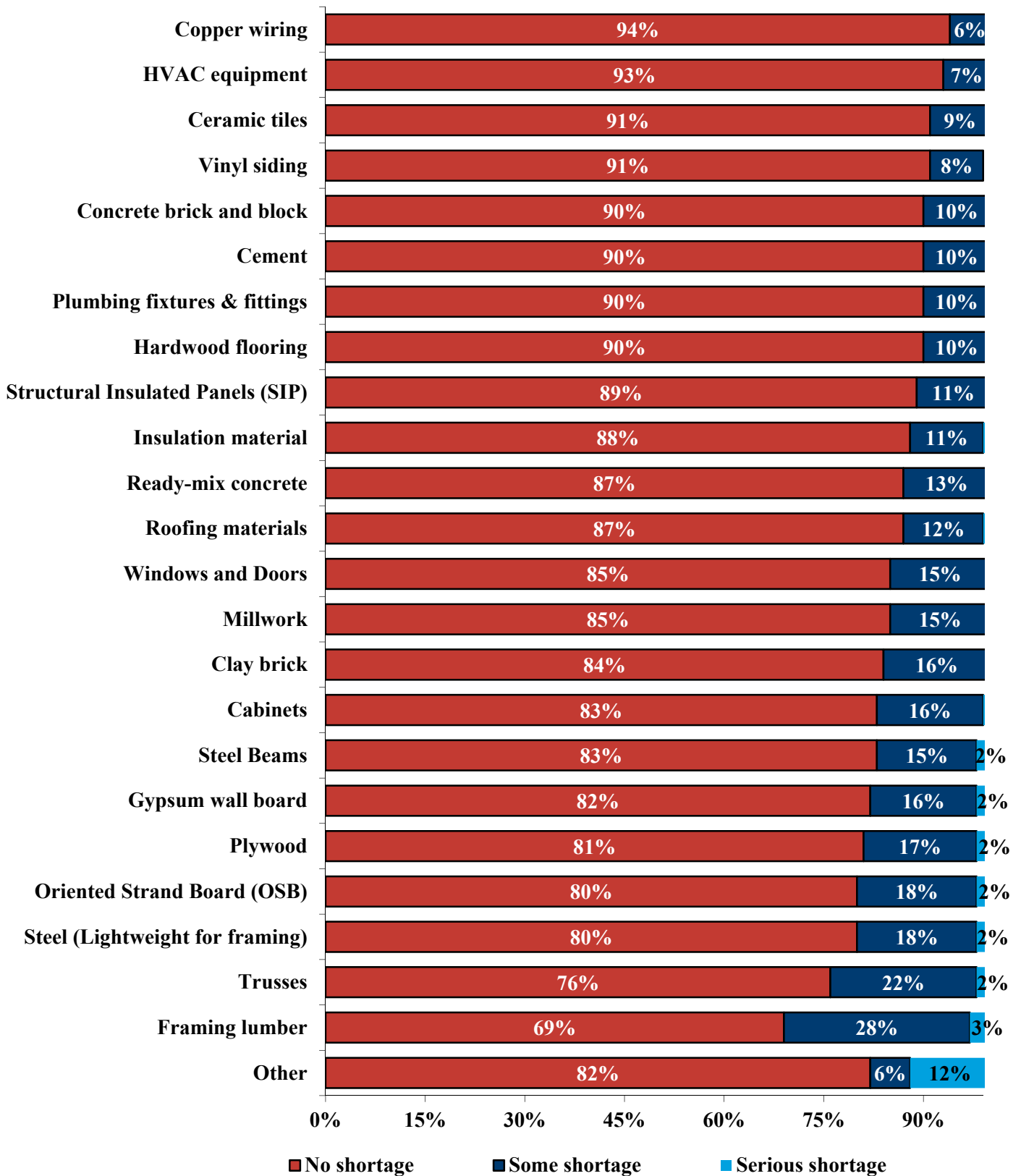
Introduction:

For more than 25 years, the National Association of Home Builders (NAHB) has conducted a monthly survey of its builder members that is used to generate the NAHB/Wells Fargo Housing Market Index (HMI). The main section of the HMI survey asks builders to rate market conditions for the sale of new homes at the present time and expected over the next 6 months, as well as the traffic of prospective buyers. The results are combined into a single composite index that measures the overall strength of the market for new single-family housing.

Throughout its history, the HMI has generally performed well as a leading indicator of single-family housing starts and is widely reported in business media and used by government and Wall Street analysts. This month survey was sent electronically to a panel of roughly 3,000 builder members. Results are broken down by the four census regions and by total number of units started in 2017. The survey sample is refreshed annually to keep the panel consistent overtime.

In addition to the questions that provide the data needed to compute the HMI, the survey often also includes a set of “special” questions on a topic of current interest to the housing industry. The special questions for this month cover issues relating to opioid use and impact of increase in lumber prices. The results in this report are based on 396 responses.

**Q4. How would you describe the current availability of the following materials?
(Percent of Respondents)***



Note: (*) Based on responses who said "No shortages, Some shortages and Serious shortages" only

Current Availability of Materials? - HISTORY
(Percent of Respondents)

	No Shortage	Some Shortage	Serious Shortage
Cement+			
May-18	90%	10%	0%
May-17	88%	12%	1%
Jul-15	87%	13%	1%
Jul-14	91%	9%	0%
May-13	94%	6%	0%
Apr-12	98%	2%	0%
Jun-11	97%	3%	0%
May-06	75%	23%	1%
Nov-05	68%	28%	4%
Oct-05	64%	29%	7%
Jul-05	71%	25%	5%
Jan-05	71%	24%	4%
Oct-04	61%	34%	4%
Jul-04	59%	34%	7%
May-04	88%	8%	3%
Mar-04	96%	3%	0%
Oct-03	98%	2%	0%
Oct-02	98%	2%	0%
Jun-01	96%	4%	0%
Jul-00	89%	11%	0%
Jan-00	90%	10%	0%
Mar-99	87%	13%	0%
Jun-98	86%	10%	4%
Dec-96	90%	8%	2%
Sep-94	90%	8%	2%
Ready-mix concrete			
May-18	87%	13%	0%
May-17	85%	13%	1%
Jul-15	84%	14%	1%
Jul-14	88%	11%	1%
May-13	93%	7%	0%
Apr-12	97%	3%	0%
Jun-11	98%	2%	0%
Jul-05	70%	26%	3%
Jan-05	73%	24%	3%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage
Concrete brick and block			
May-18	90%	10%	0%
May-17	89%	10%	1%
Jul-15	92%	8%	0%
Jul-14	92%	8%	0%
May-13	94%	6%	0%
Apr-12	96%	4%	0%
Jun-11	96%	2%	0%
May-06	83%	16%	1%
Nov-05	75%	23%	2%
Oct-05	73%	24%	5%
Jul-05	80%	18%	2%
Jan-05	80%	15%	6%
Oct-04	73%	23%	6%
Jul-04	75%	20%	4%
May-04	88%	10%	2%
Mar-04	93%	7%	0%
Oct-03	96%	4%	0%
Oct-02	96%	4%	0%
Jun-01	88%	12%	0%
Jul-00	76%	20%	5%
Jan-00	80%	18%	2%
Mar-99	91%	8%	1%
Jun-98	92%	6%	2%
Clay brick			
May-18	84%	16%	0%
May-17	86%	13%	0%
Jul-15	90%	10%	0%
Jul-14	85%	15%	0%
May-13	86%	14%	0%
Apr-12	95%	5%	0%
Jun-11	96%	4%	0%
May-06	74%	21%	5%
Nov-05	71%	25%	4%
Oct-05	72%	21%	6%
Jul-05	70%	27%	4%
Jan-05	70%	25%	5%
Oct-04	59%	33%	8%
Jul-04	63%	30%	7%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Clay brick - continued			
May-04	77%	20%	2%
Mar-04	77%	22%	1%
Oct-03	91%	9%	0%
Oct-02	88%	12%	0%
Jun-01	69%	27%	4%
Jul-00	50%	34%	16%
Jan-00	40%	39%	21%
Mar-99	77%	20%	3%
Jun-98	87%	12%	1%
Vinyl siding			
May-18	91%	8%	0%
May-17	94%	5%	0%
Jul-15	96%	4%	0%
Jul-14	95%	5%	0%
May-13	97%	3%	0%
Apr-12	96%	3%	0%
Jun-11	94%	4%	0%
Insulation material			
May-18	88%	11%	1%
May-17	95%	4%	0%
Jul-15	93%	7%	0%
Jul-14	91%	9%	0%
May-13	95%	6%	0%
Apr-12	95%	5%	0%
Jun-11	94%	5%	0%
May-06	80%	18%	2%
Nov-05	87%	12%	1%
Oct-05	86%	13%	1%
Jul-05	90%	10%	0%
Jan-05	86%	13%	0%
Oct-04	80%	19%	2%
Jul-04	80%	19%	1%
May-04	87%	12%	0%
Mar-04	89%	10%	0%
Oct-03	96%	3%	1%
Oct-02	94%	6%	0%
Jun-01	98%	2%	0%
Jul-00	80%	20%	0%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Insulation material - continued			
Jan-00	61%	37%	1%
Mar-99	58%	34%	7%
Jun-98	88%	10%	2%
Structural Insulated Panels (SIP)			
May-18	89%	11%	1%
May-17	91%	8%	1%
Jul-15	94%	6%	0%
Jul-14	94%	6%	0%
May-13	91%	9%	0%
Apr-12	97%	3%	0%
Jun-11	91%	9%	0%
May-06	92%	8%	0%
Nov-05	94%	3%	0%
Oct-05	91%	9%	0%
Oct-04	87%	8%	5%
Jul-04	89%	8%	3%
May-04	88%	7%	5%
Mar-04	95%	5%	3%
Steel (Lightweight for framing)			
May-18	80%	18%	2%
May-17	92%	8%	0%
Jul-15	91%	9%	0%
Jul-14	91%	8%	0%
May-13	92%	8%	0%
Apr-12	95%	7%	0%
Jun-11	93%	7%	2%
May-06	93%	5%	0%
Nov-05	79%	19%	2%
Oct-05	87%	10%	3%
Oct-04	71%	24%	5%
Jul-04	74%	19%	5%
May-04	68%	25%	8%
Mar-04	86%	13%	2%
Steel Beams			
May-18	83%	15%	2%
May-17	92%	8%	0%
Jul-15	92%	8%	1%
Jul-14	91%	9%	1%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Steel Beams - continued			
May-13	94%	6%	0%
Apr-12	96%	4%	0%
Jun-11	95%	5%	2%
May-06	91%	9%	0%
Nov-05	88%	10%	1%
Oct-05	90%	9%	1%
Oct-04	79%	16%	4%
Jul-04	81%	18%	1%
May-04	76%	20%	4%
Mar-04	86%	10%	4%
Trusses			
May-18	76%	22%	2%
May-17	86%	13%	1%
Jul-15	91%	8%	1%
Jul-14	85%	14%	1%
May-13	86%	13%	1%
Apr-12	98%	2%	0%
Jun-11	97%	2%	0%
May-06	94%	6%	0%
Nov-05	93%	7%	0%
Oct-05	88%	11%	1%
Jul-05	95%	4%	0%
Jan-05	92%	7%	0%
Oct-04	86%	12%	2%
Jul-04	90%	9%	0%
May-04	92%	7%	0%
Mar-04	93%	5%	0%
Framing lumber			
May-18	69%	28%	3%
May-17	79%	19%	2%
Jul-15	93%	7%	0%
Jul-14	91%	8%	0%
May-13	82%	16%	2%
Apr-12	97%	3%	0%
Jun-11	96%	4%	0%
May-06	95%	5%	0%
Nov-05	88%	11%	1%
Oct-05	80%	18%	2%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Framing lumber - continued			
Jul-05	95%	5%	0%
Jan-05	88%	12%	0%
Oct-04	76%	23%	1%
Jul-04	84%	13%	2%
May-04	81%	17%	2%
Mar-04	79%	20%	1%
Oct-03	84%	14%	2%
Oct-02	99%	1%	0%
Jun-01	96%	4%	0%
Jul-00	92%	8%	0%
Jan-00	90%	9%	1%
Mar-99	90%	9%	1%
Jun-98	93%	7%	0%
Dec-96	78%	21%	1%
Sep-94	81%	18%	1%
Gypsum wall board			
May-18	82%	16%	2%
May-17	89%	10%	1%
Jul-15	92%	8%	0%
Jul-14	86%	14%	0%
May-13	80%	18%	2%
Apr-12	89%	11%	0%
Jun-11	94%	6%	0%
May-06	66%	29%	5%
Nov-05	71%	26%	3%
Oct-05	73%	23%	3%
Jul-05	78%	21%	1%
Jan-05	83%	16%	1%
Oct-04	73%	25%	1%
Jul-04	75%	24%	1%
May-04	81%	17%	2%
Mar-04	83%	16%	0%
Oct-03	89%	11%	0%
Oct-02	92%	8%	0%
Jun-01	91%	9%	0%
Jul-00	72%	26%	2%
Jan-00	31%	61%	8%
Mar-99	40%	41%	18%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Gypsum wall board - continued			
Jun-98	84%	15%	1%
Dec-96	73%	23%	3%
Sep-94	76%	23%	1%
Oriented Strand Board (OSB)			
May-18	80%	18%	2%
May-17	88%	12%	1%
Jul-15	94%	6%	0%
Jul-14	90%	9%	0%
May-13	78%	19%	3%
Apr-12	96%	4%	0%
Jun-11	97%	3%	0%
May-06	89%	11%	1%
Nov-05	73%	25%	2%
Oct-05	68%	26%	6%
Jul-05	91%	9%	0%
Jan-05	77%	22%	0%
Oct-04	63%	33%	3%
Jul-04	69%	26%	5%
May-04	70%	22%	7%
Mar-04	55%	40%	6%
Oct-03	47%	37%	15%
Oct-02	98%	2%	0%
Jun-01	97%	3%	0%
Plywood			
May-18	81%	17%	2%
May-17	88%	12%	1%
Jul-15	93%	7%	0%
Jul-14	92%	7%	0%
May-13	81%	16%	2%
Apr-12	97%	3%	0%
Jun-11	98%	2%	0%
May-06	89%	10%	0%
Nov-05	76%	21%	2%
Oct-05	71%	23%	5%
Jul-05	90%	10%	0%
Jan-05	82%	16%	1%
Oct-04	69%	29%	2%
Jul-04	76%	22%	3%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Plywood - continued			
May-04	72%	22%	7%
Mar-04	63%	33%	4%
Oct-03	61%	29%	10%
Oct-02	98%	2%	0%
Jun-01	96%	4%	0%
Jan-00#	90%	10%	0%
Cabinets			
May-18	83%	16%	1%
May-17	87%	12%	1%
Jul-15	85%	14%	1%
Jul-14	86%	13%	1%
May-13	91%	7%	1%
Apr-12	97%	3%	0%
Jun-11	98%	2%	0%
Millwork			
May-18	85%	15%	1%
May-17	91%	8%	1%
Jul-15	89%	11%	1%
Jul-14	90%	9%	1%
May-13	92%	8%	0%
Apr-12	97%	3%	0%
Jun-11	95%	4%	0%
Windows and Doors			
May-18	85%	15%	0%
May-17	87%	12%	1%
Jul-15	90%	9%	1%
Jul-14	86%	14%	0%
May-13	91%	9%	0%
Apr-12	98%	2%	0%
Jun-11	96%	4%	0%
May-06	93%	6%	1%
Nov-05	94%	5%	1%
Oct-05	93%	5%	1%
Jul-05	95%	4%	0%
Jan-05	95%	6%	0%
Oct-04	93%	7%	0%
Jul-04	96%	4%	0%
May-04	96%	3%	0%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Windows and Doors - continued			
Mar-04	96%	3%	0%
Oct-03	97%	2%	1%
Oct-02	98%	2%	0%
Jun-01	96%	4%	0%
Jul-00	90%	10%	0%
Hardwood flooring			
May-18	90%	10%	1%
May-17	91%	9%	1%
Jul-15	90%	9%	1%
Jul-14	87%	12%	1%
May-13	94%	6%	1%
Apr-12	97%	3%	0%
Jun-11	99%	1%	0%
Ceramic Tiles			
May-18	91%	9%	0%
May-17	92%	7%	2%
Jul-15	91%	8%	1%
Jul-14	90%	9%	0%
May-13	95%	5%	1%
Apr-12	94%	5%	0%
Jun-11	96%	3%	1%
Roofing materials			
May-18	87%	12%	1%
May-17	91%	8%	1%
Jul-15	93%	7%	0%
Jul-14	89%	11%	0%
May-13	88%	11%	1%
Apr-12	91%	8%	1%
Jun-11	89%	10%	1%
May-06	81%	17%	2%
Nov-05	78%	19%	2%
Oct-05	75%	18%	6%
Jul-05	81%	14%	5%
Jan-05	81%	14%	6%
Oct-04	79%	19%	3%
Jul-04	88%	10%	1%
May-04	90%	9%	1%
Mar-04	91%	9%	0%

Current Availability of Materials? - HISTORY
(Percent of Respondents) - continued

	No Shortage	Some Shortage	Serious Shortage
Roofing materials - continued			
Oct-03	95%	4%	1%
Oct-02	96%	4%	0%
Jun-01	95%	5%	0%
Jul-00	89%	10%	0%
Jan-00	88%	12%	0%
Mar-99	90%	9%	1%
Plumbing fixtures & fittings			
May-18	90%	10%	1%
May-17	93%	6%	1%
Jul-15	94%	6%	0%
Jul-14	94%	5%	0%
May-13	94%	6%	0%
Apr-12	96%	3%	0%
Jun-11	97%	3%	0%
HVAC equipment			
May-18	93%	7%	0%
May-17	94%	3%	1%
Jul-15	94%	6%	0%
Jul-14	94%	6%	0%
May-13	97%	3%	0%
Apr-12	98%	1%	0%
Jun-11	97%	2%	0%
Copper wiring			
May-18	94%	6%	0%
May-17	93%	6%	0%
Jul-15	95%	5%	1%
Jul-14	94%	5%	1%
May-13	95%	4%	1%
Apr-12	93%	6%	0%
Jun-11	90%	9%	1%
Rebar (Steel Reinforcing bars)			
May-06	90%	11%	0%
Nov-05	87%	12%	1%
Oct-05	88%	11%	1%
Jul-05	74%	24%	2%
Jan-05	80%	16%	3%
Oct-04	79%	17%	4%
Jul-04	86%	11%	2%

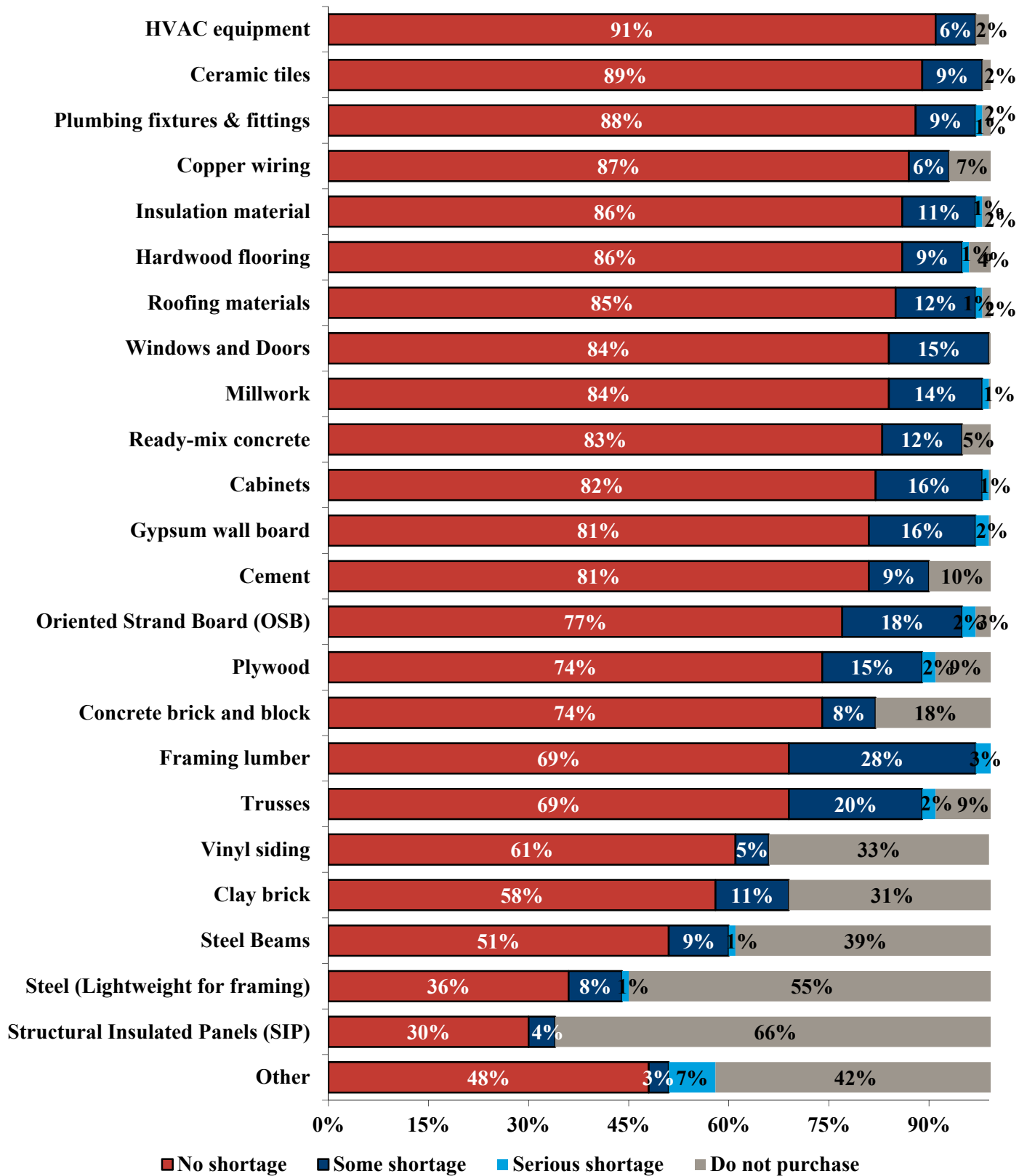
Source: BEC Survey, NAHB Economics.

Note: (*) denotes less than 0.5 percent. (#) Plywood/OSB. (**) Prior to Jun 2011, the category was Do Not Use.

Note: (+) Prior to Jan. '05 Cement and ready-mix concrete were combined.

Q4. How would you describe the current availability of the following materials?

(Percent of Respondents)



Current Availability of Materials - HISTORY
(Percent of Respondents)

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Cement+				
May-18	81%	9%	0%	10%
May-17	75%	10%	1%	14%
Jul-15	74%	11%	1%	15%
Jul-14	79%	8%	0%	14%
May-13	83%	5%	0%	12%
Apr-12	87%	2%	0%	11%
Jun-11	84%	3%	0%	13%
May-06	75%	23%	1%	0%
Nov-05	68%	28%	4%	0%
Oct-05	64%	29%	7%	0%
Jul-05	67%	24%	5%	5%
Jan-05	67%	23%	4%	6%
Oct-04	61%	34%	4%	0%
Jul-04	59%	34%	7%	0%
May-04	88%	8%	3%	0%
Mar-04	95%	3%	0%	1%
Oct-03	98%	2%	0%	0%
Oct-02	98%	2%	0%	0%
Jun-01	96%	4%	0%	0%
Jul-00	89%	11%	0%	0%
Jan-00	90%	10%	0%	0%
Mar-99	87%	13%	0%	0%
Jun-98	86%	10%	4%	0%
Dec-96	90%	8%	2%	0%
Sep-94	90%	8%	2%	0%
Ready-mix concrete				
May-18	83%	12%	0%	5%
May-17	81%	13%	1%	4%
Jul-15	81%	14%	1%	4%
Jul-14	83%	11%	1%	6%
May-13	88%	7%	0%	5%
Apr-12	94%	3%	0%	3%
Jun-11	90%	2%	0%	8%
Jul-05	69%	25%	3%	2%
Jan-05	71%	23%	3%	3%

Current Availability of Materials – HISTORY
(Percent of Respondents) – *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Concrete brick and block				
May-18	74%	8%	0%	18%
May-17	71%	8%	1%	20%
Jul-15	78%	7%	0%	15%
Jul-14	74%	7%	0%	20%
May-13	78%	5%	0%	17%
Apr-12	81%	3%	0%	16%
Jun-11	81%	2%	0%	16%
May-06	73%	14%	1%	12%
Nov-05	66%	20%	2%	12%
Oct-05	64%	21%	4%	12%
Jul-05	70%	16%	2%	12%
Jan-05	68%	13%	5%	15%
Oct-04	64%	20%	5%	12%
Jul-04	64%	17%	3%	15%
May-04	78%	9%	2%	11%
Mar-04	85%	6%	0%	9%
Oct-03	96%	4%	0%	0%
Oct-02	96%	4%	0%	0%
Jun-01	88%	12%	0%	0%
Jul-00	76%	20%	5%	0%
Jan-00	80%	18%	2%	0%
Mar-99	91%	8%	1%	0%
Jun-98	92%	6%	2%	0%
Clay brick				
May-18	58%	11%	0%	31%
May-17	60%	9%	0%	31%
Jul-15	62%	7%	0%	31%
Jul-14	58%	10%	0%	31%
May-13	64%	10%	0%	26%
Apr-12	74%	4%	0%	22%
Jun-11	69%	3%	0%	28%
May-06	60%	17%	4%	19%
Nov-05	53%	19%	3%	25%
Oct-05	56%	16%	5%	22%
Jul-05	57%	22%	3%	18%
Jan-05	55%	20%	4%	21%
Oct-04	46%	26%	6%	22%

Current Availability of Materials – HISTORY
(Percent of Respondents) – continued

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Clay brick - continued				
Jul-04	51%	24%	6%	19%
May-04	62%	16%	2%	19%
Mar-04	69%	20%	1%	10%
Oct-03	91%	9%	0%	0%
Oct-02	88%	12%	0%	0%
Jun-01	69%	27%	4%	0%
Jul-00	50%	34%	16%	0%
Jan-00	40%	39%	21%	0%
Mar-99	77%	20%	3%	0%
Jun-98	87%	12%	1%	0%
Vinyl siding				
May-18	61%	5%	0%	33%
May-17	59%	3%	0%	38%
Jul-15	61%	3%	0%	36%
Jul-14	62%	3%	0%	35%
May-13	64%	2%	0%	34%
Apr-12	70%	2%	0%	27%
Jun-11	66%	3%	0%	30%
Insulation material				
May-18	86%	11%	1%	2%
May-17	92%	4%	0%	3%
Jul-15	90%	7%	0%	3%
Jul-14	87%	9%	0%	3%
May-13	93%	6%	0%	2%
Apr-12	94%	5%	0%	1%
Jun-11	90%	5%	0%	4%
May-06	80%	18%	2%	0%
Nov-05	87%	12%	1%	0%
Oct-05	86%	13%	1%	0%
Jul-05	90%	10%	0%	0%
Jan-05	86%	13%	0%	0%
Oct-04	79%	19%	2%	1%
Jul-04	80%	19%	1%	0%
May-04	87%	12%	0%	0%
Mar-04	89%	10%	0%	0%
Oct-03	96%	3%	1%	0%
Oct-02	94%	6%	0%	0%
Jun-01	98%	2%	0%	0%

Current Availability of Materials – HISTORY
(Percent of Respondents) – *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Insulation material - <i>continued</i>				
Jul-00	80%	20%	0%	0%
Jan-00	61%	37%	1%	0%
Mar-99	58%	34%	7%	0%
Jun-98	88%	10%	2%	0%
Structural Insulated Panels (SIP)				
May-18	30%	4%	0%	66%
May-17	30%	2%	0%	68%
Jul-15	31%	2%	0%	67%
Jul-14	28%	2%	0%	71%
May-13	29%	3%	0%	68%
Apr-12	38%	1%	0%	61%
Jun-11	32%	3%	0%	65%
May-06	36%	3%	0%	61%
Nov-05	32%	1%	0%	66%
Oct-05	40%	4%	0%	56%
Oct-04	34%	3%	2%	61%
Jul-04	34%	3%	1%	62%
May-04	36%	3%	2%	59%
Mar-04	35%	2%	1%	63%
Steel (Lightweight for framing)				
May-18	36%	8%	1%	55%
May-17	38%	3%	0%	59%
Jul-15	40%	4%	0%	56%
Jul-14	38%	3%	0%	59%
May-13	34%	3%	0%	63%
Apr-12	40%	3%	0%	58%
Jun-11	38%	3%	1%	59%
May-06	51%	3%	0%	45%
Nov-05	45%	11%	1%	43%
Oct-05	53%	6%	2%	39%
Oct-04	44%	15%	3%	38%
Jul-04	43%	11%	3%	42%
May-04	43%	16%	5%	37%
Mar-04	48%	7%	1%	44%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Steel Beams				
May-18	51%	9%	1%	39%
May-17	58%	5%	0%	37%
Jul-15	60%	5%	0%	35%
Jul-14	58%	5%	0%	37%
May-13	58%	4%	0%	38%
Apr-12	65%	3%	0%	32%
Jun-11	56%	3%	1%	41%
May-06	63%	6%	0%	31%
Nov-05	60%	7%	1%	32%
Oct-05	63%	6%	1%	30%
Oct-04	54%	11%	3%	32%
Jul-04	55%	12%	1%	32%
May-04	53%	14%	3%	30%
Mar-04	68%	8%	3%	21%
Trusses				
May-18	69%	20%	2%	9%
May-17	77%	11%	1%	11%
Jul-15	78%	7%	1%	14%
Jul-14	73%	12%	1%	14%
May-13	75%	11%	1%	13%
Apr-12	83%	2%	0%	15%
Jun-11	83%	2%	0%	14%
May-06	85%	5%	0%	10%
Nov-05	83%	6%	0%	11%
Oct-05	77%	10%	1%	12%
Jul-05	87%	4%	0%	8%
Jan-05	79%	6%	0%	14%
Oct-04	73%	10%	2%	15%
Jul-04	79%	8%	0%	12%
May-04	84%	6%	0%	9%
Mar-04	85%	5%	0%	9%
Framing lumber				
May-18	69%	28%	3%	1%
May-17	79%	19%	2%	1%
Jul-15	92%	7%	0%	1%
Jul-14	90%	8%	0%	2%
May-13	81%	16%	2%	1%
Apr-12	96%	3%	0%	1%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Framing lumber - <i>continued</i>				
Jun-11	92%	4%	0%	4%
May-06	95%	5%	0%	0%
Nov-05	88%	11%	1%	0%
Oct-05	80%	18%	2%	0%
Jul-05	94%	5%	0%	1%
Jan-05	88%	12%	0%	0%
Oct-04	76%	23%	1%	0%
Jul-04	84%	13%	2%	0%
May-04	81%	17%	2%	0%
Mar-04	79%	20%	1%	0%
Oct-03	84%	14%	2%	0%
Oct-02	99%	1%	0%	0%
Jun-01	96%	4%	0%	0%
Jul-00	92%	8%	0%	0%
Jan-00	90%	9%	1%	0%
Mar-99	90%	9%	1%	0%
Jun-98	93%	7%	0%	0%
Dec-96	78%	21%	1%	0%
Sep-94	81%	18%	1%	0%
Gypsum wall board				
May-18	81%	16%	2%	1%
May-17	86%	10%	1%	3%
Jul-15	90%	8%	0%	2%
Jul-14	84%	14%	0%	2%
May-13	79%	18%	2%	1%
Apr-12	88%	11%	0%	1%
Jun-11	89%	6%	0%	5%
May-06	66%	29%	5%	0%
Nov-05	71%	26%	3%	0%
Oct-05	73%	23%	3%	0%
Jul-05	78%	21%	1%	0%
Jan-05	82%	16%	1%	1%
Oct-04	72%	25%	1%	1%
Jul-04	75%	24%	1%	0%
May-04	80%	17%	2%	1%
Mar-04	83%	16%	0%	0%
Oct-03	89%	11%	0%	0%
Oct-02	92%	8%	0%	0%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Gypsum wall board - <i>continued</i>				
Jun-01	91%	9%	0%	0%
Jul-00	72%	26%	2%	0%
Jan-00	31%	61%	8%	0%
Mar-99	40%	41%	18%	0%
Jun-98	84%	15%	1%	0%
Dec-96	73%	23%	3%	0%
Sep-94	76%	23%	1%	0%
Oriented Strand Board (OSB)				
May-18	77%	18%	2%	3%
May-17	85%	11%	1%	4%
Jul-15	90%	5%	0%	4%
Jul-14	85%	8%	0%	6%
May-13	74%	18%	3%	5%
Apr-12	92%	4%	0%	4%
Jun-11	91%	3%	0%	6%
May-06	85%	10%	1%	5%
Nov-05	71%	24%	2%	3%
Oct-05	66%	25%	6%	3%
Jul-05	88%	9%	0%	3%
Jan-05	74%	21%	0%	4%
Oct-04	60%	31%	3%	5%
Jul-04	67%	25%	5%	3%
May-04	67%	21%	7%	4%
Mar-04	53%	39%	6%	3%
Oct-03	47%	37%	15%	0%
Oct-02	98%	2%	0%	0%
Jun-01	97%	3%	0%	0%
Plywood				
May-18	74%	15%	2%	9%
May-17	78%	10%	1%	11%
Jul-15	85%	6%	0%	9%
Jul-14	84%	7%	0%	9%
May-13	72%	14%	2%	11%
Apr-12	88%	3%	0%	9%
Jun-11	87%	2%	0%	11%
May-06	81%	9%	0%	9%
Nov-05	68%	19%	2%	10%
Oct-05	66%	21%	5%	7%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Plywood - <i>continued</i>				
Jul-05	86%	10%	0%	4%
Jan-05	77%	15%	1%	6%
Oct-04	64%	27%	2%	7%
Jul-04	67%	19%	3%	12%
May-04	66%	20%	6%	8%
Mar-04	57%	30%	4%	9%
Oct-03	61%	29%	10%	0%
Oct-02	98%	2%	0%	0%
Jun-01	96%	4%	0%	0%
Jan-00#	90%	10%	0%	0%
Cabinets				
May-18	82%	16%	1%	1%
May-17	85%	12%	1%	2%
Jul-15	84%	14%	1%	2%
Jul-14	83%	13%	1%	3%
May-13	88%	7%	1%	3%
Apr-12	95%	3%	0%	2%
Jun-11	92%	2%	0%	6%
Millwork				
May-18	84%	14%	1%	2%
May-17	90%	8%	1%	2%
Jul-15	87%	10%	1%	2%
Jul-14	89%	9%	1%	2%
May-13	91%	8%	0%	1%
Apr-12	96%	3%	0%	1%
Jun-11	91%	4%	0%	4%
Windows and Doors				
May-18	84%	15%	0%	1%
May-17	87%	12%	1%	1%
Jul-15	90%	9%	1%	1%
Jul-14	85%	14%	0%	1%
May-13	90%	9%	0%	1%
Apr-12	97%	2%	0%	1%
Jun-11	92%	4%	0%	4%
May-06	93%	6%	1%	0%
Nov-05	94%	5%	1%	0%
Oct-05	93%	5%	1%	0%
Jul-05	95%	4%	0%	0%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Windows and Doors - <i>continued</i>				
Jan-05	94%	6%	0%	1%
Oct-04	93%	7%	0%	0%
Jul-04	95%	4%	0%	1%
May-04	96%	3%	0%	0%
Mar-04	96%	3%	0%	0%
Oct-03	97%	2%	1%	0%
Oct-02	98%	2%	0%	0%
Jun-01	96%	4%	0%	0%
Jul-00	90%	10%	0%	0%
Hardwood flooring				
May-18	86%	9%	1%	4%
May-17	86%	8%	1%	5%
Jul-15	87%	9%	1%	3%
Jul-14	82%	12%	1%	5%
May-13	90%	6%	1%	4%
Apr-12	91%	3%	0%	6%
Jun-11	91%	1%	0%	8%
Ceramic Tiles				
May-18	89%	9%	0%	2%
May-17	89%	7%	1%	3%
Jul-15	89%	7%	1%	2%
Jul-14	87%	9%	0%	3%
May-13	92%	5%	1%	3%
Apr-12	92%	5%	0%	2%
Jun-11	90%	3%	1%	6%
Roofing materials				
May-18	85%	12%	1%	2%
May-17	89%	8%	1%	2%
Jul-15	92%	7%	0%	1%
Jul-14	88%	10%	0%	2%
May-13	87%	11%	1%	1%
Apr-12	90%	8%	1%	1%
Jun-11	85%	10%	1%	4%
May-06	80%	17%	2%	1%
Nov-05	78%	19%	2%	0%
Oct-05	75%	18%	6%	0%
Jul-05	81%	14%	5%	0%
Jan-05	80%	14%	6%	1%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Roofing materials - <i>continued</i>				
Oct-04	79%	19%	3%	0%
Jul-04	88%	10%	1%	0%
May-04	90%	9%	1%	0%
Mar-04	91%	9%	0%	0%
Oct-03	95%	4%	1%	0%
Oct-02	96%	4%	0%	0%
Jun-01	95%	5%	0%	0%
Jul-00	89%	10%	0%	0%
Jan-00	88%	12%	0%	0%
Mar-99	90%	9%	1%	0%
Plumbing fixtures & fittings				
May-18	88%	9%	1%	2%
May-17	91%	6%	1%	2%
Jul-15	92%	6%	0%	2%
Jul-14	92%	5%	0%	3%
May-13	91%	6%	0%	3%
Apr-12	94%	3%	0%	2%
Jun-11	93%	3%	0%	4%
HVAC equipment				
May-18	91%	6%	0%	2%
May-17	91%	5%	1%	3%
Jul-15	92%	5%	0%	3%
Jul-14	88%	6%	0%	6%
May-13	93%	3%	0%	4%
Apr-12	95%	1%	0%	3%
Jun-11	91%	2%	0%	6%
Copper wiring				
May-18	87%	6%	0%	7%
May-17	84%	6%	0%	9%
Jul-15	88%	5%	0%	7%
Jul-14	84%	4%	1%	11%
May-13	88%	4%	1%	7%
Apr-12	87%	6%	0%	6%
Jun-11	84%	8%	1%	7%

Current Availability of Materials - HISTORY
(Percent of Respondents) - *continued*

	No Shortage	Some Shortage	Serious Shortage	Do Not Purchase**
Rebar (Steel Reinforcing bars)				
May-06	82%	10%	0%	9%
Nov-05	82%	11%	1%	6%
Oct-05	83%	10%	1%	6%
Jul-05	71%	23%	2%	4%
Jan-05	75%	15%	3%	6%
Oct-04	76%	16%	4%	4%
Jul-04	79%	10%	2%	8%

Source: HMI Special Survey Analysis, NAHB EchP.

Note: () denotes less than 0.5 percent*

Note: (#) Plywood/OSB.

*Note: (**) Prior to Jun 2011, the category was Do Not Use.*

Note: (+) Prior to Jan. '05 Cement and ready-mix concrete were combined.

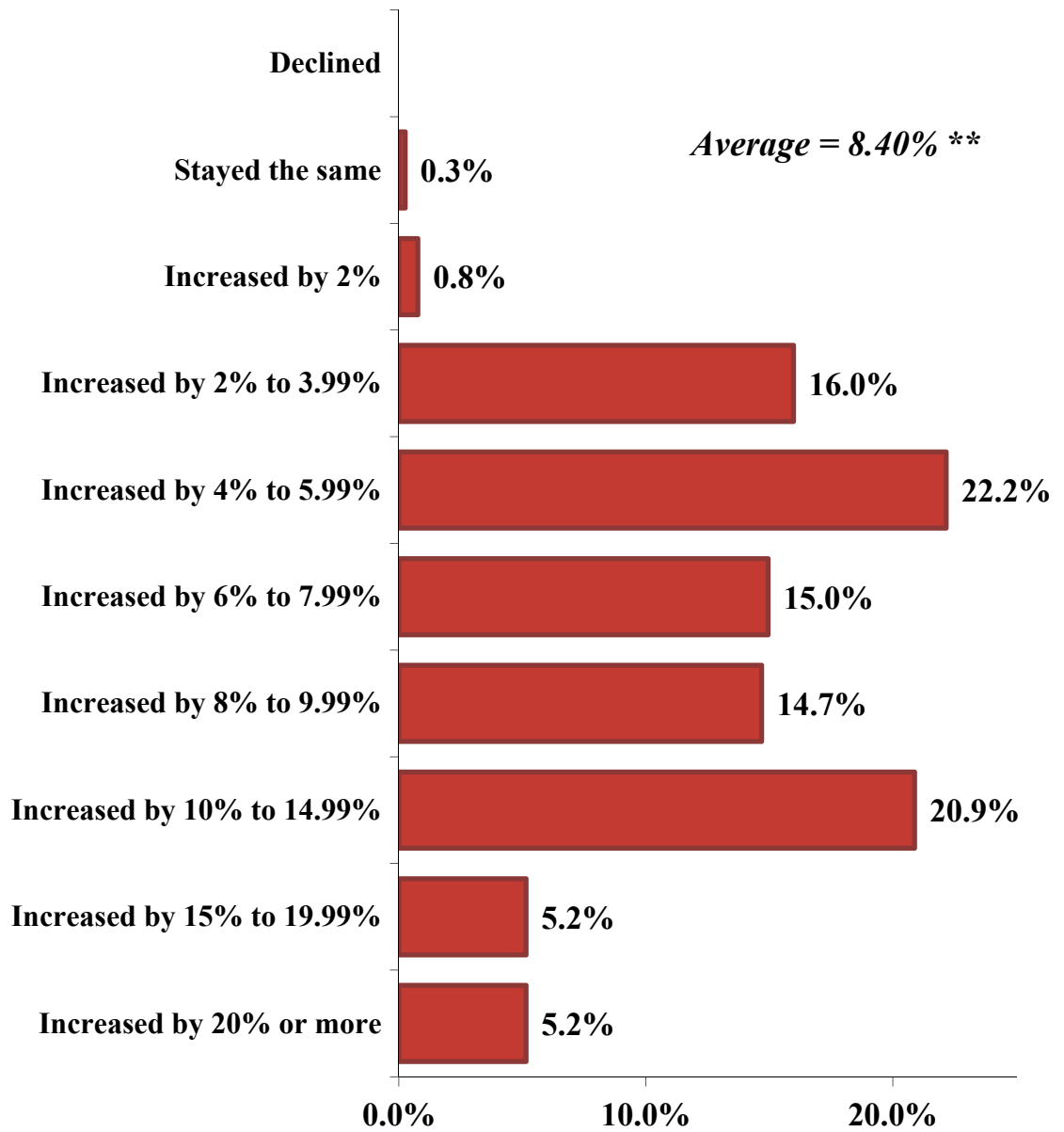
COMMENT: If “OTHER” in *question 4* i.e., current availability of materials *please specify*:

- * Although there are no shortages, there are long delays and lead times to get things that have to be produced like Cabinets, Door, Trusses and Windows.
- * Buildable land.
- * Extreme shortage of yard sod and metal products.
- * For us, it's not so much a shortage of the specified materials as it is a shortage of contractors to perform the work, and also rapidly rising costs.
- * Framing carpenters, electricians and experienced plumbers are in short supply and the wage stagnation of the past 9 years for skilled workers in a soft market have taken an enormous toll on the amount of workers who have left the industry. Amish carpenters have taken over the framing segment by probably 60% in this area.
- * Having trouble getting import plywood's.
- * Hurricane shutters.
- * I do not know just what other is.
- * I don't think its material shortages. Ready mix is short because they can't hire enough truck drivers. Cabinets are short because of labor and factory complicity.
- * I have not purchased any material in the past year, but am about to start a subdivision, so I don't have current information regarding this question.
- * I haven't ordered any. So I do not know, but have not heard of any problems yet.
- * Labor.
- * Labor in all trades.
- * Labor is the problem.
- * Labor shortage is our biggest issue to date.
- * Labor shortage severe in all trades.
- * Labor/Subcontractors is our biggest shortage now. Some, such as tile setters, have long waiting times for completing the work.
- * Lead time increased.
- * Not applicable.
- * Our problem is not so much in the actual material but in the labor, we are having problems in delays but again, due to labor.
- * Our shortages in Michigan are on the labor and not the material side. We are having trouble with siders and framers and seem to be keeping up in the other areas for now.
- * Our suppliers have product when we need it, but we are a small custom builder not doing tracts.
- * Panelized wall systems.
- * Precast Fiberglass tub and shower units.
- * Prices are high and some availability is low.
- * Qualified labor ready workers for framing, plumbing, HVAC, etc.
- * Same old story. We are in need of qualified LABOR!!!
- * Serious skilled & unskilled labor in all trades.
- * Shortage of man power.
- * Shortages are not the problem, the continual rise in cost of materials is the problem.
- * Solid surface panels.

COMMENT: If “OTHER” in *question 4* i.e., current availability of materials *please specify*: - *continued*

- * Steel pricing has increased significantly.
- * Suppliers keep raising prices due to natural disasters.
- * Suppliers seem to be having personnel issues within the warehouse and with drivers. So the time to get orders filled and delivered is causing delays. More so than a shortage of the materials. Labor remains tight.
- * The biggest factor in our local economy and in Texas in general is our labor force. We are almost depleted of skilled labor and our local 47 builders are having to share the majority of our local subcontractors. This results in slower build times and higher home prices.
- * The biggest problem is skilled labor for concrete, framing, and electrical. Other subs that seem to keep up but are stressed are HVAC and plumbing.
- * The lead time on everything has increased. I think mostly due to labor shortages.
- * The prices of material have been going up, the bigger problem is lack of labor or more precisely qualified labor. Schedules are getting pushed and quality is going down.
- * Unknown, but I can usually get materials.
- * We are seeing excessively high labor rates and rising cost of materials which is slowing demand and halting upgrade change orders in projects.
- * We do not feel the impact in material nearly as much as we do, labor. Labor shortage and unqualified labor is still our biggest challenge in delivering product on time. Outside of providing a fair and controlled Work Visa solution to foreign labor, I do not see a short term fix for this. However, if we (the US) allowed for a controlled, documented, Work Visa to solution, this problem could be addressed or at least mitigated until we can build our labor force.
- * We have pre bought and are usually one of the last builders in our area to be affected by shortages.
- * We only supply framing labor.
- * While materials remain available for the most part, lead times on delivery have gotten longer.

**Q5. Overall, how have total material costs for the same house changed over the past 12 months?
(Percent of Respondents)**



*** For May 2015 the average estimated assuming midpoint for each category, with 10% of the observations in each tail winsorized.*

Change in total material costs for the same house over the past 12 months - HISTORY

	April 2012	May 2013	July 2014	July 2015	May 2017	May 2018
Declined	1.3	-	0.3	-	0.3	-
Stayed about the same	11.2	2.7	7.5	5.7	1.8	0.3
Increased by less than 2%	23.3	9.6	16.0	12.2	6.2	0.8
Increased by 2% to 3.99%	36.3	30.1	35.4	32.5	22.8	16.0
Increased by 4% to 5.99%	17.8	25.9	21.9	25.8	32.3	22.2
Increased by 6% to 7.99%	6.1	12.5	10.3	13.0	12.4	15.0
Increased by 8% to 9.99%	1.9	5.1	2.5	5.4	9.5	14.7
Increased by 10% or more	2.2	14.1	6.0	-	-	-
Increased by 10% to 14.99%				4.6	12.1	20.9
Increased by 15% or more				0.8	-	-
Increased by 15% to 19.99%					2.4	5.2
Increased by 20% or more					0.3	5.2
<i>Average**</i>	2.93%	5.17%	3.71%	4.46%	5.96%	8.40%

***For May 2018 the average estimated assuming midpoint for each category, with 10% of the observations in each tail winsorized.*

Detailed Tables

**Q4. Current Availability of Materials
(Percent of Respondents)**

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Cement									
No shortage	81	84	86	80	77	78	88	76	76
Some shortage	9		3	12	12	9	6	10	20
Serious shortage									
Do not purchase	10	16	11	9	11	13	6	14	5
Responses	378	25	91	188	74	127	113	79	41
Ready-mix concrete									
No shortage	83	92	91	79	79	82	85	85	73
Some shortage	12		5	18	10	13	12	10	20
Serious shortage									
Do not purchase	5	8	3	3	11	6	4	5	7
Responses	377	25	91	188	73	127	112	79	41
Concrete brick & block									
No shortage	74	76	73	80	59	73	81	68	66
Some shortage	8	8	1	9	15	6	7	11	17
Serious shortage									
Do not purchase	18	16	26	11	26	21	12	20	17
Responses	378	25	91	188	74	127	113	79	41
Clay brick									
No shortage	58	60	59	68	31	55	63	52	65
Some shortage	11		7	16	6	12	7	11	15
Serious shortage									
Do not purchase	31	40	34	16	63	33	30	37	20
Responses	371	25	91	185	70	126	108	79	40
Vinyl siding									
No shortage	61	88	76	64	26	55	70	58	59
Some shortage	5	4	8	6	1	7	6	4	5
Serious shortage	0			1				1	
Do not purchase	33	8	17	29	72	37	24	36	37
Responses	366	24	90	183	69	123	107	77	41

Q4. Current Availability of Materials - *continued*

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Insulation material									
No shortage	86	84	92	88	73	86	88	80	88
Some shortage	11	8	8	10	18	10	10	14	10
Serious shortage	1			1	4	1		3	2
Do not purchase	2	8		2	5	3	2	4	
Responses	377	25	91	188	73	126	113	79	41
Structural Insulated Panels (SIP)									
No shortage	30	36	29	32	24	32	27	25	40
Some shortage	4	4	5	2	6	2	2	4	10
Serious shortage	0				1				3
Do not purchase	66	60	67	66	69	65	71	71	48
Responses	364	25	87	180	72	121	108	77	40
Steel (Lightweight for framing)									
No shortage	36	32	47	35	27	36	32	30	51
Some shortage	8	12	6	8	10	7	12	4	8
Serious shortage	1			2			1	3	3
Do not purchase	55	56	48	54	63	56	54	63	38
Responses	362	25	88	178	71	124	105	76	39
Steel Beams									
No shortage	51	68	68	45	39	51	51	45	51
Some shortage	9	8	11	8	10	11	10	4	10
Serious shortage	1			2	1		2	3	
Do not purchase	39	24	21	45	49	38	37	48	38
Responses	365	25	90	179	71	122	109	77	39
Trusses									
No shortage	69	72	78	66	63	68	67	68	73
Some shortage	20	12	17	19	27	19	20	21	24
Serious shortage	2		1	1	8	2	1	4	2
Do not purchase	9	16	4	14	1	11	12	8	
Responses	370	25	90	182	73	124	110	78	41

Q4. Current Availability of Materials - *continued*

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Framing lumber									
No shortage	69	92	76	66	58	70	67	63	76
Some shortage	28	4	22	30	37	29	30	30	15
Serious shortage	3		2	3	4	1	3	4	10
Do not purchase	1	4		1	1	1		3	
Responses	377	25	91	188	73	126	113	79	41
Gypsum wall board									
No shortage	81	76	90	79	77	80	78	82	85
Some shortage	16	20	10	18	17	17	20	14	7
Serious shortage	2			2	4	2	1	1	7
Do not purchase	1	4		1	1	1	1	3	
Responses	375	25	91	188	71	126	113	77	41
Oriented Strand Board (OSB)									
No shortage	77	88	87	76	62	72	77	82	78
Some shortage	18	8	11	18	29	21	20	11	12
Serious shortage	2		1	2	5	2		3	10
Do not purchase	3	4	1	4	4	5	4	4	
Responses	375	25	91	186	73	126	111	79	41
Plywood									
No shortage	74	80	81	73	67	74	74	71	73
Some shortage	15	8	9	18	18	20	16	10	13
Serious shortage	2		1	2	4	2		3	8
Do not purchase	9	12	9	8	11	5	10	16	8
Responses	373	25	89	187	72	126	112	77	40
Cabinets									
No shortage	82	96	87	80	77	83	82	80	83
Some shortage	16		13	17	21	13	16	19	17
Serious shortage	1			2	1	3	1		
Do not purchase	1	4		1	1	1	1	1	
Responses	376	25	91	187	73	125	112	80	41

Q4. Current Availability of Materials - *continued*

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Millwork									
No shortage	84	96	85	81	84	83	84	81	85
Some shortage	14		14	16	15	14	15	15	15
Serious shortage	1			1		2			
Do not purchase	2	4	1	2	1	2	1	4	
Responses	376	25	91	187	73	125	113	80	40
Windows and Doors									
No shortage	84	96	88	82	82	79	86	84	90
Some shortage	15		12	18	15	19	14	15	10
Serious shortage									
Do not purchase	1	4			3	2		1	
Responses	376	24	91	188	73	126	112	79	41
Hardwood flooring									
No shortage	86	96	88	85	82	83	88	82	90
Some shortage	9		8	12	8	12	10	9	5
Serious shortage	1			1		1		1	
Do not purchase	4	4	4	2	10	4	3	8	5
Responses	377	25	91	188	73	126	113	79	41
Ceramic tiles									
No shortage	89	88	90	89	88	87	94	81	93
Some shortage	9	4	7	10	8	10	5	13	7
Serious shortage	0			1		1			
Do not purchase	2	8	3	1	4	2	1	6	
Responses	376	25	91	188	72	126	113	78	41
Roofing materials									
No shortage	85	88	86	82	92	84	87	82	83
Some shortage	12	4	10	17	5	12	12	13	17
Serious shortage	1			1			2		
Do not purchase	2	8	4	1	3	4		5	
Responses	376	25	91	187	73	126	113	78	41

Q4. Current Availability of Materials - *continued*

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Plumbing fixtures & fittings									
No shortage	88	80	91	90	79	84	91	86	93
Some shortage	9	12	3	9	18	13	8	6	7
Serious shortage	1			1	1			3	
Do not purchase	2	8	6	1	1	3	1	5	
Responses	375	25	90	187	73	125	113	78	41
HVAC equipment									
No shortage	91	92	92	93	86	87	96	91	90
Some shortage	6		2	7	13	10	4	5	10
Serious shortage									
Do not purchase	2	8	6		1	3	1	4	
Responses	375	25	90	188	72	126	112	79	41
Copper wiring									
No shortage	87	88	84	88	86	83	89	82	95
Some shortage	6		4	7	5	6	5	8	2
Serious shortage									
Do not purchase	7	12	11	5	8	10	5	10	2
Responses	374	25	90	186	73	126	111	78	41
Other									
No shortage	48	60	43	55	31	47	43	41	53
Some shortage	3		3	4	3		4	6	6
Serious shortage	7		11	3	14	9	7	6	6
Do not purchase	42	40	43	38	52	44	46	47	35
Responses	145	10	35	71	29	43	46	32	17

Q4. Current Availability of Materials : WITHOUT "DO NOT PURCHASE"

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Cement									
No shortage	90	100	96	87	86	90	93	88	79
Some shortage	10		4	13	14	10	7	12	21
Serious shortage									
Responses	340	21	81	172	66	110	106	68	39
Ready-mix concrete									
No shortage	87	100	94	81	89	87	88	89	79
Some shortage	13		6	19	11	13	12	11	21
Serious shortage									
Responses	358	23	88	182	65	120	108	75	38
Concrete brick & block									
No shortage	90	90	99	90	80	93	92	86	79
Some shortage	10	10	1	10	20	7	8	14	21
Serious shortage									
Responses	311	21	67	168	55	100	99	63	34
Clay brick									
No shortage	84	100	90	81	85	82	89	82	81
Some shortage	16		10	19	15	18	11	18	19
Serious shortage									
Responses	256	15	60	155	26	84	76	50	32
Vinyl siding									
No shortage	91	95	91	91	95	88	93	92	92
Some shortage	8	5	9	8	5	12	7	6	8
Serious shortage	0			1				2	
Responses	246	22	75	130	19	77	81	49	26
Insulation material									
No shortage	88	91	92	90	77	89	90	83	88
Some shortage	11	9	8	10	19	11	10	14	10
Serious shortage	1			1	4	1		3	2
Responses	368	23	91	185	69	122	111	76	41

Q4. Current Availability of Materials : WITHOUT "DO NOT PURCHASE" - continued

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Structural Insulated Panels (SIP)									
No shortage	89	90	86	94	77	93	94	86	76
Some shortage	11	10	14	6	18	7	6	14	19
Serious shortage	1				5				5
Responses	123	10	29	62	22	42	31	22	21
Steel (Lightweight for framing)									
No shortage	80	73	89	78	73	83	71	82	83
Some shortage	18	27	11	17	27	17	27	11	13
Serious shortage	2			5			2	7	4
Responses	164	11	46	81	26	54	48	28	24
Steel Beams									
No shortage	83	89	86	82	78	82	81	88	83
Some shortage	15	11	14	14	19	18	16	8	17
Serious shortage	2			4	3		3	5	
Responses	224	19	71	98	36	76	69	40	24
Trusses									
No shortage	76	86	81	77	64	76	76	74	73
Some shortage	22	14	17	22	28	22	23	22	24
Serious shortage	2		1	1	8	2	1	4	2
Responses	335	21	86	156	72	110	97	72	41
Framing lumber									
No shortage	69	96	76	67	58	70	67	65	76
Some shortage	28	4	22	30	38	29	30	31	15
Serious shortage	3		2	3	4	1	3	4	10
Responses	374	24	91	187	72	125	113	77	41
Gypsum wall board									
No shortage	82	79	90	80	79	81	79	84	85
Some shortage	16	21	10	18	17	18	21	15	7
Serious shortage	2			2	4	2	1	1	7
Responses	371	24	91	186	70	125	112	75	41

Q4. Current Availability of Materials : WITHOUT "DO NOT PURCHASE" - continued
(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Oriented Strand Board (OSB)									
No shortage	80	92	88	80	64	76	79	86	78
Some shortage	18	8	11	19	30	23	21	12	12
Serious shortage	2		1	2	6	2		3	10
Responses	362	24	90	178	70	120	107	76	41
Plywood									
No shortage	81	91	89	79	75	78	82	85	78
Some shortage	17	9	10	19	20	21	18	12	14
Serious shortage	2		1	2	5	2		3	8
Responses	339	22	81	172	64	120	101	65	37
Cabinets									
No shortage	83	100	87	81	78	84	83	81	83
Some shortage	16		13	17	21	13	16	19	17
Serious shortage	1			2	1	3	1		
Responses	373	24	91	186	72	124	111	79	41
Millwork									
No shortage	85	100	86	83	85	85	85	84	85
Some shortage	15		14	16	15	14	15	16	15
Serious shortage	1			1		2			
Responses	370	24	90	184	72	123	112	77	40
Windows and Doors									
No shortage	85	100	88	82	85	81	86	85	90
Some shortage	15		12	18	15	19	14	15	10
Serious shortage									
Responses	373	23	91	188	71	124	112	78	41
Hardwood flooring									
No shortage	90	100	92	87	91	87	90	89	95
Some shortage	10		8	12	9	12	10	10	5
Serious shortage	1			1		1		1	
Responses	361	24	87	184	66	121	110	73	39

Q4. Current Availability of Materials : WITHOUT "DO NOT PURCHASE" - continued

(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Ceramic tiles									
No shortage	91	96	93	89	91	89	95	86	93
Some shortage	9	4	7	10	9	11	5	14	7
Serious shortage	0			1		1			
Responses	367	23	88	187	69	123	112	73	41
Roofing materials									
No shortage	87	96	90	82	94	88	87	86	83
Some shortage	12	4	10	17	6	12	12	14	17
Serious shortage	1			1			2		
Responses	367	23	87	186	71	121	113	74	41
Plumbing fixtures & fittings									
No shortage	90	87	96	91	81	87	92	91	93
Some shortage	10	13	4	9	18	13	8	7	7
Serious shortage	1			1	1			3	
Responses	366	23	85	186	72	121	112	74	41
HVAC equipment									
No shortage	93	100	98	93	87	90	96	95	90
Some shortage	7		2	7	13	10	4	5	10
Serious shortage									
Responses	367	23	85	188	71	122	111	76	41
Copper wiring									
No shortage	94	100	95	93	94	93	94	91	98
Some shortage	6		5	7	6	7	6	9	3
Serious shortage									
Responses	346	22	80	177	67	113	105	70	40
Other									
No shortage	82	100	75	89	64	83	80	76	82
Some shortage	6		5	7	7		8	12	9
Serious shortage	12		20	5	29	17	12	12	9
Responses	84	6	20	44	14	24	25	17	11

Q5. Overall, how have total material costs for the same house changed over the past 12 months?

(Percent of respondents)

	Total	Region				Total No. of Units Started in 2017			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Declined									
Stayed about the same	0.26			0.52				1.18	
Increased by less than 2%	0.77		2.15	0.52		1.54	0.87		
Increased by 2% to 3.99%	15.98	29.63	16.13	16.23	10.39	11.54	16.52	20	14.63
Increased by 4% to 5.99%	22.16	18.52	23.66	26.18	11.69	20	19.13	25.88	29.27
Increased by 6% to 7.99%	14.95	14.81	16.13	15.71	11.69	14.62	13.91	18.82	17.07
Increased by 8% to 9.99%	14.69	14.81	13.98	13.61	18.18	19.23	18.26	7.06	7.32
Increased by 10% to 14.99%	20.88	14.81	17.2	19.9	29.87	21.54	25.22	17.65	17.07
Increased by 15% to 19.99%	5.15	3.7	4.3	3.66	10.39	4.62	0.87	5.88	12.2
Increased by 20% or more	5.15	3.7	6.45	3.66	7.79	6.92	5.22	3.53	2.44
<i>Winsorized Mean (10%)</i>	<i>8.40</i>	<i>6.96</i>	<i>7.61</i>	<i>7.55</i>	<i>10.47</i>	<i>8.86</i>	<i>8.01</i>	<i>7.26</i>	<i>8.45</i>
Responses	388	27	93	191	77	130	115	85	41

Appendix I: Survey Questionnaire: HMI Special Questions for May 2018

4. How would you describe the current availability of the following materials, as well as changes in their prices now vs. 6 months ago?

	Current Availability			
	No shortage	Some shortage	Serious shortage	Do not Purchase
Cement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ready-mix concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concrete brick and block	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clay brick	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vinyl siding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structural Insulated Panels (SIP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steel (Lightweight for framing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steel Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trusses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Framing lumber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gypsum wall board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oriented Strand Board (OSB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plywood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Millwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windows and Doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardwood flooring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramic tiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roofing materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plumbing fixtures & fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper wiring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other(<i>Specify</i>) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Overall, how have total material costs for the same house changed over the past 12 months?

- | | |
|--|---|
| <input type="checkbox"/> Declined | <input type="checkbox"/> Increased by 6% to 7.99% |
| <input type="checkbox"/> Stayed about the same | <input type="checkbox"/> Increased by 8% to 9.99% |
| <input type="checkbox"/> Increased by less than 2% | <input type="checkbox"/> Increased by 10% to 14.99% |
| <input type="checkbox"/> Increased by 2% to 3.99% | <input type="checkbox"/> Increased by 15% to 19.99% |
| <input type="checkbox"/> Increased by 4% to 5.99% | <input type="checkbox"/> Increased by 20% or more |

THANK YOU