

# Index Of Figures

## Macroeconomic Assumptions

		Page
Figure 1	US Gross Domestic Product Real Percent Change, 1996 = 100 .....	3
Figure 2	Quarter-To-Quarter Real Percentage Change In GDP, Residential Structures, And Non-Residential Structures, Percent .....	5
Figure 3	US Disposable Personal Income Real Percent Change Compared To GDP Real Percent Change, 1996 = 100 .....	6
Figure 4	Taxes As A Percent Of Personal Income And Savings As A Percent Of Disposable Income .....	7
Figure 5	US Consumer Price Index Real Percent Change Compared To GDP Real Percent Change, 1982-84 = 100 .....	9
Figure 6	US Producer Price Index Compared To GDP Real Percent Change .....	10
Figure 7	US 30-Year And Adjustable Mortgage Rates Annual Percentage Rate .....	11
Figure 8	US Population Estimates, Million .....	12
Figure 9	Canadian GDP Real Percent Change Compared To US GDP Real Percent Change, 1996 = 100 .....	14
Figure 10	Canadian CPI Real Percent Change Compared To US CPI Real Percent Change, US 1982/84 = 100; Canada 1992 = 100 .....	15
Figure 11	Canadian 5-Year Lending Rate, Annual Percentage .....	16
Figure 12	Canadian Population Projections, Million .....	17

## Wood Products End Use Markets

Figure 13	2000 Allocation Of SFD Starts, Thousand and Percent .....	21
Figure 14	SFD Starts Constrained And Unconstrained, Thousand Units .....	22
Figure 15	2000 Allocation Of MFD Starts, Thousand And Percent .....	23
Figure 16	MFD Starts Constrained And Unconstrained, Thousand Units .....	24
Figure 17	2000 Allocation Of Manufactured Housing Placements, Thousand And Percent .....	25
Figure 18	Manufactured Housing Placements Constrained And Unconstrained, Thousand Units .....	26
Figure 19	2000 Estimates Of Square Feet Per Housing Unit By Type By Census Region .....	28
Figure 20	US Average Square Feet By Type, 2000, 2005, 2016 .....	29
Figure 21	Repairs And Remodeling Expenditures, Constrained And Unconstrained 1992/96, Billion Dollars .....	31
Figure 22	Non-Residential Construction Expenditures, Constrained And Unconstrained 1996, Billion Dollars .....	33
Figure 23	Value Of Shipments, Constrained And Unconstrained, 1996 Dollars .....	35

		Page
Figure 24	Softwood Lumber WPC Factors, Board Feet Per Square Foot .....	37
Figure 25	Softwood Lumber WPC Factor Reductions By Housing Type, US South 2004, 2016, Board Feet Per Square Foot .....	39
Figure 26	Panel WPC Factors, Square Feet Per Square Foot .....	41
Figure 27	WPC Factors For R&R Improvement Expenditures By Census Region 2000 And 2016, Board Feet And Square Feet Per \$1,000 Real Expenditures .....	43
Figure 28	WPC Factors For R&R Maintenance/Repairs Expenditures By Census Region 2000 And 2016, Board Feet And Square Feet Per \$1,000 Real Expenditures .....	44
Figure 29	WPC Factors For Non-Residential Construction By Census Region 2000 And 2016, Board Feet And Square Feet Per \$1,000 Real Expenditures .....	46
Figure 30	WPC Factors For Industrial Production 2000 And 2016, Board Feet And Square Feet Per \$1,000 Real Expenditures .....	47
Figure 31	Lumber Consumption By End Use Market, Billion Board Feet, 2000, 2006, 2016 (with table) .....	51
Figure 32	Plywood Consumption By End Use Market, Billion Square Feet, 2000, 2006, 2016 (with table) .....	54
Figure 33	OSB Consumption By End Use Market, Billion Square Feet, 2000, 2006, 2016 (with table) .....	56
Figure 34	All Structural Panels Consumption By End Use Market, Billion Square Feet, 2000, 2006, 2016 (with table) .....	58
Figure 35	Hardwood Lumber Consumption By End Use Market, Million Board Feet, 2000 and 2016 .....	60
Figure 36	Hardwood Plywood Consumption By End Use Market, Million Square Feet, 2000 and 2016 .....	60
Figure 37	WPC Factors For Hardwood Lumber And Hardwood Plywood .....	62
Figure 38	Canadian Residential Housing Starts, Thousand Units .....	64
Figure 39	Canadian WPC Factors For Residential Housing, Wood Consumed per Square Foot Of Construction .....	65
Figure 40	Canadian Housing Square Feet Size SFD And MFD, 2000 And 2016 .....	65
Figure 41	Canadian Softwood Lumber Consumption And Softwood Lumber Exports 2001, 2006, 2011, 2016 .....	67
Figure 42	Canadian Softwood Panel Consumption And Exports .....	67

## Wood Products Production

Figure 43	US Softwood Regional Lumber Production, Billion Board Feet 2000, 2006, 2016 .....	71
Figure 44	US Softwood Lumber Production Market Share 2000, 2006, 2016 .....	72

		Page
Figure 45	US Softwood Lumber Residual Chip Production By Region Million Bone Dry Tons 2000, 2006, 2016 .....	73
Figure 46	US Regional Softwood Plywood Production Billion Square Feet 2000, 2006, 2016 .....	76
Figure 47	US Softwood Plywood Production Market Share 2000, 2006, 2016 .....	77
Figure 48	US Softwood Plywood Residual Chip Production Million Bone Dry Tons 2000, 2006, 2016 .....	78
Figure 49	US Regional OSB Production Billion Square Feet 2000, 2006, 2016 .....	80
Figure 50	US OSB Production Market Share 2000, 2006, 2016 .....	81
Figure 51	US Regional Structural Panel Production, Billion Square Feet 2000, 2006, 2016 .....	82
Figure 52	US Structural Panel Production Market Share 2000, 2006, 2016 .....	83
Figure 53	US Regional Hardwood Lumber Production, Billion Board Feet 2000, 2006, 2016 .....	85
Figure 54	US Regional Hardwood Plywood Production Billion Square Feet 2000, 2006, 2016 .....	86
Figure 55	US Paper And Paperboard Production, Million Tons 2000 To 2016 .....	88
Figure 56	US Regional Paper And Paperboard Production Million Tons 2000, 2006, 2016 .....	89
Figure 57	US Paper Product Production Market Share 2000, 2006, 2016 .....	90
Figure 58	Sawmill Conversion Gains 2000, 2006, 2016 .....	92

## Timber Supply

Figure 59	US Softwood Timber Supply By Region, Million Cubic Feet, 2000, 2005, 2016 (with table) .....	101
Figure 60	Softwood Timber Inventory By Region, Million Cubic Feet 2000, 2006, 2016 (with table) .....	103
Figure 61	Softwood Average Annual Timber Growth By Region, Million Cubic Feet 2000, 2006, 2016 (with table) .....	105
Figure 62	US Hardwood Timber Supply By Region, Million Cubic Feet 2000, 2006, 2016 (with table) .....	107
Figure 63	Hardwood Timber Inventory By Region, Million Cubic Feet, 2000, 2006, 2016 (with table) .....	109
Figure 64	Hardwood Average Annual Timber Growth By Region Million Cubic Feet, 2000, 2006, 2016 (with table) .....	111
Figure 65	US Softwood Timber Harvest Consumption By Competing Processes Million Cubic Feet And Percent Of Total .....	114
Figure 66	US Hardwood Timber Harvest Consumption By Competing Processes Million Cubic Feet And Percent Of Total .....	115
Figure 67	Canadian Softwood Timber Supply, Billion Cubic Feet .....	117

## Product Prices, Stumpage Prices, And Costs

	Page
Figure 68 Softwood Lumber Composite Prices By Region, Nominal Terms In Dollars Per Thousand Board Feet, 2000, 2001, 2006, 2016 .....	124
Figure 69 Softwood Lumber Manufacturing Costs By Region, Nominal Terms In Dollars Per Thousand Board Feet, 2000, 2001, 2006, 2016 .....	124
Figure 70 Softwood Plywood Composite Prices By Region, Nominal Terms In Dollars Per Thousand Square Feet, 2000, 2001, 2006, 2016 .....	126
Figure 71 Softwood Plywood Manufacturing Costs By Region, Nominal Terms In Dollars Per Thousand Square Feet, 2000, 2001, 2006, 2016 .....	125
Figure 72 Oriented Strand Board Composite Prices By Region, Nominal Terms In Dollars Per Thousand Square Feet, 2000, 2001, 2006, 2016 .....	128
Figure 73 Oriented Strand Board Manufacturing Costs By Region, Nominal Terms In Dollars Per Thousand Square Feet, 2000, 2001, 2006, 2016 .....	129
Figure 74 Softwood Composite Stumpage Prices By Region For Lumber Production, Nominal Terms In Dollars Per Thousand Board Feet, 2000, 2001, 2006, 2016 .....	132
Figure 75 Softwood Sawtimber Harvest Costs By Region, Nominal Terms In Dollars Per Thousand Board Feet, 2000, 2001, 2006, 2016 .....	132
Figure 76 Softwood Composite Stumpage Prices By Region For Plywood Production, Nominal Terms In Dollars Per Thousand Board Feet, 2000, 2001, 2006, 2016 .....	133
Figure 77 Softwood Composite Stumpage Prices By Region For OSB Production, Nominal Terms In Dollars Per Cord, 2000, 2001, 2006, 2016 .....	134
Figure 78 Inflation Annual Percentage Increase For Three Time Periods, 2000 To 2006, 2000 To 2011, 2000 To 2016 .....	136
Figure 79 Difference Between Annual Percentage Increase In Product Price And Inflation For Three Time Periods, 2000 To 2006, 2000 To 2011, 2000 To 2016 .....	136
Figure 80 Difference Between Annual Percentage Increase In Stumpage Price And Inflation For Three Time Periods, 2000 To 2006, 2000 To 2011, 2000 To 2016 .....	136

## Breakeven Analysis

		Page
Figure 81	Softwood Lumber Real Net Returns Per Thousand Board Feet Log Scale Input By Region, 2000 Dollars Per MBF .....	141
Figure 82	Softwood Plywood Real Net Returns Per Thousand Board Feet Log Scale Input By Region, 2000 Dollars Per MBF .....	142
Figure 83	Oriented Strand Board Real Net Returns Per Thousand Board Feet Log Scale Input By Region, 2000 Dollars Per Cord .....	144

