

Investment Management Group

Winter 2022 Info Session



NORTHWESTERN
UNIVERSITY

Tonight's Agenda

- Club Overview
- Sample Pitch
- Small Group Q&A
 - Recruitment Process
 - First-Year Experience
 - Professional Development
 - Diversity and Inclusion

What do we do as a Club?

We exist to make investors out of students who are willing to work hard and are eager to learn.

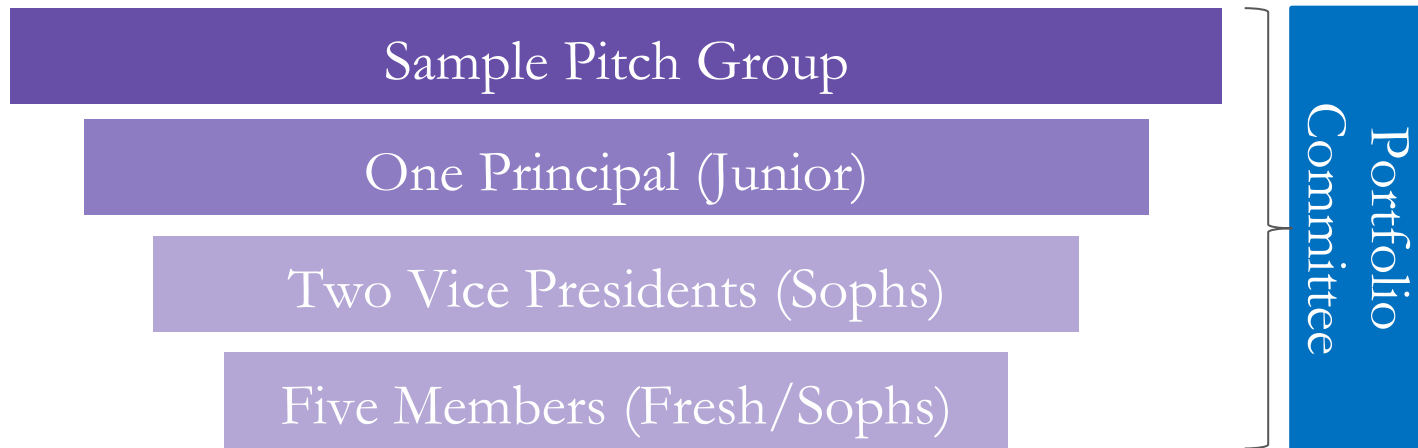
To this end, we spend each quarter understanding businesses with the aim to buy and sell securities for our portfolio.

Our core areas of research include:

- **Industry Research** (2 weeks): Understand the industry's dynamics and articulate our outlook on the space
- **Company Research** (4 weeks): Understand its competitive advantage, management, and operating profile; articulate our thesis on the business
- **Valuation & Presentation** (2 weeks): Build a dynamic model in excel to assess the value of the business, and present final conclusions to the club

How are we organized?

- We organize our members into six different pitch groups, each tasked with finding, researching, and valuing one company over the quarter
- Each pitch group is run by a Principal who has both mentoring and pitching responsibilities; two Vice Presidents lead the research process by working with members
- Our Club-wide Thursday meetings feature updates from pitch groups



Group structures designed in order to encourage lean teams (resulting in quick learning experiences) as well as opportunities for leadership positions.

Our Training Program

Investing requires two core skillsets:

- (1) Qualitative understanding of the asset / company
- (2) Quantitative ability to forecast future performance

We believe that pitch groups best facilitate the learning of the bucket (1) skillset

We have designed a case-based training program in excel to cover the bucket (2) skillset from our prior experience working at world-class investment banks and private equity firms.

Tiny Camp Fires		Case: KCM Base Case											CAGR / Δ bps		
Operating Model		Estimated											'15A-'20A	'21A-'26E	
(All figures in \$000's unless otherwise noted)		2015A	2016A	2017A	2018A	2019A	2020A	2021B	2022E	2023E	2024E	2025E	2026E		
S'mores Co															
S'mores Sold		1,000	1,100	1,210	1,331	1,398	1,467	1,541	1,618	1,699	1,784	1,873	1,966	8.0%	3.0%
Average S'more Price		2.00	2.04	2.08	2.12	2.25	2.38	2.52	2.66	2.80	2.95	3.11	3.28	11.1%	4.0%
S'More Revenue		2,000	2,244	2,518	2,825	4,542	4,959	5,416	5,914	6,458	7,052	7,701	8,410	19.9%	9.2%
% Growth															
S'mores Sold			10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%		
Average S'more Price			2.0%	2.0%	2.0%	5.2%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%		
S'More Revenue			12.2%	12.2%	12.2%	66.8%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%		
Crackers	(600)	(667)	(741)	(823)	(872)	(924)	(980)	(1,040)	(1,103)	(1,169)	(1,240)	(1,315)		9.0%	6.1%
Chocolate	(500)	(583)	(678)	(783)	(866)	(954)	(1,041)	(1,126)	(1,206)	(1,292)	(1,384)	(1,482)		13.8%	7.3%
Marshmallow	(750)	(842)	(944)	(1,058)	(1,132)	(1,211)	(1,296)	(1,389)	(1,487)	(1,593)	(1,706)	(1,827)		10.0%	7.1%
Special Sauce	-	-	-	-	(629)	(673)	(721)	(773)	(827)	(886)	(949)	(1,016)		N/A	7.1%
S'More Direct Cost		(1,850)	(2,091)	(2,362)	(2,666)	(3,499)	(3,762)	(4,040)	(4,327)	(4,623)	(4,940)	(5,278)	(5,640)	15.3%	6.9%
Pieces per S'more															
Crackers		2	2	2	2	2	2	2	2	2	2	2	2		
Chocolate		1	1	1	1	1	1	1	1	1	1	1	1		
Marshmallow		1	1	1	1	1	1	1	1	1	1	1	1		
Special Sauce		-	-	-	-	-	-	-	-	-	-	-	-		
Total Pieces		4	4	4	4	5	5	5	5	5	5	5	5	4.6%	-
Cost per Piece															
Crackers	(0.30)	(0.30)	(0.31)	(0.31)	(0.31)	(0.32)	(0.32)	(0.32)	(0.32)	(0.32)	(0.33)	(0.33)	(0.33)	1.0%	1.0%
Chocolate	(0.50)	(0.53)	(0.56)	(0.59)	(0.62)	(0.65)	(0.68)	(0.70)	(0.71)	(0.72)	(0.74)	(0.75)	(0.75)	5.4%	2.2%
Marshmallow	(0.75)	(0.77)	(0.78)	(0.80)	(0.81)	(0.83)	(0.84)	(0.86)	(0.88)	(0.89)	(0.91)	(0.93)	(0.93)	1.9%	2.0%
Special Sauce	N/A	N/A	N/A	N/A	(0.45)	(0.46)	(0.47)	(0.47)	(0.49)	(0.49)	(0.50)	(0.51)	(0.52)	N/A	2.0%
Total Pieces		(0.46)	(0.48)	(0.49)	(0.50)	(0.50)	(0.51)	(0.52)	(0.53)	(0.54)	(0.55)	(0.56)	(0.57)	2.1%	1.8%

The IMG Difference

Quarterly Pitches

- Long-term thinking
- Constant feedback
- Real-world simulation

Close-Knit Culture

- Dedicated mentorship
- Club Presidents know you

Unmatched Education

- Excel-based training
- Not offered in NU coursework
- Stock Competition 1st Places

Powerful Network

- ~100% Placement into the Investment Banking Club (<40% Acceptance Rate)
- Alumni placement at top firms

Our Outcomes



Morgan Stanley

J.P.Morgan



CREDIT SUISSE

BANK OF AMERICA



Deutsche Bank



MOELIS & COMPANY

EVERCORE

LAZARD

William Blair



McKinsey & Company



BAIN & COMPANY



Point72

CITADEL

facebook

amazon

Google

Class of 2022 Placement

Amazon - Financial Operations
Analysis Group - Management Consulting
Ares - Credit
Blackstone - Tactical Opportunities
BDT - Merchant Banking
BNP Paribas - Corporate Banking
Capital One - Strategy Consulting
Evercore - Investment Banking (2x)
Roland Berger - Management Consulting
Shore Capital Partners - Private Equity
Union Square Advisors - Investment Banking
William Blair - Investment Banking

Class of 2023 Placement

BGL - Investment Banking
Bank of America - Investment Banking
Blackstone - Credit
Blackstone - Private Wealth Solutions
Blackstone - Real Estate Debt Strategies
Blackstone - Tactical Opportunities
Citi - Investment Banking (2x)
Deutsche Bank - Investment Banking
Lazard - Investment Banking
Macquarie - Investment Banking
Moelis - Investment Banking
Morgan Stanley - Sales and Trading
PJT - Investment Banking
Morgan Stanley - Investment Banking
William Blair - Investment Banking

Class of 2024 Placement (Ongoing)

Bank of America - Investment Banking
McKinsey - Healthcare Consulting
Starwood Capital - Real Estate
PIMCO - Real Estate

What We're Looking For

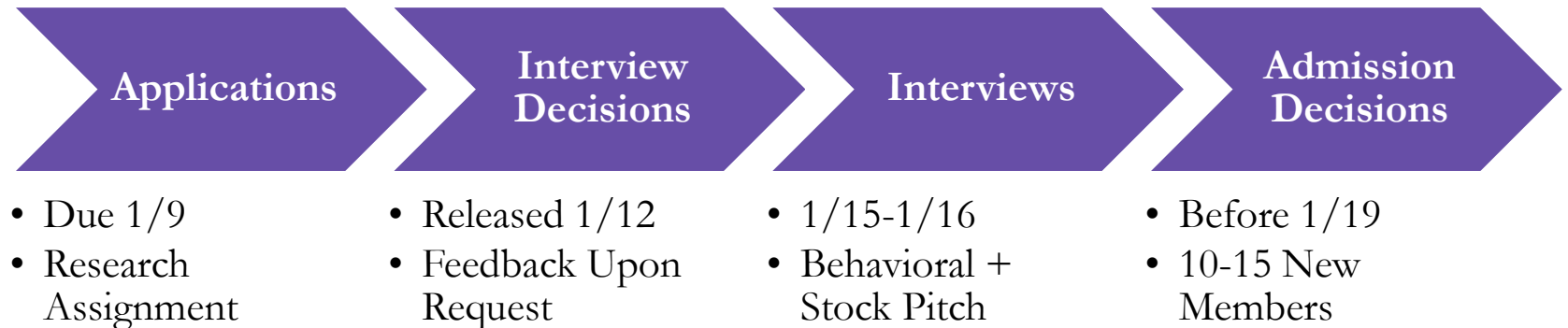
A Candidate's Qualities

- (0) ZERO prior finance or investing experience required
- (1) Smart
- (2) Willing to work hard
- (3) Able to conduct good research

Candidate Profiles

- First-year students
- Typically studying Economics, but also in Engineering, Computer Science, Pre-Med, Communications, Liberal Arts...
- Typically with career goals in Finance, but also in Consulting, Tech, Law, Business, Academia...

Recruitment Process



Contact NorthwesternIMG@gmail.com

Learn more at NUIMG.org

Register at tinyurl.com/NUIMG2022

Questions & Tips

What does the time commitment look like?

- 2 hours weekly training sessions
- 1 hour weekly pitch meetings
- 2+ hours weekly on investment research and pitch work
- Opportunities for mentorship and additional learning

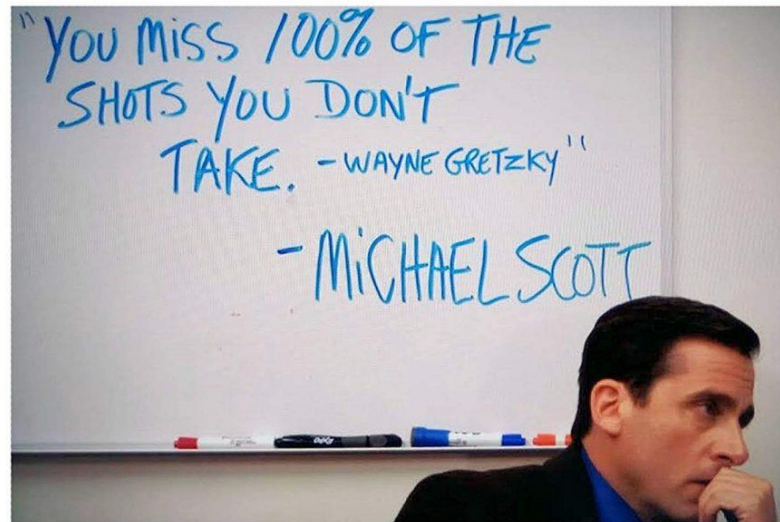
How do I find what to pitch?

- **Pitch what you know!** Don't start on the internet (e.g. Seeking Alpha, Motley Fool)
- Avoid unoriginal ideas (e.g., FAANG) or overly complicated companies—pitch what you can understand.
- No expectations on rigorous financial modeling—do what you can. We care more about qualitative analysis.
- Start with Company's Annual Report (10K)



Conclusion

- Apps due 1/9 (SUN) at midnight
- Email NorthwesternIMG@gmail.com
- Learn more at NUIMG.org
- Register at tinyurl.com/NUIMG2022



Networking and Q&A

- **Recruitment Process (Main Room)**
 - Victor, Wasim
- **First-Year Experience (Room 1)**
 - Ray, Hayden, Josh, Richard
- **Professional Development (Room 2)**
 - Scott, Allen, Anirudh, Jacob, Martin
- **Diversity and Inclusion (Room 3)**
 - Emily, Rachel, Katie, Christine

PGT Innovations (NYSE: PGTI)



Emily Seo, Martin Rusanov, Rachel Yoon, Anirudh Poranki



MSD Case Competition – November 2021

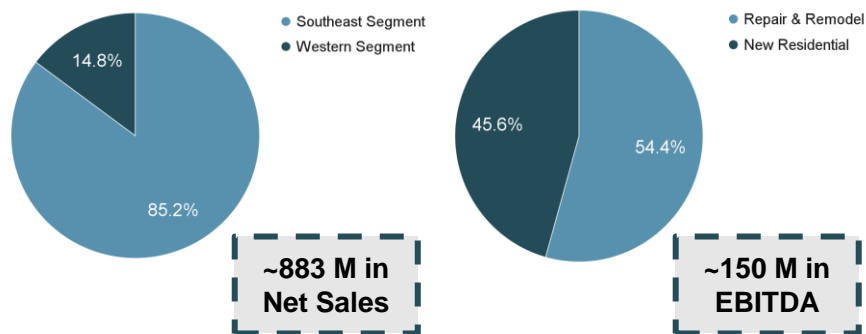
PGTI Overview

PGTI is a manufacturer of impact-resistant windows with 65% market share in Florida.

Business Overview

- PGTI manufactures and distributes high quality windows and doors with a primary focus on residential homes in Florida (75% of sales).
- Corporate Strategy / Capital Allocation is focused on growth through M&A and building new manufacturing assets.
- PGTI sells their product through a diversified base of 2,000 window distributors, building supply distributors, and window dealers. Top 10 customers account for ~20% of net sales in 2020.

End Markets and Revenue Drivers



Sources: PGTI's Investor Presentations (2011, 2021), PGTI Annual Report

Financial Overview

	HISTORICAL					CONSENSUS		CAGR		
	Dec-18	Dec-19	Dec-20	LTM	Dec-21	Dec-22	Dec-23	'10 - '19	17 - '19	22 - '24
Revenue	698.5	745.0	882.6	1,078.6	1,151.2	1,338.8	1,392.4	17.4%	20.7%	10.0%
Growth (%)	36.7%	6.7%	18.5%	22.2%	30.4%	16.3%	4.0%			
EBITDA	123.5	130.2	150.1	155.1	166.4	212.9	213.5	28.6%	24.4%	13.3%
Margin (%)	17.7%	17.5%	17.0%	14.4%	14.5%	15.9%	16.4%			
CapEx	(29.8)	(31.3)	(24.8)	(31.8)	(38.5)	(48.5)	(51.5)			
Pct. of Rev (%)	4.3%	4.2%	2.8%	2.9%	3.3%	3.6%	3.7%			
FCF	93.7	98.9	125.3	123.4	127.9	164.4	128.1			

Capitalization

Cap Structure	\$M	x EBITDA	FCF	Coupon	Int. Exp.
Revolver	-				
Term Loan	54.0			2.0%	1.1
Total Secured Debt	54.0	0.3x	0.3x		1.1
4 3/8 2029 Unsecureds	575.0			4.4%	25.2
Total Debt	629.0	3.0x	3.8x		26.2
(-) Cash	(114.0)				
= Net Debt	515.0	2.4x	3.1x		
(+) Market Cap	1,290.7	6.1x	7.9x		
= EV	1,805.7	8.5x	11.0x		
Share Price	\$ 21.67				
S/O	59,560				
Mkt Cap	\$1,291				
FCF / Share	\$2.35				
Yield	10.9%				

Investment Opportunity

We are long PGTI at \$21.67 for a 22% probability-weighted return and 2x upside/downside skew.

Thesis I: PGTI is a high-quality business

- Consistent revenue and EBITDA growth over past 10 years.
- High quality management team that has executed since IPO in 2006.
- Free cash flow generative, with ~10% levered FCF yield and 28% leverage.

Thesis II: PGTI is trading at a reasonable multiple

- Trading at 8.7x today, in-line with historical multiple of 9.1x.
- Trading at a 1.8x premium to its comps DOOR and JELD, in-line with history.

Thesis III: Consensus is overestimating the impact of labor inflation

- Consensus is pricing in a 150bp margin contraction from labor inflation.
- Based on primary research, we think the short-term impact will be 50 bps and the medium-term impact will be fully passed through.
- Every 50 bps of margin change results in a 5% impact to the stock.

Our differentiated view is driven by primary research found through our visit to PGTI's main factory and conversations with Florida window distributors.

Thesis I: PGTI is a high-quality business

PGTI has an attractive long run financial performance.

	HISTORICAL													FORECAST - CONSENSUS		CAGR		
	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19	12/31/20	LTM	12/31/21	12/31/22	12/31/23	'10 - '19	'17 - '19	'21 - '23
Revenue	175.7	167.3	174.5	239.3	306.4	389.8	458.6	511.1	698.5	745.0	882.6	1,078.6	1,151.2	1,338.8	1,392.4	17.4%	20.3%	22.4%
Growth (%)		(4.8%)	4.3%	37.1%	28.0%	27.2%	17.7%	11.4%	36.7%	6.7%	18.5%	22.2%	30.43%	16.3%	4.0%			
Organic Growth Rate		-4.8%	4.3%	37.1%	28.0%	27.2%	7.8%	11.4%	27.0%	-6.0%	5.9%							
Gross Profit	51.0	46.5	59.7	80.1	92.8	124.2	140.7	159.5	243.5	261.5	321.7	376.7	405.2	483.3	483.3	19.9%	28.0%	
Margin (%)	29.0%	27.8%	34.2%	33.5%	30.3%	31.9%	30.7%	31.2%	34.9%	35.1%	36.4%	34.9%	35.2%	36.1%	36.1%	31.9%	33.7%	
EBITDA	13.5	12.7	24.8	36.6	44.5	67.8	75.6	84.1	123.5	130.2	150.1	155.1	166.4	212.9	213.5	28.6%	24.4%	13.3%
Margin (%)	7.7%	7.6%	14.2%	15.3%	14.5%	17.4%	16.5%	16.5%	17.7%	17.5%	17.0%	14.4%	14.5%	15.9%	16.4%			
CapEx	(5.8)	(3.7)	(3.8)	(7.6)	(19.3)	(17.4)	(17.7)	(17.8)	(29.8)	(31.3)	(24.8)	(31.7)	(38.5)	(48.5)	(51.5)			
Pct. of Rev (%)	3.3%	2.2%	2.2%	3.2%	6.3%	4.5%	3.9%	3.5%	4.3%	4.2%	2.8%	2.9%	3.3%	3.6%	3.7%			
Pct. of EBITDA (%)	42.9%	29.1%	15.3%	20.6%	43.4%	25.7%	23.4%	21.2%	24.1%	24.0%	16.5%	20.4%	23.1%	22.8%	24.1%			
FCF	7.7	9.0	21.0	29.1	25.2	50.4	57.9	66.3	93.7	98.9	125.3	123.5	127.9	164.4	128.1			
Net Income	(6.9)	(6.0)	8.8	24.8	20.7	29.3	26.8	30.3	59.7	48.7	55.2	51.3	61.0	106.9	109.5			
EPS	\$ (0.14)	\$ (0.11)	\$ 0.16	\$ 0.47	\$ 0.42	\$ 0.58	\$ 0.53	\$ 0.58	\$ 1.11	\$ 0.83	\$ 0.93	\$ 0.85	\$ 0.99	\$ 1.41	\$ 1.66	20.1%	26.6%	29.5%

Key Observations

- 1 Consistent revenue, EBITDA, and margin expansion. Company's last negative growth year was in 2011.
- 2 Growth is driven in part by acquisitions, but these acquisitions have been highly accretive.
- 3 Consistently generates positive free cash flow.
- 4 High quality management team: since IPO in 2011, EPS has compounded at a 20% annual growth rate since 2012.

Sources: PGTI 10-k (2010-2020), FactSet

Thesis I: PGTI is a high-quality business

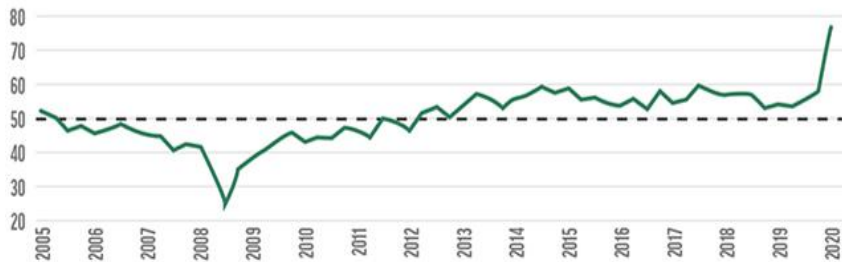
PGTI serves a stable and growing underlying market.

Housing Overview

- The housing market, especially in Florida, has seen strong & consistent growth over the last decade due to favorable tax laws, immigration, and climate.
- Remodeling demand has also seen consistent growth and recently has increased due to work from home.
- These trends allow PGTI to grow both of its revenue segments - particularly within the Florida region it dominates.

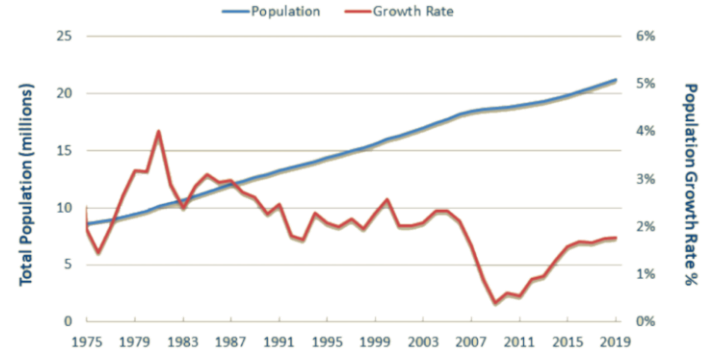
NAHB National Remodeling Market Index

Current Market Conditions = 77.0



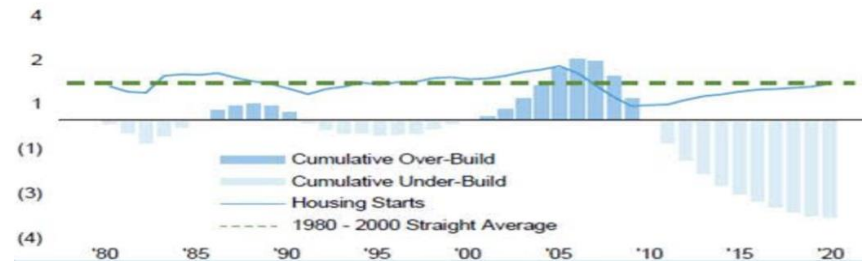
Sources: NAHB, LEK Consulting, University of Florida, PGTI primary research

Florida Population & Growth Rate



Housing Starts & Excess Inventory

(Units in mms)

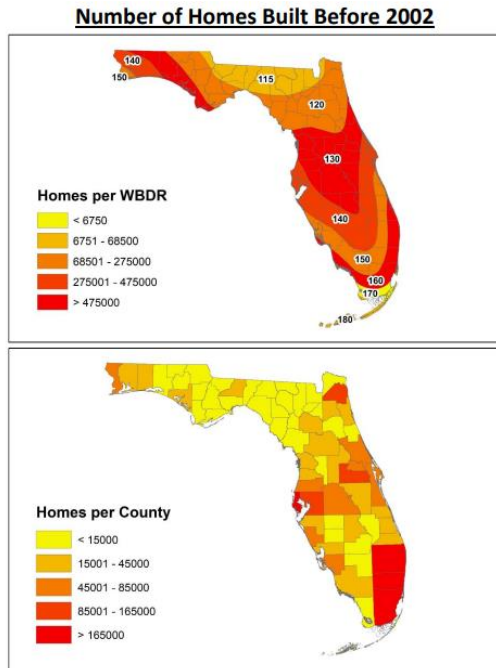


Thesis I: PGTI is a high-quality business

PGTI's addressable market is both underpenetrated and expanding, creating ample room for sustainable growth.

Underpenetrated Addressable Market

~70% of homes in Florida were built prior to the creation of the Florida Building Code in 2002.

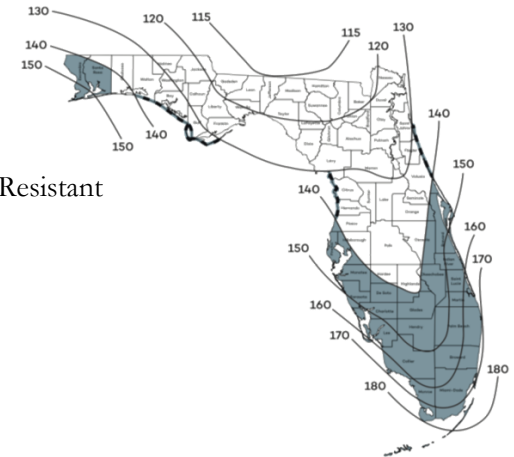


Expanding Addressable Market

Key:

Wind Speeds that Residential Homes should be able to withstand

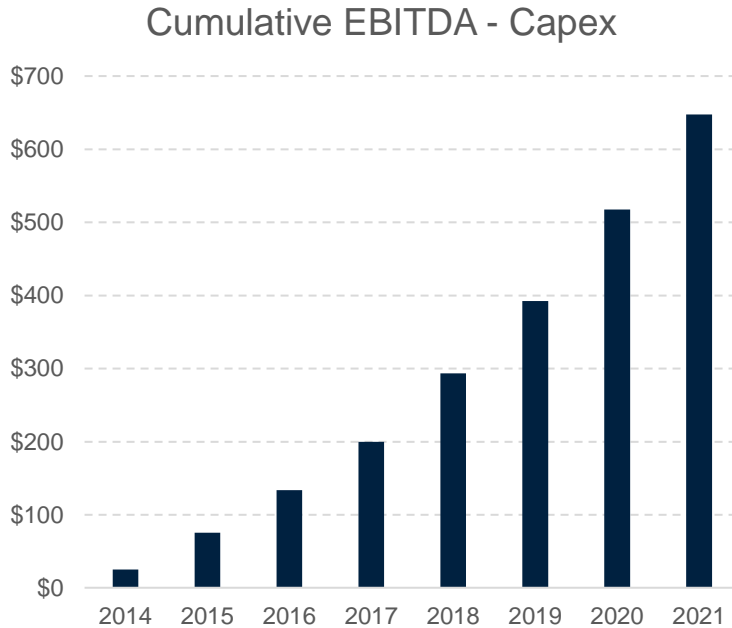
Regions where Impact Resistant Windows are required



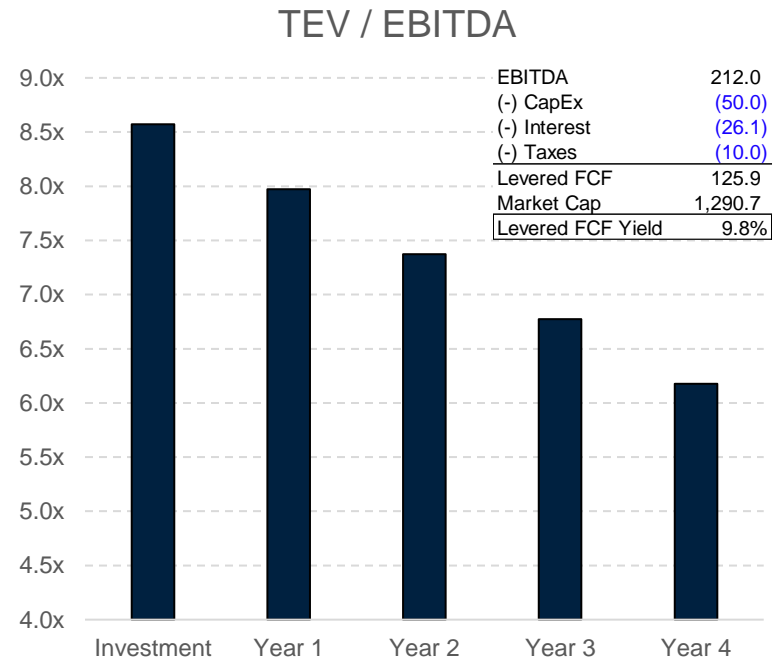
Thesis I: PGTI is a high-quality business

PGTI has stable levered free cash flow generation.

Consistent history of positive free cash flow...



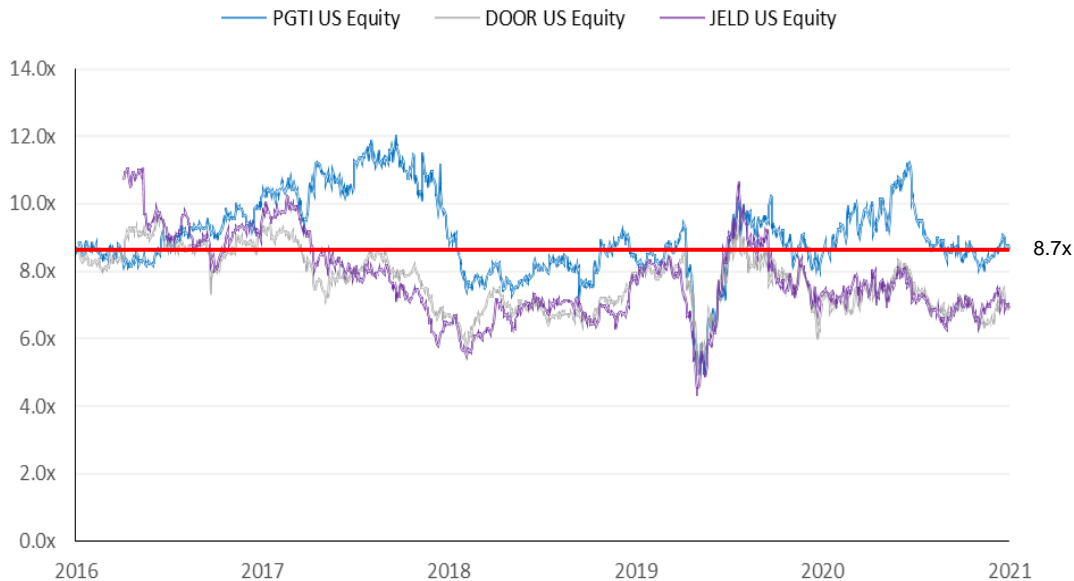
...leads to natural reduction of cost basis over time



Thesis II: PGTI is trading at a reasonable multiple

PGTI is historically valued from 8-12x NTM EBITDA, relative to our creation multiple today of 8.7x.

DOOR AND WINDOW MANUFACTURER EV/FWD EBITDA



Observations

- Historical average multiple of 9.1x compared to creation multiple today of 8.7x.
- Historically PGTI has traded at a 1.5x premium to commoditized comparables DOOR and JELD - Compares to a 1.8x premium today.
- Premium is justified: 5-year revenue growth is 4% and 5% for JELD and DOOR respectively vs. 18% for PGTI

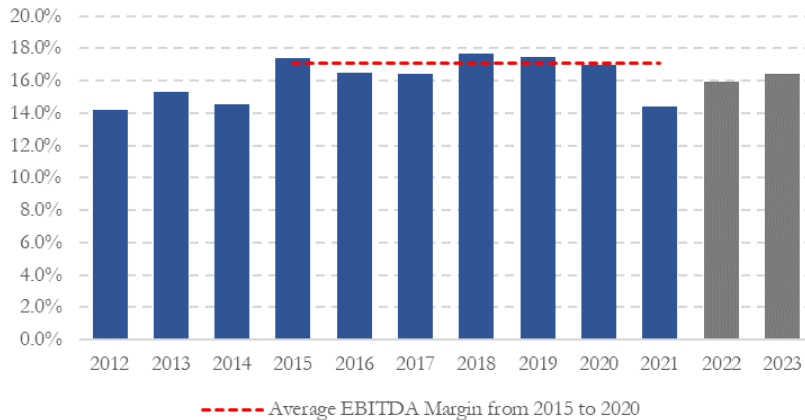
Thesis III: Consensus is overestimating the impact of labor inflation

Margins have grown consistently YoY & we see signs of margin reversion.

Investor View

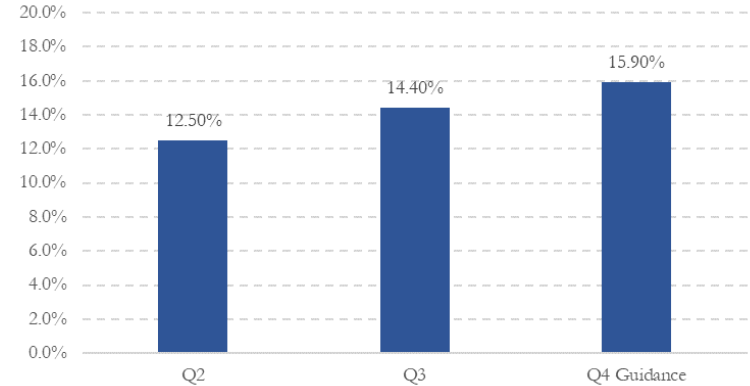
- Due to Q1/Q2 margin contraction, sell-side analysts unfairly misestimate future impact of inflationary pressure.
- However, we believe that margin reversion will occur in Q4 & FY 2022 due to pricing power & durable cost structure.

EBITDA Margin



Based on Consensus

2021 Quarterly Margin Reversion



Thesis III: Consensus is overestimating the impact of labor inflation

We visited PGTI's factory and spoke with their employees and their local distributors.

Photos from the Research Trip



Findings & Insights

Market is overestimating impact of labor shortages

- Already paying more than minimum wage.
- After a new Amazon facility opened in the region, PGTI faced minimal employment issues due to its “small firm culture”.

Every 100bps of margin impacts returns by ~\$2 / 10%

Returns Under Revenue Growth and Margin Sensitivities				
	(5.0%)	5.0%	15.0%	25.0%
\$ 28.91				
13.0%	\$ 14.70	\$ 17.36	\$ 20.02	\$ 22.68
14.0%	\$ 16.65	\$ 19.51	\$ 22.37	\$ 25.24
15.0%	\$ 18.59	\$ 21.66	\$ 24.73	\$ 27.79
16.0%	\$ 20.53	\$ 23.81	\$ 27.08	\$ 30.35
17.0%	\$ 22.48	\$ 25.95	\$ 29.43	\$ 32.91
18.0%	\$ 24.42	\$ 28.10	\$ 31.78	\$ 35.46

Returns Under Revenue Growth and Margin Sensitivities				
	(5.0%)	5.0%	15.0%	25.0%
33.4%				
13.0%	(32.2%)	(19.9%)	(7.6%)	4.7%
14.0%	(23.2%)	(10.0%)	3.2%	16.5%
15.0%	(14.2%)	(0.1%)	14.1%	28.3%
16.0%	(5.3%)	9.9%	25.0%	40.1%
17.0%	3.7%	19.8%	35.8%	51.9%
18.0%	12.7%	29.7%	46.7%	63.7%

Thesis III: Consensus is overestimating the impact of labor inflation

PGTI has the ability to offset wage inflation.

Pricing Power

- PGTI's **dominant market share, regulatory demand driver, and non-commoditized product** creates pricing power.
- Planned price increases through 2H 2021 & 1H 2022; Consistent backlog shows high demand regardless.

Raw Material Stability

- **Aluminum:** The number one cost driver is **70% hedged** against for future price increases in 2022.
- **Vertical Integration:** Acquisition of ECO for in-house glass production.

Labor Cost Stability

- Majority of Q1/Q2 cost increase driven by increased hiring & specialized training. The increased sales growth from these costs will be reflected in future quarters.
- Labor force is primarily specialized workers & not minimum wage workers.

Quantifying The Thesis

PGTI has a 22% probability-related return opportunity with 2x upside/downside skew.

Scenario Analysis	Bear	Base	Bull	Catastrophic
2023E Revenue	1,379.0	1,519.6	1,579.8	1,004.1
% Change from 2022E	3.0%	13.5%	18.0%	(25.0%)
2023E EBITDA	200.0	258.3	276.5	75.3
% Margin	14.5%	17.0%	17.5%	7.5%
Multiple	8.0x	9.1x	9.1x	5.0x
EV	1,599.7	2,350.8	2,515.9	376.6
(-) Debt	(629.0)	(629.0)	(629.0)	(629.0)
= Equity Value	970.7	1,721.8	1,886.9	(252.4)
Share Price	\$ 16.30	\$ 28.91	\$ 31.68	N/A
Up/Down	(24.8%)	33.4%	46.2%	
Probability	25.0%	50.0%	25.0%	
Probability Weighted Return		22.1%		
FCF	148.5	206.8	225.0	23.8
DSCR	5.7x	7.9x	8.6x	0.9x

Returns Under Revenue Growth and Margin Sensitivities					
\$ 28.91	(5.0%)	5.0%	15.0%	25.0%	
13.0%	\$ 14.70	\$ 17.36	\$ 20.02	\$ 22.68	
14.0%	\$ 16.65	\$ 19.51	\$ 22.37	\$ 25.24	
15.0%	\$ 18.59	\$ 21.66	\$ 24.73	\$ 27.79	
16.0%	\$ 20.53	\$ 23.81	\$ 27.08	\$ 30.35	
17.0%	\$ 22.48	\$ 25.95	\$ 29.43	\$ 32.91	
18.0%	\$ 24.42	\$ 28.10	\$ 31.78	\$ 35.46	

Returns Under Revenue Growth and Margin Sensitivities					
33.4%	(5.0%)	5.0%	15.0%	25.0%	
13.0%	(32.2%)	(19.9%)	(7.6%)	4.7%	
14.0%	(23.2%)	(10.0%)	3.2%	16.5%	
15.0%	(14.2%)	(0.1%)	14.1%	28.3%	
16.0%	(5.3%)	9.9%	25.0%	40.1%	
17.0%	3.7%	19.8%	35.8%	51.9%	
18.0%	12.7%	29.7%	46.7%	63.7%	

Key Drivers Outlook

- **Revenue Growth:** Driven by Florida housing market trends and building code compliance.
- **EBITDA Margin:** Labor shortage concerns are inflated and PGTI has product pricing power.

Where Could We Be Wrong?

Risk	Mitigant
<p>Florida Housing Market & Interest Rate Risk</p>	<ul style="list-style-type: none"> • Florida’s growing population needs housing in some form and these buildings will have impact windows. • PGTI has the ability to shift between R&R and New Home Construction segments. • Increasing building code compliance is insensitive to interest rates.
<p>Labor Shortages</p>	<ul style="list-style-type: none"> • PGTI primarily employs specialist labor compared to minimum wage workers where the greatest wage pressure exists. • After a new Amazon facility opening, PGTI faced minimal employment issues due to its higher salaries and “small firm culture”. • <u>Already priced in:</u> Market is already forecasting margin degradation. PGTI has announced price increases.
<p>Material Input Costs Inflation & Non-Labor Shortages</p>	<ul style="list-style-type: none"> • Aluminum: 70% of Aluminum costs are hedged for 2021 giving PGTI a cost advantage against industry. • Glass: Acquisition of ECO allows for vertical integration & in-house production of glass. • In-house development of both interlayers & screens for sliding doors.

Conclusion


PGTI is in a high growth market, has deep regulatory protections & has dominant market share.

What do you need to believe?	Why are the assumptions reasonable?	What does this mean?
<ul style="list-style-type: none">PGTI's growth is sustainable due to changes in building codes & the Florida housing market.	<ul style="list-style-type: none">Consensus revenue growth of 4% is below historical organic growth.The company has outperformed the bull case growth assumption five times in the last ten years.	<ul style="list-style-type: none">Every 5% change in revenue is worth \$1.30/share (~7%)
<ul style="list-style-type: none">PGTI is wage-cost inflation resistant and won't see permanent margin impairment.	<ul style="list-style-type: none">Management consistently improves margins year over year.Our Bull Case margin assumption are still below 2018/2019 margins.	<ul style="list-style-type: none">Every 1% improvement in margins is worth \$2.30/share (~10%).

Thank You - Questions

MSD Case Competition


NYSE: PGTI

A decorative graphic on the right side of the slide consisting of two overlapping triangles. The upper triangle is a medium blue color, and the lower triangle is a darker teal color. They meet at a diagonal line that runs from the bottom left towards the top right.

Appendix

MSD Case Competition

NYSE: PGTI

A decorative graphic on the right side of the page consisting of two overlapping triangles. The top triangle is a medium blue color, and the bottom triangle is a darker teal color. They meet at a diagonal line that slopes upwards from the bottom right towards the top right.

Cost Structure Analysis

Revenues	FY 2020	%
New Construction	402.0	45.6%
Repaid / Remodel	480.0	54.4%
Total Revenue	882.0	100.0%
(-) COGS	(582.0)	66.0%
= Gross Profit	300.0	34.0%
SG&A	(191.0)	21.7%
Other Operating Expense	(12.0)	1.4%
= Operating Income	109.0	12.4%

~\$45M of D/A included in COGS and SG&A

Estimated Wage Expense	
Average Wage	\$ 16.26
Number of Employees	3,500.0
% Wage Employees	80.0%
Number of Wage Employees	2,800.0
Average Annual Total Comp	39,000.0
Estimated Wage Expense	109.2
% of Total COGS	18.8%
% of Revenue	12.4%

~45% above minimum wage

Estimated Materials		
Glass	43.0%	203.3
Aluminum	35.0%	165.5
Resins	5.0%	23.6
Other	13.0%	61.5
Total Materials		453.9
% of COGS		78.0%
% of Revenue		51.5%

Inourced

70% Hedged

Impact-Resistant Window Industry Overview

PGTI's core market is growing through housing trends and insurance requirements.

Overview

- The window & door industry generates annual sales of \$67B.
- Anticipated growth of 5-6% annualized due to further adoption and complexity.
- Penetration rates in natural disaster-prone markets is ~31%.

Product Value Proposition

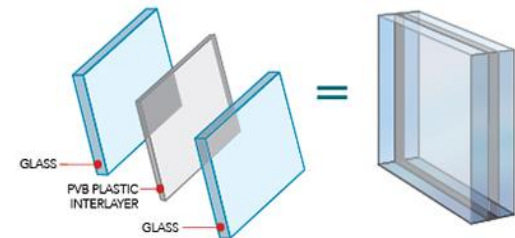
- Provide sound insulation, UV radiation protection, energy savings, security from burglary, safety from shattering, and hurricane resistance.
- In South Florida, building codes require homeowners' insurance providers to give discounts on hurricane premiums.

Recent Trends

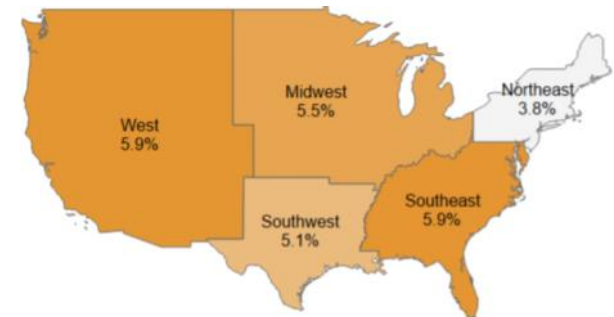
- Tailwinds caused by acceleration of the Florida housing market (majority of industry sales).
- Florida new housing starts up ~40-50% Y/Y, Repair and Remodel growth of 9% in 2021.



Product Description



Demand Growth



Hurricane Intensification and Building Code Changes

Adoption of Impact Resistant Windows in Florida is increasing due to building code changes.

1 Hurricane Activity is Increasing

- Northwestern and Panhandle Florida are seeing increased hurricane frequency and damage.
- This is caused by increasingly hot weather in the gulf. In the next five years, there is a 90% likelihood of experiencing the hottest year on record.
- Hotter temperatures lead to greater heat energy which lead to more intense hurricane wind speeds which damage windows and structures.

2 That Drives Changes in Building Codes

- Hurricane Andrew (1992) and Michael (2018) both led to strengthening of building codes.
- Next major revision to the Florida Building Code is currently in progress. CEO of PGTI sits on the Commission Board and majority of board supports tighter regulations.

3 That drives sustainable increases in TAM

- Currently Florida Building Code §1609.1.2 only requires Impact Resistant Windows in South Florida where traditionally hurricanes have done more damage. For example, Miami-Dade and Broward Counties require property owners to have a Notice of Acceptance to showcase compliance. As a result, penetration of IR windows is 27%.

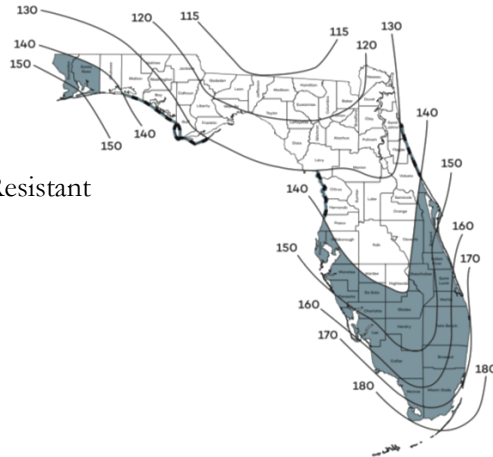
Expansion of Building Codes drives TAM increase

Impact Window Regions are based on wind intensity during hurricanes. Wind Zones are determined by the Florida Building Commission. As the panhandle is increasingly affected by high intensity wind, these codes there will naturally become more stringent.

Wind-Borne Debris Region 2020 - Category II

Key:
 Wind Speeds that Residential Homes should be able to withstand

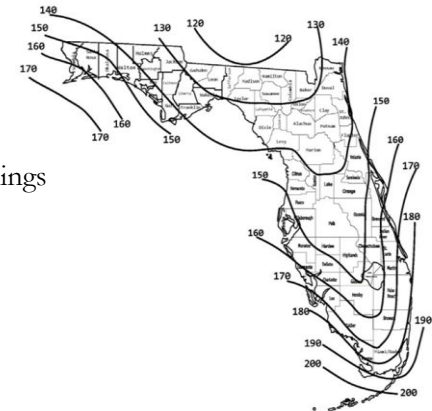
Regions where Impact Resistant Windows are required



- Wind-Borne Debris regions for Single Family Homes has not experienced a revision since 2010.
- The Florida Panhandle is projected to experience more intense hurricanes as a result of warmer ocean temperatures.

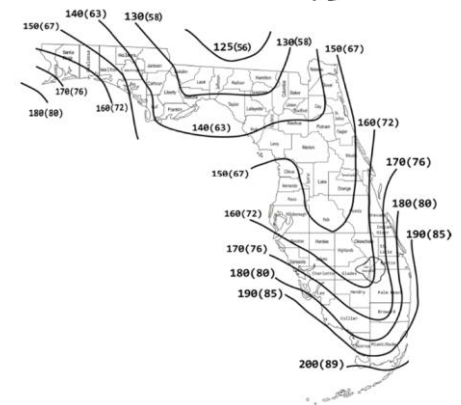
Wind-Borne Debris Region 2017 - Category IV

Key:
 Wind Speeds that Critical Buildings should be able to withstand



Wind-Borne Debris Region 2020 - Category IV

- Changes made in the aftermath of Hurricane Michael (2018).



Comparable Company Analysis

Company Name	Price as of		EqV	EV	Total Debt	Cash	LTM 11/07/2020			LTM YoY Growth		EV / EBITDA NTM
	11/16/2021	% of 52 Week High					Sales	EBITDA	Margin	Revenue	EBITDA	
Window & Door Manufacturer												
Jeld-Wen Holding (\$JELD)	\$ 26.70	84.8%	2,552.0	3,942.0	1,715.6	444.9	4,153.0	312.9	7.5%	11.6%	29.7%	7.3x
Masonite (\$DOOR)	\$ 116.85	88.4%	2,837.0	3,300.0	949.8	328.6	2,134.3	299.1	14.0%	17.8%	14.1%	7.0x
Low			2,552.0	3,300.0	949.8	328.6	2,134.3	299.1	7.5%	11.6%	14.1%	7.0x
Mean			2,694.5	3,621.0	1,332.7	386.8	3,143.6	306.0	10.8%	14.7%	21.9%	7.2x
High			2,837.0	3,942.0	1,715.6	444.9	4,153.0	312.9	14.0%	17.8%	29.7%	7.3x
Other Building Products												
Armstrong (\$AWI)	\$ 113.34	99.0%	5,450.0	5,929.0	666.4	94.3	945.1	271.4	28.7%	12.5%	-7.4%	13.8x
Cornerstone (\$CNR)	\$ 16.80	85.1%	2,225.0	5,180.0	3,567.0	89.0	4,728.2	572.5	12.1%	7.6%	14.1%	6.9x
Builders FirstSource (\$BLDR)	\$ 69.00	99.5%	13,439.0	15,638.0	2,878.4	224.7	7,477.0	505.5	6.8%	95.0%	216.9%	7.3x
TopBuild Corp (\$BLD)	\$ 276.88	98.4%	9,156.0	9,528.0	699.1	327.9	2,658.9	388.7	14.6%	18.3%	36.4%	12.2x
Low			2,225.0	5,180.0	666.4	89.0	945.1	271.4	6.8%	7.6%	-7.4%	6.9x
Mean			7,567.5	9,068.8	1,952.7	184.0	3,952.3	434.5	15.6%	33.3%	65.0%	10.1x
Median			7,303.0	7,728.5	1,788.8	159.5	3,693.5	447.1	13.4%	15.4%	25.3%	9.8x
High			13,439.0	15,638.0	3,567.0	327.9	7,477.0	572.5	28.7%	95.0%	216.9%	13.8x
PGT Innovations	\$22.29	79.3%	1,358.0	1,833.3	474.5	47.6	796.4	132.4	16.6%	27.7%	8.3%	8.6x

Commentary:

PGTI currently trades at a **8.6x** EV/EBITDA compared to **7.3x** median (Window & Door Manufacturers).

- Focus on **high growth** impact resistant industry, **barriers to entry** & exposure to **Florida housing market** justifies these multiples.

PGTI's EBITDA margins at **16.6%** compared to **13.1%** median (Window & Door Manufacturers).

- Shows that PGTI has effective **scale & niche** products that drives improved margins compared to peer firms.

Multiple Sensitivity

Margin Growth

Returns Under Margin Growth and Multiple Sensitivity					
\$	28.91	14.0%	16.0%	18.0%	20.0%
7.0x	\$ 14.44	\$ 18.01	\$ 21.59	\$ 25.16	
7.5x	\$ 16.23	\$ 20.06	\$ 23.88	\$ 27.71	
8.0x	\$ 18.01	\$ 22.10	\$ 26.18	\$ 30.26	
8.5x	\$ 19.80	\$ 24.14	\$ 28.48	\$ 32.81	
9.0x	\$ 21.59	\$ 26.18	\$ 30.77	\$ 35.36	
9.5x	\$ 23.37	\$ 28.22	\$ 33.07	\$ 37.92	

Returns Under Margin Growth and Multiple Sensitivity					
	14.0%	16.0%	18.0%	20.0%	
7.0x	-33.4%	-16.9%	-0.4%	16.1%	
7.5x	-25.1%	-7.5%	10.2%	27.9%	
8.0x	-16.9%	2.0%	20.8%	39.6%	
8.5x	-8.6%	11.4%	31.4%	51.4%	
9.0x	-0.4%	20.8%	42.0%	63.2%	
9.5x	7.9%	30.2%	52.6%	75.0%	

Revenue Growth

Returns Under Revenue Growth and Multiple Sensitivity					
\$	28.91	(5.0%)	5.0%	15.0%	25.0%
7.0x	\$ 14.85	\$ 17.53	\$ 20.20	\$ 22.88	
7.5x	\$ 16.67	\$ 19.53	\$ 22.40	\$ 25.27	
8.0x	\$ 18.48	\$ 21.54	\$ 24.60	\$ 27.65	
8.5x	\$ 20.30	\$ 23.55	\$ 26.79	\$ 30.04	
9.0x	\$ 22.11	\$ 25.55	\$ 28.99	\$ 32.43	
9.5x	\$ 23.93	\$ 27.56	\$ 31.19	\$ 34.82	

Returns Under Revenue Growth and Multiple Sensitivity					
	(5.0%)	5.0%	15.0%	25.0%	
7.0x	-31.5%	-19.1%	-6.8%	5.6%	
7.5x	-23.1%	-9.9%	3.4%	16.6%	
8.0x	-14.7%	-0.6%	13.5%	27.6%	
8.5x	-6.3%	8.7%	23.6%	38.6%	
9.0x	2.0%	17.9%	33.8%	49.7%	
9.5x	10.4%	27.2%	43.9%	60.7%	

Takeaway

- PGTI has greater upside potential when considering multiple expansion.
- 1.0x multiple expansion leads to 20% share price appreciation.

DCF Analysis

Implied Share Price (Gordon Growth Method)

PV of FCF	518.4
Terminal Value	2,672.1
Discount Rate	7.56%
Terminal Growth Rate	2.50%
<hr/> PV of Terminal Value	<hr/> 1,855.94
Enterprise Value	2,374.3
(-) Total Debt	474.3
(-) Lease	299.4
(+) Cash and Eqv	100.3
<hr/> Equity Value	<hr/> 1,701.0
Shares Outstanding	60.3
 Implied Share Price	<hr/> <hr/> 28.20
Current Share Price as of 10/25	21.67
Implied Return on Investment	30.1%