Applied Investment Management (AIM) Program

AIM Class of 2018 Equity Fund Reports
Spring 2017

Date**:* Friday, April 21st | ***Time: *Various* | ***Location:*** *Chicago Firms*

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These student presentations are an important element of the applied learning experience in the AIM program. The students conduct fundamental equity research and present their recommendations in written and oral format – with the goal of adding their stock to the AIM Equity Fund. Your comments and advice add considerably to their educational experience and is greatly appreciated. Each student will spend about 5-7 minutes presenting their formal recommendation, which is then followed by about 8-10 minutes of Q & A.

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PGT Innovations, Inc. (PGTI)
April 21, 2017

Jordan Luczaj — Domestic Industrials

PGT Innovations, Inc. (NYSE: PGTI) manufactures and sells a variety of custom windows and doors. Their revenues are made up of two segments Repairs and Remodeling and New Construction, making up 59% and 41% of revenues, respectively. They also offer two diverse types of products: impact resistant and non-impact resistant, representing 83% and 17% of revenues. PGTI operates in Canada, Central America, the Caribbean, and the United States. They focus on hurricane inflicted areas, especially in the southern United States, where they hold 65% of the impact resistant market share in Florida. PGTI has three different business branches, (PGT, CGI, and WinDoor), that target three different markets. PGT Innovations manufactures their products in Orlando, Miami, and North Venice, Florida. They were founded on December 16, 2003 and are headquartered in North Venice, Florida.

				FY: December	2015	2016	2017E	2018E
Price ($): (4/19/17)	$ 10.40	Beta:	1.23	Revenue (Mil)	389,810.00	458,550.00	499,819.50	537,305.96
Price Target ($):	13.80	WACC	8.68%	% Growth	27.23%	17.63%	9.00%	7.50%
52WK H-L ($):	$12.49-$9.38	M-Term Rev. Gr Rate Est:	6.30%	Gross Margin	30.56%	30.55%	30.50%	31.00%
Market Cap (mil):	508.00	M-Term EPS Gr Rate Est:	7.33%	Operating Margin	13.07%	12.89%	12.25%	12.75%
Float (mil):	47.74	Debt/Equity:	187.05%	EPS (Cal)	$ 0.47	$ 0.47	$ 0.47	$ 0.54
Short Interest (%):	4.30%	Debt/EBITDA (ttm):	3.41x	FCF/Share (Cal)	$ 0.25	$ 0.45	$ 0.92	$ 0.88
Avg. Daily Vol (mil):	0.31	ROA:	6.10%	P/E (Cal)	24.36x	24.39x	22.10x	19.27x
Dividend ($):	0.00	ROE:	19.80%	EV/EBITDA (Cal)	11.42x	10.54x	8.94x	7.97x
Yield (%):	0.00%	ROIC:	7.00%					

Recommendation

PGTI has shown enormous growth over the last five years, evidenced by a 5-year revenue CAGR of 21%. The competition in the window and door market, particularly in Florida, is highly fragmented; however, PGTI has a much larger market share than any competitor in the region by differentiating themselves with a 98% on-time delivery and a highly diversified and loyal customer base. PGTI offers three different brands and target markets: residential (PGTI), commercial (CGI), and luxury (WinDoor). Florida has provided a great market for their impact resistant windows and doors – the state is incurring increasing populations, decreasing unemployment rates, and increases in housing starts and completions. People are moving to Florida, principally to the coasts, exemplified by US Census Bureau data that shows over ten coastal counties growing by more than 5,000 people in 2016. From February 2016 to February 2017, the number of people employed increased by almost 250,000, a 3.0% year over year change, and recently, personal income and disposable income have risen by 0.4%. Additionally, between January 2017 and February 2017, U.S. housing starts were up 3.0% and 6.2% year over year. Furthermore, hurricanes are always a concern in the southern US, and since 1916, Florida has been hit by more tropical storms than any other state. Experts are projecting that hurricanes will intensify during the 21st century, with some predicting a 75% increased frequency of category 4 and 5 hurricanes. Hurricanes continually threaten Florida's coasts, and citizens are choosing to protect their families using high quality impact resistant products. Considering the strong real estate market, low probability of rapid recession, and increasing hurricane intensity, it is recommended that PGT Innovations, Inc. be added to the AIM Equity Fund with a target price of $13.80, signifying a 32.73% upside.

Investment Thesis

- **Population Migration to the Sunshine State.** Since coming out of the recession, the Florida housing market has continued to respond positively, and many people are choosing to migrate south, especially to Florida. During 2015 to 2016, the south was the largest growing US region, 1,280,368 people, and Florida accounted for 367,525 people or about 29% of the total southern migration. This was the largest growth in the past six years. Due to this population growth, single family housing starts were up 15%, and are estimated to grow at around 15-17% in 2017.

- **Increased Hurricane Intensity Due to Global Warming.** Recent studies have shown that as global warming increases and the ozone layer evaporates, the seas are warmed which is causing more category 4 and 5 hurricanes. A study conducted from 1984 to 2012 found that wind speeds in tropical storms had increased by 3 mph, while hurricane activity decreased by less than one percent. The warmer seas are also creating higher sea levels, which have contributed to increased hurricane intensity. Over the next century, a 1-4 feet increase of sea level is anticipated. However, even for those people that do not believe in climate change, when the seas are cooler there seems to be an increased hurricane activity, but with less high intense storms. It is a tradeoff between more intensity or more volume.
- **Scale of Operations and Implementation of Two TPS Systems.** PGTI has grown rapidly over the last three years, at a three-year average of 24.3%. They are now trying to increase their margins by implementing two new Thermal Plastic Spacer (TPS) Systems. This innovative technology is cutting edge and will produce higher quality insulated glass. The first system was made fully active in 2016, and the other should be operational by the end of 2Q 2017. After workers become acclimated to the updated technology, this should result in higher efficiency and less excess waste.

Valuation

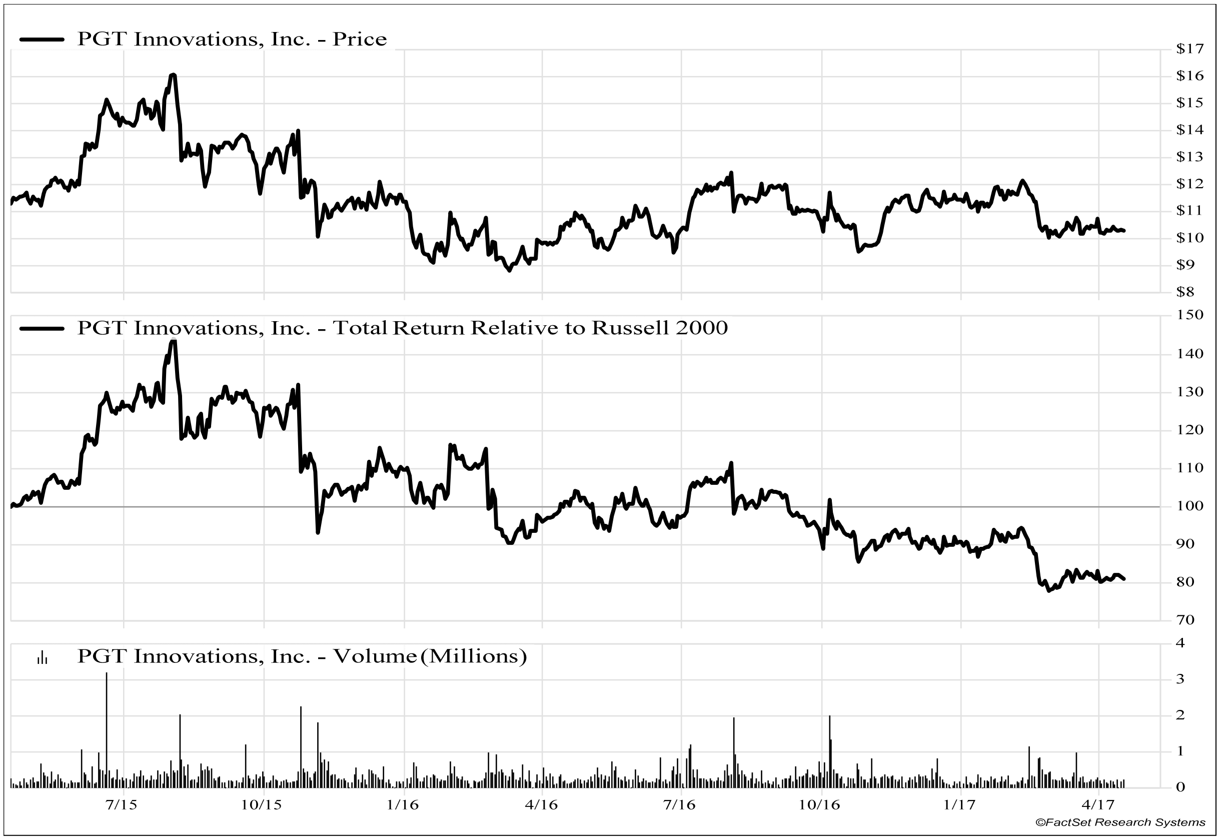
To reach an intrinsic value for PGTI, a five year DCF model was constructed. By using an EBITDA multiple of 9.0x and a WACC of 8.68%, an intrinsic value of $16.55 was reached. The sensitivity analysis applied to the EBITDA Multiple and WACC ranged from $14.65-18.86. Additionally, an EV/EBITDA multiple valuation and P/E valuation were conducted. EV/EBITDA was applied using 2017E EBITDA of $81.22 million and peer comparable multiple of 8.95x, resulting in a valuation of $14.37. Lastly, a P/E valuation was calculated using EPS 2017E of $0.47, resulting in a target price of $7.75. By weighting the DCF model 50%, EV/EBITDA 25%, and P/E 25%, a price target of $13.80 was reached, yielding a 32.73% upside. The firm does not pay a dividend.

Risks

- **Reduction in the Florida Real Estate Market and Chance of Recession.** PGT Innovations relies heavily on the Florida real estate market, population expansion, and overall spending, considering this is their primary market and represents 91% of sales. A recession could cause a decrease in the consistent population migration that Florida has seen throughout the post-recession years. This would decrease new construction projects and remodels because of less disposable income.
- **Changing Governmental Regulations and Building Codes.** PGTI’s products are held to the highest building codes and standards in the state of Florida. If these regulations are increased or changed then this could result in PGTI having to spend more money on testing, manufacturing, and transportation of products. If product standards are changed then many people could use alternatives to impact resistant windows and doors, such as storm shutters.
- **Raw Material Costs (Aluminum and Vinyl).** Aluminum was on the rise at the start of 2017, and makes up many of the frames that PGTI uses in their impact resistant products. For 2017, PGTI has accounted for 51% of their aluminum needs at $0.88/pound, but that other 49% is unaccounted for. If aluminum increases during the year then this could impact margins. Additionally, vinyl products grew by 37%, compared to aluminum at 9%, in 2016 so vinyl expenses are likely to increase in 2017.

Management

Rodney Hershberger is the current Chairman and CEO at PGT Innovations. He founded PGT Innovations in 1980, formerly PGT Industries, Inc., and became the CEO in 2005. Rodney works closely to develop new rules and regulations for impact resistant products with local governments. He is also the President and Director of the Argus Foundation, which encourages business leaders to improve local communities.



Ownership

% of Shares Held by All Insider and 5% Owners:	31.39% ▲
% of Shares Held by Institutional & Mutual Fund Owners:	93.12% ▼

Source: Factset

Top 5 Shareholders

Holder	Shares		% Out
BlackRock Fund Advisors	5,837,000	▲	11.84%
Jennison Associates LLC	2,799,000	▲	5.68%
Lazard Asset Management LLC	2,648,000	▲	5.37%
Renaissance Technologies LLC	2,602,000	▼	5.28%
Cooke & Bieler LP	2,370,000	▲	4.81%

Source: FactSet

Peer Analysis

Name	Ticker	Market Cap (mil)	Net Income (mil)	D/E	P/E	EV/ EBITDA	Gross Margin	Asset Turnover
PGT Innovations	PGTI-US	507.98	23.75	187.05%	21.91x	9.86x	31.08%	1.17x
Apogee Enterprises	APOG-US	1452.93	82.61	4.51%	17.80x	8.96x	26.29%	1.57x
Continental Bldg Prods	CBPX-US	946.13	44.02	86.20%	22.13x	8.68x	27.11%	0.72x
Huttig Building Products	HBP-US	209.64	12.80	78.72%	12.64x	9.96x	21.18%	3.76x
Tecnoglass	TGLS-US	349.30	23.18	175.76%	13.33x	8.20x	36.35%	0.86x
Peer Averages		739.50	40.65	86.30%	16.47x	8.95x	27.73%	1.73x

Source: FactSet

Stamps.com, Inc. (STMP)
April 21, 2017

Connor W. Konicke — Domestic Consumer Discretionary

Stamps.com Inc. (NASDAQ: STMP) was the first USPS-approved PC postage vendor and is currently the leading provider of Internet-based mailing and shipping solutions in the United States. STMP operates under five entities: Stamps.com, Endicia, ShipWorks, ShippingEasy and ShipStation and through two segments: Mailing and Shipping Business, and Customized Postage. Within its Mailing and Shipping Business segment, STMP offers USPS Mailing and Shipping Solutions, Multi-Carrier Shipping Solutions, Mailing and Shipping Integrations, Mailing and Shipping Supply Stores, Branded Insurance and International Shipping. STMP's revenues are derived from services (~86%), products (~6%), insurance (~5%) and customized postage (~3%). The company was founded in 1996, went public in 1998 and is headquartered in El Segundo, California.

Price ($): (4/19/17)	$106.30
Price Target ($):	$170.66
52WK H-L ($):	$136.00-$68.82
Market Cap (mil):	1,843
Float (mil):	15.5
Short Interest (%):	22.59%
Avg. Daily Vol (mil	0.34
Dividend ($):	0.00
Yield (%):	0.00%

Beta:	1.12
WACC	7.6%
M-Term Rev. Gr Rate E	14.4%
M-Term EPS Gr Rate E:	18.2%
Debt/Equity:	39.5%
Debt/EBITDA (ttm):	1.16
ROA:	13.2%
ROE:	24.6%
ROIC:	16.5%

FY: Dec	2015A	2016A	2017E	2018E
Revenue (Mil)	214.0	364.3	431.7	493.8
% Growth	45.3%	70.3%	18.5%	14.4%
Gross Margin	82.7%	83.8%	84.0%	84.1%
Operating Margin	-2.5%	33.0%	34.3%	34.4%
EPS (Cal)	($0.26)	$4.12	$4.77	$5.94
FCF/Share	$2.67	$7.69	$5.14	$6.34
P/E (Cal)	—	27.8x	21.8x	18.1x
EV/EBITDA	30.1x	14.2x	12.8x	10.9x

Recommendation

Changes in the technology landscape over the last several decades have caused a shift in consumer preferences, and as such the consumer discretionary industry. Amazon, the primary driver of this change, has revolutionized the industry by providing customers with the convenience of same day or next day shipping. This convenience eliminates the need for customers to shop in traditional brick and mortar stores. As a PC postage vendor, STMP is well positioned to capitalize on changing consumer preferences by providing the technology to further customer convenience and speed in the shipping industry. As of March 2017, STMP had 681,000 customers within the small office / home office (SOHO) market, which makes up approximately 2.5% of the market. Based on data from the International Data Corporation, there are 14 million home businesses, 5.7 million small business and 1 million enterprise retailers in the US. While there is a large SOHO market to penetrate, STMP has built a portfolio of customers and partners that will continue to give them an advantage over competition. With over 400 partners, including Amazon.com, Ebay, Etsy, Google, and PayPal, they continue to gain attention from prominent e-commerce companies to provide their services across a wide variety of platforms. Due to STMP's ability to increase average revenue per paid customer, declining churn rates and expanding depth in the service pipeline, it is recommended that Stamps.com Inc. be added to the AIM Equity Fund with a target price of $170.66, representing 60.55% upside. STMP pays no dividend.

Investment Thesis

- **Depth in Service Pipeline.** Management's initiatives for 2017 are focused on inventory management and customer relationship management (CRM) services to broaden features and eliminate seller pain points during the shipping process. Successfully implementing these services will continue to deepen and diversify their service portfolio. The addition of niche services and a more robust offering will serve to drive ARPU by supplying additional services to customers.
- **Increase in Average Revenue per Paid Customers (ARPU) and Paid Customers.** For FY 2016, STMP achieved an ARPU of $44.52 which is up $14.88, or 50.2% YoY and up $23.66, or 113.4% over the five-year period ending December 31, 2016. STMP is also seeing an increasing

number of paid customers. For FY 2016, STMP's mailing and shipping paid customers increased by 75,000 to 656,000 customers, up 12.9% YoY. For the five-year period ending December 31, 2016, STMP's number of annual paid customers increased from 439,000 to 656,000, representing a 49.4% increase and an 8.4% 5-year CAGR. These increases in ARPU and annual paid customers are attributable to their ability to up-sell customers by providing additional capabilities to increase customer shipping efficiency. With continual innovation in their service portfolio, STMP is positioned well to add to their customer base and grow revenues by 15-20% for the next 5 years.

- **Decline in Churn Rates for Paid Customers.** Churn rates represent the amount of paying customers that stop subscribing to their service. As STMP continues to grow and strengthen their product offerings, customers are seeing the value add. In 2010, STMP had an average annual customer churn rate of 3.9%. STMP's churn rate has fallen at an average 15 basis points per year and currently sits at 3.0%. As STMP continues to build out their services, specifically their inventory management and CRM system, they will be more appealing to high volume shippers and will be better able to retain customers, ultimately lowering churn rates.

Valuation

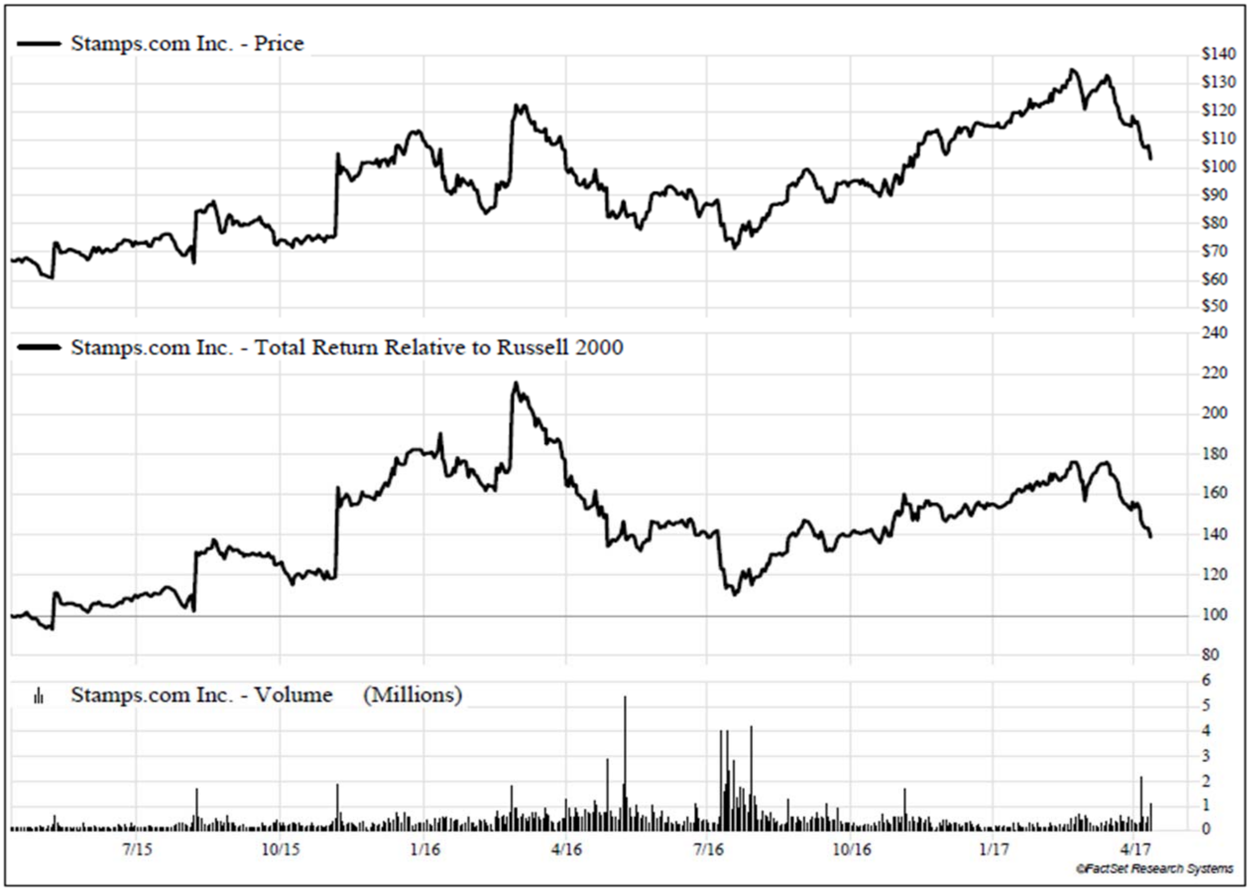
In order to reach an intrinsic value for STMP a ten year DCF model, price-to-earnings multiple model, and an enterprise value to EBITDA model were employed. Using a terminal growth rate of 2.5% and a WACC of 7.63%, an intrinsic value of $190.37 was reached. A sensitivity analysis performed on both the terminal growth rate and WACC resulted in a price range of $137.14 to $265.13. Additionally, a P/E multiple valuation was conducted using a comparables weighted average forward one year P/E of 11.5x (33.3%), and STMPS's 2017 estimated P/E of 21.8x (66.6%) resulted in a valuation of $87.49. Finally, an EV/EBITDA multiple valuation was calculated. Using the similar blended comparables and STMP's 2017 estimated EV/EBITDA of 12.8x, a predicted multiple of 10.7x was used and STMP's 2017 estimated EBITDA of $167.24M, which resulted in a valuation of $96.21. Weighting the three valuation models 80/10/10, a price target of $170.66 was reached, which yields a 60.55% upside. STMP pays no dividend.

Risks

- **Reliance on USPS.** With roughly 30% of revenues coming from USPS, they have a significant revenue source concentration. As a government sponsored enterprise (GSE), USPS is highly regulated and can modify certification requirements or specifics for PC Postage that would force STMP to alter their business model. In addition, USPS is a threat if it decides to terminate its relationship and build its own online service instead of outsourcing STMP.
- **Short Interest.** Over the last few earnings calls, management lacked insight surrounding metrics and potential acquisitions, which has significantly driven up their short interest to 22.59% (4/13/17) from 15.71% (4/15/16).
- **Drones.** Amazon and Google have brought great attention to the shipping industry by experimenting with drones to ship and deliver packages. If this is developed sooner than expected and they are successful in implementing the drones, the shipping and mailing business would see a significant decline in growth, which is where STMP sees the majority of revenue.

Management

Kenneth T. McBride has held the position as CEO since August 2001 and was announced Chairman of the Board in May of 2015. James M. Bortnak has served as the Co-President and Business Development Officer since Janurary of 2012 and has been with the company since 1999. Kyle Huebner serves as the Co-President and CFO. He has served as CFO since Janurary of 2004 and has been with the company since 2000.



Source: FactSet

Ownership

% of Shares Held by All Insider Owners:	7.71% ▼
% of Shares Held by Institutional & Mutual Fund Owners:	>97% ▲

Source: FactSet

Top 5 Shareholders

Holder	Shares		% Out
Fidelity Manangement & Research Co.	1,951,693	▼	11.58
BlackRock Fund Advisors	1,638,093	▲	9.72
The Vanguard Group, Inc.	1,328,600	▲	7.89
FIAM LLC.	606,167	▲	3.60
Jericho Capital Asset Management LP	592,000	▲	3.51

Source: FactSet

Peer Analysis

Name	Ticker	Market Cap (mil)	Net Income (mil)	D/E	P/E	EV/ EBITDA
Stamps.com	STMP	1,780	75.2	39.5%	27.8x	14.2x
RR Donnelley & sons	RRD	785	-486.2	0.0%	—*	6.0x
Pitney Bowes	PBI	2,405	95.5	0.0%	31.0x	7.2x
Deluxe	DLX	3,295	227.5	86.1%	15.4x	8.9x
Quad/Graphics A	QUAD	1,226	44.9	257.3%	29.9x	5.1x
Peer Averages		1,927	-29.6	85.9%	25.4x	6.8x

Callon Petroleum Company (CPE)

April 21, 2017

William Reckamp Domestic Energy

Callon Petroleum Company (NYSE: CPE) is an independent exploration and production (E&P) company that operates in the Permian Basin, which is located in west Texas and southeastern New Mexico. The basin consists of three sub-basins: the Midland, the Delaware, and Central Platform. Callon primarily focuses on the expansion and development of oil (88% of revenue) and natural gas reserves (12%) in the Midland sub-basin (39,570 net acres), and has extended operations into the Delaware sub-basin (16,688 net acres) in 1Q17. Currently, Callon's proved reserves are estimated at 106 MMBOE (million barrels of oil equivalent) and have increased 69% Y/Y. In 2009, Callon Petroleum changed its geographic focus from offshore drilling to the Permian Basin under current CEO Fred Callon – the firm is headquartered in Natchez, Mississippi.

Price ($): 4/19/2016	$11.50	Beta:	1.28	FY: Dec	2015	2016	2017E	2018E
Price Target ($):	$17.54	WACC	10.16%	Revenue (Thou.)	137,503	200,859	394,498	601,027
52WK H-L ($):	$18.53- $8.15	M-Term Rev. Gr Rate Est:	39.26%	% Growth	-9.5%	46.1%	96.4%	52.4%
Market Cap (mil):	2,313	M-Term EBIT Gr Rate Est:	47.30%	Daily Production (BOE)	9,600	15,200	24,700	36,400
Float (mil):	201.10	Debt/Equity (ttm):	0.23	Operating Cost per BOE	10.50	9.01	8.84	9.88
Short Interest (%):	19%	Debt/EBITDAX (ttm):	3.12	EPS (GAAP)	($3.77)	($0.78)	$0.57	$1.01
Avg. Daily Vol (mil):	5.04	ROA (%):	-5.97%	FCF/Share	($2.30)	($0.64)	$0.03	$0.72
Dividend ($):	0.00	ROE (%):	-8.76%	EBITDAX Margin	53.1%	62.4%	73.8%	72.0%
Yield (%):	0.0	ROIC (%):	-4.45%	EV/S	14.91	10.20	5.20	3.41

Recommendation

The domestic energy industry is reverting to normality after a 44% price drop in oil and a 30% natural gas price decrease since 2014. These prices seemed to have bottomed out with oil and natural gas low prices of $26.21/bbl (barrel of oil) and $1.64/MMBtu (million British thermal units), respectively, in February 2016. With sliding prices competitors' revenue fell 27% from 2014 to 2015, while Callon's revenue only fell 9%. CPE was able to generate a sales increase of 46% in 2015, while competitor revenue fell another 10%. Callon's focused operating regional strategy has allowed management to quickly modify their extracting techniques. Drilling was shifted to flow units that offered the highest potential returns on capital. Beginning in 2017, oil prices have demonstrated stability and the Baker Hughes rig count continues to rise and has jumped 93% Y/Y. The Permian Basin has also seen rapid growth with a 79% and 86% increase in oil and natural gas daily production, respectively, from Dec. 2014 to April 2017. In the past month, oil production spiked in the Permian to 79 MBbls/d (thousands of barrels of oil per day), leading the seven domestic oil-producing regions. Callon is well positioned to take advantage of Permian Basin production opportunities with a cash reserve of $651 million which is more than 4x than of its closest competitor. It owns a sustainable amount of reserves with a proved Reserve Life Index of 16 years, which lies above its peer average of 13 years. Over the next five years annual production is estimated to increase 193% with a 47% increase in revenue growth. Their current acreage has the growth potential of providing ≈1,550 new horizontal drilling locations in already active flow units. 1,400 of the new projected locations are estimated to breakeven at $40/bbl. With Callon's operational adjustments capabilities, favorable commodity outlook, and future production and reserve growth it is recommended that CPE be added to the AIM Equity Fund with a price target of $17.54 representing a 52.53% upside.

Investment Thesis

- **Delaware sub-basin penetration.** The recent acquisition of over 16,000 net acres within the Delaware sub-basin further expands Callon's Permian footprint and opportunities for reserve growth. This will cause a 13.5% increase of proved reserved (90% likelihood of recovery) or 14 MMBOE to its existing reserve portfolio. The hydrocarbons within the proved developed reserves are estimated to contain 87% oil. This projected oil content is one of the highest amongst its existing reserves and daily production is estimated to increase 1,945 BOE/d (barrels of oil equivalents per day) from this acquirement. Management has already taken steps for further development by placing infrastructure facilities near the exploration well locations.

- **Horizontal transition drilling structure.** In 2009, Callon entered the Permian Basin focusing on developing vertical extraction wells that allowed them to archive oil and natural gas producing locations. Four years later, management began directing their interests toward the more efficient horizontal well development. Efforts are still being made to make the transition in areas where it is economically feasible. In 2012, CPE had two gross operating horizontal wells which have increased over 7000% to 148 wells in 2016. Management has estimated a 22% increase in horizontal wells for next year with lateral lengths ranging from 5,000’-10,000’. The average horizontal well length is approx. 8,200’ and management has expressed interest in expanding these lengths using a fraction of their $325-350 million 2017 capital expenditure budget.
- **Additional rig implementation.** Callon runs on a new three-rig program only in the Midland sub-basin. In 2015 to the end of 2016, only two rigs were operating largely in part due to declining oil prices; however, the number increased to three in 1Q17 as prices turned relatively stable which varied from $53-$47 bbls. Management has projected a fourth rig in 3Q17 which will be placed in the Delaware sub-basin and a fifth rig will be stationed in the Midland toward the end of 2018. This expansion is estimated to boost production up to around 36,000 BOE/d resulting in a projected production increase of 47% from 2017.

Valuation

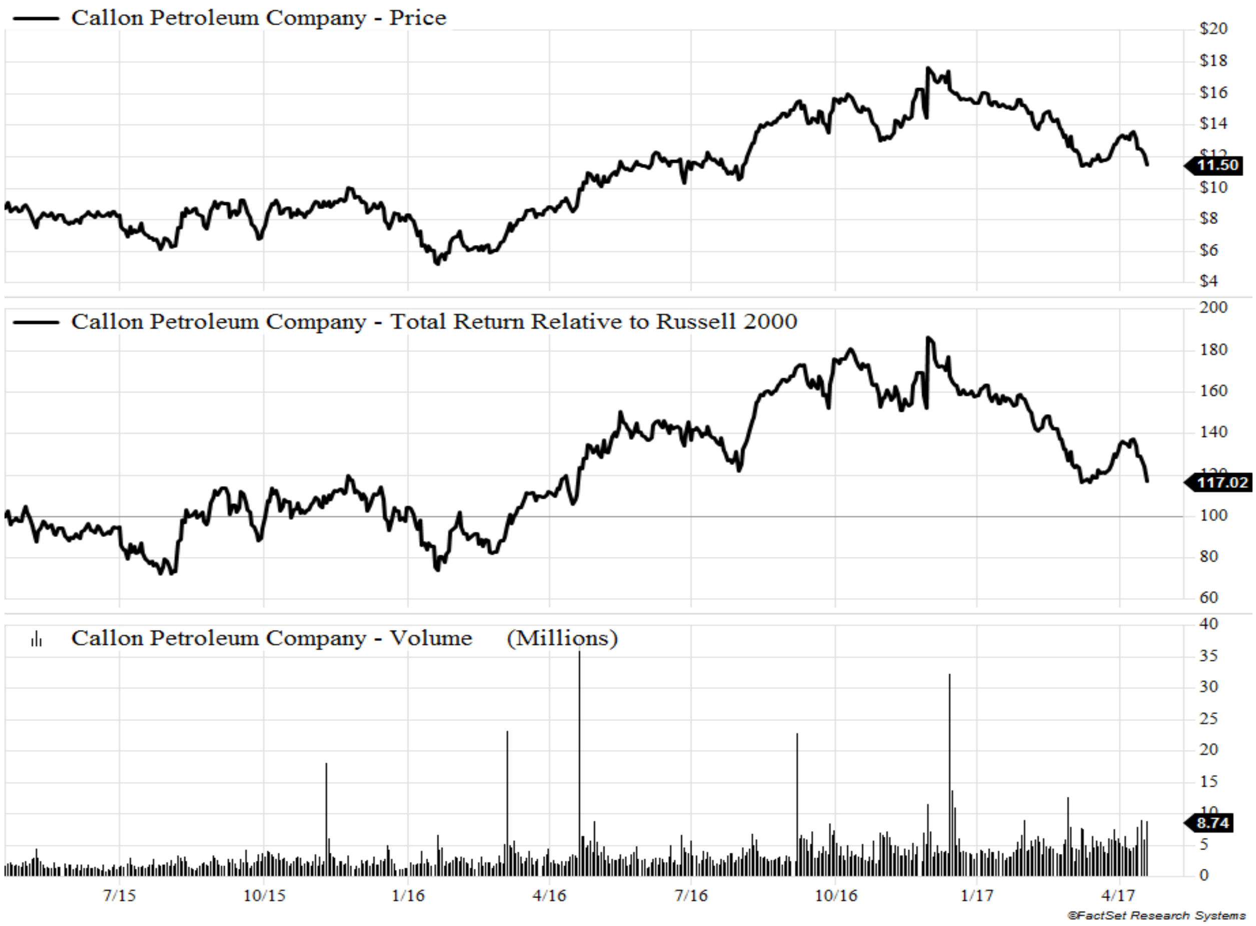
To reach an intrinsic value for CPE, a five year DCF model, comparable multiple approach, and NAV models were employed. Using a terminal growth rate of 2.0% and a WACC of 10.16%, a DCF intrinsic value of $24.32 was reached. A sensitivity analysis of the WACC and price of WTI oil produced a range of $17.47-31.95. An EV/EBITDAX and EV/1P multiple valuation was used with the following 2016 peer averages, 16.10x and 21.71x respectively. In order to calculate the EV/EBITDAX intrinsic value, Callon’s EBITDAX of $125 million was muliplied by the peer average (16.10x) to arrive at an intrinsic value of $11.34. The EV/1P value was calculated by multiplying the 106 MMBOE proved reserves by the competitor metric of 21.71x to reach a $12.75 valuation. The NAV model was conducted by adding both the total proved and unproved reserve value/per share to reach an intrinsic value of $24.12. The intrinsic value was then decreased 20% to $19.29 in order to reach a conservative price based on the underlying assumptions in the model. Weighting the DCF, EV/EBITDAX, EV/1P, and NAV 20/10/30/40% respectively, a final value of $17.54 was reached representing a 52.53% upside.

Risks

- **Commodity price fluctuations.** Oil and natural gas prices are very volatile resulting from changes in OPEC decisions, economic and currency conditions, governmental actions etc. CPE’s revenue is solely based on the prices of these two commodities. If they decrease sharply then they will have smaller cash flows which are used to acquire net acreage and thus additional reserves.
- **Geographic concentration risk.** Considering Callon is a pure-play Permian Basin operator it faces many headwinds in regard to geographic changes. Net acreage cost within the basin is one of the highest among the seven oil-producing regions in the United States. A cost increase will limit Callon’s ability to actively pursue growth opportunities in an accretive manner.
- **Fracturing regulation.** Fracturing has allowed E&P firms to more quickly extract gas and oil from large shale deposits. CPE’s sales rely heavily on their ability to extract oil and natural gas through horizontal drilling. If this method is regulated, then sever adaption will be required and will result in a large amount of financial stress.

Management

Fred Callon has been President and CEO since 1997 and was appointed Chairman of the Board in 2004. Prior to 1997, he served as the COO beginning in 1984, and has been employed by the company starting in 1976. Mr. Callon earned his undergraduate degree from Millsaps College and received his M.B.A degree from the Wharton School of Finance.



Source: FactSet

Ownership

% of Shares Held by All Insider Owners:	0.74%
% of Shares Held by Institutional & Mutual Fund Owners:	>90%

Source: FactSet

Top 5 Shareholders

Holder	Shares	% Out
Wellington Management Co. LLP	4,750,000 ▲	10.50%
The Vanguard Group, Inc.	6,273,000 ▲	7.70%
BlackRock Fund Advisors	1,983,000 ▲	4.53%
Fidelity Management & Research Co.	2,305,000 ▲	3.86%
Millenium Management LLC	1,016,000 ▲	3.81%

Source: FactSet

Peer Analysis

Name	Ticker	Market Cap (mil)	Sales (mil)	EBITDAX (mil)	EV/ EBITDAX	EV/1P
Callon Petroleum	CPE	2,313	201	125.28	18.94	22.39
Carrizo Oil & Gas, Inc.	CRZO	1,842	444	245.30	12.85	15.75
SM Energy Company	SM	2,536	1,217	321.00	16.81	13.63
RSP Permian, Inc.	RSPP	5,670	354	236.11	26.34*	26.25
Whiting Petroleum Corporation	WLL	3,105	12,845	543.30	12.48	11.01*
Matador Resources Company	MTDR	2,237	264	136.65	19.99	25.83
Peer Averages		3,078	3,025	296.47	16.10x	21.71x

**Removed For Relative Valuation Analysis* Note: comparable metrics include weighted averages Source: FactSet

Albemarle Corporation (ALB)
April 21, 2017

Holly Kuffel — International Materials

Albemarle Corporation (NYSE: ALB) is primarily engaged in the development, manufacture and marketing of specialty chemicals for consumer electronics, transportation, petroleum refining, utilities, and custom chemistry services. It operates through three main segments: Lithium and Advanced Materials (36% of total revenue), Bromine Specialties (30%) and Refining Solutions (27%). The Lithium and Advanced Materials segment is structured around the mining and refining of lithium used for batteries. The Bromine segment focuses primarily on flame retardants used for potentially flammable materials, while the Refining Solutions segment deals with Clean Fuels Technologies and Heavy Oil Upgrading. The company was founded in 1993 and is headquartered in Charlotte, North Carolina.

Price ($): (4/18/17)	105.64
Price Target ($):	136.10
52WK H-L ($):	65-108
Market Cap (mil):	11,588
Float (mil):	11,542
Short Interest (%):	4.10%
Avg. Daily Vol (mil):	1,009
Dividend ($):	1.28
Yield (%):	1.20%

Beta:	1.24
WACC	9.56%
M-Term Rev. Gr Rate Est:	14.0%
M-Term EPS Gr Rate Est:	21.8%
Debt/Equity:	62.4%
Debt/EBITDA (ttm):	3.22
ROA:	5.0%
ROE:	12.5%
ROIC:	7.2%

FY: Dec	2015	2016	2017E	2018E
Revenue (Mil)	3,651.34	2,677.20	2,998.47	3,418.25
% Growth	49.3%	-26.7%	12.0%	14.0%
Gross Margin	34.9%	36.3%	37.0%	39.0%
Operating Margin	18.0%	19.0%	20.0%	23.0%
EPS (Cal)	3.00	4.49	4.17	4.86
FCF/Share	2.03	4.72	5.46	7.19
P/E (Cal)	14.20	24.10	25.10	21.50
EV/EBITDA	11.09	13.68	14.74	12.26

Recommendation

85% of the world's lithium supply is controlled by the "Big 3" leading producers, Albemarle, FMC Corporation and Sociedad Quimica y Minera de Chile. Albemarle's Lithium segment's top two customers, Panasonic and Samsung, consist of greater than 20% of the segments revenues. Panasonic, the world's leading battery manufacturer, signed a four-year supply agreement with Tesla Motors in 2009, which ensured over 80,000 lithium-ion batteries for their Model S. In 2010, Panasonic purchased $30 million of Tesla Motor's common stock in a private placement to deepen their partnership and accelerate the market expansion of electric vehicles. Lithium demand is set to grow over 50% for the next five years, and ALB plans to spend $1B in expansion costs to capture new market capacity. Operations in Chile and Argentina both upgraded to increase lithium extraction and operate as the two lowest-cost lithium facilities in the world as a result of their strategic geographic location. ALB obtained a favorable increase in overall lithium prices by 14% during 2016, which greatly contributed to the lithium segment's 16% growth in sales and EBITDA since 2015. With 80% of lithium customers on 3-5 year contracts, pricing is expected to climb an additional 10-15% in 2017 alone. The Bromine business has weighed on the company's profits due to declining bromine prices, but ALB is continuing expansion projects and is expected to generate higher profits from their low-cost bromine source in the Dead Sea. This segment generates a stable cash inflow that they have utilized to reinvest in other areas. The Refining Solutions business experienced a difficult 2015 FY caused by depressed oil prices, but the segment recognized five consecutive quarters with EBITDA margin expansion and is expected to continue this growth in 2017. ALB's low-cost, strategically located lithium and bromine plants, in addition to their high market share, produce a strong economic moat for the firm. With high capital investment activity, vertically integrated structure, and cost advantages, it is recommended that Albemarle Corporation be added to the AIM International Equity Fund with a target price of $136.10, representing a 28.83% upside. ALB pays a regular quarterly dividend of $0.32, yielding 1.20%.

Investment Thesis

- **Electric Vehicles Lead the Demand for Lithium.** Past years indicate 11% of lithium demand comes from electric vehicles, while industrial applications and consumer electronics represented over 60% and 27% of demand, respectively; however, an increase in electric vehicle production will cause a change in the lithium demand market. The average electric vehicle has the capacity to use 5,000 times more lithium than a mobile phone. Higher range electric cars, such as the Tesla Model S, can use as much lithium as 10,000 smartphones. In 2015, car production consumed 15,000 tons of lithium, and is expected to reach over 136,000 tons by 2025 as electric and hybrid cars become more reliant on lithium-ion battery technologies. In September 2018, Tesla announced a planned production rate of 500,000 cars per year beginning in 2018 when their Gigafactory begins operating at full capacity. At this point, Tesla alone will produce more lithium-ion batteries annually than were produced globally in 2013; however, Tesla is not alone, as GM plans to invest $43M in Brownstown Township to manufacture lithium-ion battery packs for the Chevrolet Volt and other extended-range electric vehicles not yet available for purchase.

- **Global Expansion of Lithium Segment.** Recognizing the rapid rise in demand for lithium, Albemarle shifted its focus from miscellaneous chemical production to lithium mining. In 2015, ALB acquired Rockwood Holdings, a leading provider of lithium compounds and surface treatments, for $5.7B. This acquisition allowed ALB to expand into Chile, home to one of the world's largest and lowest-cost lithium operations. The company is also focusing on expanding its lithium operations and extending long-term production contracts in China, Argentina and Chile, which would give ALB to have the capacity to produce more than 160,000 MT LC by 2021, with unmatched geographic diversity of resources and conversion assets. Over 80% of ALB's lithium businesses are now under long-term contracts. Accelerating lithium investments are expected to capture over 50% of demand growth over the next several years, maximizing production from ALB's low-cost resources. Expansion of the lithium segment is expected to increase EPS to $4.00-$4.25 (12-19%) and EBITDA $800-840M (6-11% increase).
- **Focus on Debt Reduction.** Within a year of the Rockwood acquisition, ALB restructured their business model to prepare for the large growth in lithium demand. As a result, ALB sold their Chemetall Surface Treatment business and structured their segments around Bromine Specialties, Lithium and Advanced Materials, and Refining Solutions. The sale of Chemetall resulted in cash proceeds of $3.1B**,** allowing the firm to deliver and pay outstanding debts of $1.7B. Management increased their dividend by 5% for the 23rd consecutive year, with its current dividend valued at $0.32, a yield of 1.20%. $250M of cash was returned to the shareholders in the first quarter of 2017.

Valuation

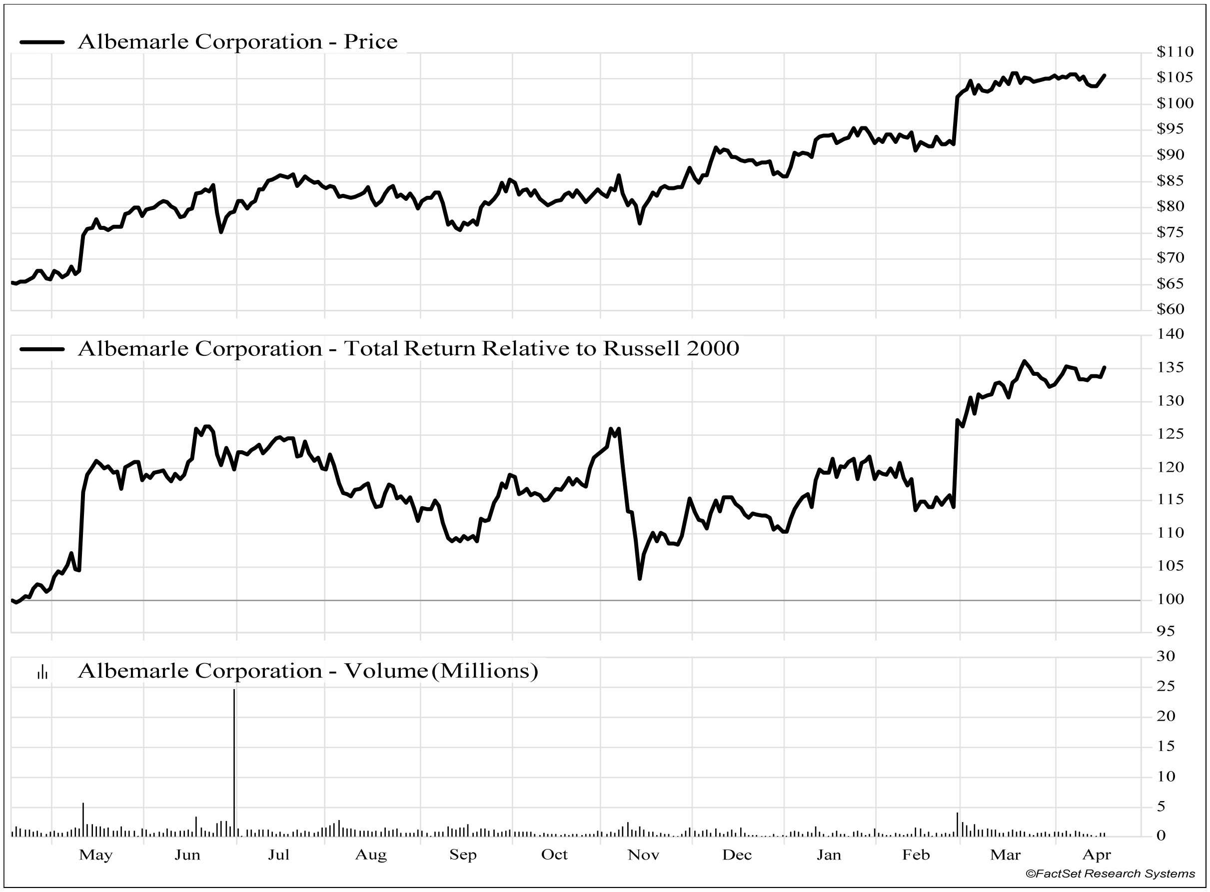
In order to reach an intrinsic value for ALB, a five year DCF model was constructed. Using a terminal growth rate of 2.0%, WACC of 9.56%, an intrinsic value of $133.56 was reached. A sensitivity analysis on the terminal growth rate (1.5-2.5%) and discount rate (9-10%) ranged from $119.0-152.6. Additionally, P/E and P/BV multiple valuations were conducted by analyzing the five-year historical, select weighted comparable, and forward year multiples, resulting in a P/E target multiple of 28.93x and P/BV target multiple 4.37x, yielding values of $129.87 and $147.40, respectively. By weighting the DCF and relative valuation models 50/25/25, a price target of $136.10 was reached, which yields a 28.83% upside.

Risks

- **Declining Prices.** Lithium prices could decline if electric vehicle demand grows more slowly than expected or production takes off too quickly, which could impact ALB's margins moving forward.
- **Faltering Businesses.** Although the company has successfully managed to restructure and focus in on growth in the lithium industry, Albemarle's other businesses are struggling to meet expectations and could continue to do so moving into the future.

Management

Luke Kissam, IV has been Chairman, President and CEO position since 2003 and Chairman of the Board since 2010. Prior to Albemarle, Kissam was Secretary and VP at Merisant Co. Scott Tozier has served as Executive VP and CFO since 2011.



Ownership

% of Shares Held by All Insider and 5% Owners:	0.38%
% of Shares Held by Institutional & Mutual Fund Owners:	89.69%

Source: FactSet

Top 5 Shareholders

Holder	Shares	% Out
Vanguard Group, Inc.	11,562,000	10.44
Franklin Advisory Services LLC	8,261,000	7.46
SSgA Funds Management, Inc.	6,326,000	5.71
BlackRock Fund Advisors	5,378,000	4.86
Jennison Associates LLC	5,003,000	4.52

Source: FactSet

Peer Analysis

Name	Ticker	Market Cap (mil)	Net Income (mil)	P/B	P/E	EV/ EBITDA
Albemarle Corporation	ALB	11,587.9	442	3.14	23.5	15.5
FMC Corporation	FMC	9,833.6	209	3.86	47.8	16.4
Sociedad Quimica y Minera de Ch	SQM	9,527.7	278	3.39	33.9	11.5
Tianqi Lithium Industries, Inc.	SHE:002486	49,632.0	1,512	7.03	21.4	13.2
W.R. Grace	GRA	4,684.0	107	*	*	15.5
Peer Averages		18,419	527	4.8	34.35	14.2

**Removed for Relative Valuation Analysis* — Source: FactSet

Pacific Premier Bancorp, Inc. (PPBI)
April 21, 2017

Catherine Strietmann — Financial Services

Pacific Premier Bancorp, Inc. (NASDAQ: PPBI) is a bank holding company which engages in the provision of banking services through its subsidiary, Pacific Premier Bank, a California state-chartered commercial bank. The company's principal business is attracting deposits from small and middle market businesses and consumers - and investing those deposits together with funds generated from operations and borrowings, primarily in commercial business loans and commercial real estate loans. It offers deposit products and services, including checking, money market and savings accounts, cash management services, and electronic banking. As of 12/31/16, PPBI had $4.1 billion in total assets, $3.1 billion in total deposits, and $3.2 in outstanding loans, although these numbers are forecasted to change to $6 billion, $4.8 billion, and $4.6 billion because of their recent acquisition of Heritage Oaks Bancorp (HEOP) completed 04/01/17, as stated in a press release. PPBI is one of the largest banks headquartered in Southern California and operates more than 25 depository branches in California, focused on serving small and middle businesses in the counties of Orange, Los Angeles, Riverside, San Bernardino, San Diego, San Luis Obispo, and Santa Barbara, California. Pacific Premier Bancorp, Inc. was founded in 1997 and is headquartered in Irvine, CA.

Price ($): (04/18/17)	34.70
Price Target ($):	41.97
52Wk H-L ($):	21 - 42
Market Cap (mil):	1,381
Float:	88.2%
Short Interest (%):	10.30%
Avg. Daily Vol (000):	241,817.5
Dividend ($):	-
Yield (%):	-

Beta:	1.21
WACC	7.90%
M-Term Rev. Gr Rate Est:	7.00%
M-Term EPS Gr Rate Est:	12.63%
Total Debt/Total Assets	9.82%
ROA:	1.17%
ROE:	10.57%
Tier 1 Capital Ratio	10.45%
Loan Loss Provisions/Loans	0.27

FY: Dec	2015A	2016A	2017E	2018E
Interest Income (Mil)	118.36	166.61	191.34	229.61
% Growth	47.35%	40.77%	25.00%	20.00%
Pretax Margin	34.41%	39.21%	35.86%	35.88%
Net Income Margin	0.22%	0.24%	26.20%	26.20%
EPS (Cal)	$1.19	$1.46	$1.80	$2.16
P/E (Cal)	35.27	28.75	23.27	19.40
BVPS	13.86	16.54	20.67	24.81
P/B	3.03	2.54	2.03	1.69

Recommendation

Pacific Premier Bancorp has grown net interest income at a 5-Yr CAGR of 33.19% and a net income margin at a 5-Yr average of 22.5%. With seven successful acquisitions in the past five years, it is evident that the bank is a high growth investment, with no sight of slowing down soon, as PPBI only currently has branch offices in southern and central California. PPBI's strategic plan highlights organic growth, as well as having a great emphasis on acquisitions of banks with similar business strategies. Because of the previous M&A success, the recent acquisition of Heritage Oaks Bank poises PPBI for exceptionally high earnings, acquiring twelve more branch locations. PPBI is ranked eighth in the state of California for deposit market share, being compared to bulge bracket banks, having 3.7% in 2015, without the addition of the M&A. Additionally, a booming regional economy for a bank that has nearly 50% commercial loans in its portfolio sets PPBI up for long term success. California has the fastest small business growth in the country over the past ten years, as well as strong GDP growth. Looking forward, organic growth as well as growth through continued acquisitions will enable PPBI to increase its ROA and interest revenue, well ahead of peers with ROAs historically below 1.0%. Based on the continued opportunities for growth, strong local markets, and positioning for rising interest rates, it is recommended that PPBI be added to the AIM Equity Fund with a price target of $41.97, representing a potential upside of 20.95%.

Investment Thesis

- **Strong Regional Economy.** California's economy produces over $1 trillion more than the next most productive state, New York. In addition, California's economy is the sixth largest economy in the world. Southern California is becoming increasingly popular, and the higher cost for real estate in the area driven by demand greatly benefits PPGI, with a positive economic outlook for the state. The fastest job gains through 2020 in California are expected in Orange, Ventura, and Los Angeles counties, all areas where PPBI has large commercial lending presence.

- **Proven M&A Strategy.** PPBI has proven adept at identifying, acquiring, and integrating banks that add to the core earnings power of the franchise. PPBI has completed seven acquisitions in five years that have extended the company's market footprint, improved its deposit base, and provided new sources for commercial banking growth.
- **Well Diversified Loan Portfolio.** With a focus on commercial lending, business-related loans across a broad variety of industries comprise nearly 50% of PPBI's loan portfolio. The remaining portfolio is well diversified with commercial real estate, multi-family, and construction, each accounting for more than 8% of total loans. Having a well-diversified loan portfolio therefore decreases risk, with interest revenue coming from loans within a wide range of sectors in the economy.

Valuation

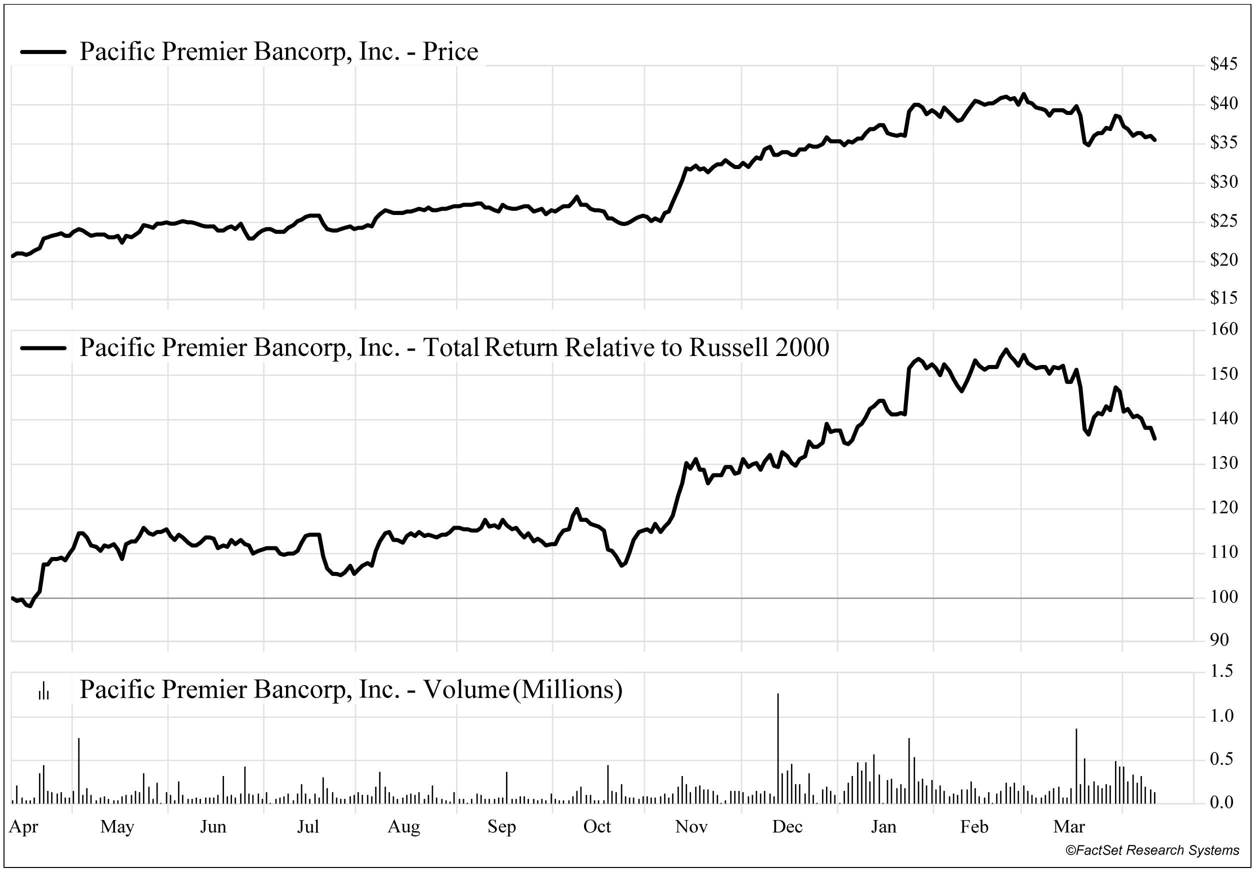
In order to reach an intrinsic value for PPBI, a five year excess earnings model was constructed, as well as a price to book and price to earnings multiple. The P/E and P/B multiple was derived from taking the average P/E and P/B multiple of PPBI's peer and industry, as well as PPBI's P/E and P/B multiple. By doing this, predicted P/E and P/B multiples of 24.33x and 2.05x were calculated, respectively. These multiples were multiplied by PPBI's EPS ($1.46) and BVPS ($16.54) to reach an intrinsic value of $35.52 for P/E and $33.90 for P/B. Weighing these multiples 50/50, an intrinsic value of $34.71 was reached. The excess earnings model, using a terminal growth rate of 2.21% and cost of equity of 8.01%, yielded an intrinsic value of $45.08. PPBI's ratio's were higher than average, making them less useful in valuing the company. Because of this, the two valuation models were weighted 70/30, and a price target of $41.97 was reached, which yields a 20.95% upside.

Risks

- **Concentration Risk.** PPBI's business activities and credit exposure are concentrated in California. Difficult economic conditions in the region may cause PPBI to incur losses associated with higher default rates and decreased collateral values in their loan portfolio. As of December 31, 2016, 55% of PPBI's loans were backed by real estate in California, and if values were to decline, the collateral for the loans would provide less security.
- **Uncertainty with Dodd-Frank.** The Dodd-Frank Act continues to materially affect operations, and the uncertainty with President Trump's executive orders makes for greater confusion as to how PPBI's financials will be impacted by the act. Many aspects of the Dodd-Frank Act continue to be subject to rule making and are yet to take effect, making it difficult to anticipate the overall financial impact on the company, although the de-regulation of the industry could be seen as a driver as well.
- **High Level of Competition.** PPBI faces direct competition from a significant number of financial institutions, many with a regional, or even national, presence. The competitors both originate loans and attract deposits in PPBI's primary market areas, as well as there being fierce competition for attracting and retaining depositors.

Management

Steven R. Gardner is the Chairman, President, CEO, and IR Contact of PPBI. Gardner is also a Member of Federal Reserve Bank of San Francisco, and is on the Board of Directors at Federal Home Loan Bank of San Francisco. Prior to assuming the role of President and CEO in 2000, Gardner served various high-level roles in trade organizations that serve the banking industry, with more than 30 years of experience in commercial banking. As of May 2016, Ronald J. Nicolas is CFO and senior EVP of PPBI, previously being CFO and EVP of Banc of California, Inc. from 2012 to 2015, with more than 30 years of experience in the financial services sector. Edward Wilcox is Chief Banking Officer and a Senior EVP.



Ownership

% of Shares Held by All Insider and 5% Owners:	11.82%
% of Shares Held by Institutional & Mutual Fund Owners:	80.23%

Source: FactSet

Top 5 Shareholders

Holder	Shares (000)	% Out
Carpenter & Co. (Private Equity)	1,950 ▲	6.98
BlackRock Fund Advisors	1,571 ▲	5.63
Vaughan Nelson Investment Management LP	1,432 ▲	5.13
RBC Global Asset Management (US), Inc.	1,256 ▲	4.50
T. Rowe Price Associates, Inc.	1,149 ▲	4.11

Source: FactSet

Peer Analysis

Name	Ticker	Market Cap (mil)	Net Income (mil)	Div. Yld. %	P/B	P/E	LTM ROA
Pacific Premier Bancorp	PPBI-US	1,399.25	40.10	--	2.13	24.08	1.11
CU Bancorp	CUNB-US	650.94	27.46	--	2.02	24.33	0.97
Cascade Bancorp	CACB-US	556.95	16.77	--	1.53	32.26	0.90
Pacific Continental	PCBK-US	539.45	19.78	2.01	1.97	25.05	1.11
Westamerica Bancorp	WABC-US	1,427.47	58.85	2.48	2.51	23.72	1.11
Peer Averages		793.70	30.71	2.25	2.01	26.34	1.02

Source: FactSet

DBS Group Holdings Ltd. (DBSDY)

April 21, 2017

Cathy Gong International Financial Services

DBS Group Holdings Ltd. (NASDAQ: DBSDY) is a Singaporean investment holding company which operates in the delivery of retail, small and medium-sized enterprise, corporate and investment banking services. DBSDY engages in Consumer Banking/Wealth Management, Institutional Banking, Treasury and other services. These services include: current and savings accounts, fixed deposits, loans and home finance, cards, payments, investment and insurance products in more than 15 countries and regions. The Institutional Banking segment involves in financial services and products to institutional clients, including non-bank financial institutions, government linked companies, large corporate and small and medium-sized businesses. DBS Bank is the largest bank in South East Asia by assets and is among the highest credit ratings in the Asia-Pacific Region. Founded by the Government of Singapore in 1968, the company has 22,194 employees and is headquartered in Singapore.

Price ($): (4/13/17)	54.45	Beta:	1.12	FY: Dec	2015A	2016A	2017E	2018E
Price Target ($):	63.24	WACC	9.09%	Interest Income (M	7,386.70	7,434.33	7,657.36	7,887.08
52Wk H-L ($):	56-43	M-Term Rev. Gr Rate Es	3.0%	% Growth	3.72%	2.27%	3.31%	5.24%
Market Cap (bil):	34.28	M-Term EPS Gr Rate Est	17.0%	Net Interest Margir	68.42%	66.30%	68.93%	70.81%
Float :	-	Total Debt/Total Assets	10.1%	Pretax Margin	51.91%	49.51%	57.70%	63.82%
Short Interest (%):	-	Loans/Deposits(%)	91.86%	EPS (Cal)	$5.14	$4.83	$5.75	$6.58
Avg. Daily Vol (mil	4.1	Efficiency Ratio(%)	46.75%	P/E (Cal)	9.1	9.9	8.5	8.3
Dividend ($):	1.63	Tier 1 Capital Ratio	14.4%	BVPS	45.9	49.0	48.6	46.0
Yield (%):	3.00%	Loan Loss Reserves/Loan	1.3%	P/B	1.0	1.17	1.2	1.15

Recommendation

With an open and corruption-free environment, stable prices, and a per capita GDP higher than that of most developed countries, Singapore has a highly developed and successful free-market economy. As of January 2017, according to Bloomberg, Singapore's economic growth quickened to the fastest pace in more than three years last quarter as manufacturing and services rebounded with GDP rising at an annualized 9.1% in the fourth quarter of 2016. DBSDY, as a Singapore-based multinational financial services corporation and the largest commercial banking group in SE Asia, expects to benefit from the growth of local economy. DBSDY has grown operating income margin at a 5-year average of 36.83% and net profit margin at a 5-year average of 32.57% and DBS has experienced strong improvements in management effectiveness. The return on equity ratio has increased from 10.04% to 11.54% and return on invested capital ratio increased from 4.08% in 2012 to 5.15% in 2016. Total income rose 6% from sustained growth in a wide range of business and profit before allowances increased 10% compared in 2015. Given the strength of the local economy and strong management, it is recommended that DBSDY be added to the AIM Equity Fund with a price target of $63.24, representing a potential upside of 16.14%. DBSDY also paid a $1.8 dividend in 2016, yielding 3%.

Investment Thesis

- **Strong Liquidity and Capital Base.** The loan-deposit ratio was 87% and deposits rose an impressive 9% in 2016. The Tier 1 capital adequacy ratio was 13.3%, well above the regulatory requirement of 9%. DBS' leverage ratio of 7.7% in 2016 was more than twice the requirement of 3% envisaged by the Basel Committee. With adequate liquidity to support growth and additional buffers to meet possible contingencies from external environment, DBSDY's liquidity and capital remain strong enabling future growth.
- **Sustainability.** Both DBS and POSB were established with strong social mandates – DBS was formed to finance Singapore's industrialization, while POSB as the "People's Bank" had a mission of promoting the nation's savings habit and facilitating home ownership. Today, DBS

and POSB continue to uphold our responsibility to the communities we operate in across Asia, whether through providing inclusive and subsidized banking, supporting SMEs or championing social entrepreneurship. DBSDY recognize that our lending practices play an influential role in shaping the behaviors of our customers towards sustainable development, and are committed to supporting and implementing responsible banking in line with The Association of Banks in Singapore Guidelines on Responsible Financing.

- **Local Economies.** Asia's rapid economic growth and development have led to an improvement in living standards across the region. With low tax rates, seventh least corrupt, most pro-business, Singapore's economy has been ranked as the most open in the world. Singapore's pro-trade environment and commitment to free trade have created an easy and efficient place to do business. As well as being a good place for business, expats have long been attracted to the city-state for its safe environment and high standard of living.

Valuation

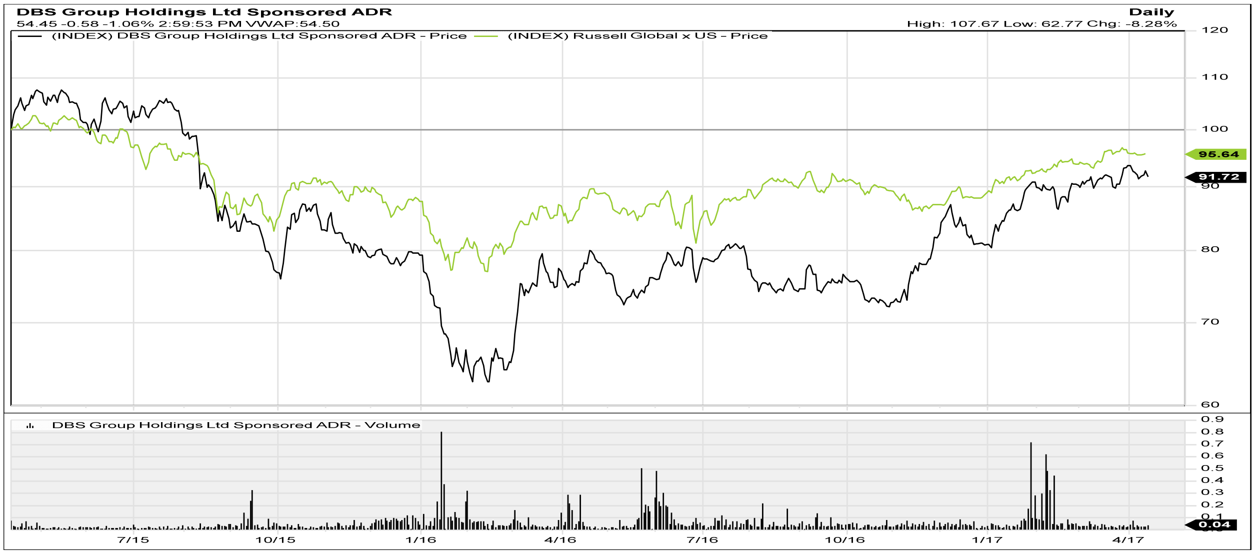
To find the intrinsic value of DBSDY a price to book and price to earnings multiple was used, as well as a dividend discount model. A predicted P/E and P/B multiple of 15.03x and 1.22x were used. By multiplying these two multiples with an EPS ($4.83) and BVPS ($49) to reach an intrinsic value of $72.5 for P/E and $59.94 for P/B. Weighing these multiples by 50/50, an intrinsic value of $66.26 was reached. For the dividend discount model approach, a WACC of 9.09% and a long-term growth rate of 3% was used to calculate an intrinsic value of $60.21. Weighting the DDM and Multiple valuations 50/50, the final estimated intrinsic value of MSL is $63.24, which provides an upside of 16.14%.

Risks

- **Challenging Macroeconomic Trends.** As a global and regional slowdown, oil price weakness and market volatility exacerbated by political shocks such as Brexit and the outcome of US presidential elections, business and credit risks rise. Operating environment is challenging with a slowing China, a faster interest rate hike cycle in the US and growing uncertainties in Europe. In a challenging environment, credit risks increase for multinational financial services corporations and demands a stronger balance sheet performances.
- **Changing Consumer Behavior.** Technology and mobility are increasingly shaping consumer behavior. Traditional banks face the competition in new areas such as digital. Digital transformation requires the traditional bank companies to respond and innovate quickly to deliver banking service to customers in a fast way. Digital disruption and changing consumer behavior increase the investment risks in traditional bank industry. Traditional banks risk losing relevance to platform companies and fintech.
- **Increased Bank Regulation.** An increase in government regulation of banks has resulted in an increase in operating costs. The evolving regulatory and reporting landscape, including Basel reforms, overhaul of accounting standards such as FRS 109 and tax measures to counter base erosion and profit shifting, may affect banks' existing business models and gives rise to compliance risks.

Management

Piyush Gupta has served as Chief Executive Officer and Executive Director of DBS Group Holdings since 2014. Prior to joining DBS, Piyush was Citigroup's Chief Executive Officer for Southeast Asia, Australia and New Zealand. In addition, his external appointments include serving as the Deputy Chairman of SPRING Singapore, as a council member of Asian Bureau of Finance of Economic Research. Ching Sok Hui is the Chief Financial Officer since October 2008.



Ownership

% of Shares Held by All Insider and 5% Owners:	0.07%
% of Shares Held by Institutional & Mutual Fund Owners:	>74%

Source: ThompsonOne

Top 5 Shareholders

Holder	Shares	% Out
Fisher Investments	920,652	2.03
Parametric Portfolio Associates LLC	469,931	19.91
Renaissance Investment Management	280,408	1.38
Todd Asset Management LLC	179,294	0.25
Ferguson Wellman Capital Management, Inc.	155,487	6.51

Source: ThompsonOne

Peer Analysis

Name	Ticker	Market Cap (mil)	Net Income (mil)	Div. Yld. %	P/B	D/E
DBS Group Holdings Ltd.	DBSDY	50,902	3,033	3.00	1.17	135.3
Malayan Banking	YBANK	29,515	1,628	5.80	1.3	181.4
Oversea-Chinese Banking	O39-SG	29,056	2,470	3.65	1.3	137.2
Hang Seng Bank, Limited	11-HK	38,170	2,044	4.23	2.06	22.02*
United Overseas Bank	U11-SG	25,804	2,154	3.43	1.26	134.3
Peer Averages		30,636	2,074	4.28	1.5	151.0

**Removed For Relative Valuation Analysis*

Source: FactSet