Applied Investment Management (AIM) Program

AIM Class of 2018 Equity Fund Reports
Fall 2017

Date**: Friday, November 17th* | ***Time:** 2:30 – 3:30 p.m.* | ***Location: AIM Research Room 488

Student Presenter	Company Name	Ticker	Sector	Page
Justine Shanner	Fair Issac Corporation	FICO	Financial Services	2
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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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Fair Isaac Corporation (FICO)
November 17, 2017

Justine Shanner — Domestic Technology

Fair Isaac Company, Inc. (NYSE: FICO) provides a wide array of financial analytics and solutions to banks, credit card issuers, insurers, retailers, and public agencies. FICO segments revenue by three segments: Applications (59.3%), Scores (28.6%), and Decision Management Software (12.1%). Fair Isaac Company utilized predictive analytics in every segment of their business, aiming to assist companies automate, improve, and connect decisions to performance. The company derives 64.3% of revenues domestically, and 35.7% internationally, particularly in the United Kingdom and China. Fair Isaac Corporation was founded by Bill Fair and Earl Isaac in 1956, and is headquartered in San Jose, California.

Price ($):	151.90	Beta:	1.45	FY: Sep.	2016A	2017A	2018E	2019E
Price Target ($):	$181.18	WACC:	9.86%	Revenue:	881.36	932.17	1,017.93	1,103.43
52Wk H-L ($):	110.18-155.24	M-Term Rev. Gr Rate Est:	4.60%	% Growth:	9.20%	8.40%	4.60%	4.10%
Market Cap (mil):	$ 4,555.00	M-Term EPS Gr Rate Est;	7.38%	Operating Income:	169.59	181.67	237.50	288.71
Short Interest (%):	2.3%	Debt/Equity	117.03%	% Growth:	8.6%	5.0%	11.8%	10.1%
Avg. Daily Vol:	169,252.50	Debt/EBITDA	141.79%	Operating Margin	19.2%	19.5%	23.3%	26.2%
Yield (%):	0.1%	ROA (%):	10.36%	EPS ($)	3.39	3.98	5.00	6.03
Dividend ($):	0.00	ROE (%):	29.37%	P/E	36.75	35.30	30.36	25.2
ESG Rating:		ROIC (%):	14.02%	EV/EBITDA	21.61	21.79	21.25	17.71

Recommendation

Fair Isaac Corporation was founded in 1956 on the idea that "data, used intelligently, can improve business decisions." FICO is able to accomplish this by leveraging the possibilities of big data and mathematical algorithms to predict consumer behavior and other outcomes. Best known for inventing the FICO score, the company has a household name for providing the standard measure of US consumer credit risk. Fair Isaac Corporation was able to achieve brand recognition in the market, across a variety of users and industries. End users include 98 of 100 largest financial institutions, two-thirds of the largest 100 banks in the world, one-third of top US retailers, 150 public agencies, and 150 healthcare and pharmaceutical companies. FICO's Scoring segment now only accounts for 28.6% of total revenue, leaving substantial room to grow in Applications and Decision Management Software segments by the massive base of users that have trusted FICO's scores for decades. Financial analytics is a consistently growing market, with businesses and financial institutions looking to technology to provide affordable solutions that are more precise, consistent and updated in real time. With FICO's SaaS (system as a service) cloud innovation, marketing, account origination, fraud detection, fraud management, compliance, etc. is now provided in a customizable cloud suite, allowing FICO's existing client base to customize their financial technology service. Despite being a well-tenured firm misunderstood in the market as simply a scoring agency, growth is derived from the expansion of Decision Management Software, as well as entering international markets who have yet to implement a reliable scoring system. With free cash flow and net income increasing at a 5-year CAGR of 14.6% and 6.9%, respectively, Fair Isaac Corporation has continued to grow, and has opportunities to become a leader in Decision Management Software, with average bookings averaging 29 months and the growing reliance on trusted financial technology software. Due to its defensible market position, revenue growth in emerging market Scores and cloud-based financial technology, it is recommended that Fair Isaac Corporation be added to the AIM Equity Fund with a target price of $181.15, representing an 18.80% upside.

Investment Thesis

- **Proven Reputation with Innovation Leadership.** FICO's recognition in the market is derived from their ability to provide reliable scores to the overwhelming majority of lenders and consumers. FICO's scoring model has stood the test of time, and the ability to grow lies in modernization. In 2015, Fair Isaac launched the FICO Analytic Cloud, increasing sales by addressing a new market, small to mid-sized businesses that benefit from the affordability and simplicity of cloud-based solutions. In 2017, FICO added Amazon Web Services (AWS) as the primary cloud infrasturcture, and continued to make the gradual transition from licensing to cloud-based. Cloud bookings increased 82% over the same quarter last year (Q4), generating $146 million in new bookings, and cloud-based offerings currently have a $100 million pipeline, building a recurring revenue base, in addition to the unprecedented 59 bookings over $1million in FY2017.

- **Investment in Financial Inclusion.** Management has emphasized plans to expand its FICO Inclusions Initiative, moving to score more than 26 million people who were previously unscorabele, either due to a lack of access to credit or insufficent data, with 72% of new scores expecting to reach lenders. FICO intends to infiltrate international markets that are not aleady covered by a major credit bureau, partnering with data providers that can easily match their datasets with FICO's capabilites, bringing millions into the traditional credit system. Additionally, a partnership with Lenddo created FICO Score X Data India, recognizing the expanding middle class and addressing the World Bank assertion that almost 50% of India's adult population is underbanked.
- **Equifax Effect.** VantageScore, an algorithm created in a joint venture with Experian, TransUnion, and Equifax is the only major competior of the Scores segment, which is inherently seen as a generic brand based on relative tenure as a trusted source, and the lack of confidence in Equifax's security and reporting. The Applications segment will continue to see use of Fraud and Security and Cybersecurity applications, whcih predicts likelihood of a transaction or account experiencing fraud in real time, along with enterprise level risk and tactical response solutions for cyber breaches and money laundering.

Valuation

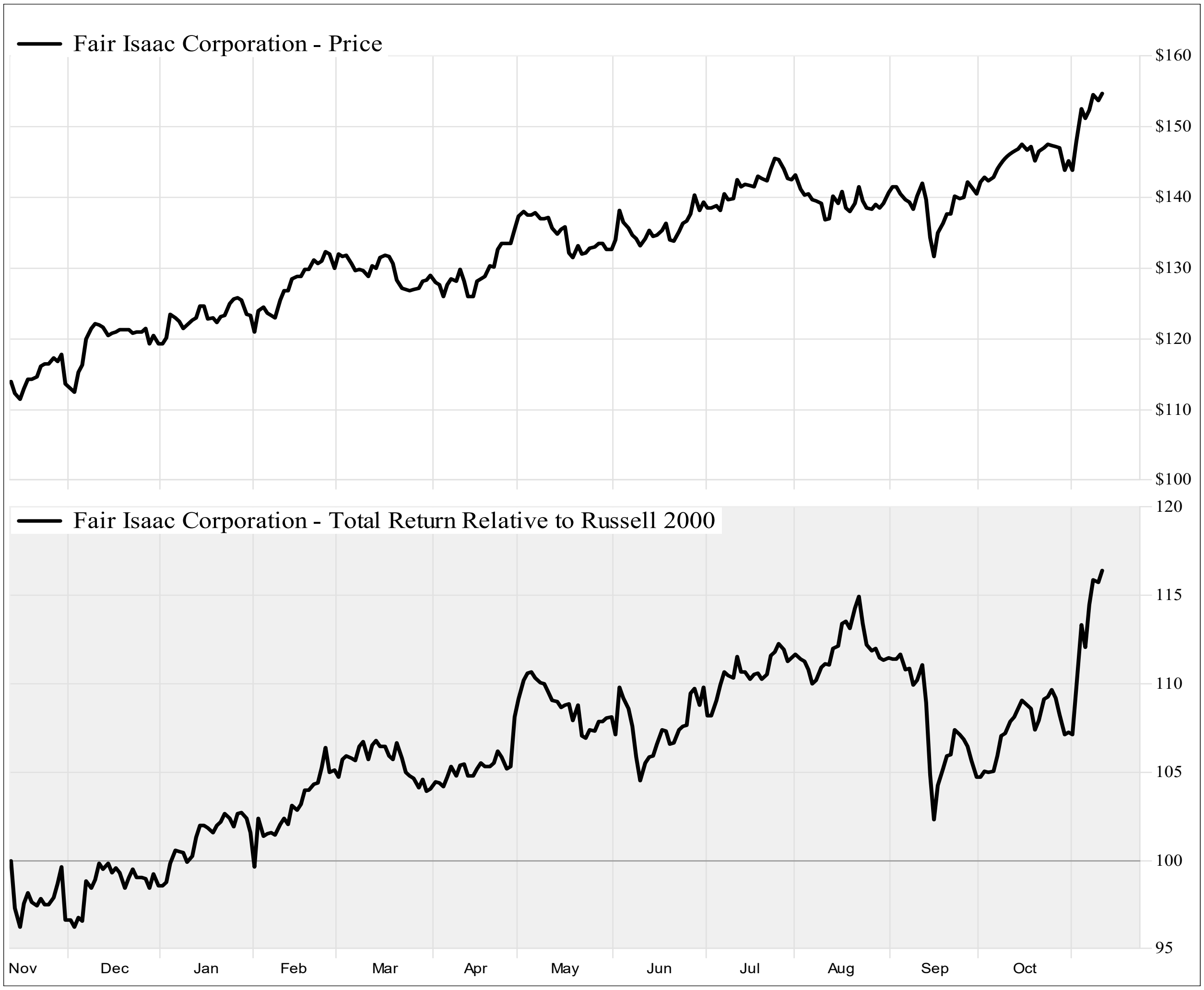
In order to reach an intrinsic value for FICO, a five- year DCF was cosntructed using a terminal growth rate of 2% and WACC of 9.86%, an intrinsic value of $192.02 was reached. Additionally, an EV/EBITA and EV/Sales multiple valuation was utilized, using a peer average multiples of 17.43x and 5.05x, respectively. Weighing the DCF and multiple valuations 50/25/25, a price target of $181.18 was reached, producing an 18.80% upside. Fair Isaac Corpation does not pay a dividend.

Risks

- **Failure to Adequately Capture International Markets.** With India and China being the primary targets for FICO Inclusions Initiative, large populations and assumptions of middle class growth could pose a capital-intensive risk if the initiative is not successful. Failure to infiltrate these markets with existing credit bureaus and scoring technology could prove to be a premature attempt to move from a recognized domestic score provider to a trusted global scoring company.
- **Corporate and Consumer Cybersecurity.** The massive amount of consumer, corporate, and agency data is subject to a substantial amount of risk, as the current environment has seen increased hacking activity and catastrophic breaches. FICO was the first in the industry to increase investment on internal cybersecurity, however, the vast amount of sensitive information is an area of concern.

Management

Will Lansing has served as President, CEO and Director for 11 years, bringing 30 years of experience. Prior, Lansing served as CEO of InfoSpace, ValueVision Media and NBC Internet. Michael J. Pung joined the firm in 2004, and is the current CFO and EVP. Dr. Stuart Wells is the Chief Product and Technology Officer, offering crucial expertise in developing innovative technologies, specializing in originations, fraud management, and debt management enterprise solutions.



Name	Ticker	Market Cap (mil)	P/S	P/E	EV/EBITA	P/B
Fair Isaac Corporation	FICO	4,555	5.3	38.20	23.20	10.8
ACI Worldwide	ACIW	2,664	2.60	68.10	13.20	3.4
Dun & Bradstreet	DNB	4,308	2.50	22.00	11.30	-
NICE	NICE	17,826	3.90	53.20	18.40	3.0
MSCI	MSCI	11,188	9.30	37.10	19.70	36.4
Verisk	VRSK	15,018	7.30	33.60	17.60	8.9
Peer Averages		9,260	5.15	42.03	17.23	12.5

Source: Factset

Peer Fundamentals

Name	Ticker	Revenue (mil)	ROA	ROE	Debt/Equity	Est. 5 YR NI Growth
Fair Isaac Corporation	FICO	932.2	10.4	29.4	141.8	6.9%
ACI Worldwide	ACIW	1,055.70	6.66	18.38	99.99	23.1%
Dun & Bradstreet	DNB	1,704	4.53	-	-	-17.10%
NICE	NICE	3,898	5.45	8.34	30.78	18.2%
MSCI	MSCI	1,151	8.37	42.79	653.39	8.6%
Verisk	VRSK	15,018	8.81	33.39	179.15	9.8%
Peer Averages		3,960	7.36	26.45	221.02	8.3%

Source: Factset

Versum Materials, Inc. (VSM)
November 17, 2017

Holly Kuffel | Domestic Materials

Versum Materials, Inc. (NYSE:VSM) is primarily engaged in the manufacture and distribution of specialty chemicals for the semiconductor, display and LED industries. It operates through two main segments: Materials (78% of total revenue) and Delivery Systems and Services (22%). The Materials segment produces specialty chemicals and gases crucial for the manufacture of semiconductors and LED displays, while the Delivery Systems and Services manufactures, operates and installs chemical and gas distribution systems to ensure safe delivery to customers. The company was founded in November 2015 as a spinoff from Air Products and Chemicals, Inc. and went public October 2016. VSM is headquartered in Tempe, Arizona.

Price ($):	39.07
Price Target ($):	55.00
52WK H-L ($):	42.74 - 22.72
Market Cap (mil):	4,251
Insider Holdings:	0.52%
Avg. Daily Vol (mil):	402,326
Yield (%):	0.50
Short interest (%):	2.50
ESG Rating:	BB

Beta:	1.23
M-Term Rev. Gr Rate Est:	5.0%
M-Term EPS Gr Rate Est:	11.3%
Net debt (Mil):	982.8
Debt/EBITDA:	1.95
WACC:	12.52
ROA (%):	16.85
ROIC (%):	24.14

FY: Sep.	2016	2017	2018E	2019E
Revenue (Mil)	970	1,127	1,202	1,269
% Growth	-3.9%	16.2%	6.6%	5.6%
Oper Inc	280	326	363	391
% Growth	14.9%	16.4%	11.4%	7.9%
Op Margin	28.8%	28.9%	30.2%	30.8%
EPS	$1.95	$1.91	$2.14	$2.35
P/E (Cal)	11.64	20.32	18.26	16.64
EV/EBITDA	10.23	13.61	11.90	11.01

Recommendation

Semiconductors are widely recognized as a key driver and technology enabler in the electronics industry; however, the semiconductor industry is changing their architecture to next generation nodes and to three-dimensional structures, thus requiring newer and higher quantities of chemicals. In 2016, the memory and logic products composed 27.9% and 23.5% of total revenue in the industry, primarily being driven by DRAM and NAND devices. Furthermore, R&D budgets in the semiconductor manufacturing industry are rising by about 6% YoY, emphasizing the necessity for newer and a higher capacity of materials. VSM's gases and chemicals are a critical part of the manufacture of semiconductors, as they are necessary for six of the seven process steps. With the advancement to 3-D semiconductors, more steps are being added to the process, driving the necessity for higher quantities of chemicals. Furthermore, more than 80% of VSM's material sales to the semiconductor industry are in the memory and logic segments, and with the Dynaloy acquisition, VSM offers more product diversity than its competitors. VSM's top three customers include Intel Corporation, Taiwan Semiconductors, and Samsung Electronics; together, they compose 47% of overall revenue. VSM has strategically located manufacturing plants in South Korea and Taiwan not only to catch the benefits of lower costs, but to be closer to their largest customers. In order to match the demand for more materials, VSM announced a $20M expansion at its largest chemical site in Pennsylvania, allowing the company to increase its production capacity of DRAM and NAND chemical products and gases and modify equipment configuration to reduce bottlenecking. In addition to their materials segment, VSM offers an innovative delivery service of their high-purity products to their customers, a feature that their biggest competitors do not offer. As a result, the delivery systems and services revenue increased 37.8% in FY 2017. In 2017, VSM's consolidated segments experienced 16.2% sales growth to $81.6M, while EBITDA margins improved to approximately 33%, which reflects increases in all businesses. Due to their disciplined growth strategy and strengthened profitability and margins, it is recommended that Versum Materials, Inc. be added to the AIM Equity Fund with a target price of $51.12, representing a 30.84% upside. VSM pays a regular quarterly dividend, yielding 0.50%.

Investment Thesis

- **Pursuing a Growth Strategy.** Within one year of the company going public, VSM announced the acquisition Dynaloy, an electronic chemicals segment from Eastman Chemicals. Dynaloy is a leading supplier in cleaning solutions for the semiconductor and specialty manufacturing industries. This acquisition consisted of a $13M transaction covered entirely by cash on hand. With this acquisition, management anticipates even stronger cash flow generation and gain a stronger exposure in Asia's semiconductor market.
- **Decreasing leverage.** VSM incurred $1.0B in debt from Air Products & Chemicals as a result of the spin off, leaving management with a hefty burden; however, management anticipates their strong margins and cash flows to be more than sufficient enough to service their debt obligations and further pursue their growth strategy. As of FY 2017, VSM has produced continually strong financial performance with net income of $44.6M, operating margins of approximately 30% and EBITDA margins of approximately 33%.
- **Expanding Delivery Systems & Services Segment.** VSM and NuMat Technologies partnered together to implement a purification and separation system that allows for the safe travel and delivery of high-purity gases directly to customers. In July 2017, VSM released ION-X, which utilizes Metal Organic Frameworks (MOFs) to absorb, store, and safely deliver ultrahigh purity gases at subatomic pressures. Management indicates that their next step is to manufacture and distribute ION-X globally in FY 2018. Revenue in this segment increased 37.8% in FY 2017 and management anticipates these strong earnings to carry into 2018.

Valuation

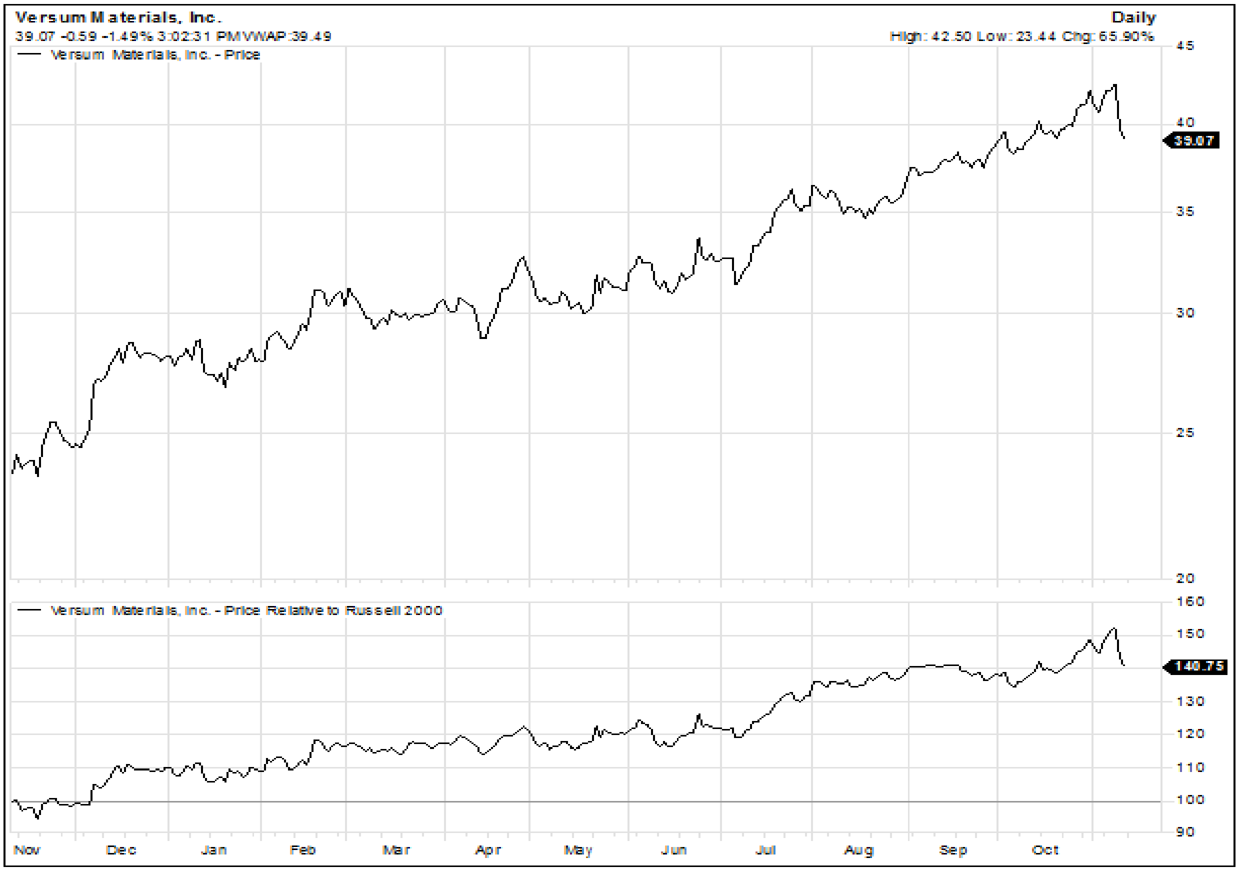
To reach an intrinsic value for VSM, a five year DCF model was constructed. Using a terminal growth rate of 2.00% and a WACC of 8.46%, an intrinsic value of $42.93 was reached. A ± 0.25% sensitivity analysis on the terminal growth rate (1.5-2.5%) and discount rate (8.0%-9.0%) ranged from $40.6-$47.7. An EV/EBITDA multiple valuation was conducted utilizing a comparables average EV/EBITDA multiple of 17.5x and a FY 2018 EBITDA of $417.8M, yielding a value of $67.31. Additionally, a P/E multiple valuation was conducted with the use of a comparables average P/E multiple of 30.8x and a FY 2018 EPS of $2.14, yielding a value of $65.82. By weighting the DCF and relative valuation models 50/25/25, a price target of $55.00 was reached, yielding a 40.77% upside. VSM pays a regular quarterly dividend, yielding 0.50%.

Risks

- **Too Much Debt.** A result of the spinoff left VSM with $1B in debt and a high obligation to pay it off. VSM generates strong cash flows and has strategically aligned their debt as a high priority; however, failure to reduce this debt over time can take a critical hit on the company's share value and potentially lead to bankruptcy.
- **Economic Semiconductor Demand.** 80% of the materials segment's revenue comes from the semiconductor industry. Therefore, revenue is highly dependent on semiconductor demand, which in turn is affected by consumer demand. While demand for semiconductors is projected to continue growing, VSM could struggle if they do not continually adapt to consumer preferences.
- **Customer Retention.** VSM's top three customers composed 47% of the company's overall revenue in FY 2016. If VSM cannot strategically manage their product lines to match their customer's demand, they run a high risk of customer retention and thus, low sales.

Management

VSM entered the market with an experienced management team, all of which were previously employed at Air Products & Chemicals and share years of experience with the semiconductor industry. Guillermo Novo has served as President and CEO since VSM's inception in 2015 and previously worked as SVP and VP for Air Products & Chemicals and the Dow Chemical Co, respectively.



Source: FactSet

Peer Fundamentals

Name	Ticker	Revenues	ROE	ROIC	Debt/ Equity	Est. 5 yr NI Growth
Versum Materials, Inc.	VSM	1,127	-	16.85	-	20.90
Cabot Microelectronics Corporation	CCMP	507	15.60	10.90	25.60	110.20
Entegris, Inc.	ENTG	1,313	14.60	8.00	50.20	42.70
KMG Chemicals, Inc.	KMG	333	14.91	4.59	291.03	-
W.R. Grace & Co.	GRA	1,698	34.30	5.10	399.20	-42.60
Peer Averages		963	19.85	7.15	191.51	36.77

Source: FactSet

Peer Valuation

Name	Ticker	Market Cap (mil)	P/S	P/E	EV/ EBITDA
Versum Materials, Inc.	VSM	4,251	3.8	22.1	13.6
Cabot Microelectronics Corporation	CCMP	2,458	5.1	30.3	16.8
Entegris, Inc.	ENTG	4,468	3.5	32.6	13.8
KMG Chemicals, Inc.	KMG	814	1.9	27.6	23.6
W.R. Grace & Co.	GRA	4,819	2.9	32.6	15.9
Peer Averages		3,140	3.3	30.8	17.5

Source: FactSet

Electricite de France ADR (ECIFY)
November 17, 2017

Derek Grifka — International Utilities

Electricite de France (EDF) ADR (US-OTC) is a state-owned French utilities company. The company services 37.6 million clients around the globe with a market share of 23% in Europe. About 78% of revenue comes from nuclear power, 9% from renewable sources, and 13% from fossil-fired power. Nuclear power has no carbon emissions and little variability in output and about 75% of electricity in France comes from nuclear energy. EDF provides for 77% of this total nuclear production with 58 nuclear reactors. Over 60% of revenue comes from France, 13% from Italy, and 11% from the UK. The company was founded in 1946 and is headquartered in Paris, France.

Price ($): (11/17/2017)	2.44	Beta:	0.46	FY: Dec	2016	2017E	2018E	2019E
Price Target ($):	3.17	WACC	9.63%	Revenue (Mil)	78,592	71,229	71,301	71,326
52WK H-L ($):	1.58-2.87	M-Term Rev. Gr Rate Est:	0.1%	% Growth	-5.06%	-9.37%	0.10%	0.04%
Market Cap (mil):	35,221	M-Term EPS Gr Rate Est:	13.1%	Gross Margin w/o Dep	25.1%	19.6%	19.6%	19.6%
Float (mil):	-	Debt/Equity:	163%	Operating Margin	9.2%	5.76%	6.25%	6.09%
Short Interest (%):	0.00%	Debt/EBITDA:	4.62	EPS (Cal)	$0.27	0.04	0.07	0.06
Avg. Daily Vol (mil):	44,819	ROA:	13.6%	FCF/Share	($0.02)	($0.27)	($0.25)	($0.03)
Dividend TTM ($):	0.18	ROE:	9.6%	P/E (Cal)	8.0	56.6	37.4	44.2
Yield (%):	7.89%	ROIC:	7.9%	EV/EBITDA	4.40	5.53	5.37	5.37

Recommendation

EDF is a major player in the utilities sector. For example, in 2009, EDF was the largest producer of electricity in the world. Creditors have ease of mind knowing that if the company struggles, then the government can protect the company while it raises capital, since the government owns over 83% of EDF's shares. Also, it is unlikely that the government would reduce its stake in the company, since so many French citizens would be affected. Regulated tariffs were eliminated in 2016, making EDF's prices more exposed to market prices. Only about 8% of revenue is regulated by the government. Additionally, French President Macron wants to raise the carbon price floor to over 30 euros per ton, which would leave EDF unaffected and hurt its competitors. French nuclear capacity is rather old, which calls for a revamping with less fuel consumption, less generated waste, and higher safety standards. Free Cash Flow should only increase, since 2015 was its scheduled maximum CAPEX level, which will be reduced gradually in the next few years. Power plants that have been under construction have recently finished, which should result in a 3.6 billion euro decrease in CAPEX. EDF's renewable energy produces the lowest level of carbon in Europe and plans to double its global capacity of renewable energy by 2030. In addition to utilizing nuclear power, EDF Renewable Energy has wind farms across North America, giving the company a diverse background of energy utilization. Moving on to fundamentals, the past 3 years have been rather sound for the company. Its cash ratio sits at 0.57%, which represents is little liquidity concern and can fund any acquisitions to get a larger market share of Europe and abroad. Its hefty dividend of $0.18 gives it a great incentive to own the stock. Finally, its EV/EBITDA sits at a low 4.40x compared to the peer average of 8.32x, making it a value stock with much growth potential. With these numbers and ideas in mind, an intrinsic value of $3.17 was reached, representing a 30.1% upside.

Investment Thesis

- **Hinkley Point Nuclear Plant.** EDF has begun construction of a plant in the UK at Hinkley Point and should begin operations in 2025. This is an important stepping stone to establish a stronger presence outside of France. The facility will provide power to 6 million (22%) of homes in the UK. Since British Prime Minister Theresa May gave the green light for the project, this could pave the way for future operations in the country.
- **Nuclear Position.** EDF's position in the nuclear industry is a major reason for its success. Nuclear is also, currently, the most efficient and powerful source of energy in the world. For

EDF, despite nuclear energy consisting of 55% of the installed capacity of its operations, nuclear generates 78% of the energy provided by the group. This signifies that nuclear is clearly the most efficient source of energy provided by the company. Although some forms of renewable energy, such as wind and solar, are gaining popularity, they are very expensive to implement with little efficiency.

- **Strong Market Position.** Being the leading electricity provider in Europe has its advantages. Barriers to entry are insurmountable and EDF should be able to maintain its strong market share with increased global presence. For example, the company produces about 20% of the UK's electricity, which makes EDF the largest supplier by volume through its use of nuclear energy. Their presence is only going to increase with the implementation of the Hinkley Point plant.
- **Research and Development.** Despite being the largest provider of electricity in Europe, the company is striving to grow even more. The group is hoping to expand with its nuclear power and renewable energies to support local communities and develop its international presence. Four research programs delve into the "disruptive-future-ready" category, including energy storage, small modular reactors, and developing renewable energy sources. In 2016, its R&D increased to 662 million euros compared to 659 in 2015.

Valuation

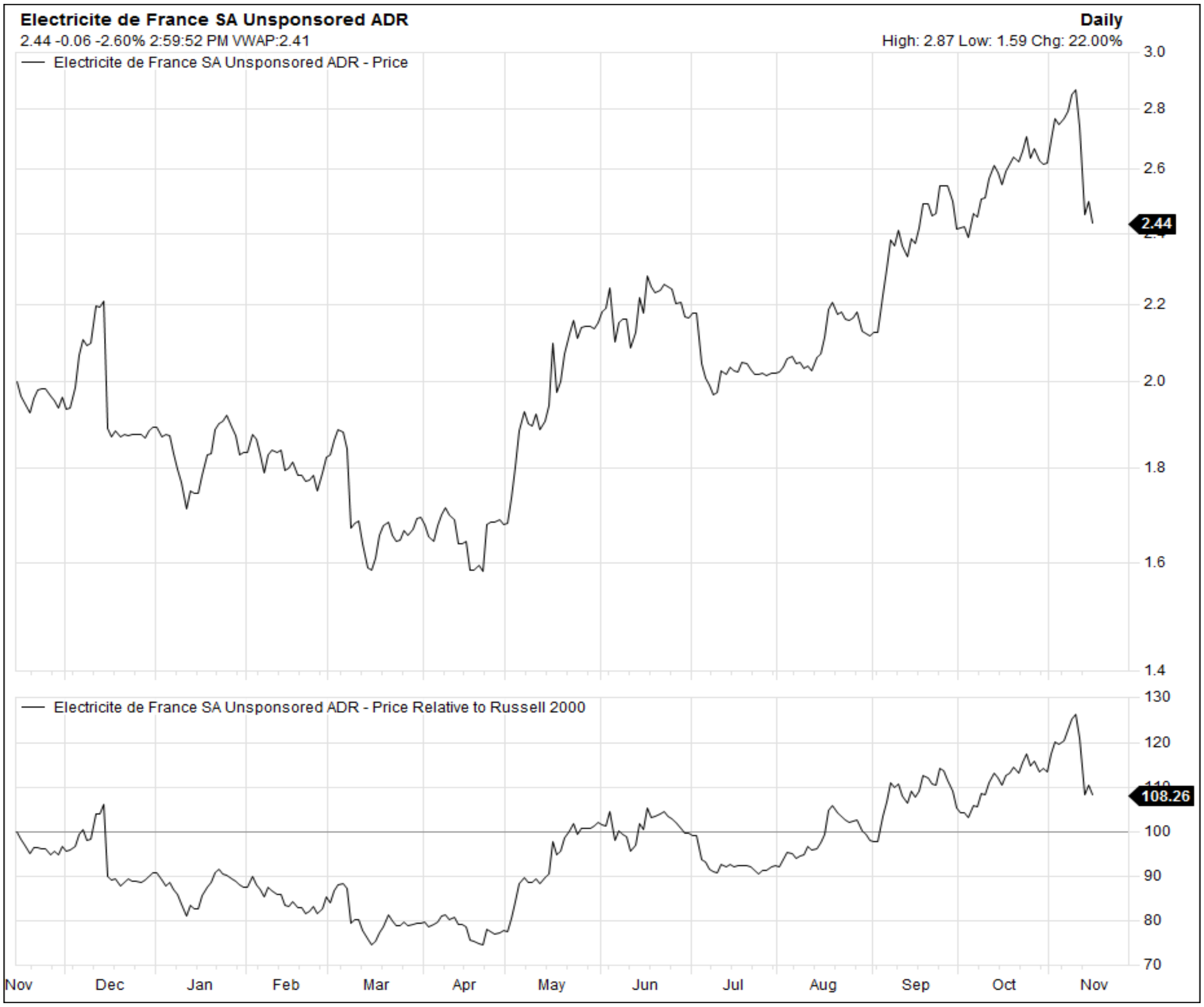
To reach a valuation for EDF, a five-year DCF model was constructed. Using a terminal growth rate of 2.0%, WACC of 9.64%, an intrinsic value of $2.95 was reached. A sensitivity analysis on the terminal growth rate and WACC ranged from $2.37-$3.74. Additionally, an EV/EBITDA valuation was used with an estimated 2017 EV of 63,597 and a LTM EBITDA of 12,470 and a comparables weighted average EV/EBITDA of 5.10x, which resulted in a valuation of $3.84. By weighting the DCF 75% and the EV/EBITDA 25%, a price target of $3.17 was reached, which yields a 30.1% upside. EDF pays a dividend of $0.18 per share, yielding 7.89%.

Risks

- **ROIC.** EDF's ROIC sits at 7.86%; however, this should be just a blip on the radar, since ROIC was over 23% in just 2010. One reason for the low ROIC is because of the issuance of 10 billion euros of hybrid debt in 2016. Conversely, total cash (including short-term investments) went up over 5.3% in 2016, which is a good sign of being able to raise future ROIC.
- **French Nuclear Reduction.** French President Emmanuel Macron is not favorable when it comes to nuclear energy. In fact, he would like to see the 75% of energy generation come from nuclear to be reduced to 50% by 2025. This is a rather unlikely scenario and Macron has even considered delaying these plans and utilizing a UK-style subsidy mechanism to build nuclear reactors.
- **Currency Risks**. EDF does not hedge against currency risk, so any unfavorable exchange rate moves could negatively affect the company. For example, over $112 million in 2016 was gained from the positive exchange rate effect, which boosted FCF. However, in the future, EDF may not be as lucky.

Management

Jean-Bernard Levy began his career as an engineer in 1979 after graduating from Ecole Polytechnique and Telecom Paris Tech. He has been the CEO of a telecom company, an investment bank, Vivendi, and the Thales Group. He has been the chairman and CEO of EDF since the end of 2014. Marc Benayoun, the company's VP, started his career as a buy-side analyst. He joined EDF in 2009 and led the creation of the Economics, Tariffs and Prices Direction.



Name	Ticker	Revenue	ROA	Dividend	Cash Ratio	Net PP&E
Electricite de France ADR	ECIFY	78,592	0.8%	7.9%	0.57%	151,092
E ON ADR	EONGY	42,134	0.6%	3.1%	0.36%	30,030
ENGIE	ENGI	73,100	-0.2%	8.3%	0.36%	60,376
RWE	RWE	53,747	-4.6%	0.0%	0.59%	27,501
Peer Averages		56,327	-1.4%	4.8%	0.44%	39,302

Name	Ticker	Market Cap (mil)	ROE	EBITDA Margin	EV/EBITDA	1 YR Beta
Electricite de France ADI	ECIFY	35,221	5.7%	16.2%	4.40	0.46
E ON ADR	EONGY	26,325	23.6%	11.4%	8.32	0.60
ENGIE	ENGI	41,850	-1.0%	13.9%	7.22	0.78
RWE	RWE	15,863	-63.4%	5.8%	9.43	-0.09
Peer Averages		28,012	-13.6%	10.4%	8.32	0.43

Source: FactSet

KB Financial Group Inc. (KB)
November 17, 2017

Cathy Gong International Financial Services

KB Financial Group Inc. (NYSE:KB) is a financial holding company, which provides various banking and financial services to individuals and corporations in mainly in South Korea. It operates through six segments: Corporate Banking, Retail Banking, Other Banking Operations, Credit Card Operations, Life Insurance, Investment and Securities business. The Corporate Banking business includes services such as loans, overdrafts, deposits, credit facilities and other foreign currency activities. As of December 31, 2016, the company operated a network of 1,130 branches and sub-branches in Korea. KB Financial Group Inc. was founded in 2001 and is headquartered in Seoul, South Korea.

Price ($):	53.06
Limit Buy Order ($):	50.00
Price Target ($):	59.18
52WK H-L ($):	54.36 - 34.36
Market Cap (mil):	21,514
Insider Holdings	5.84%
Avg. Daily Vol (mil):	0.1
Yield (%):	1.7
ESG Rating	BBB

Beta:	1.12
M-Term Rev. Gr Rate Est:	20.4%
M-Term EPS Gr Rate Est:	18.2%
Dividend Yield (%)	3.10
WACC	8.51
ROA (%):	0.60
ROE (%):	7.00
Tier 1 Capital Ratio (%)	14.4
Credit Provisions/Loans (%	465.4

FY: Dec	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Interest Income	9,247.35	8,765.38	10,812.70	12,075.45
% Growth	-16.90%	-5.21%	23.36%	11.68%
Net Interest Income	5562.92	5641.88	6132.18	7418.29
%Growth	-9.83%	1.42%	8.69%	20.97%
Operating Income	1808.61	1479.50	2114.14	3333.42
EPS	3.86	4.80	4.58	5.99
P/E	7.5	8.3	7.4	7.4
P/B	0.44	0.55	0.80	0.70

Recommendation

According to Bloomberg, South Korea has been selected as the most innovative country in the world. South Korea was in the top three in five of the innovation categories: R&D intensity, high-tech density, manufacturing capability, tertiary efficiency and patent activity. According to government data released recently, the South Korean economy grew at its fastest rate with a real GDP growth rate of 3.2% in seven years. It is believed this economic momentum will hold despite the saber-rattling between Kim Jong Un and President Trump. It is expected that South Korea will benefit from healthy global trade, rising government spending and a big hike in the country's minimum wage. KB offers a diverse line of financial products and services through its various subsidiaries. Based on total asset value, KB is the fourth largest financial group in Korea. With a 78% board independence and a BBB ESG rating, KB Financial Group has outperformed its peers by a margin of 24.9% to 8.6% in the past 12 weeks. The recent acquisition of new securities subsidiaries increased KB's product coverage and cross-selling services. According to KB's report of preliminary unaudited consolidated earnings results for the third quarter and nine months for 2017, they reported operating revenue of KRW 9,477,872 million against KRW 6,868,982 million a year ago. Net operating profit was KRW 1,165,404 million against KRW 721,435 million a year ago. Profit before income tax was KRW 1,199,523 million against 761,857 million a year ago, while net interest income was up 4.2% quarter-on-quarter. Quantitative and qualitative earnings growth will continue on higher core income and from non-banking subsidiaries. KB's payout ratio has been trending up steadily from 21.5% in 2014 to 22.3% in 2015 and 23.2% in 2016 as KB's shareholder returns policy is growing more favorable. Led by improving profitability and synergies at banking and other subsidiaries, it is expected that KB's position as a leading financial group to be solidified. It is recommended that KB be added to the AIM International Fund with an upside of 18.36% - the firm pays a dividend that is currently yielding 1.7%.

Investment Thesis

- **Solid Top Line Growth.** Spurred by the banking-friendly environment and operating profit improvements at KB securities and KB Insurance, KB's earnings growth should continue to exceed their peers, backed by interest income growth and asset quality improvement. For the time being as market interest rates rise and regulatory uncertainties ease following the announcement of the government's household debt regulations in October, banking fundamentals in South Korea should continue to improve.

- **Strong Results Again in 3Q.** Fundamentals at banking and other subsidiaries continued to improve in 3Q2017. KB recently released its preliminary 3Q17 NP of KRW898bn, which was 5-6% higher than our estimate of KRW853bn and Bloomberg consensus of KRW847bn. Positive impacts on funding costs (from the Bank of Korea's rate cut a year ago) have disappeared and KB has increased its Net Interest Margin to 2.08% in the sector over the past four quarters.
- **Acquisitions and Diversification.** KB will acquire a controlling (22.56%) stake in Hyundai Securities. With a core business of retail banking and corporate banking, KB has been keen to expand into the non-banking sector for diversification of its revenue streams. The acquisition of new subsidiaries is based on a premise of increasing KB Financial's product coverage and will obtain greater cross-selling opportunities.

Valuation

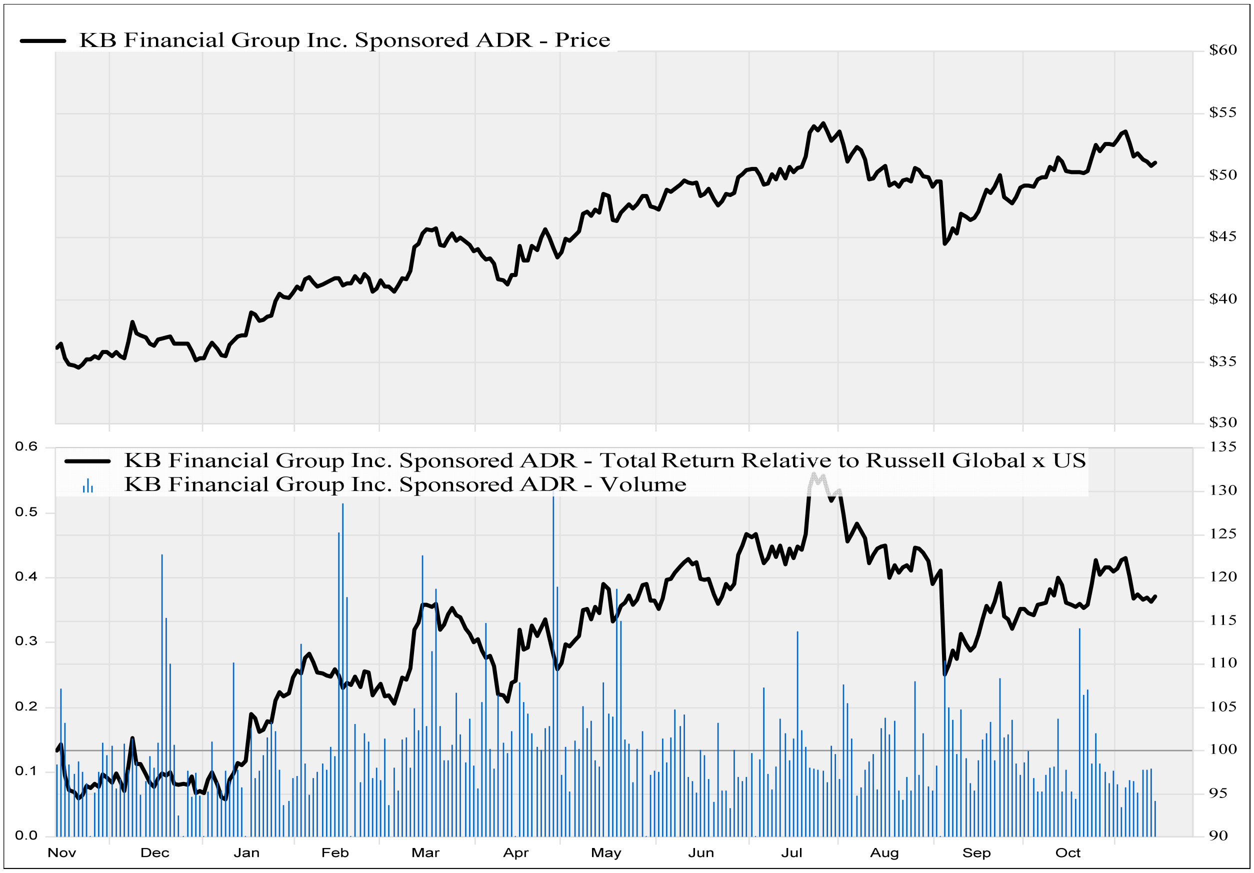
To reach an intrinsic value for KB, a P/B and P/E multiple analysis was conducted. A peer average P/B multiple of 0.66x was used, resulting in a valuation of $64.74. A peer average P/E multiple of 9.2x was used, resulting in a valuation of $52.09. By weighting the two multiples equally, a price target of $58.42 was reached. Discounted Dividend Model was used with a WACC of 8.51%, a 0.75% country risk premuim was added, resulting in a valuation of $59.95. By weighting the two valuation models equally, a price target of $59.18 was reached, resulting in a 18.36% upside. The company currently provides a dividend yield of 1.7%.

Risks

- **Political Tensions with North Korea.** Tensions between North and South Korea have increased sharply since the North's announcement that it tested a nuclear weapon for the fourth time. The Korean Peninsula was in the news because of growing conflicts between the two nations. Conflict on the Korean Peninsula is not new as North and South Korea have long had tensions with one another that dates back prior to the Korean War, which ended in 1953. Political tensions with North Korea has been a discussion since 2011; however, investors are showing optimism about South Korean companies. The benchmark Kospi index has soared to record highs recently and is up more than 22% since the start of the year. That beats the Nasdaq and the Dow over the same period.
- **Human Capital Development.** The level of turnover at KB Financial Group (5%) is below the global industry average of 11% though, macroeconomic conditions in Korea pressure large companies to cut their payrolls and reduce employee count. High turnover could negatively impact employee morale. Further, over 30% of the company's total assets expended in acquisitions since 2013 and this could potentially increase employee disengagement and attrition.

Management

Dr. Jong-Kyoo Yoon is Chairman & Chief Executive Officer at KB Financial Group, Inc. and President& Chief Executive Officer at KB Kookmin Bank. He is on the Board of Directors at KB Kookmin Card Co., Ltd. and KB Real Estate Trust Co., Ltd. Lee Jae Keun is the Chief Financial Officer & Managing Director at KB Financial Group Inc.



Source: FactSet

Name	Ticker	Net Margin	ROE	ROA	Net Interest Margin
Industrial Bank Of Korea	646297	8,427,681	7.45	0.49	1.97
Woori Bank	BSP5RP	10,478,000	4.92	0.30	1.89
Shinhan Financial Group Co., Ltd.	639750	22,832,710	8.15	0.68	2.28
Hana Financial Group Inc.	B0RNRF	13,423,739	6.16	0.39	-
Samsung Life Insurance Co., Ltd.	B12C0T	26,400,000	8.17	0.83	-
Peer Averages		18,283,612	6.85	0.55	2.09

Source: Factset

Name	Ticker	Market Cap	P/E	P/B	P/TBV	Div Yld
KB Financial Group Inc. Spo	kb	21,116	7.25	0.71	0.78	2.15
Industrial Bank Of Korea	646297	8,427,681	6.77	0.58	0.59	3.19
Woori Bank	BSP5RP	10,478,000	7.53	0.61	0.62	3.23
Shinhan Financial Group Co.	639750	22,832,710	6.90	0.72	0.83	3.01
Hana Financial Group Inc.	B0RNRF	13,423,739	8.30	0.59	0.61	2.43
Samsung Life Insurance Co.	B12C0T	26,400,000	16.56	0.79	0.81	0.91
Peer Averages		16,312,426	9.2	0.66	0.7	2.6

*Removed For Relative Valuation Analysis

Source: FactSet