Applied Investment Management (AIM) Program

AIM Class of 2015 Equity Fund Reports
Spring 2014

Date: Friday, March 28th   Time: 1:30 pm – 2:30 pm
Road Show Location: Union League Club of Chicago
Hosted by Marquette Associates
65 West Jackson Blvd., Chicago

Student Presenter	Company Name	Ticker	Price	Page No.
H. Joseph Hodes	Aegon NV	AEG	$8.89	2
Rushi Shah	CalAmp Corp.	CAMP	$27.98	5
Hendrik van der Zandt	China Cord Blood Corporation	CO	$4.00	8
Mike Stankovsky	Vanda Pharmaceuticals, Inc.	VNDA	$17.12	11
Dustin Hwang	Petrobras	PBR	$10.37	14

We appreciate the opportunity to take an AIM 'road show' to the Chicago. 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. Thank you to Chris Caparelli and Dave Smith from Marquette Associates for facilitating and hosting this opportunity for us to present in Chicago.

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Aegon N.V. (AEG)
March 28, 2014

H. Joseph Hodes International Financials

Aegon N.V. (NYSE: AEG), through its member companies that are collectively referred to as Aegon or the Aegon Group, is an international life insurance (38.09% Revenue), pensions (36.21%), and asset management (6.62%) company. Aegon was founded in 1983 and is headquartered in the Netherlands and employs approximately 24,000 people worldwide through its subsidiaries. Aegon N.V. is a holding company that is also active in accident, supplemental health, general insurance, and has some limited banking activities. The company's operations are conducted through its operating subsidiaries. Aegon operates in more than 20 countries in the Americas, Europe and Asia, serving millions of customers. Its main markets are the United States (41.1% Revenue), the United Kingdom (28.2%), and the Netherlands (22.4%).

Price ($): (03/24/14)	$8.89	Beta:	1.36	FY: Dec 31	2013A	2014E	2015E
Price Target ($):	$12.63	WACC	10.38%	Revenue (Mil)	55,807.79	59,004.36	64,979.17
52WK H-L ($):	9.50 - 5.71	M-Term Rev. Gr Rate Est:	8.02%	% Growth	10.70%	5.73%	10.13%
Market Cap (mil):	19,183.10	M-Term EPS Gr Rate Est:	11.00%	Net Interest Margin	2.01%	2.04%	2.09%
Float (mil):	2131.5	Financial Leverage	48.81x	Pretax Margin	2.31%	2.56%	3.04%
Short Interest (%):	0.0%	ROA:	0.2%	EPS (Cal)	$0.39	$1.23	$1.39
Avg. Daily Vol (mil)	0.988	ROE:	2.5%	P/E (Cal)	16.93	11.43	10.02
Dividend ($):	0.26	Long Term Debt ($B)	16.56	BVPS	$16.93	$16.35	$16.28
Yield (%):	2.9%			P/B	0.94	0.98	1.00

Recommendation

Since 2011, Aegon has experienced solid operating momentum through its efforts to improve product mix, reduce its risk profile, boost productivity, and generate cash flows. The company has strong brand recognition under its US subsidiary Transamerica and its broad international scale helps keep costs low. Because of its large American business, Aegon should remain largely unaffected by the Ukrainian crisis and has low exposure to PIIGS nations of only 5% book equity. AEG enjoys an excellent solvency margin of 212% and has over €2.2 B ($3 B) in excess capital. Due to its strong capital position, AEG plans to use $1.2 B in 2014 to reduce its debt. Management is projecting FCF of €3.5 B ($4.8 B) from 2013 to 2015; approximately $3 B will be used for deleveraging, which leaves $1.8 B for share repurchases and dividend issuances of at least 5% CAGR. Aegon's stock came under pressure recently following the 2013 earnings release, most likely due to a lower-than-expected dividend for the second half of 2013 ($0.15/share vs. $0.17/share expected). This miss resulted in a 2013 total dividend of $0.29, which was an increase of 5% compared to 2012. With its low price-to-book ratio of 0.94, established capital structure, international scope, and room for expansion, it is recommended that AEG be added to the AIM International Equity Fund with a target price of $12.63, which offers a potential upside of 42.06%.

Investment Thesis

- **Quality of Earnings** Aegon has emphasized employer solutions and pensions in an effort to shift its business mix more toward fee-based earnings while de-emphasizing spread based earnings. Assets under management were $122.7 B at 2013 year-end after a consistent CAGR of 20% since 2009. The previous earnings drag caused by fixed annuities has lessened due to a decrease in fixed annuity reserves from $28.3 B in 2010 to $16 B at 2013 year-end. Variable annuity reserves, which require less than half of the margin on reserves as fixed annuities, have increased from $36.1 B in 2010 to $59.8 B in 2013. As Aegon continues this shift, the company should experience a rise in quality of earnings, increased cash flow stability, and sustainable earnings growth.

- **Decreased Interest Rate Sensitivity** AEG is currently enjoying lower interest rate yield sensitivity due to rising interest rates in the U.S. The gap between the guaranteed rate on AEG's annuity-based liabilities and the company's book yield has narrowed since the company last updated its guidance on earnings drag due to historically low interest rates. Aegon makes annual earnings adjustments due to projected interest rate movements that are generally conservative in nature. A charge of approximately $550 M was made in Q3 2013 to account for assumptions of interest rates remaining low. Due to recent comments made by the Fed, this charge should be readdressed, which should result in an increase in earnings of about $75 M, further alleviating drag on AEG's earnings and boosting an understated ROE.
- **Focus on Efficiency** Over the past year, Aegon has divested from unprofitable business segments while the company continues to explore growth opportunities in Central and Eastern Europe, Latin America, and Asia. AEG includes capital invested in run-off businesses but not earnings from run-off businesses in ROE, causing a dilution of $125 to $175 M annually. The company plans to decrease capital tied up in run-off businesses from $2.2 B at year-end 2013 to $1.9 B in 2015, freeing up capital and increasing earnings.

Valuation

To find the intrinsic value of AEG, a price-to-book multiple model, dividend discount model, and equity excess model were used. The five year average historic price-to-book for AEG was 0.94 and the industry average is 1.61. Weighting the historic average at 80% and the industry average at 20% due to the consistency of Aegon's lower P/B multiple, the model yielded an intrinsic value of $16.30. The dividend discount model culminated in an intrinsic value of $13.28 using a dividend growth rate of 8.2%. Because of AEG's high cost of equity and relatively low ROE, the equity excess model yielded a lower intrinsic value of $8.30. Weighting each of the models equally, a price target of $12.63 was reached – which relates to a return potential of greater than 40%.

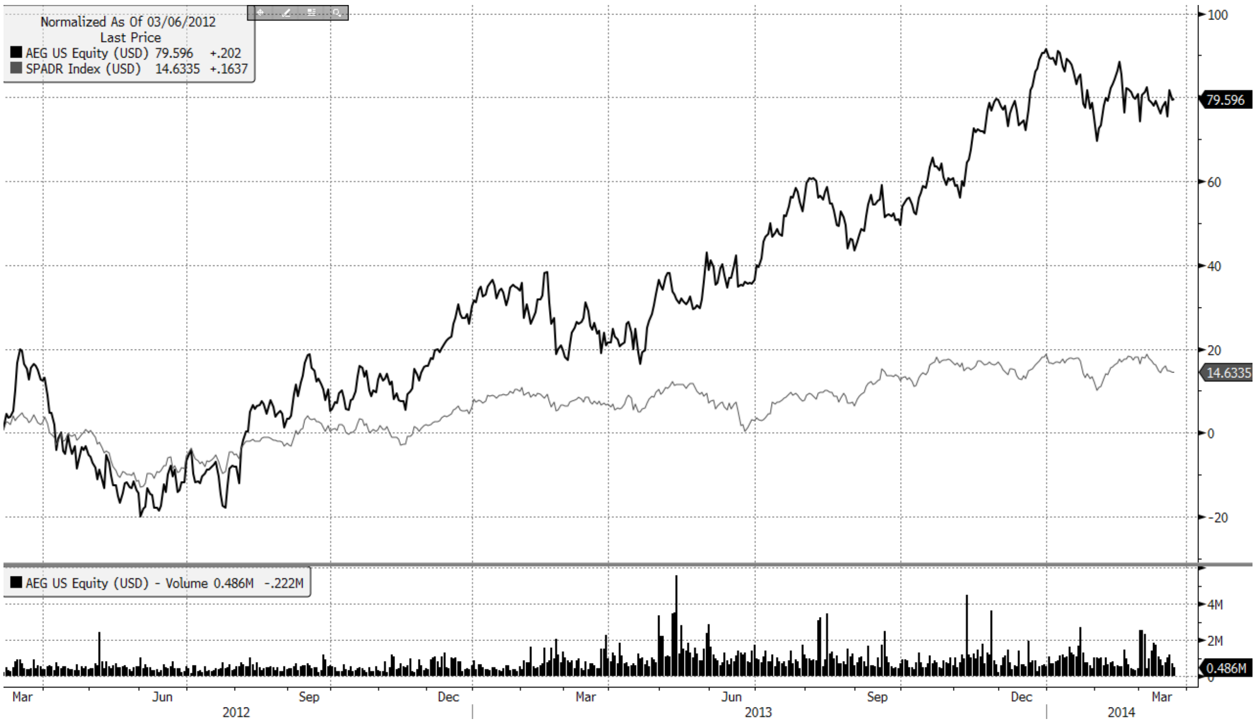
Risks

- **Capital and Exchange Markets Exposure** The high portion of variable annuity and universal life policies inherent in Aegon's US business typically carry minimum guaranteed returns, which would prove detrimental to AEG in a deflationary environment. If the cost of these guarantees were to rise, AEG would be forced to increase its reserves. Also, like other insurers, Aegon has exposure to capital markets via its investment portfolio, which would suffer in an economic downturn. Deterioration of the USD/EUR exchange rate would cause AEG a decrease in realized earnings from Transamerica.
- **Regulatory Concerns** There are a wide variety of laws and regulations applicable to insurance companies and insurance holding companies in the Netherlands and internationally. The adoption of Solvency II by the European Union will cause a heightened oversight of insurers such as Aegon's subsidiaries by regulatory authorities. Also, changes to the Solvency II directive could negatively affect AEG's profitability.
- **Operating Entity Shortfalls** Aegon injects capital into its subsidiaries with the expectation that the company will be able to repatriate the capital on an annual basis. If these operating entities experience lower profits than expected due to defaults or impairments, AEG's overall earnings will suffer. These losses would also reflect a risk management failure on the part of Aegon.

Management

Aegon's CEO, Alex Wynaendts, has thirty years of experience in European banking, asset management, and corporate finance. He joined AEG in 1997 as Senior Vice President for Group Business Development. He has been a member of Aegon's Executive Board since 2003. In April 2007, Mr.

Wynaendts was named Aegon's Chief Operating Officer. A year later, he became CEO and Chairman of Aegon's Executive and Management Boards.



Ownership

% of Shares Held by All Insider and 5% Owners:	0.00%
% of Shares Held by Institutional & Mutual Fund Owners:	9.27%

Source: Morningstar

Top 5 Shareholders

Holder	Shares	% Out
Dodge & Cox Inc	100,821,343	4.73
Brandes Investment Partners L.P.	9,355,996	0.44
Tradewinds Global Investors, LLC	6,067,580	0.28
Private Management Group, Inc.	5,245,087	0.25
Eaton Vance Management	5,160,070	0.24

Source: Yahoo! Finance

CalAmp Corp. (CAMP)
March 28, 2014

Rushi Shah | Domestic Information Technology

CalAmp Corp. (NASDAQ: CAMP) is a leader in wireless communications solutions for various companies globally. The company produces revenues through two different business segments: Wireless Datacom [Mobile Resource Management (48%) and Wireless Networks (32%)] and Satellite Products (20%). CalAmp provides MRM to assist in reporting business critical data efficiently from machine-to-machine. The company also develops, manufactures, and sells direct broadcast satellite (DBS) outdoor equipment and home video networking devices for high definition services. CalAmp Corp. was founded in 1981 and is headquartered in Oxnard, California.

Price ($): March 24 2014	$27.98		Beta:	1.21		FY: Apr	2013A	2014E	2015E
Price Target ($)	$32.38		WACC:	10.34%		Revenue ($mil)	$180.58	$240.31	$311.87
52 WK H-L ($)	$34.85-9.26		M-Term Revenue Gr. Rate Est:	27%		% Growth	30.17%	33.08%	29.78%
Market Cap (mil):	984.1M		M-Term EPS Gr. Rate Est:	39%		Gross Margin	31.51%	35.00%	36.00%
Float (mil):	32.5M		Debt/Equity Ratio	0.00%		Operating Margin	8.85%	12.50%	15.00%
Short Interest (%)	7.95%		ROA:	25.70%		EPS (Cal)	$1.54	$0.57	$0.88
Avg Vol (K)	887,448		ROE:	33.90%		FCF/Share	$0.51	$0.74	$1.13
Dividend ($):	--					P/E (Cal)	23.55	49.4537	31.755
Yield (%)	--					EV/EBITDA	17.35x	9.02x	5.88x

Recommendation

With technology trends changing at vast speeds, CalAmp has been successful in innovating accordingly. With its first positive earnings in over three years reported in 2012, and with a recent $29 million tax benefit in the fiscal year of 2013, the stock price has risen nearly 500% over the last two years. This should not discount the fact that there is still room for this undervalued company to continue to rise in price. CalAmp is focused on using industry trends in their MRM segment in order to continue to increase their revenue at a near 30% CAGR over the next several years. The company fuels demand by making acquisitions like the recent "Wireless Matrix," which has led to revenue and margin increases in recent quarters. Wireless Matrix is a MRM fleet management software company that was acquired in 2013. CalAmp has been successful in using their MRM products internationally in order to increase market share globally. Some of the firm's products help with services such as stolen vehicle recovery, vehicle finance, and auto insurance telematics. CAMP also has had steady sales in their satellite segment that has yielded around 20% of total revenue. Satellite products are sold primarily to EchoStar, an affiliate of Dish Network. CalAmp has many well-known clients across all segments of their business such as Caterpillar, Sprint, and Vodafone. Although another tax refund is not expected in the near future, there are drivers that can lead to healthy cash flows for the future. It is recommended that CalAmp be added to the AIM Domestic Equity Fund with a target price of $32.38, presenting a potential upside of 15.72%.

Investment Thesis

- **MRM Growth to Drive Future.** According to a recent *Business Insider* report, there are currently about 1.9 billion devices connected through "the Internet of Things." This number is expected to increase to 9 billion by 2018. CalAmp Corporation has driven their future in the direction of this exciting trend with new products and the recent acquisition of "Wireless Management" proves that. The increased demand in the company's new products has led to a 34% CAGR in MRM revenue as well as profit margins increasing from 26% in 2011 to 32% in 2013. This trend of increasing margins is expected to continue to increase into the future since CAMP is introducing more software products.

- **Growth Internationally Leading to New Opportunities.** CalAmp currently reports that 16% of its sales come from international avenues. Management would like this number to increase because of international opportunities that may not be available domestically. For example, the Brazilian 245 legislation now requires all cars made in the future to have a stolen vehicle recovery solutions system installed. CalAmp hopes to be a front-runner in the aftermarket products used by foreign car companies. The international space can contribute to the high 30% CAGR for sales in the future.
- **Steady Satellite Sales.** Although the satellite segment is not where the concentration of the new acquisitions by CalAmp are, there is still potential for growth in this segment. 2013 marked the first year where the operating margin contributed by the satellite segment was positive at 1.7%. In 2013, a total of about $41 million in sales was recognized, which accounted for 23% of the total sales. Through nine months of fiscal 2014, the satellite segment accounted for $38M in sales.

Valuation

The intrinsic value of CAMP was found using two different valuation methods. A 5-year DCF was evaluated, using a WACC of 10.34% with a terminal growth rate of 4%. An intrinsic value of $32.40 was found. A sensitivity analysis on both the terminal growth rate (±0.5%) and WACC (±1%) was conducted providing a range between $26.89 and $41.23. A P/E comparable valuation was done as well. Competitors of CalAmp were used to obtain a P/E multiple of 24.7x. Using this along with the expected 2014 EPS of $1.31, an intrinsic value of $32.36 was obtained. Weighing the DCF model at 50%, and the P/E comparable at 50%, a target price of $32.38 was established. This represents a 15.72% upside. CAMP does not pay a dividend.

Risks

- **Potential Loss of Satellite Segment.** The satellite segment of CalAmp was 22% of the fiscal year of 2013's revenue. However, there are no long term deals with the main customer of the satellite segment, EchoStar. Management doesn't view the satellite segment to be where the growth of the company lies.
- **International Exposure Leading to More Regulations.** With CalAmp expecting to grow internationally, there are new regulations that may potentially lead to lower earnings. This can be due to things like foreign exchange losses, threats of being nationalized, and intellectual property differences.
- **Technology Trends Going in Another Direction.** With the Internet of Things being so vast, competition is high. If CalAmp's products are not what customers choose, this could potentially hinder on the growth sales from MRM products. This is where CalAmp believes their future lies, and a negative impact on their biggest segment can lead to lower earnings.

Management

Michael Burdiek joined CalAmp in 2006 as Executive Vice President, and now holds the CEO position. Burdiek has experience as a prior CEO of Telenetics Corporation, a privately held communication product manufacturing company. Garo Sarkissian joined CalAmp in 2005 and is currently the Senior Vice President. He has much prior experience in private equity after working for Global Technology Investments. He has expertise in radio frequency components. Richard Vitelle joined in 2001 and holds the Executive Vice President, CFO, and Secretary/Treasury position. He has 11 years of prior experience in being the CFO of publicly traded SMTEK international.

Ownership

% Shares Held by All Insider and 5% Owners:	9%
% Shares Held by Institutional & Mutual Fund Owners:	57%
	Source: Yahoo! Finance

Top 5 Shareholders

Holder	Shares	% Out
Blackrock	3,126,153	8.78%
Vanguard Group Inc.	1,343,598	3.77%
Columbia Wanger Asset Management	1,235,000	3.47%
Dimensional Fund Advisors	1,198,886	3.37%
Echostar	987,000	2.77%
		Source: Bloomberg

Peer Group

Company	**Ticker**	**Mkt. Cap.**	**P/E**
Motorola Solutions	MSI	16.94B	17.32
Trimble Navigation LTD	TRMB	10.01B	38.19
Comtech Telecommunications Corp.	CMTL	547M	29.96
Sierra Wireless Inc.	SW	742.39M	13.33

China Cord Blood Corporation (CO)

March 20, 2014

Hendrik van der Zandt International Healthcare

China Cord Blood Corporation (NYSE: CO) is the leading cord blood bank operator in China. The company provides umbilical cord blood services for expectant parents interested in capturing the opportunities made available by evolving medical treatments and technologies such as cord blood transplants. CO currently holds four of the seven municipality/province-specific exclusive cord blood bank licenses that have been issued in China. The aggregate number of births in this operating region accounts for 45% of the total newborn population in the provinces that have been authorized. The company has three operating cord blood banks in the Beijing municipality, the Guangdong province, and the Zhejiang province. China Cord Blood Corporation is based in Central, Hong Kong.

Price ($): (3/21/14)	4.00	Beta:	0.59	FY: Mar	2013A	2014E	2015E
Price Target ($):	5.39	WACC	6.2%	Revenue (Mil)	84.66	93.00	106.70
52WK H-L ($):	4.85-2.75	M-Term Rev. Gr Rate Est:	20%	% Growth	40.10%	9.85%	14.73%
Market Cap (mil):	296.40	M-Term EPS Gr Rate Est:	27.8%	Gross Margin	79.42%	79.40%	80.00%
Float (mil):	28.3	Debt/Equity:	64.6%	Operating Margin	32.00%	30.29%	32.40%
Short Interest (%):	0.38%	ROA:	4.3%	EPS (Cal)	0.25A	0.35E	0.41E
Avg. Daily Vol:	122,460	ROE:	8.9%	FCF/Share	($0.14)	($0.16)	($0.08)
Dividend ($):	N/A			P/E (Cal)	15.81	11.53	9.71
Yield (%):	N/A			EV/EBITDA	3.47x	3.26x	2.67x

Recommendation

China Cord Blood Corporation's strength comes from its ability to sell a new service in a growing market in addition to a strong management team that seizes opportunities to expand and grow revenues at a 5-year average historical rate of above 30%. Using the latest technology and investing heavily in a well-trained sales force to promote the benefits of cord blood stem cell storage to expectant parents has resulted in an above average penetration rate of 3% of CCBC's target markets. Macro-drivers include the rapid economic development in China, the strong GDP per capita growth and the increasing awareness and affordability of healthcare services in China. CCBC stands out with the soundness of its business, the integrity of its operating model and revenue stream, and the sustainability of its healthy growth. Because of the drivers developed below and a favorable valuation, it is recommended that China Cord Blood Corporation be added to the AIM International Equity Fund with a price target of $5.39, representing an upside of approximately 35%. CCBC does not currently offer a dividend.

Investment Thesis

- **Large number of newborns.** With the relaxation of the one-child policy by the Chinese government and the most recent census of 16.1 million newborns in 2011, China has the second largest newborn population in the world. This provides CCBC with an expanding target market and a number of opportunities to continue the trend of delivering consistent growth and earnings outperformance. The company will continue to put forward its efforts to increase the current penetration rate of 3%, by increasing its sales force and establishing more awareness in its collaborative 290 hospitals in the population dense regions of Beijing, Guangdong and Zhejiang. The company experienced an annual average increase of 22% in new subscribers to its cord blood banking services since 2009.
- **Early stage development of cord blood stem cell research.** China Cord Blood Corperation has established a well-known brand, a monopolistic market share of 45% of all licensed regions in China and expertise in the public market of cord blood collection, transportation and testing. The company is able to maintain 80% gross margins due to economies of scale in their direct costs, since additional subscribers do not add to their fixed costs. Based on recent public information,

cord blood stem cells can be used to treat approximately 80 types of diseases. Stem cell therapy continues to develop around the world and medical practitioners are likely to discover diseases that can be treated by stem cell therapies and therefore increase public awareness as well as the company's ability to raise prices on their services.

- **Growth in GDP and urban disposable income.** GDP per capita in China grew by 8.0%, 17.1% and 17.2% in 2009, 2010 and 2011, respectively. China's healthcare expenditures grew by a CAGR of approximately 15.9% since 2000 with an increased awareness of middle and upper class parents into the opportunities and benefits given to the child and family members by storing the cord blood and stem cells for future use in transplants, for example. CCBC will continue to look for strategic acquisition opportunities for expanding its market share and state-of-the-art technology to other provinces, as well as expanding overseas by performing additional equity investments and large capital investments into fixed assets.

Valuation

To reach an intrinsic value for CO, a five-year DCF model along with a comparative P/E multiple were conducted. Using a conservative terminal growth rate of 2% and a WACC of 6.22%, an intrinsic value of $4.94 was determined through the DCF model. For the P/E multiple valuation, an industry peer average multiple of 25.69x was used along with a trailing EPS of $0.25, which yielded an intrinsic value of $6.42. Weighing the DCF model 70% and the P/E valuation 30%, a price target of $5.39 was obtained, representing a 34.66% upside. CCBC does not offer a dividend.

Risks

- **Change in "one license per region" policy.** The PRC Ministry of Health introduced this policy in its regulation of cord blood banks, which precludes more than one cord blood banking licesee from operating in the same region. This policy may be changed at any time and cause new competitors to enter markets that have so far been solely available to CCBC. Further, change in legislature in China could adversely affect the company in its pricing power, its monopolistic position and its overall business in the market of cord blood banking services with a very limited number of regulations.
- **Reliance on strategic acquisitions.** The company depends on the ability to increase the target subscription base by expanding the geographical coverage to other regions in order to increase revenues. The PRC MOH announced to release an additional three licenses to arrive at a limited number of ten licenses throughout the country by 2015. The application process takes several years and the company is very dependent on acquisitions to expand its growth opportunities. International competition could threaten CCBC's ability for expansion and adverse growth trends.

Management

Ms. Ting Zheng has been Chief Executive Officer and Director at China Cord Blood Cooperation since 2003. Aside from overseeing the overall operation, she is also responsible for strategic developments and acquisition planning and negotiations. Prior to CCBC, she worked for an accounting firm and holds an Executive MBA degree from Renmin University of China. Mr. Albert Chen serves as the Chief Financial Officer and is a CFA charterholder. He worked in a number of financial institutions prior to his role and specialized in the pharmaceutical and healthcare industries. The CEO of the Beijing division, Ms. Yue Deng and the CEO in the Guangdong and Zhejiang division have each over ten years of sales and marketing experiences in China and in-depth knowledge about China's consumer market and regulatory environment. The management's complementory backgrounds, extensive experience and in-depth knowledge of China's healthcare sector provide a strong foundation for future growth.

Ownership

% of Shares Held by All Insider and 5% Owners:	93%
% of Shares Held by Institutional & Mutual Fund Owners	9%

Source: Yahoo! Finance

Top % Shareholders

Holder:	Shares	% Out
Starr International Company, Inc.	1,928,232	2.64
Essex Woodlands Health Ventures	974,200	1.33
Cortex Capital Management LLC	940,899	1.29
McKinley Capital Management, Inc.	419,402	0.57
Acadian Asset Management	412,102	0.56

Source: Yahoo! Finance

Vanda Pharmaceuticals, Inc. (VNDA)
March 21, 2014

Mike Stankovsky — Domestic Healthcare

Vanda Pharmaceuticals, Inc. (NASDAQ: VNDA) is focused on the development, commercialization, and distribution of novel treatments for central nervous system disorders. The company's portfolio of products includes: HETLIOZ, a unique circadian regulator for the treatment of Non-24-hour sleep-wake disorder, Fanapt, a product for the treatment of schizophrenia, and VLY-686, a small molecule neurokinin-1 receptor antagonist for the treatment of multiple conditions including alcohol dependence. The company received approval for HETLIOZ in January of this year and plans to launch the product in early quarter two. Incorporated since 2002, Vanda Pharmaceuticals, Inc. is headquartered in Washington D.C.

Price ($) (3/24/14)	17.12	Beta:	1.51
Price Target ($):	26.51	WACC	13.1%
52WK Range ($):	3.87-19.00	M-Term Rev. Gr Rate Est:	109.8%
Market Cap:	605.0M	M-Term EPS Gr Rate Est:	N/A
Float	32.9M	LT Debt/Equity	0.0%
Short Interest (%):	13.9%	ROA:	-14.5%
Avg. Daily Vol:	1.13M	ROE:	N/A
Dividend ($):	$ -	Yield (%):	0.00%

FY: December	2013A	2014E	2015E
Revenue (Mil)	34	43	70
% Growth	3.98%	25.88%	505.00%
Gross Margin	100.00%	98.60%	89.75%
Operating Margin	-80.00%	-175.23%	-80.25%
EPS (Cal)	-$0.93A	-$2.27E	-$1.63E
FCF/Share	-$1.37	-$2.24	-$1.61
P/S (Cal)	12.29	20.75	13.40

Recommendation

Non-24-hour sleep-wake disorder (Non-24) is a rare circadian rhythm disorder characterized by the inability to entrain the biological body clock within a 24-hour day-night cycle. Significant consequences of the disorder include the disruption of metabolic and cardiovascular homeostasis as well as the reversal of the natural sleep cycle. The disorder is most common amongst the legally blind, affecting over 70% of individuals with total blindness. Thought to affect approximately 80,000 people in the U.S. and 90,000 in Europe, the treatment was granted orphan drug designation by the FDA and EMA in 2010 and 2011, respectively. HETLIOZ is covered by 11 patents, expiring in 2022, and is the only FDA approved treatment for Non-24. VNDA's only other commercial product is Fanapt, an atypical antipsychotic for the treatment of schizophrenia. In 2009, pursuant to an initial payment of $200M, Vanda entered into an amended sublicense agreement with Novartis AG, who purchased exclusive selling and distribution rights of Fanapt and is responsible for any further clinical development of the drug in the U.S. or Canada. Since its launch in 2010 Fanapt prescriptions have grown to over 160,000 annually, representing a CAGR of 28.8%. The company receives 10% royalty revenue from sales of Fanapt. In the second half of 2013 the company began clinical trials of VLY-686 for treatment-resistant Pruritus in Atopic Dermatitis (AD). There is no known cure for AD and is thought to affect 20-25% of children and 4-8% of adults in developed countries, representing over 75M individuals worldwide. Considering all these reasons, along with a favorable valuation, it is recommended that VNDA be purchased with a target price of $26.51, which represents a potential upside of 54%. The company currently does not pay a dividend.

Investment Thesis

- **Accelerated Traction from Awareness Campaign.** Selling, general, and administrative expenses in 2013 were $24,594,000, compared with $13,882,000 in 2012 and $11,486,000 in 2011. Original estimates assumed the company would market HETLIOZ by contacting individual physicians, a potentially slow, extended process. In addition to direct-to-physician marketing, the company successfully aired its pilot radio campaign, which it will continue into 2014, targeting individuals affected by Non-24. With just over 70 patients included in the safety study, many of whom are likely to become revenue-generating patients, management and the Street had forecast

300 prescribed patients by YE 2014. The most recent guidance given by management suggests that the company may have "thousands" of potential patients identified through self-registration upon hearing the radio campaign.

- **Orphan Drug Designation.** In early March 2014, the company announced that HETLIOZ would be priced at $7,019 per month, or about $84,200 annually, topping analyst estimates of around $35,000 to $45,000 annually. The high price tag is indicative of the severe and debilitating nature of Non-24 and is consistent with similar Orphan treatments. With no approved alternatives it is unlikely that adoption of HETLIOZ will be negatively affected by the higher than expected price. Since HETLIOZ was priced the company's market price per share has advanced 13%, with significant upside remaining.
- **Enthusiasm from the Totally Blind Community.** HETLIOZ packaging will be the first in the United States to carry blind accessible information through Braille. By developing a treatment for Non-24, Vanda is addressing a well-known disorder amongst those with total blindness. By offering the first product tailored exclusively to this community, Vanda Pharmaceuticals has the opportunity to gain long-term patient loyalty.

Valuation

In order to reach an intrinsic value for VNDA, a ten year discounted cash flow model was conducted. Using a terminal growth rate of 1% and a WACC of 13.1% resulted in a valuation of $28.62. Sensitivity analysis on both the terminal growth rate and WACC provided for a range between $26.20 and $33.01. Additionally, a price-to-sales multiple comparison and valuation of the company's peers was analyzed. Using a blended average of the industry a P/Sales multiple of 5.4x, along with VNDA's estimated 2014-2017 average sales per share of $3.74, a value of $20.19 was obtained. By weighting the DCF model 75% and the P/Sales value 25% a price target of $26.51 was established; a 54% upside.

Risks

- **Lack of Experience in Selling, Marketing, and Distribution.** Unlike with Fanapt, which is marketed and distributed by Novartis AG, distribution of HETLIOZ will require a substantial internal investment to create an in-house sales staff. The company hired Robert Rapella in late 2011 to serve as Chief Commercial Officer. The future success of HETLIOZ will rely on Mr. Rapella's ability to create a system that recruits and retains effective sales personnel, and that obtains access to physicians who will prescribe VNDA's products. The company can target a significant portion of sleep doctors as there are only about 2000 across the country.
- **Failure to Gain EMA Approval.** While gaining approval in the United States, any failure to obtain EMA approval in Europe could be detrimental to the company's growth. This is true for both Fanapt and HETLIOZ. In 2012, the EMA's Committee for Medicinal Products for Human Use issued a negative opinion recommending against the approval of Fanaptum in the European Union.
- **Perceived Efficacy.** As with any circadian rhythm disorder, symptoms of Non-24 can vary in onset and severity. Therefore, despite successful clinical results, the company's treatment may not garner positive perceived efficacy if the product is used while the patient's circadian rhythm is synchronized with a typical 24-hour day-night cycle. Nonetheless, tasimelteon achieved 70% greater efficacy versus placebo, with a p-value of .0026.

Management

Mihael H. Polymeropoulos, M.D. is the President and Chief Executive Officer. He has held both positions since May 2003. Before joining Vanda he served as Vice President and Head of the Pharmacogenetics Department at Novartis AG. The Chief Financial Officer is James P. Kelly and has held the position since December 2010. Noteworthy board members include Steven Galson, M.D., M.P.H., the 2007-2009 acting U.S. Surgeon General. He does not currently sit on any other boards.

Ownership

% of Shares Held by All Insider and 5% Owners	22%
% of Shares Held by Institutional & Mutual Fund Owners	59%

Source: Yahoo! Finance

Top 5 Shareholders

Holder	Shares	% Out
Baker Brothers Advisors, LLC	4,791,179	14.30%
FMR, LLC	3,493,700	10.43%
Palo Alto Investors, LLC	3,238,628	9.67%
BlackRock Fund Advisors	1,279,081	3.82%
T. Rowe Price Associates Inc.	1,208,401	3.61%

Source: Bloomberg

Petrobras. (PBR)
March 28, 2014

Dustin Hwang International Energy

Petrobras is a semi-public Brazilian multinational energy corporation that explores and produces oil and natural gas. The company refines, markets and supplies oil products. They also operate oil tankers; distribution pipelines; marine, river, and lake terminals; thermal power plants; fertilizer plants; and petro chemical units. The company produces 90% of revenues within Brazil and 10% internationally. The Brazilian government owns over 50% of the outstanding shares. PBR is the largest oil company in Brazil and the 10th largest oil company in the world. In 2013, the company produced 2.6M barrels per day of which 84% was crude oil. Petrobras is also heavily invested in the production of offshore pre-salt reserves. The firm has 80,497 employees and is headquartered in Rio de Janeiro, Brazil.

Price ($): (3/16/14)	$10.37	Beta:	0.91	FY: Dec. 31	2013A	2014E	2015E
Price Target ($):	18.30	WACC	14.15%	Revenue (Mil)	$304,890	$317,086	$332,940
52 WK H-L ($):	$19.65-$10.20	L-Term Rev. Gr Rate Est:	10.00%	% Growth	8.36%	4.00%	5.00%
Market Cap (mil):	$ 76,582	L-Term EPS Gr Rate Est:	2.00%	Gross Margin	23.34%	23.34%	22.57%
Float (mil):	35.80	Debt/Equity	55.4%	Operating Margin	11.27%	11.27%	10.50%
Short Interest (%):	1.79%	ROA:	3.29%	EPS (Cal)	0.63	0.97	0.96
Avg. Daily Vol (mil):	19.6	ROE:	6.82%	FCF/Share	-3.20	-1.43	-1.50
Dividend ($):	$0.44	P/B	0.53	P/E (Cal)	16.37	13.44	14.55
Yield (%):	4.2%			EV/EBITDA	2.98x	2.96x	2.82x

Recommendation

The discovery of pre-salt oil reserves in 2007 by a consortium led by Petrobras in the southeastern region of Brazil is considered one of the world's largest oil discoveries in the past 30 years. Increasing production from these 6000-meter deep reserves is transforming Brazil into one of the largest oil producers in the world. With some estimates at over 50B barrels of oil equivalent in these deep-sea reserves, Petrobras is well positioned with recent regulatory and operational reform to capitalize on these newfound discoveries. PBR controls 11 of Brazil's 13 refineries, has a stake in 21 out of the 27 state owned natural gas distribution companies, and is the sole operator of Brazil's domestic natural gas transport system through its integrated gas pipeline. The pipeline was responsible for 100% of pipeline imports in 2012 and has linked the northwest and southeast regions of Brazil for the first time. Operating at 94% capacity, Petrobras was unable to satisfy the record high demand in 2011 that resulted in a 219% increase in imports of refined oil from the United States and Bolivia compared to levels achieved five years earlier. With their 2013-2030 strategic plan, Petrobras expects to increase production to levels that will both satisfy domestic demand and increase exports to over 2.25M barrels a day. Given the company's business model which provides a strong outlook for upstream production, a favorable price-to-book ratio of .53, and a dividend yield of 4.2%, it is recommended that PBR be added to the AIM International Fund with an impressive upside potential of 76%.

Investment Thesis

- **Pre-salt exploration and production increase.** In Petrobras' strategic plan for 2030, management has approved an investment budget $220.6B for 2014-2018. With $200B invested into exploration and production over the past five years, Petrobras already has 10 production units operating in the pre-salt layer since 2007. Petrobras anticipates producing about 4-5M barrels a day by 2020. Experience is leading Petrobras into a cost optimization phase and is allowing them to learn from their previous mistakes. In the past five years, there have only been five capacity additions in comparison to 38 new capacity additions since 2012 (28 have been already contracted). With the second highest ROI on upstream production in the industry at 19%, a doubling in production as planned to 4M barrels a day would produce massive shareholder value.

- **Regulatory Reform.** In 2010, the Brazilian government passed legislation instituting a new regulatory framework for the pre-salt reserves. In contrast to the previous framework, Petrobras is now the sole operator of production sharing agreements and will hold a minimum of 30% in all pre-salt projects. In addition, the government raised ethanol blend requirements to 25% and announced plans to expand PBRs' presence in the ethanol market. The mid-term plan is for Petrobras to export ethanol to the United States, which recently removed tariffs on the Brazilian sugar cane ethanol.
- **Natural gas and Refining Capacity Increase.** Natural gas combines for only a small portion of Brazil's energy consumption with the majority coming through Petrobras' pipelines from Bolivia and the Amazon region. The pre-salt layer reserves are expected to house significant portions of natural gas. Tupi, an oil and natural reserve in the Campos Basin, is expected to contain as much as 5-7 TCF, which could increase Brazil's natural gas reserves by 50%. This increase in natural gas production should significantly decrease import costs and could be a source of revenue through exports.

Valuation

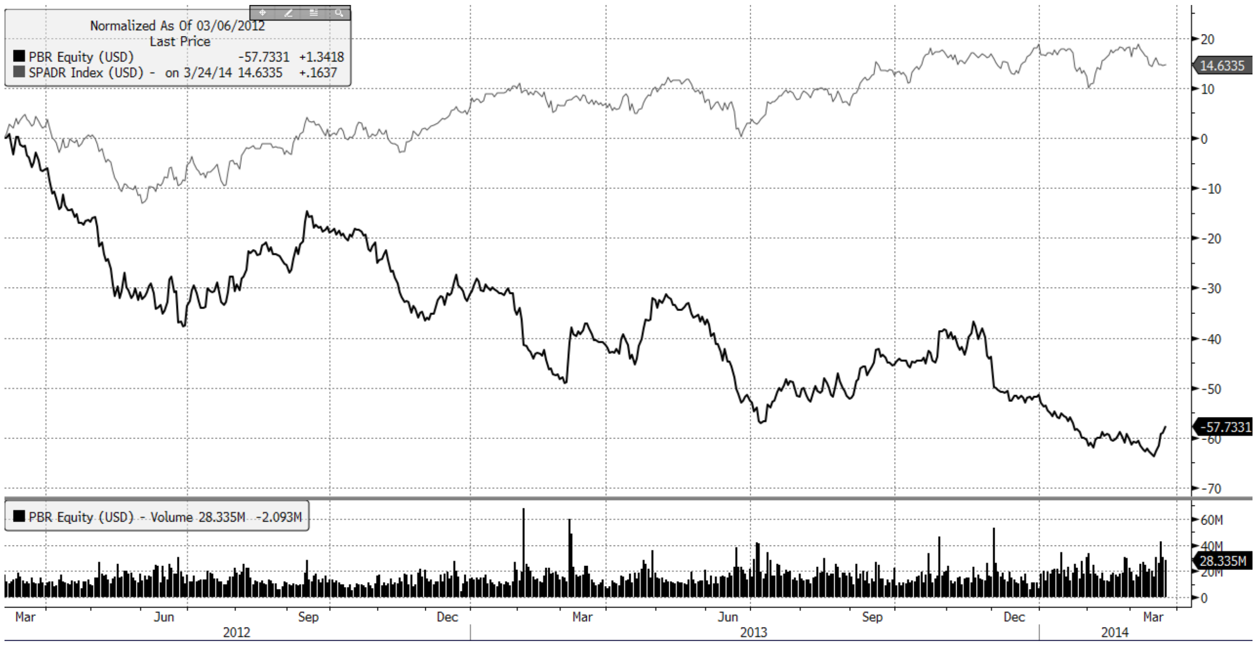
To reach an intrinsic value for PBR, an equity value estimated off of 2020 production estimates was discounted at a WACC of 14.15%. The equity value was derived from refining and daily production estimates based on growth rates of 3% per year, multiplied by net income margins per barrel. These values were then multiplied by historical net income to production asset ratios. The consolidated asset values minus debt in 2020 over the outstanding shares resulted in an intrinsic valuation of $19.40. An EV/PPB (production per barrel) analysis was conducted using 2020 production estimates of 3.6M barrels a day which yielded a price target of $18.26. Additionally, a dividend discount model was conducted resulting in a price target of $17.24. Weighting each equally at 33.33% a price target of $18.30 was reached and represented an upside potential of over 70%.

Risks

- **Power Rationing.** Brazil is experiencing the worst drought since 1972 and the government has ordered utilities to switch on gas-fired plants to offset the reduction in dam power hydrogeneration that typically generates 70% of the nation's power. With increase imports of natural gas the company has less capacity for diesel. Without passing through the price to the domestic market this could result in losses.
- **Leverage.** Petrobras is leveraged in comparison to the industry average with net debt to total capital at 0.3 and 0.2 respectively. This has been the norm for the past decade with 2010 as an exception year when the company recapitalized. It took only one year for the company to become one of the highest levered after taking a $6B in corporate bonds 2011 and $7B in 2012. With upstream production set to resume growth from 2014, de-leverage is dependent partially on the downstream success.
- **United States Energy Independence.** With a boom in U.S. shale production, the U.S. has been on track to becoming energy independent. The U.S. is Petrobras' largest customer which could cut into top line revenues.

Management

Maria Das Gracas Silva Foster is the current CEO and board member of Petrobras. Foster joined Petrobras as an intern in 1978, utilizing her Master's degree in chemical engineering. She has been on since February of 2012. In April 2008, Foster was named Executive of the Year by the Institute of Brazilian Finance Executives. In 1998, Foster was working for a Petrobras unit that was involved importing natural gas from Bolivia. During this time, she met Dilima Rousseff who is the current President of Brazil.



% of Shares Held by All Insider and 5% Owners:	50.28%
% of Shares Held by Institutional & Mutual Fund Owners:	68.88%

Top 5 Shareholders

Holder	Shares	% Out
Uniao Federal Brazil	3,740,577,431	50.26%
Bndes Participaoes S.A.	752,432,110	10.11%
Caixa Economica Federation	102,164,671	1.37%
Blackrock	69,151,099	0.93%
Vanguard Group Inc.	68,657,066	0.92%

Source: Bloomberg