

Financial Services/Real Estate: Self-Storage REITs

Important disclosures can be found on pages 6 - 10 of this report.

CubeSmart (CUBE - \$28.16*)

Breaking News

Malvern, PA
September 6, 2016
Outperform
Price Target: \$35.00

STOCK DATA				
52-Week Range	\$33.52 – \$24.67			
3-Month ADTV	2,417,027			
Diluted Shares Out. (mil)	180.5			
Float (%)	99.5			
Market Cap (mil)	\$5,048.9			
Dividend Yield	2.98%			
Fiscal Year-End	December			

EARNINGS DATA						
FFO	2015A	2016E	2017E			
1Q	\$0.28	\$0.32A	\$0.37			
Prior 1Q			\$0.36			
2Q	\$0.31	\$0.36A	\$0.41			
Prior 2Q			\$0.40			
3Q	\$0.34	\$0.38	\$0.43			
4Q	\$0.33	\$0.38	\$0.41			
Prior 4Q			\$0.42			
FY	\$1.25	\$1.43	\$1.61			
Prior FY		\$1.44				
P/FFO	22.5x	19.7x	17.5x			
AFFO	2015A	2016E	2017E			
1Q	\$0.25	\$0.30A	\$0.34			
2Q	\$0.28	\$0.33A	\$0.37			
3Q	\$0.30	\$0.34	\$0.39			
Prior 3Q		\$0.35				
4Q	\$0.31	\$0.35	\$0.40			
Prior 4Q		\$0.36				
FY	\$1.14	\$1.33	\$1.50			
Prior FY		\$1.34				
P/AFFO	24.7x	21.2x	18.8x			

BALANCE SHEET DATA	
	2Q16
NAV/Share	\$27.00

Preferred Share Redemption Should Round Out Capital Transactions for 2016

Summary and Recommendation

In the past few weeks, CUBE has announced a few major capital transactions, including the pending redemption of \$77.5 million of preferred equity and the recently completed \$300 million bond offering. The preferred redemption should round out the company's capital transactions for 2016, exclusive of any ATM sales.

Key Points

- Series A preferreds redemption. On September 2, 2016, CubeSmart announced that it would be redeeming all 3,100,000 shares of outstanding 7.75% Series A Cumulative Redeemable Preferred Shares. The shares have a redemption price of \$25.00 per share, as well as an accumulated unpaid dividend of \$0.17374 per share. Aggregate payment received by shareholders will be \$25.17374 per share. The redemption will occur on November 2, 2016.
- \$300 million debt offering. On August 8, 2016, CUBE raised \$300 million in an offering of 3.125% senior unsecured notes due September 1, 2026. The notes carry a Moody's rating of Baa2. CubeSmart will use proceeds from the offering to pay down the entire outstanding balance of the unsecured revolving credit facility.
- Adjusting estimates. We are adjusting our 2016E FFO as adjusted to \$1.43 (from \$1.44) and maintaining our 2017E FFO as adjusted of \$1.61 and our 2018E FFO as adjusted of \$1.72. We note that our 3Q16 FFO estimate contains a \$0.015 per preferred redemption charge, but this is excluded from our FFO as adjusted estimates, as well as our FAD estimates (noncash charge).
- Strong balance sheet, low payout ratio. We believe that CubeSmart has a relatively strong balance sheet, which provides us with comfort heading into the later stages of the cycle. The company has a net debt + preferreds to forward EBITDA multiple of 4.8x and net debt + preferreds to EV of 23.7%. CUBE maintains the lowest dividend payout ratio, at just 63.2% estimated for 2016. We are assuming a 19.0% dividend raise in 2017 (usually announced in mid December), which implies FAD coverage of 1.5x and a 66.6% payout ratio.

David Corak, CFA 703.312.1610 . dcorak@fbr.com

Debatable Point	Our Thoughts	Time Frame	Impact
Is CubeSmart's outsized exposure to New York a positive or negative?	There is an above-average level of new development under construction or in preliminary phases in New York City that will likely affect storage operations. Yet, we believe that CubeSmart's portfolio will hold steady in NYC because (1) its 48-asset portfolio is geographically well insulated; (2) NYC has one of the lowest ratios of square feet per capita in the country at about 1.5x; (3) new development sites are becoming much harder to come by in NYC, so new development will only last so long; (4) CubeSmart's dominant market share and brand recognition in NYC should offset some of the potential impact of new supply; and (5) the company's assets are high quality (purpose built, with strong amenities like parking lots and security) and competing against many non-purpose-built assets with poor amenities. Furthermore, M1 sites are drying up quickly, and new potential regulations proposed by Mayor Bill de Blasio would limit "by-right" development of storage facilities in 21 industrial building zones in the city. Developers would need special permits, which would make development in NYC exponentially more difficult.	6 to 12 Months	-
In the face of potentially decelerating fundamentals, how will CUBE be able to grow earnings in a material way?	We believe that CubeSmart has one of the strongest external growth profiles in the sector with its stabilized acquisitions, C/O deals, and development. Likewise, the company is able to move the needle more easily than its larger competitors and a declining cost of capital. It has the opportunity to expand margin on both the revenue and expense sides. CubeSmart also has lower occupancy than its larger peers, implying that there is plenty of opportunity to drive revenue with occupancy gains.	12 Months	•
Heading into the latter parts of the cycle, is it prudent to have a large development pipeline?	Storage development will likely be dilutive to earnings in the near term but accretive to NAV and earnings long term. We believe development makes sense over the long term, but it can take up to seven years to fully stabilize a storage facility from when the site is first recognized. Mistiming the market can be disastrous. Although we believe the storage cycle still has plenty of growth ahead, we keep a close eye on the lease-up velocities. So far, CubeSmart's deals have met or exceeded (or are on track to do so) lease-up velocity expectations.	12 to 24 Months	

Investment Thesis

We believe self-storage will outperform most (if not all) real estate sectors over cycles. Likewise, the sector is generally a late-cycle outperformer. We think CubeSmart's portfolio is well insulated against new supply, has plenty of occupancy upside to drive revenue growth, trades at a more reasonable valuation than its larger peers, and has the second-largest relative external profile in the sector. Overall, we expect valuation and the imposing threat of new supply to lead to increasing investor caution on the sector, but we look for CUBE to outperform its peers.

Valuation

We estimate that CUBE's current NAV is \$27 per share based on forward-four-quarter net operating income at a 5.25% cap rate. Our value range of \$29.75–\$26.50 per share reflects cap rates of 5.0%–5.5%. The shares currently trade at \$194/square foot, a 3.8% premium to our NAV estimate, and a 4.8% implied cap rate. Our \$35 price target represents a 4.23% implied cap rate on 2017E NOI.

Risks

Valet storage. Startups like MakeSpace, Redbin, Box Butler, and Clutter are moving-and-storage companies that offer home pickup and return delivery of stored items, usually in high-density metropolitan regions like Manhattan and San Francisco. The general idea is that a van comes and picks up one's belongings, stores them, and returns them. As such, customers never have to leave their homes or step foot in traditional brick-and-mortar storage facilities. While we recognize that valet storage is indeed a threat to traditional storage in urban areas due to the rising use of technology among millennials and even baby boomers, we think making the analogy of Uber to taxis or Airbnb to hotels is a bit of a stretch. The concept has been tested before (i.e., CubeSmart in 2004). People still like being close to their belongings, knowing where they are, and having the ability to go and get them. We believe valet storage poses a bigger threat to CubeSmart than to other storage operators because it has 21.9% exposure to New York City.

Environmental regulation risk. The presence of contamination or the failure to remediate contamination at its properties may expose CubeSmart to third-party liability for personal injury or property damage, or it could adversely affect the company's ability to sell, lease, or develop a property or to borrow using certain properties as collateral. The company does not carry environmental insurance on any properties in the portfolio.

Liquidity risk. Real estate investments are relatively illiquid and cannot always be sold quickly. Therefore, the company may not be able to change its portfolio promptly in response to changes in economic or other market conditions. This could have a materially adverse effect on its financial condition or operating results.

Financing risk. The company's business strategy depends on access to an appropriate blend of debt financing, including unsecured lines of credit and other forms of secured and unsecured debt and equity financing, including common and preferred equity. Should the market experience unusual volatility and uncertainty, proper financing may not be available in sufficient amounts, on favorable terms, or at all.

Cash flow risk. To meet the REIT minimum distribution requirements, the company may decide to borrow funds, even if management believes that the prevailing market conditions are not favorable for such borrowings. If CubeSmart borrows money to meet the REIT minimum distribution requirement or for other working capital needs, its expenses will increase, and its net income will be reduced.

Insurance and reinsurance risk. CubeSmart carries customary property, earthquake, general liability, employee medical insurance, and workers' compensation coverage through internationally recognized insurance carriers, subject to deductibles. If the company experiences a loss that is uninsured or exceeds policy limits, it could lose the capital invested, as well as anticipated future cash flows. CubeSmart also reinsures a program that provides insurance to its customers from an independent third-party insurer.

Company Profile

CubeSmart is a Wayne, Pennsylvania—based internally managed REIT. The company is the fourth-largest owner of self-storage facilities in the world with a focus on acquiring, developing, and operating institutional-quality self-storage facilities. As of March 31, 2016, CubeSmart had interests in 456 self-storage facilities located in 22 states and Washington, D.C., with approximately 31.4 million net rentable square feet in the U.S.

CubeSmart (CUBE)				
Net Asset Value Analysis \$27				
2Q16				
				Implied Cap
Cap Rate Assumptions:				Rate
Nominal NOI Cap Rate	5.5%	5.7%	6.0%	5.3%
Adjusted GAAP NOI From Properties	\$345,945	\$345,945	\$345,945	\$345,945
Property Management Fee Adjustment to Market Rate	(23,339)	(23,339)	(23,339)	
Recurring Capital Expenditures	(6,392)	(6,392)	(6,392)	(6,392)
Adjusted NOI From Properties	\$316,214	\$316,214	\$316,214	
Economic Cash NOI Cap Rate	5.0%	5.3%	5.5%	4.8%
Market Value of Owned Properties	\$6,330,195	\$6,021,673	\$5,760,951	\$6,520,813
Management Income	11,201	11,201	11,201	11,201
Economic Cap Rate	<u>10%</u>	<u>10%</u>	<u>10%</u>	10%
Implied Valuation of Management Income	112,011	112,011	112,011	112,011
Cash, Cash Equivalents	3,423	3,423	3,423	3,423
Recent Acquisitions	32,800	32,800	32,800	32,800
Development Pipeline	134,870	134,870	134,870	134,870
Unstabilized C/O Properties	148,720	148,720	148,720	148,720
Joint Venture Interests	188,770	188,770	188,770	188,770
Other Assets	50,732	50,732	50,732	50,732
Gross Market Value of Assets	\$7,001,521	\$6,692,999	\$6,432,278	\$7,080,128
Preferred Stock	-	-	-	-
Joint Venture Debt	67,800	67,800	67,800	67,800
Noncontrolling Interests	68,581	68,581	68,581	68,581
Total Liabilities	1,669,598	1,669,598	1,669,598	1,669,598
Net Market Value of Assets	\$5,195,542	\$4,887,020	\$4,626,299	\$5,274,149
Total Shares/OP Units (000)	180,471	180,471	180,471	180,471
Net Asset Value per Share	\$28.79	\$27.08	\$25.63	\$29.22
Transaction Costs/Share (2% of Gross Market Value)	\$0.78	\$0.74	\$0.71	\$0.78
Net Asset Value Less Transaction Costs	\$28.01	\$26.34	\$24.92	\$28.44
Valuation Measures:				
Current Stock Price (8-26-16)	\$28.11	\$28.11	\$28.11	\$28.11
Stock Price/Net Asset Value	97.6%	103.8%	109.7%	
Rentable Sq Ft.				33,479
Enterprise Value/ Sq. Ft.				\$ 194.40

Financial information based on 2Q16 results.

CubeSmart												
Quarterly Earnings Model												
(\$ in thousands except per share amounts)												
,	2015A	1Q16A	2Q16A	3Q16E	4Q16E	2016E	1Q17E	2Q17E	3Q17E	4Q17E	2017E	2018E
Assumptions:					•							
Acquisitions	\$276,600	\$135,900	\$65.600	\$99.900	\$50,000	\$351,400	\$50,000	\$50.000	\$50,000	\$50,000	\$200,000	\$200,000
Cap Rate on Acquisitions	5.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
Ending Stock Price	\$ 28.72	\$ 29.72	\$ 32.65	\$ 28.11	\$ 32.65	\$ 32.65	\$ 32.65	\$ 32.65	\$ 32.65	\$ 32.65	\$ 32.65	\$ 32.65
Revenues:		•	•	•				•	•	•		
Net rental income	\$392,476	\$104,997	\$111,538	\$115,330	\$113,254	\$445,120	\$113,481	\$118,134	\$121,914	\$119,476	\$473,004	\$493,927
Other income	\$45,189	11,763	12,643	13,149	12,741	\$50,296	12,486	13,610	14,018	13,458	\$53,572	\$56,585
Effective Gross Income	\$437,665	\$116,760	\$124,181	\$128,479	\$125,995	\$495,415	\$125,967	\$131,744	\$135,932	\$132,933	\$526,576	\$550,512
Operating Expenses:	Ψ-57,005	ψ110,700	ψ12 4 ,101	ψ120, 4 73	Ψ123,333	Ψ-33,-13	Ψ123,307	Ψ131,744	Ψ133,332	\$132,333	ψ320,370	ψ330,31 <u>2</u>
Total Property Operating Expenses	(\$153,172)	(\$40,219)	(\$41,607)	(\$43,242)	(\$41,624)	(\$166,692)	(\$43,516)	(\$43,482)	(\$45,071)	(\$43,251)	(\$175,321)	(\$182,481)
Core Portfolio NOI	\$284,493	\$76,541	\$82,574	\$85,237	\$84,372	\$328,724	\$82,451	\$88,261	\$90,861	\$89,682	\$351,256	\$368,030
NOI from acquisitions and dispositions, net	\$0	0	0	1,034	1,971	\$3,006	2,607	3,251	3,897	4,544	\$14,300	\$24,682
NOI from Development and C/O Deals	\$0	0	0	531	980	\$1,511	1,423	2.057	2,813	2.947	\$9.239	\$12,993
Total Net Operating Income	\$284.493	\$76.541	\$82.574	\$86.802	\$87,323	\$333.240	\$86.481	\$93.570	\$97,571	\$97,173	\$374,795	\$405.706
General and administrative expense	(\$28,371)	(8,228)	(7.891)	(7.541)	(7,552)	(\$31,212)	(8.616)	(8.170)	(7,766)	(7,759)	(\$32,310)	(\$32,759)
EBITDA	\$256,122	\$68,313	\$74,683	\$79,262	(7,552) \$ 79,771	\$302,028	\$77,865	\$85,400	\$89,805	\$89,415	\$32,310) \$342,485	\$32,759) \$372,947
Other Income (Expense):	\$250,122	\$10,00¢	\$14,083	⊅19,202	φ <i>ι</i> υ, ι / Ί	\$3UZ,UZ8	\$11,000	\$00,400	\$09,005	ф09,41 3	⊅ 34∠,483	⊅312,941
Depreciation	(\$151,789)	(39,356)	(41,448)	(43,570)	(43,832)	(\$168,206)	(43,409)	(46,967)	(48,976)	(48,776)	(\$188,128)	(\$203,644)
Property Management	\$6,856	(39,336)		2,462	2,585	\$9,504	2,779	2,918	3,064	3,217	\$11,979	\$14,907
Amortization of loan costs	(\$2,234)	(605)	2,345 (611)	(617)	(617)	(\$2,450)	(625)	(625)	(625)	(625)		(\$2,000)
Interest Expense	(\$2,234)	(12,084)		(13,841)	(15,330)	(\$2,450)	(15,550)	(16,056)	(16,372)	(625)		(\$2,000)
Preferred Dividend	(6,008)	(1,502)	(12,200)	(13,641)	(15,330)	(53,456)	(15,550)	(16,056)	(16,372)	(16,420)	(2,203)	(2,203)
		(1,502) 2,412	(1,502) 3,338	3,505	3,680	12.935	3,956	4.055	4,156	4,260	16,428	(2,203) 18,576
Other revenues, expenses & adjustments	6,717					,		,				
Total Other Income (Expense) - Net	(\$190,194)	(\$49,024)	(\$50,078)	(\$53,564)	(\$54,064)	(\$206,730)	(\$53,399)	(\$57,226)	(\$59,303)	(\$60,894)	(\$230,822)	(\$253,302)
Net Income	\$65,928	\$19,289	\$24,605	\$25,698	\$25,706	\$95,298	\$24,466	\$28,174	\$30,503	\$28,521	\$111,664	\$119,645
Depreciation	\$150,030	38,899	40,831	43,170	43,432	\$166,332	43,009	46,567	48,576	48,376	\$186,528	\$202,044
Funds From Operations as Adjusted (FFO)	\$215,958	\$58,188	\$65,436	\$68,869	\$69,138	\$261,631	\$67,475	\$74,741	\$79,078	\$76,897	\$298,192	\$321,689
Weighted Average Shares Outstanding	172,482	179,421	181,430	182,430	183,430	183,430	183,930	184,430	184,930	185,430	185,430	187,430
FFO as Adjusted / Share	\$1.25	\$0.32	\$0.36	\$0.38	\$0.38	\$1.43	\$0.37	\$0.41	\$0.43	\$0.41	\$1.61	\$1.72
FFO / Share	\$1.23	\$0.31	\$0.35	\$0.35	\$0.37	\$1.38	\$0.36	\$0.40	\$0.42	\$0.41	\$1.58	\$1.68
Recurring capex	(\$15,173)	(3,449)	(4,474)	(5,518)	(3,271)	(\$16,712)	(3,625)	(4,649)	(5,688)	(3,371)	(\$17,333)	(\$17,853)
Recurring capex per square foot	\$0.51	\$0.110	\$0.140	\$0.170	\$0.100	\$0.52	\$0.110	\$0.140	\$0.170	\$0.100	\$0.52	\$0.52
Amortization of loan costs	\$1,468	367	367	367	367	\$1,468	367	367	367	367	\$1,468	\$1,468
Mortgage principal repayment	(\$4,800)	(1,000)	(1,004)	(1,352)	(1,338)	(\$4,695)	(1,325)	(1,312)	(1,299)	(1,286)	(\$5,221)	(\$5,015)
Funds Available for Distribution (FAD)	\$197,453	54,107	60,324	62,366	64,896	\$241,692	62,892	69,148	72,459	72,607	\$277,105	\$300,289
FAD / Share	\$1.14	\$0.30	\$0.33	\$0.34	\$0.35	\$1.33	\$0.34	\$0.37	\$0.39	\$0.39	\$1.50	\$1.61
Dividend / Share	\$0.64	\$0.21	\$0.21	\$0.21	\$0.21	\$0.84	\$0.25	\$0.25	\$0.25	\$0.25	\$1.00	\$1.10
Ending Shares Outstanding	176,828	179,287	180,471	181,471	182,471	182,471	182,971	183,471	183,971	184,471	184,471	186,471
Equity Market Capitalization	\$5,078,500	\$5,328,410	\$5,892,378	\$5.101.150	\$5,957,678	\$5,957,678	\$5,974,003	\$5.990.328	\$6,006,653	\$6,022,978	\$6.022.978	\$6.088.278
Cash	\$62,869	\$5,326,410	\$3,423	\$3,101,130	\$3,957,676	\$3,423	\$3,423	\$3,423	\$3,423	\$3,423	\$3,423	\$3,423
Debt	\$ 1,262,212	\$1,304,737	\$1,435,186	\$1,583,834	\$1,630,240	\$ 1,630,240	\$1,725,428	\$1,777,315	\$1,829,202	\$1,881,089		\$ 2,131,938
Preferred	\$ 77,500	77,500	77,500	φ1,303,634 -	ψ1,000,240 -	\$ 1,030,240	φ1,120,420	ψ1,777,515	ψ1,023,202 -	ψ1,001,009 -	\$ 1,001,009	\$ 2,131,936
Total Enterprise Value	\$6,481,081	\$6,713,401	\$7,408,487	\$6,688,407	\$7,591,342	\$7,591,342	\$7,702,854	\$7,771,066	\$7,839,278	\$7,907,490	\$7,907,490	\$8,223,639
Debt-plus-preferreds-to-Enterprise Value	20.7%	20.6%	20.4%	23.7%	21.5%	21.5%	22.4%	22.9%	23.3%	23.8%		25.9%
Debt-plus-preferreds-to-Enterprise value Debt-plus-preferreds-to-Forward EBITDA	4.4	4.4	4.7	4.8	4.8	4.8	4.9	5.0	5.0	5.0	5.0	NA NA
FFO Growth (year-over-year)	19.4%	13.7%	14.0%	7.1%	14.2%	12.2%	15.5%	14.7%	18.4%	10.3%		6.3%
FAD Growth (year-over-year)	18.6%	18.7%	19.2%	12.6%	15.3%	16.3%		12.8%	14.6%	10.3%		7.2%
FAD Growth (year-over-year) FAD Coverage	1.79	18.7%	19.2%	1.63	15.3%	16.3%		12.8%	14.6%	10.7%		1.46
Dividend / FAD	56.0%	69.6%	63.2%	61.4%	59.4%	63.2%	73.1%	66.7%	63.8%	63.8%	66.6%	68.4%

*Closing price of last trading day immediately prior to the date of this publication unless otherwise indicated.

Important Information

FBR is the global brand for FBR & Co. and its subsidiaries.

This report has been prepared by FBR Capital Markets & Co. (FBRC), a subsidiary of FBR & Co.

FBRC is a broker-dealer registered with the SEC and member of FINRA, the NASDAQ Stock Market and the Securities Investor Protection Corporation (SIPC). The address for FBRC is 1300 North 17th Street Suite 1400, Arlington, VA 22209.

FBR Capital Markets LT, Inc. is an affiliate of FBRC and provides services for trading non-securities products.

All references to FBR & Co. mean FBR Capital Markets & Co. (FBRC) and its affiliates.

Company-Specific Disclosures

FBR acts as a market maker or liquidity provider for the company's securities: CubeSmart

For up-to-date company disclosures including price charts, please click on the following link or paste URL in a web browser: www.fbr.com/disclosures

General Disclosures

Information about the Research Analyst Responsible for this report:

The primary analyst(s) covering the issuer(s), David Corak, CFA, certifies (certify) that the views expressed herein accurately reflect the analyst's personal views as to the subject securities and issuers and further certifies that no part of such analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the analyst in the report. The analyst(s) responsible for this research report has received and is eligible to receive compensation, including bonus compensation, based on FBR's overall operating revenues, including revenues generated by its investment banking activities.

Information about FBR's Conflicts Management Policy:

Our Research conflicts management policy is available at: http://www.fbr.com/conflicts-management-policy.

Information about investment banking:

In the normal course of its business, FBR seeks to perform investment banking and other services for various companies and to receive compensation in connection with such services. As such, investors should assume that FBR intends to seek investment banking or other business relationships with the companies.

Information about our recommendations, holdings and investment decisions:

The information and rating included in this report represent the long-term view as described more fully below. The analyst may have different views regarding short-term trading strategies with respect to the stocks covered by the rating, options on such stocks, and/or other securities or financial instruments issued by the company, and such views may be made available to all or some of our clients from time to time. Our brokers also may make recommendations to their clients, and our affiliates may make investment decisions that are contrary to the recommendations contained in this research report. Such recommendations or investment decisions may be based on the particular investment strategies, risk tolerances, and other investment factors of that particular client or affiliate. From time to time, FBR, its affiliated entities, and their respective directors, officers, employees, or members of their immediate families may have a long or short position in the securities or other financial instruments mentioned in this report.

We provide to certain customers on request specialized research products or services that focus on covered stocks from a particular perspective. These products or services include, but are not limited to, compilations, reviews, and analysis that may use different research methodologies or focus on the prospects for individual stocks as compared to other covered stocks or over differing time horizons or under assumed market events or conditions. Readers should be aware that we may issue investment research on the subject companies from a technical perspective and/or include in this report discussions about options on stocks covered in this report and/or other securities or financial instruments issued by the company. These analyses are different from fundamental analysis, and the conclusions reached may differ. Technical research and the discussions concerning options and other securities and financial instruments issued by the company do not represent a rating or coverage of any discussed issuer(s). The disclosures concerning distribution of ratings and price charts refer to fundamental research and

do not include reference to technical recommendations or discussions concerning options and other securities and financial instruments issued by the company.

Our analysts' short-term views, recommendations by our brokers, views contained in products and services provided to customers on an individualized basis, and\or strategies, analysis or decisions made by FBR & Co. or its affiliates and their respective directors, officers, employees, or members of their immediate families may reach different conclusions than those published by the analyst in this report and could impact the price of the securities mentioned in this report.

Important Information Concerning Options Transactions:

This discussion is directed to experienced professional investors with a high degree of sophistication and risk tolerance.

Options transactions are not suitable for all investors. This brief statement does not address all of the risks or other significant aspects of entering into any particular transaction. Tax implications are an important consideration for options transactions. Prior to undertaking any trade you should discuss with your preferred tax, ERISA, legal, accounting, regulatory, or other advisor how such particular trade may affect you.

Opinion with respect to options is distinct from fundamental research analysis. Opinion is current as of the time of publication, and there should be no expectation that it will be updated, supplemented, or reviewed as information changes. We make no commitment to continue to follow any ideas or information contained in this section. Analysis does not consider the cost of commissions. Supporting documentation is available upon request.

Please ensure that you have read and understood the current options risk disclosure document before entering into any options transactions. The options risk disclosure document can be accessed at the following Web address: http://optionsclearing.com/about/publications/character-risks.jsp. If this link is inaccessible, please contact your representative.

Risks

Some options strategies may be complex, high risk, and speculative. There are potentially unlimited combinations of hedged and unhedged options strategies that expose investors to varying degrees of risk. Generally, buyers establishing long options positions risk the loss of the entire premium paid for the position, while sellers establishing short options positions have unlimited risk of loss. There are a number of commonly recognized options strategies, that expose investors to varying degrees of risk, some of which are summarized below:

Buying Calls or Puts--Investors may lose the entire premium paid.

Selling Covered Calls--Selling calls on long stock position. Risk is that the stock will be called away at strike, limiting investor profit to strike plus premium received.

Selling Uncovered Calls--Unlimited risk that investors may experience losses much greater than premium received.

Selling Uncovered Puts--Significant risk that investors will experience losses much greater than premium income received.

Buying Vertical Spreads (Calls--long call and short call with higher strike; Puts--long put and short put with lower strike) Same expiration month for both options. Investors may lose the entire premium paid.

Buying Calendar Spreads (different expiration months with short expiration earlier than long). Investors may lose the entire premium paid.

Selling Call or Put Vertical Spreads (Calls--short call and long call with higher strike; Puts--short put and long put with a lower strike, same expiration month for both options.) Investors risk the loss of the difference between the strike prices, reduced by the premium received.

Buying Straddle--Buying a put and a call with the same underlying strike and expiration. Investors risk loss of the entire premium paid.

Selling Straddle--Sale of call and put with the same underlying strike and expiration.) Unlimited risk that investors will experience losses much greater than the premium income received.

Buying Strangle--Long call and long put, both out of the money, with the same expiration and underlying security. Investors may lose the entire premium paid.

Selling Strangle--Short call and put, both out of the money, with the same expiration and underlying security. Unlimited risk of loss in excess premium collected.

Important Information about Convertible & Other Fixed-Income Securities and Financial Instruments:

This discussion is directed to experienced professional investors with a high degree of sophistication and risk tolerance.

Opinion with respect to convertible, other fixed-income securities and other financial instruments is distinct from fundamental research analysis. Opinion is current as of the time of publication, and there should be no expectation that it will be updated,

supplemented, or reviewed as information changes. We make no commitment to continue to follow any ideas or information contained in this section.

Research analysts may consult Credit Sales and Trading personnel when preparing commentary on convertible and fixed-income securities and other financial instruments. FBR may be a market maker in the company's convertible or fixed-income securities. FBR Capital Markets LT, Inc. may be a market maker in financial instruments that are not securities.

Securities and financial instruments discussed may be unrated or rated below investment grade, may be considered speculative, and should only be considered by accounts qualified to invest in such securities.

Securities and financial instruments discussed may not be registered or exempt from registration in all jurisdictions. Nonregistered securities discussed may be subject to a variety of unique risk considerations, including those related to liquidity, price volatility, and lack of widely distributed information.

Rule 144A securities are sold only to persons who are Qualified Institutional Buyers within the meaning of Rule 144A, under the Securities Act of 1933, as amended.

Information about our rating system:

FBR instituted the following three-tiered rating system on October 11, 2002, for securities it covers:

- Outperform (OP) FBR expects that the subject company will outperform its peers over the next 12 months. We recommend that investors buy the securities at the current valuation.
- Market Perform (MP) FBR expects that the subject company's stock price will be in a trading range neither outperforming nor underperforming its peers over the next 12 months.
- Underperform (UP) FBR expects that the subject company will underperform its peers over the next 12 months. We recommend that investors reduce their positions until the valuation or fundamentals become more compelling.

A description of the five-tiered rating system used prior to October 11, 2002, can be found at http://www.fbr.com/disclosures-pre-10702.

Rating	FBR Research Distribution ¹	FBR Banking Services in the past 12 months ¹
BUY [Outperform]	64.15%	27.76%
HOLD [Market Perform]	33.41%	8.03%
SELL [Underperform]	2.44%	0.00%

⁽¹⁾ As of midnight on the business day immediately prior to the date of this publication.

General Information about FBR Research:

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable but is not guaranteed as to accuracy and does not purport to be complete. Opinion is as of the date of the report unless labeled otherwise and is subject to change without notice. Updates may be provided based on developments and events and as otherwise appropriate. Updates may be restricted based on regulatory requirements or other considerations. Consequently, there should be no assumption that updates will be made. FBR & Co. disclaims any warranty of any kind, whether express or implied, as to any matter whatsoever relating to this research report and any analysis, discussion or trade ideas contained herein. This research report is provided on an "as is" basis for use at your own risk, and FBR & Co. is not liable for any damages or injury resulting from use of this information. This report should not be construed as advice designed to meet the particular investment needs of any investor or as an offer or solicitation to buy or sell the securities or financial instruments mentioned herein, and any opinions expressed herein are subject to change. Some or all of the securities and financial instruments discussed in this report may be speculative, high risk, and unsuitable or inappropriate for many investors. FBR & Co. makes no representation as to the suitability or appropriateness of these securities or financial instruments for individual investors. Investors must make their own determination, either alone or in consultation with their own advisors, as to the suitability or appropriateness of such investments based upon factors including their investment objectives, financial position, liquidity needs, tax status, and level of risk tolerance. These securities and financial instruments may be sold to or purchased from customers or others by FBR acting as principal or agent.

Securities and financial instruments issued by foreign companies and/or issued overseas may involve certain risks, including differences in accounting, reporting, and registration, as well as foreign currency, economic, and political risks.

This report and the securities and financial instruments discussed herein may not be eligible for distribution or sale in all jurisdictions and/or to all types of investors. This report is provided for information purposes only and does not represent an offer or solicitation in any jurisdiction where such offer would be prohibited.

Commentary regarding the future direction of financial markets is illustrative and is not intended to predict actual results, which may differ substantially from the opinions expressed herein. If any hyperlink is inaccessible, call 800.846.5050 and ask for Editorial.

FBR utilizes a tiered approach to service its clients. The services provided by FBR's research analysts to clients vary, based upon a variety of factors including, but not limited to, client preferences and the extent of a client's total relationship with the Firm. FBR does not provide any of the Firm's clients with access to unpublished research opinion. FBR provides clients across all tiers equal access to research reports.

Pairs Trade Disclaimer

From time to time FBR Research Analysts will offer short term trading ideas, including identifying a paired trade. In a paired trade an investor buys the securities of one company and sells the securities of another company. The idea to buy the securities of one company and sell the securities of the other company is based on the expected short term price move or relative value between the two companies mentioned in the paired trade, not between the companies and any other companies. In contrast, the recommendations in a Research Analyst's published report reflects the Research Analyst's views on a company over the long term (i.e., the next twelve (12) months) relative to other companies covered by the Research Analyst. The trade idea in a paired trade is unrelated to the Research Analyst's long term view of the companies as expressed in the Research Analyst's most recently published research report. A paired trade idea to sell a company that is rated as a market perform or higher, or to buy a security that is a market perform or lower, is not inconsistent because the call to sell or buy the company is relative to the other company mentioned in the paired trade over the short term; it is not a long term view relative to other companies covered by the Research Analyst.

Important information for French addresses and potential investors:

Addresses and potential investors based in France expressly acknowledge that they have not been subject to any kind of solicitation by FBR Capital Markets & Co, as defined under Article L.341-1 and seq. of the French Monetary and Financial code.

The above analyses have not been prepared in the context of a public offering of financial instruments in France within the meaning of Article L.411-1 and seq. of the French Monetary and Financial code and shall not be deemed to be drawn up for the purpose of providing investment services as defined under Article L.321-1 and seq. of the French Monetary and Financial code. In this respect, the above analyses shall not be qualified as a personalized investment advice related to financial instruments under French law and shall therefore not be deemed to be qualified as investment advice provided by FBR Capital Markets & Co.

Addresses and potential investors based in France may initiate the first contact with FBR Capital Markets & Co in order to get additional information on financial analyses and services provided by the latter. By doing so, addresses and potential investors based in France expressly acknowledge that the banking and financial solicitation regime as defined under Article L.341-1 and seq. of the French Monetary and Financial code shall not be applicable.

Information for Clients of FBRC:

This publication has been approved by FBR Capital Markets & Co. (FBRC), which accepts responsibility for its contents and its distribution to our clients. Any FBRC client who receives this research and wishes to effect a transaction in the securities or financial instruments discussed should contact and place orders with an FBRC Sales representative or a representative of FBR Capital Markets LT, Inc. for financial instruments that are not securities.

Copyright 2016 FBR & Co.

