PROSPER

NATIONAL STORAGE AFFILIATES

Company Update

January 2019

Information in this presentation is as of September 30, 2018, except as otherwise noted.

Forward-Looking Statements and Non-GAAP Financial Measures

FORWARD-LOOKING STATEMENTS: We make forward-looking statements in this presentation that are subject to risks and uncertainties. These forward-looking statements include information about possible or assumed future results of our business, financial condition, liquidity, results of operations, plans and objectives. When we use the words “believe,” “expect,” “anticipate,” “estimate,” “plan,” “continue,” “intend,” “should,” “may” or similar expressions, we intend to identify forward-looking statements. The forward-looking statements contained in this presentation reflect our current views about future events and are subject to numerous known and unknown risks, uncertainties, assumptions and changes in circumstances that may cause our actual results to differ significantly from those expressed in any forward-looking statement.

The forward-looking statements are based on our beliefs, assumptions and expectations of our future performance, taking into account all information currently available to us. Forward-looking statements are not predictions of future events. These beliefs, assumptions and expectations can change as a result of many possible events or factors, not all of which are known to us. Some of these factors are described in the quarterly report on Form 10-Q filed with the SEC on November 2, 2018 and the annual report on Form 10-K filed with the SEC on February 27, 2018 (the “Annual Report”) under the headings “business,” “risk factors,” “properties,” and “management’s discussion and analysis of financial condition and results of operations,” as applicable. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. If a change occurs, our business, financial condition, liquidity and results of operations may vary materially from those expressed in our forward-looking statements. Any forward-looking statement speaks only as of the date on which it is made. New risks and uncertainties arise over time, and it is not possible for us to predict those events or how they may affect us. Except as required by law, we are not obligated to, and do not intend to, update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

This presentation and the information contained herein are for informational purposes only and may not be relied upon for any purpose, including in connection with the purchase or sale of any of our securities. Such information does not constitute an offer to sell or a solicitation of an offer to buy any security described herein.

Non-GAAP Financial Measures: This presentation contains certain non-GAAP financial measures, such as funds from operations ("FFO"), Core FFO, net operating income ("NOI"), EBITDA, and Adjusted EBITDA, which are each defined in NSA’s Annual Report. These non-GAAP financial measures are presented because NSA's management believes these measures help investors understand NSA's business, performance and ability to earn and distribute cash to its shareholders by providing perspectives not immediately apparent from net income (loss). These measures are also frequently used by securities analysts, investors and other interested parties. The presentation of FFO, Core FFO, NOI, EBITDA, and Adjusted EBITDA herein are not intended to be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP and should not be considered as alternative measures of liquidity. In addition, NSA's definitions and method of calculating these measures may be different from those used by other companies, and, accordingly, may not be comparable to similar measures as defined and calculated by other companies that do not use the same methodology as NSA. Reconciliations of these non-GAAP financial measures to their most directly comparable GAAP measures for the three months ended September 30, 2018 and 2017 are set forth in the Appendix attached hereto. In addition, reconciliations of these non-GAAP financial measures to their most directly comparable GAAP measures for the three months ended June 30, 2018, 2017, 2016 and 2015, March 31, 2018, 2017 and 2016, December 31, 2017, 2016 and 2015, and September 30, 2016 and 2015 are available in NSA’s earnings releases for such period ends, which are furnished to the SEC quarterly as Exhibit 99.1 on Current Reports on Form 8-K pursuant to Item 2.02.

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Investment Highlights (NYSE: NSA)

- Well Diversified Institutional Quality Portfolio
- Differentiated Structure Drives Growth
- Sophisticated Operating Platforms Deliver Results
- Flexible Capital Structure Supports Future Growth
- Delivering Sector-Leading Results Since IPO

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National Storage Affiliates Overview

- With 675 properties, NSA is one of the largest operators of self storage facilities in the U.S.[1][2]
- Total enterprise value $4.2 billion[3]
- Key metrics in three years since IPO[3]:
  - $3.7 billion in completed acquisitions
  - 52.6% dividend growth
  - 14.8% average y-o-y increase in Core FFO/share
  - 128.8% total shareholder return

(1) Source: 2018 Self-Storage Almanac, based on net rentable square feet ("NRSF") owned.
(2) Includes 176 properties NSA manages through its joint ventures, in which NSA has a 25% ownership interest. Property information as of December 31, 2018.
(3) As of September 28, 2018; for definition of total enterprise value please see slide #14.

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NSA's Guiding Vision Unites Top Operators

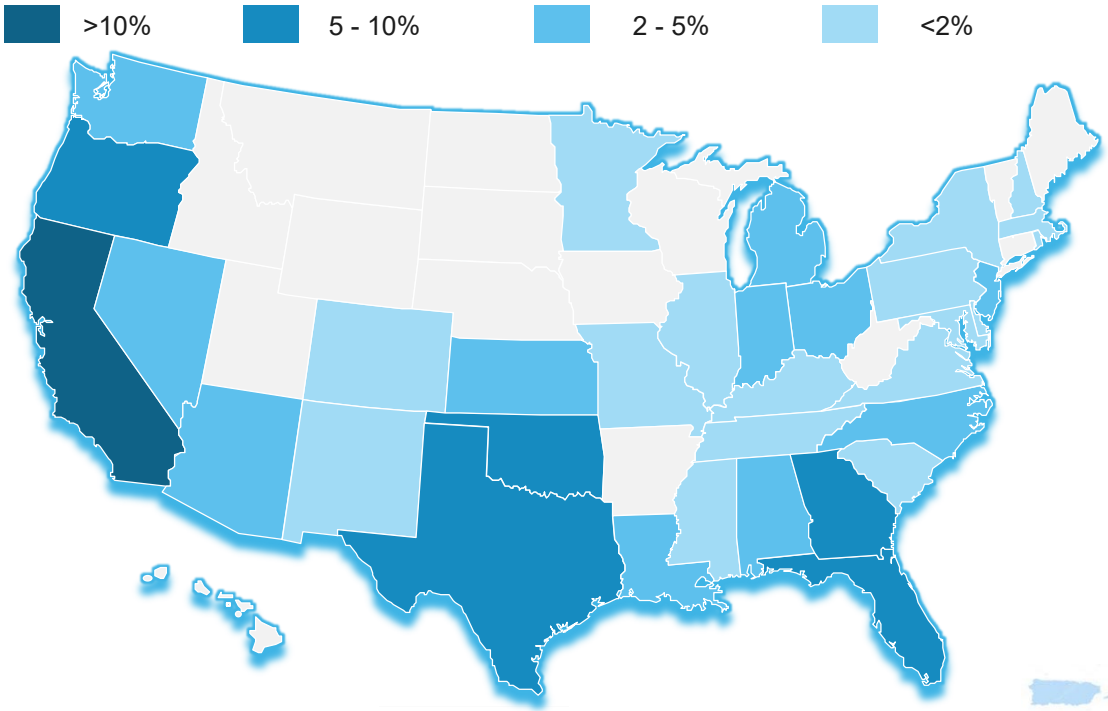
NSA's unique strategy has successfully united nine of the most prominent storage operators with the common goal to drive significant organic and external growth

National Footprint

675 Properties[1]

499 Wholly-Owned	176 Joint Venture

% of NSA Properties



SecurCare Self Storage · Northwest Self Storage · Optivest Properties · Guardian Storage Centers · Move It Self Storage · Storage Solutions · Hide-Away Storage Made Easy! · Personal Mini Storage · iStorage.com (2)

(1) *Property information as of December 31, 2018.*
(2) *The iStorage brand is owned by NSA and is not a Participating Regional Operator.*

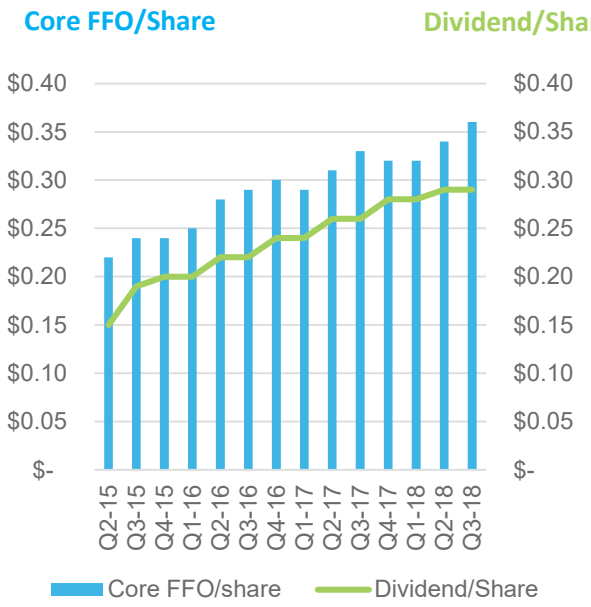
National Storage Affiliates

NSA's Transformational Growth Since IPO

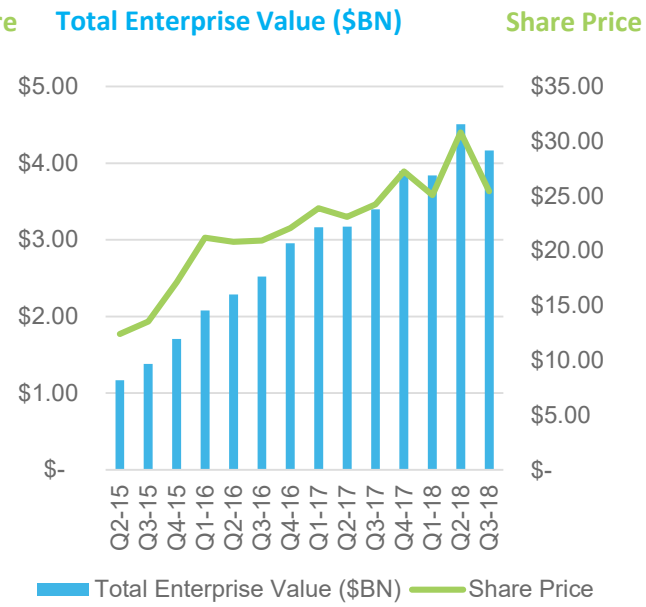
NSA's PRO Model Drives All Aspects of Growth

Growth in Total Properties and Rentable Square Feet

Growth in Core FFO/Share and Dividend/Share



Growth in Total Enterprise Value[(1)] and Share Price



(1) Total Enterprise Value is defined as the sum of the Company's debt principal outstanding plus the perpetual preferred and common equity (on a fully diluted basis) valued at the closing price per share, respectively, as of each quarter end. SP equity is assumed converted using the hypothetical conversion ratio for the trailing twelve months ended at each respective quarter end, which we publicly disclose each quarter. See Supplemental Schedule 4 to each of our earnings releases which are furnished with the U.S. Securities and Exchange Commission.

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Structure Promotes Internal and External Growth

Organic Growth Through Sophisticated Platform Tools

Operational "Best Practices"

Revenue Management / Analytics

Economies of Scale and Lower Cost of Capital

Internet Marketing

External Growth Via Multiple Acquisition Strategies

Acquisition of Captive Pipeline Properties

Recruitment of New PROs

Strategic Joint Ventures

Relationship Driven Third Party Acquisitions

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NSA's Tools and Decentralized Structure Deliver Results

Since IPO NSA has an Average Year-over-Year Same Store
Total Revenue Growth of 6.4% and Same Store NOI Growth of 8.6%

NSA Corporate Headquarters Provides Platform Tools

Executive Leadership

Corporate Accounting

Corporate Marketing

Legal & Finance Support

Technology & Innovation

Regional and Local Operations Implement Best Practices

Underwriting & Sourcing

Property Acquisition & Management

Property Level Accounting

Local Branding & Marketing

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Structure Attracts Disciplined Growth-Oriented Operators

Successful regional operators join NSA as PROs rather than third-party JV or sale options, giving NSA access to top properties not otherwise available

Criteria	NSA	JV	Sale / Exit
Liquidity / Monetization	✓	●	●
Ability to Maintain Property Management	✓	●	
Participate in Upside	✓	●	
Enhance NOI Through Best Practices	✓		
Opportunity and Incentives to Grow Portfolio	✓		

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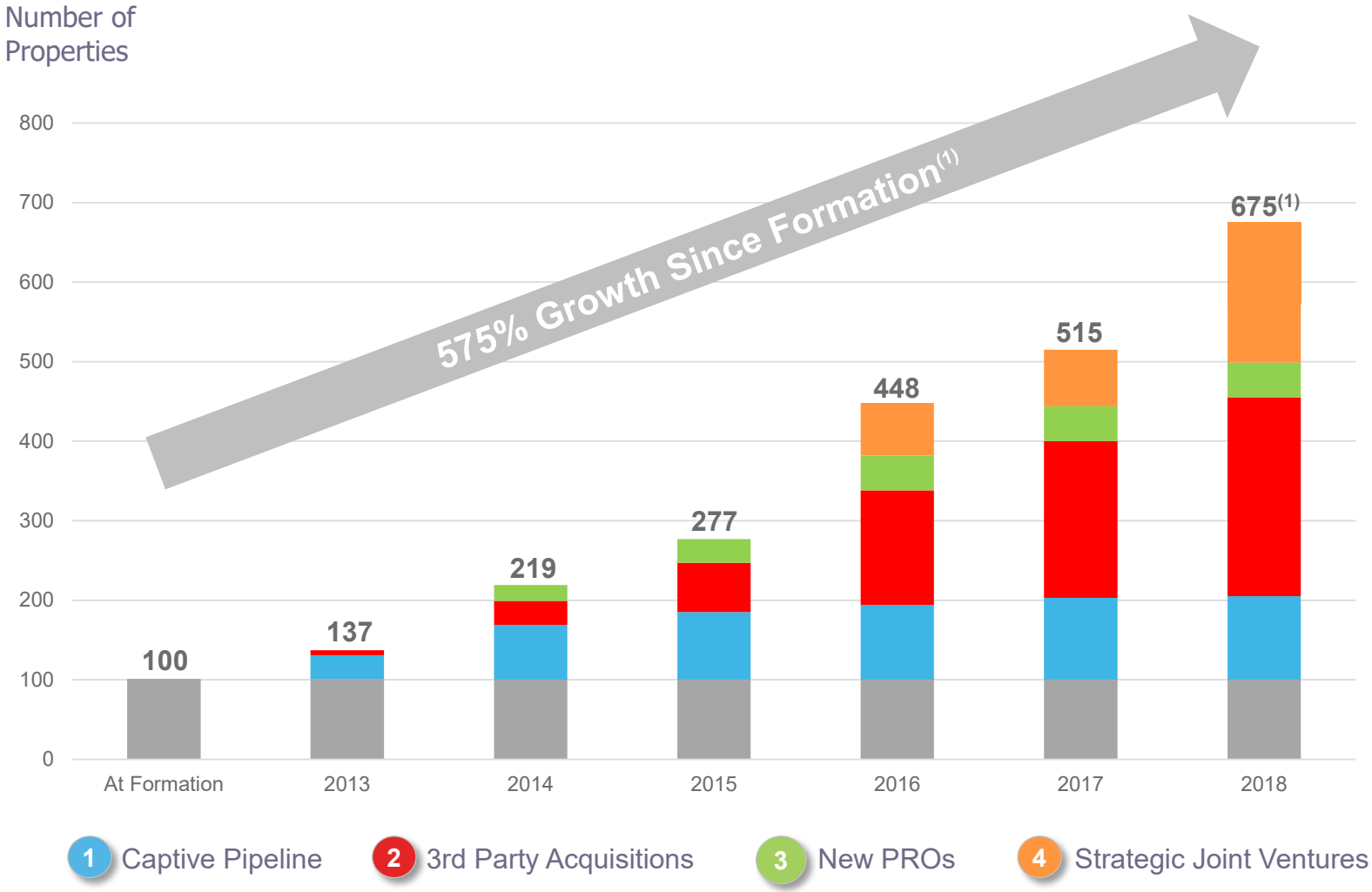
NSA's Portfolio Growth Leads the Industry



(1) As of December 31, 2018, NSA's portfolio consisted of 499 wholly-owned properties and 176 JV-owned properties.

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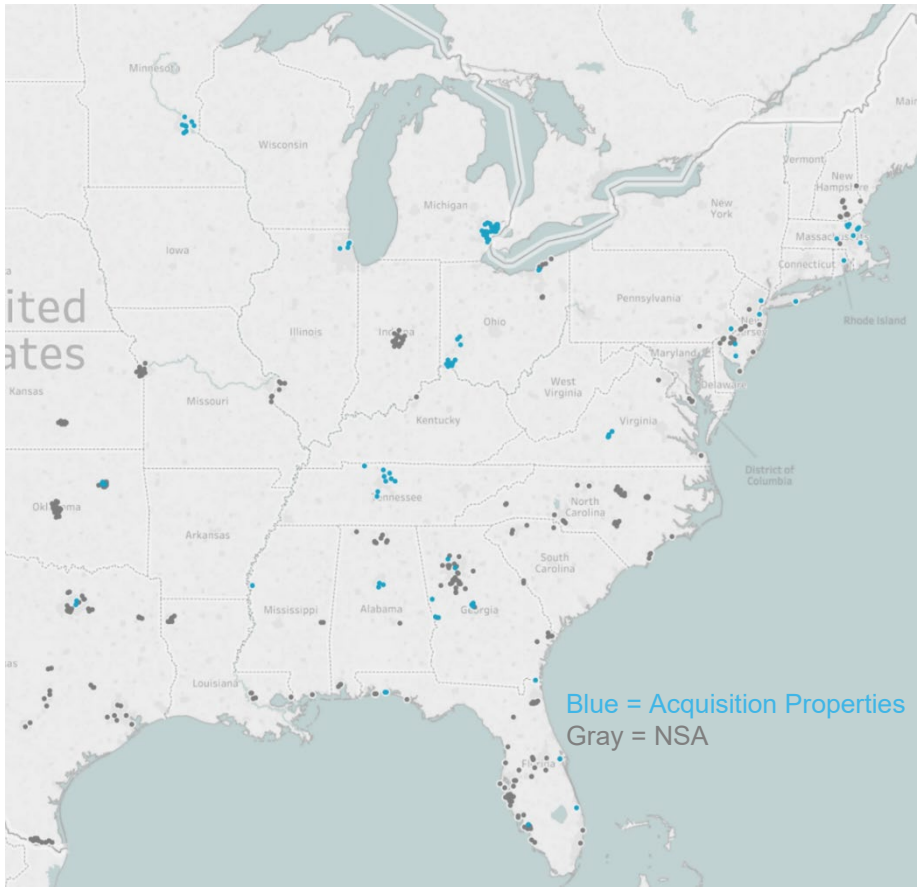
Transformational Acquisition

The Fourth Largest Transaction in the History of the Self Storage Sector[(1)]

Acquisition Highlights

- ✓ New joint venture (the "2018 Joint Venture" and "JV") with an affiliate of Heitman America Real Estate REIT LLC, acquired the Simply Self Storage portfolio, a private real estate fund managed by Brookfield Asset Management
- ✓ 75% / 25% split between JV Investor / NSA
- ✓ Purchase price of $1.325 billion representing a 5.6% underwritten cap rate
- ✓ High quality, stabilized portfolio of 112 properties in 17 states + Puerto Rico totaling 8.2 million sf and ~68,500 units
- ✓ NSA earns net management and platform fees of ~$4.0 million per year
- ✓ Transaction is immediately accretive to NSA's Core FFO per share



(1) Source: BMO, S&P Global, Thompson Reuters, by enterprise value.

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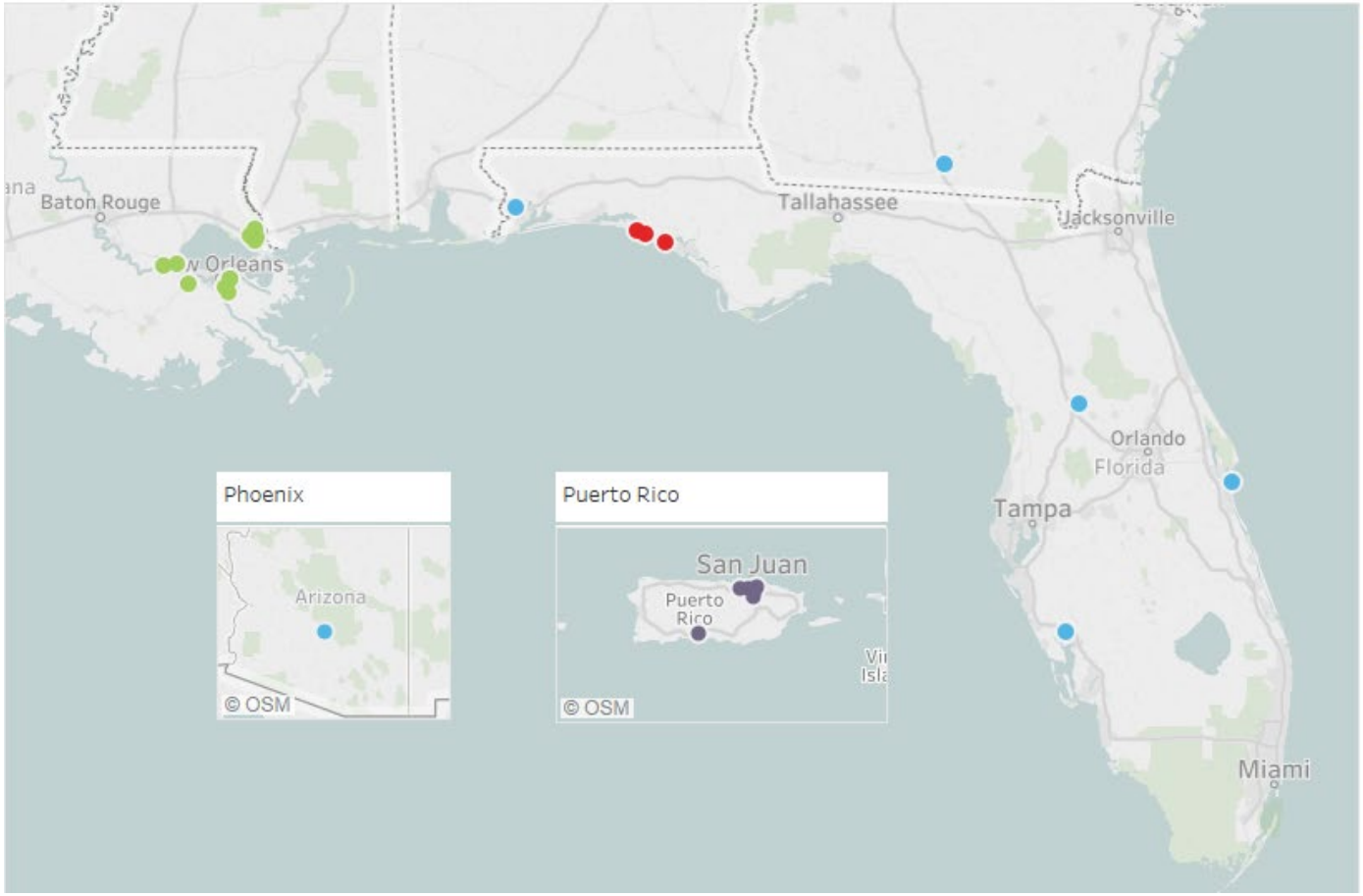
9th PRO: Southern Self Storage

New PRO Portfolio Highlights



Type
- Contribution
- Captive Pipeline
- Acquisition
- Puerto Rico

Total Portfolio
- 23 NSA Properties
- 3 Captive Pipeline
- $115 MM New to NSA, January 2019

(1) Source: BMO, S&P Global, Thompson Reuters, by enterprise value.

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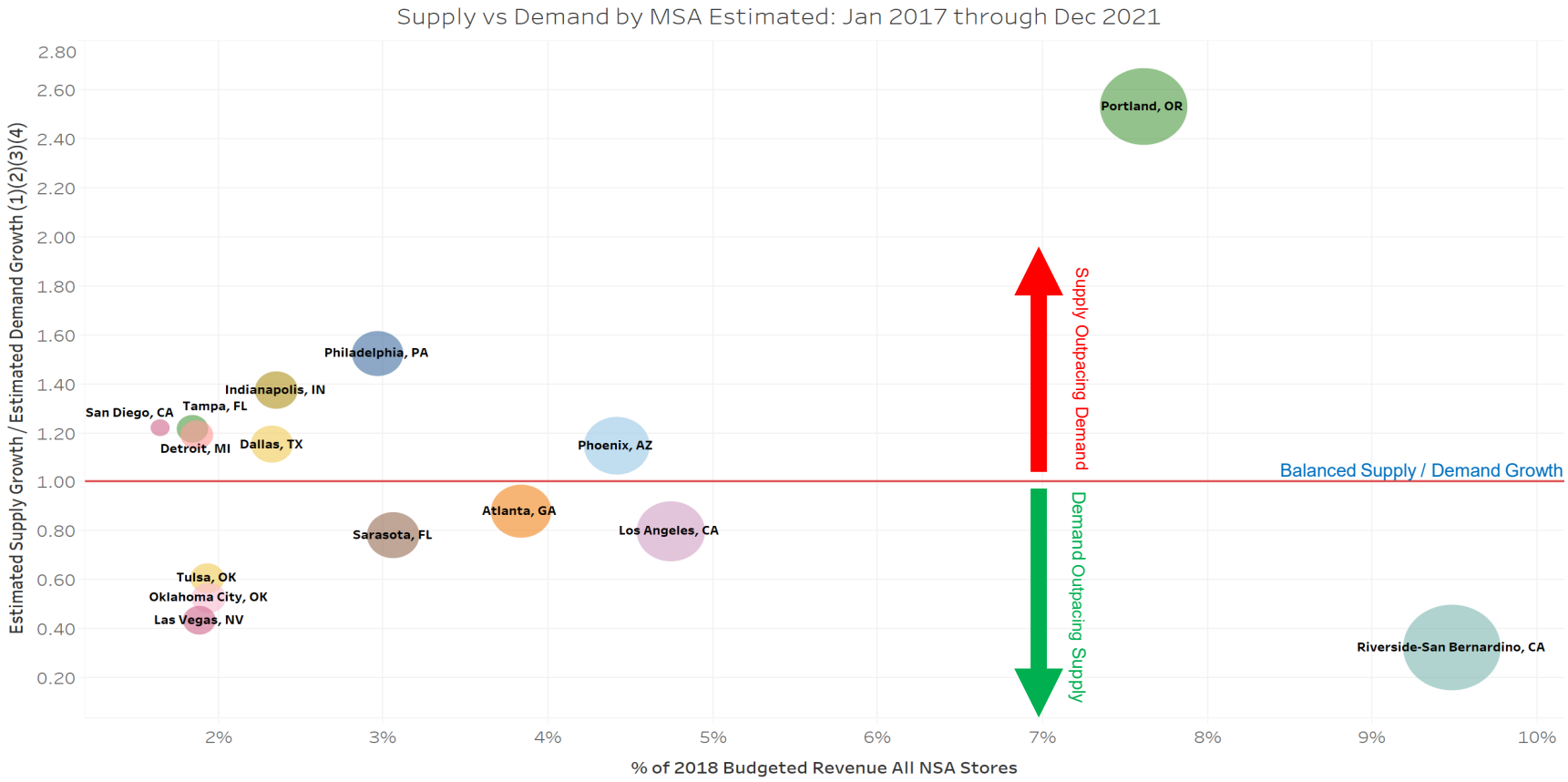
NSA's Top 15 Markets are Less Impacted by Supply



1) *We estimate supply growth for each market as follows: first, we add together the expected total net rentable square footage attributable to (i) all Fill-Up and Under Construction Properties and (ii) 50% of all Planned and Prospective Properties. Properties refers to all self storage properties (including NSA's) in the MSAs set forth above, tracked and reported by Yardi. Fill-Up are stores that have opened in the 24-month period prior to September 30, 2018. Under Construction are those currently under construction. Planned and Prospective are those with a permit in place or an approval pending to build. We divide this number by the total net rentable square footage of all properties in each market.*
2) *We estimate demand growth in each market by adding together (i) Experian's 5-year projections for the percentage increase in household growth in each market plus (ii) 5%, which represents our assumptions with respect to increased demand in each market irrespective of population growth.*
3) *The ratio of supply growth to demand growth in the table above is calculated based upon NSA's estimates and assumptions as set forth in footnotes 1 and 2 above. There can be no assurance that supply growth and demand growth in any market will correspond to such estimates. Some or all of our competitor's properties in these markets may not fill up, reach completion or be built at all or on the schedule currently contemplated and increases in population and non-population related demand may differ from our estimates and assumptions.*
4) *Circle sizes correspond to each MSA's % share of NSA's 2018 budgeted revenue.*

Source: Yardi Matrix and Experian.

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NSA's Flexible Capital Structure Positioned for Growth

Total Principal Debt Outstanding[1]
$1.23B

Key Credit Metrics

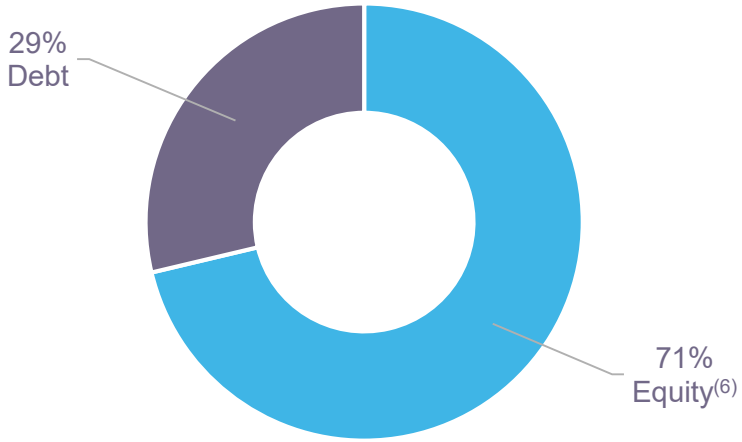
29%	5.7x	5.0x
Principal Debt /Total Enterprise Value[2]	Net Debt/ Adjusted EBITDA[3]	Interest Coverage Ratio[4]

Capital for Growth

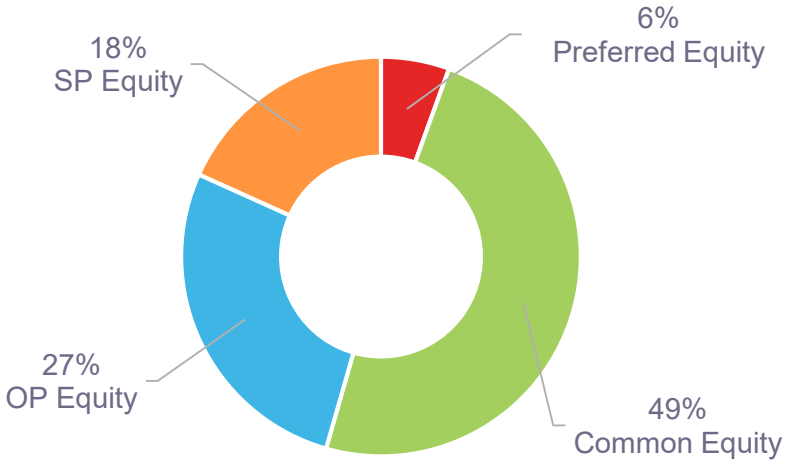
$400MM	OP & SP Equity
Unsecured Revolving Line of Credit	

Attractive Dividend
4.6%
Yield[5]

Total Enterprise Value $4.2 Billion



Significant Investment by Management and PROs[6]



(1) Principal debt outstanding as of September 30, 2018.
(2) Total Enterprise Value is defined as the sum of the Company's principal debt outstanding plus the perpetual preferred and common equity (on a fully diluted basis) valued at $24.83 and $25.44 per share, respectively, which are the closing prices as of September 28, 2018. SP equity is assumed converted using the hypothetical conversion ratio of 1.35x as of September 30, 2018.
(3) Net debt means principal debt outstanding less cash and cash equivalents as of September 30, 2018. Adjusted EBITDA is based on annualized current quarter for Q3 2018.
(4) Interest coverage is computed by dividing Q3 2018 adjusted EBITDA by Q3 2018 interest expense. Does not include loss on early extinguishment of debt.
(5) Yield is calculated based on current quarterly annualized dividend of $1.16 divided by market closing price of NSA's common shares on September 28, 2018 of $25.44.
(6) Equity outstanding as of September 30, 2018.

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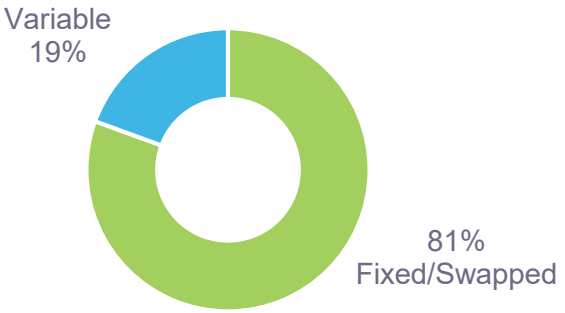
Balance Sheet Provides Strength and Flexibility to Finance Growth

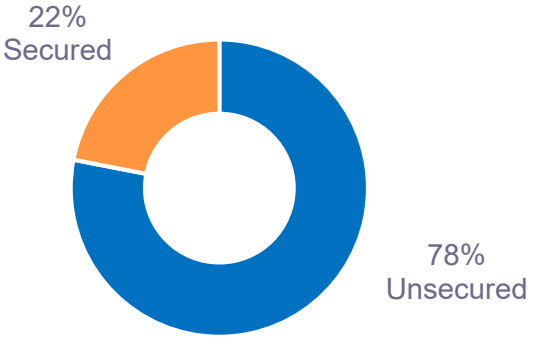
Total Principal Debt Outstanding(1)	Weighted Average Maturity(1)	Effective Interest Rate(1, 2)
$1.23B	4.3 Years	3.5%

Debt Maturity Schedule(1) ($ in millions)

Minimal Interest Rate Risk: Principal(1)



Balanced Debt Security Profile(1)



(1) Principal debt outstanding as of September 30, 2018.
(2) Effective interest rate incorporates the stated rate plus the impact of interest rate cash flow hedges and discount and premium amortization, if applicable. For the revolving line of credit, the effective interest rate excludes fees which range from 0.15% to 0.25% for unused borrowings.

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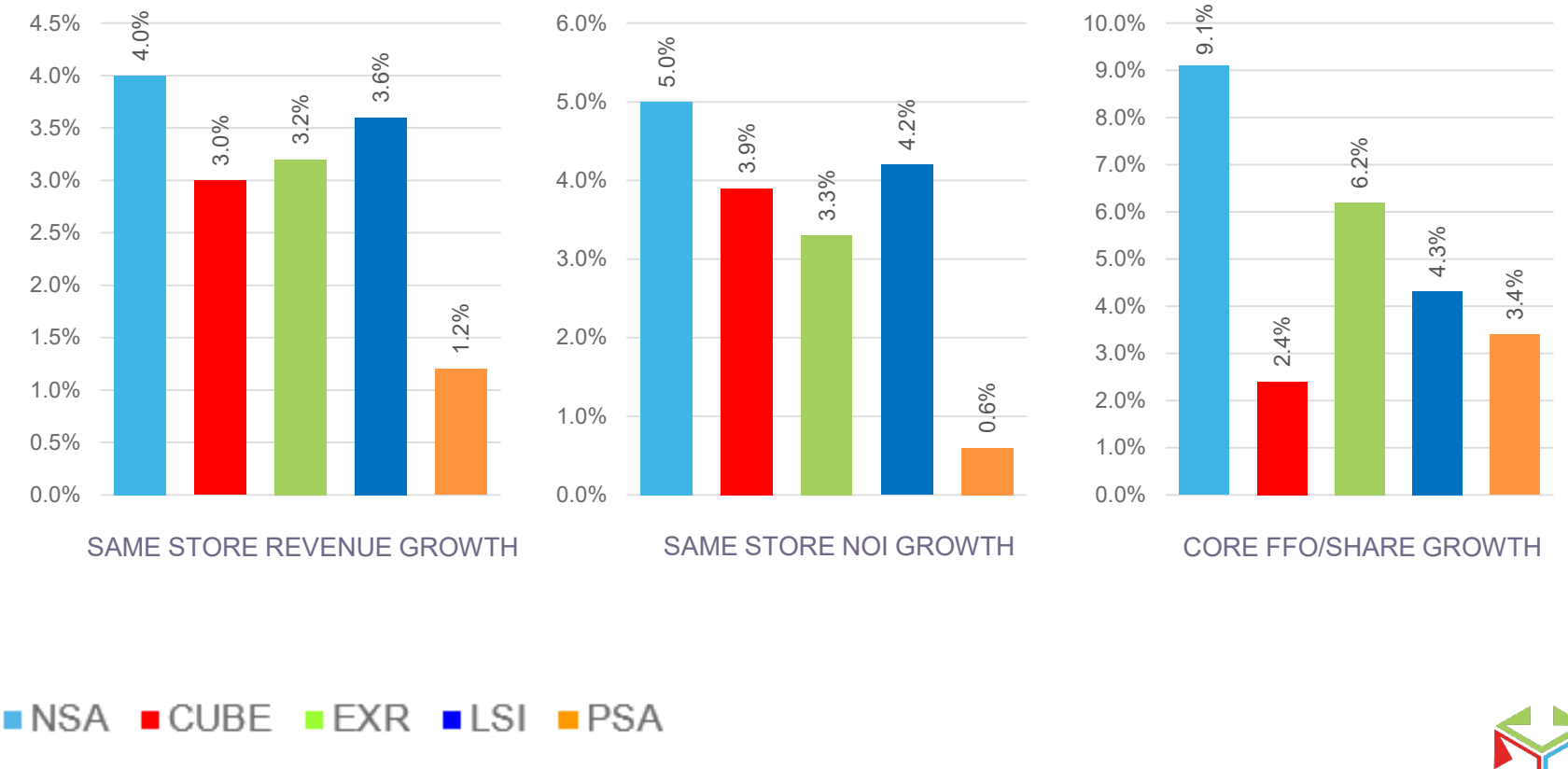
NSA Delivers Top Quarterly Performance

Third Quarter 2018(1)



(1) Source: Third quarter 2018 public reporting.

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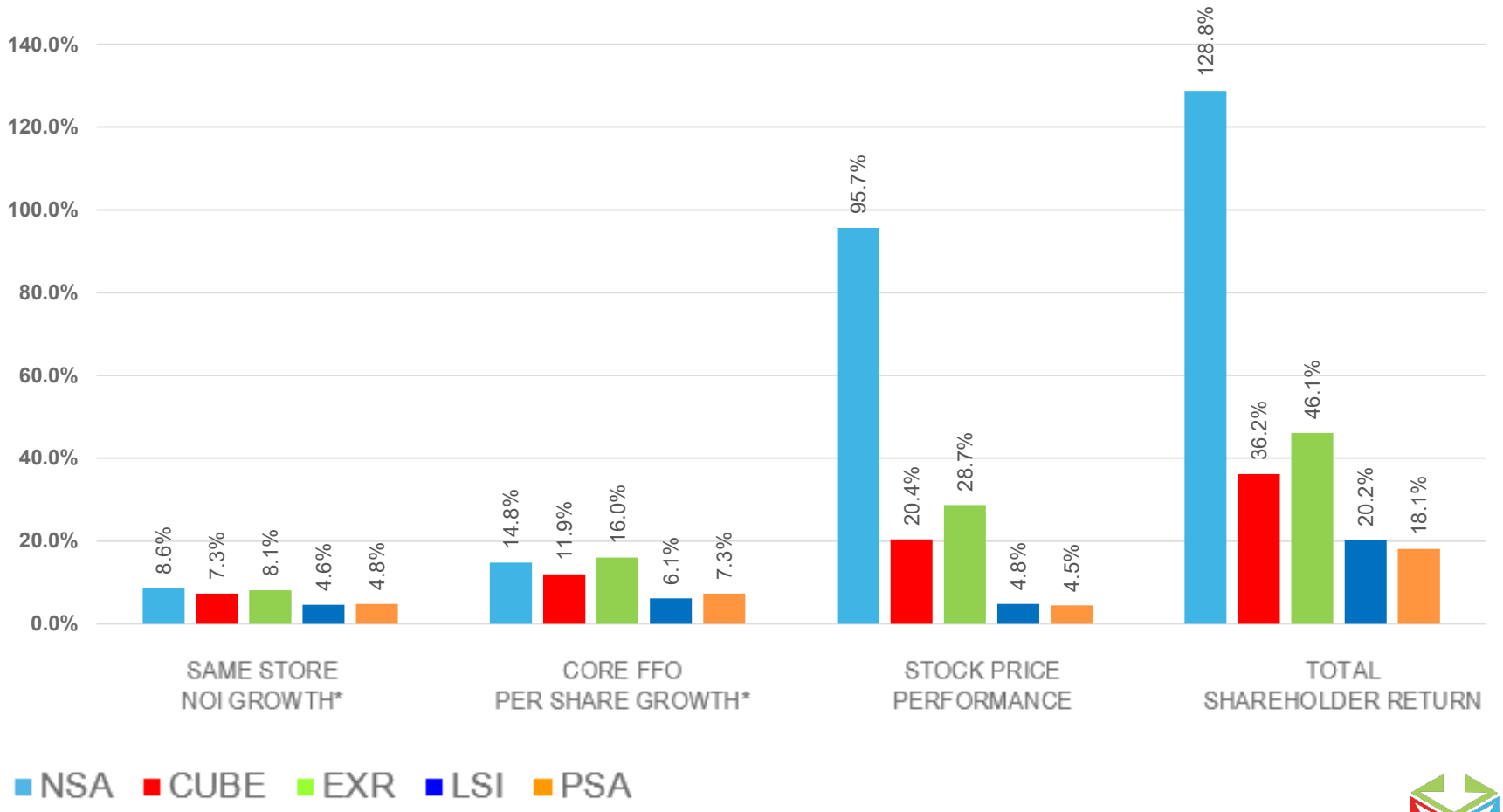
NSA Delivers Top Results Versus Peers

Fourteen Quarters of Performance Since IPO: 4/23/15 through 9/30/18[(1)(2)]



(1) Source: 2015, 2016, 2017 and 2018 public reporting and SNL Financial.
(2) Quarterly averages are computed using a simple average of year-over-year quarterly growth rates from second quarter 2015 through third quarter 2018.

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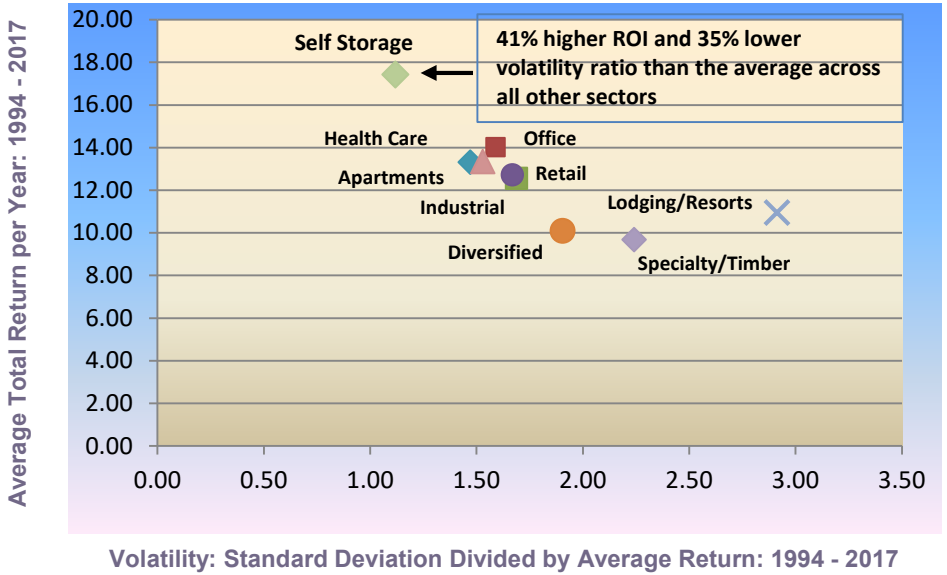
Appendix

Self Storage Has Consistently Outperformed

Self Storage has delivered the highest ROI and lowest volatility of any REIT Sector

- Since 1994, total returns for self storage have outperformed all other equity REIT sectors while experiencing the least volatility
  - The industry is expected to continue to generate substantial NOI growth
  - Savings expected through improved scale, new technology and centralized infrastructure



Five Forces Driving Self Storage	Impact
Competitive Rivalry	Very Favorable – geographically limited
Customer Bargaining Power	Very Favorable – not price driven
Threat of Substitute Products	Favorable - Very few cost effective options
Supplier Bargaining Power	Neutral – Limited, but increasing
Threat of New Entrants	Neutral - Limited, but increasing entry barriers

Note: Data sourced from NAREIT 2017 published data. Volatility ratio defined as the standard deviation of return divided by return.

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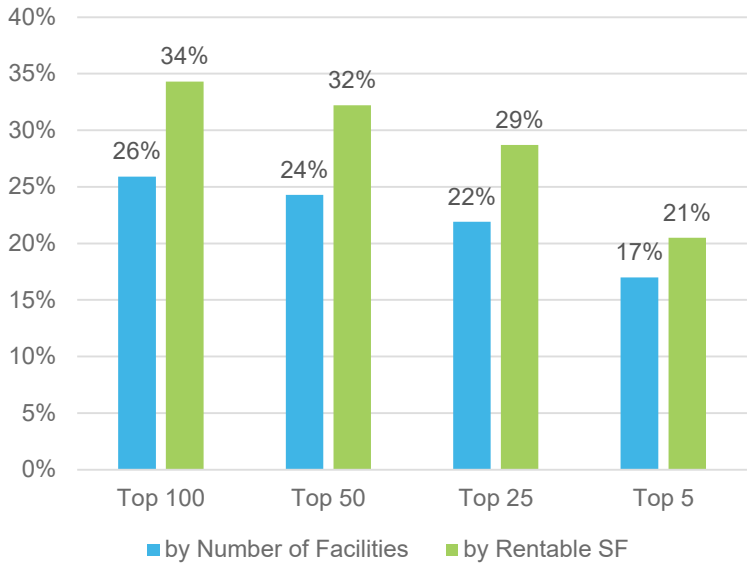
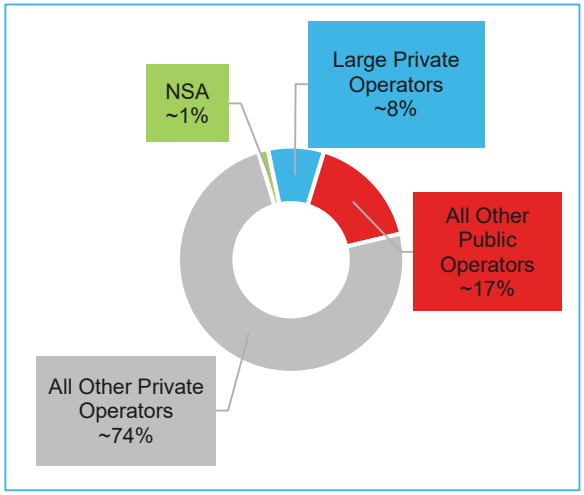
Industry Fragmentation: Opportunity for Consolidation

- **Highly fragmented sector**
  - ~44,000(1) self storage properties with over 30,000 operators(2)
  - Over $30 billion in annual revenue and over $250 billion in private market value(2)
- **NSA PRO growth primarily targets top private operators with 20 or more institutional quality properties in the top 100 MSAs**
  - Large Private operators own and/or manage over 3,600 self storage properties(1)(3)





Top 40 Operators(4)

1	Public Storage
2	Extra Space Storage
3	Life Storage, Inc.
4	CubeSmart
5	National Storage Affiliates (NYSE: NSA)
6	U-Haul International Inc.
7	StorageMart
8	Prime Group Holdings LLC
9	SmartStop Asset Management LLC
10	Metro Storage LLC
11	W.P. Carey Inc.
12	National Storage REIT (ASX: NSR)
13	All Storage
14	StoreQuest Self Storage
15	World Class Holdings
16	Westport Properties Inc./US Storage Centers
17	Morningstar Properties
18	Amsdell Cos./Compass Self Storage
19	Urban Self Storage Inc.
20	ezStorage
21	LAACO Ltd.
22	Red Dot Storage
23	Atlantic Self Storage
24	Safeguard Self Storage
25	Platinum Self Storage
26	Reliant Real Estate Management LLC
27	A-1 Self Storage
28	Storage Rentals of America
29	Brookwood Properties, dba The Storage Center
30	Merit Hill Capital
31	BACO Realty Group
32	Brundage Management Co.
33	Storage Express
34	Rosewood Property Co.
35	Strat Property Management Inc.
36	Lock Up Self Storage, The
37	Devon Self Storage
38	Dahn Corp.
39	City Line Capital
40	Jenkins Organization Inc., The

(1) 2018 Self-Storage Almanac survey excludes small, rural facilities.
(2) Self Storage Association estimates.
(3) Represents the number of facilities owned and/or managed by top operators, excluding NSA and other publicly traded entities.
(4) Inside Self-Storage 2018 Top Operators, based on NRSF owned.

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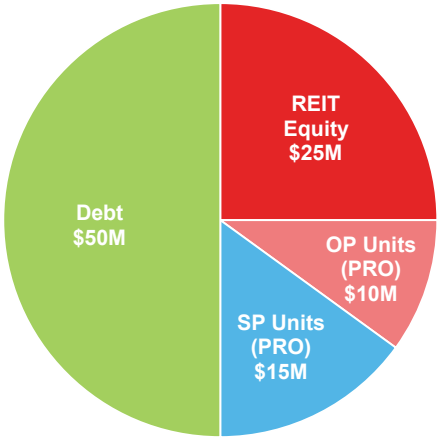
Structure Incentivizes PROs To Perform

KEY ASSUMPTIONS

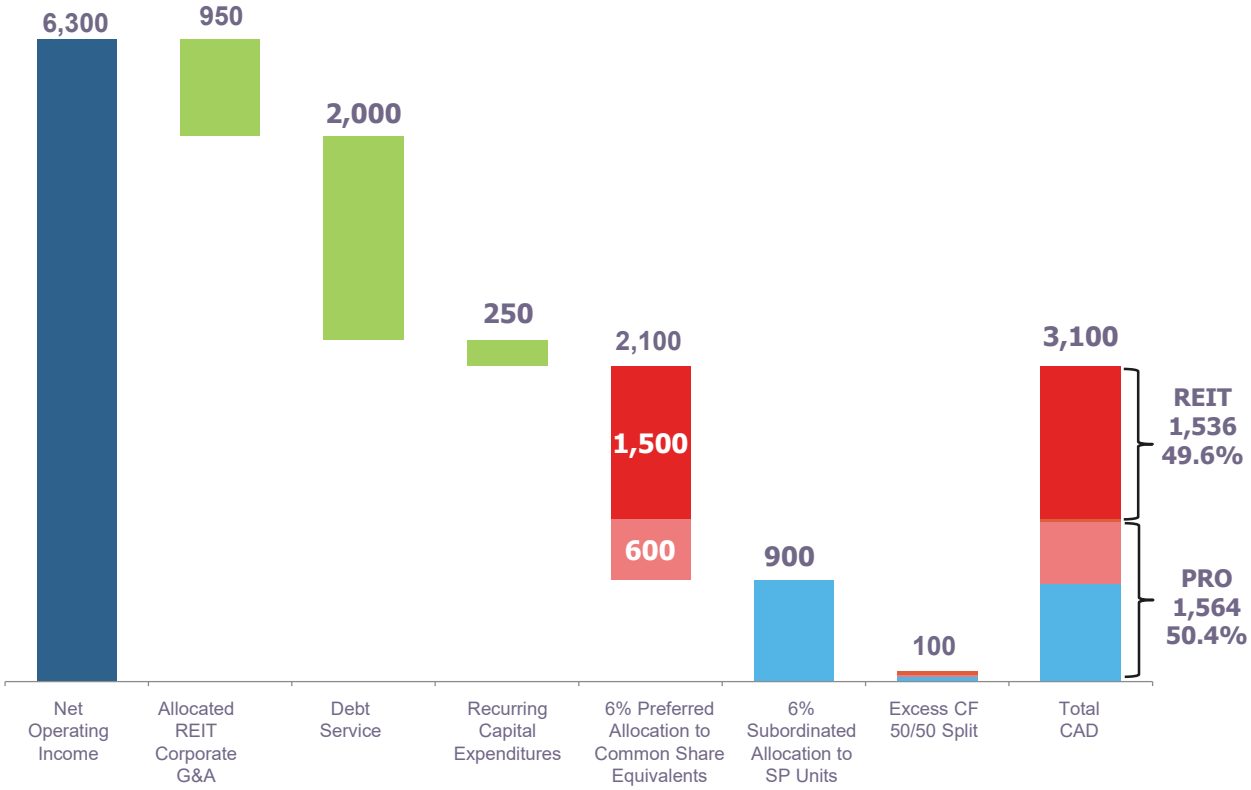
- $100MM Purchase Price
- 6.3% Cap Rate
- 50% Funded with Debt
- 50% of Equity from PRO

Illustrative Capitalization



Illustrative Operating Cash Flow Allocation for Single Acquisition

($000s)



Note: Proportion of SP units and OP units in each acquisition will vary. In general, the number of OP units issued will be capped at a level intended to provide a minimal level of operating cash flow ("CF") allocation on unreturned capital attributable to the OP units. Debt Service is reflective of interest expense and scheduled principal amortization. Post-contribution capital structure is reflective of cost and does not reflect market value. This hypothetical capital structure and cash flow allocation is for illustrative purposes only and reflects the terms of the partnership agreement: SP unit holders receive a 6% allocation of operating CF on their unreturned capital contributions after a 6% allocation on unreturned capital attributable to OP unit holders, and then share in the allocation of any excess cash flow 50/50 with OP unit holders. The REIT is allocated $36K of the operating CF allocated to OP units related to the 50/50 split of excess operating CF. The allocation of operating CF between the SP units and OP units is for purposes of determining distributions on SP units and does not represent the operating CF that will be distributed on OP units (or paid as dividends on NSA's common shares). Any distribution of operating CF allocated to OP units will be made at the discretion of NSA (and paid as dividends on our common shares at the discretion of our board of trustees).

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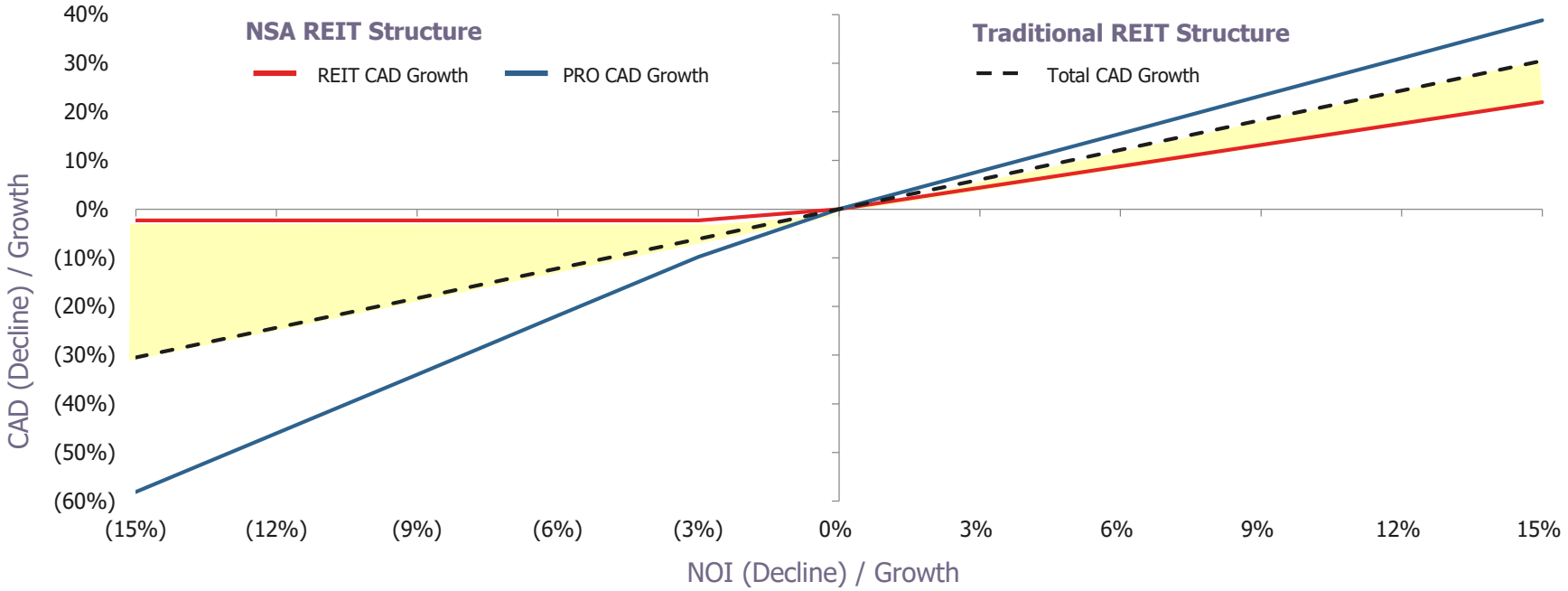
Structure Offers Cash Flow Stability and Downside Protection

Shareholders benefit from less volatile cash flow and downside protection

Illustrative Impact on Operating Cash Flow Allocation for Single Acquisition(1)



Note: PRO CAD Growth is comprised of cash available to PROs through their ownership interests in both OP and SP units. REIT CAD Growth is comprised of cash available to all other equity stakeholders.

(1) This illustrative sensitivity graph reflects the capital structure of a single acquisition and operating CF allocation assumptions reflected on page 21. This hypothetical capital structure and cash flow allocation is for illustrative purposes only and reflects the terms of the partnership agreement: SP unit holders receive a 6% allocation of operating CF on their unreturned capital contributions after a 6% allocation on unreturned capital attributable to OP unit holders, and then share in the allocation of any excess cash flow 50/50 with OP unit holders. This allocation of operating CF between the SP units and OP units is for purposes of determining distributions on SP units and does not represent the operating CF that will be distributed on OP units (or paid as dividends on NSA's common shares). Any distribution of operating CF allocated to OP units will be made at the discretion of NSA (and paid as dividends on NSA's common shares at the discretion of our board of trustees).

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Earnings Per Share – Diluted to Funds From Operations ("FFO") and Core FFO Per Share and Unit Reconciliation

	Three Months Ended September 30,	
	2018	2017
Earnings (loss) per share – diluted	**$ 0.03**	**$ 0.03**
Impact of the difference in weighted average number of shares(1)	—	(0.02)
Impact of GAAP accounting for noncontrolling interests, two-class method and treasury stock method(2)	0.14	0.14
Add real estate depreciation and amortization	0.25	0.25
Add Company's share of unconsolidated real estate venture real estate depreciation and amortization	0.02	0.03
Subtract gain on sale of self storage properties	—	—
FFO attributable to subordinated performance unitholders	(0.08)	(0.11)
FFO per share and unit	**$ 0.36**	**$ 0.32**
Add acquisition costs and Company's share of unconsolidated real estate venture acquisition costs	—	0.01
Core FFO per share and unit	**$ 0.36**	**$ 0.33**

Source: Q3 2018 Company financials.

(1) Adjustment accounts for the difference between the weighted average number of shares used to calculate diluted earnings per share and the weighted average number of shares used to calculate FFO and Core FFO per share and unit. Diluted earnings per share is calculated using the two-class method for the company's restricted common shares and the treasury stock method for certain unvested LTIP units, and assumes the conversion of vested LTIP units into OP units on a one-for-one basis and the hypothetical conversion of subordinated performance units, and DownREIT subordinated performance units into OP units, even though such units may only be convertible into OP units (i) after a lock-out period and (ii) upon certain events or conditions. For additional information about the conversion of subordinated performance units and DownREIT subordinated performance units into OP units, see Note 9 in Item 1 to the Company's most recent quarterly report on Form 10-Q, filed with the Securities and Exchange Commission. The computation of weighted average shares and units for FFO and Core FFO per share and unit includes all restricted common shares and LTIP units that participate in distributions and excludes all subordinated performance units and DownREIT subordinated performance units because their effect has been accounted for through the allocation of FFO to the related unitholders based on distributions declared.

(2) Represents the effect of adjusting the numerator to consolidated net income (loss) prior to GAAP allocations for noncontrolling interests, after deducting preferred share and unit distributions, and before the application of the two-class method and treasury stock method, as described above in footnote (1).

NATIONAL STORAGE AFFILIATES

Net Income to Net Operating Income Reconciliation

(dollars in thousands)	Three Months Ended September 30, 2018	2017
Net income	**$ 16,829**	**$ 11,226**
(Subtract) add:		
Management fees and other revenue	(3,148)	(1,998)
General and administrative expenses	8,848	7,480
Depreciation and amortization	22,469	18,463
Interest expense	10,656	9,157
Equity in (earnings) losses of unconsolidated real estate venture	(242)	710
Acquisition costs	141	139
Income tax expense	282	162
Gain on sale of self storage properties	—	(106)
Non-operating (income) expense	(153)	9
Net Operating Income	**$ 55,682**	**$ 45,242**

Source: Q3 2018 Company financials.

NATIONAL STORAGE AFFILIATES

Net Income to EBITDA & Adjusted EBITDA Reconciliation

(dollars in thousands)	Three Months Ended September 30, 2018	2017
Net income	$ 16,829	$ 11,226
Add:		
Depreciation and amortization	22,469	18,463
Company's share of unconsolidated real estate venture depreciation and amortization	1,954	2,042
Interest expense	10,656	9,157
Income tax expense	282	162
EBITDA	$ 52,190	$ 41,050
Add (subtract):		
Acquisition costs	141	139
Company's share of unconsolidated real estate venture acquisition costs	—	1
Gain on sale of self storage properties	—	(106)
Company's share of unconsolidated real estate venture loss on sale of properties	205	—
Equity-based compensation expense[1]	1,022	921
Adjusted EBITDA	$ 53,558	$ 42,005

Source: Q3 2018 Company financials.

(1) Equity-based compensation expense is a non-cash item that is included in general and administrative expenses in NSA's consolidated statements of operations.

NATIONAL STORAGE AFFILIATES

NYSE: NSA