

VALENS RESEARCH



Relative Valuation – Valuation Drivers

Joel Litman
January 2017

Valens Research
110 Cambridge Street, Cambridge, Massachusetts 02141
joel.litman@valens-research.com

SCREENING CASE:

Ratios and buy/sell signals

Universe:	<i>Large sample of “dividend payers”</i>
Initial Request:	<i>Test the relationship between ROIC and P/E</i>
Investment theory:	<i>Ratio inconsistency signals buy/sell opportunity?</i>

HIGH ROIC, LOW P/E.....	Buying Signal
LOW ROIC, HIGH P/E.....	Selling Signal

Universe: *Large sample of “dividend payers”*

Initial Request: *Test the relationship between ROIC and P/E*

Investment theory: *Ratio inconsistency signals buy/sell opportunity?*

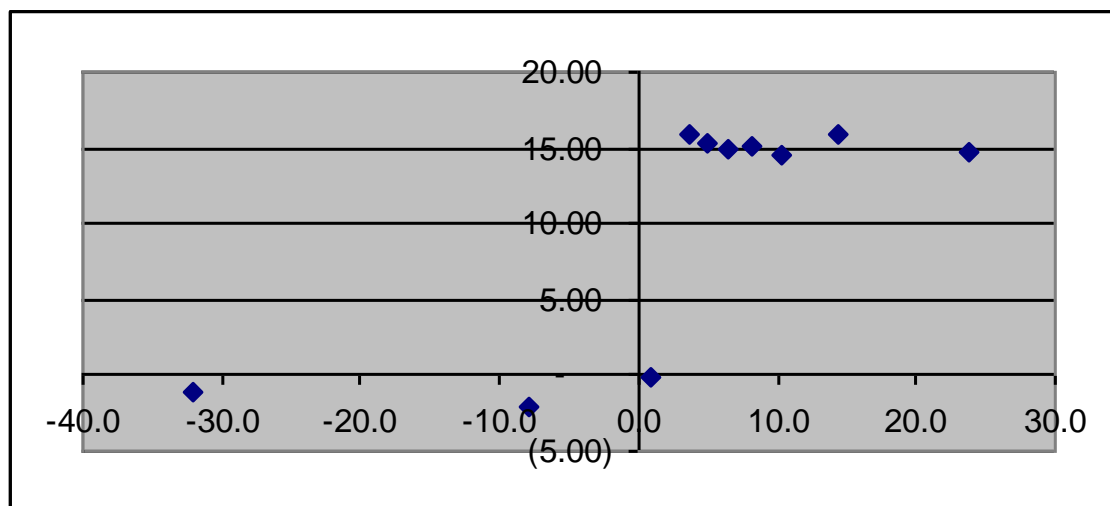
	Median ROIC	Median PE
Decile 1	-32.0	(1.08)
Decile 2	-7.9	(2.17)
Decile 3	0.9	(0.19)
Decile 4	3.8	15.84
Decile 5	5.0	15.40
Decile 6	6.4	14.92
Decile 7	8.1	15.09
Decile 8	10.4	14.52
Decile 9	14.4	15.88
Decile 10	23.7	14.68

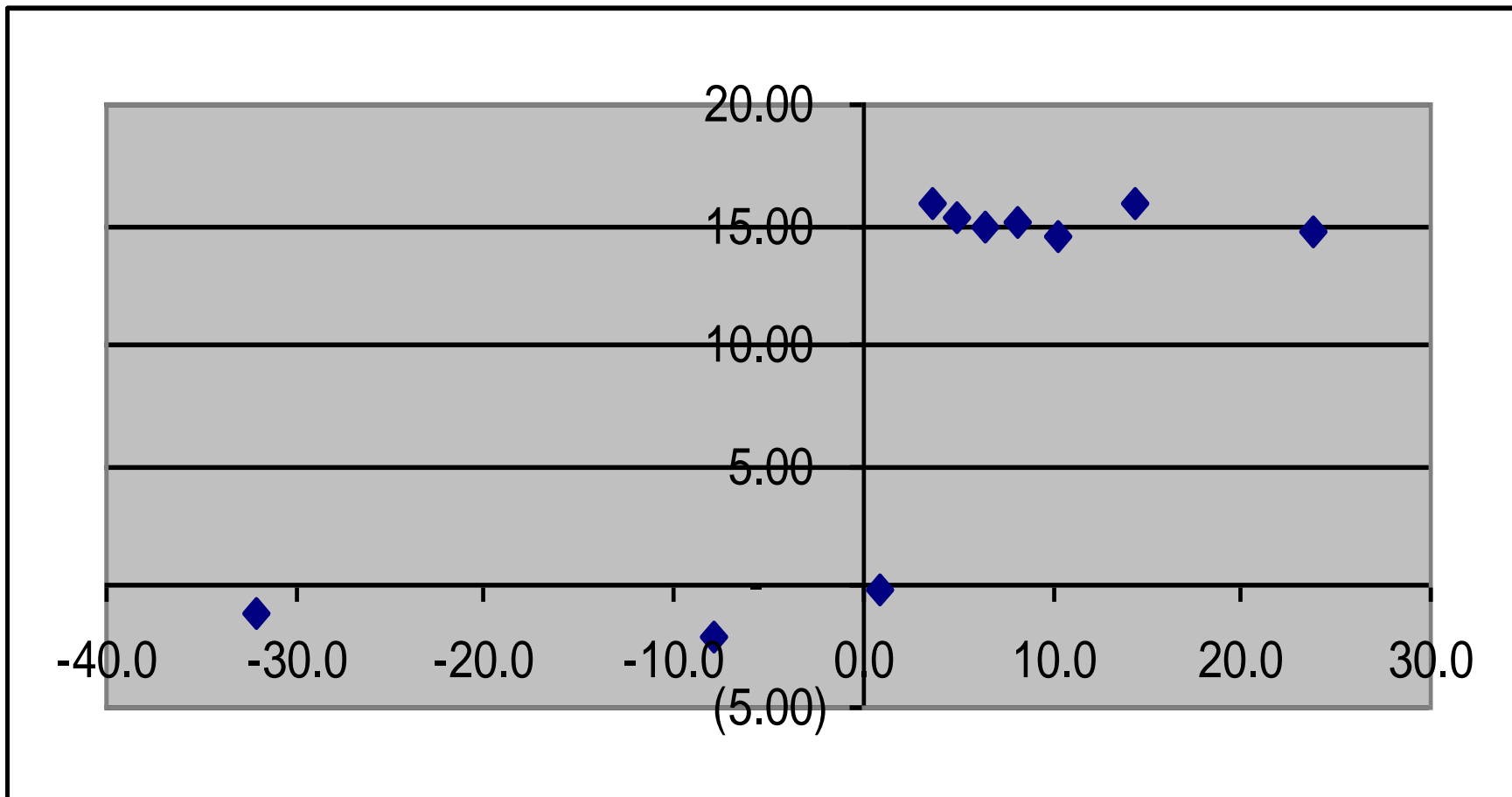
Universe: *Large sample of “dividend payers”*

Initial Request: *Test the relationship between ROIC and P/E*

Investment theory: *Ratio inconsistency signals buy/sell opportunity?*

	Median ROIC	Median PE
Decile 1	-32.0	(1.08)
Decile 2	-7.9	(2.17)
Decile 3	0.9	(0.19)
Decile 4	3.8	15.84
Decile 5	5.0	15.40
Decile 6	6.4	14.92
Decile 7	8.1	15.09
Decile 8	10.4	14.52
Decile 9	14.4	15.88
Decile 10	23.7	14.68





Universe: *Large sample of “dividend payers”*

Initial Request: *Test the relationship between ROIC and P/E*

Investment theory: *Ratio inconsistency signals buy/sell opportunity?*

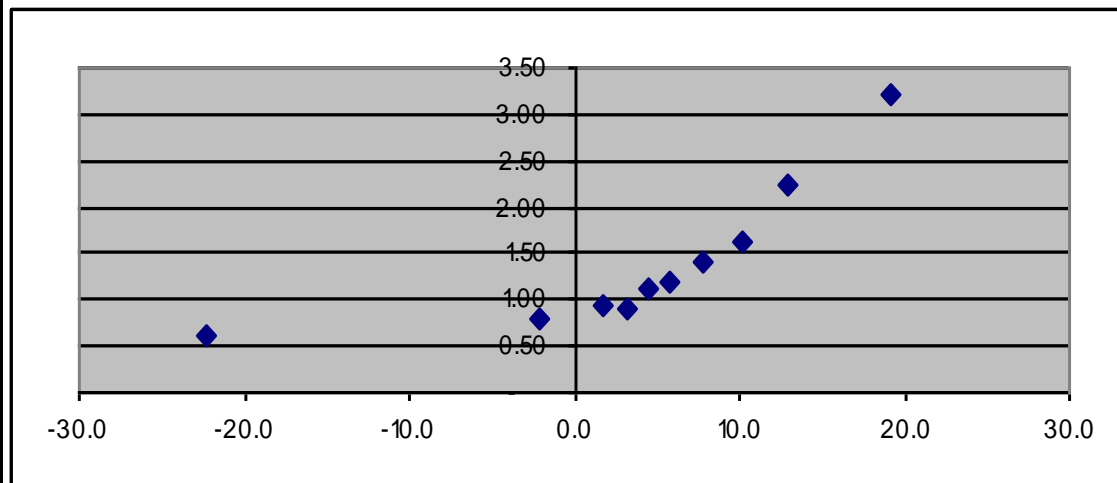
	Median ROA' FY1	Median V/A'
Decile 1	-22.3	0.60
Decile 2	-2.2	0.78
Decile 3	1.7	0.93
Decile 4	3.2	0.91
Decile 5	4.6	1.13
Decile 6	5.9	1.21
Decile 7	7.8	1.40
Decile 8	10.2	1.64
Decile 9	13.0	2.25
Decile 10	19.1	3.21

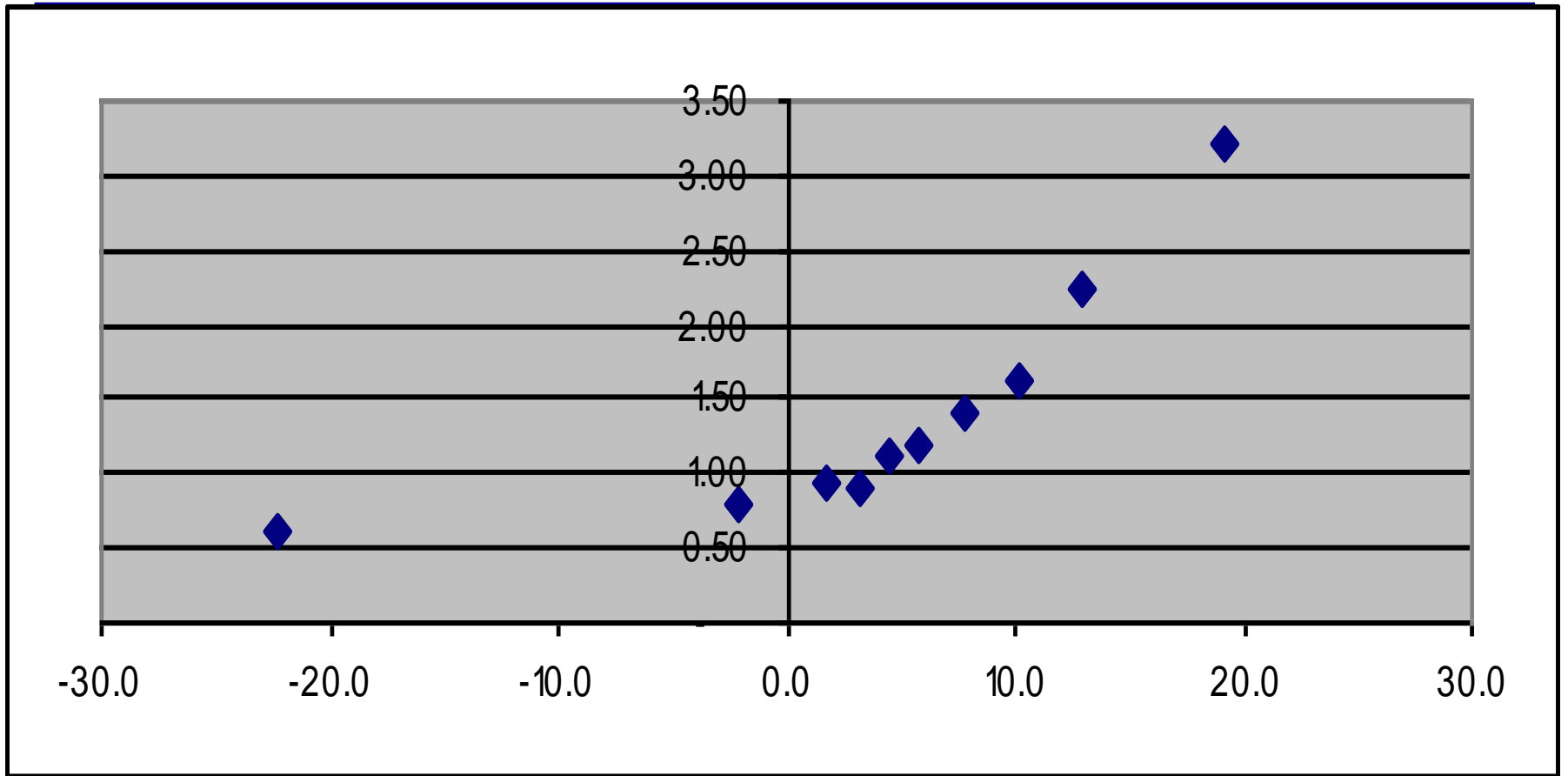
Universe: *Large sample of “dividend payers”*

Initial Request: *Test the relationship between ROIC and P/E*

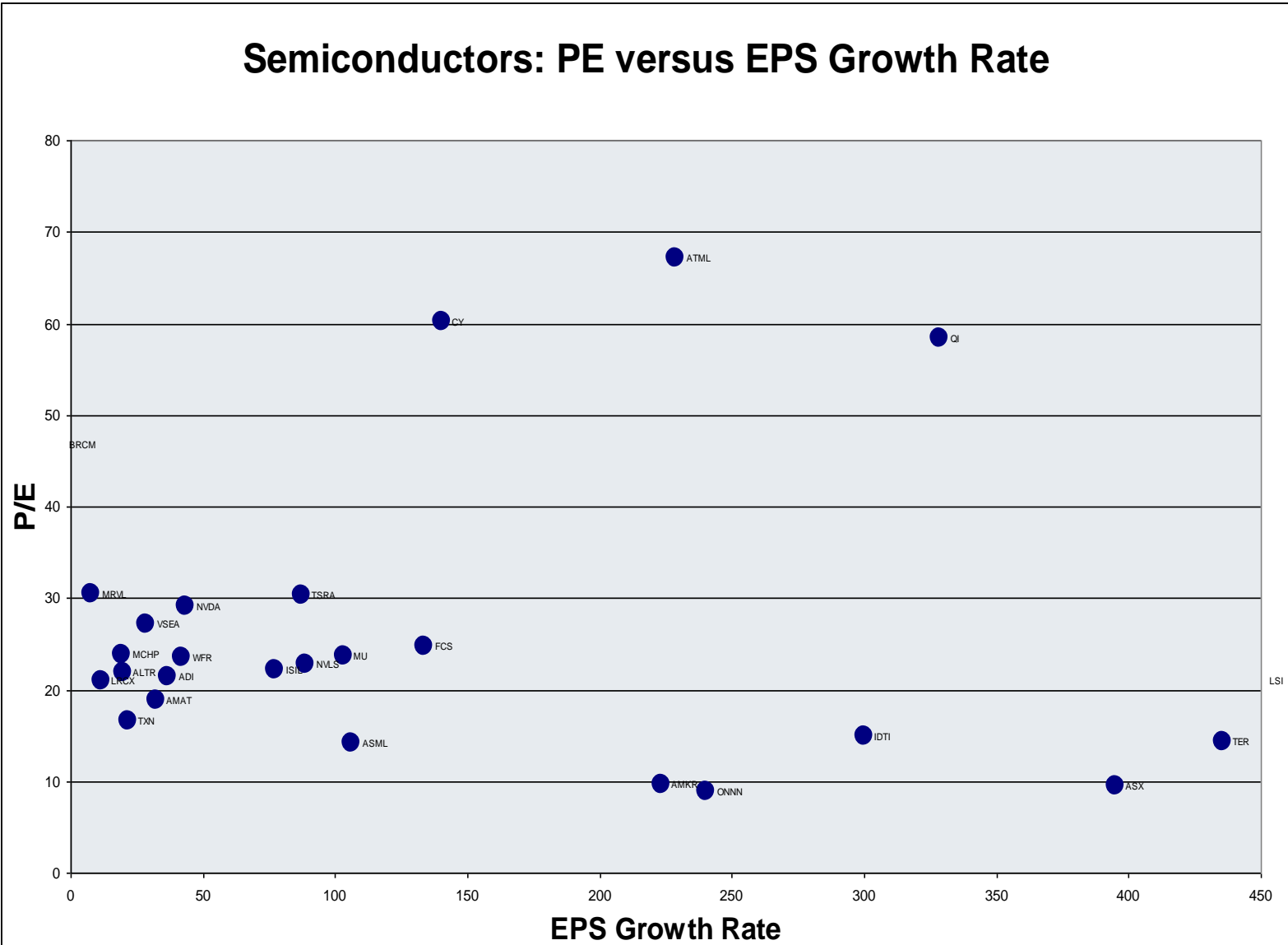
Investment theory: *Ratio inconsistency signals buy/sell opportunity?*

	Median ROA' FY1	Median V/A'
Decile 1	-22.3	0.60
Decile 2	-2.2	0.78
Decile 3	1.7	0.93
Decile 4	3.2	0.91
Decile 5	4.6	1.13
Decile 6	5.9	1.21
Decile 7	7.8	1.40
Decile 8	10.2	1.64
Decile 9	13.0	2.25
Decile 10	19.1	3.21

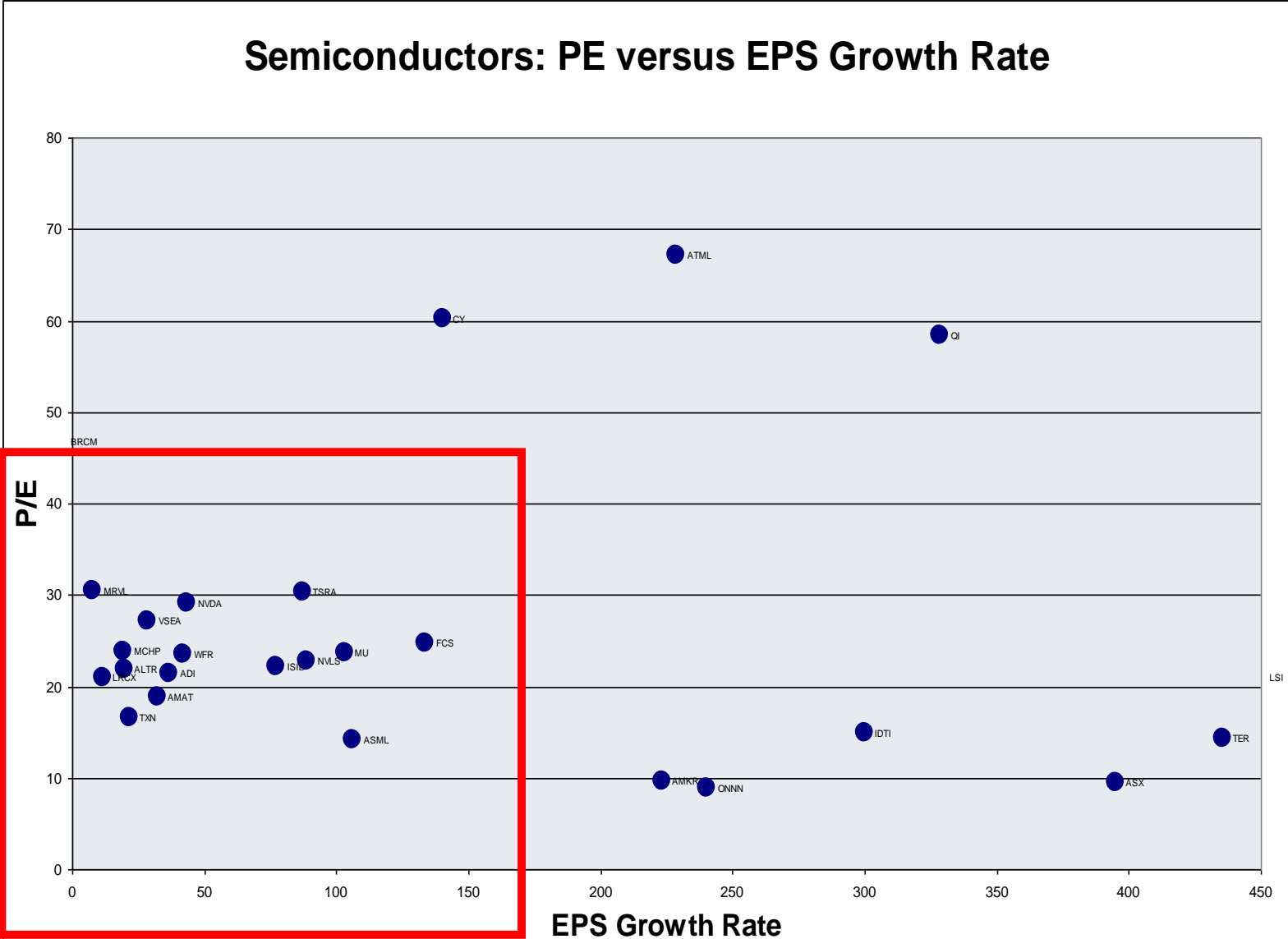




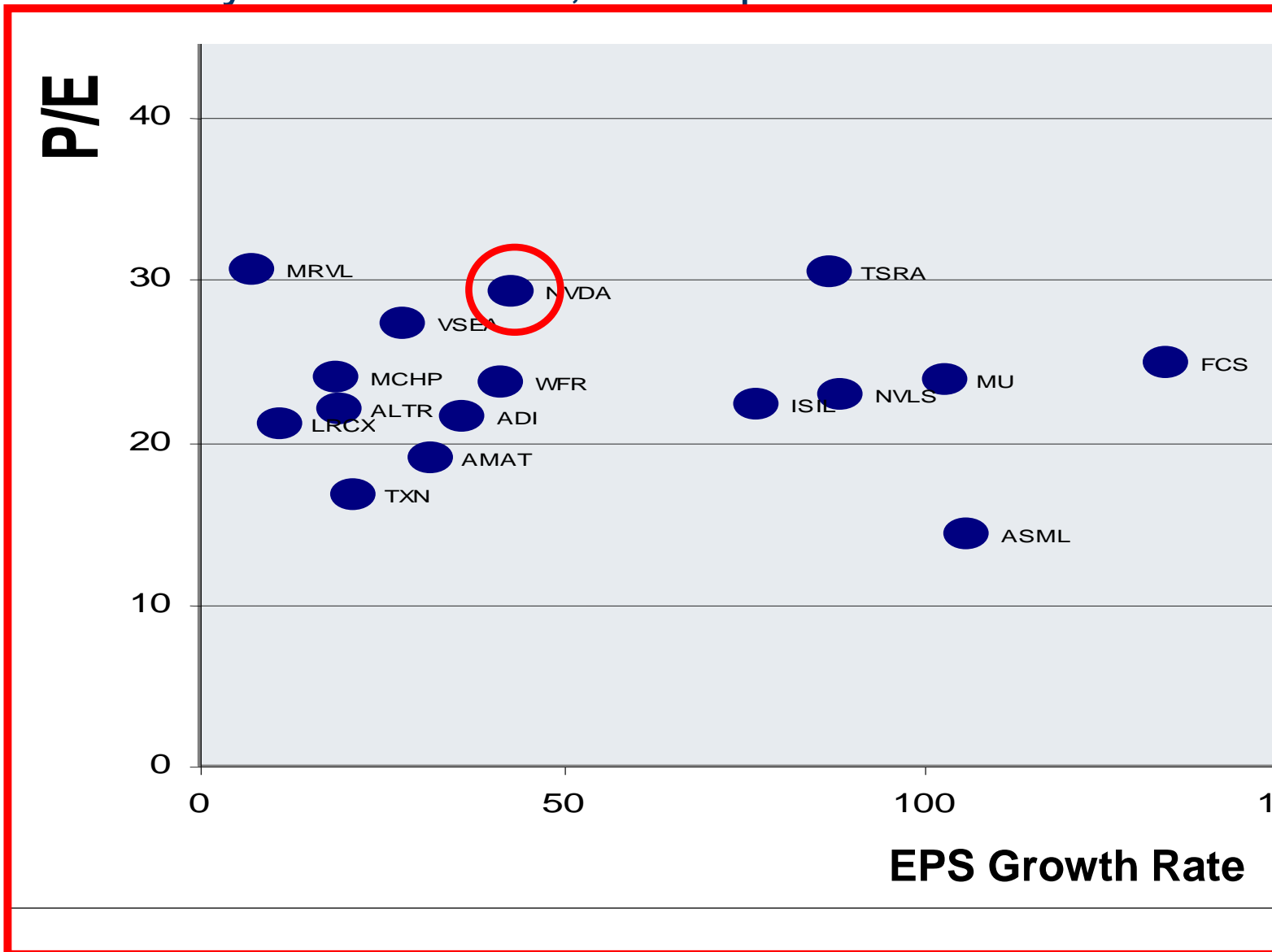
Theoretically makes sense, but in practice...



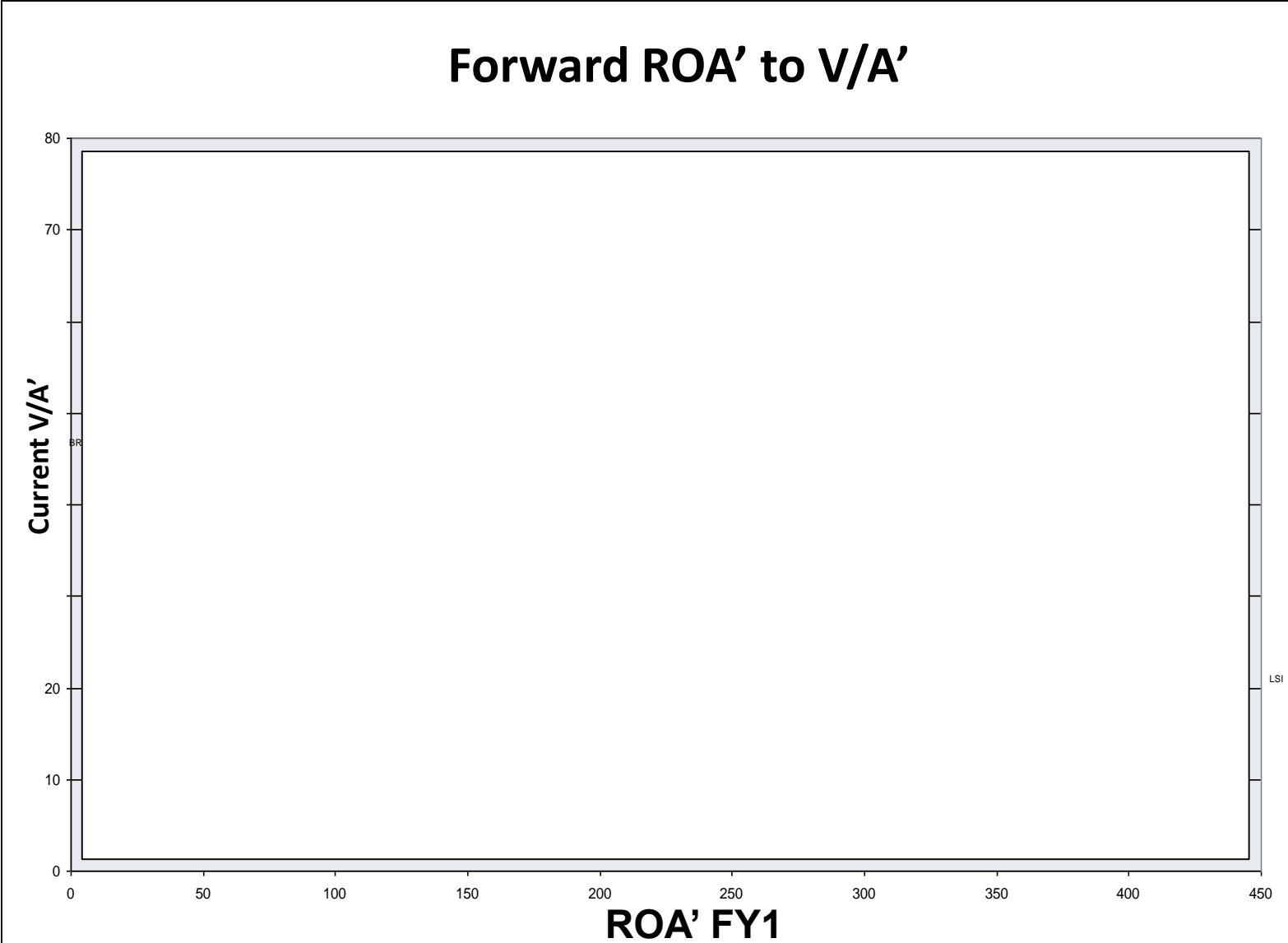
Theoretically makes sense, but in practice...



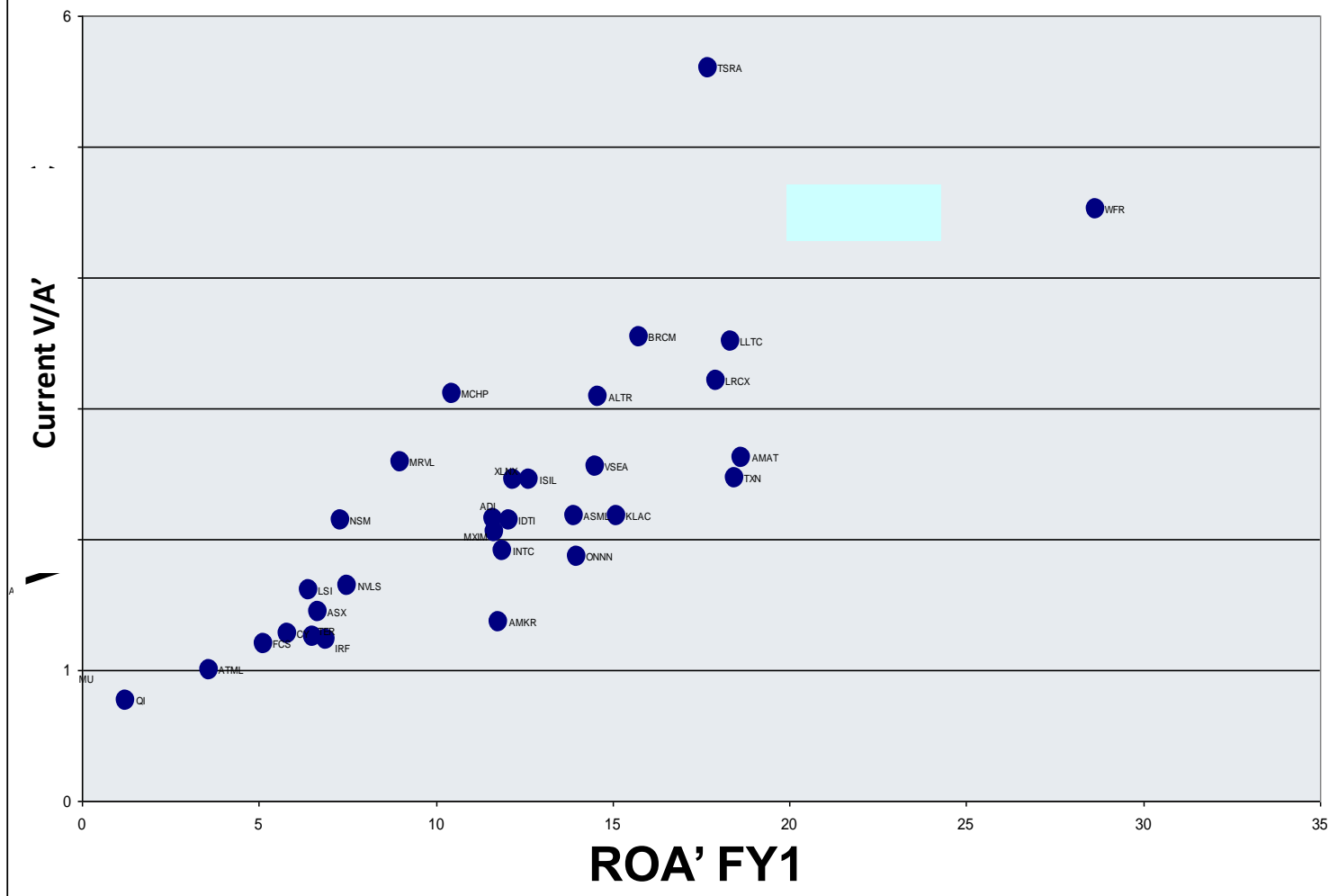
Theoretically makes sense, but in practice...



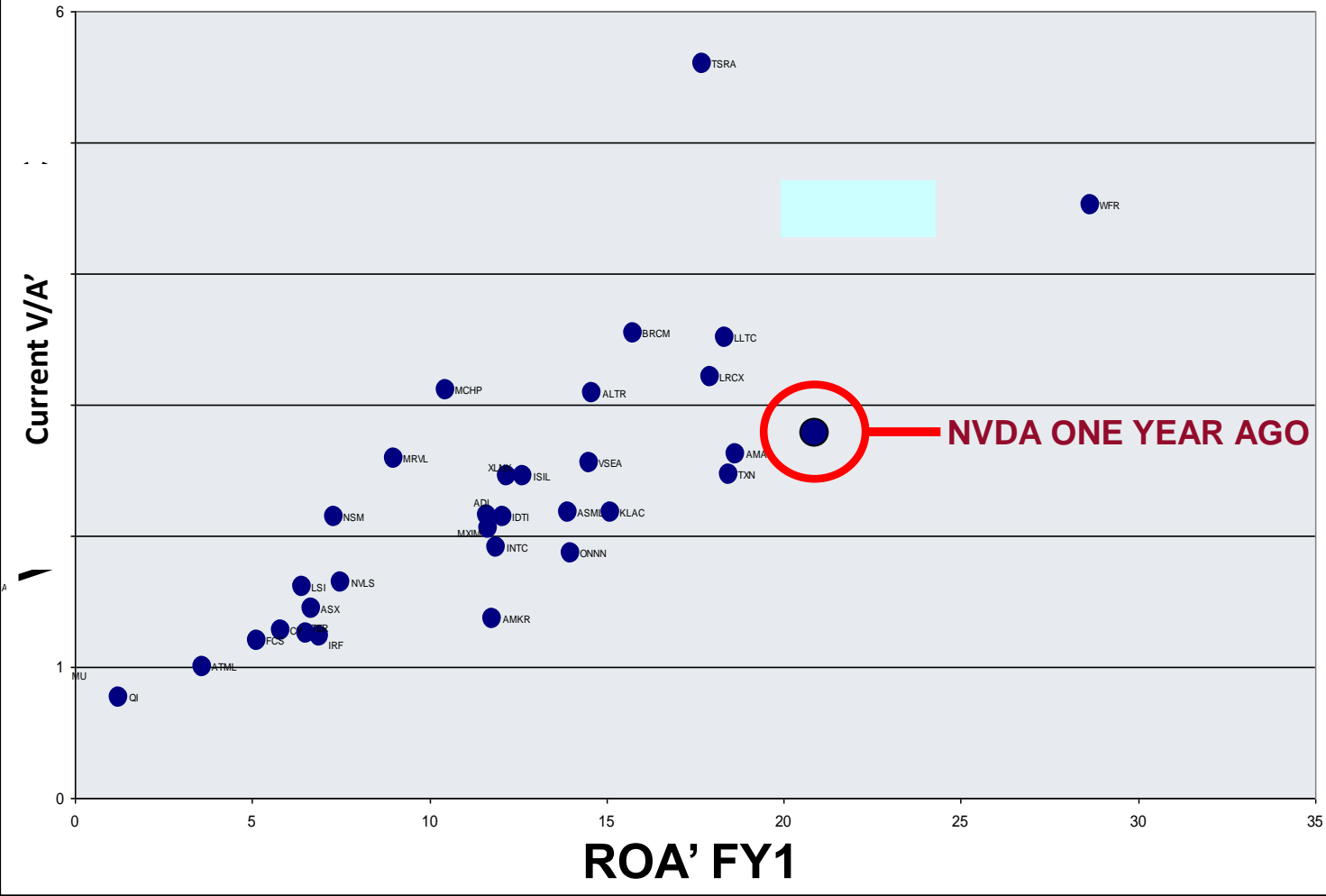
Theoretically makes sense, but in practice...



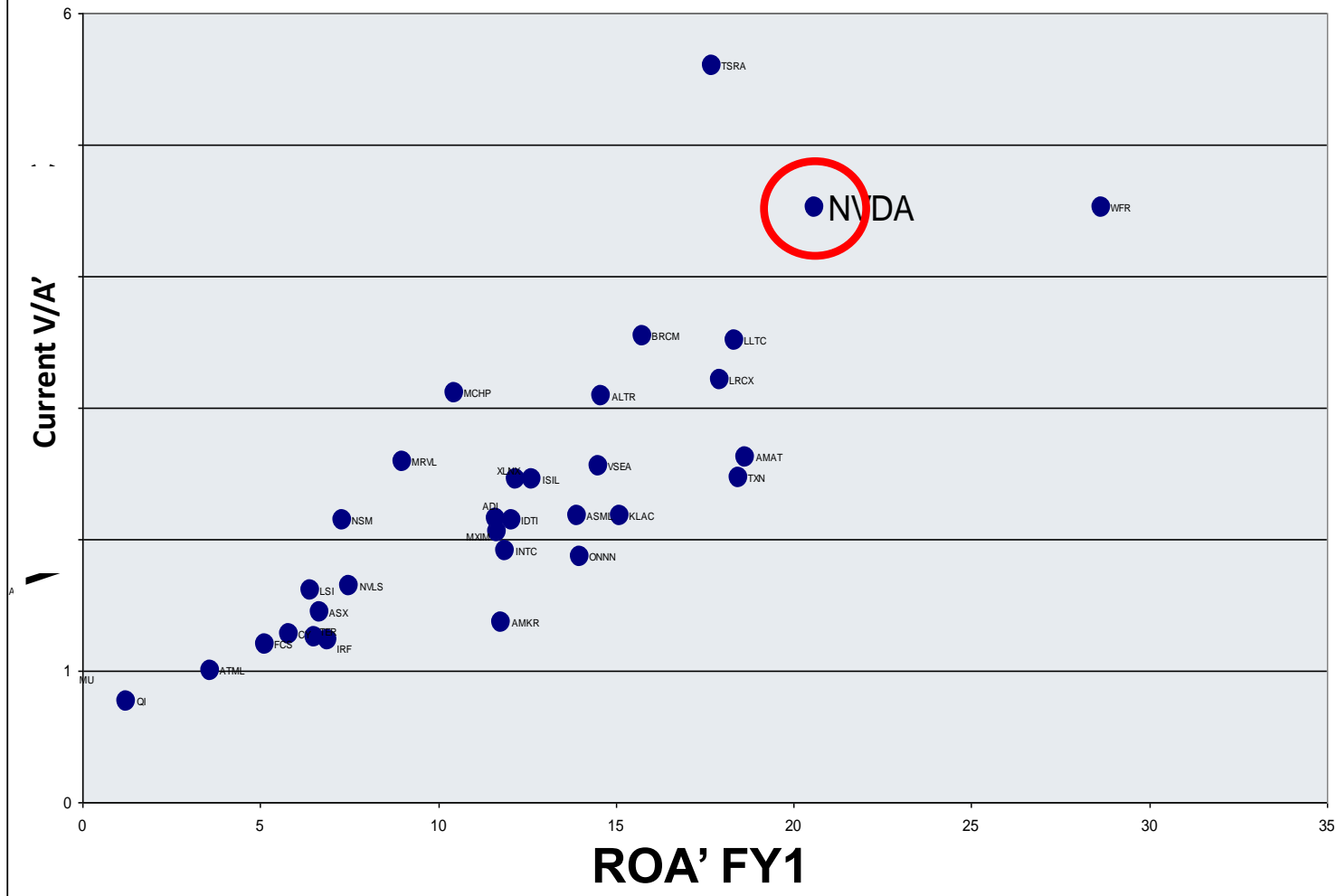
Forward ROA' to V/A'



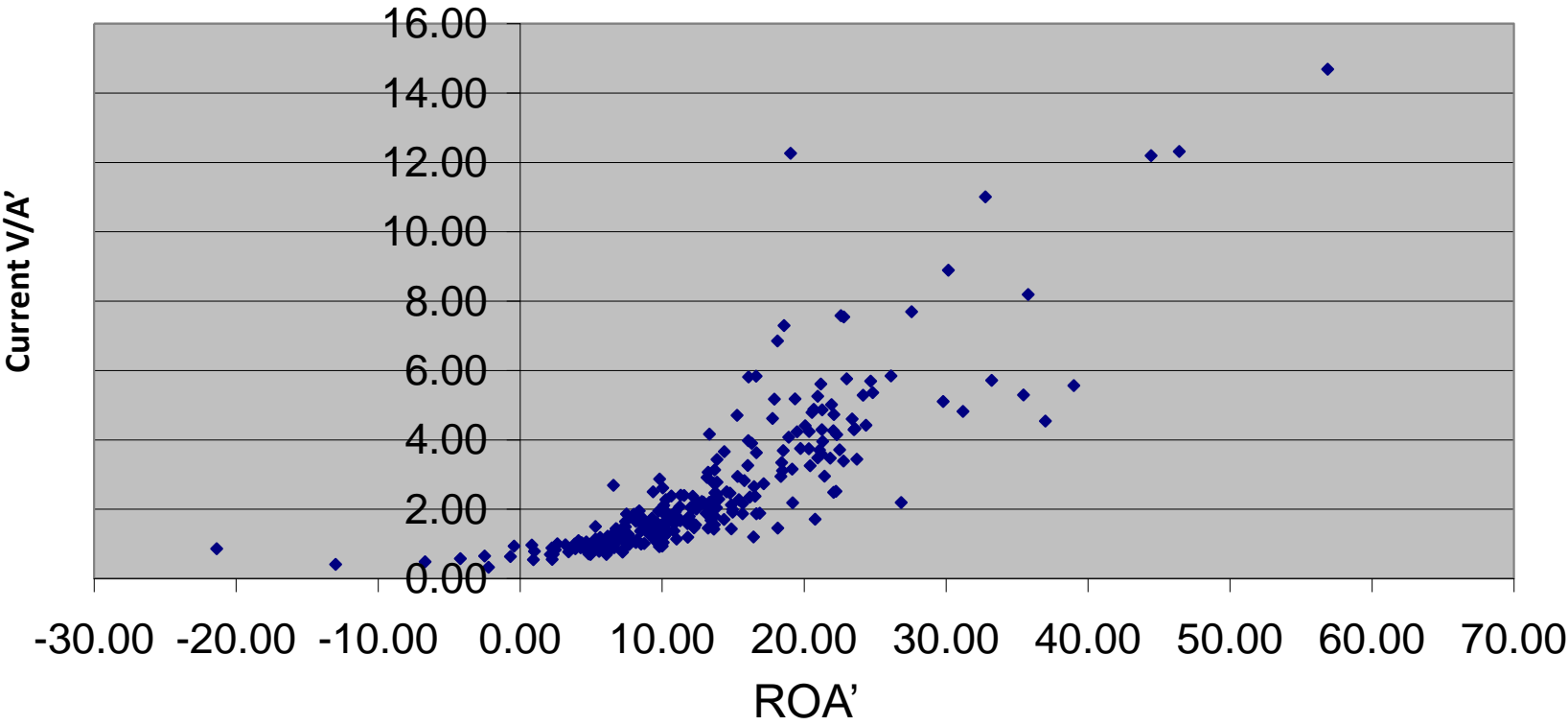
Forward ROA' to V/A'



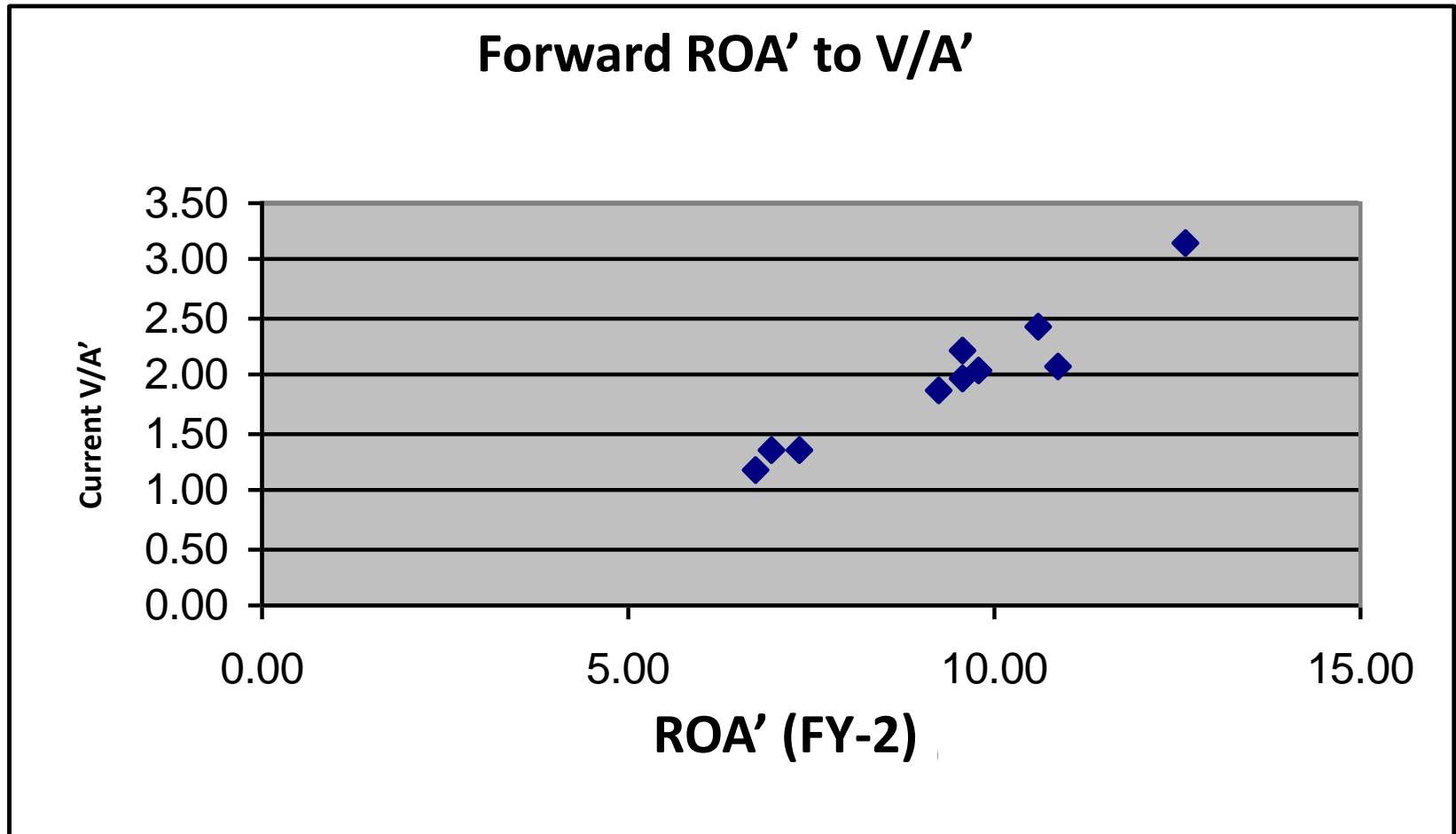
Forward ROA' to V/A'



Forward ROA' to V/A'

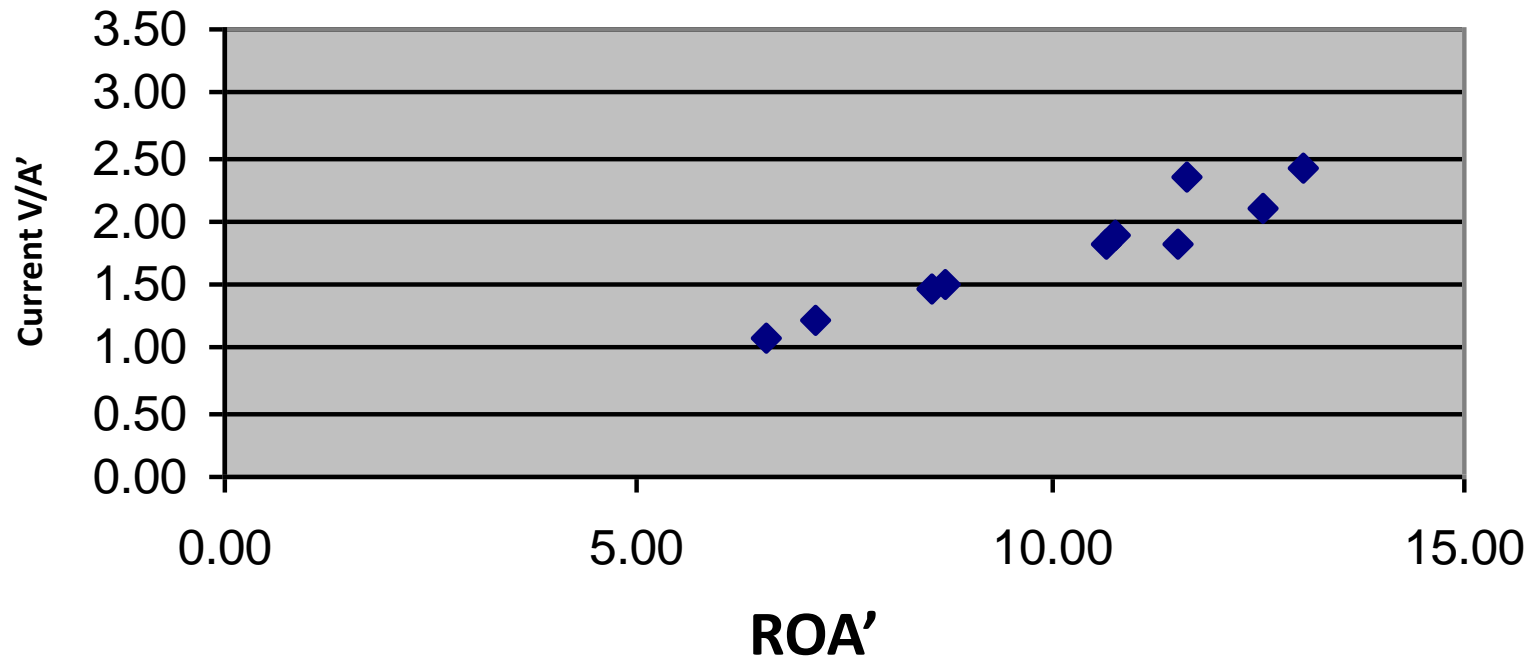


USA Sectors 2006

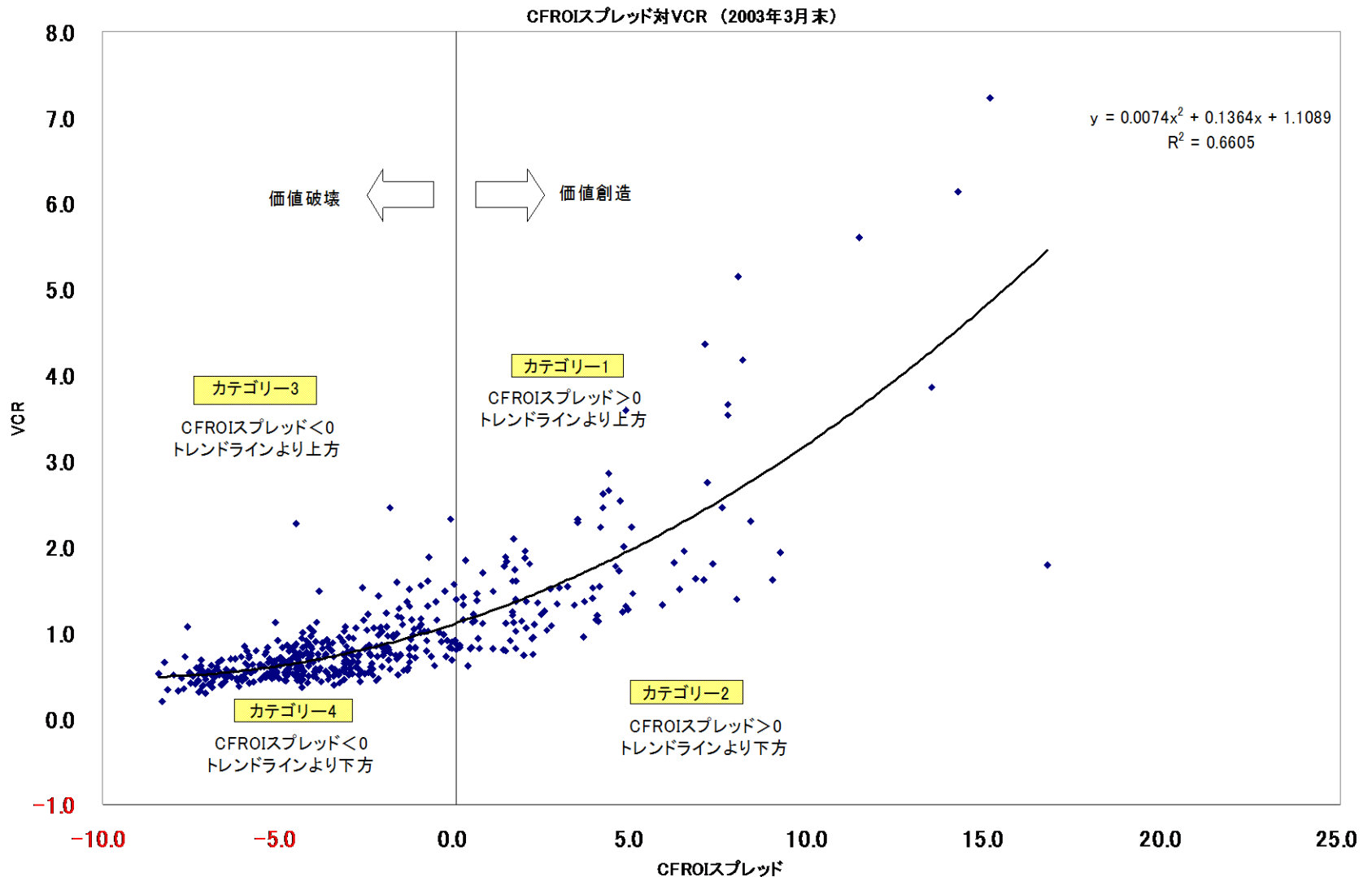


USA Sectors 2008

Forward ROA' to V/A'

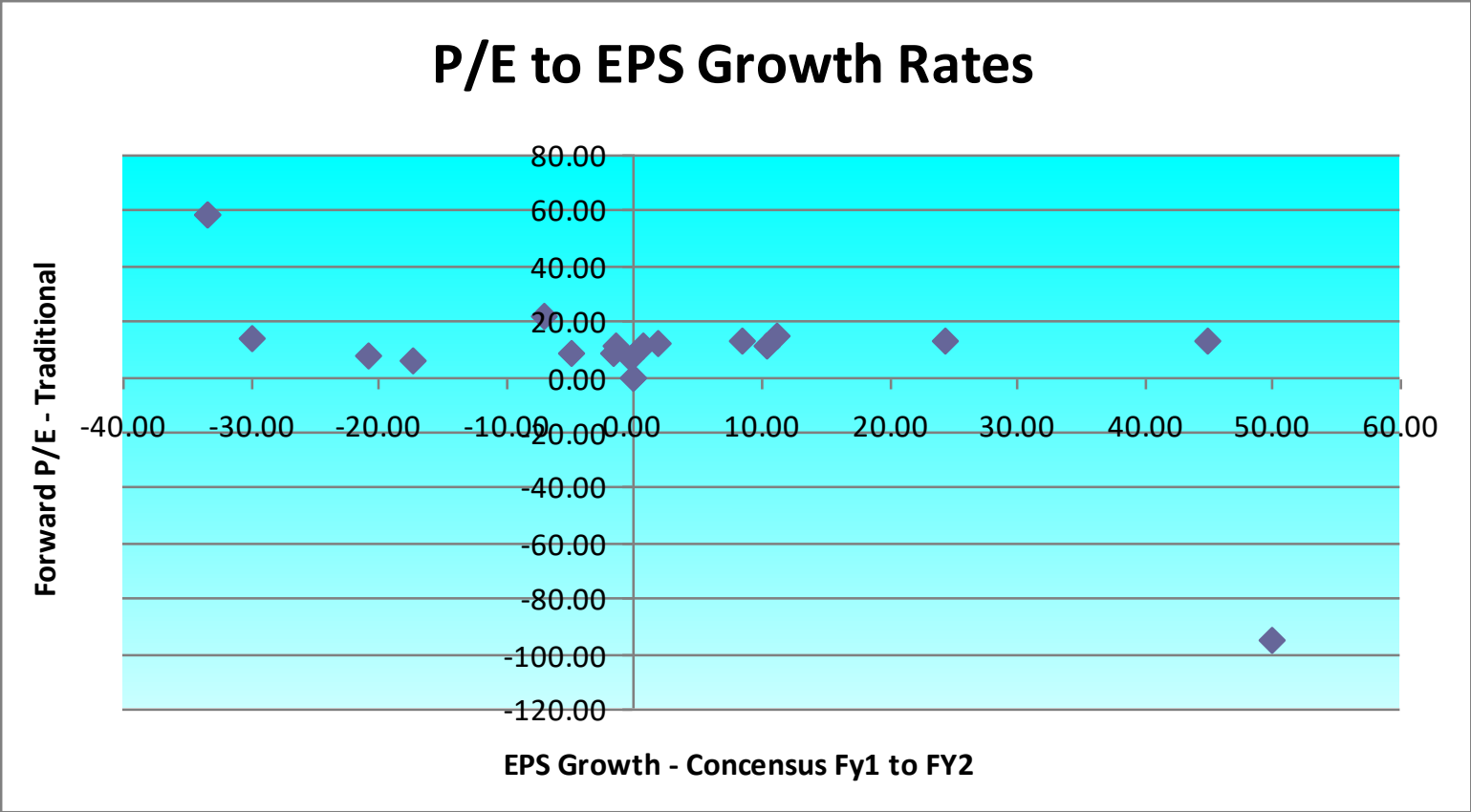


V/A' versus ROA' (CFROI as proxy)

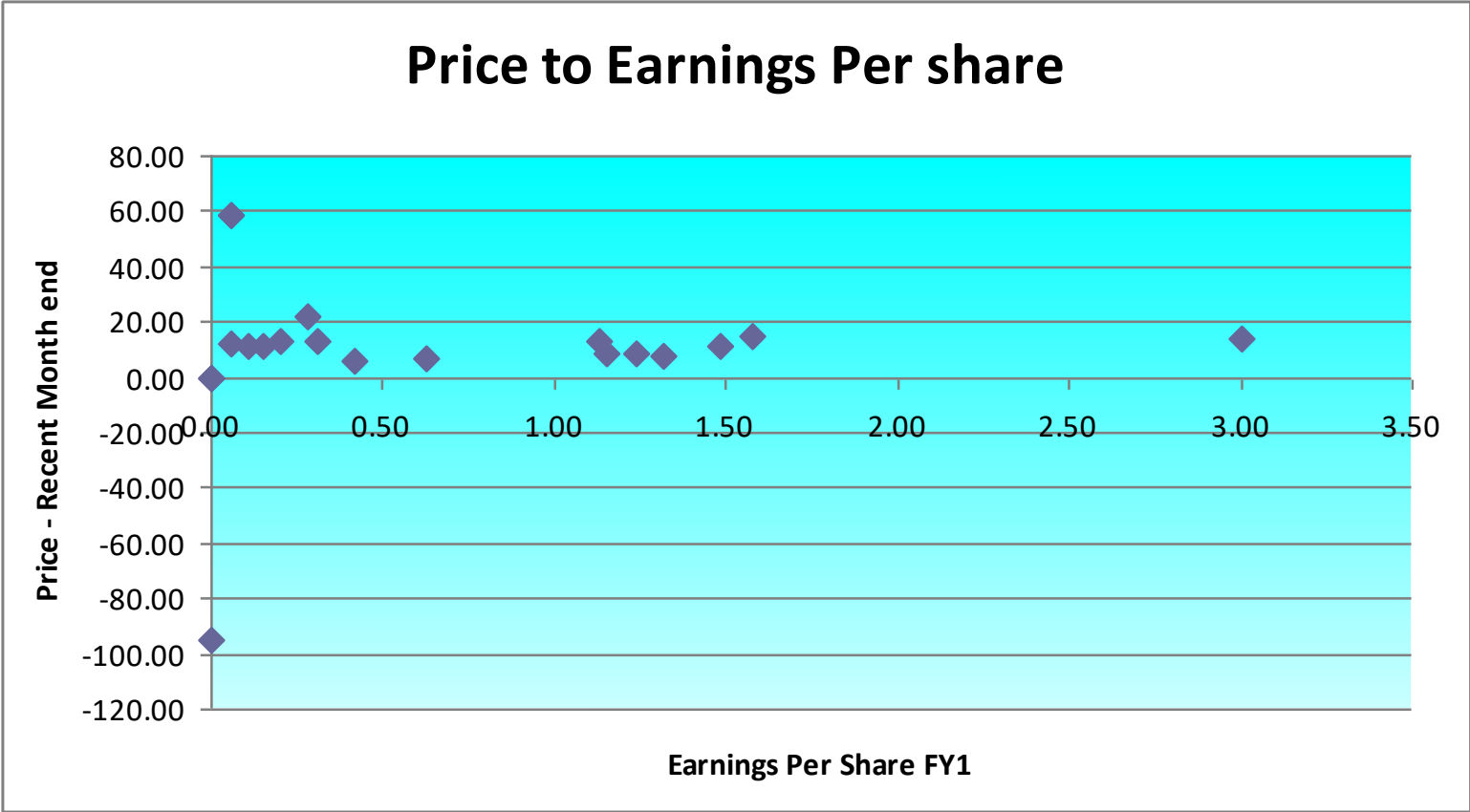


注: 時価総額500億円以上 出所: CSFBHOLT

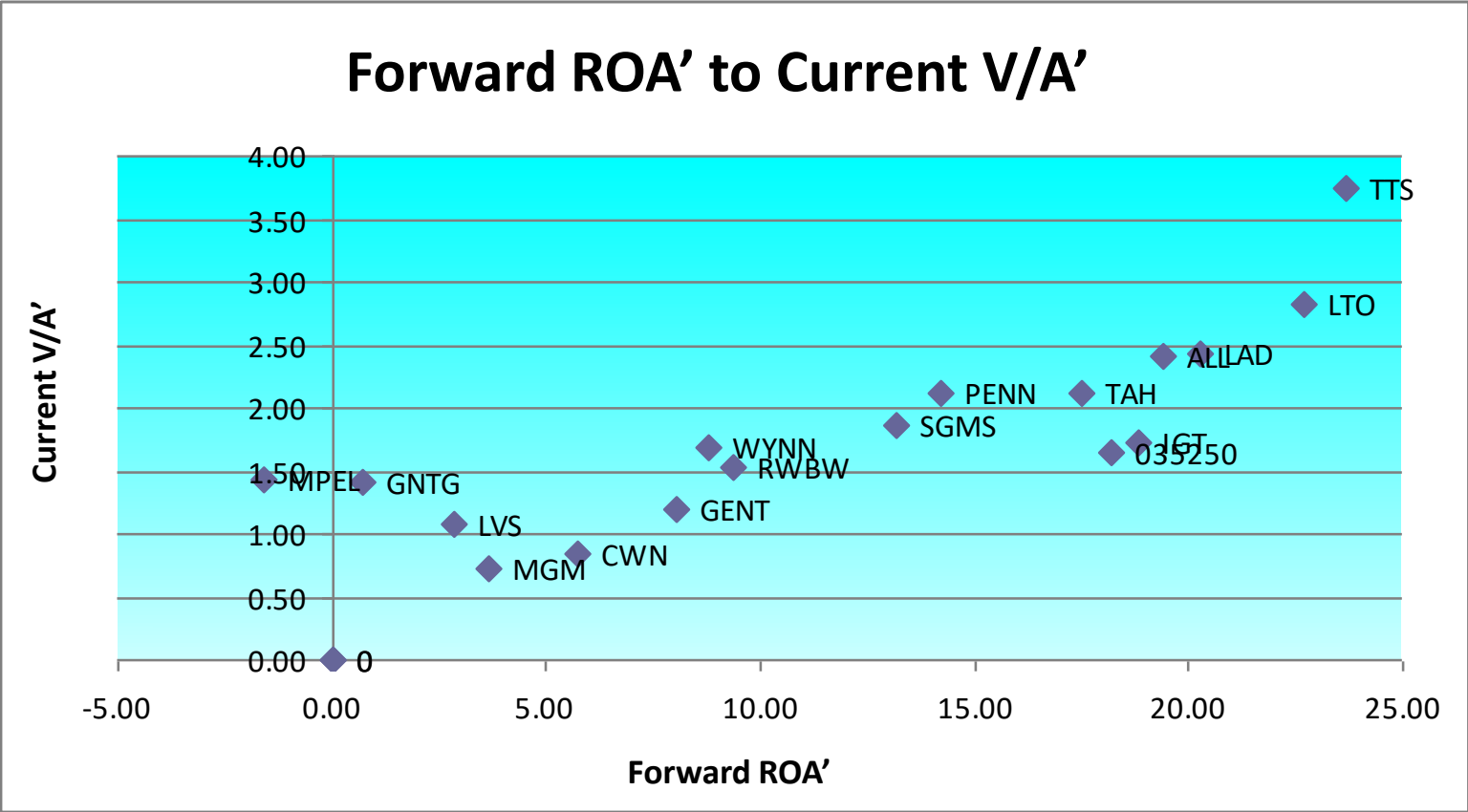
Global Casinos



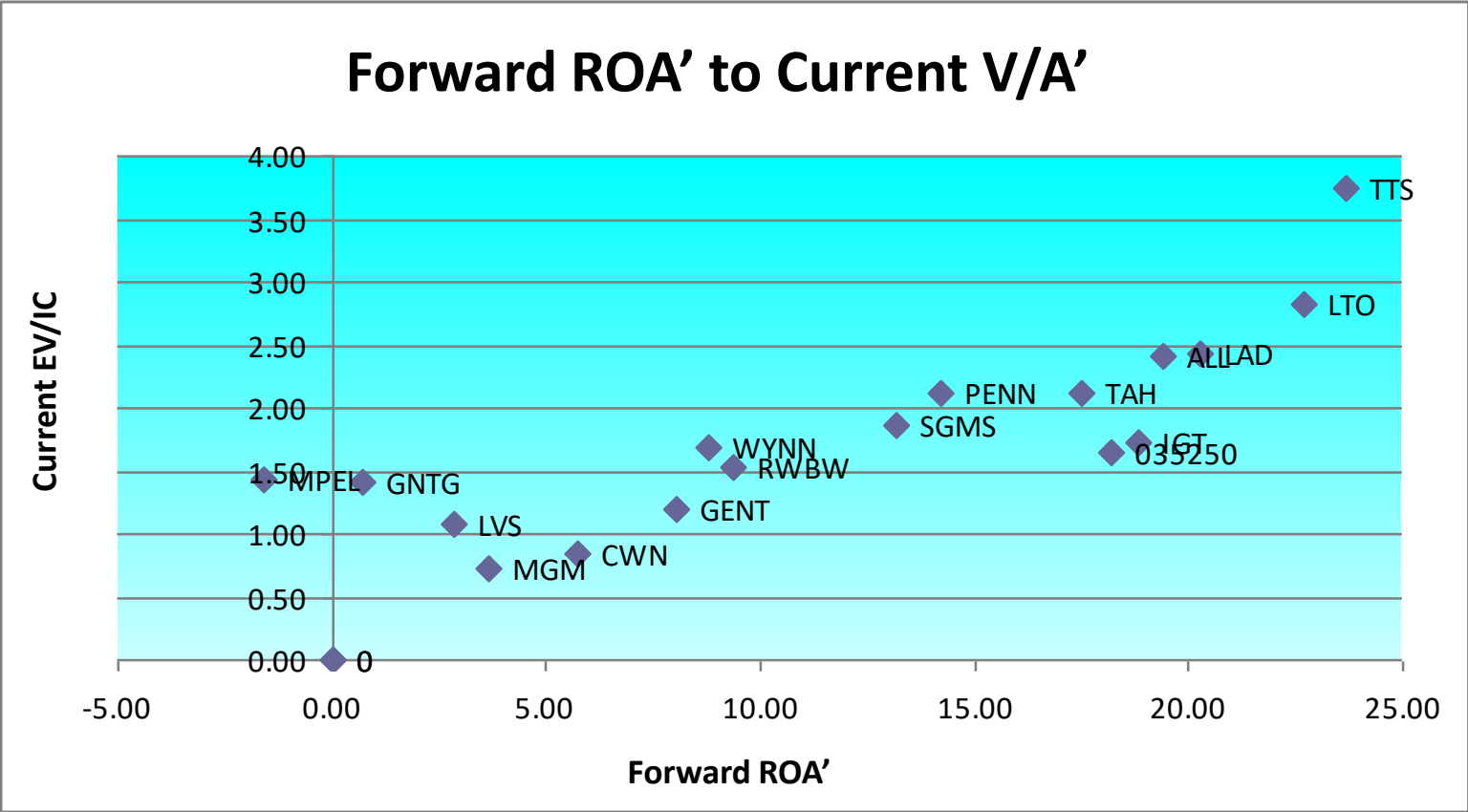
Global Casinos



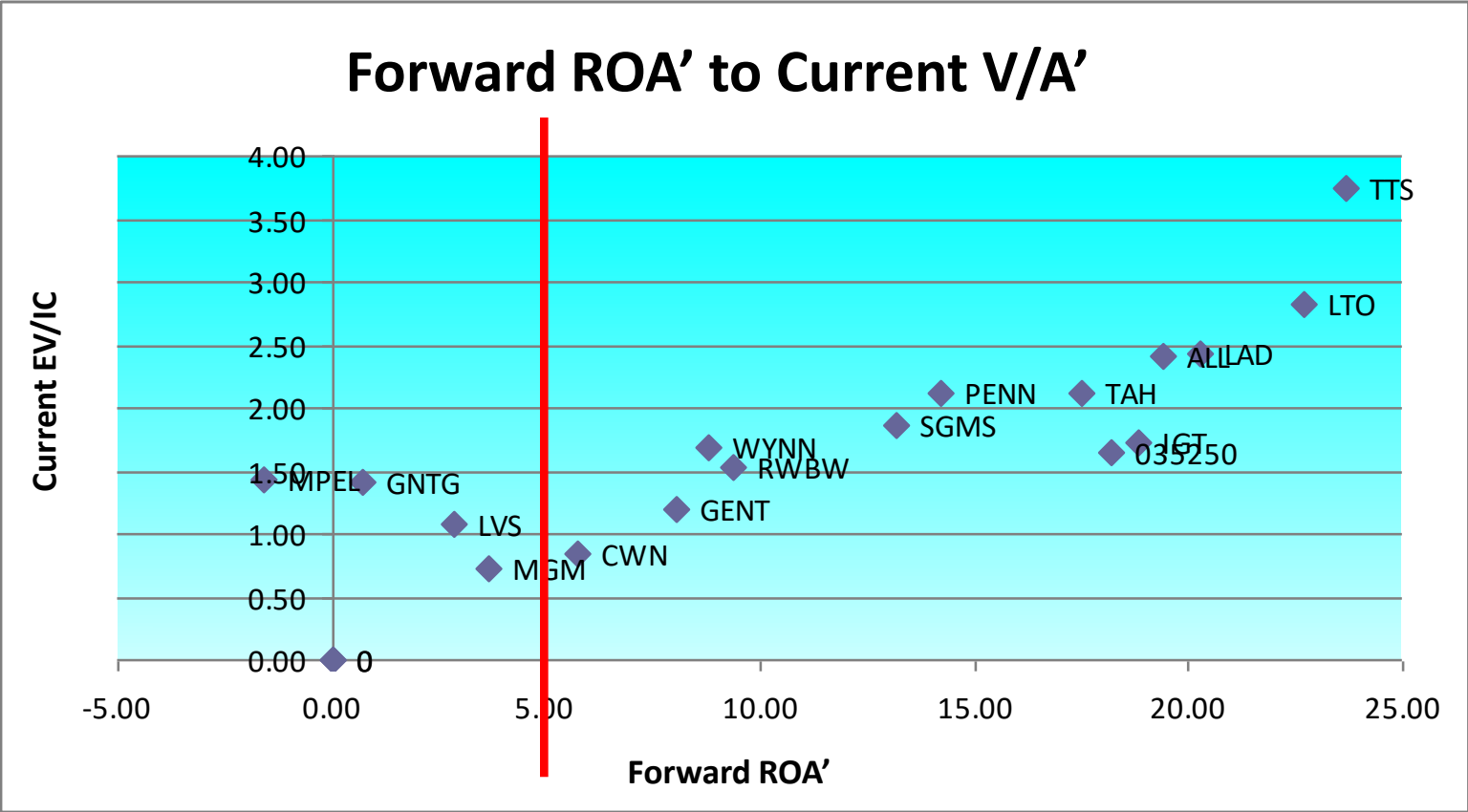
Global Casinos



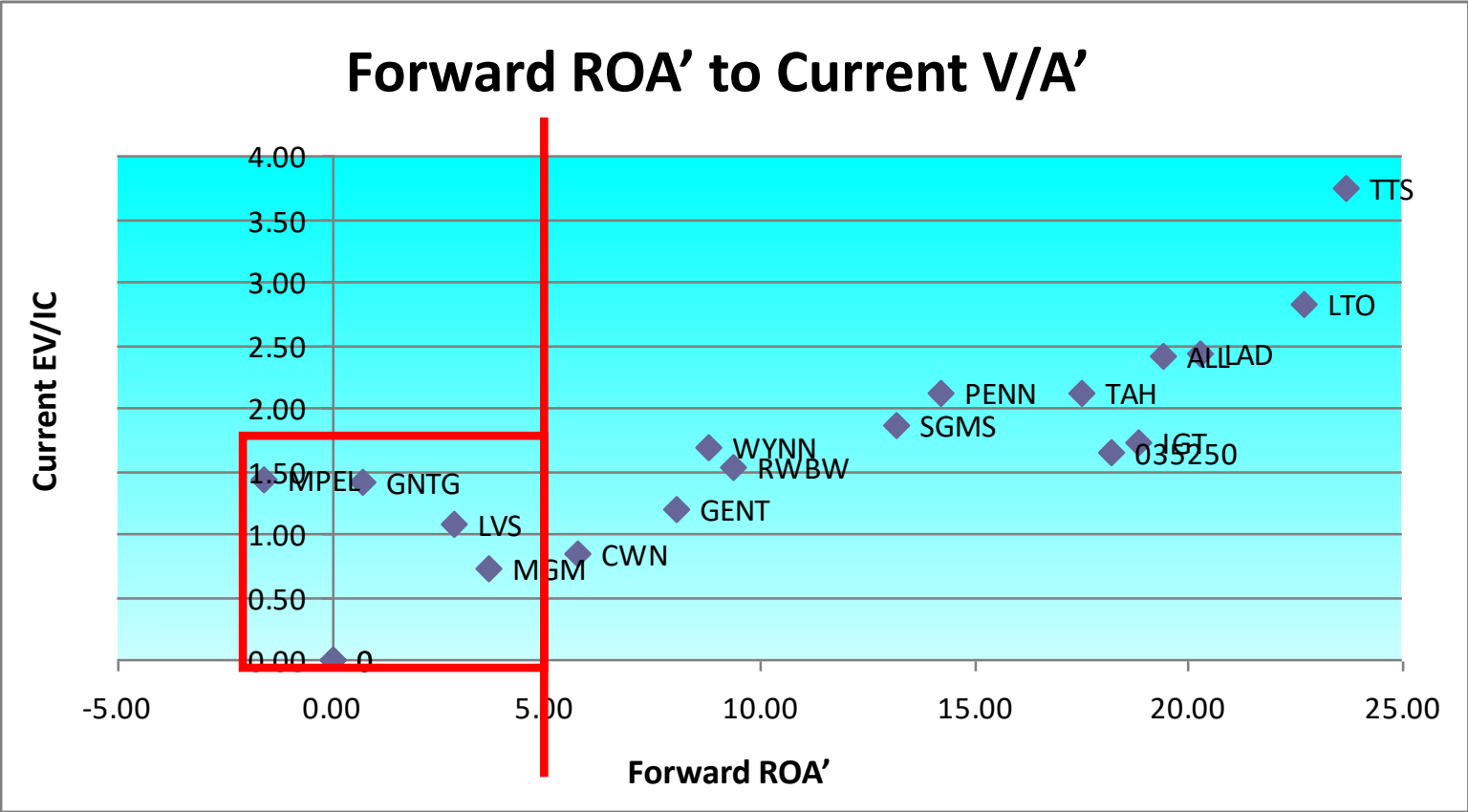
Basic Stats: Spline



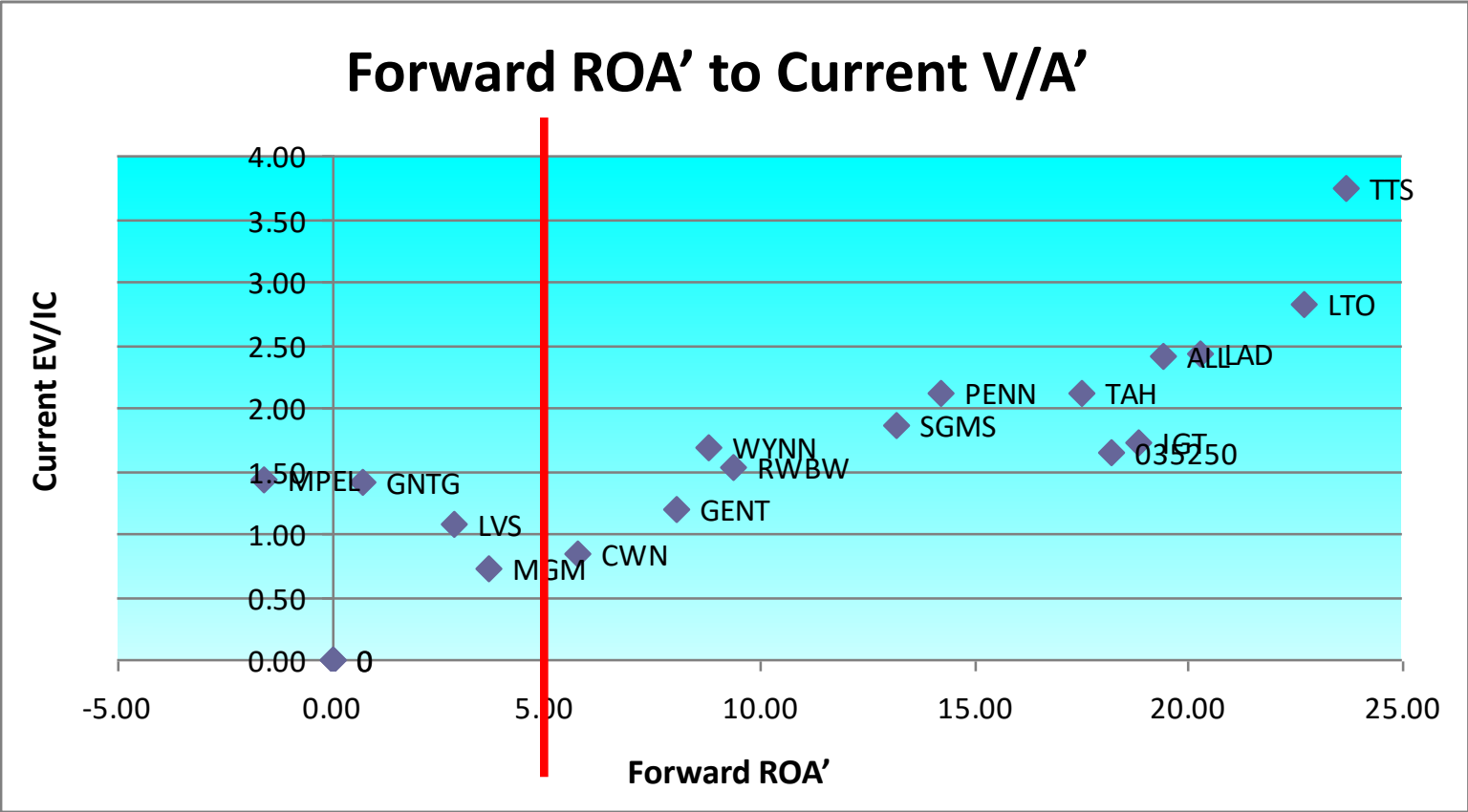
Basic Stats: Spline



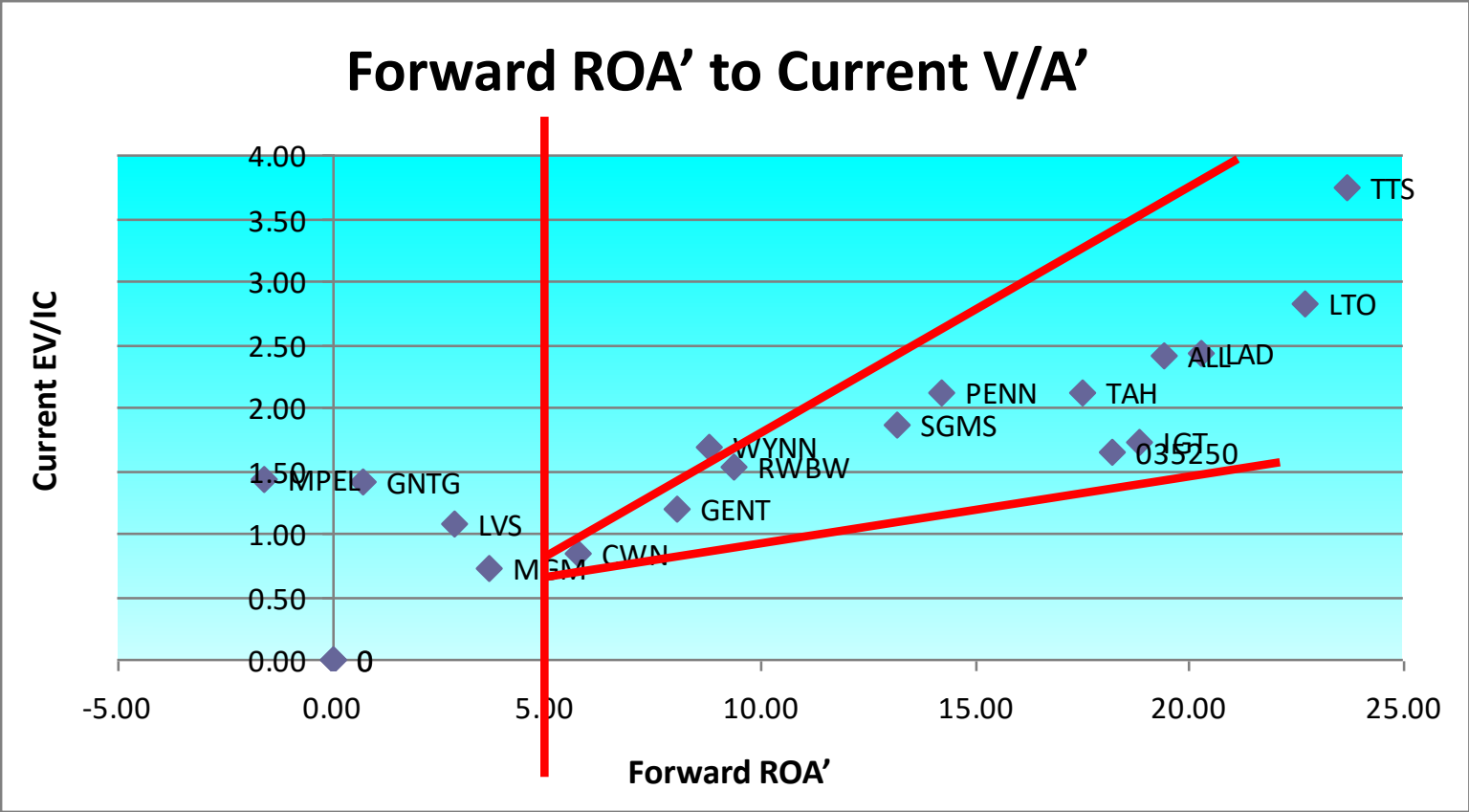
Basic Stats: Lack of explanatory variable



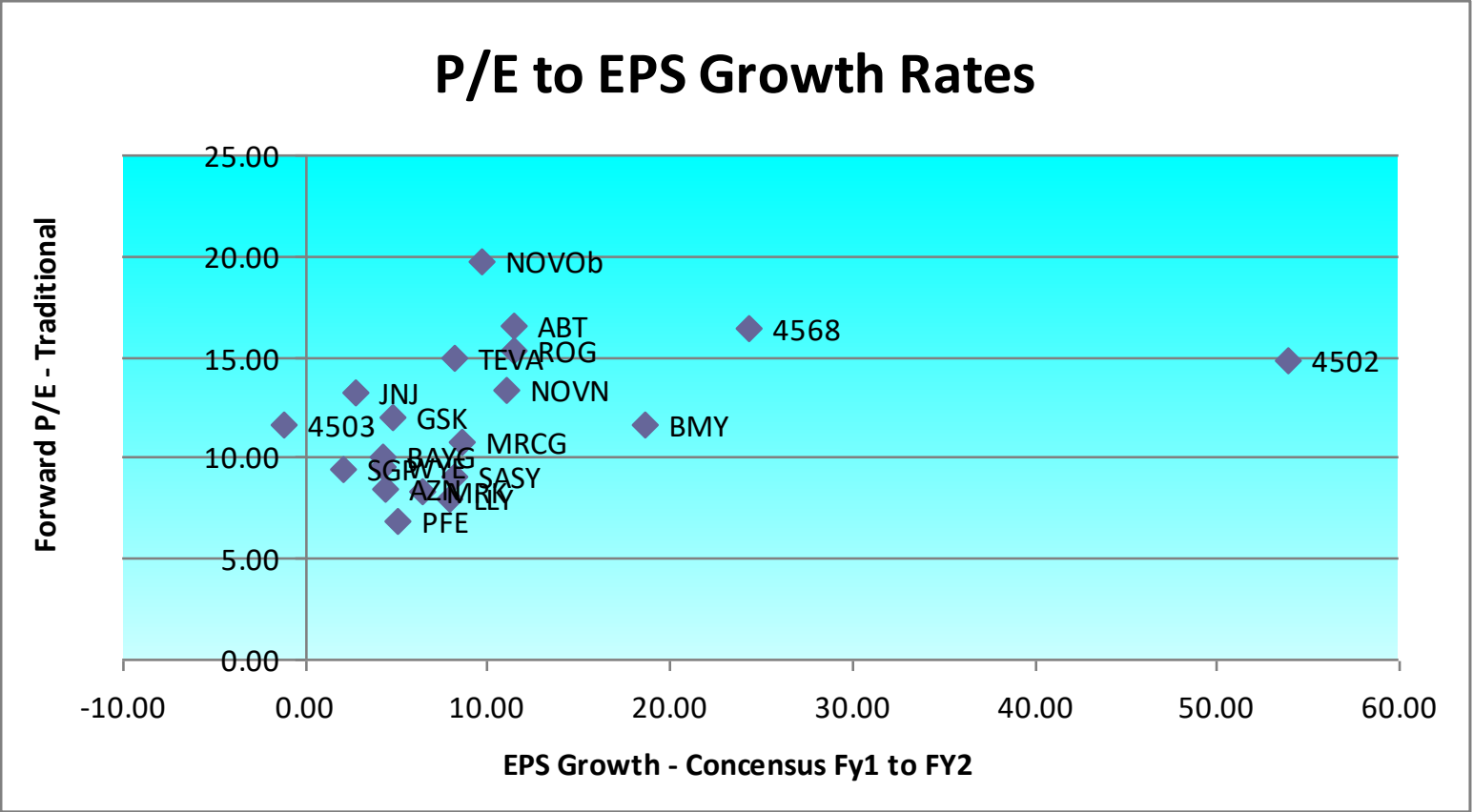
Basic Stats: Heteroskedasticity



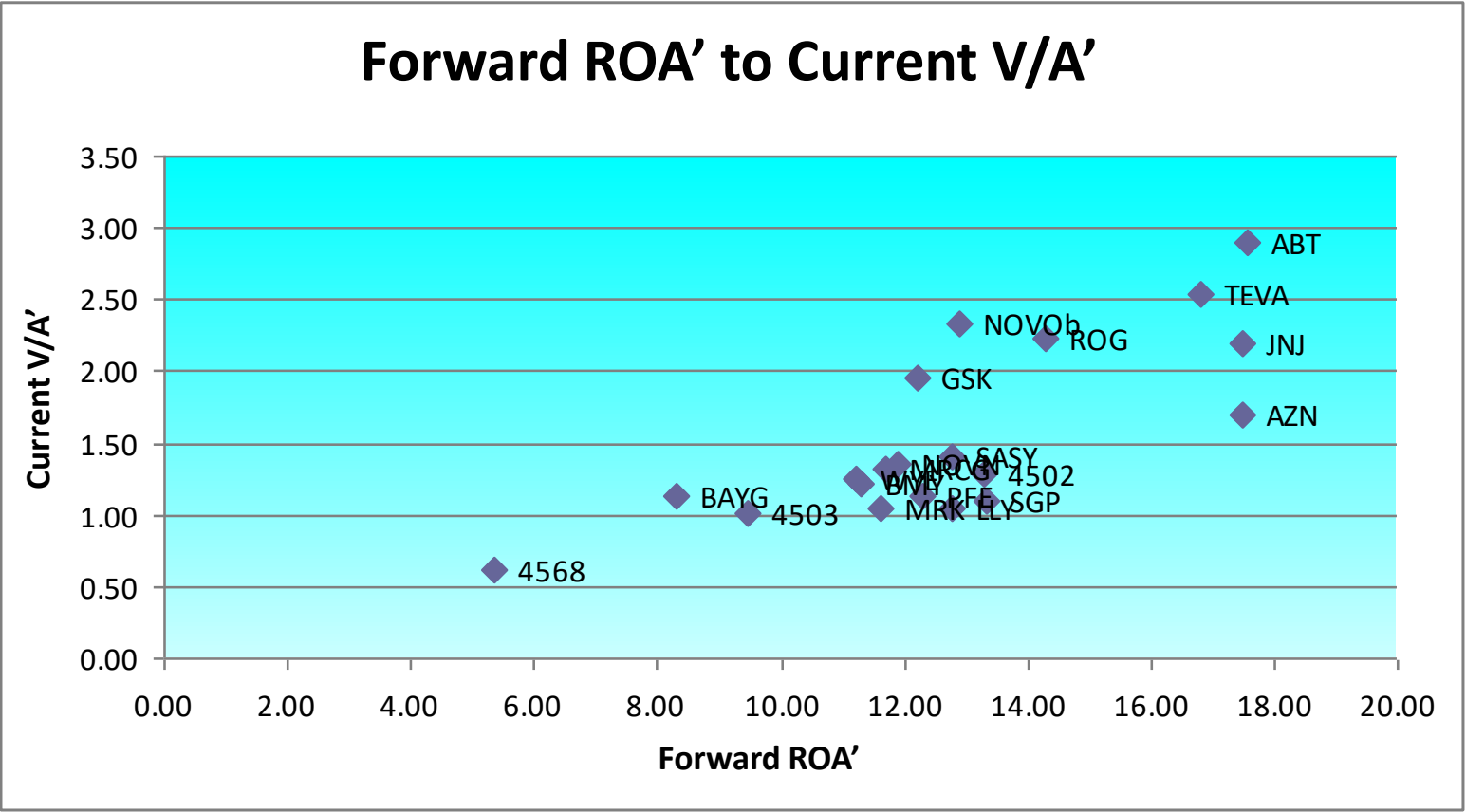
Basic Stats: Heteroskedasticity



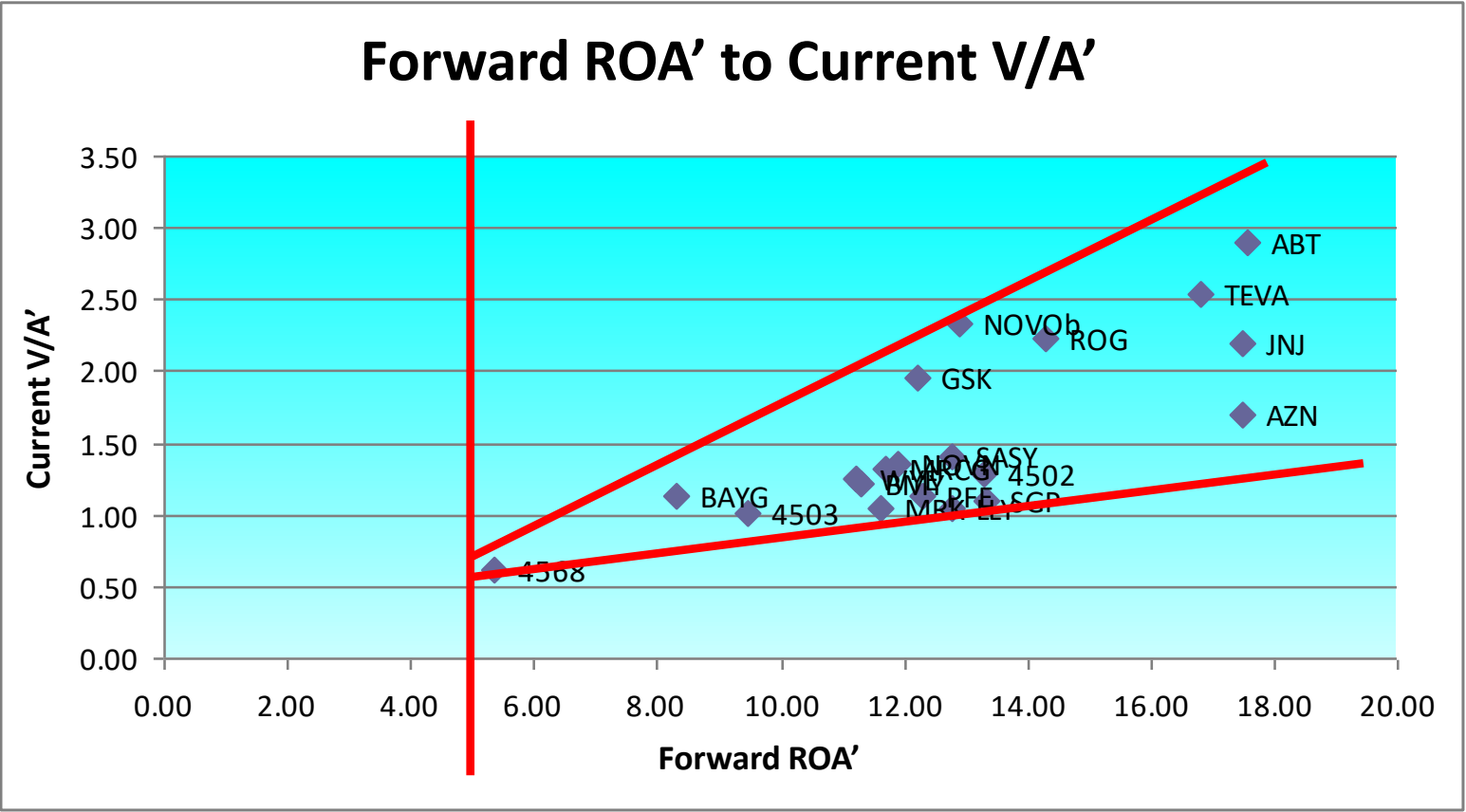
Global Pharma



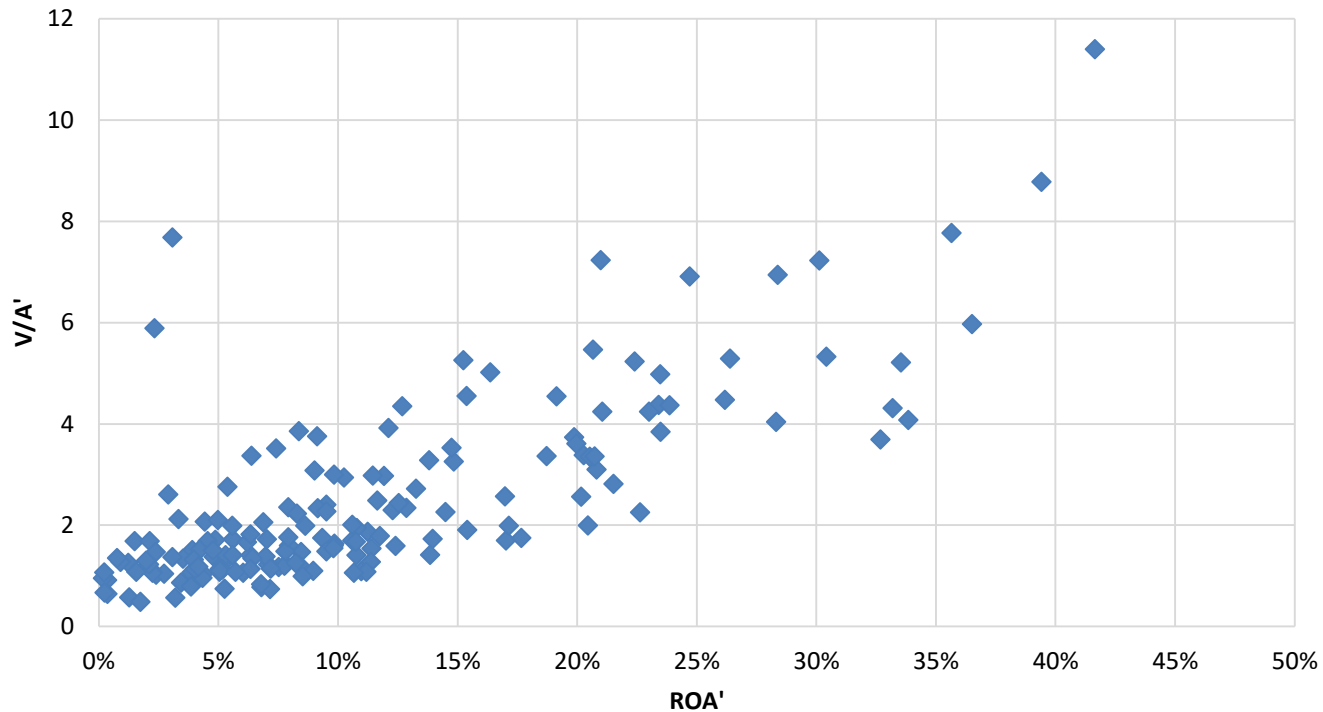
Global Pharma



Global Pharma



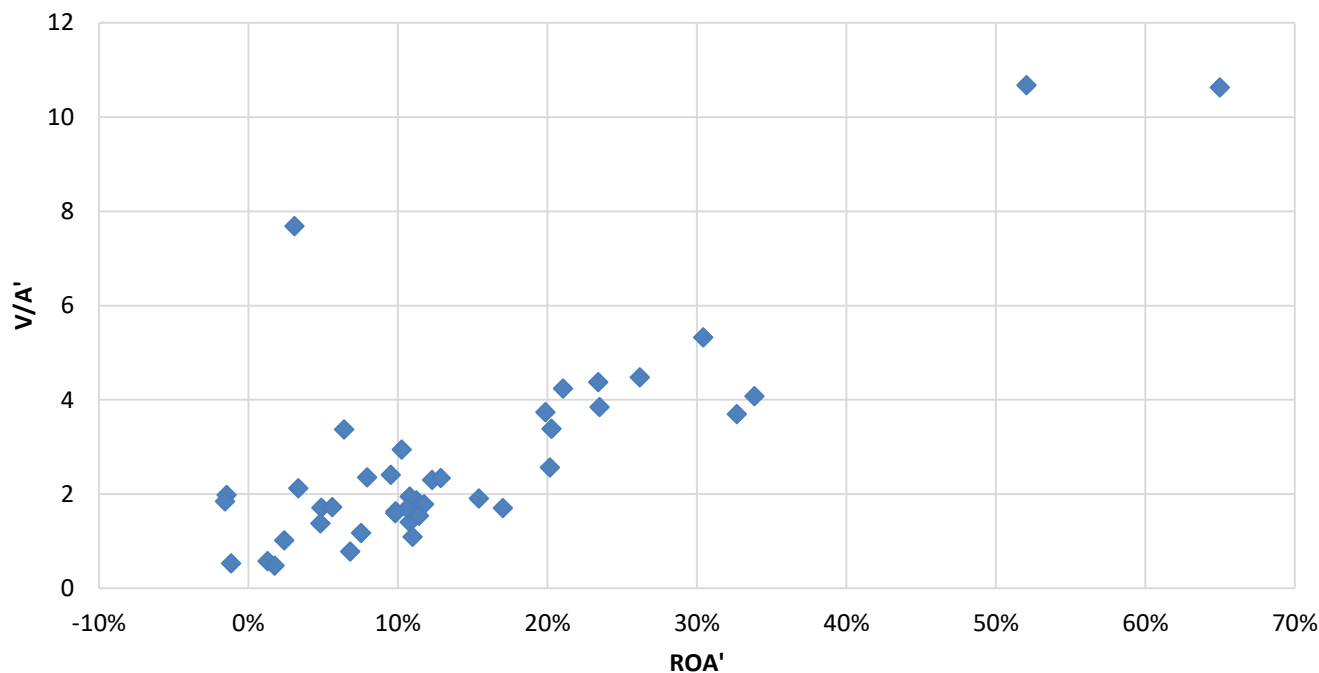
ROA' and V/A' - HK Companies



Source: Valens Securities Analysis
181 Large- and Mid-Cap HK companies ex-Financials

Data as of May 2015

ROA' and V/A' - HK Consumer Discretionary

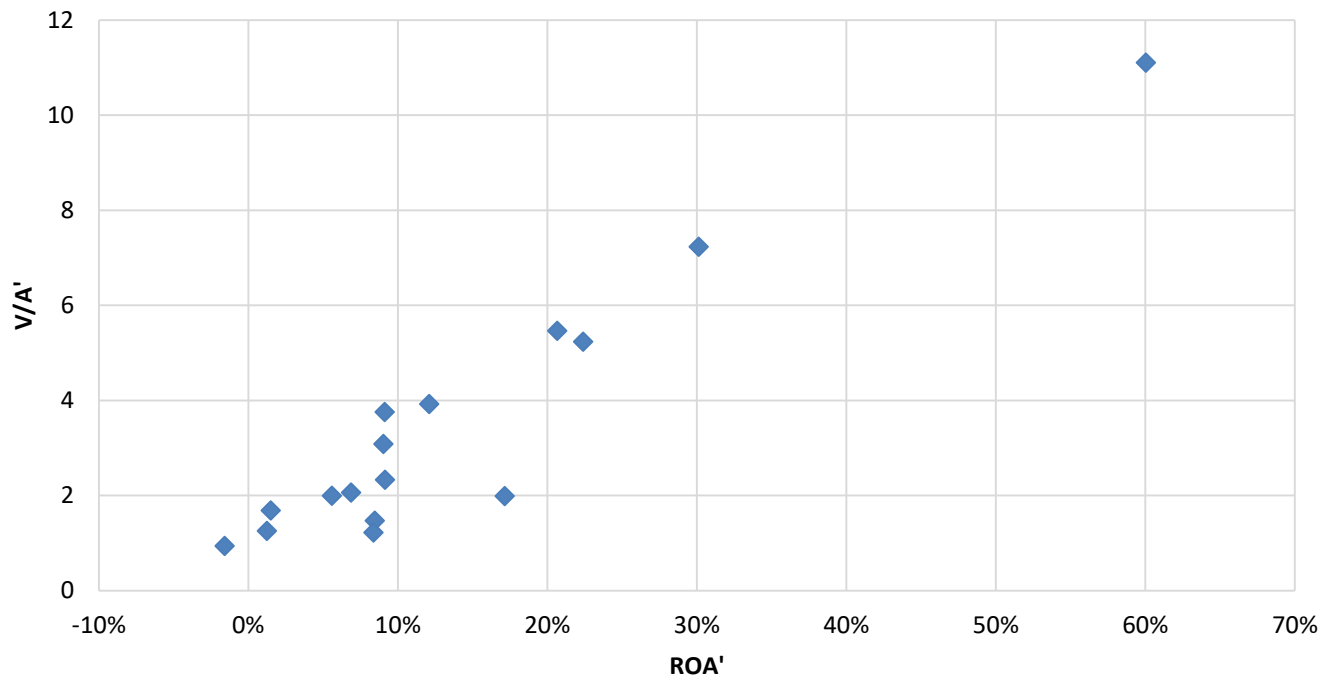


Source: Valens Securities Analysis

42 Large- and Mid-Cap Consumer Discretionary companies

Data as of May 2015

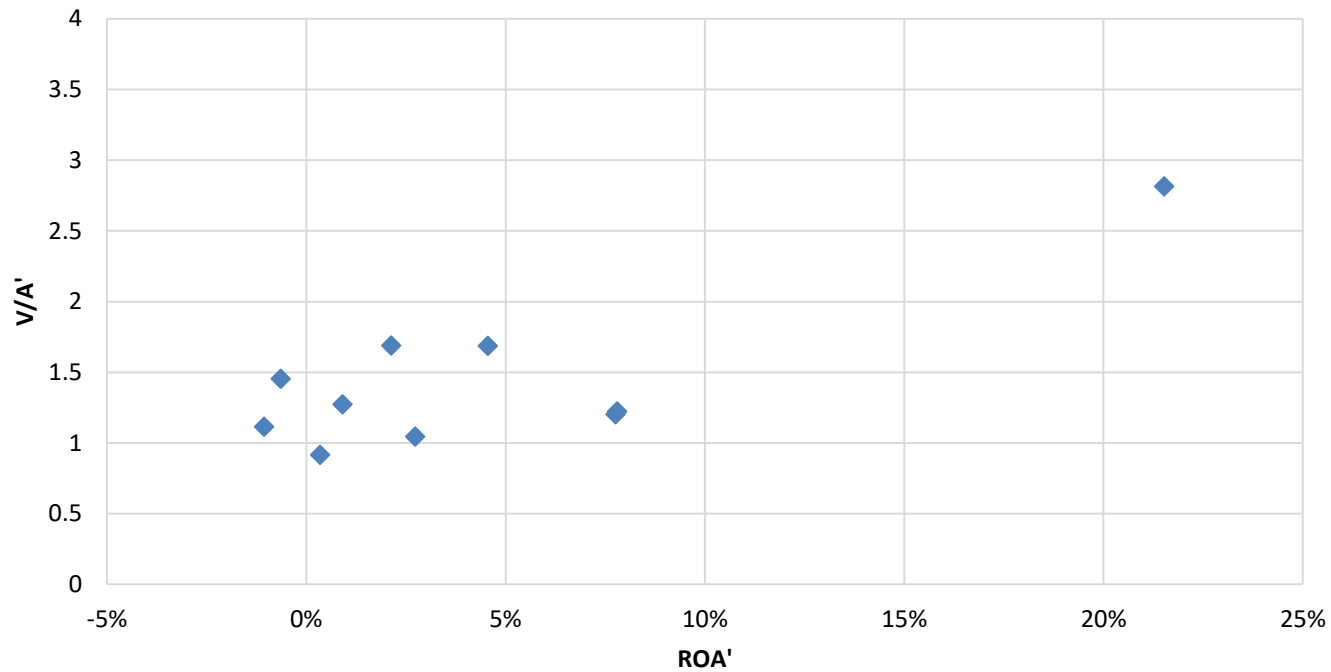
ROA' and V/A' - HK Consumer Staples



Source: Valens Securities Analysis
16 Large- and Mid-Cap Consumer Staples companies

Data as of May 2015

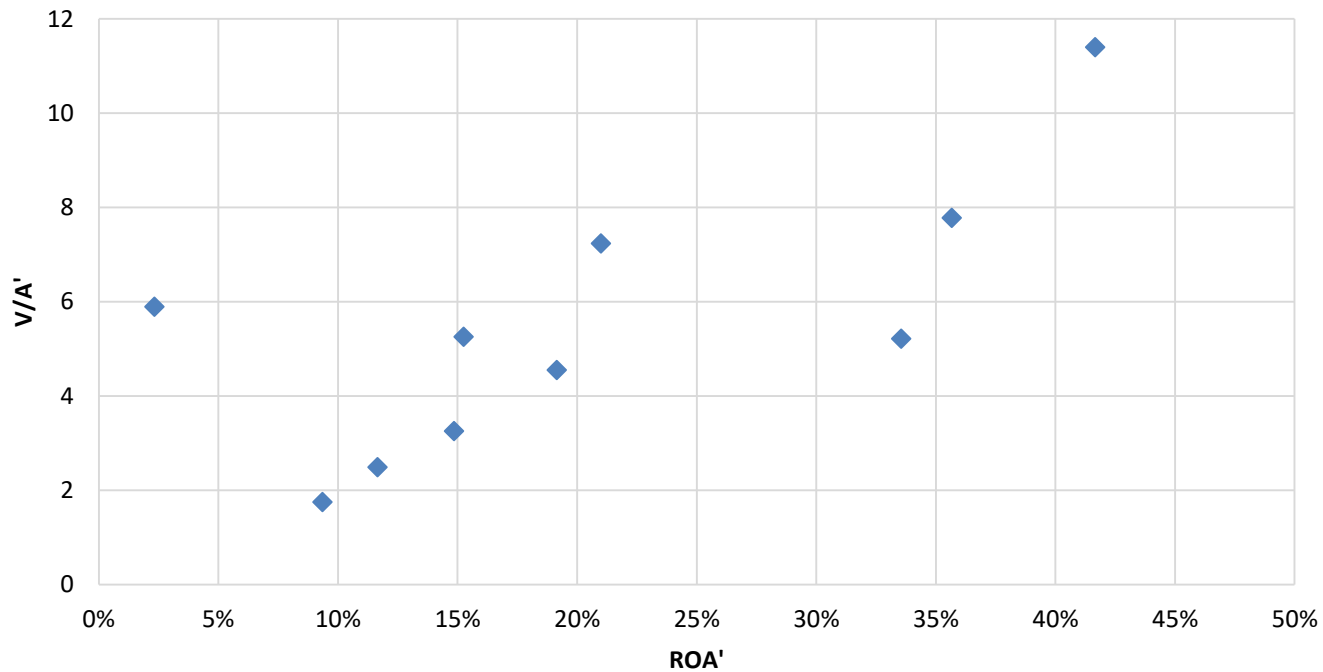
ROA' and V/A' - HK Energy



Source: Valens Securities Analysis
10 Large- and Mid-Cap Energy companies

Data as of May 2015

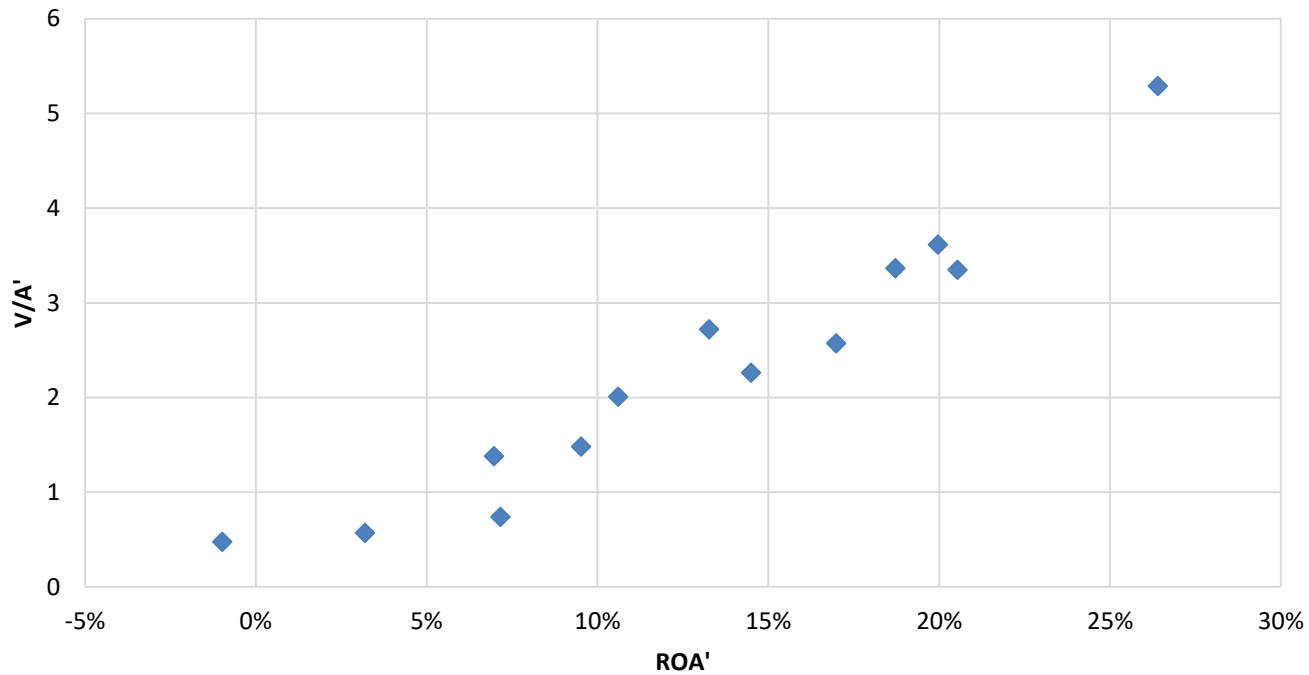
ROA' and V/A' - HK Healthcare



Source: Valens Securities Analysis
10 Large- and Mid-Cap Healthcare companies

Data as of May 2015

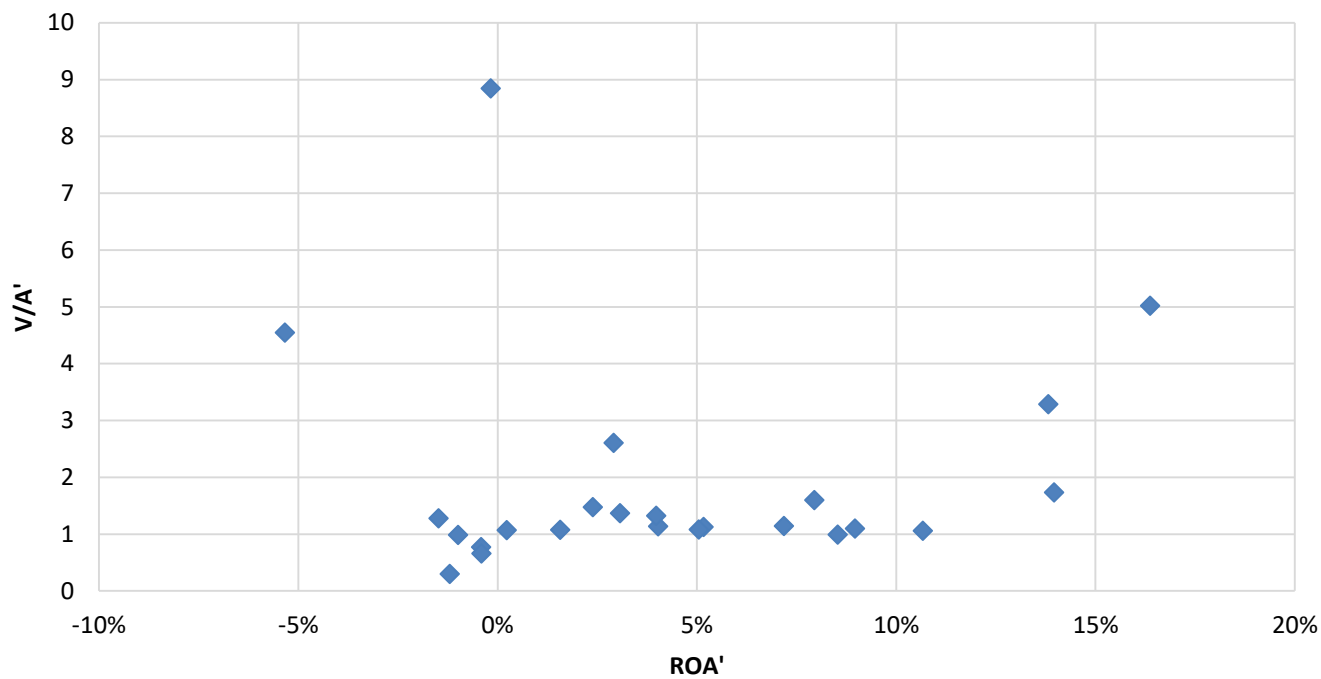
ROA' and V/A' - HK Information Technology



Source: Valens Securities Analysis
13 Large- and Mid-Cap Information Technology companies

Data as of May 2015

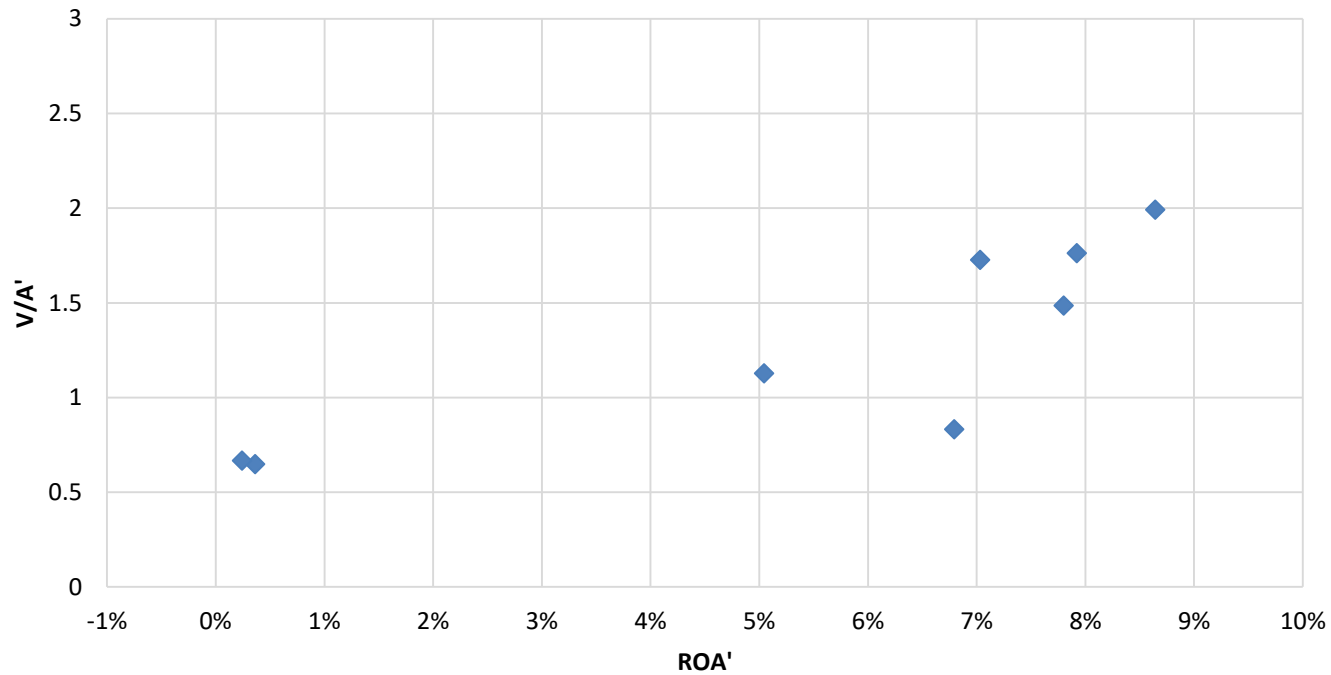
ROA' and V/A' - HK Materials



Source: Valens Securities Analysis
24 Large- and Mid-Cap Materials companies

Data as of May 2015

ROA' and V/A' - HK Telecommunication Services

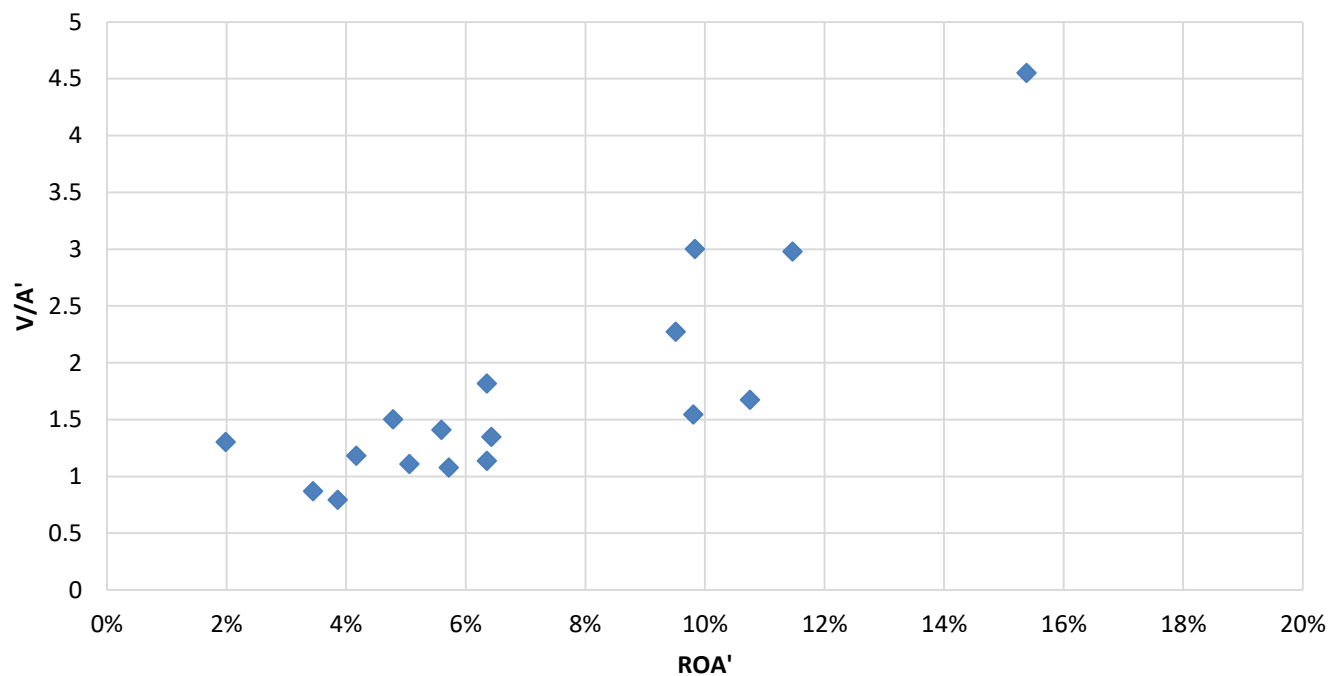


Source: Valens Securities Analysis

9 Large- and Mid-Cap Telecommunication Services companies

Data as of May 2015

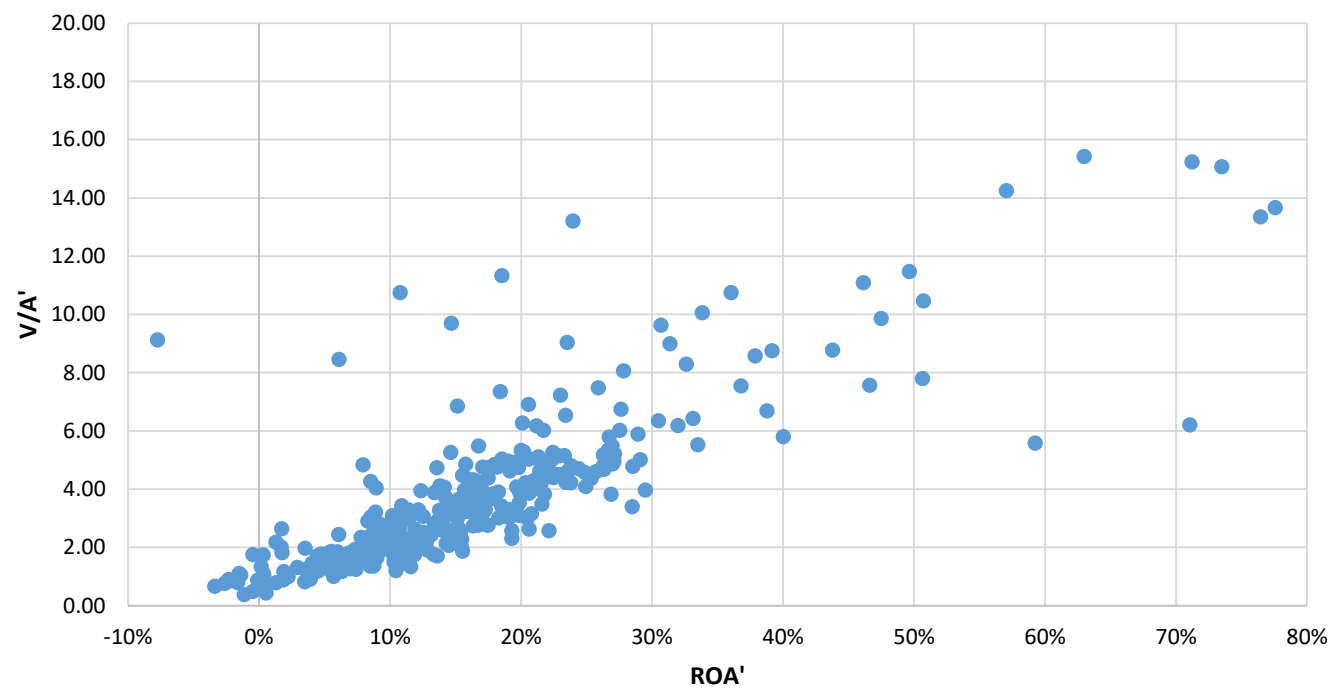
ROA' and V/A' - HK Utilities



Source: Valens Securities Analysis
18 Large- and Mid-Cap Utilities companies

Data as of May 2015

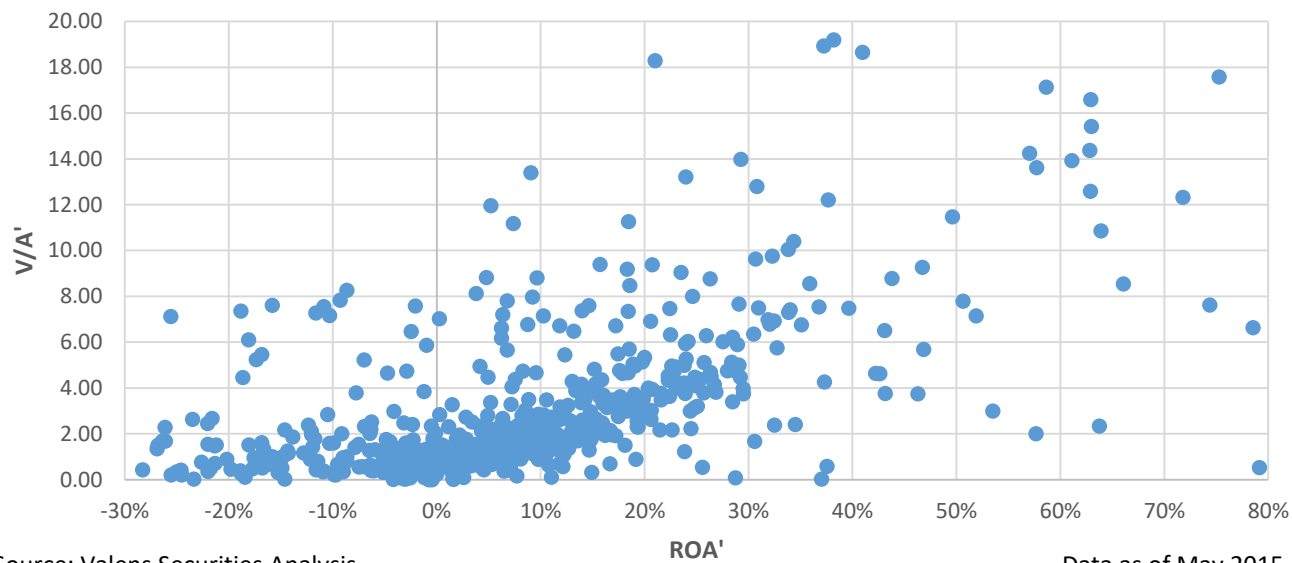
2015E ROA' and V/A' - S&P 500



Source: Valens Securities Analysis
359 non-Financials, non-Utilities firms

Data as of May 2015

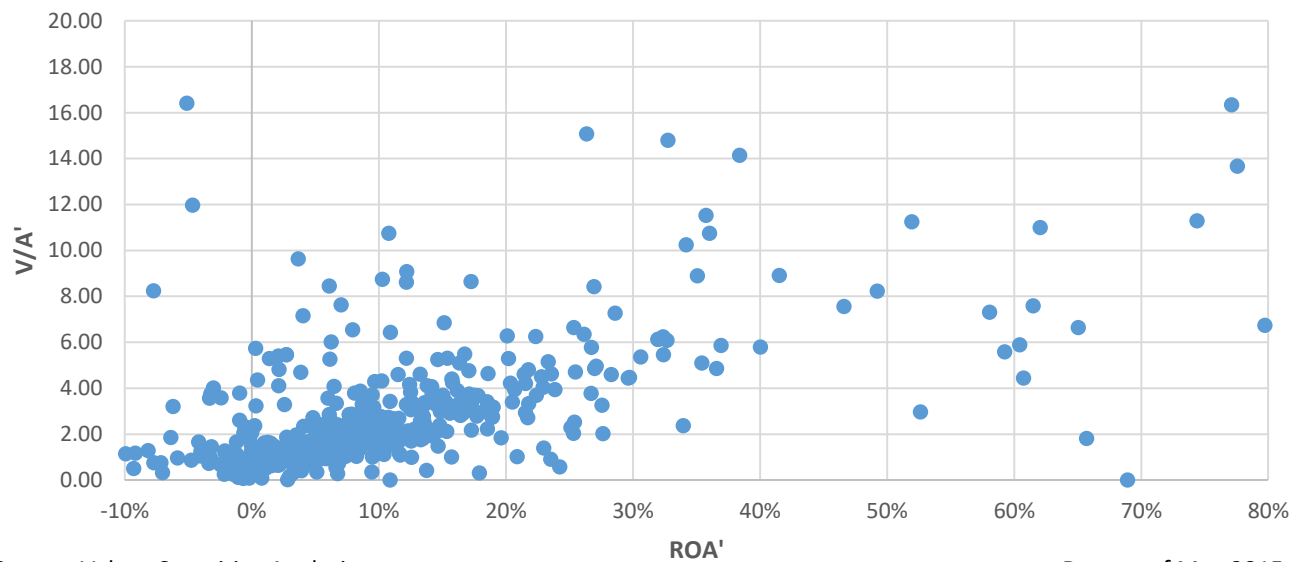
2015E ROA' and V/A' - U.S. Information Technology



Source: Valens Securities Analysis
680 companies

Data as of May 2015

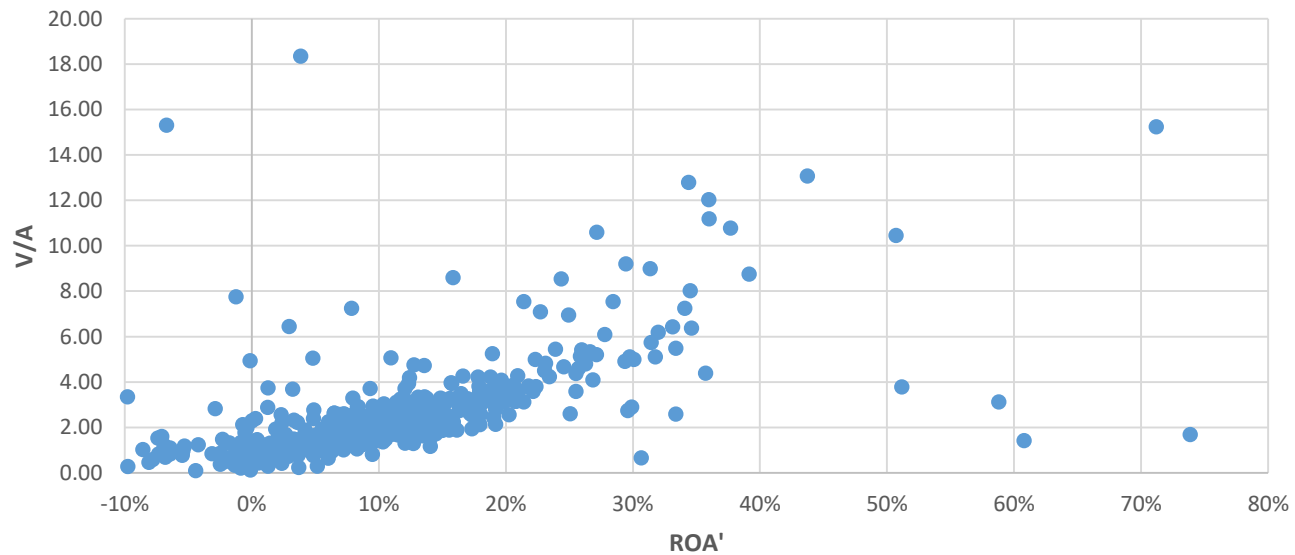
2015E ROA' and V/A' - U.S. Consumer Discretionary



Source: Valens Securities Analysis
568 companies

Data as of May 2015

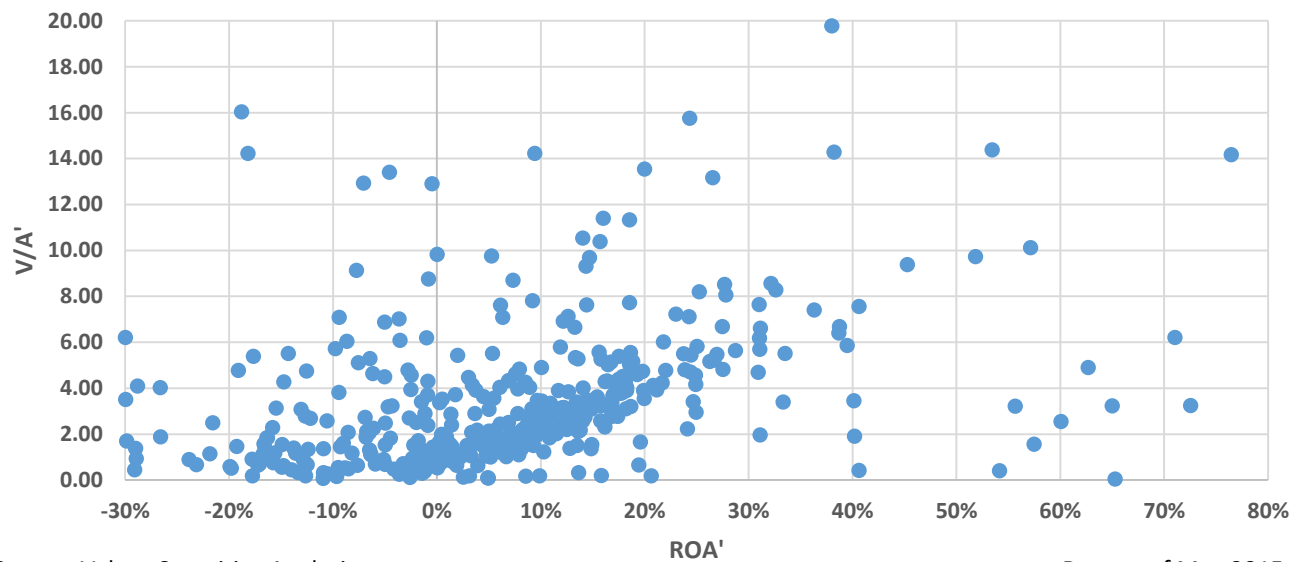
2015E ROA' and V/A' - U.S. Industrials



Source: Valens Securities Analysis
499 companies

Data as of May 2015

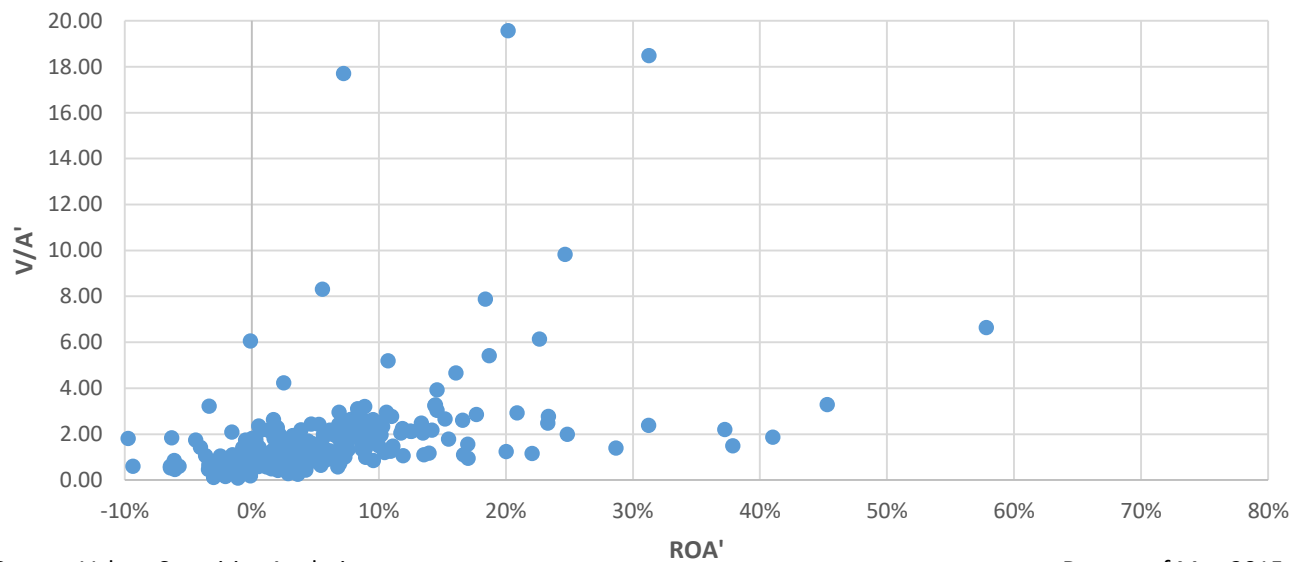
2015E ROA' and V/A' - U.S. Healthcare



Source: Valens Securities Analysis
467 companies

Data as of May 2015

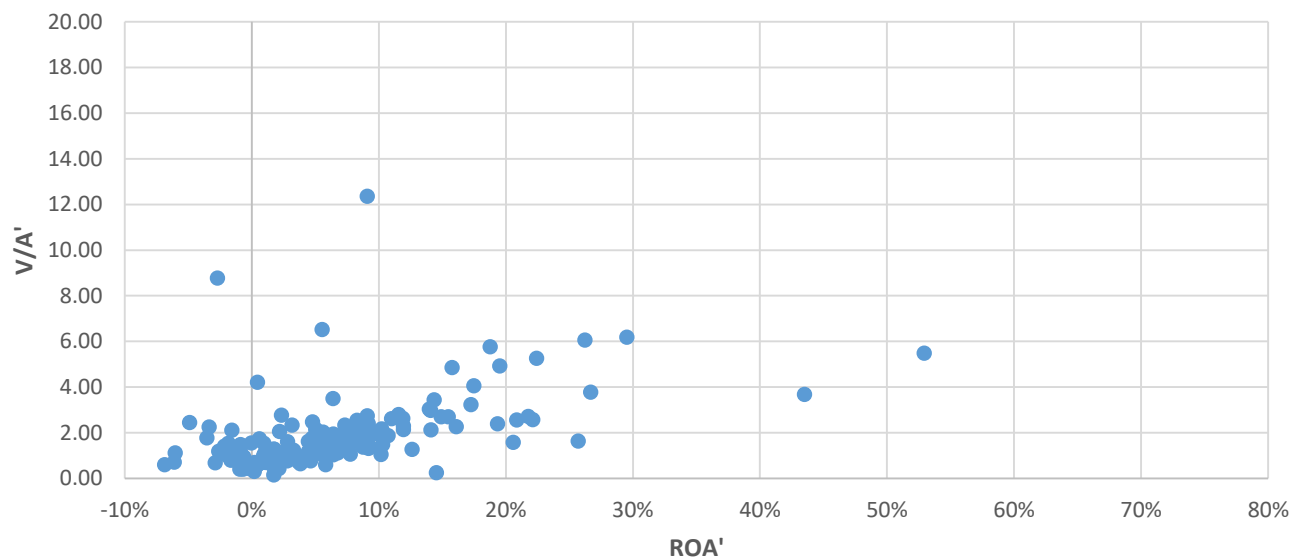
2015E ROA' and V/A' - U.S. Energy



Source: Valens Securities Analysis
276 companies

Data as of May 2015

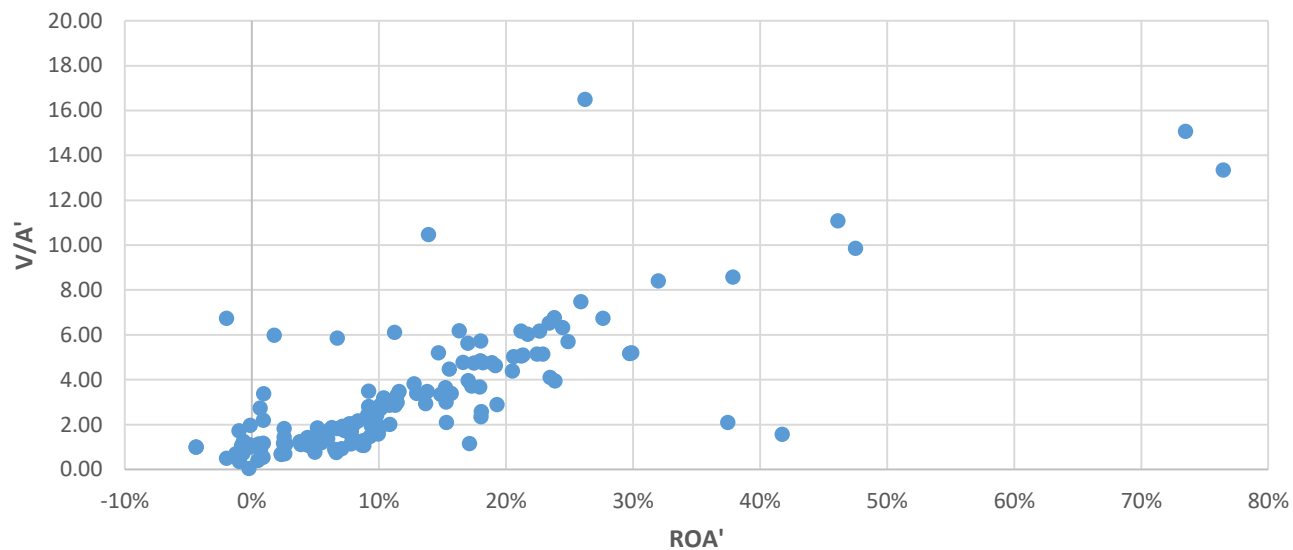
2015E ROA' and V/A' - U.S. Materials



Source: Valens Securities Analysis
181 companies

Data as of May 2015

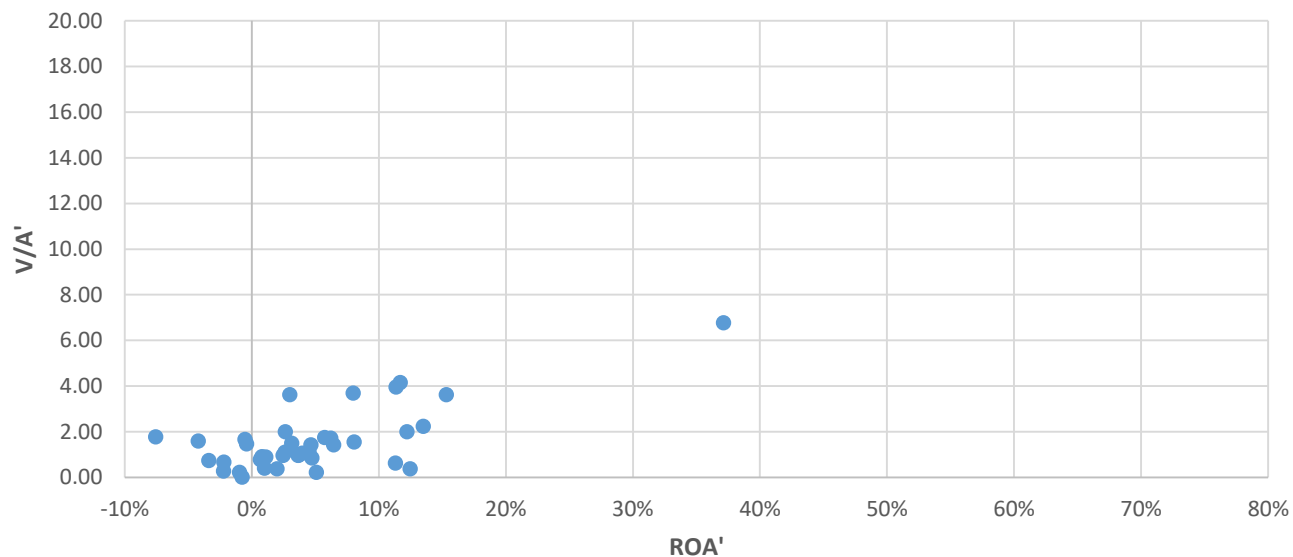
2015E ROA' and V/A' - U.S. Consumer Staples



Source: Valens Securities Analysis
148 companies

Data as of May 2015

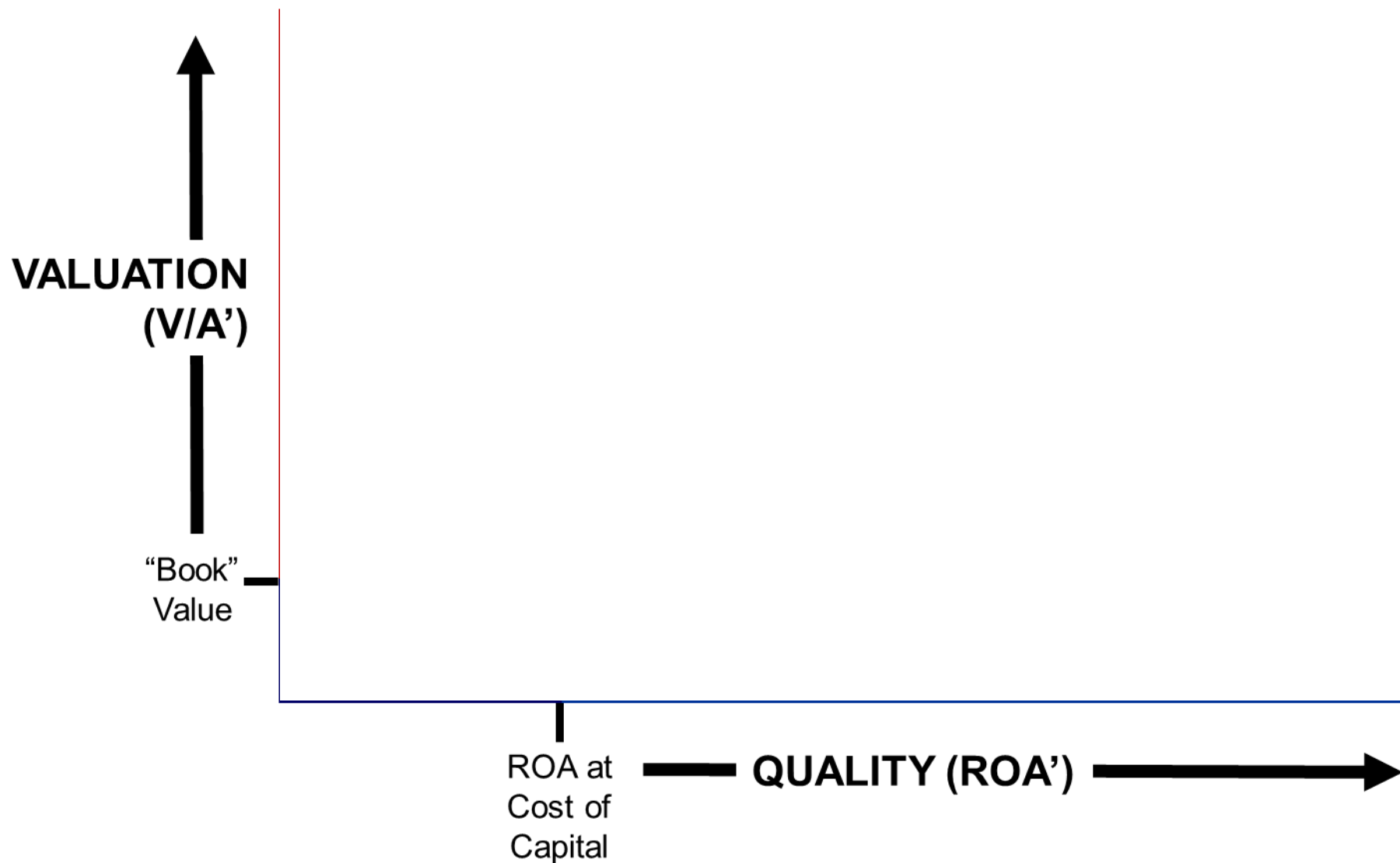
2015E ROA' and V/A' - U.S. Telecommunication Services



Source: Valens Securities Analysis
42 companies

Data as of May 2015

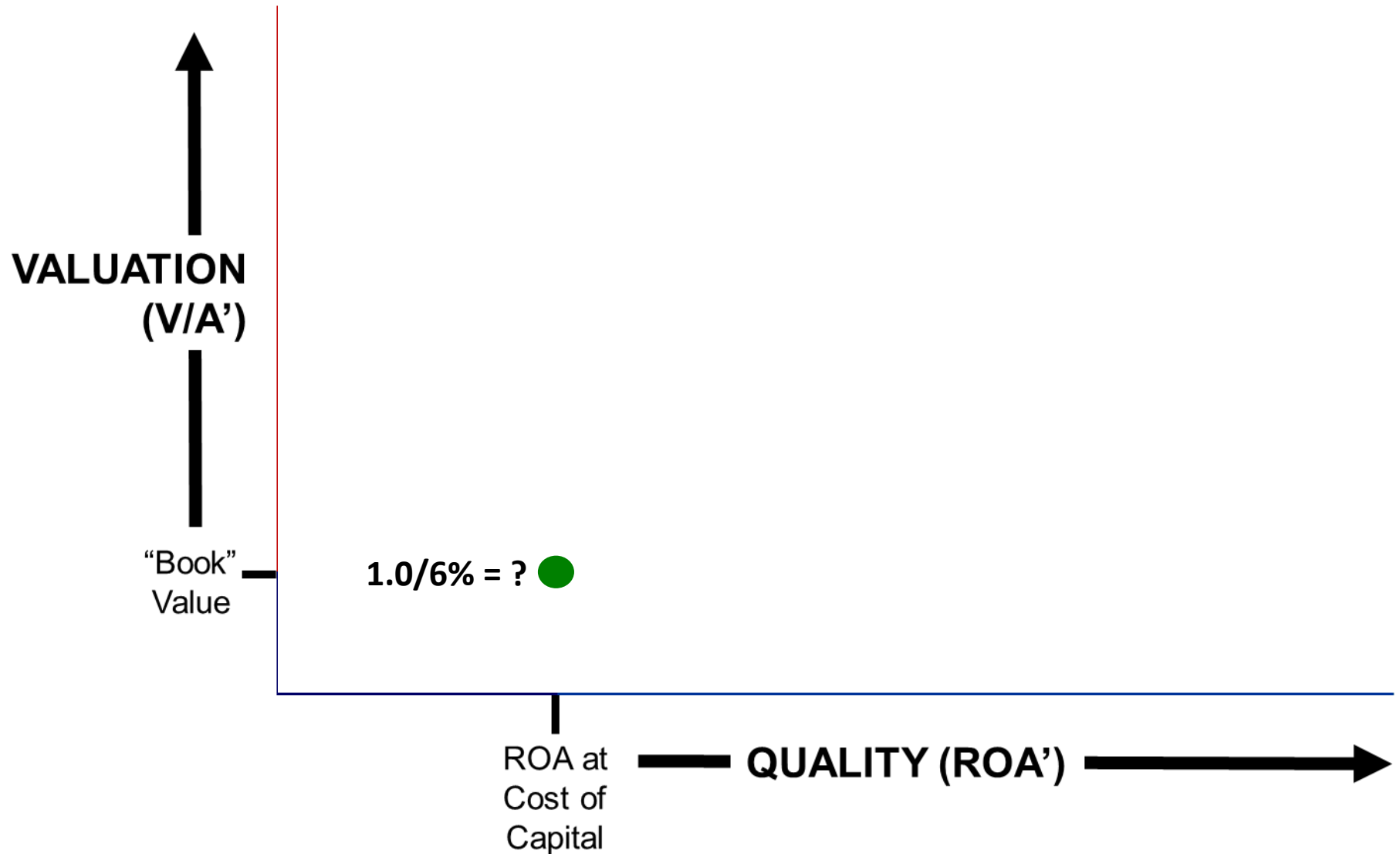
INVESTMENT STYLES via QUALITY and VALUATION



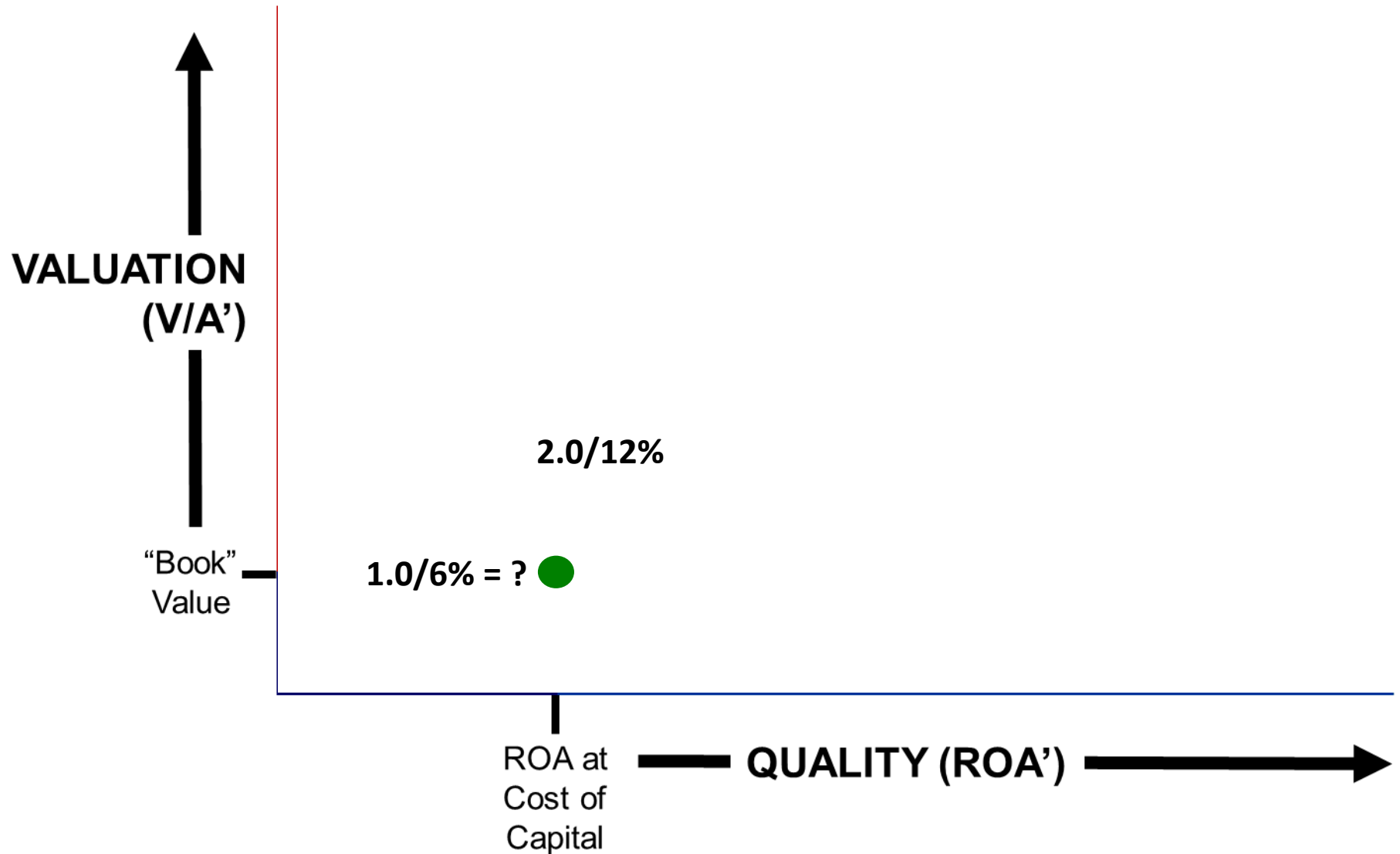
V/A' to ROA' is Advanced P/E Analysis

When is a P/E of 20 cheaper than a P/E of 15?

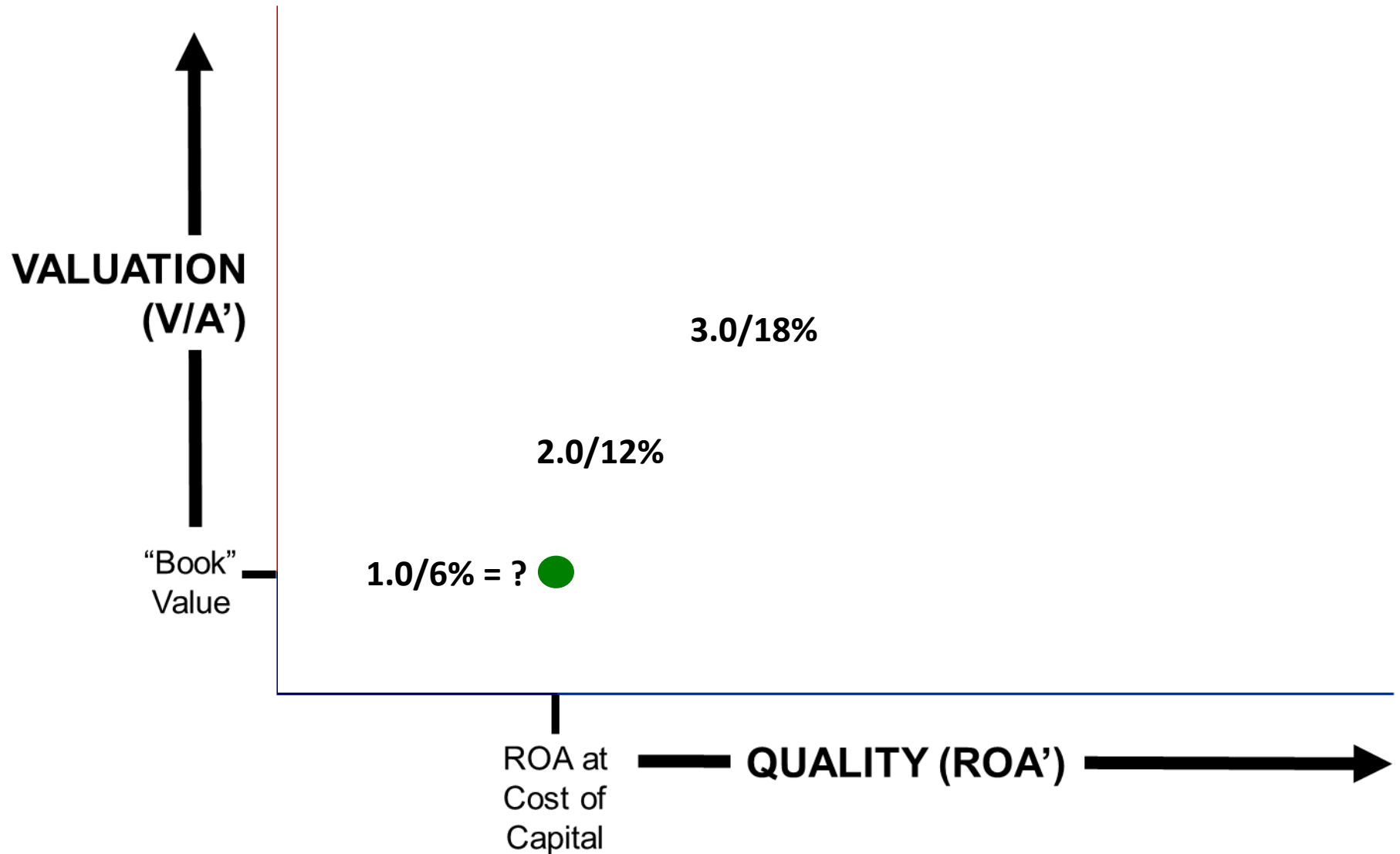
INVESTMENT STYLES via QUALITY and VALUATION



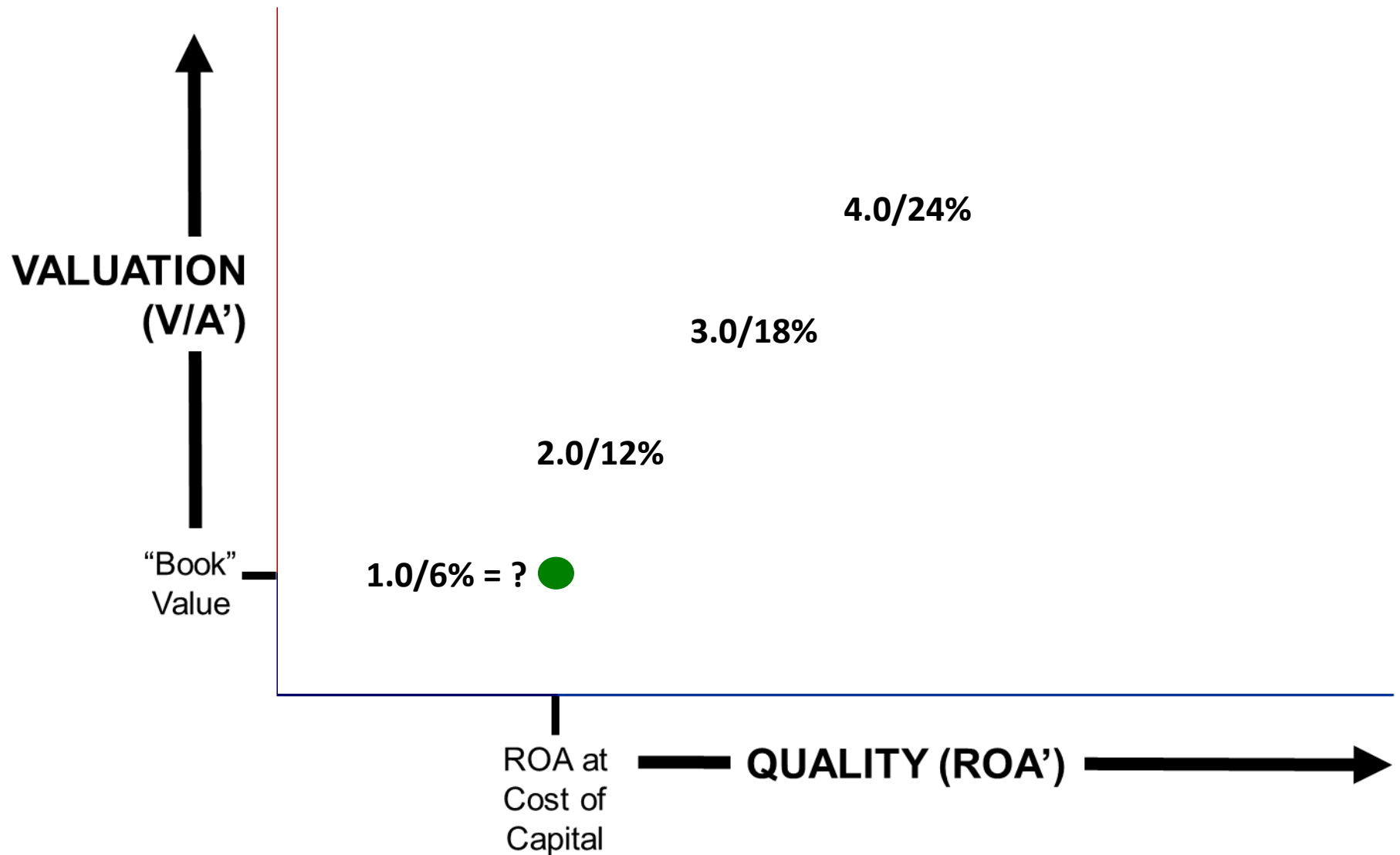
INVESTMENT STYLES via QUALITY and VALUATION



INVESTMENT STYLES via QUALITY and VALUATION



INVESTMENT STYLES via QUALITY and VALUATION



1.0/6% = ?

2.0/12%

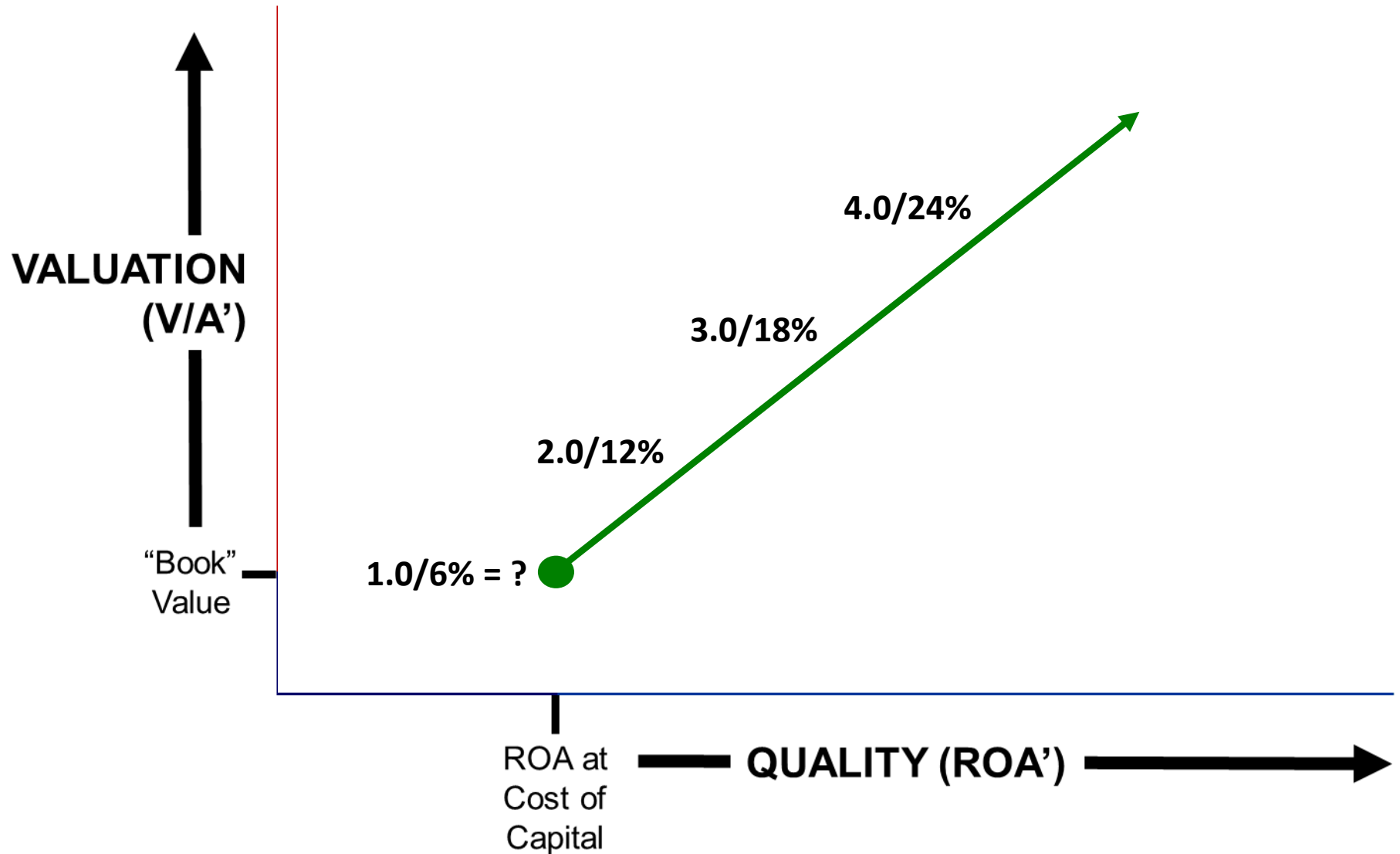
3.0/18%

4.0/24%

ROA at
Cost of
Capital

QUALITY (ROA')

INVESTMENT STYLES via QUALITY and VALUATION



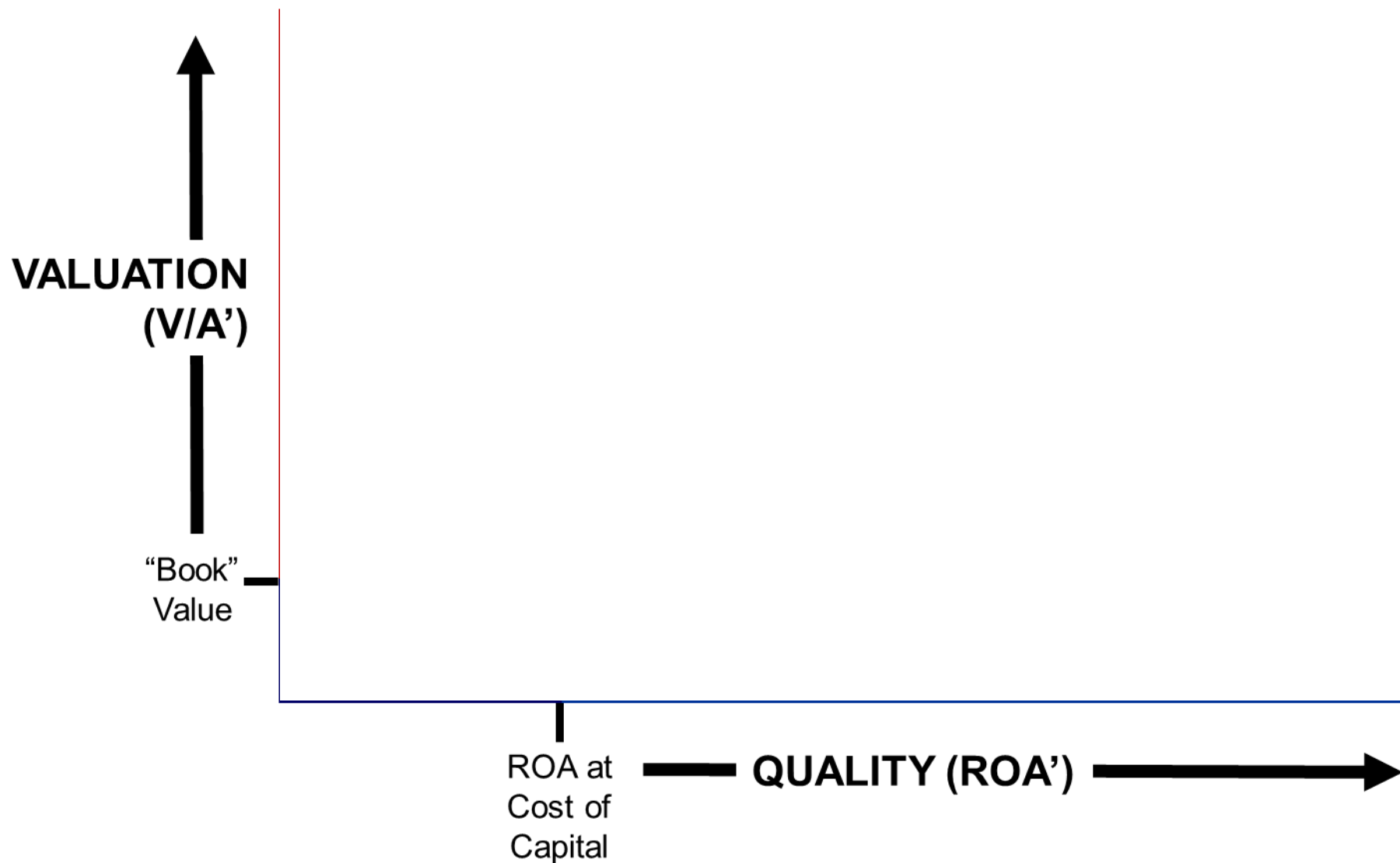
DCF and Ratios 2015 07 v4 - Excel													
Joel Litman													
<div><div>FILEHOMEINSERTPAGE LAYOUTFORMULASDATAREVIEWVIEW</div><div><div>Paste</div><div>Clipboard</div><div>Font</div><div>Alignment</div><div>Number</div><div>Styles</div><div>Cells</div><div>Editing</div></div></div>													
C3													
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Year	0	1	2	3	4	5	6	7	8	9	10	
2													
3	Return On Assets (ROA)		6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6
4	Asset Growth Rate		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
5													
6	Assets	1000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
7	Op Cash Flow		60	60	60	60	60	60	60	60	60	60	60
8	CAPX		-	-	-	-	-	-	-	-	-	-	-
9													
10	Free Cash Flow		60	60	60	60	60	60	60	60	60	60	60
11	Cost of Capital		6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6
12	Present Value of FCF		56.60	53.40	50.38	47.53	44.84	42.30	39.90	37.64	35.51	33.50	31.10
13													
14	Enterprise Value (Net Present Value)	1,000											
15	V/A'	1.0											
16	ROA-alone implied V/A'	1.0											
17													
18													
19	V/A' Divided by ROA' equals...	16.67	V/E, aka "Cleaned-up P/E"										
20													
21													
22													
23													
24													

Perpetuity

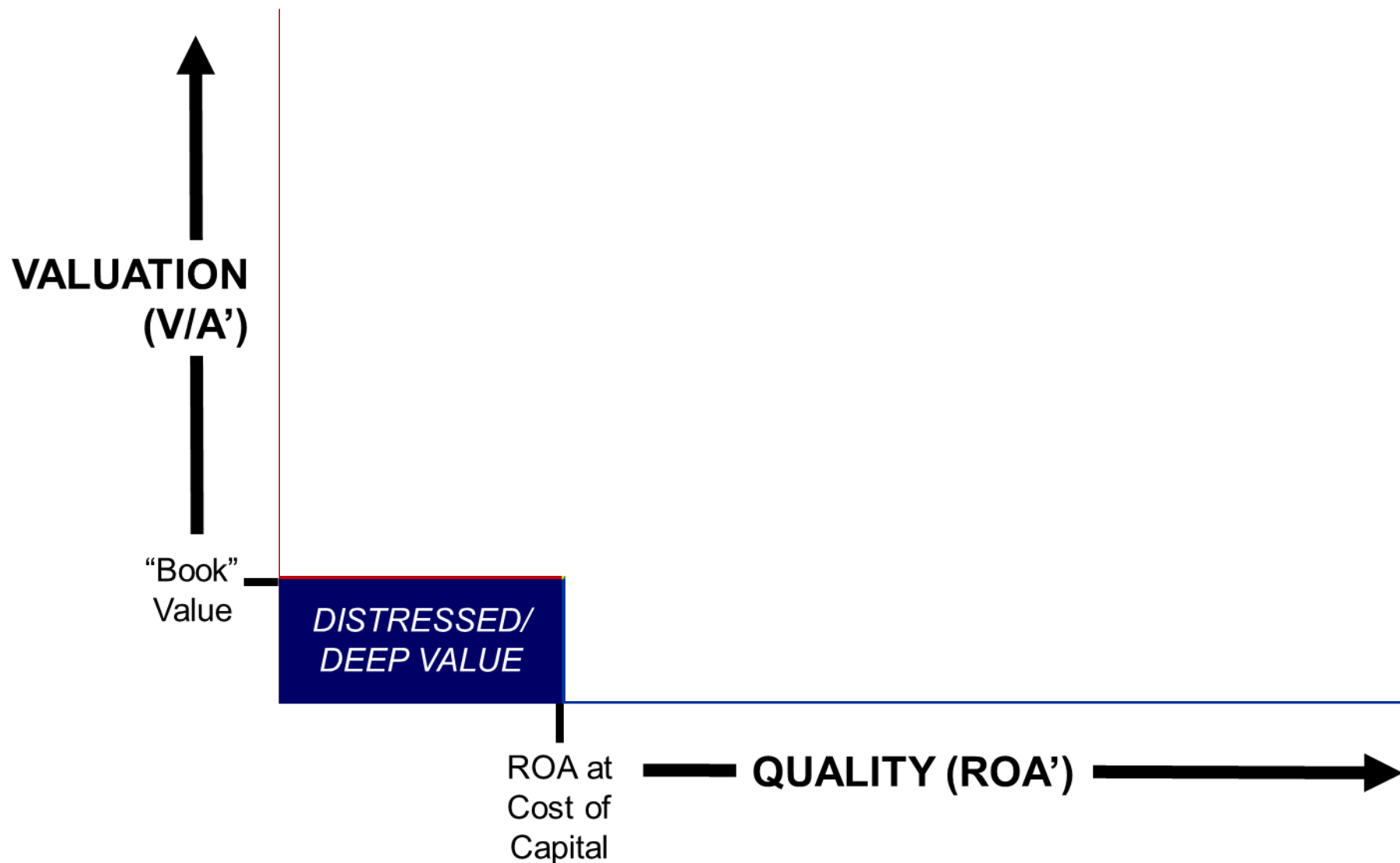
Terminal Multiple

READY

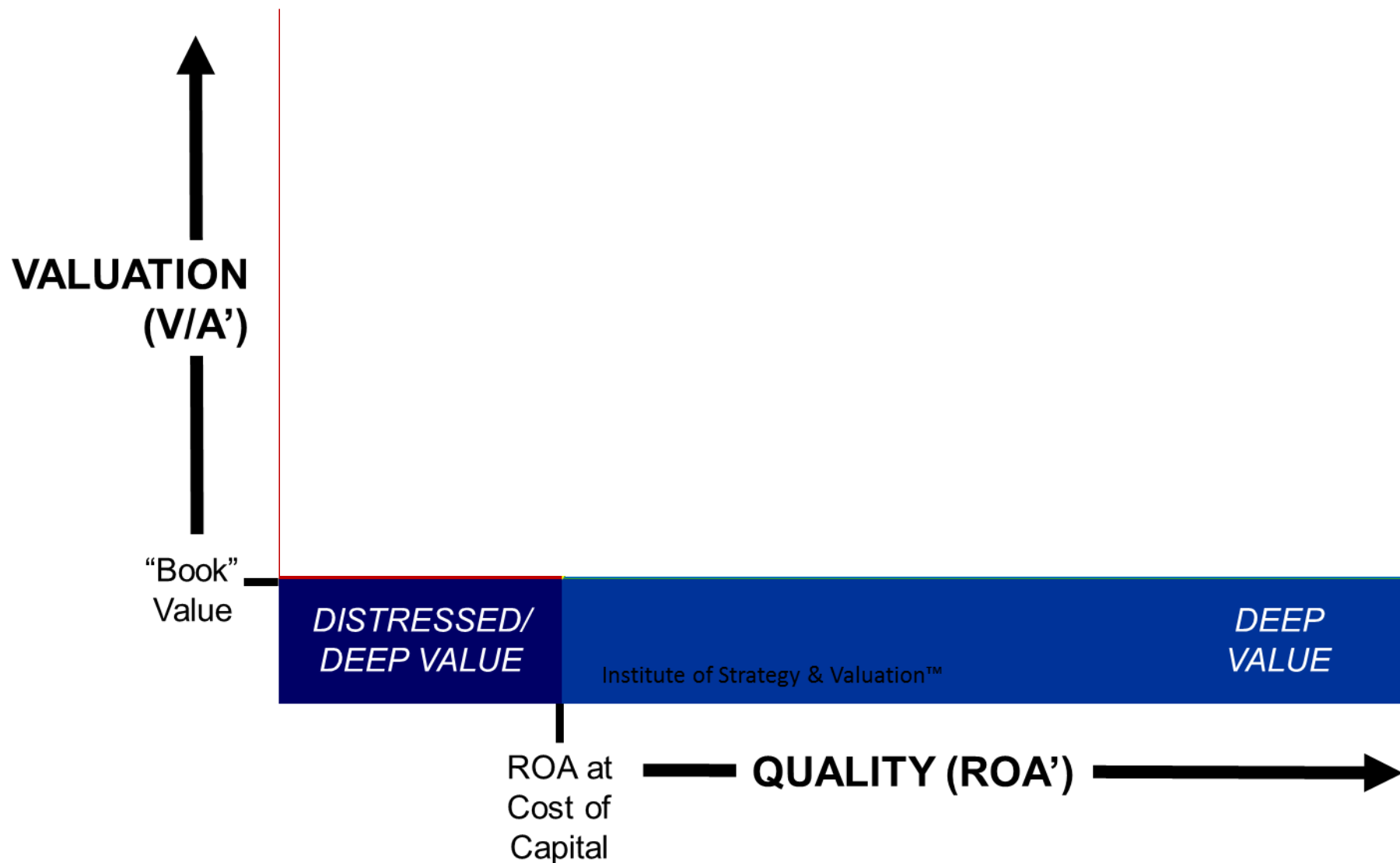
INVESTMENT STYLES via QUALITY and VALUATION



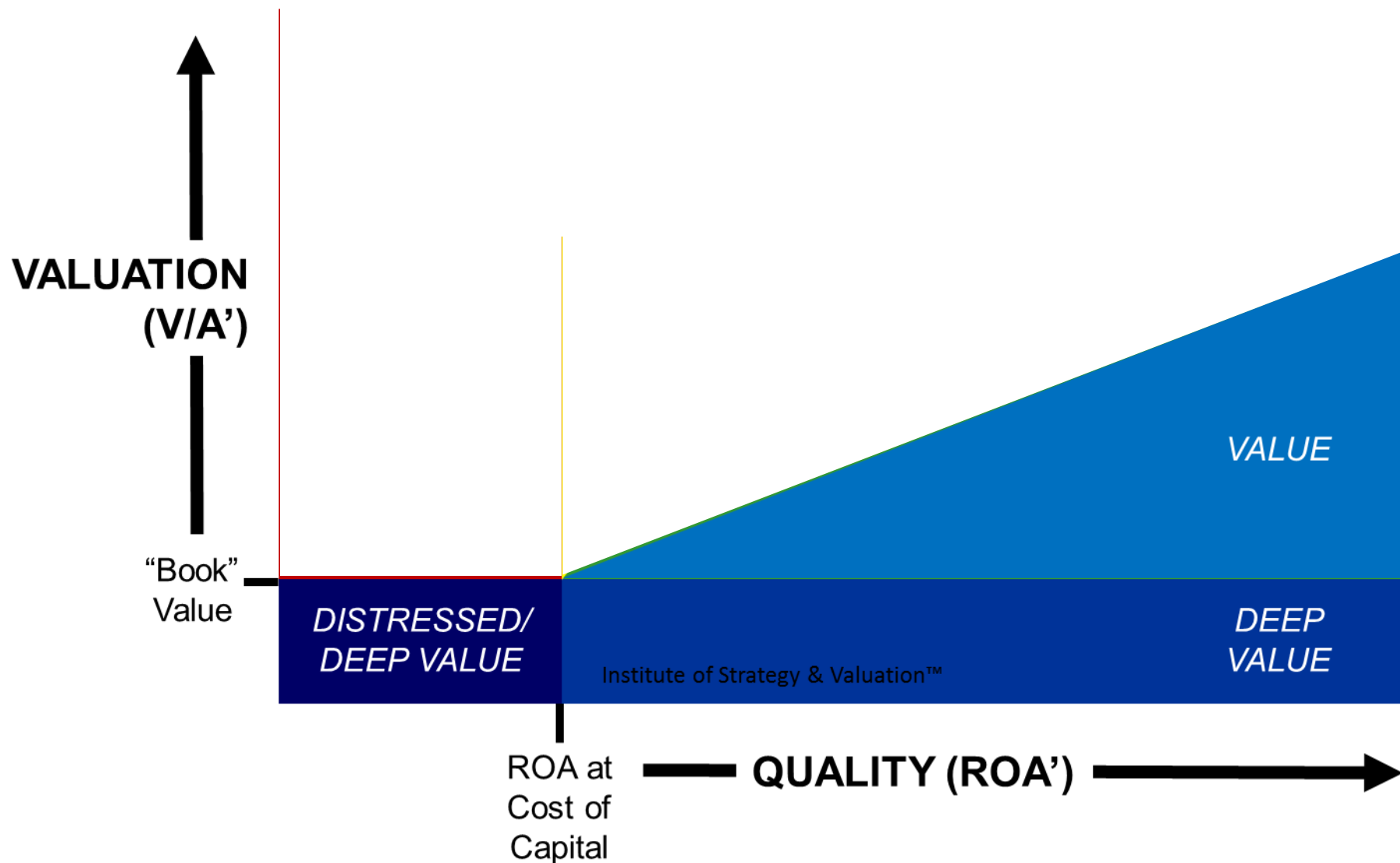
INVESTMENT STYLES via QUALITY and VALUATION



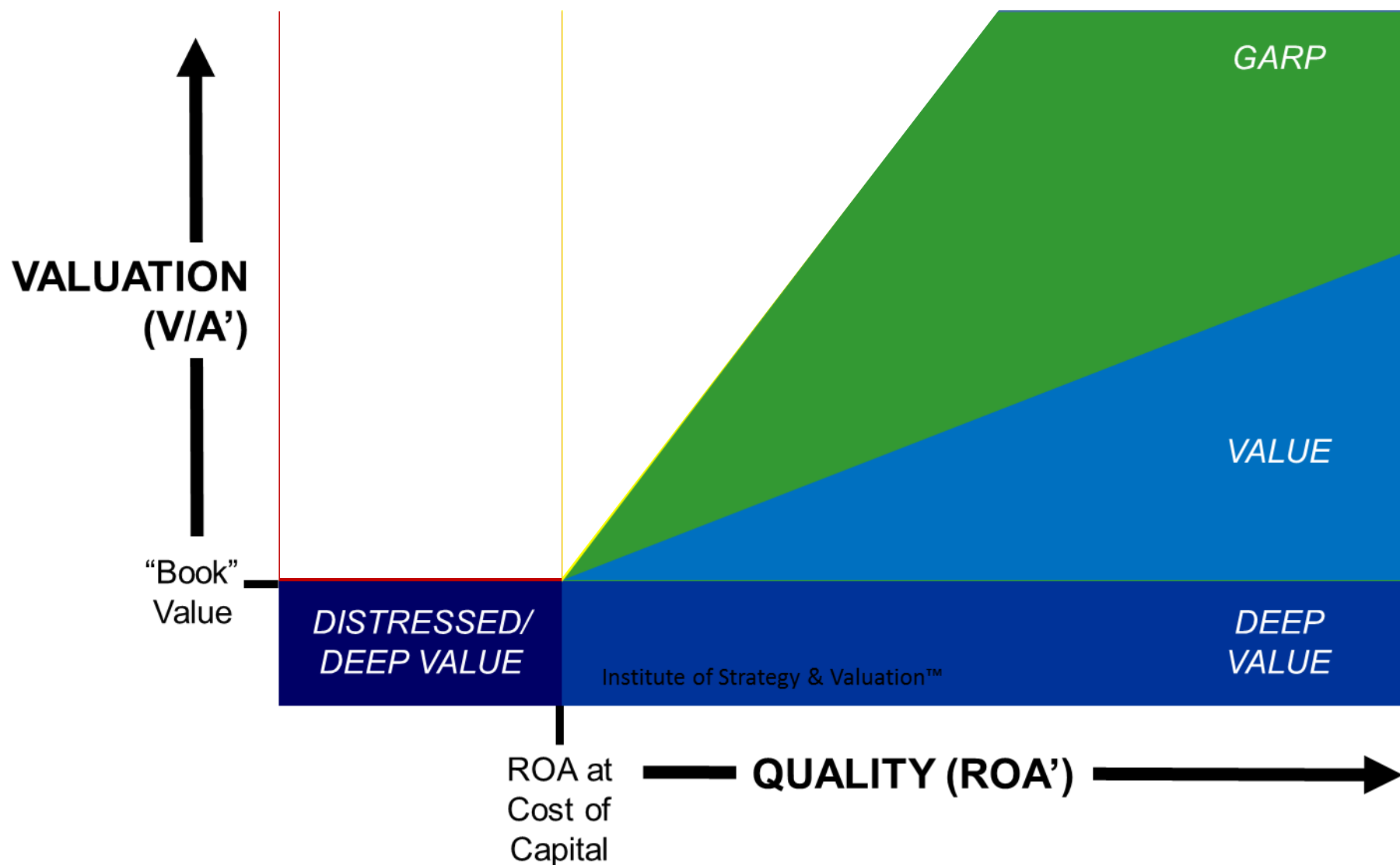
INVESTMENT STYLES via QUALITY and VALUATION



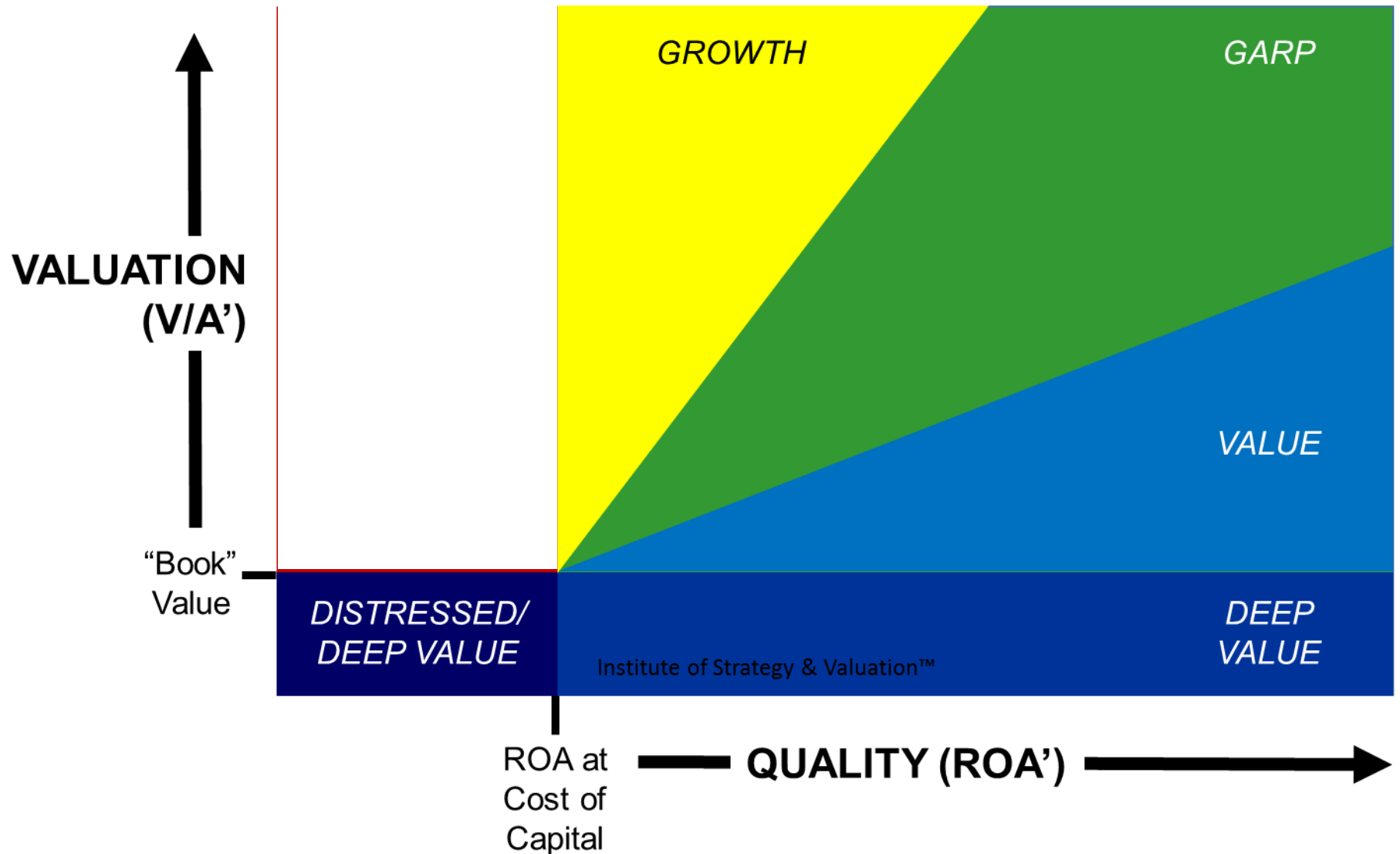
INVESTMENT STYLES via QUALITY and VALUATION



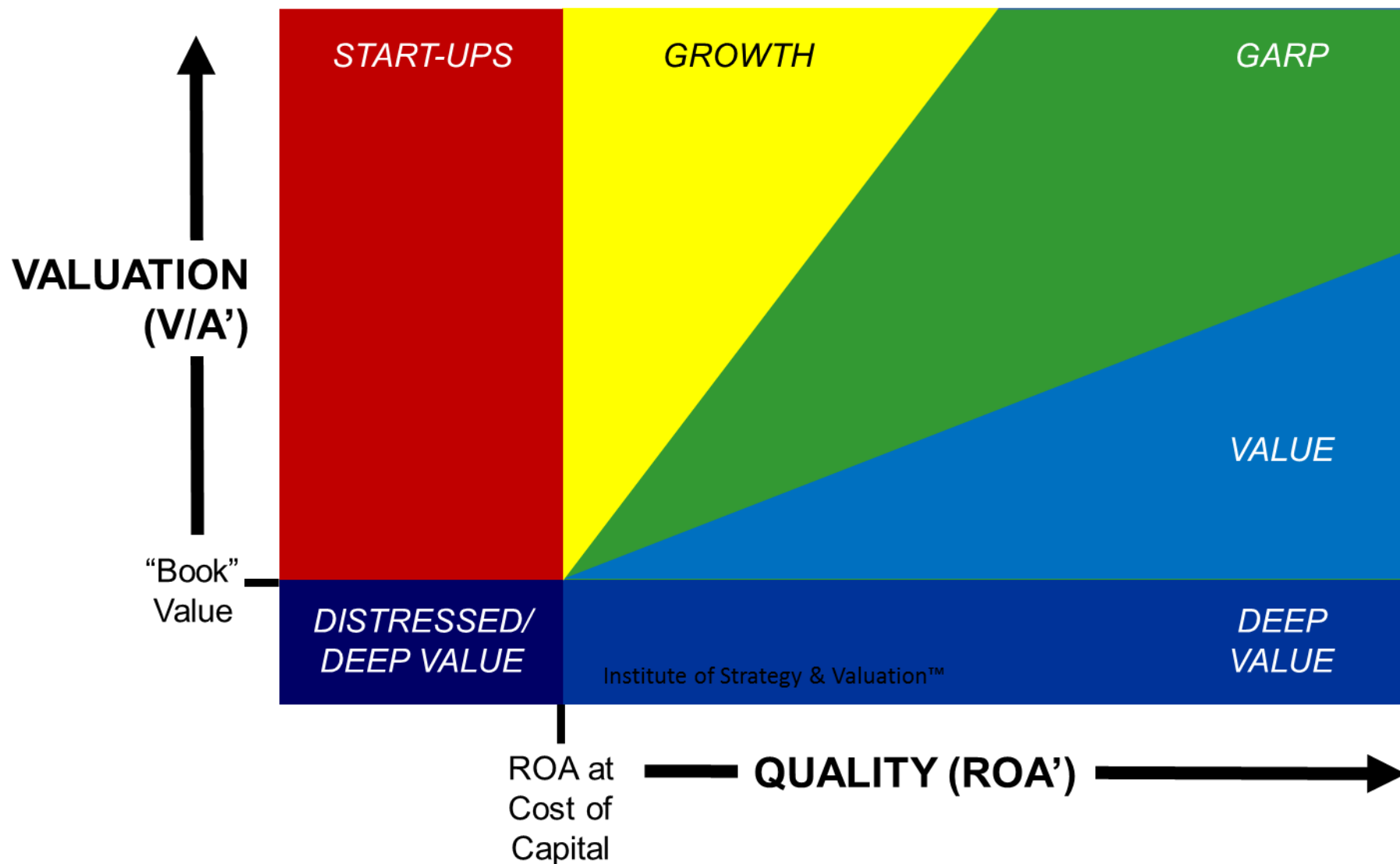
INVESTMENT STYLES via QUALITY and VALUATION



INVESTMENT STYLES via QUALITY and VALUATION



INVESTMENT STYLES via QUALITY and VALUATION

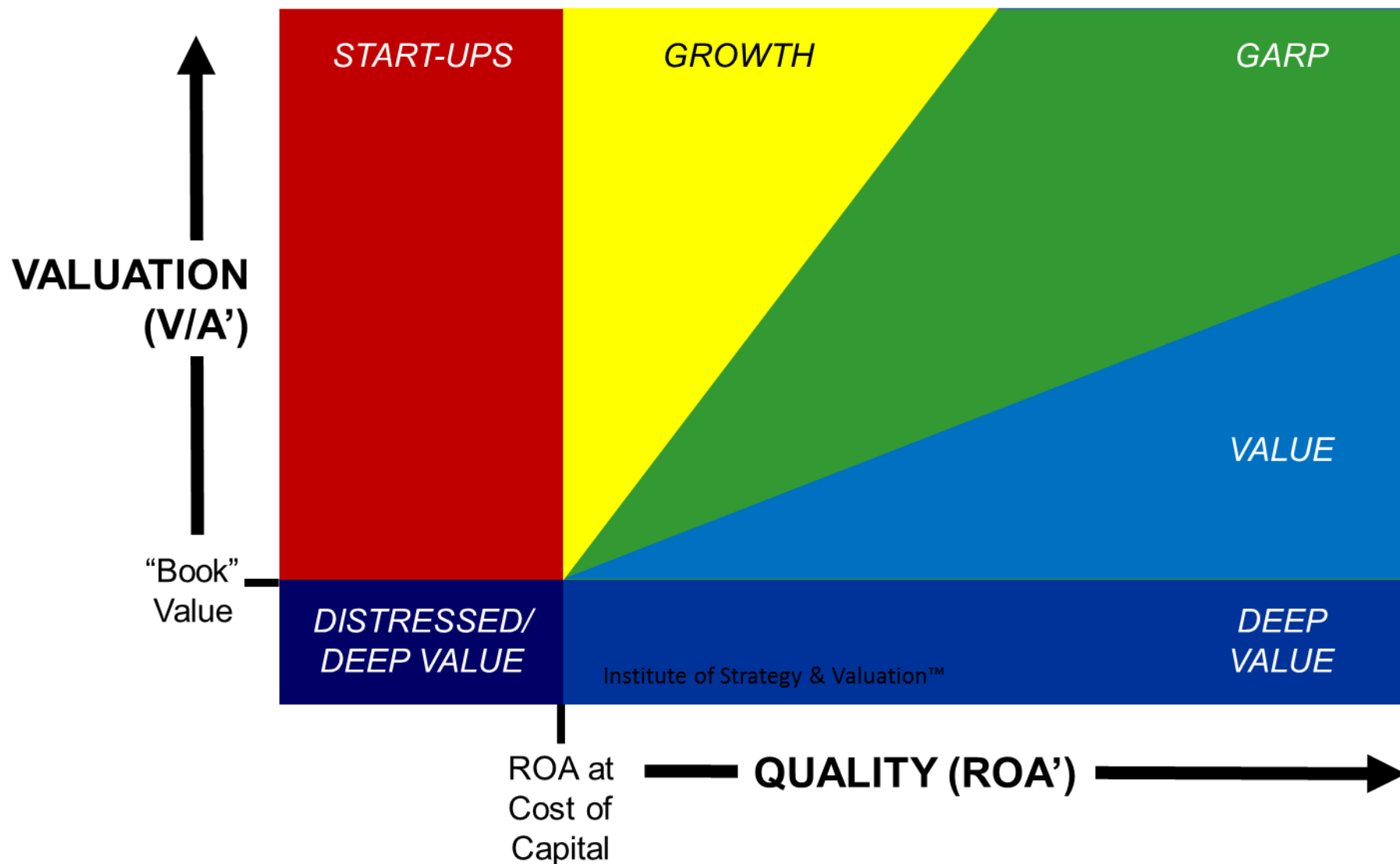


Other drivers (when does ROA not drive valuation levels?)

Other drivers (when does ROA not drive valuation levels?)

- Start-ups

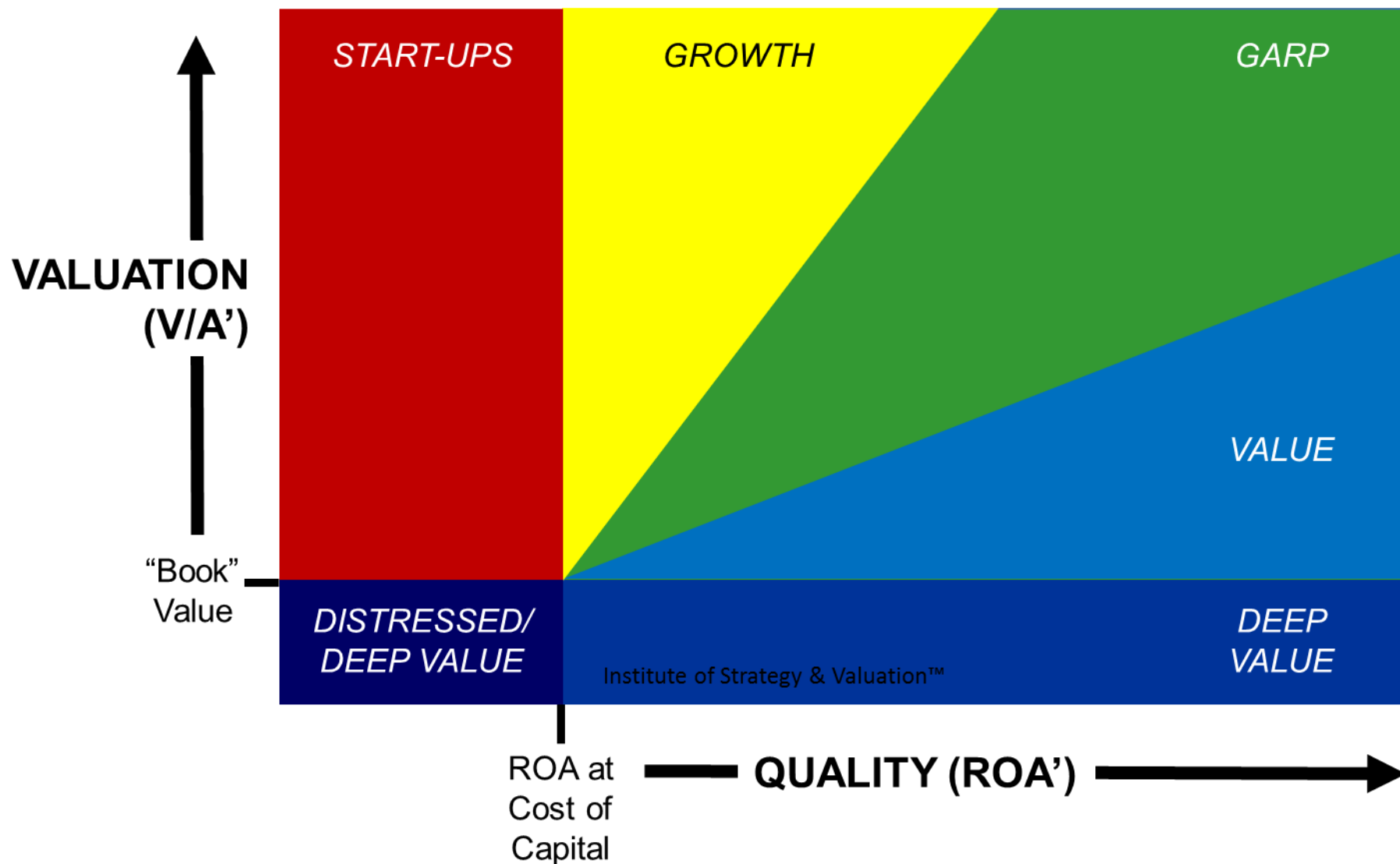
INVESTMENT STYLES via QUALITY and VALUATION



Other drivers (when does ROA not drive valuation levels?)

- Start-ups
- Firms in deep trouble

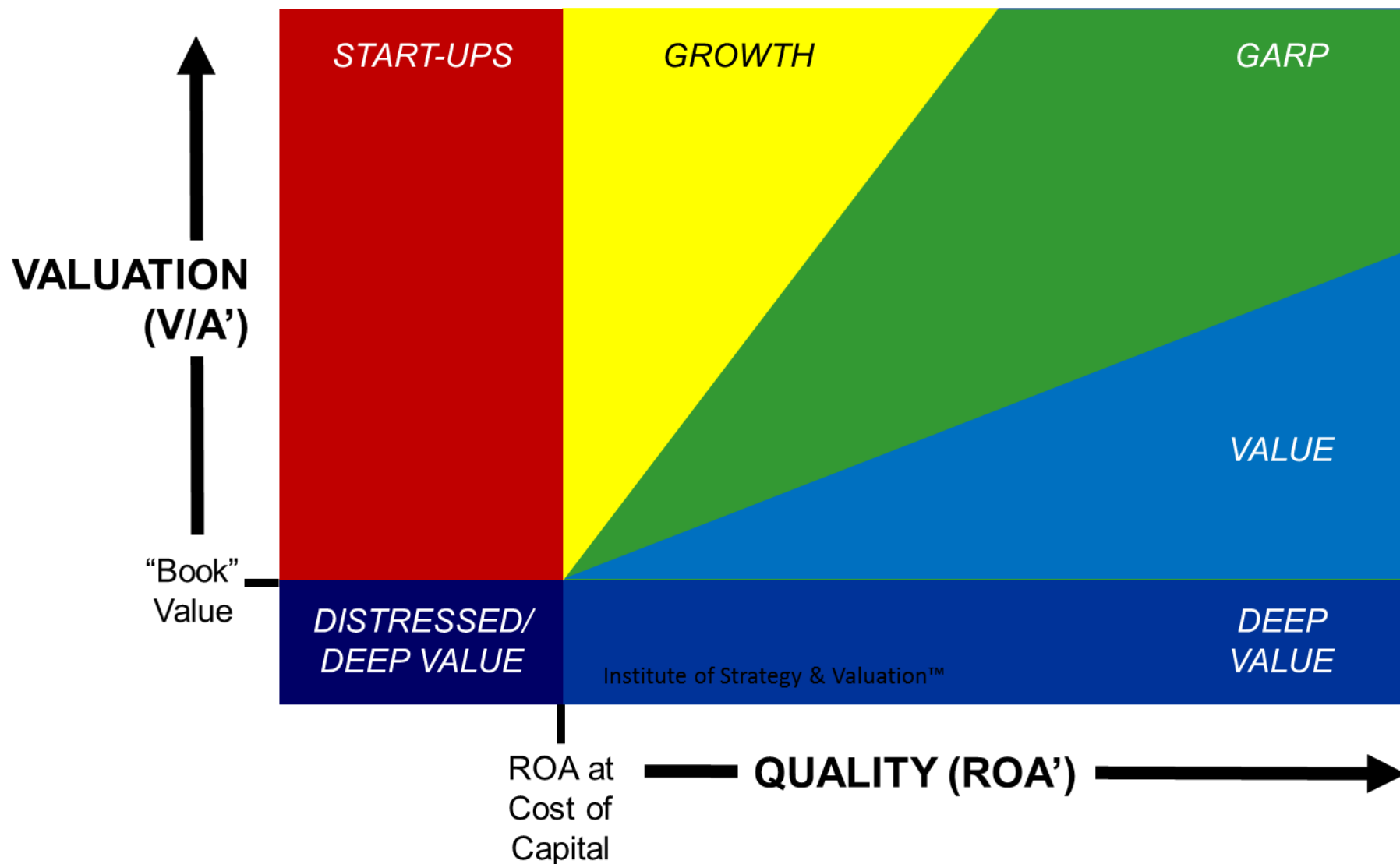
INVESTMENT STYLES via QUALITY and VALUATION



Other drivers (when does ROA not drive valuation levels?)

- Start-ups
- Firms in deep trouble
- Importance of credit health (or liquidation values)

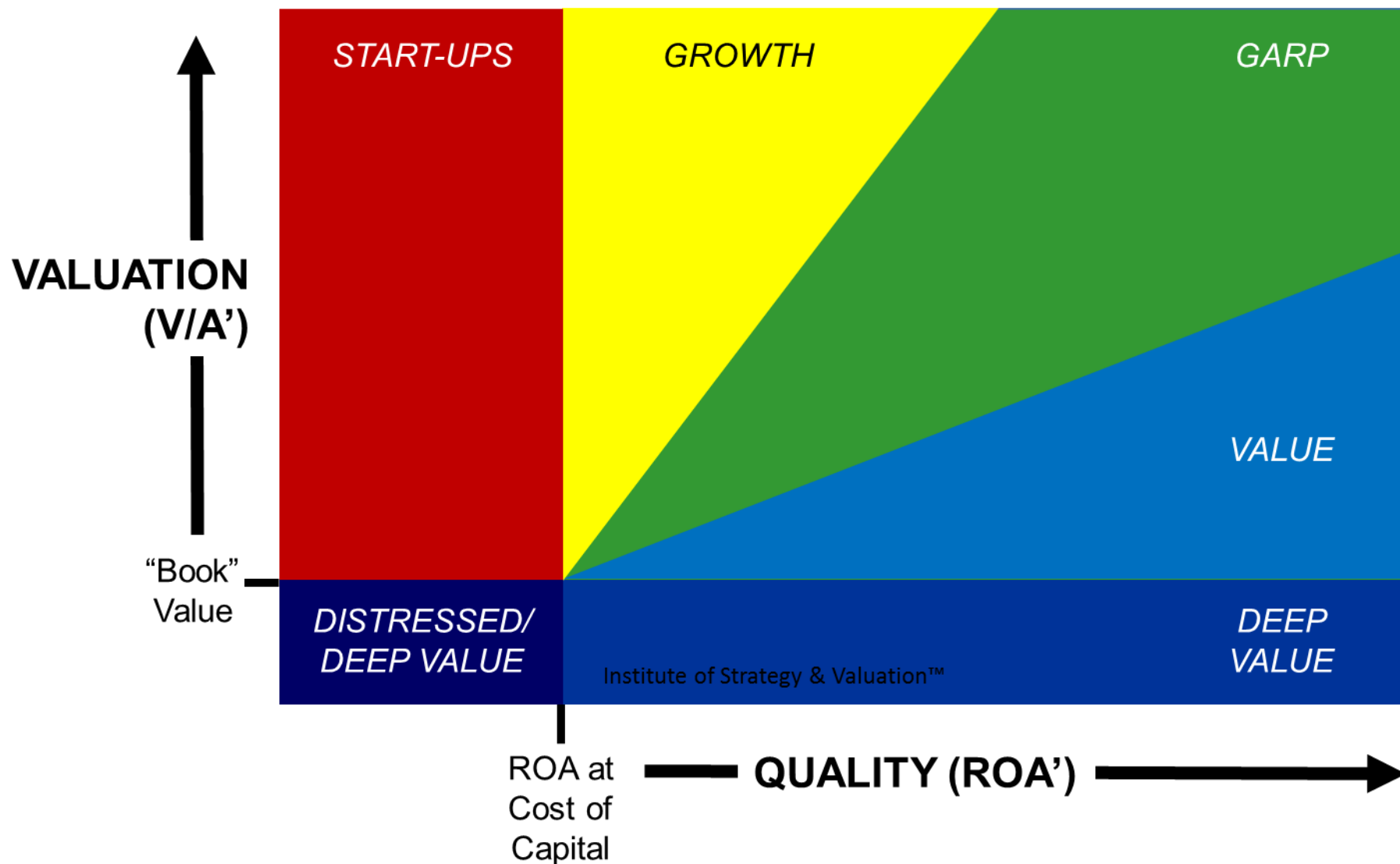
INVESTMENT STYLES via QUALITY and VALUATION



Other drivers (when does ROA not drive valuation levels?)

- Start-ups
- Firms in deep trouble
- Importance of credit health (or liquidation values)
- High growth firms (supposed Einstein principle)

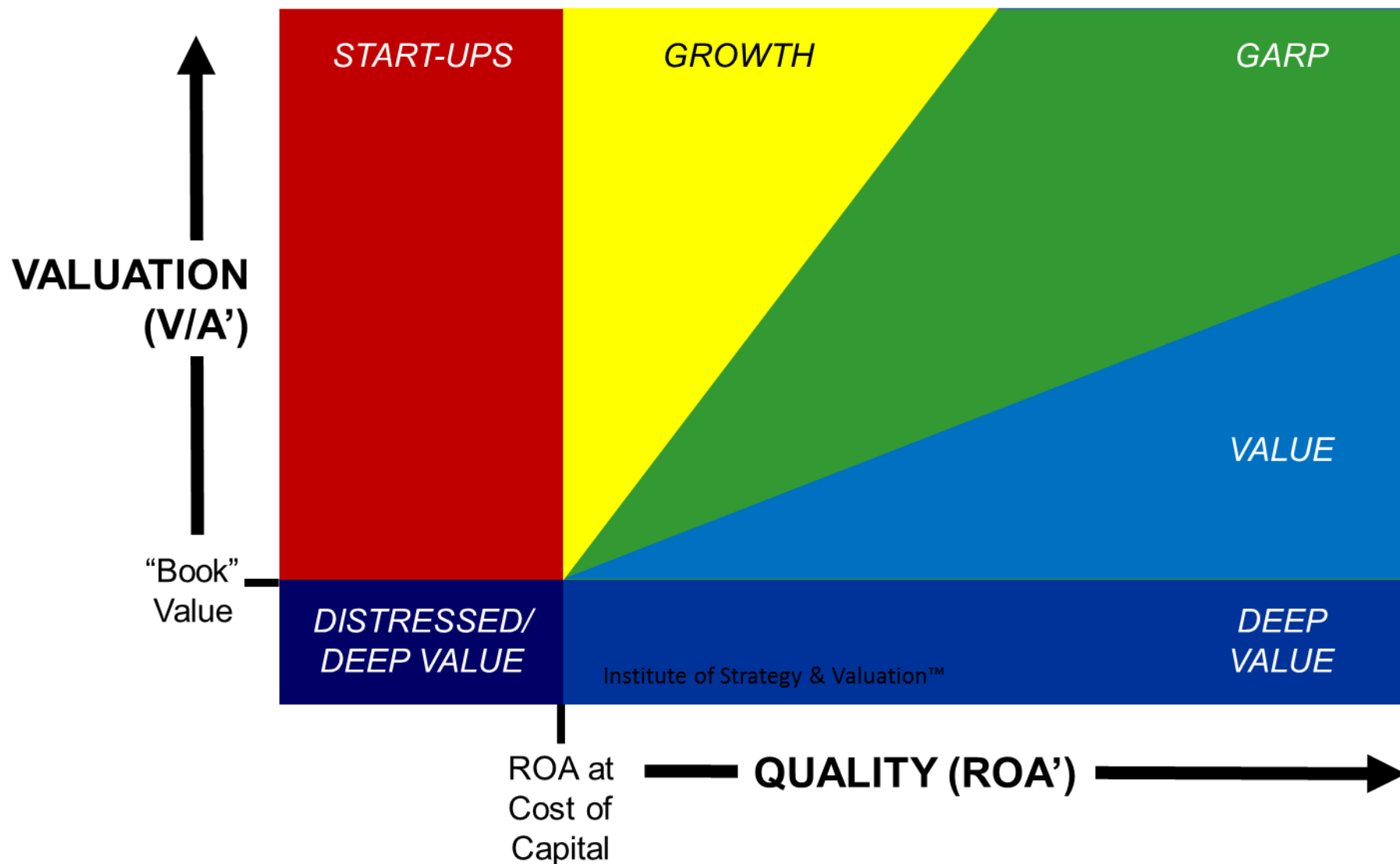
INVESTMENT STYLES via QUALITY and VALUATION



Other drivers (when does ROA not drive valuation levels?)

- Start-ups
- Firms in deep trouble
- Importance of credit health (or liquidation values)
- High growth firms (supposed Einstein principle)
- The middle to end of a bull market

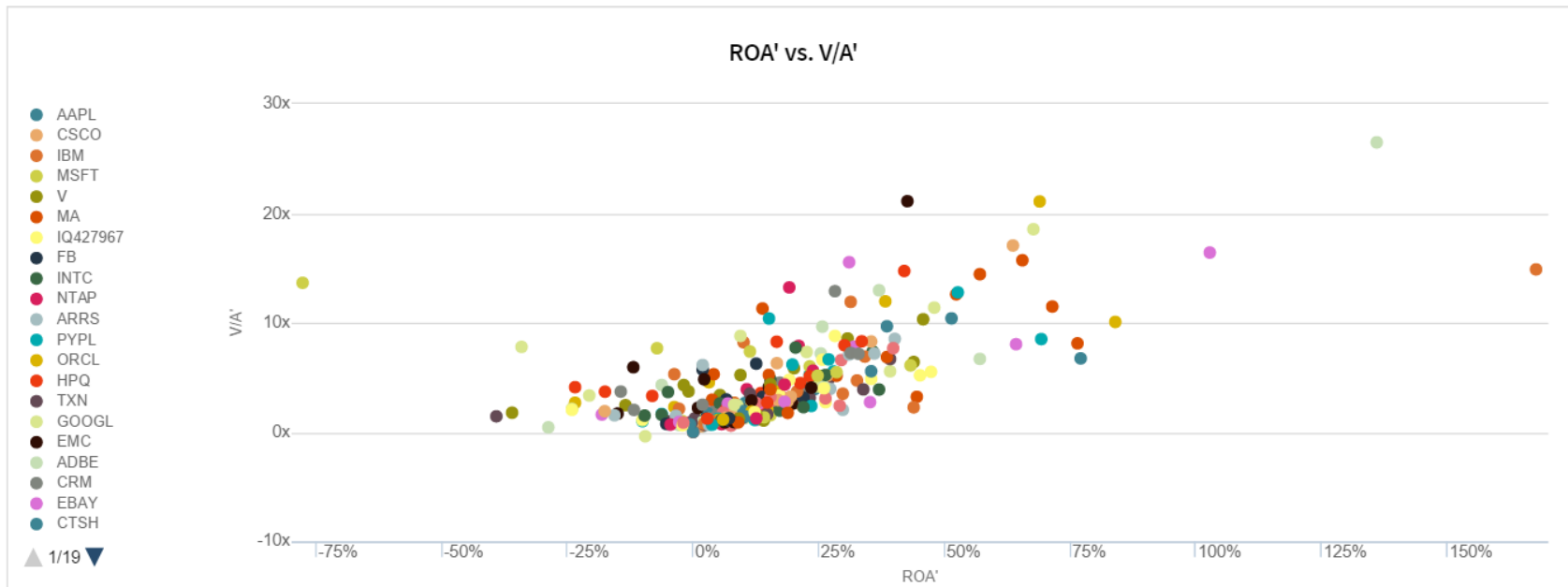
INVESTMENT STYLES via QUALITY and VALUATION



MARKET: United States

SECTOR: Information Technology

INDUSTRY: Communications Equipment

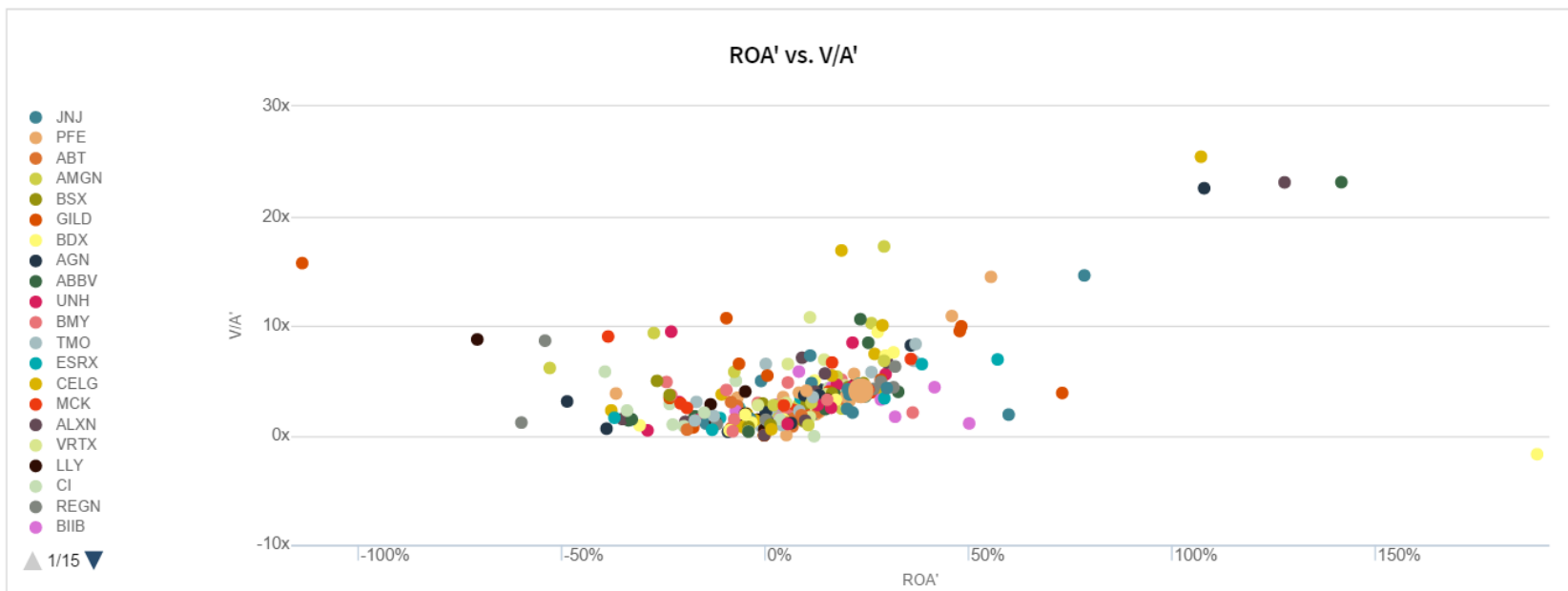


	Ticker	Company Name	ROA'	V/A'
✓	AAPL	Apple Inc.	77.2%	6.73x
✓	CSCO	Cisco Systems, Inc.	21.6%	2.42x
✓	IBM	International Business Machines Corporation	32.7%	4.71x
✓	MSFT	Microsoft Corporation	22.9%	4.46x
✓	V	Visa Inc.	30.8%	8.55x
✓	MA	MasterCard Incorporated	52.3%	12.59x
✓	IQ427967	Avaya Inc.	35.4%	4.85x

MARKET: United States

SECTOR: Healthcare

INDUSTRY: Healthcare Equipment



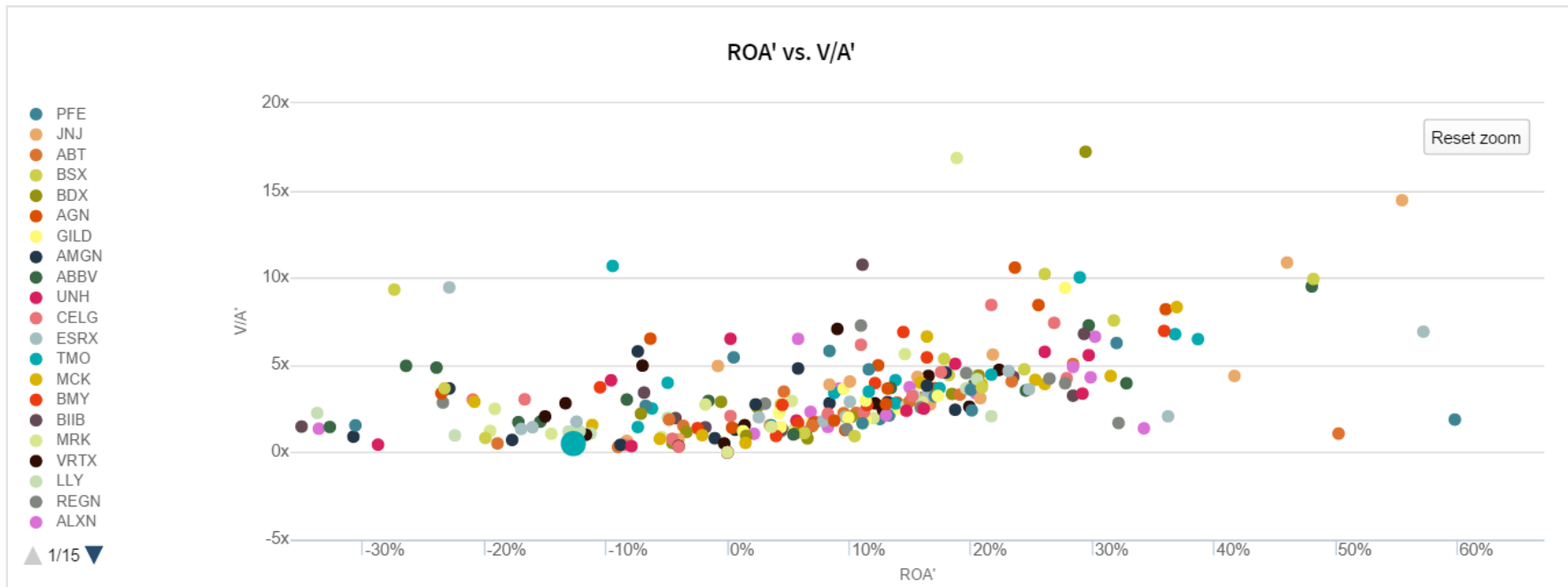
	Ticker	Company Name	ROA'	V/A'
✓	JNJ	Johnson & Johnson	16.7%	2.74x
✓	PFE	Pfizer Inc.	12.5%	1.91x
✓	ABT	Abbott Laboratories	16.0%	3.14x
✓	AMGN	Amgen Inc.	18.8%	2.43x
✓	BSX	Boston Scientific Corporation	18.3%	4.42x
✓	GILD	Gilead Sciences Inc.	73.2%	3.85x
✓	BDX	Becton, Dickinson and Company	18.5%	3.34x

PRIVATE AND CONFIDENTIAL: This document is confidential and contains proprietary information. Neither the document nor any of the information contained herein may be reproduced or disclosed to any person under any circumstances without express written permission.

MARKET: United States

SECTOR: Healthcare

INDUSTRY: Biotechnology



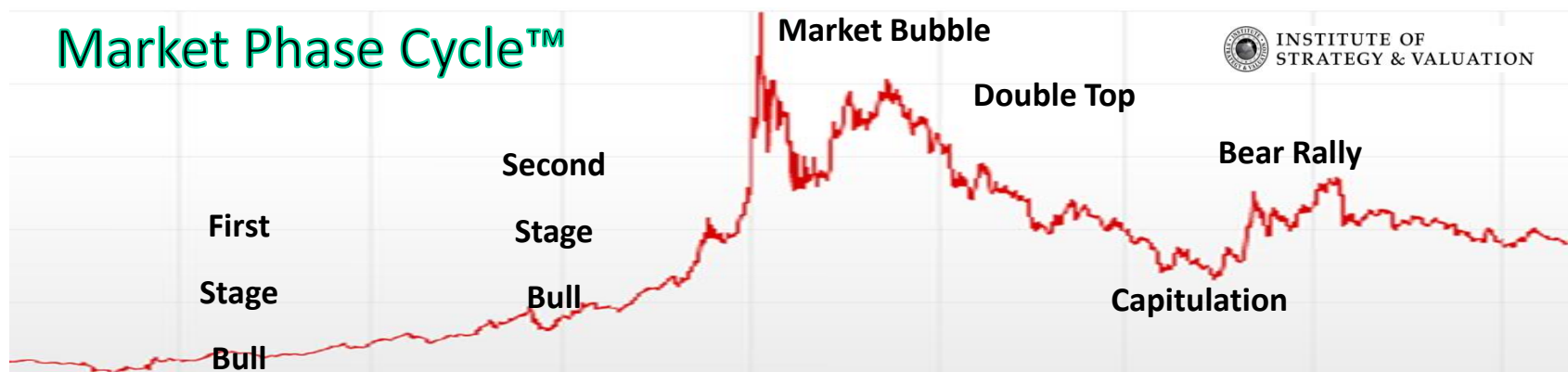
	Ticker	Company Name	ROA'	V/A'
✓	PFE	Pfizer Inc.	12.5%	1.91x
✓	JNJ	Johnson & Johnson	16.7%	2.74x
✓	ABT	Abbott Laboratories	16.0%	3.14x
✓	BSX	Boston Scientific Corporation	18.3%	4.42x
✓	BDX	Becton, Dickinson and Company	18.5%	3.34x
✓	AGN	Allergan plc	36.0%	8.19x
✓	GILD	Gilead Sciences Inc.	73.2%	3.85x

PRIVATE AND CONFIDENTIAL: This document is confidential and contains proprietary information. Neither the document nor any of the information contained herein may be reproduced or disclosed to any person under any circumstances without express written permission.

Market Phase Cycle™



INSTITUTE OF
STRATEGY & VALUATION



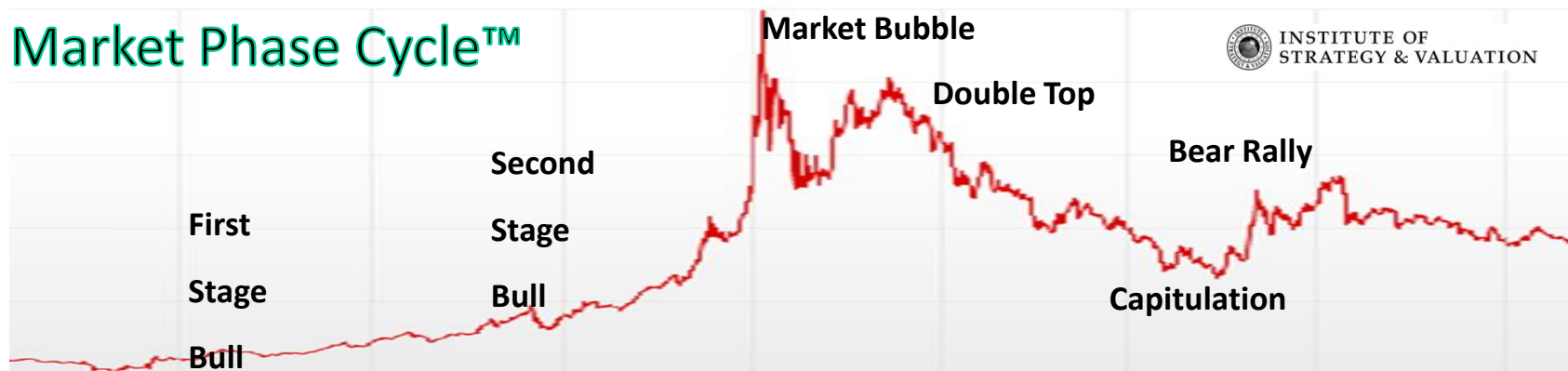
BULL CYCLE

BEAR CYCLE

Market Phase Cycle™

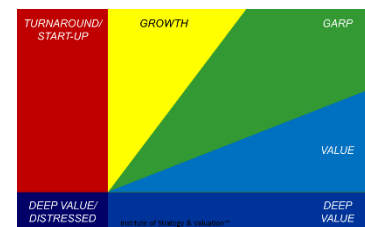


INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE

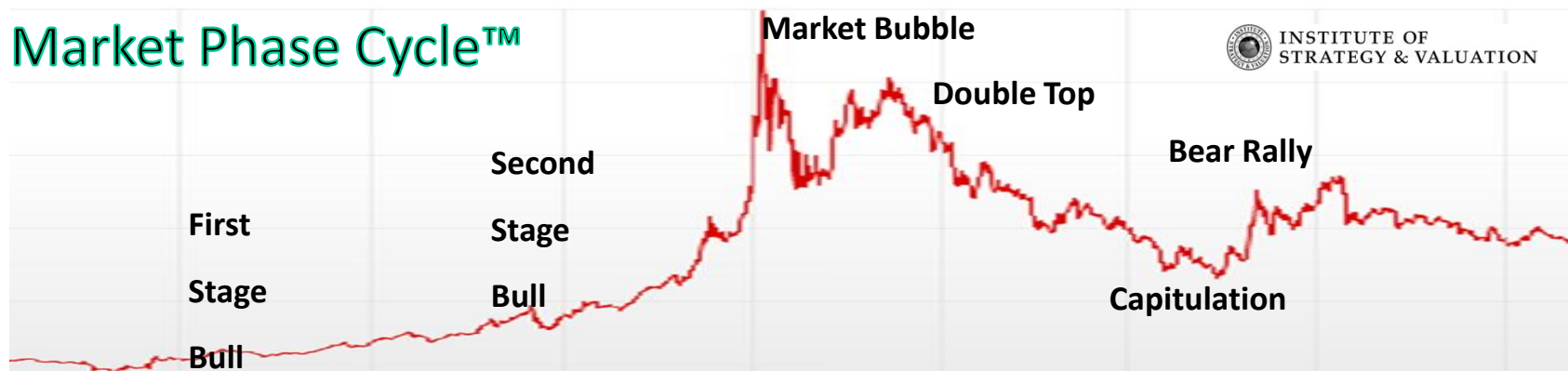


INVESTMENT STYLES

Market Phase Cycle™



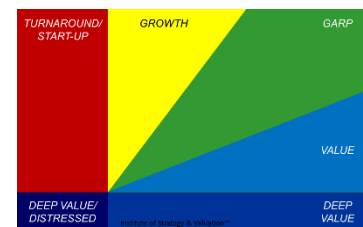
INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE

VALUE

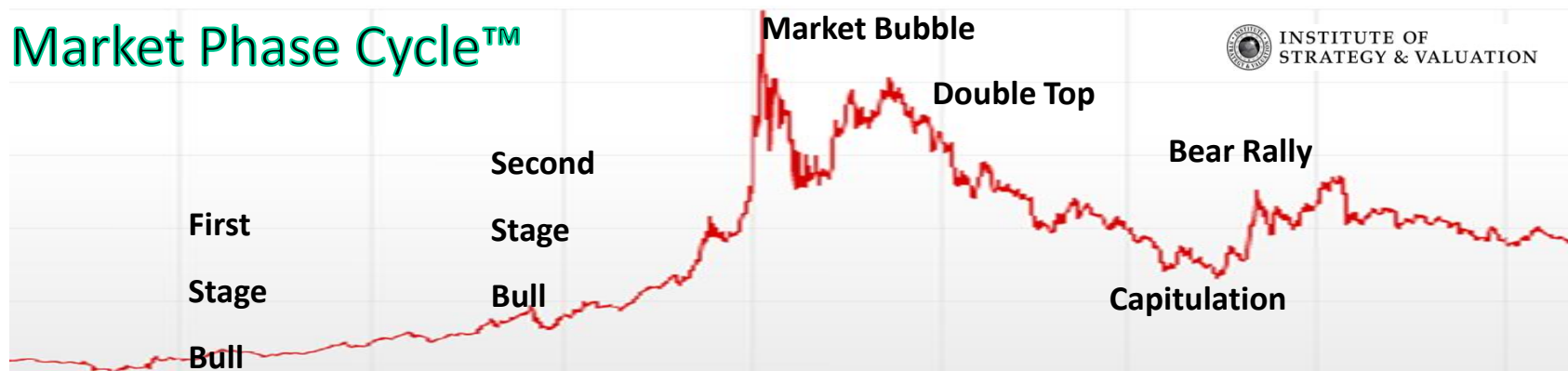


INVESTMENT STYLES

Market Phase Cycle™

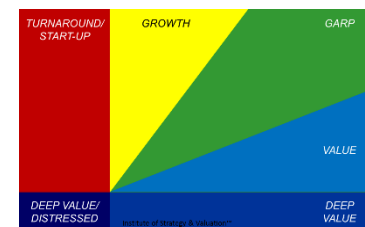
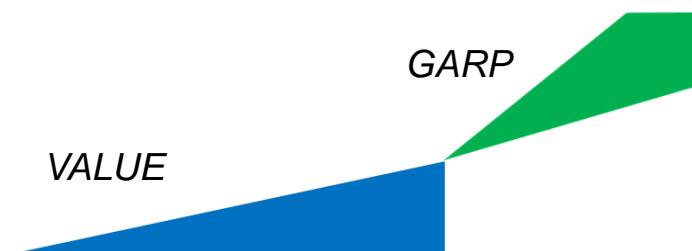


INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE

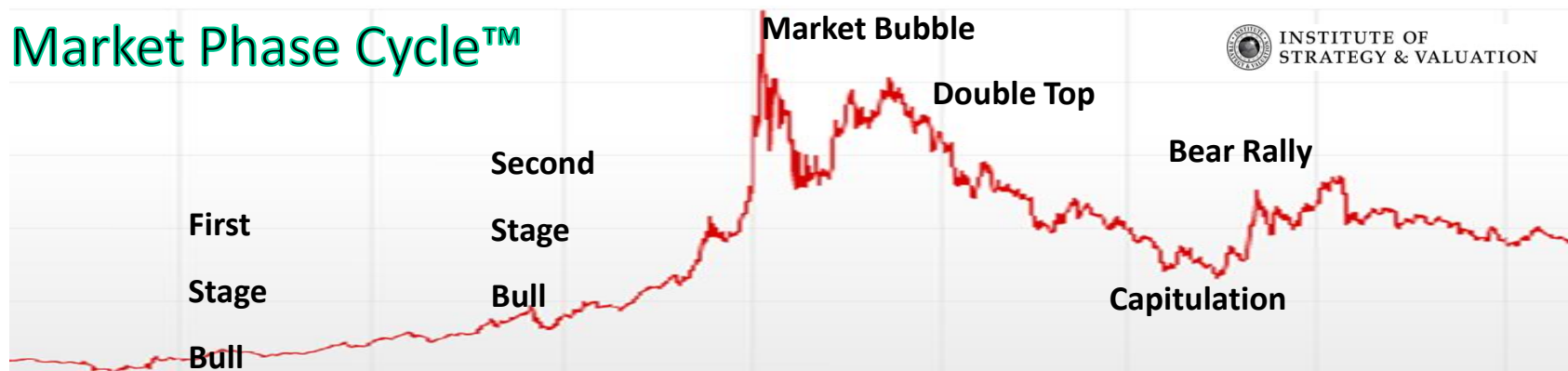


INVESTMENT STYLES

Market Phase Cycle™

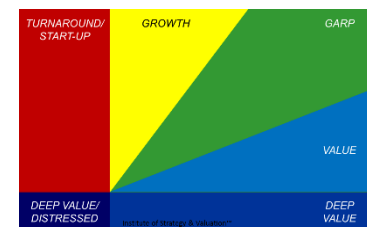
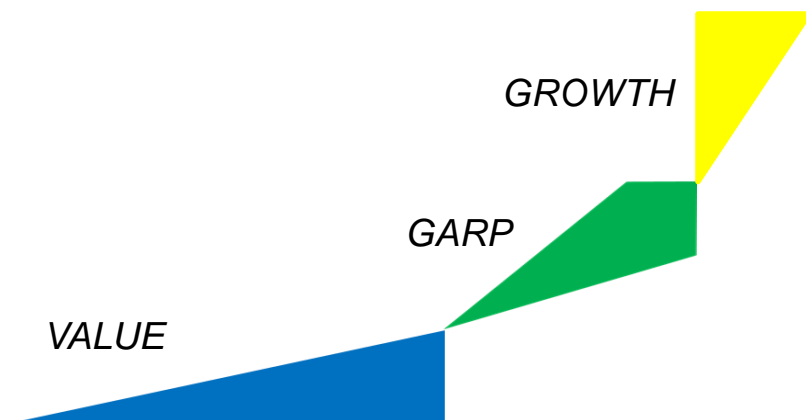


INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE

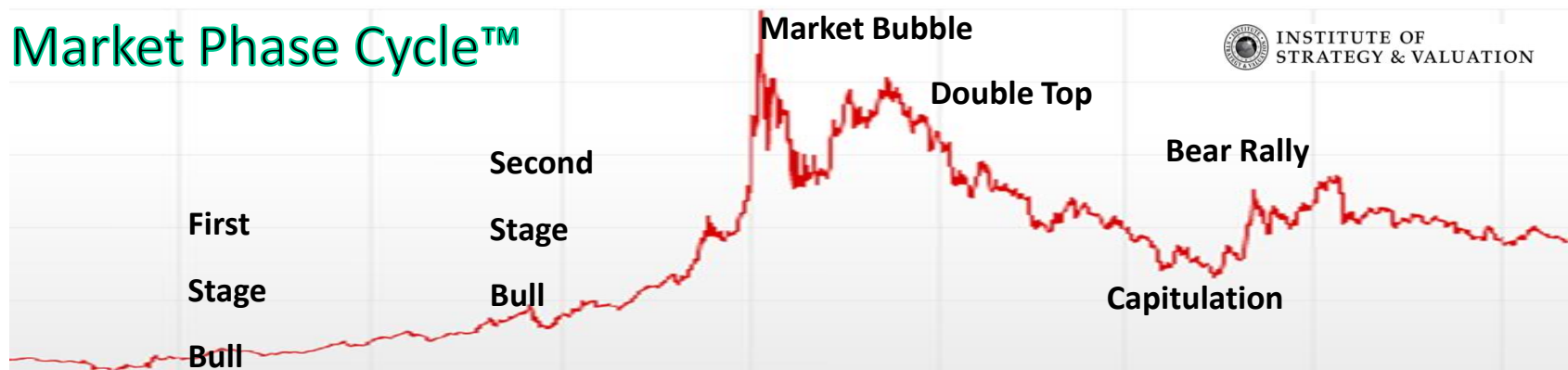


INVESTMENT STYLES

Market Phase Cycle™

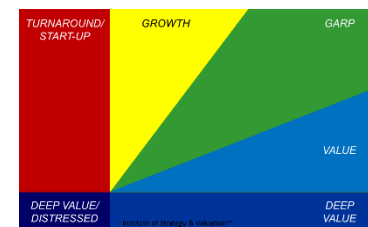
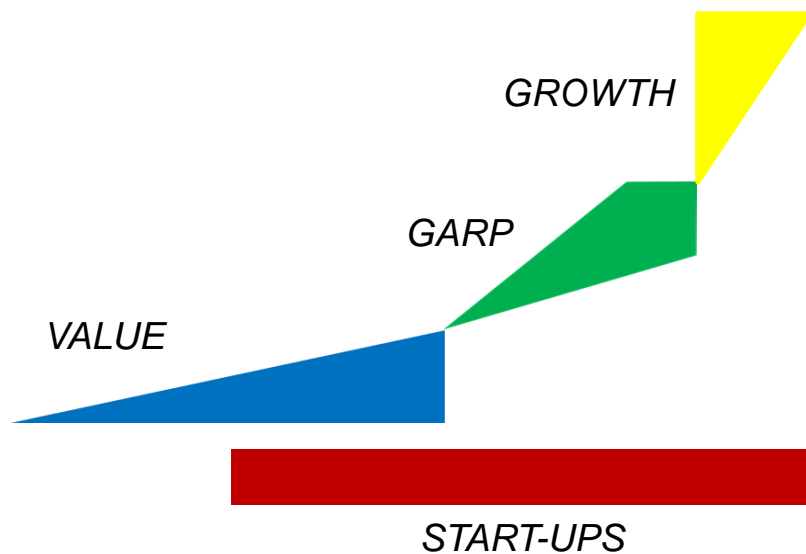


INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE

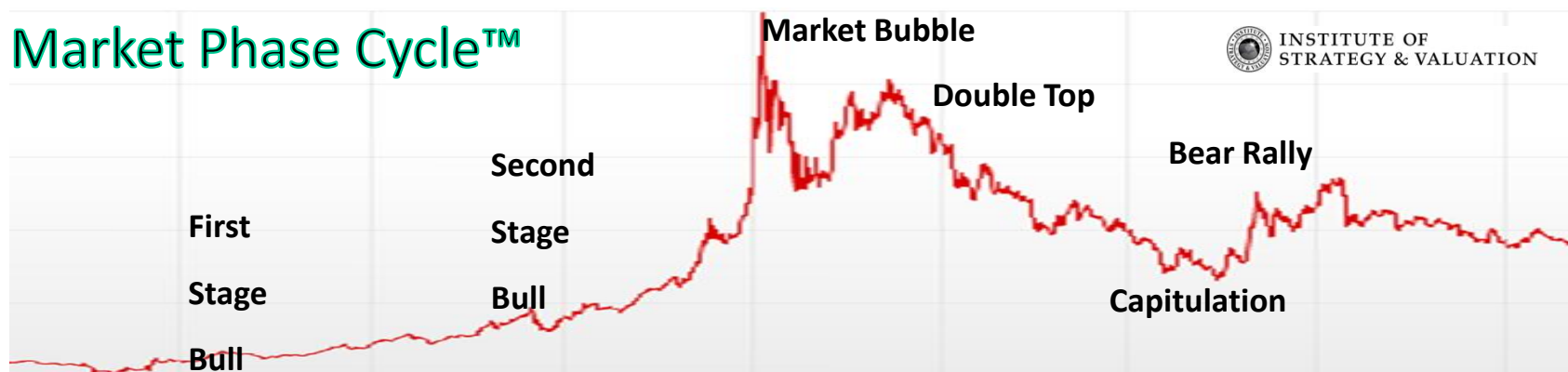


INVESTMENT STYLES

Market Phase Cycle™

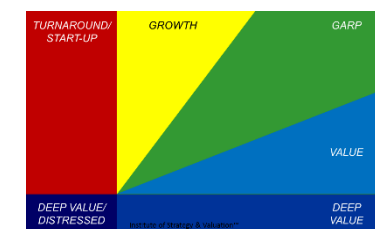
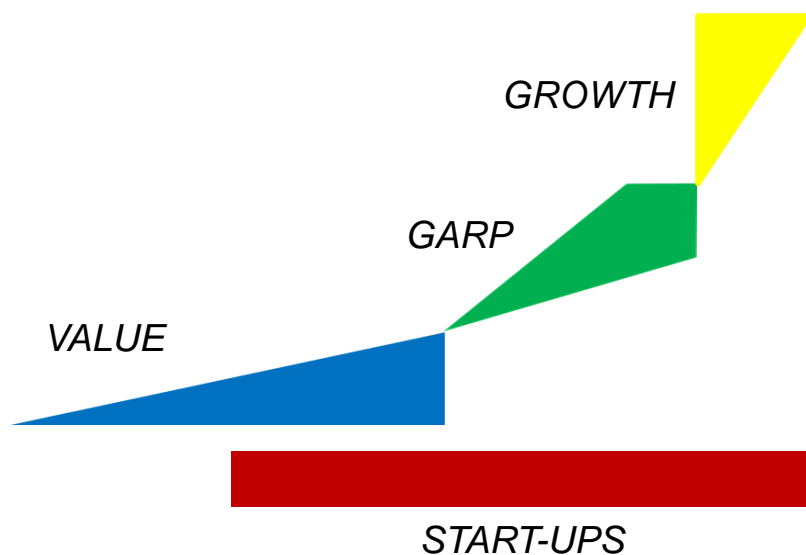


INSTITUTE OF
STRATEGY & VALUATION



BULL CYCLE

BEAR CYCLE



INVESTMENT STYLES

VALENS RESEARCH



Relative Valuation – Valuation Drivers

Joel Litman
June 2016

Valens Securities
425 5th Avenue, New York, New York 10016
joel.litman@valens-securities.com

PRIVATE AND CONFIDENTIAL: This document is confidential and contains proprietary information. Neither the document nor any of the information contained herein may be reproduced or disclosed to any person under any circumstances without express written permission.

Other drivers (when does ROA not drive valuation levels?)

- Start-ups
- Firms in deep trouble
- Importance of credit health (or liquidation values)
- High growth firms (supposed Einstein principle)
- The middle to end of a bull market
- ROA' change versus ROA' level

The Ease of Valuing Gearing

How much does P go up, when V goes up?

How much does P go down, when V goes down?

2015E ROA' and V/A' - U.S. Broad Market

