



# Telecommunication Sector



Joy Leng  
Kevin Min  
03/28/2017



# Agenda

- Overview
- Business Analysis
- Economic Analysis
- Financial Analysis
- Valuation Analysis
- Recommendation



# Overview

Overview

Business Analysis

Economic Analysis

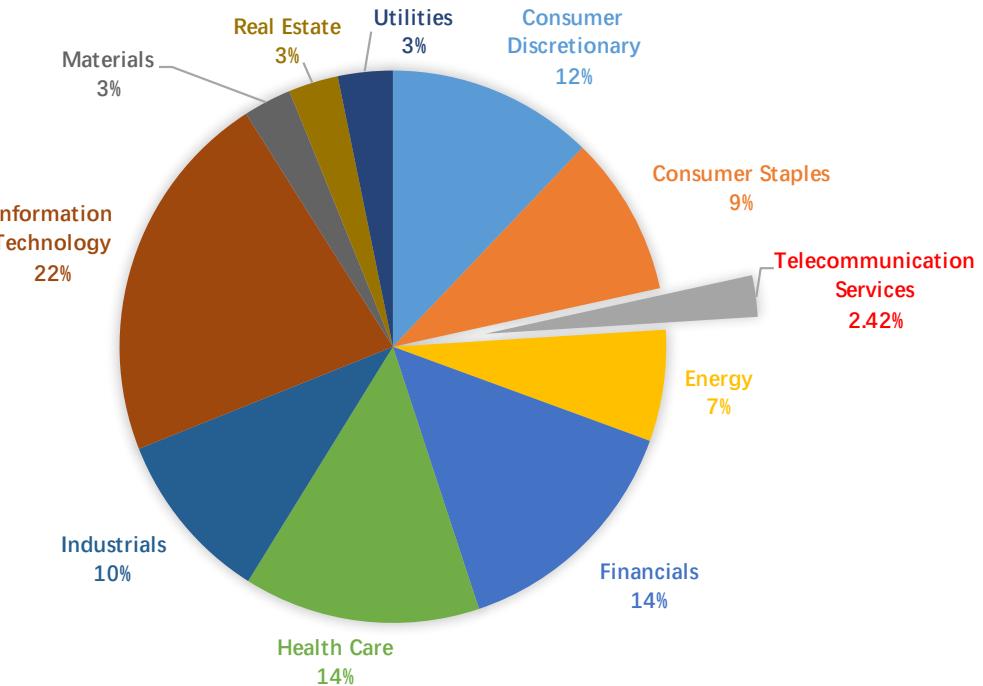
Financial Analysis

Valuation Analysis

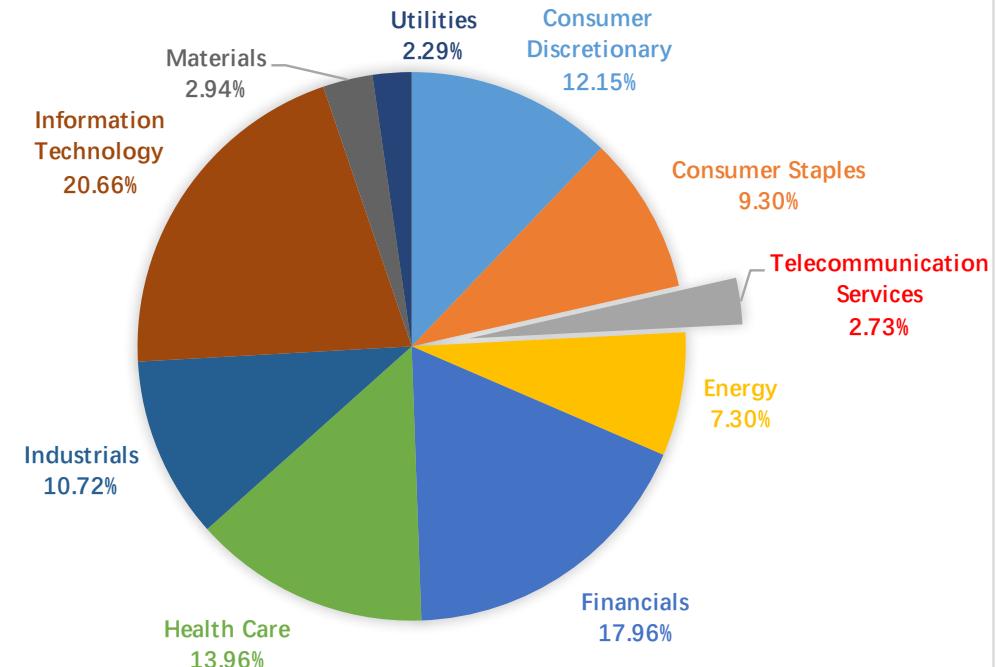
Recommendation



### S&P 500



### SIM



- **Telecom Sector Market Cap:**  
1.86 T (03/24/2017)
- **S5TELS Market Cap:** 489 B (03/24/2017)
- **2.42% of S&P 500**

- **SIM Securities Value:** \$10,733,155.78
- **2.73% of SIM**



**Wireline  
Telecommunication  
Service**

**Level(3)<sup>®</sup>**  
COMMUNICATIONS

 CenturyLink<sup>®</sup>

 **Frontier<sup>™</sup>**  
COMMUNICATIONS

**Wireless  
Telecommunications  
Service**

 **T-Mobile Sprint**

 **U.S. Cellular<sup>®</sup>**

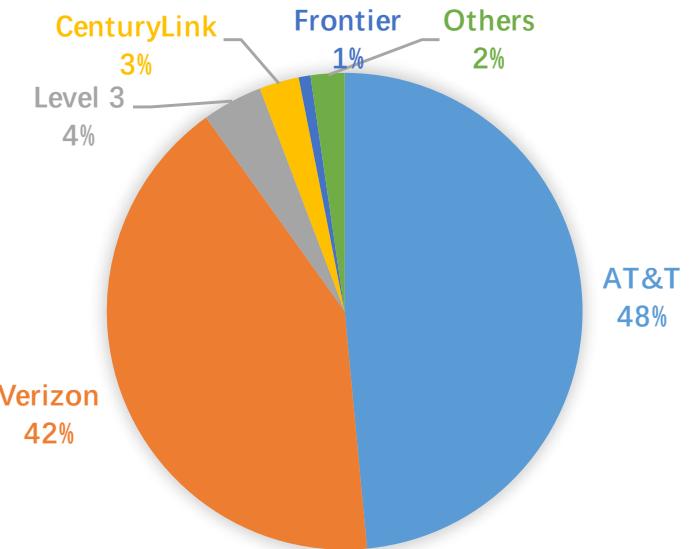
**Integrated  
Telecommunication  
Service**

 **at&t**

 **verizon**

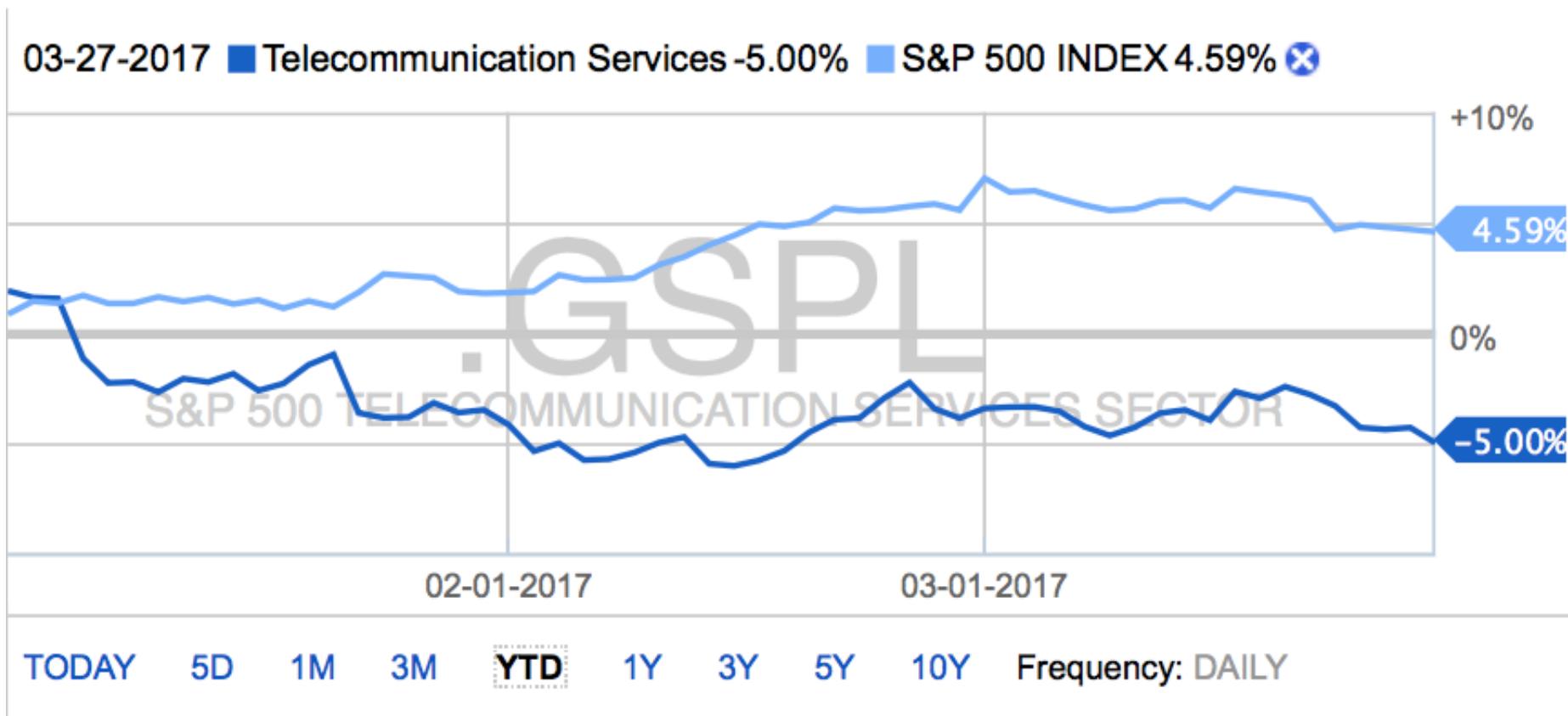


Company Name	Ticker Symbol	Market Cap (Billion)	Beta	Current Price(US\$)
AT&T	T	255.98	0.43	41.68
Verizon	VZ	202.53	0.59	49.68
T-Mobile	TMUS	53.04	0.21	64.17
Sprint	S	33.89	0.6	8.50
Level 3	LVLT	20.21	1.02	56.12
CenturyLink	CTL	12.44	0.83	22.76





- **Year-To-Date**



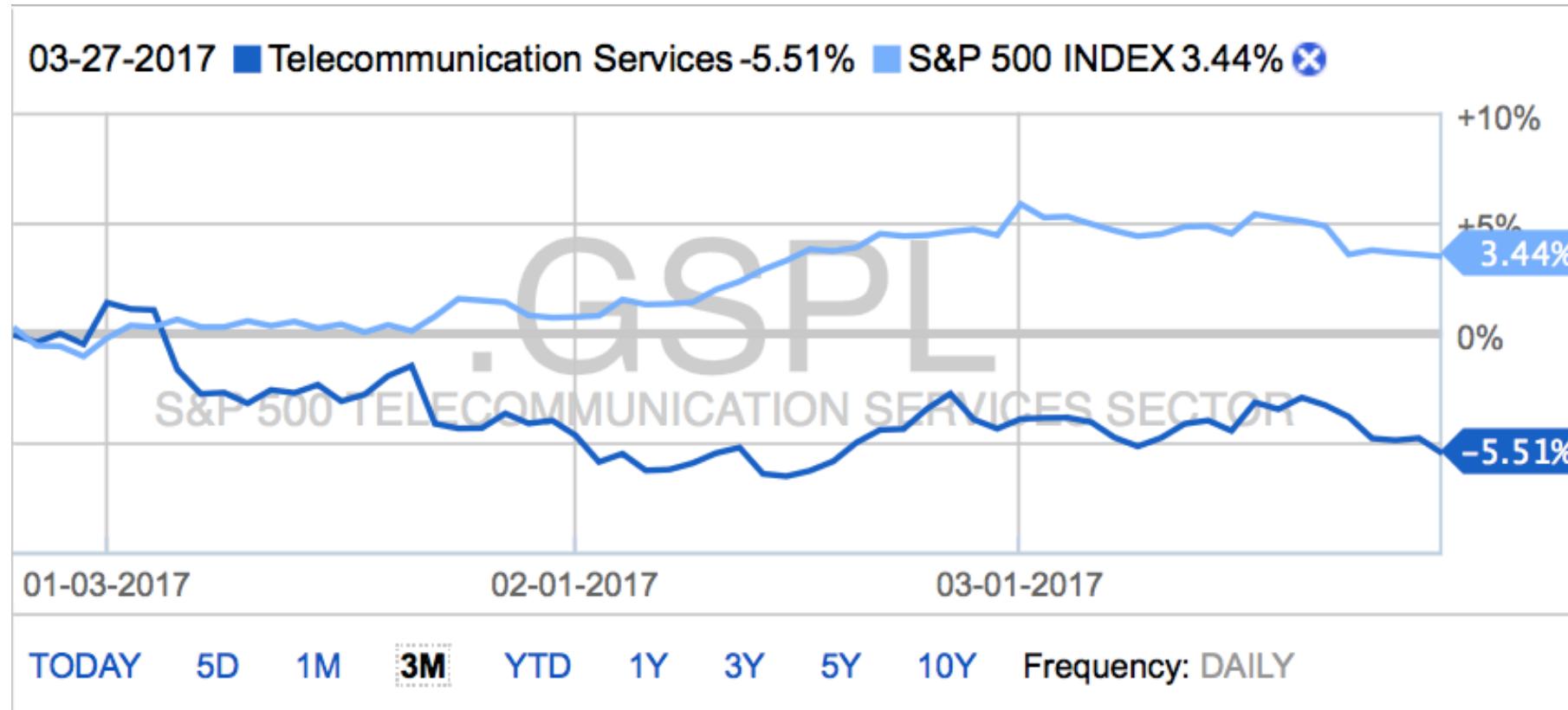
Telecom:  
Dividend Yield:  
4.3%  
YTD: -5.00%

S&P 500  
YTD: 4.59%

Underperformed



- *Quarter-To-Date*



Telecom:  
QTD: -5.51%  
  
S&P 500  
YTD: 3.44%  
  
Underperformed



# Business Analysis

Overview

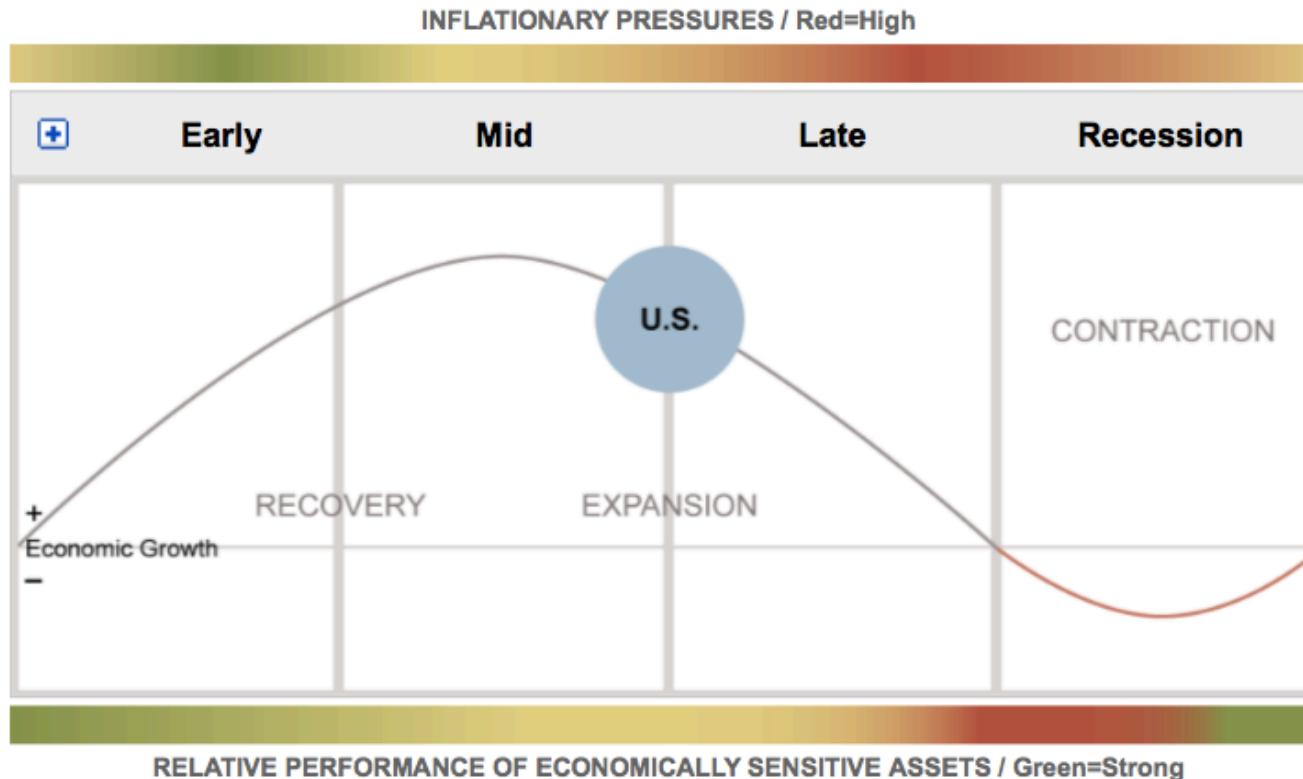
Business Analysis

Economic Analysis

Financial Analysis

Valuation Analysis

Recommendation

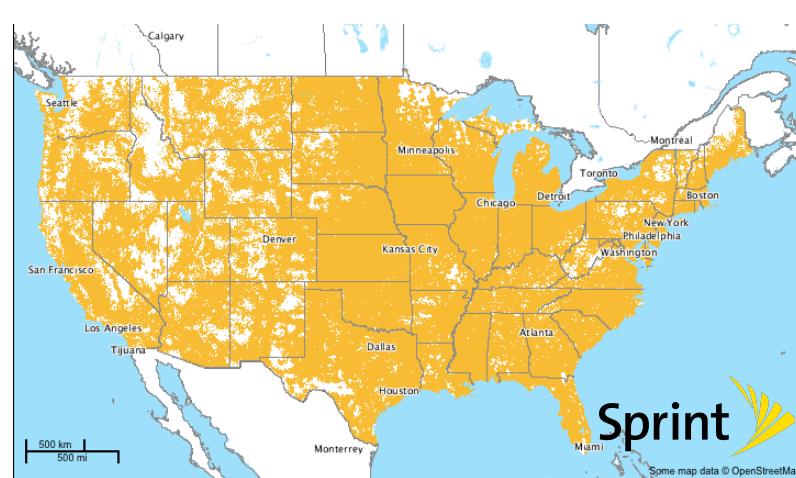
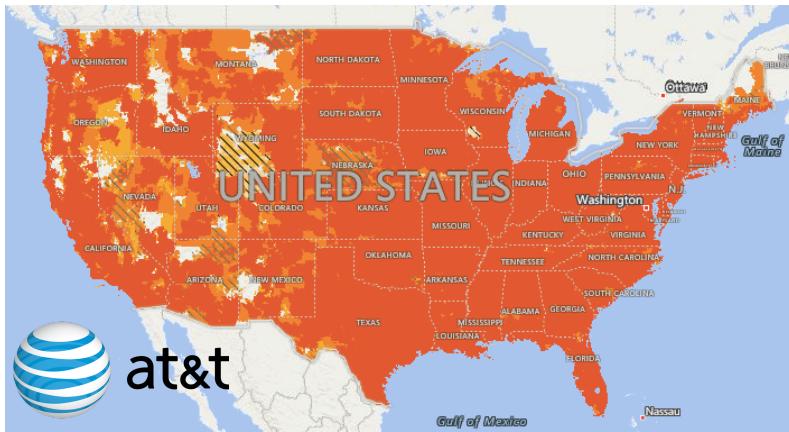
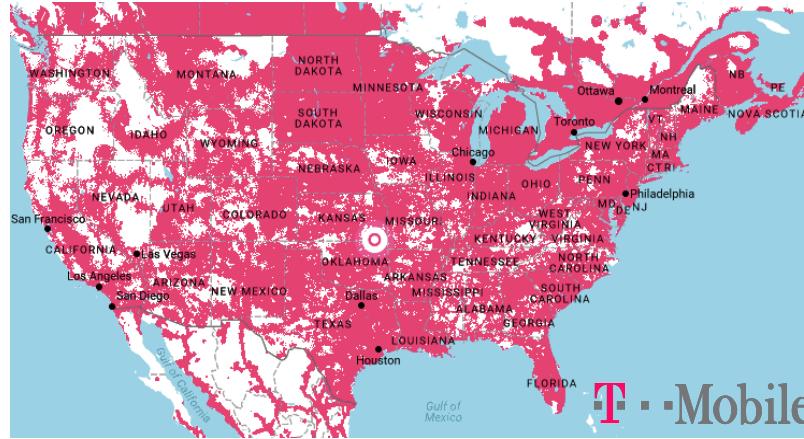
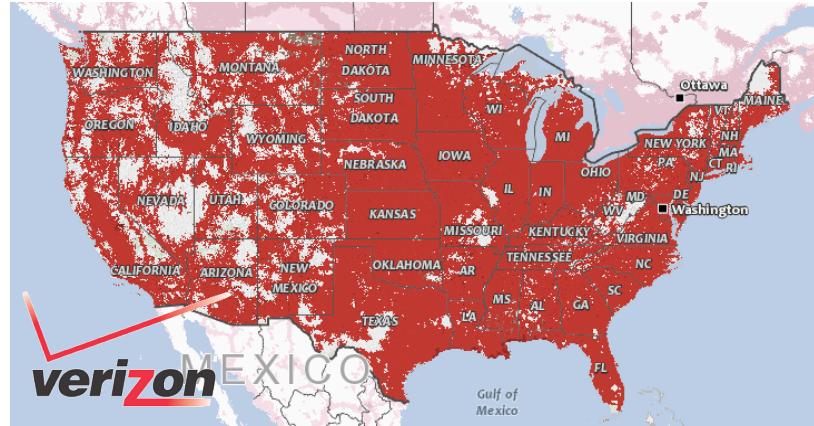


Source: Fidelity

### Sector Performance by Business Cycle Phase

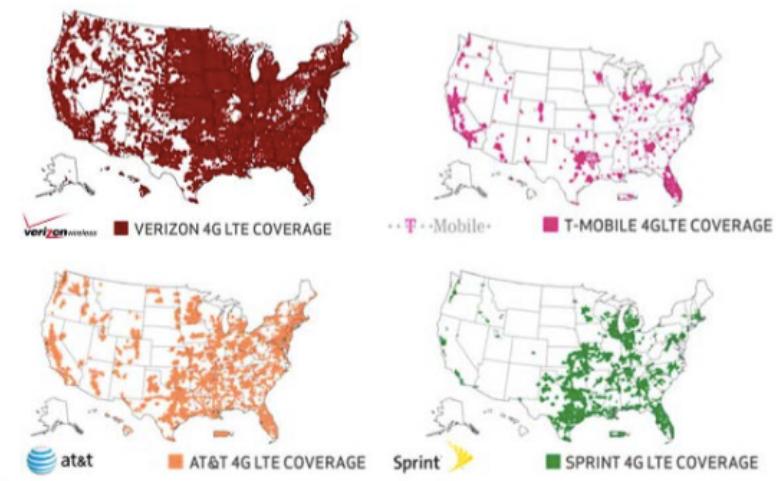
Sector	Early	Mid	Late	Recession
Telecom	--			++
	++ Consistently Overperform	— Consistently Underperform	No Clear Pattern	
	+ Overperform	- Underperform		

- **No clear pattern**
- **Comparably defensive**
- **High dividend yield**
- **Customers mainly domestic**



- **4G LTE Coverage Map 2017**

(Picture Sources: company website)

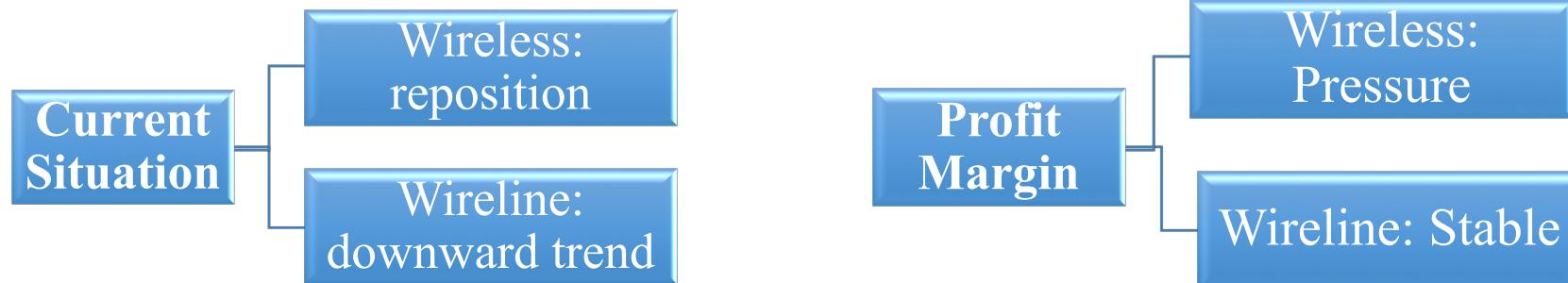


Source: 2016 SIM Telecom Sector Presentation



## *Industry Trend*

- Acquisition:  
AT&T with Time Warner. Sprint and T-Mobile
- Wireline and Wireless Industry:



- 5G Expansion





## *Porter's Five Forces*





# Economic Analysis

Overview

Business Analysis

Economic Analysis

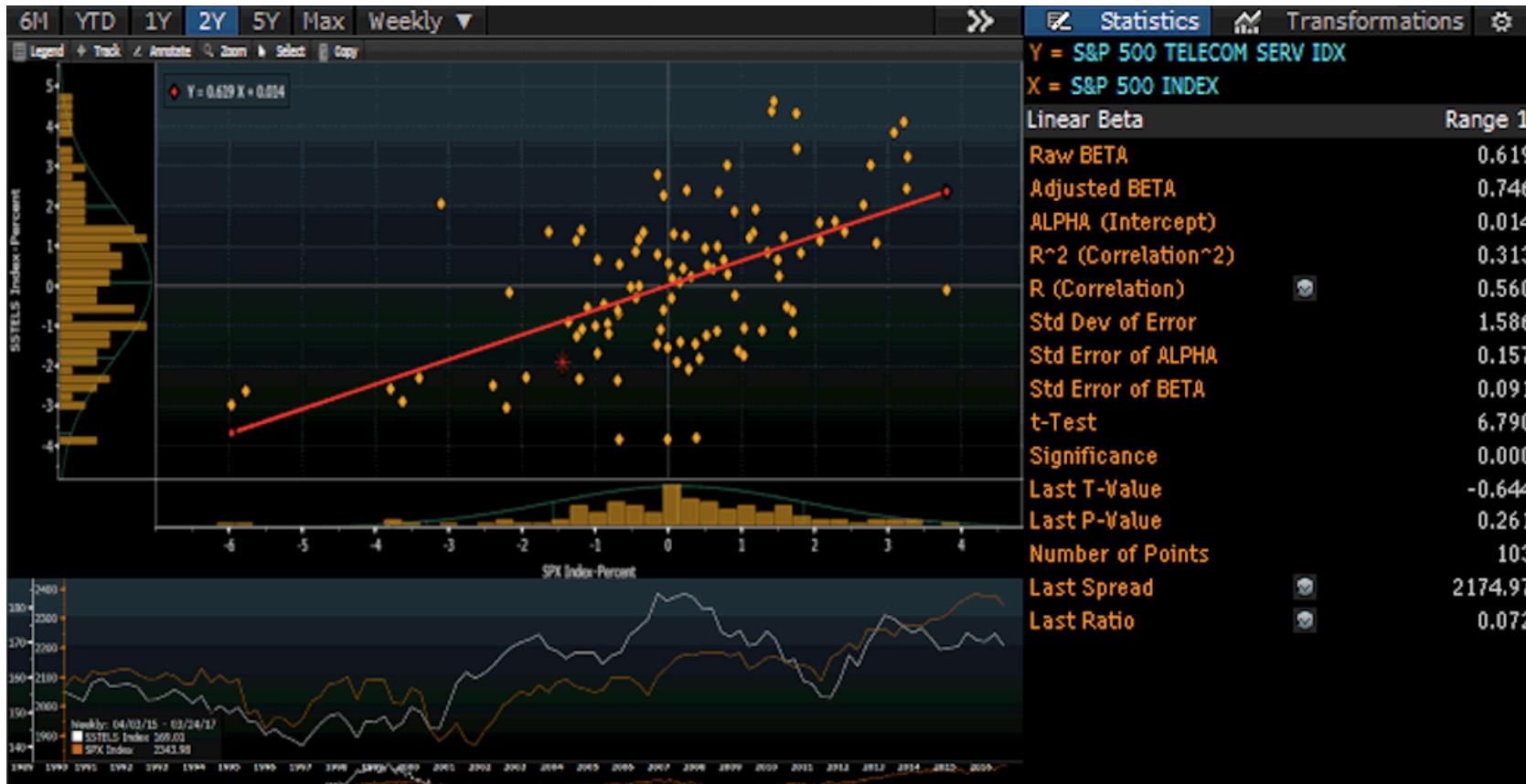
Financial Analysis

Valuation Analysis

Recommendation



- **SPX and S5TELS** (Source: Bloomberg)





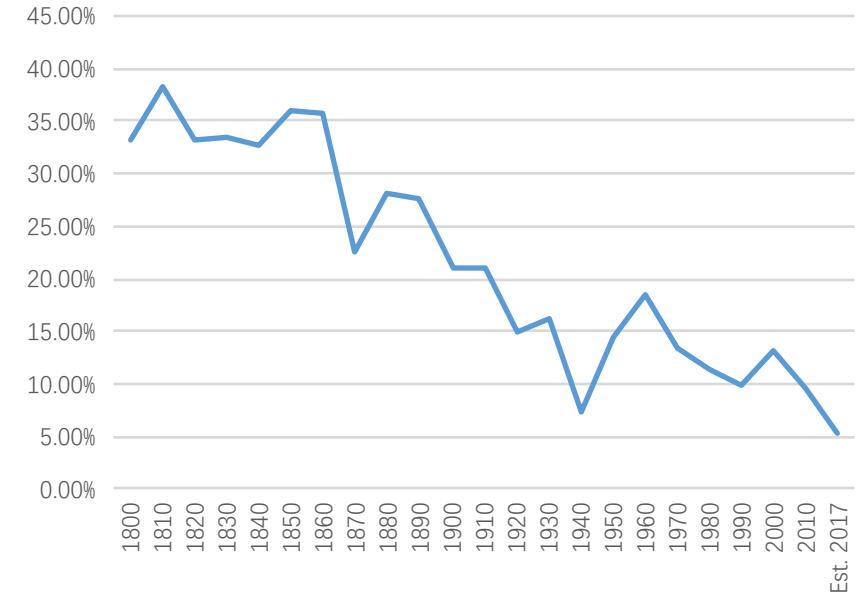
- *Interest rate*

FRED  Effective Federal Funds Rate  
10-Year Treasury Constant Maturity Rate



Source: United States Census Bureau

- *Demographics*



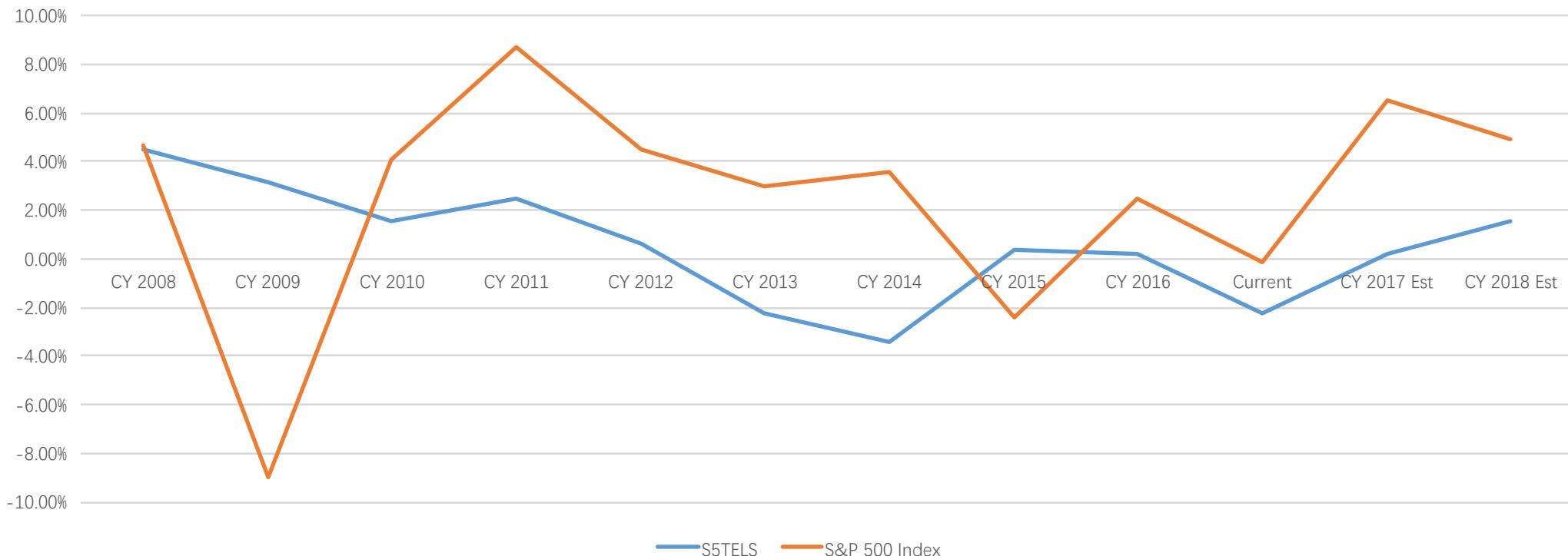


# Financial Analysis



- *Sales Growth: Sector vs. S&P500*

Sales Growth %: S5TELS vs SP500





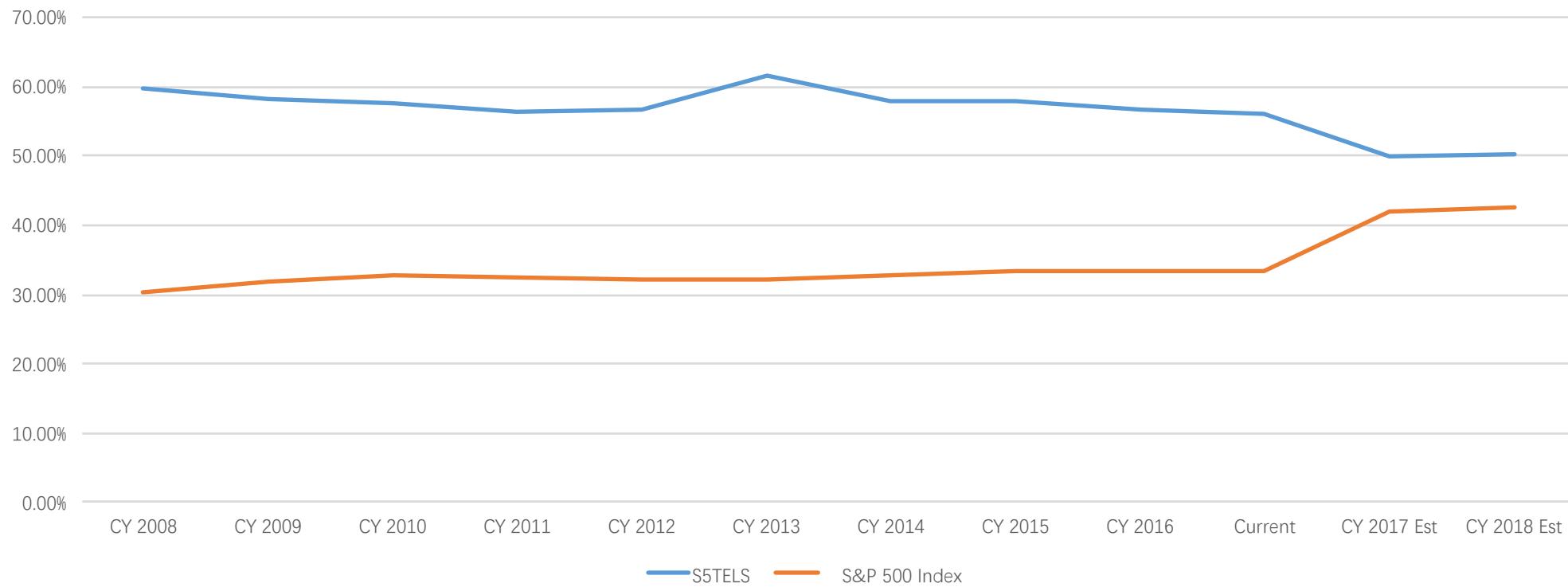
- *Sales Growth: Key Firms (Verizon and AT&T)*





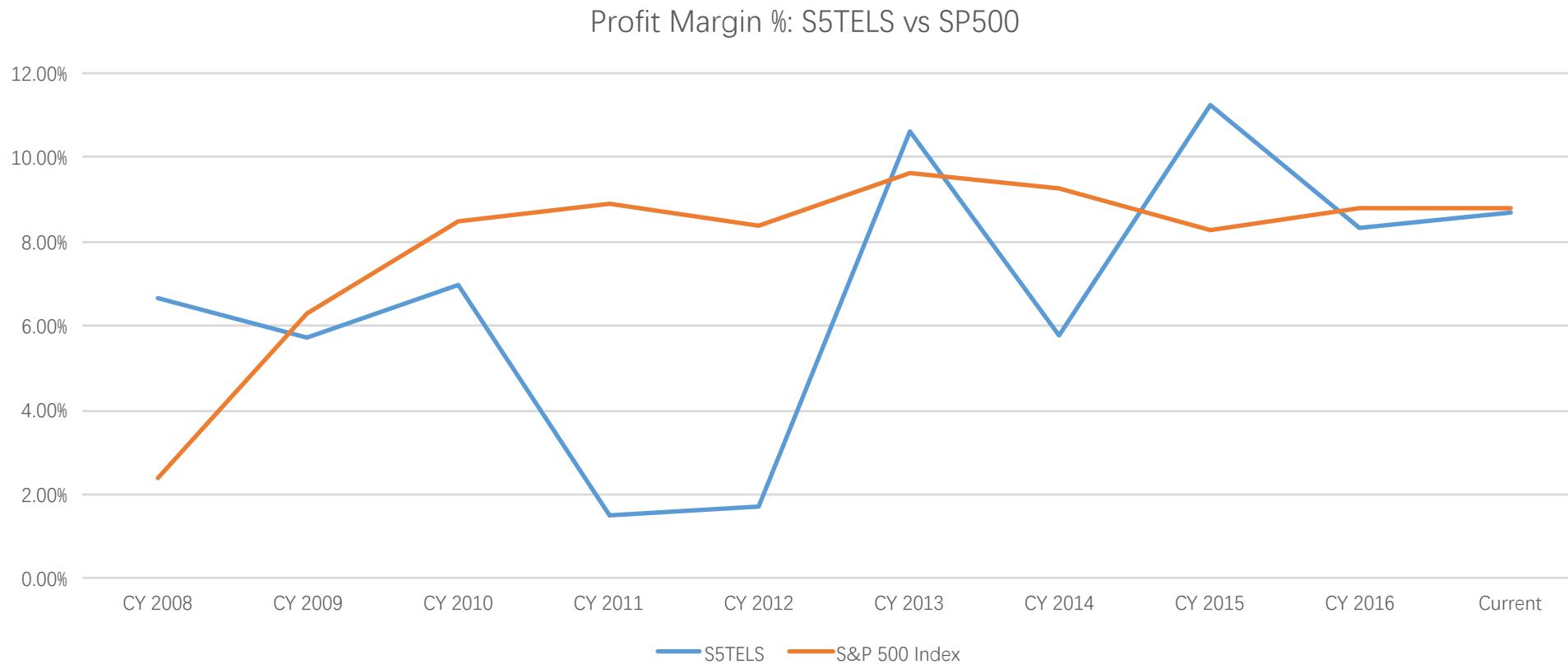
- *Gross Margin: Sector vs. S&P 500*

Gross Margin %: Sector vs SP500



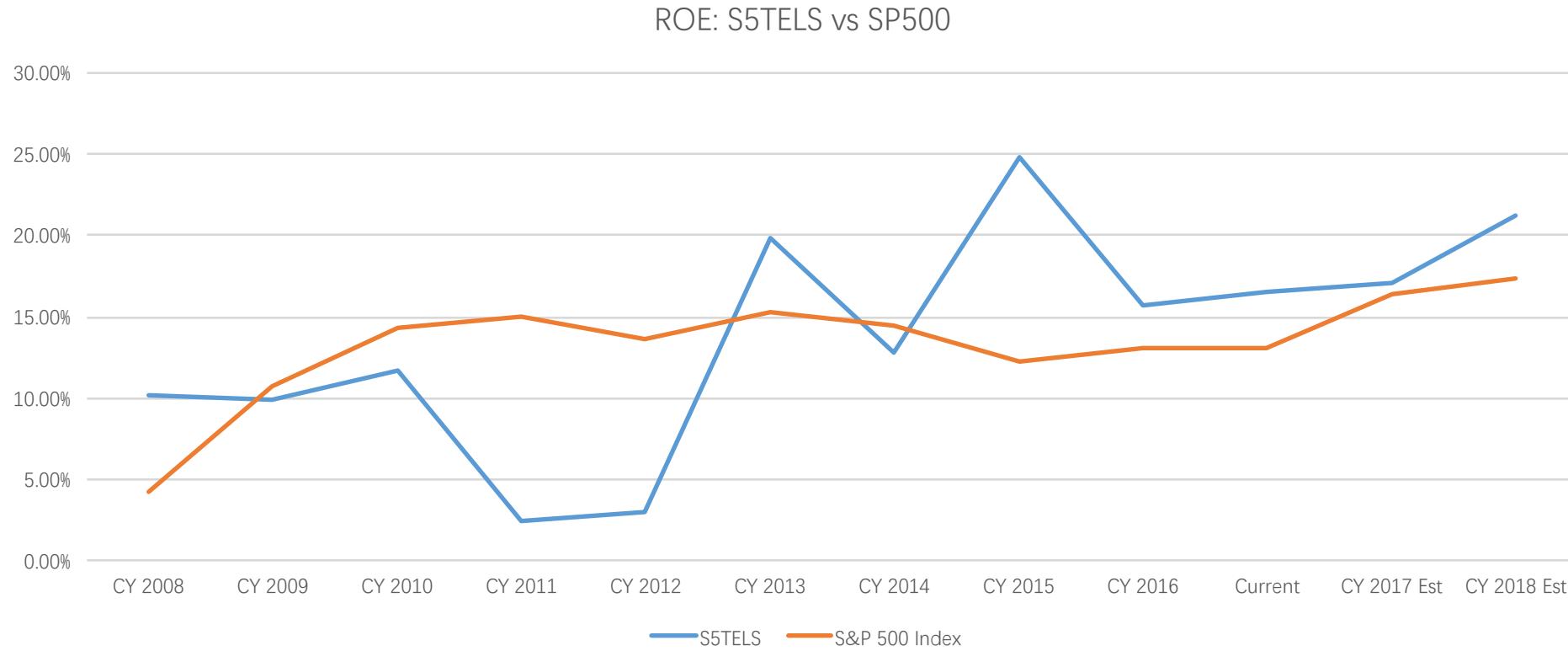


- *Profit Margin: Sector vs. S&P 500*



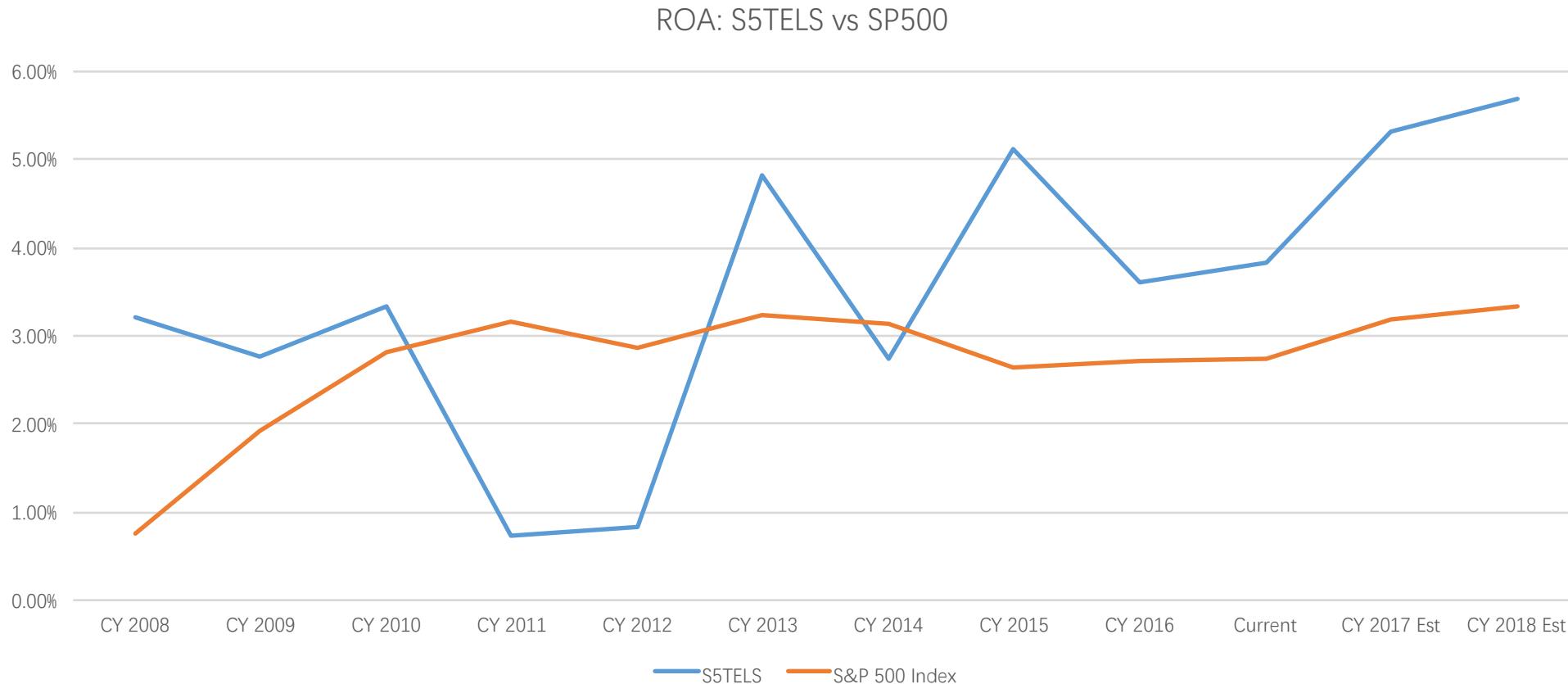


- *Return on Equity: Sector vs. S&P500*



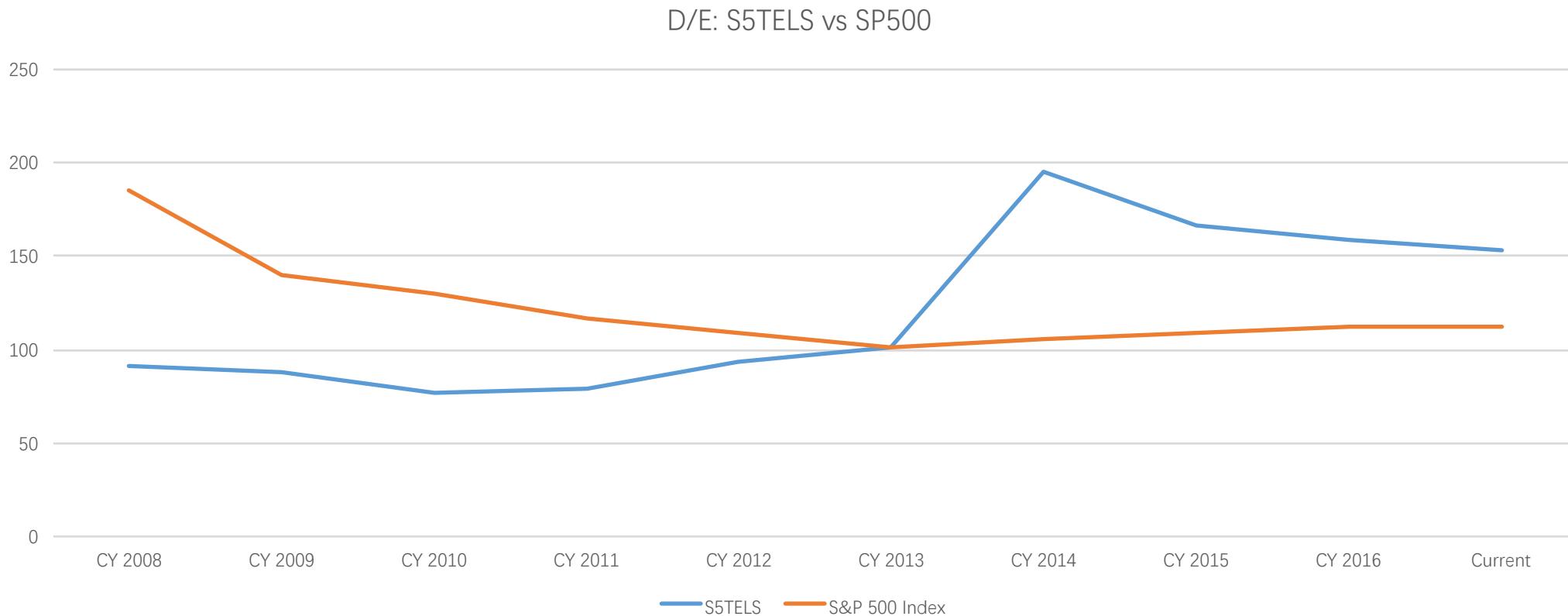


- *Return on Assets: Sector vs. S&P500*





- *Leverage (Debt to Equity): S5TELS vs. S&P 500*





# Valuation Analysis



- *Valuation Ratios*

Absolute Basis	High	Low	Median	Current
P/E	22.55	8.94	15.72	16.23
P/B	3.63	1.24	2.16	2.88
P/S	1.93	0.81	1.31	1.55
P/EBITDA	5.89	2.46	4.18	4.77

Relative to SP500	High	Low	Median	Current
P/E	1.48	0.53	0.90	0.75
P/B	1.32	0.69	0.89	0.93
P/S	1.23	0.70	0.85	0.75
P/EBITDA	0.81	0.34	0.52	0.42



- $P/E$





- $P/B$





- $P/S$





- *P/EBITDA*





- *Bollinger Bands*





- *Relative Strength Index*





# Recommendation



Current weight 2.73% (0.22% above S&P 500)

Securities Allocation			
Sector	S&P 500 Weight	SIM Weight	+/-
Information Technology	21.43%	20.66%	-0.77%
Financials	14.67%	17.96%	3.29%
Health Care	13.43%	13.96%	0.53%
Consumer Discretionary	12.27%	12.15%	-0.12%
Consumer Staples	9.23%	9.30%	0.07%
Industrials	10.33%	10.72%	0.39%
Energy	7.30%	7.30%	0.00%
Utilities	3.08%	2.29%	-0.79%
Materials	2.94%	2.94%	0.00%
Telecommunication Services	2.51%	2.73%	0.22%
Real Estate	2.81%	0.00%	-2.81%
Total	100.00%	100.00%	0.00%



## HOLD recommendation

- Stay overweight
- Hedge against potential market downturn
- Potential for growth given FCC changes
- Relatively cheap





THE OHIO STATE UNIVERSITY

---

Telecommunication Services

