

# GUIDED TEAR SHEET

Union Pacific  
UNP

B / S	P / C / S	Strike	Exp.	Premium
Buy	Put	60	JAN '18	(\$0.93)

## IOI Tear Sheet : Union Pacific (UNP)

### Speculative Bearish Put (Low Conviction)

Data as of 27 April, 2016



#### IOI's Take

Railroads are institutional investor darlings (Buffet & BNSF, Ackman & CP), but if you didn't invest when they did (2010 & 2011, respectively), these trains have probably left the station. UNP operates as a monopoly or cozy duopoly partner to BNSF and is lightly regulated, meaning it has almost unrestrained pricing power thanks to implicit government support. Most increases from repricing have already been seen, meaning profit growth in future will slow. For most large cap cos, we use 10% discount rates; UNP is overvalued by this yardstick. Using a 9% discount rate (duopoly discount), UNP is fairly valued. 8% and it's a screaming buy. Value is dependent on gov't fiat.

#### Drivers

<b>Revenues</b>	Coal volumes in secular decline. Intermodal vols at risk from Panama canal. All else cyclical or steady. Proj: +5% (Best), 0% (Worst) thanks to continuing pricing power.
<b>Profitability</b>	Phenomenal! Mid- to High 20% OCP margin levels. Better than some tech firms...(ahem, IBM). Proj: 27% (B), 23% (W)
<b>Investment Level / Eff.</b>	45% of profits spent on cap improvements. Highly effective over last 5 years, less effective going forward. Proj (med-term growth): 7% (B), 5% (W)
<b>Balance Sheet</b>	Regulatory leniency adds billions or tens of billions to its value. This position can reverse, tho' hard to judge probly.

#### Valuation & Return

#### Valuation Uncertainty: High

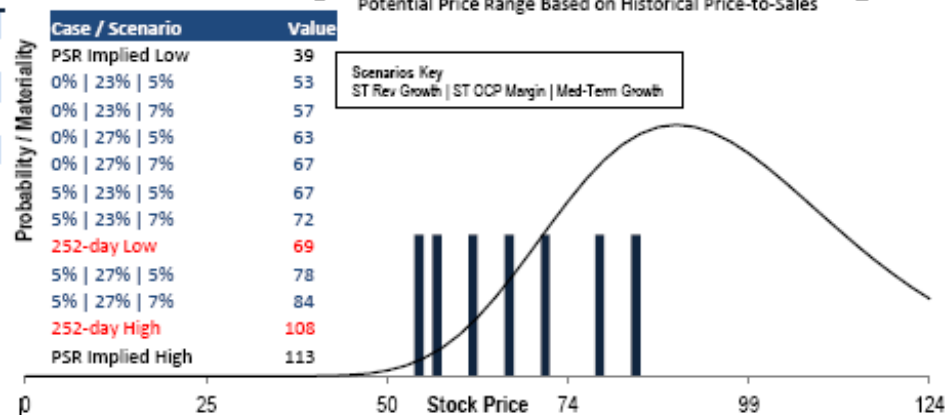
	Low	Likely	High
<b>Stock Fair Value (\$)</b>	53	69	84
<b>Stock Return (%)</b>	-40	-23	-6
<b>Option Period Return (%)</b>	653	-100	-100
<b>Option Annual Return (%)</b>	1479	-100	-100

#### Historical Metrics

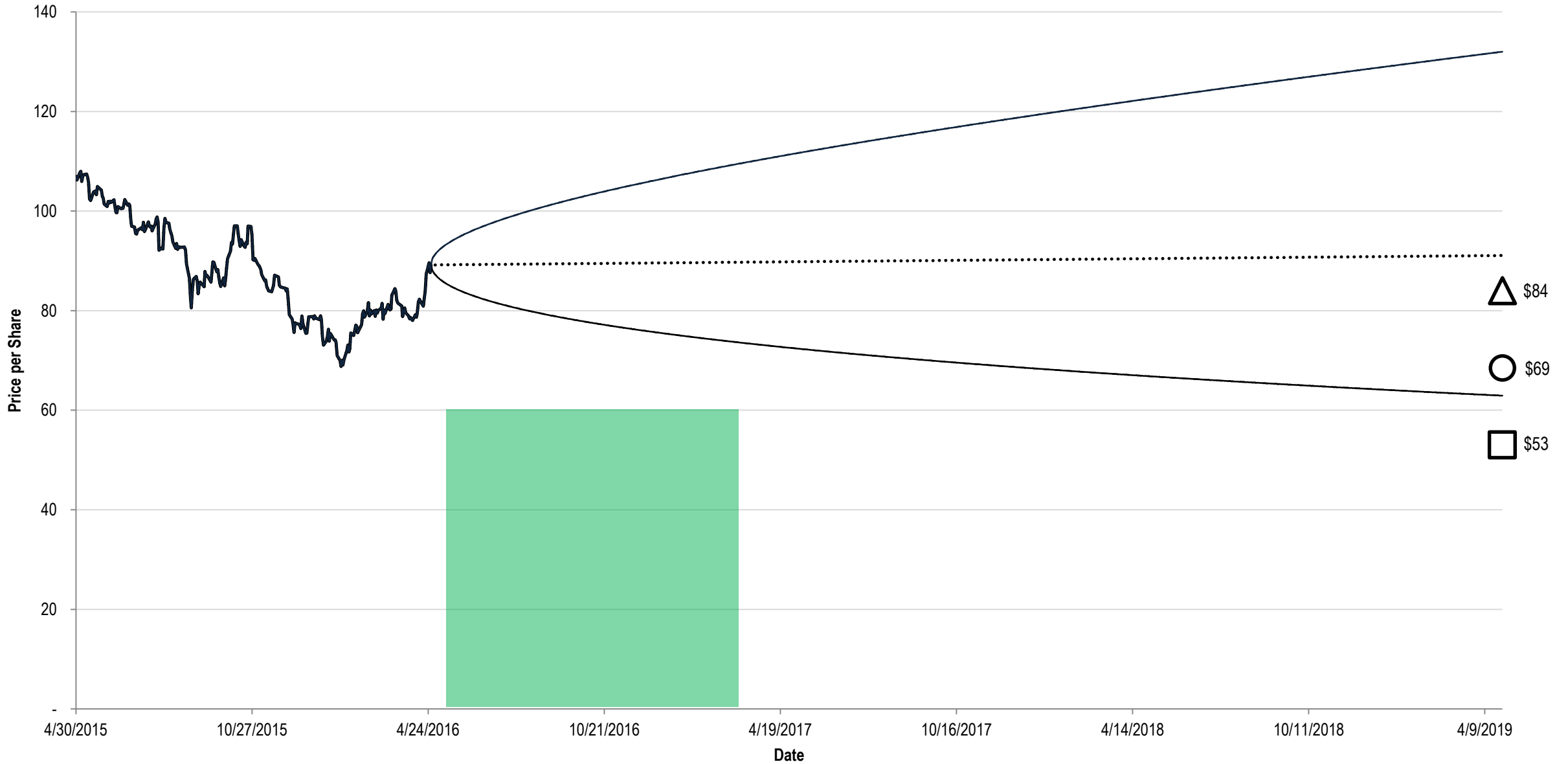
#### Market Risk

	Historical Median	
	5-year	10-year
Revenue Growth (%)	7	7
Profit Margin (%)	23	21
Med-term Growth	High	High

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Med-term Growth	High	High

#### Market Risk

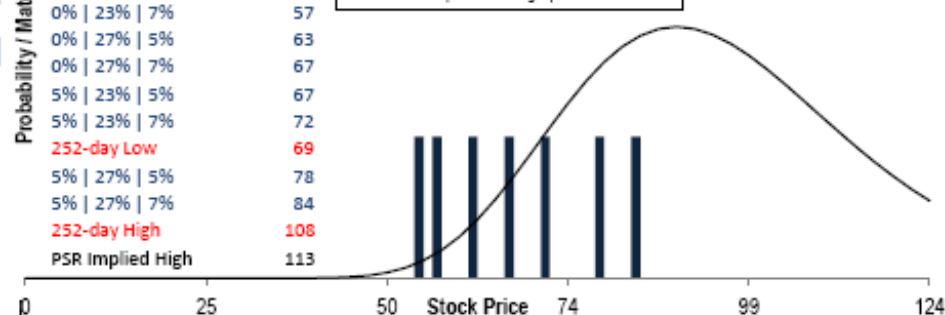
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Case / Scenario	Value
PSR Implied Low	39
0%   23%   5%	53
0%   23%   7%	57
0%   27%   5%	63
0%   27%   7%	67
5%   23%   5%	67
5%   23%   7%	72
<b>252-day Low</b>	<b>69</b>
5%   27%   5%	78
5%   27%   7%	84
<b>252-day High</b>	<b>108</b>
PSR Implied High	113

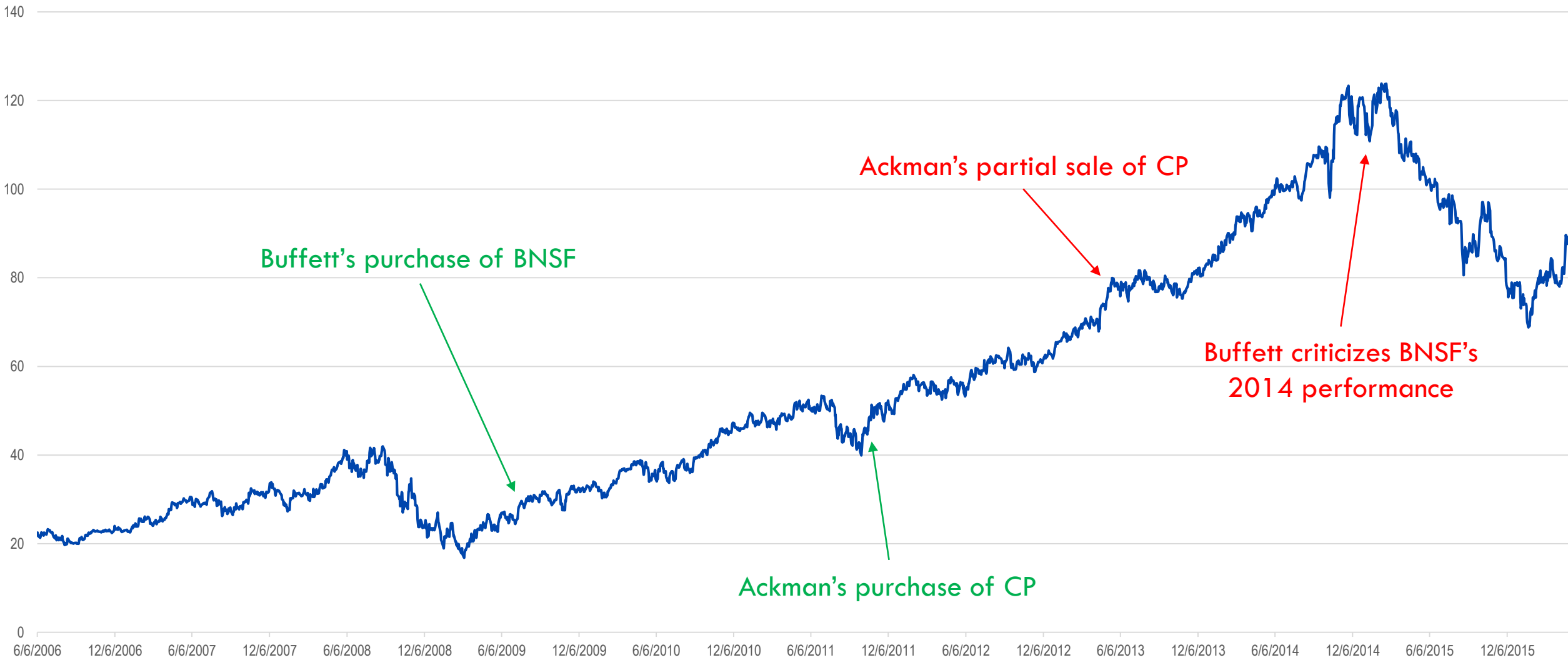
Probability / Materiality

Potential Price Range Based on Historical Price-to-Sales

Scenarios Key  
ST Rev Growth | ST OCP Margin | Med-Term Growth



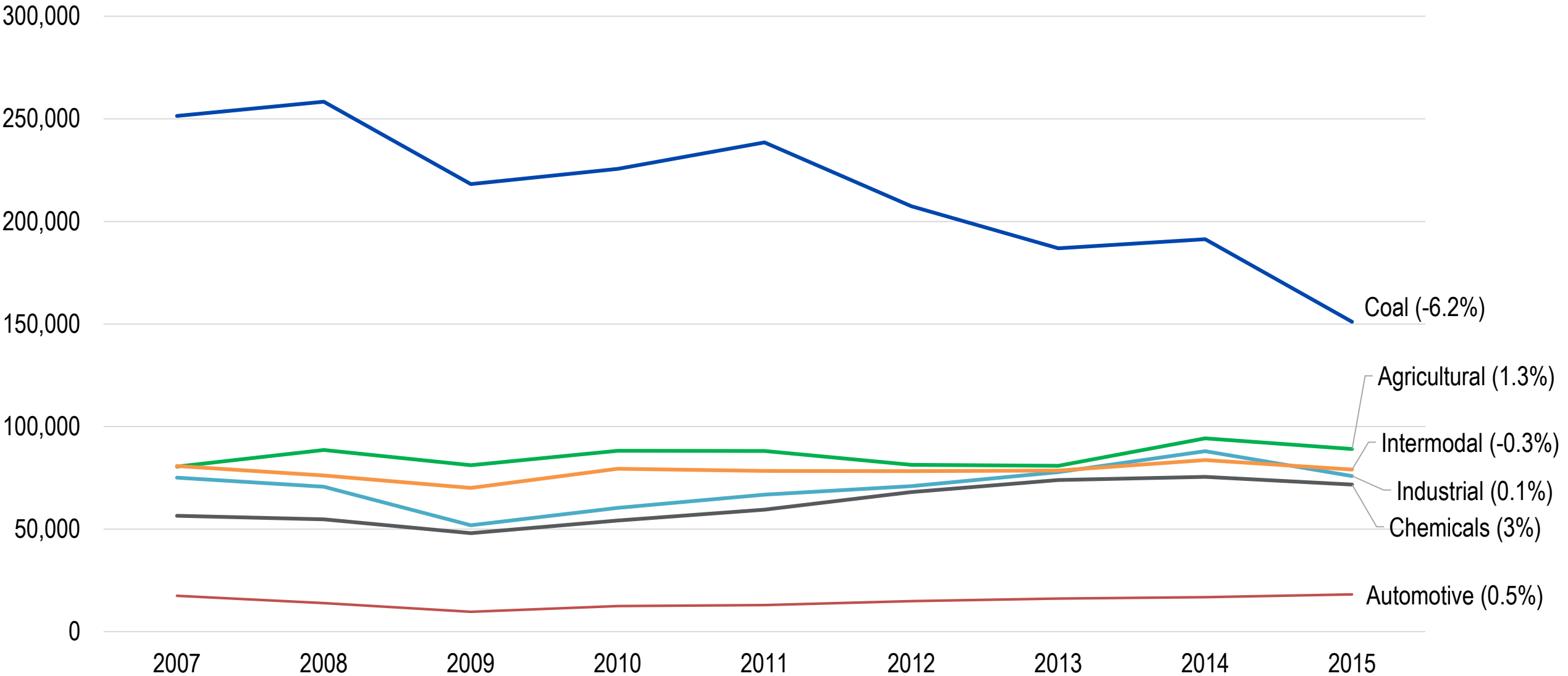
# Railroads have been a hedge fund darling



# Revenues - Volume

## Revenue Ton Miles by Freight Classification

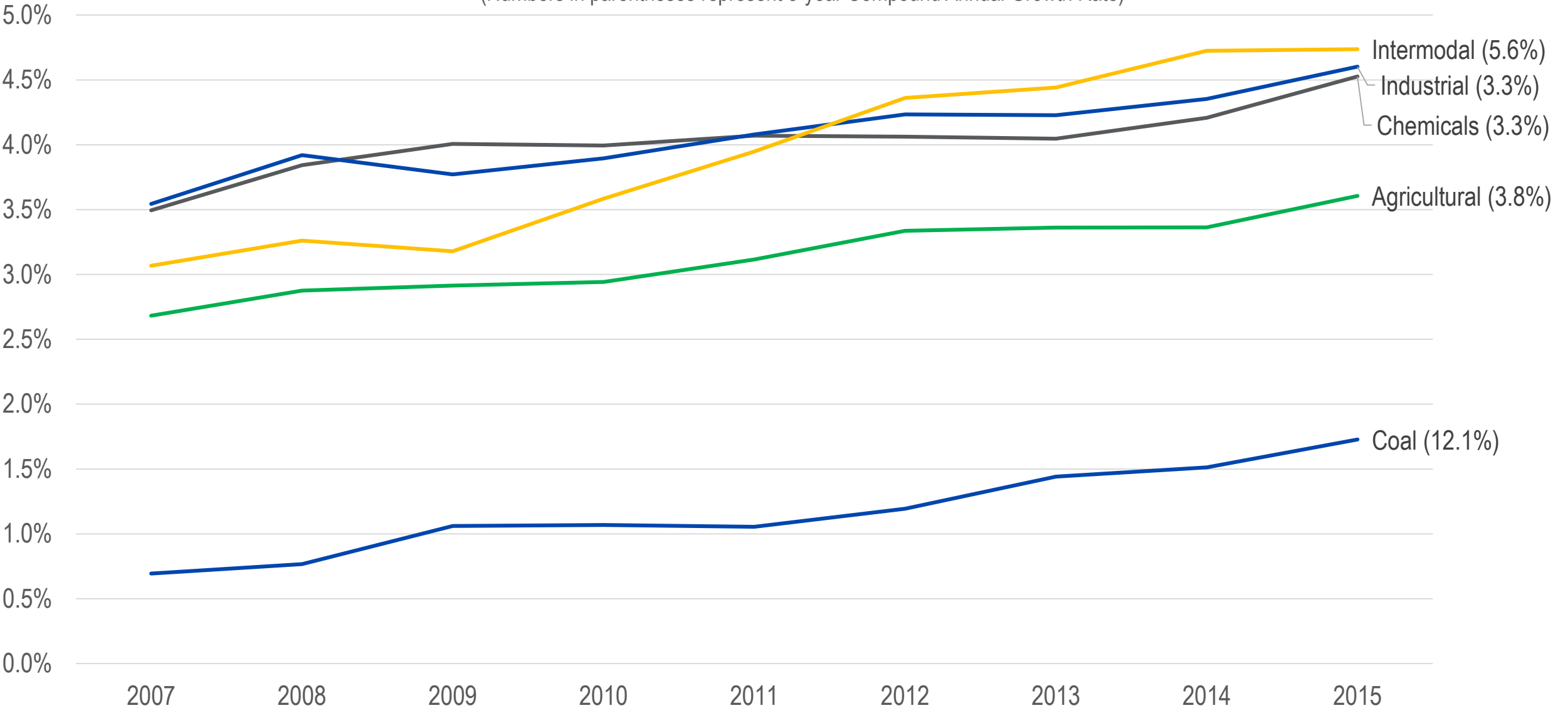
(Numbers in parentheses represent 8-year Compound Annual Growth Rate)



# Revenues - Price

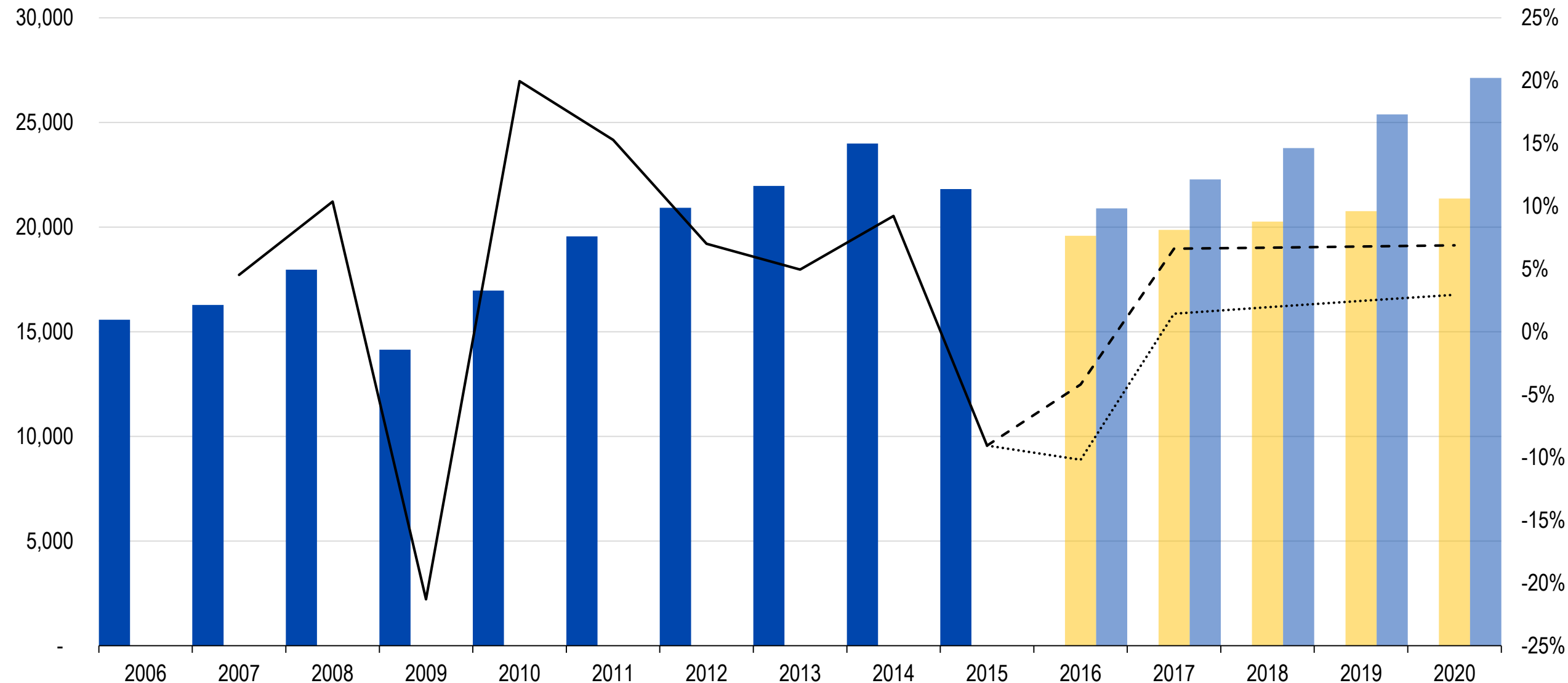
## Revenue per Ton Mile

(Numbers in parentheses represent 8-year Compound Annual Growth Rate)



# Revenue History & Scenarios

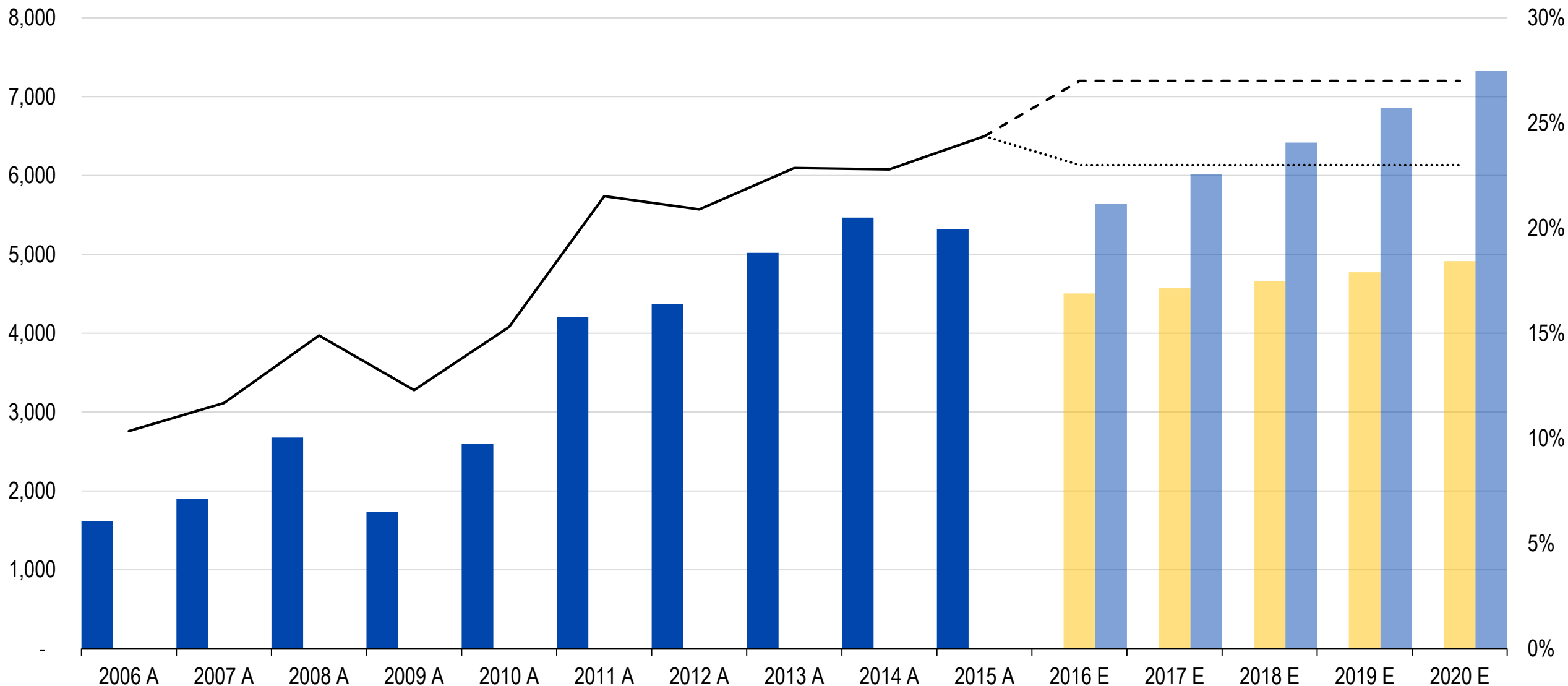
■ Historical Revenues (LHS)   
 ■ Worst Case Revenues (LHS)   
 ■ Best Case Revenues (LHS)  
 — Pct Revenue Change (RHS)   
 ..... Worst Case Pct Change (RHS)   
 - - - Best Case Pct Change (RHS)



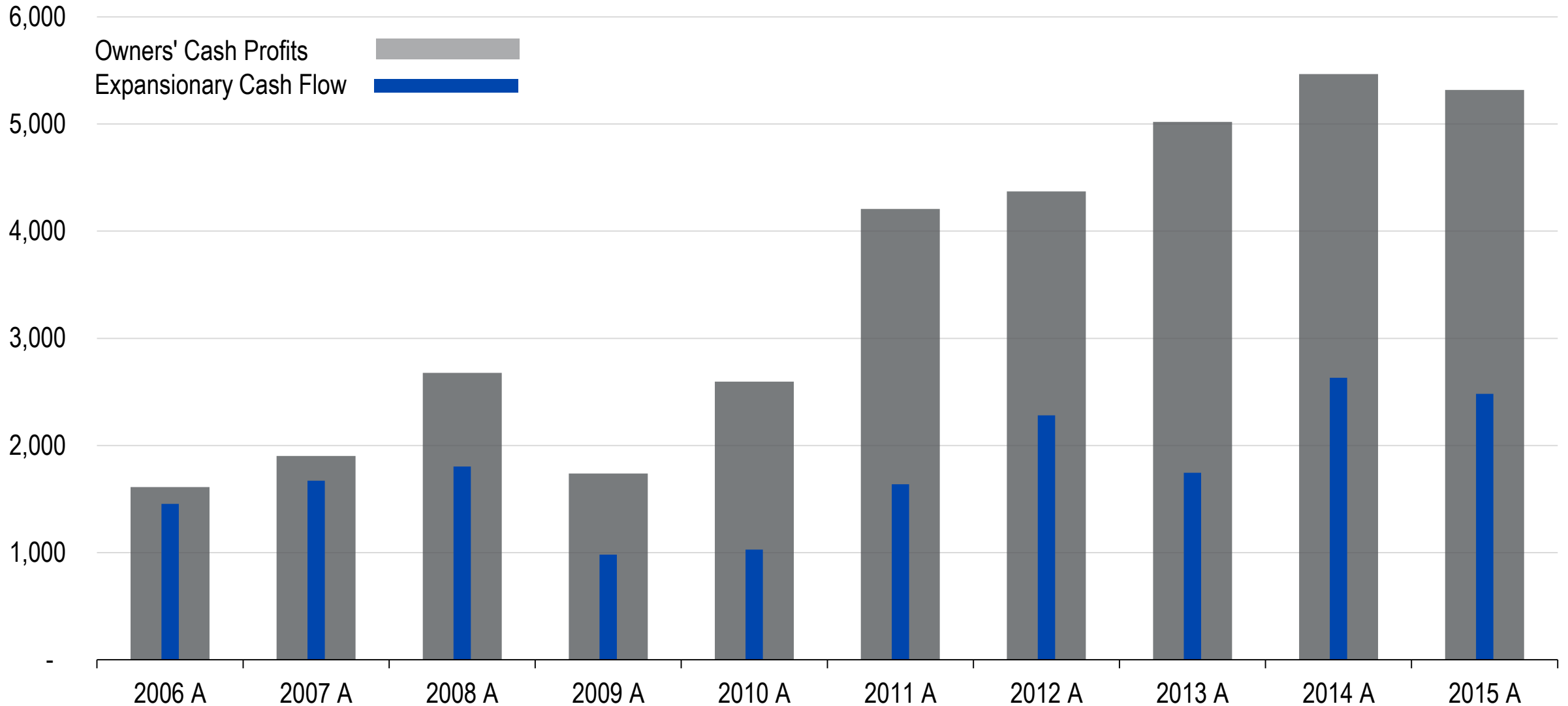


# Profitability History & Scenarios

■ Historical OCP (LHS)     
 ■ Worst Case OCP (LHS)     
 ■ Best Case OCP (LHS)  
— OCP Margin (RHS)     
 ..... Worst Case OCP Margin (RHS)     
 - - - Best Case OCP Margin (RHS)



## Expansionary Cash Flow versus Owners' Cash Profits

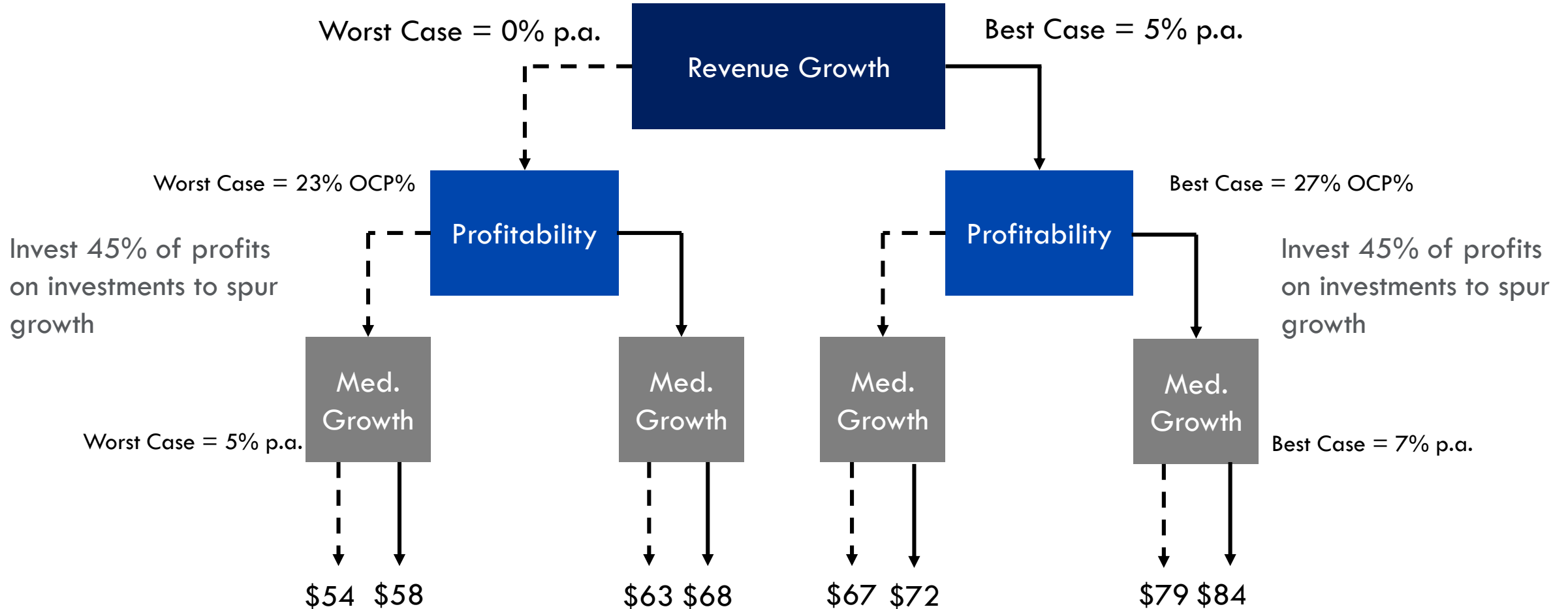


# Investment Efficacy / Medium-Term Growth



- Profit growth has been very high over the past 10 years
- Considering the flat volumes and pricing dynamics, we do not expect future growth to be as fast
  - Worst Case: 5%
  - Best Case: 7%

# Union Pacific Valuation Waterfall



Recent price = \$84

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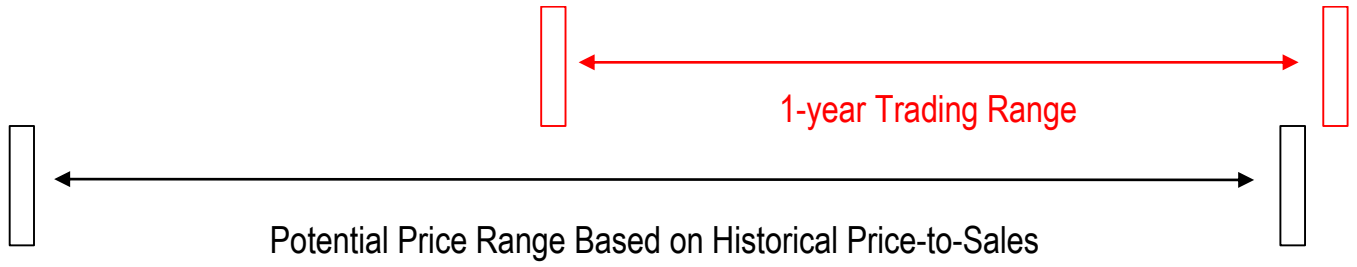
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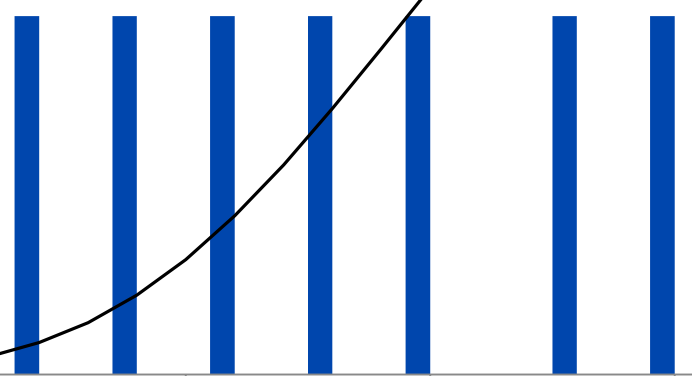




Probability / Materiality

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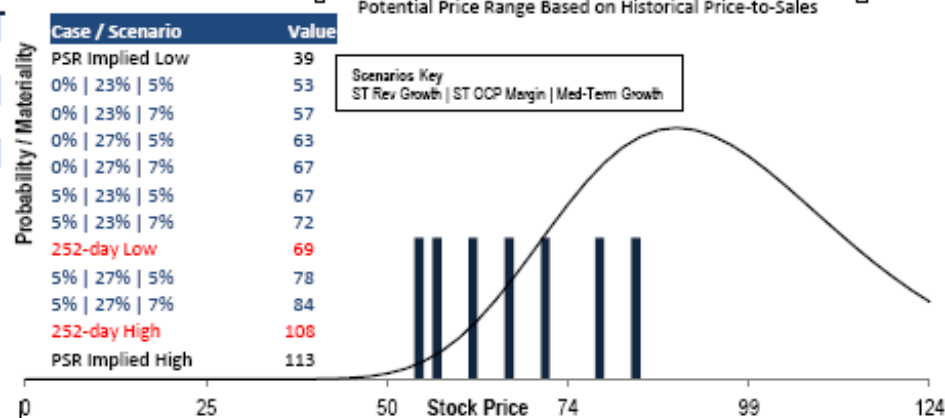
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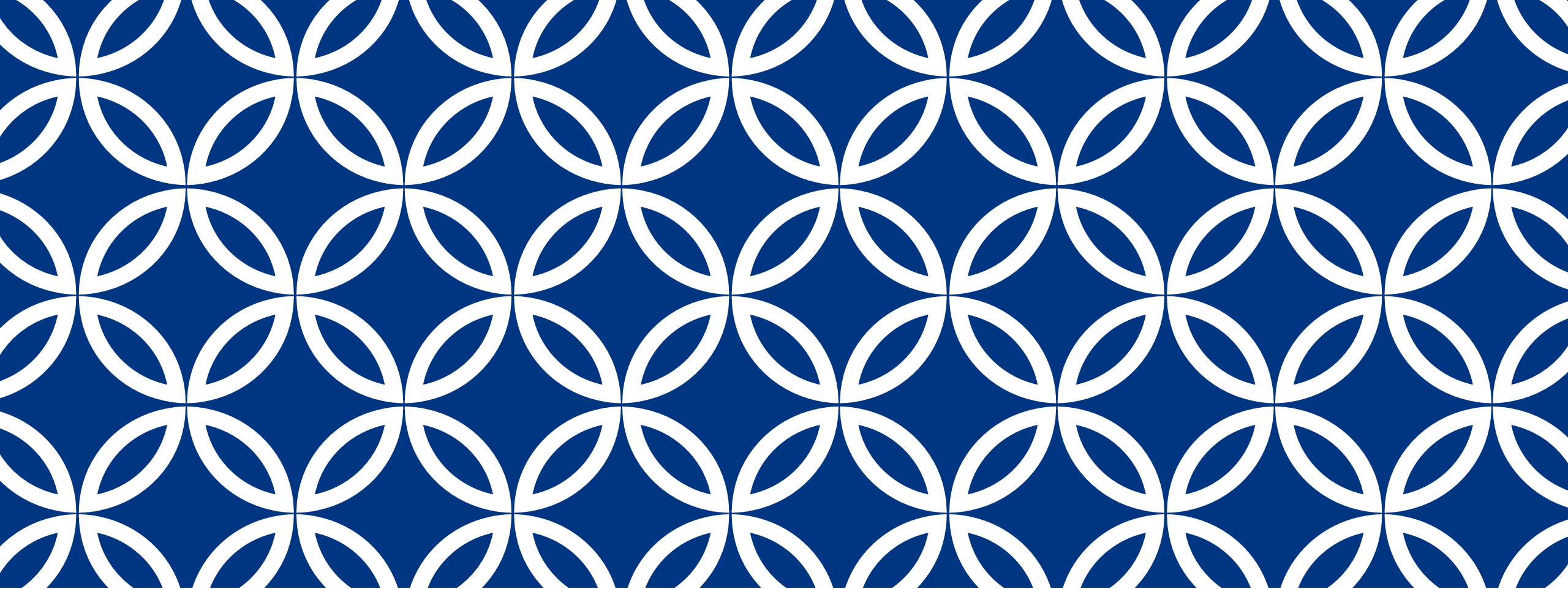
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