



The New Reality of the LPG Market: How is this Market Changing?



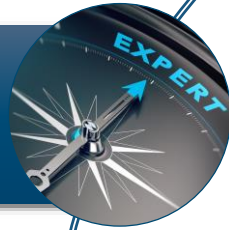
CMT 12th LPG Trade Summit - 23-25 Oct, 2017 - Dubai, U A E



NGLS introduction

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Consulting



Market Insights



Multiclient
Products



Retainer
Agreements



Training/Workshops



NGLS Expertise

LPG

Ethane

Olefins and their feedstocks

Global petchem gases trade

CMT 12th LPG Trade Summit

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Agenda

LPG: One Product, Two Different Stories (Propane vs Butane)

LPG Demand: Petchems Influence

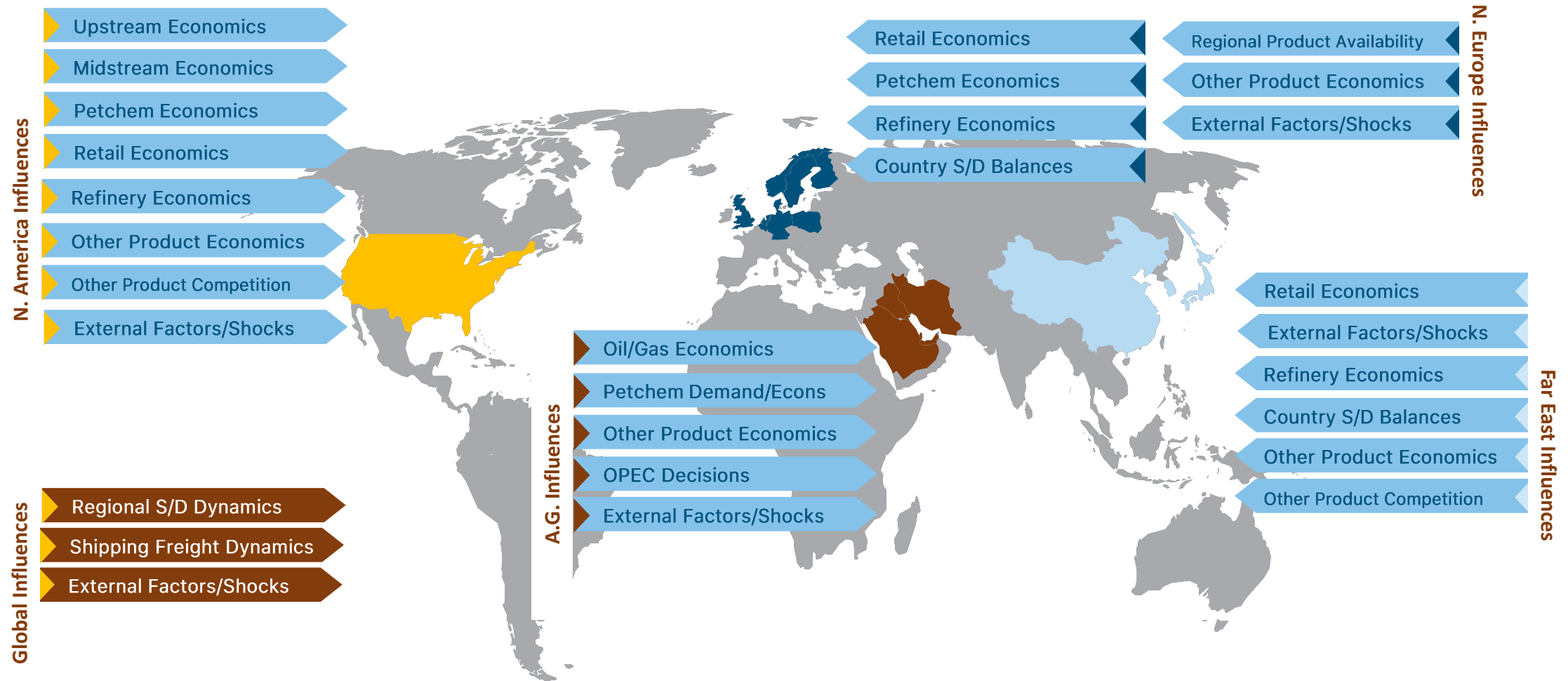
LPG Pricing Linked More to Other Products Economics

Retail Market: Present & Potential

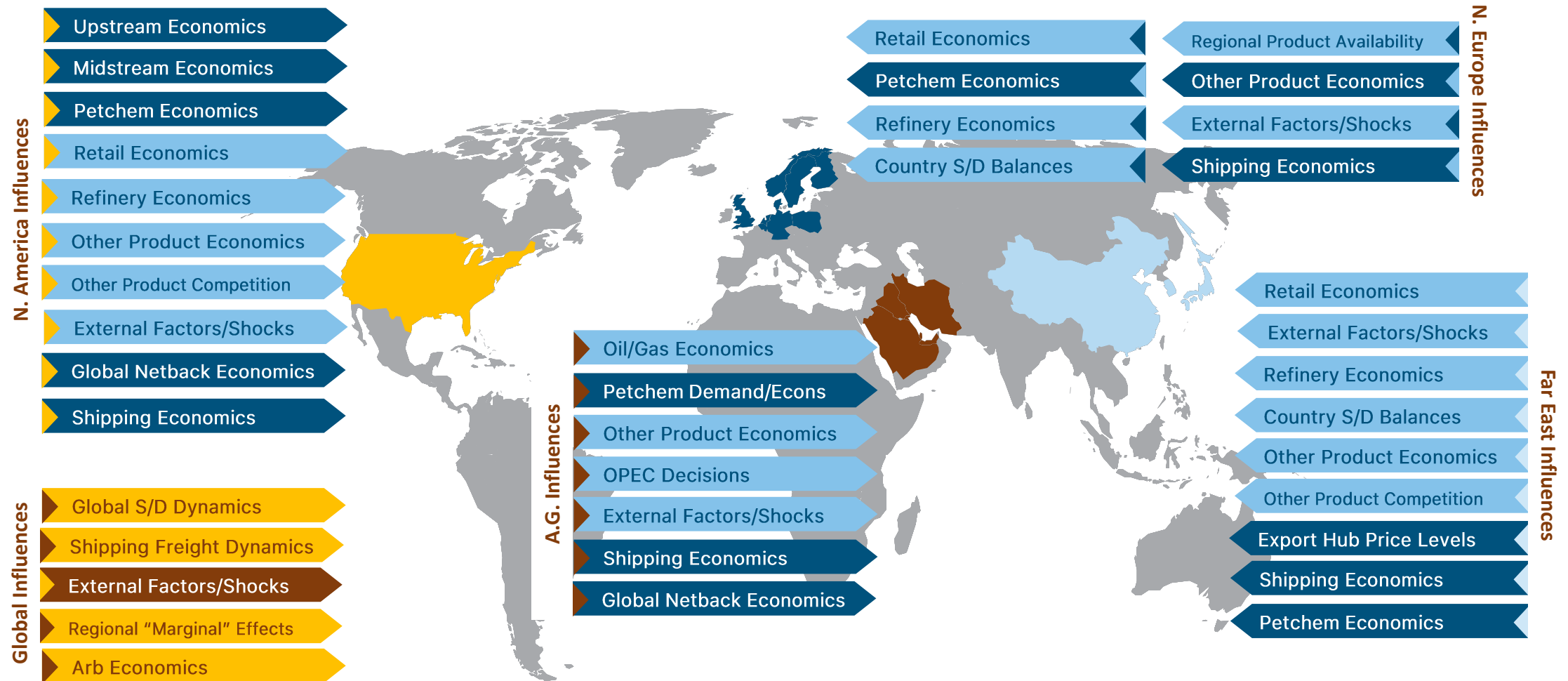
Introduction

- Market change seen in pricing dynamics – increase in complexity

Regional pricing dynamics - past



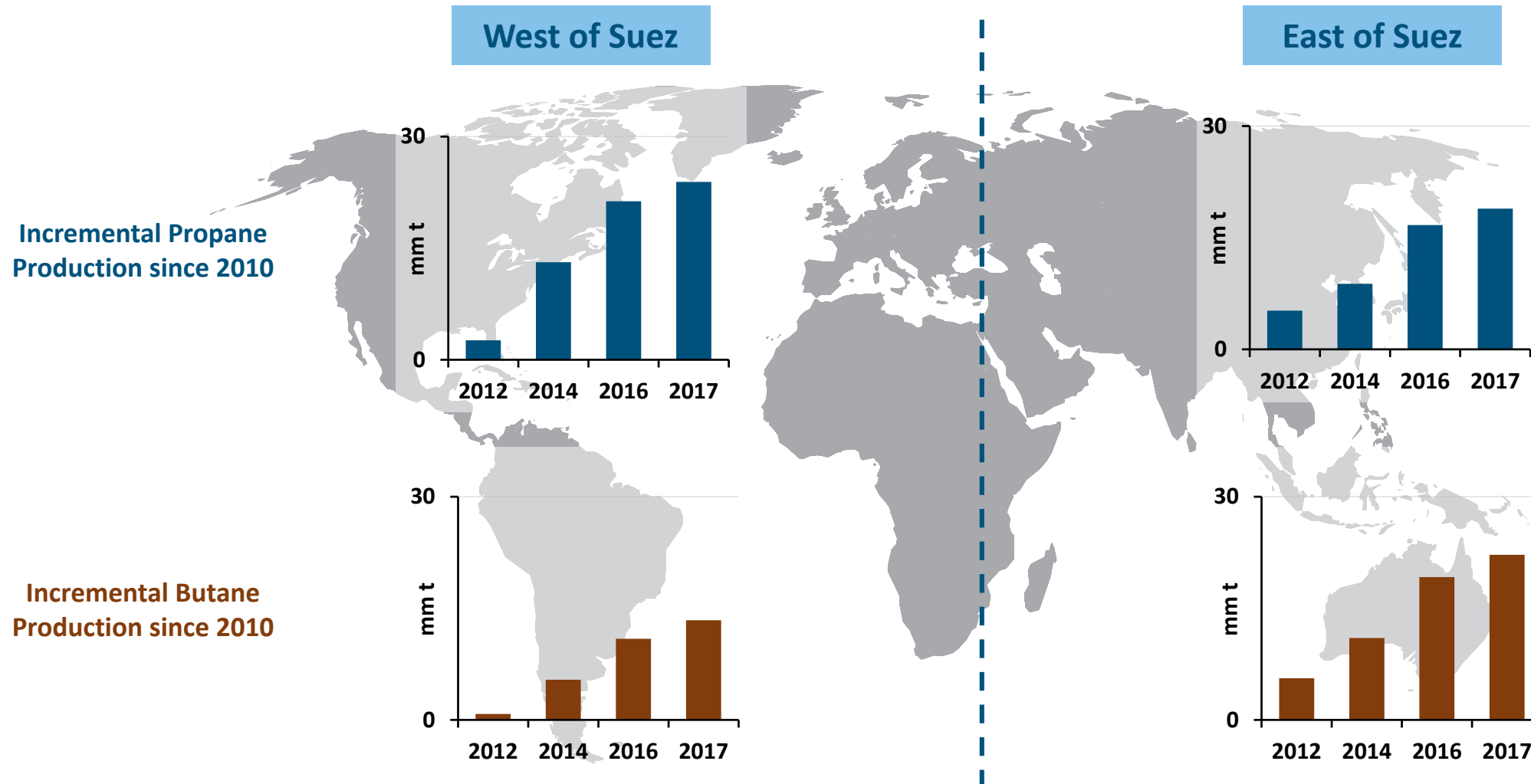
Regional pricing dynamics - present



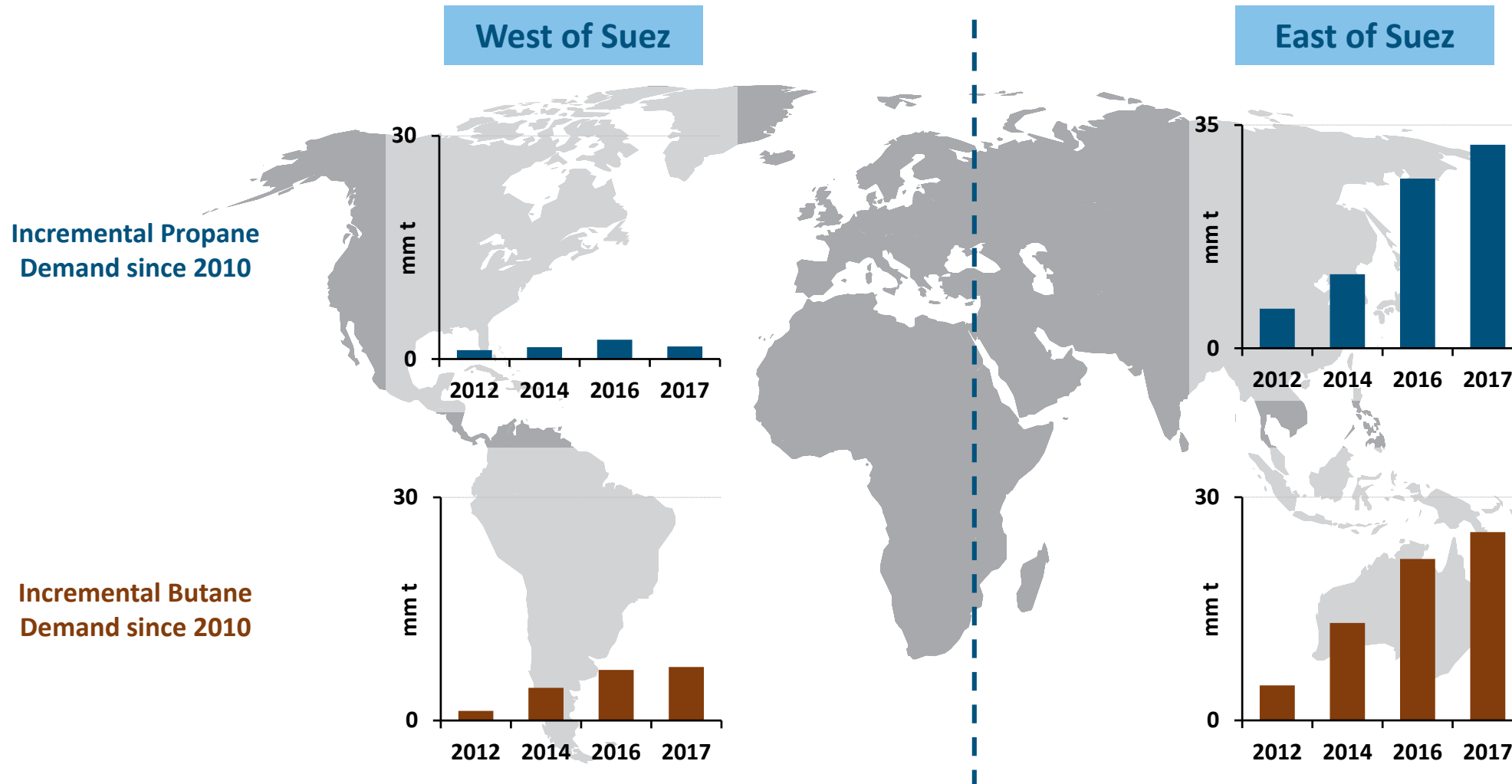
LPG: One Product, Two Different Stories (Propane vs Butane)

- Supply trend profiles: West vs East
- Demand trend profiles: East vs West
- Net trade balance trends: past and future

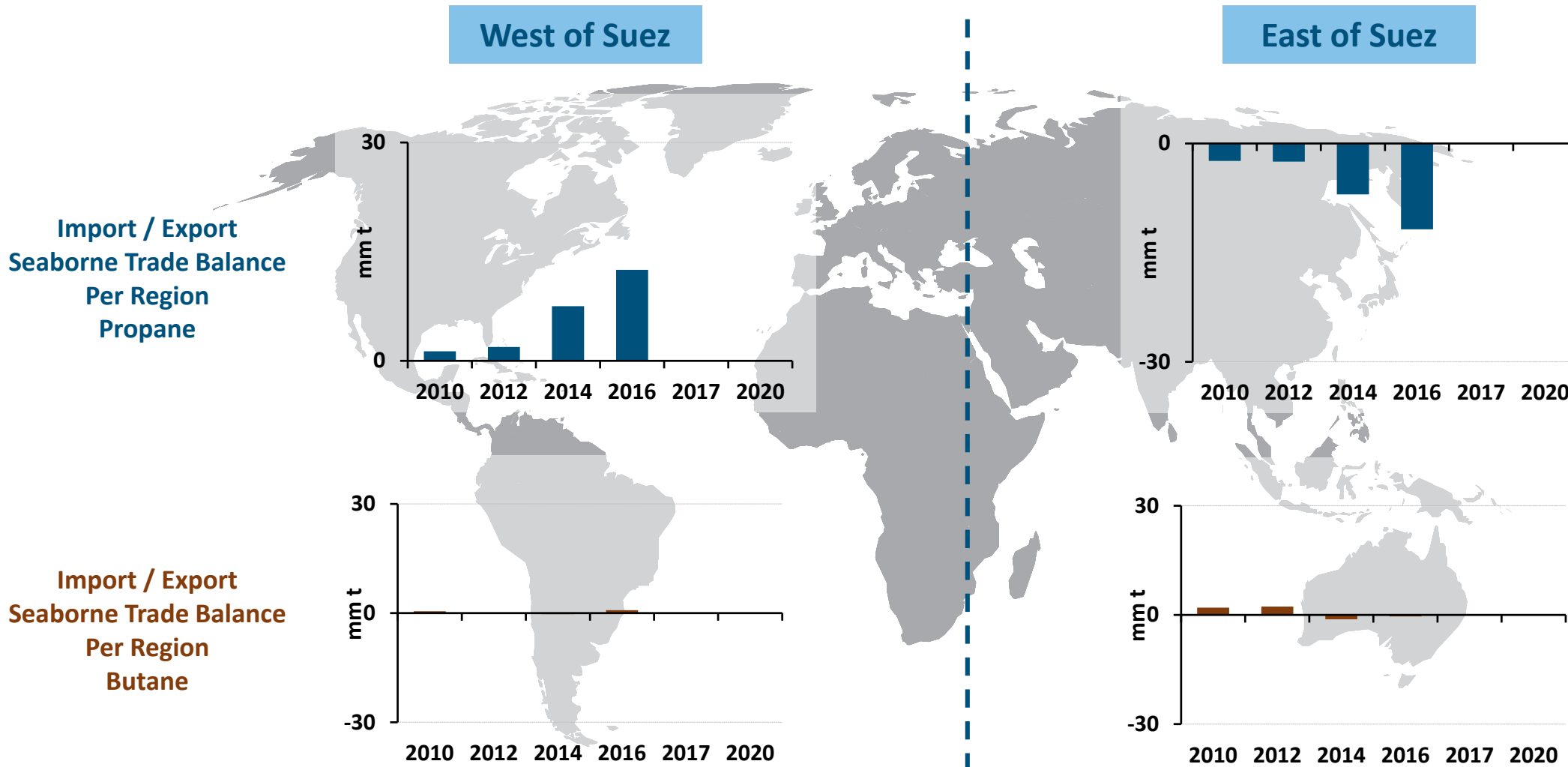
Supply: propane and butane trends differ



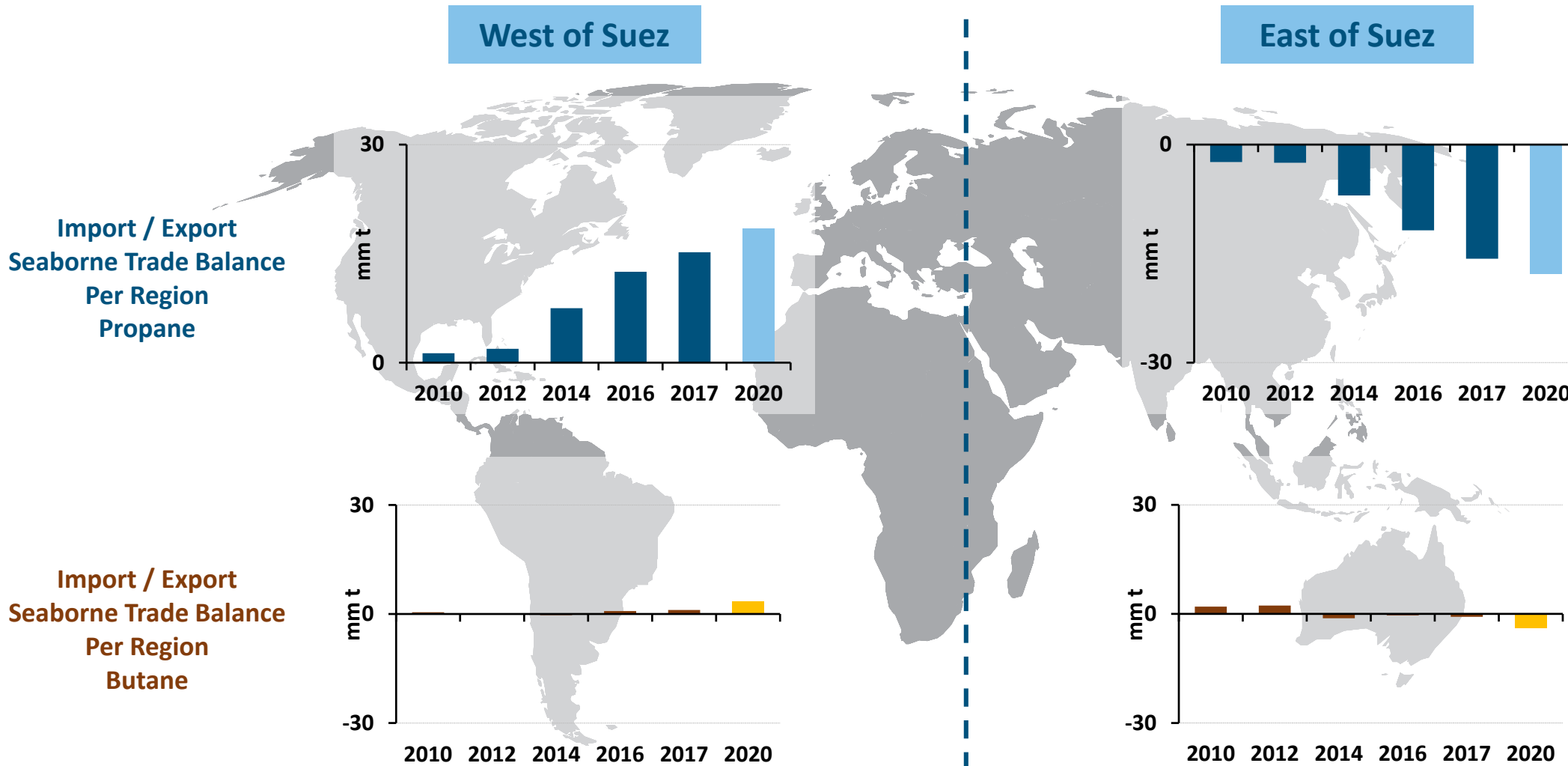
Demand: East dominates growth for both



Net trade: propane major shift, butane minor



Net trade future: past trends continue

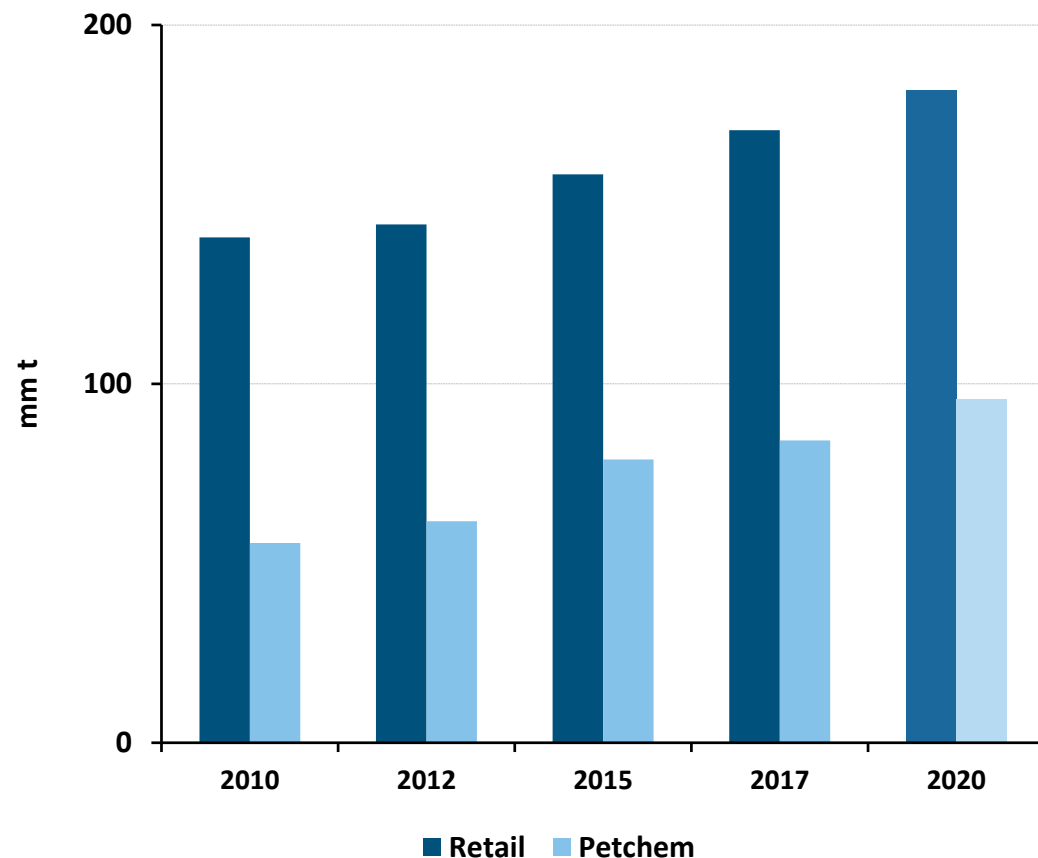


LPG Demand: Petchems Influence

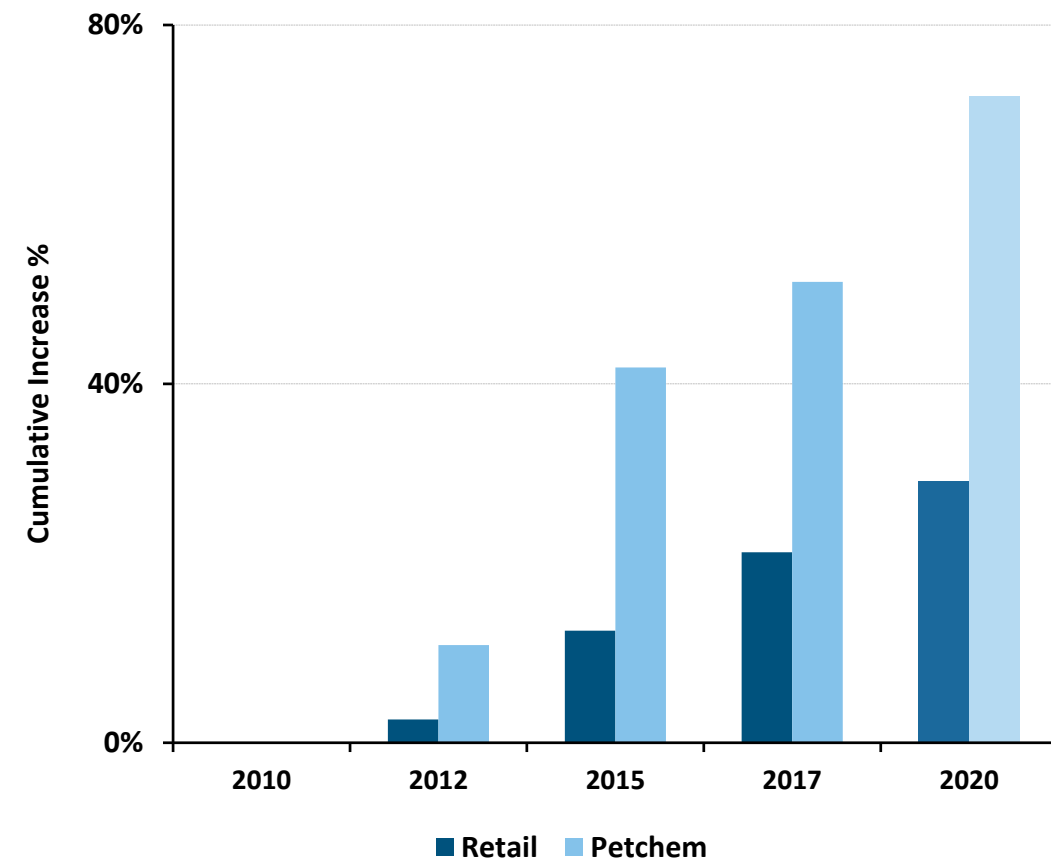
- Retail still dominates growth (in tons)
- But petchem sector grows faster
- Propane and butane follow different paths East and West

Retail demand still more important, although petchems growing faster

Retail vs Petchem Demand 2010-2020

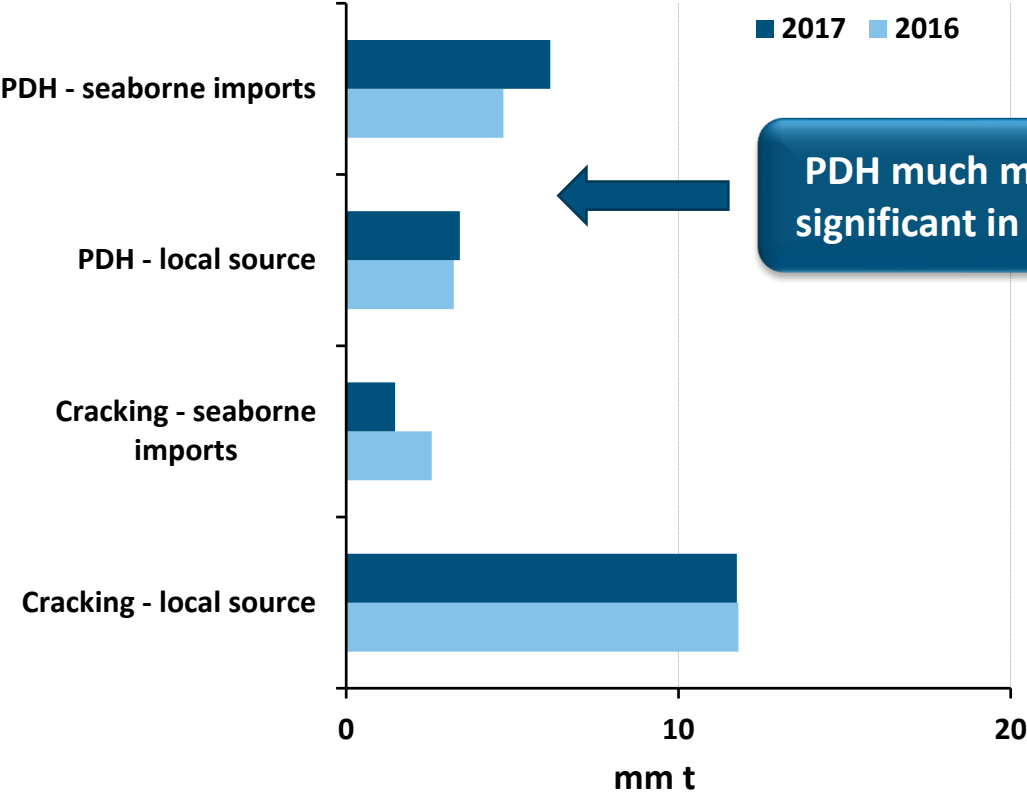


Cumulative Increase (%) 2010-2020



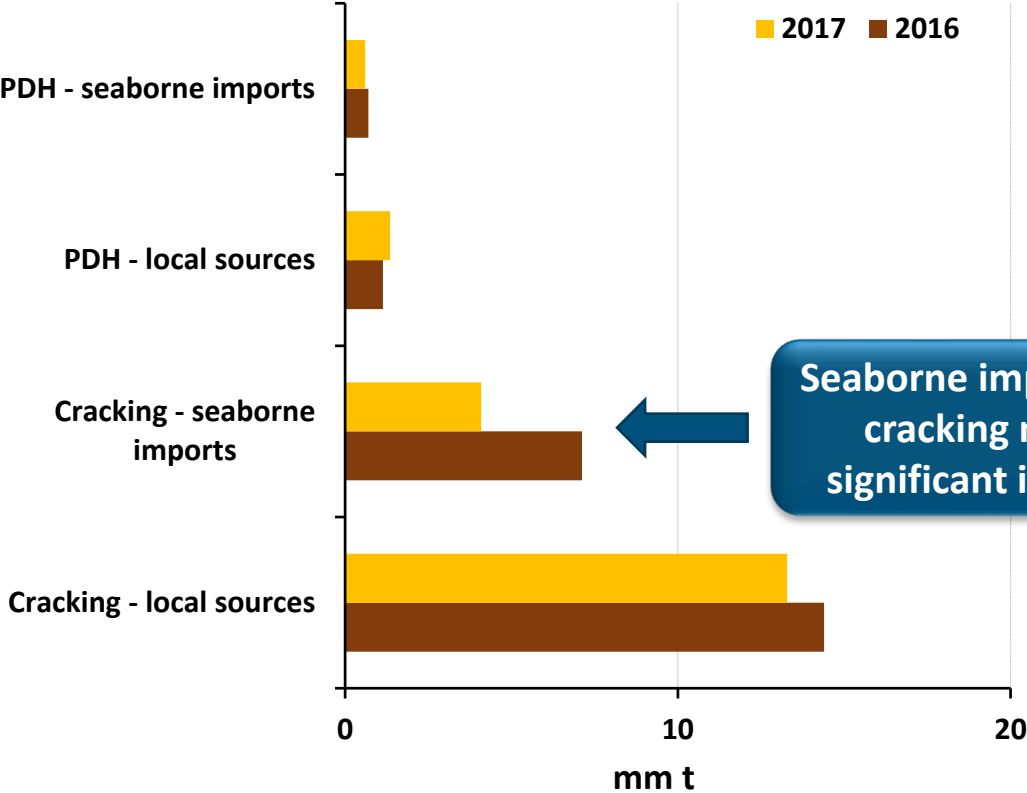
Propane in petchems – East vs West

Propane Petchem Demand East



PDH much more significant in East

Propane Petchem Demand West



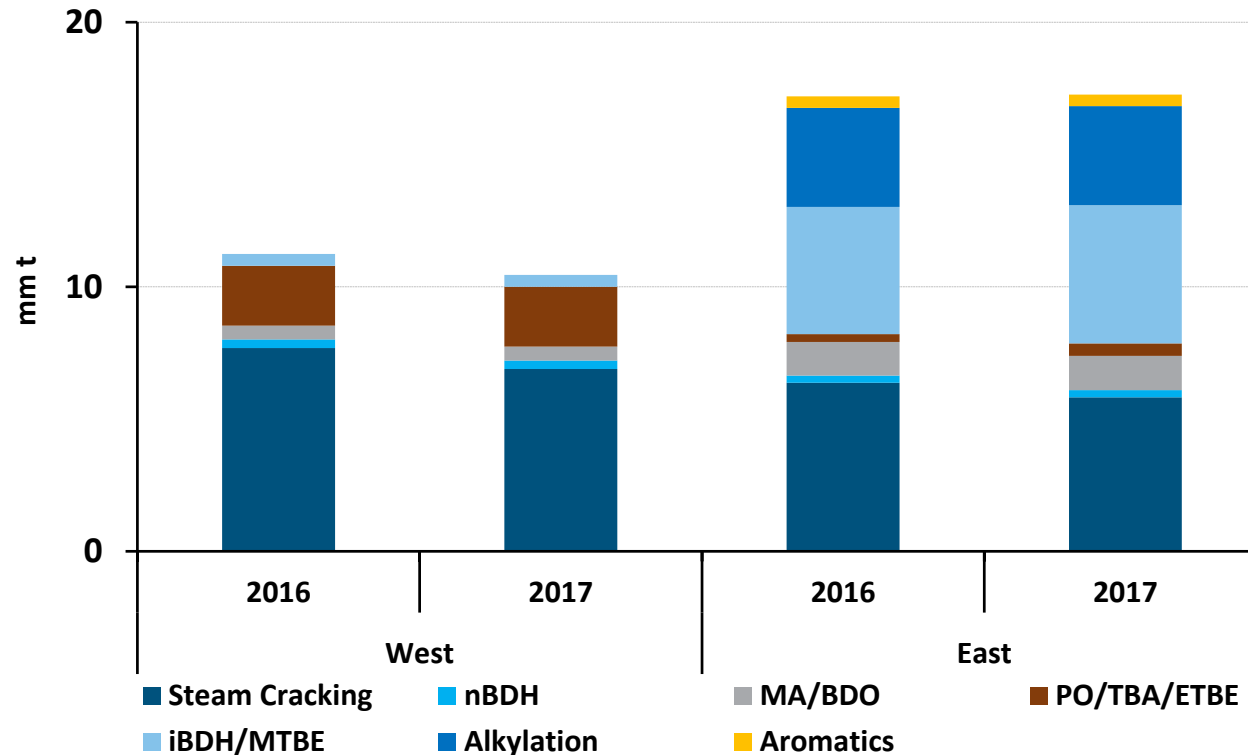
Seaborne imports for cracking more significant in West

Globally, PDH demand up, cracking demand down

Butane in large bulk – East vs West

Butane Demand in Petchems & Refinery Applications

West of Suez
Cracking demand &
PO/ETBE/TBA
dominates



East of Suez
gasoline components
more significant than
cracking demand

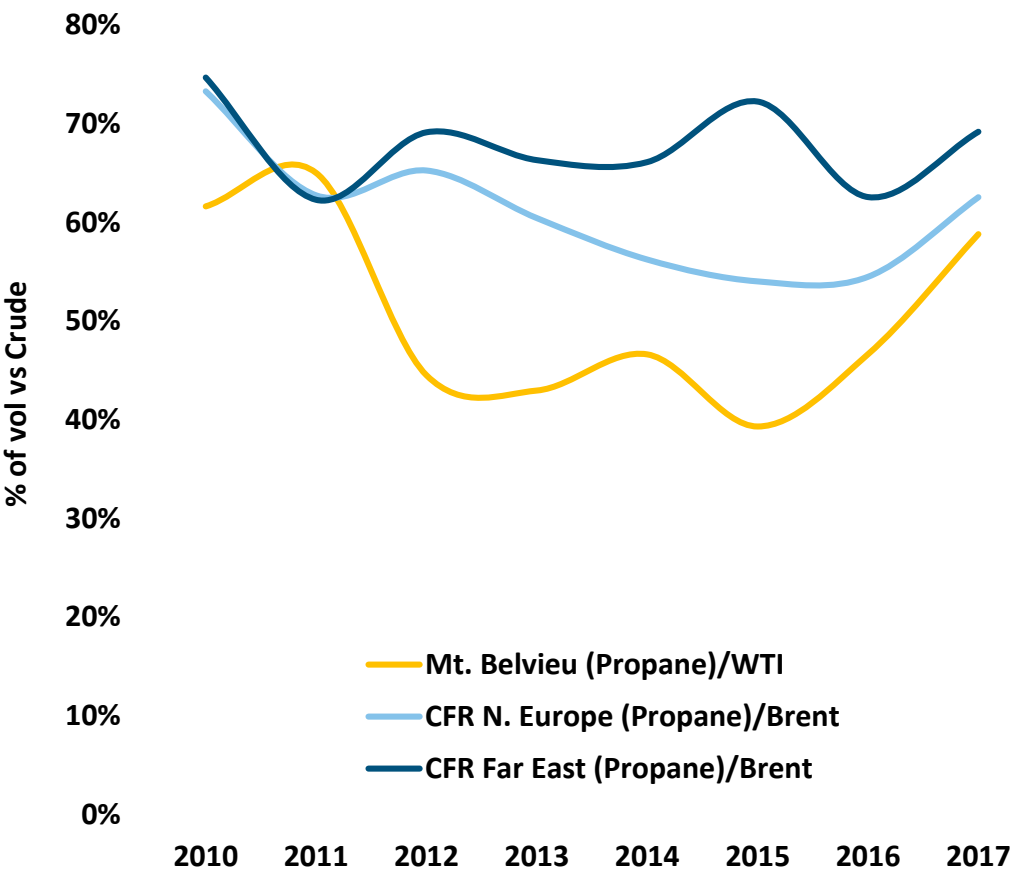
Globally gasoline component demand up
cracking demand down

LPG Pricing Linked More to Other Products Economics:

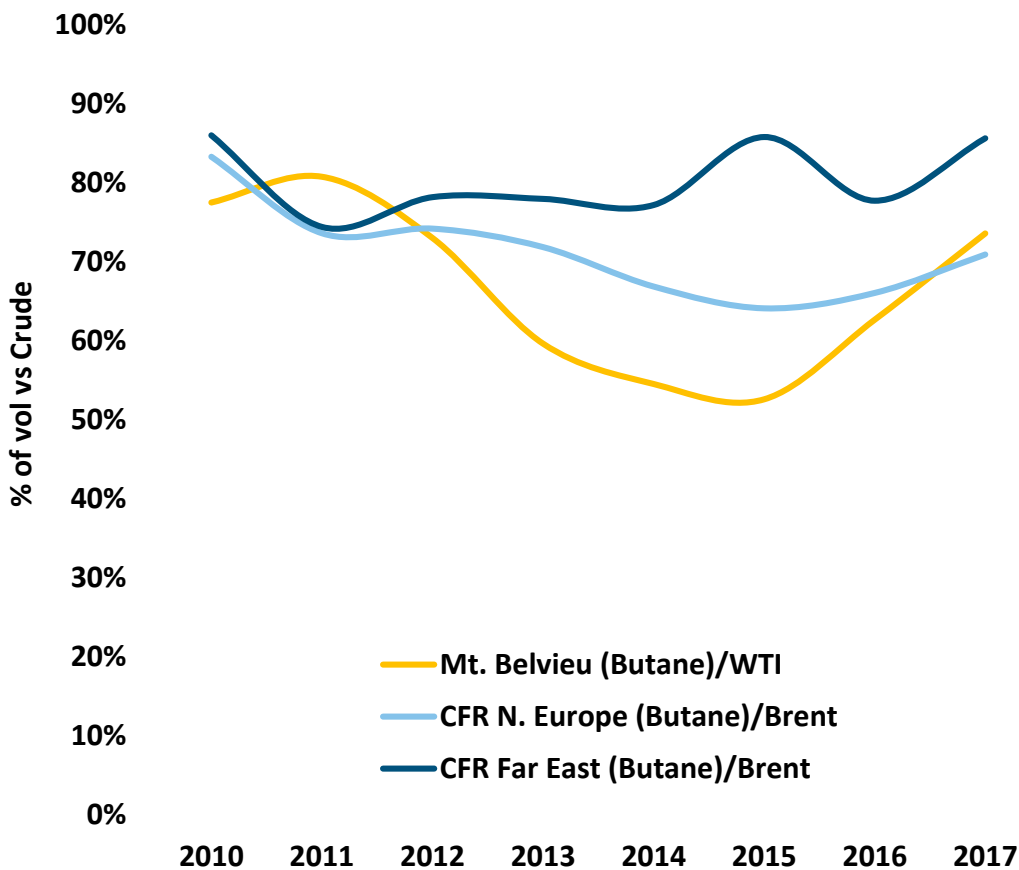
- From simplicity to complexity
- Regional prices: different factors apply
 - Mont Belvieu especially complex
 - Cracking more influential in West
 - PDH influence greater East, but occasional

Regional pricing: different trends

Propane



Butane



Mont Belvieu pricing effects

M. Belvieu Price Determinants

Domestic
Supply/Demand
Dynamics

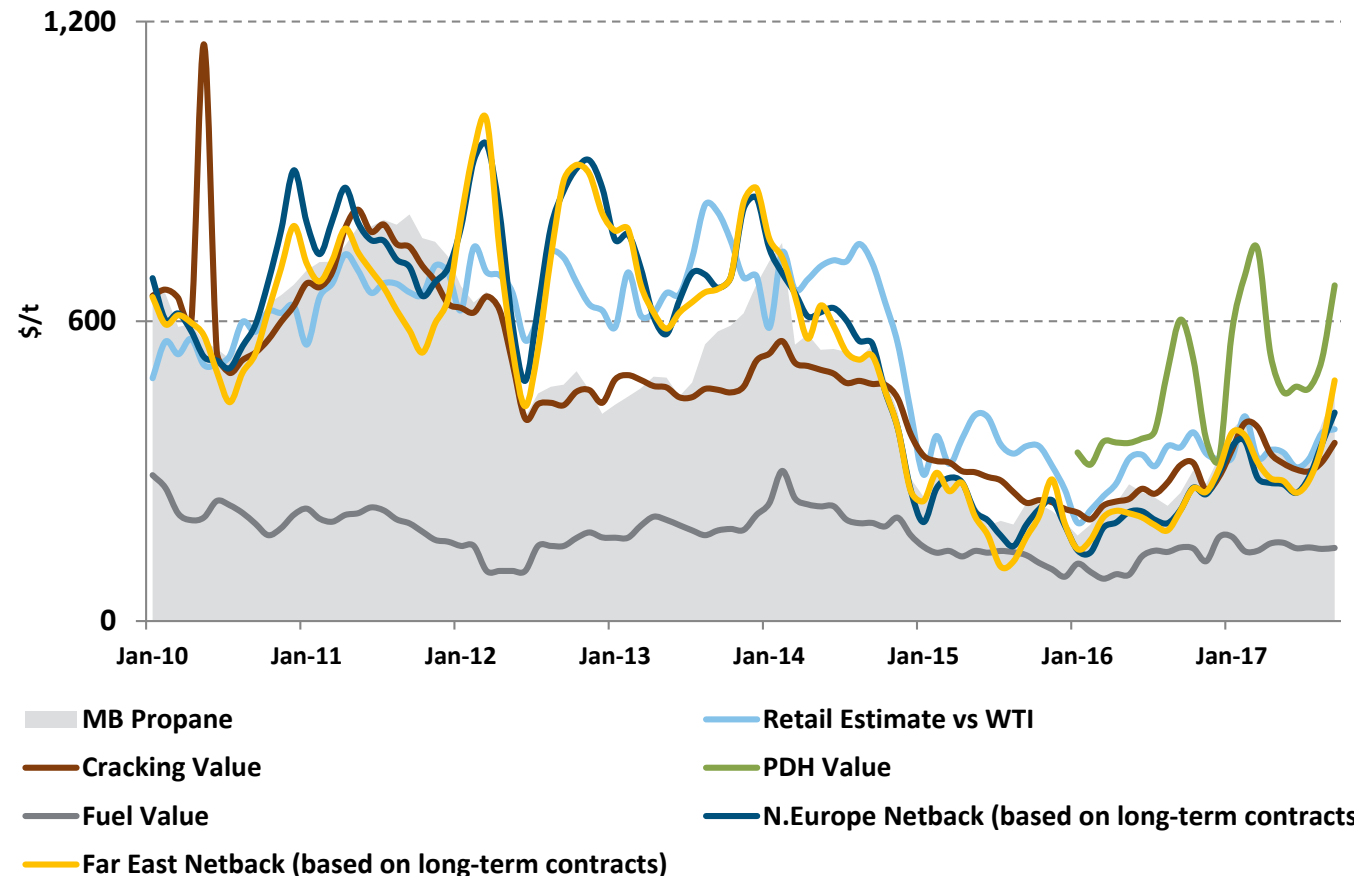
Export Cancellations

Terminalling fees

Inventory
Levels/Changes

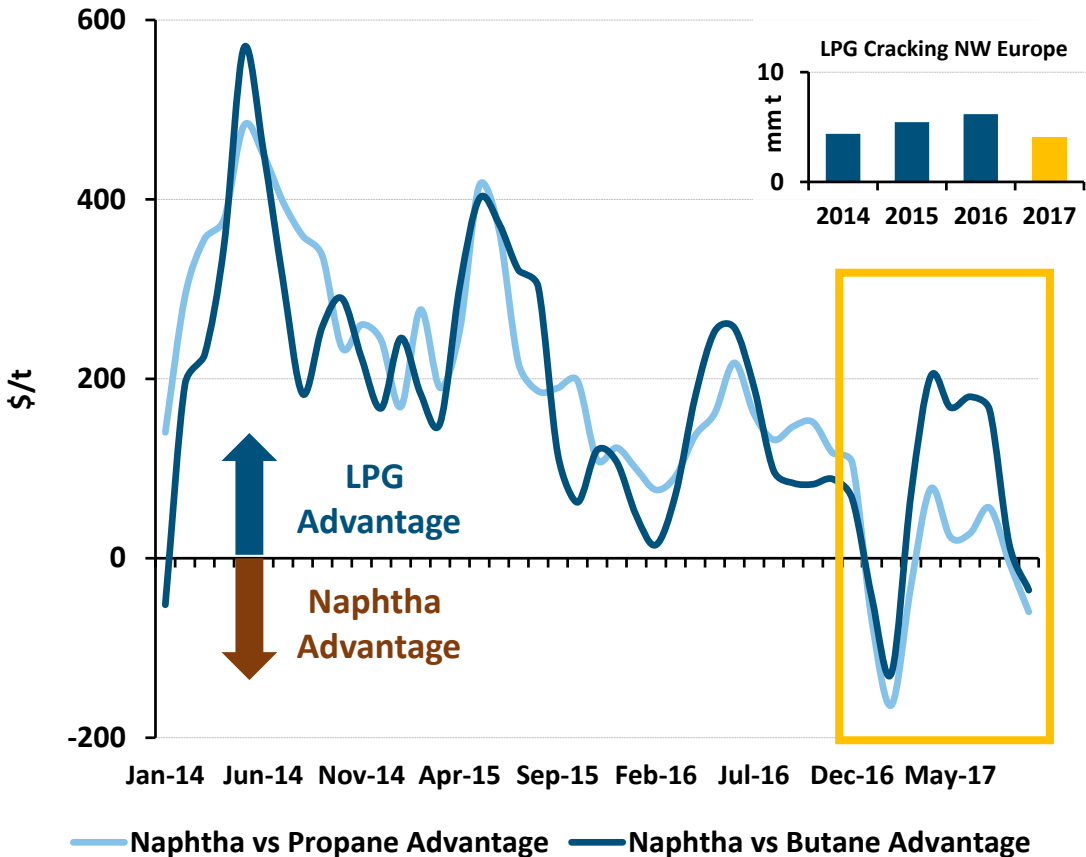
Trading Decisions

External Events

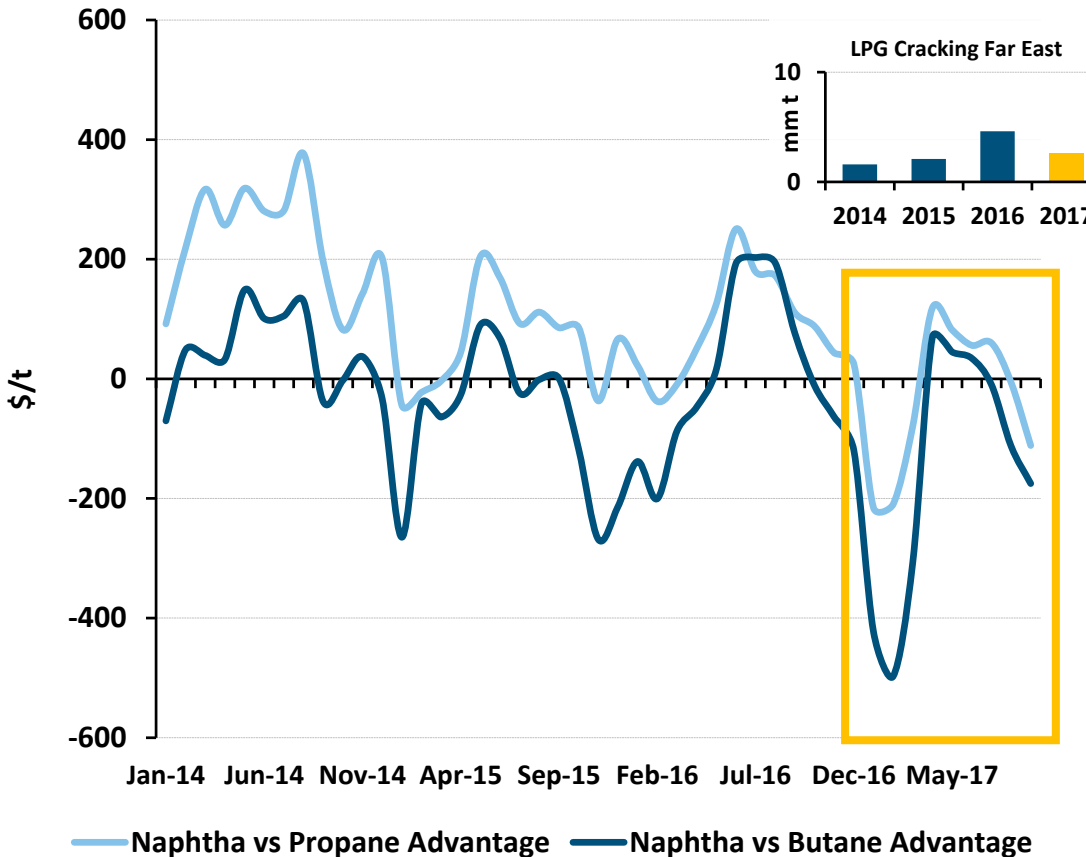


Cracking price influence greater in West

Cracker Incremental Cash Margins Advantage
N. Europe

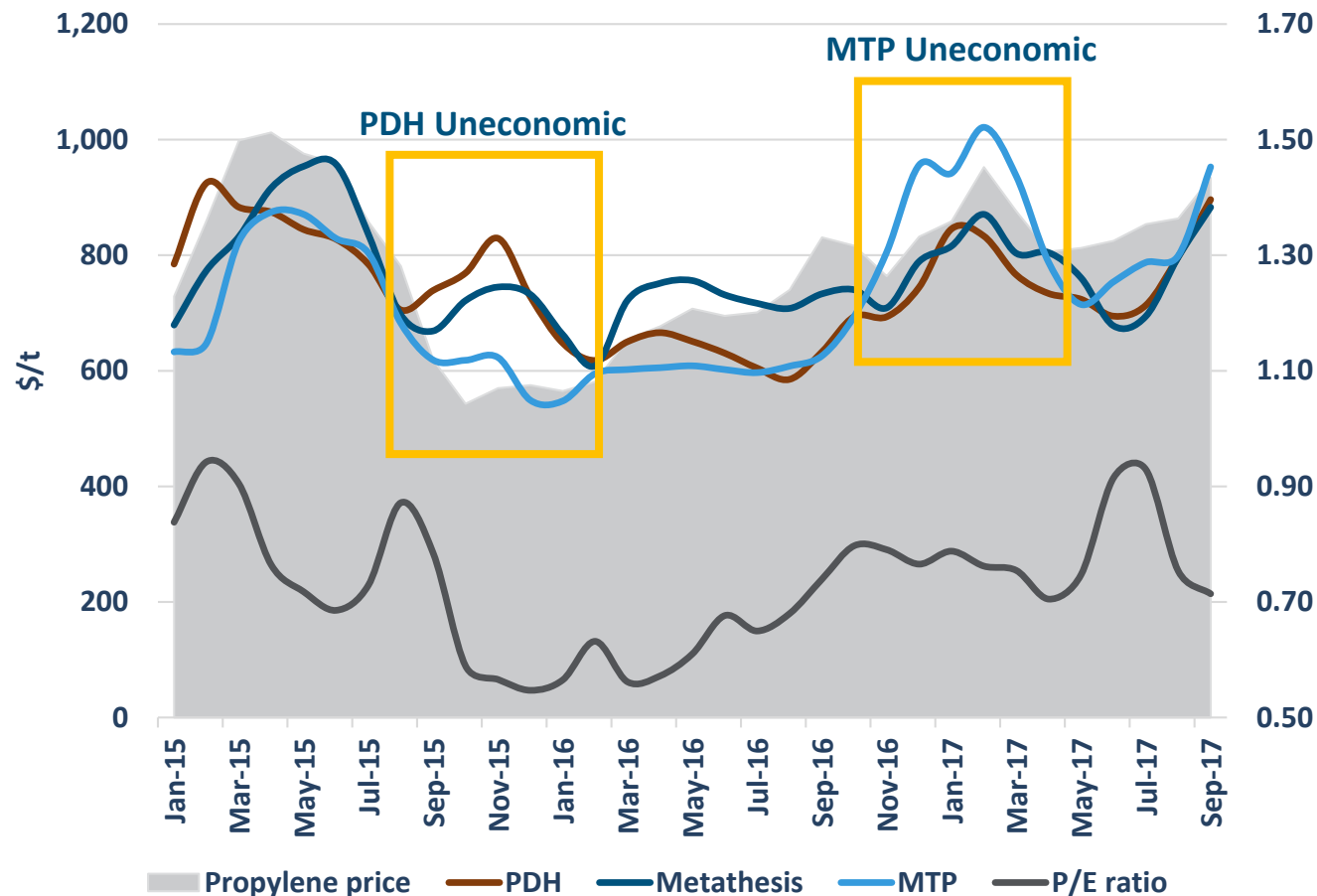


Cracker Incremental Cash Margins Advantage
Far East



Propylene prices impact propane in Far East via PDH - occasionally

Far East Propylene Price versus Costs



Key variables:

Methanol price
Propane price
Ethylene price



High PDH plant operating rates
favoured by:

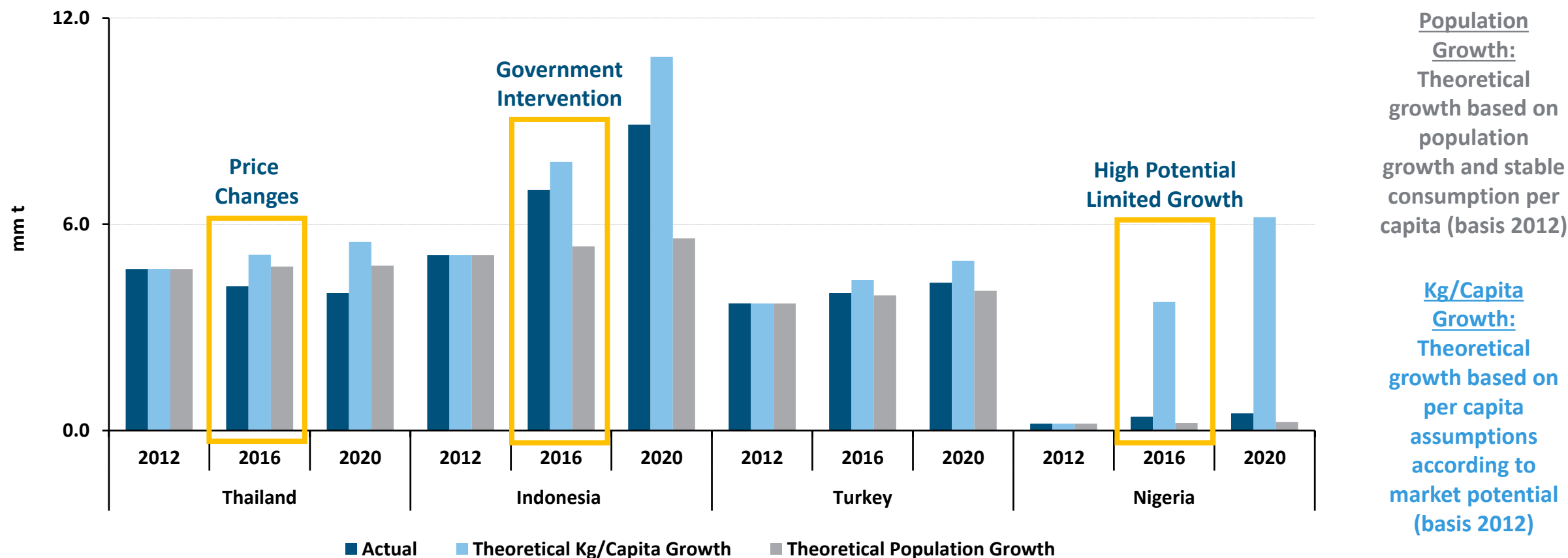
High Methanol price (MTP uneconomic)
High Ethylene price (metathesis uneconomic)
Low propane prices

Retail Market: Present & Potential

- What lies behind recent retail growth?
- How far can this be sustained?

Retail growth forecasting not simple

Actual vs Theoretical Retail Demand Growth in Some Key Countries



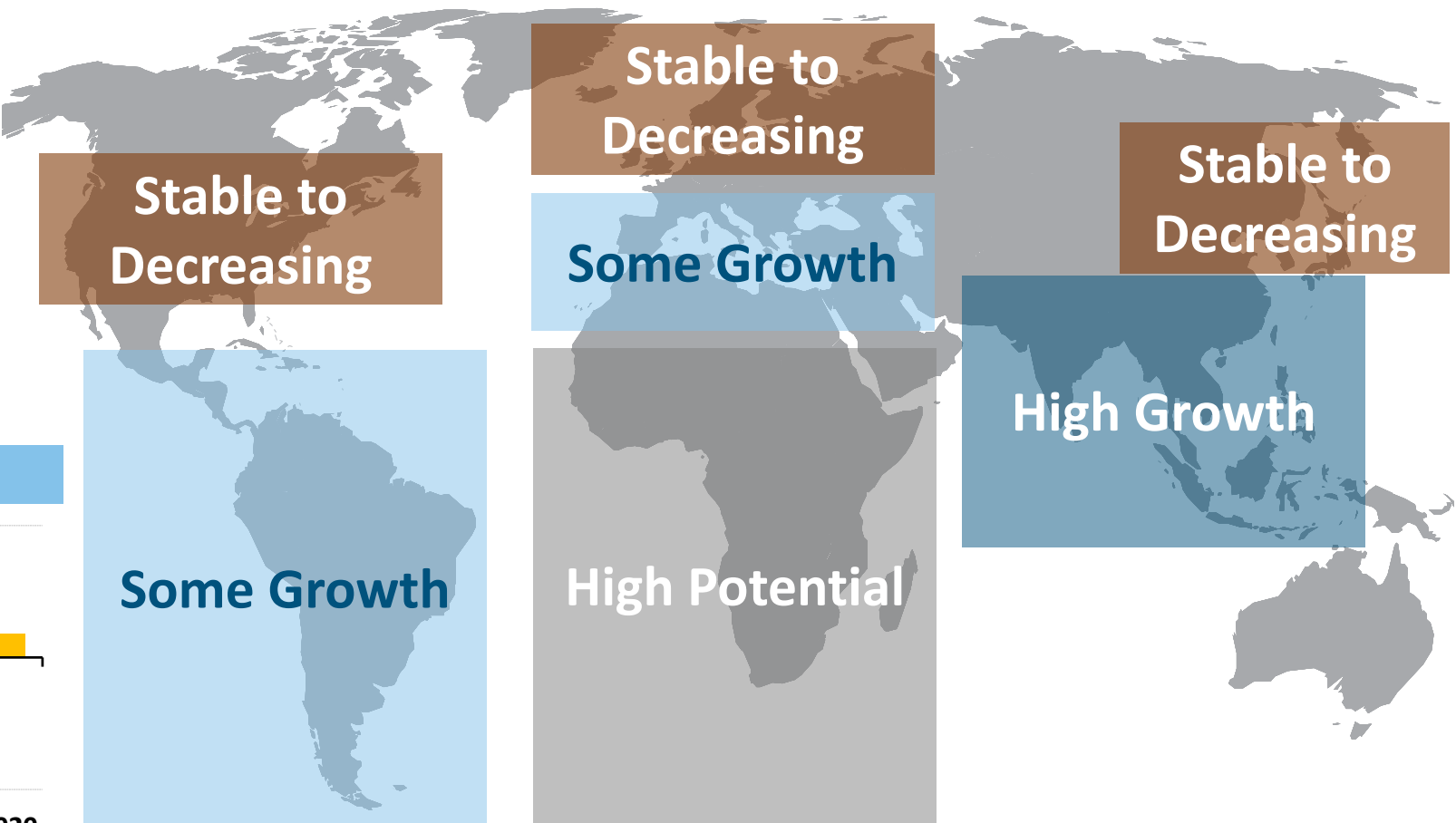
Retail market growth factors multiply

General Factors

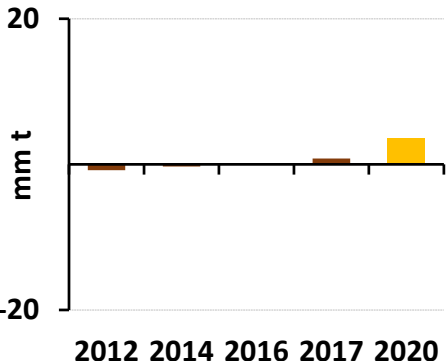
- Weather
- Population
- GDP/Inflation
- Price Elasticity
- Consumption per Capita

Market Factors

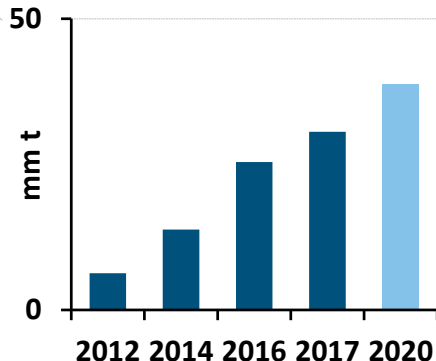
- Government intervention
- Competition with other products
- Anticipating Changes
- Infrastructure
- Funding Availability
- Marketing/Penetration



Retail Growth West



Retail Growth East

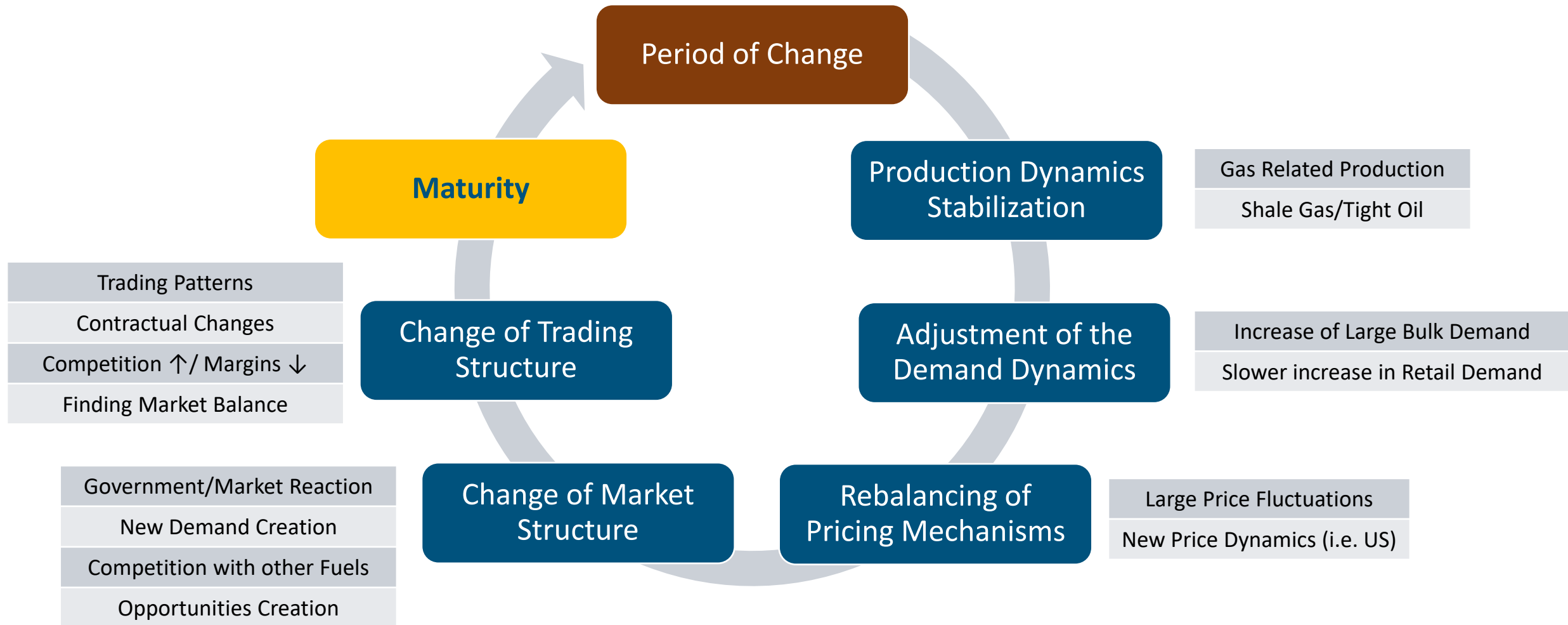


Final Thoughts



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LPG market – road to maturity



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