

# SAILING IN STRONG WINDS

THE NEW NORMAL IN GLOBAL TRADE AND CONTAINER SHIPPING



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# EXECUTIVE SUMMARY

*IN THIS YEAR'S REPORT, we analyze the unfolding of global trade developments in 2015, including key drivers of container-shipping demand. Our ultimate goal is to gauge whether the trends facing container liners, or carriers, will prove temporary or point to a new normal and to consider moves that companies can explore in this challenging environment.*

**An increase of 3.3% in the global growth in container demand in 2014 excited the imagination of carriers and analysts. But then, in 2015, reality hit hard.**

- By the end of 2015, average global growth in the container-shipping trade was a disappointing 1.9%. Yet liners still invested in new, ultralarge vessels to boost scale and reduce slot costs. This exacerbated the existing overcapacity problems, pulling freight rates down to a new low.
- For the first time in history, growth in container demand lagged behind global gross domestic product, producing a GDP multiplier lower than 1.

**The six trade routes, or trades, that collectively represent more than 80% of the total world container trade—Asia-Europe, Transpacific, Intra-Asia, Indian subcontinent and Middle East, Latin America, and Africa—demonstrated markedly varied performance from 2014 through 2015.**

- Asia-Europe saw exports from Asia into Europe shrink by 2.6%, owing, for example, to decreases in Russia's GDP growth, European industrial demand, and consumer spending.
- Transpacific did relatively well. That region accounts for more than 40% of total US imports, which have demonstrated a decent growth trajectory, thanks to rising personal disposable income that led to increases in the import of consumer goods from Asia.

- Intra-Asia, powerfully affected by developments in China, saw a negative trend in imports and exports as the Chinese economy decelerated.
- The Indian subcontinent and Middle East trades saw 5.1% growth from 2014 through 2015, led by Saudi Arabia, India, and the United Arab Emirates, along with Iran.
- Latin America and Africa both experienced a slowdown in 2015, with trade volume growth flattening. Brazil's recession strongly influenced developments in Latin America. And in Africa, trade growth stumbled after a currency depreciation, catalyzed by plummeting oil and commodity prices, struck Nigeria and Angola, the region's two largest oil producers.

**We analyzed developments in container supply and demand to gain a sense of how global container shipping could be affected through 2020. Our goal: to determine whether the 2015 dip was cyclical or an indication of a new normal for the global container trade.**

- BCG analysis of all available facts suggests that annual global container traffic growth over the next several years will be between a bear scenario of 2.2% and a bull scenario of 3.8%, while for the base scenario, growth will be at 3.2%. Corresponding container trade could reach 170 million to 183 million 20-foot-equivalent units (TEUs) in 2020.
- As for container supply-and-demand balance, the supply-demand gap stood at 7% at the end of 2015. BCG projects a compound annual growth rate (CAGR) of 3.7% for cellular fleet tonnage from 2016 through 2020, down from a CAGR of 6.6% seen from 2012 through 2015. BCG's proprietary supply-demand model indicates that the supply-demand gap could range from 8.2% to 13.8% in 2020. Therefore, we estimate that by the end of 2020, oversupply of vessel capacity will stand at 2 million to 3.3 million TEUs.

**To succeed in this increasingly difficult industry, container liners will need to craft more sophisticated strategies for boosting their performance.**

- Companies that haven't excelled at being scale leaders or niche players appear to be stuck in the middle—a dangerous position in an ever-more commoditized and consolidating industry.
- To improve their performance, these companies need to use a blend of global mergers and smaller M&A deals aimed at driving down costs. They should also seek to unlock even greater synergies from their alliances. In addition, companies need to continue optimizing their core business (for example, by strengthening their commercial excellence and optimizing the setup of their network of services), extend their offering to include complementary services to extract value from adjacent markets, and maximize their share of wallet (for instance, by accelerating development of logistics). In this challenging market context, companies that embrace digital will further strengthen their competitive advantage.

# SCANNING THE DEMAND HORIZON

*We must free ourselves of the hope that the sea will ever rest. We must learn to sail in high winds.*

—Aristotle Onassis

IN OUR MARCH 2015 report, *The Transformation Imperative in Shipping: Mastering the Next Big Wave*, we drew on our analysis of events in 2014 to forecast choppy seas for an industry buffeted by powerful forces. In particular, we noted the persistent overcapacity that had been eroding shareholder returns despite reasonably high volume growth. We also proposed a way in which container carriers could make the transformations necessary to succeed in an increasingly volatile and complex environment.

Our analysis of developments that unfolded in 2015 affirms that the industry still faces daunting challenges. Until then, global volume growth of containers shipped worldwide had been decent: from 2010 through 2014, 4.5% an-

nually. It was overcapacity that presented the primary threat to shareholder returns. In 2015, for the first time, the industry faced weak demand, surprising all observers.

For this report, our aim was to understand whether this trend will prove cyclical or become a new normal. We conducted in-depth analyses of demand-side developments during 2015, reviewing those that affect major global trade routes, or trades, and key drivers of container demand. To gauge whether the trends we're seeing will prove temporary or permanent, we considered how demand drivers could change in the next several years. Finally, we assessed moves that carriers, or container liners, can explore to defend their competitive position and further sharpen their edge.

One thing is clear: in this seascape, container-shipping companies that can continue to drive change stand the best chance of steaming ahead of their less progressive peers.

# FROM HIGH HOPES TO DEEP DISAPPOINTMENT

**B**Y THE END OF 2014, container demand showed signs of picking up, demonstrating average year-on-year global growth of 3.3% compared with 2013. Several individual trade regions—particularly Asia-Europe (including Intra-Europe), Transpacific, and Indian subcontinent and Middle East—achieved impressive growth rates that year, even as Intra-Asia (historically a powerful growth engine) saw disappointing rates.<sup>1</sup> The robust overall growth in 2014 excited the imaginations of carriers and analysts alike, raising their expectations for 2015 and beyond.

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In 2015, annual global growth in the container-shipping trade was just 1.9%.

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But then reality hit—and hit hard. By the end of 2015, annual global growth in the container-shipping trade was just 1.9%. (See Exhibit 1.) The disappointing outcome stemmed largely from a disastrous year for the Asia-Europe trade, combined with the failure of more promising trades to achieve brisk-enough growth to offset other trades' losses. Asia-Europe registered a dismal decline of 2.6%. Growth for the Indian subcontinent and Middle East—while a relatively impressive

5.1%—wasn't enough to compensate. Intra-Asia saw 2.4% growth, boosted by brisk trade throughout Southeast Asia, and Transpacific registered 3.5% growth. But again, these gains weren't enough to compensate for the big losses. Latin America, for its part, saw a 0.9% drop, while Africa remained flat at 0.1%.

In the last quarter of 2015 alone, global container trade sank by 5.4%, with all trades suffering a drop—even those that had enjoyed increases earlier in the year. (See Exhibit 2.) Meanwhile, backhaul, driven mainly by reduced demand in industrial imports to China, dragged down most trades, registering a 0.4% drop during 2015.

As demand lost momentum, the global fleet nevertheless expanded, with liners rushing to add 62 new ships above 10,000 20-foot-equivalent units (TEUs) in a bid to boost scale and reduce slot costs. The fleet growth rate peaked from 2014 through 2015 at 8.6%, a significant jump over the 6.3% seen from 2013 through 2014. This growth only worsened the overcapacity already afflicting the market, pulling freight rates down to new lows. Indeed, the Shanghai Containerized Freight Index tumbled from 1,000 at the beginning of 2015 to below 700 by year-end.

In 2015, for the first time in history, container demand growth lagged behind global gross domestic product growth, producing a GDP

## EXHIBIT 1 | Global Growth in the Container-Shipping Trade Proved Disappointing in 2015

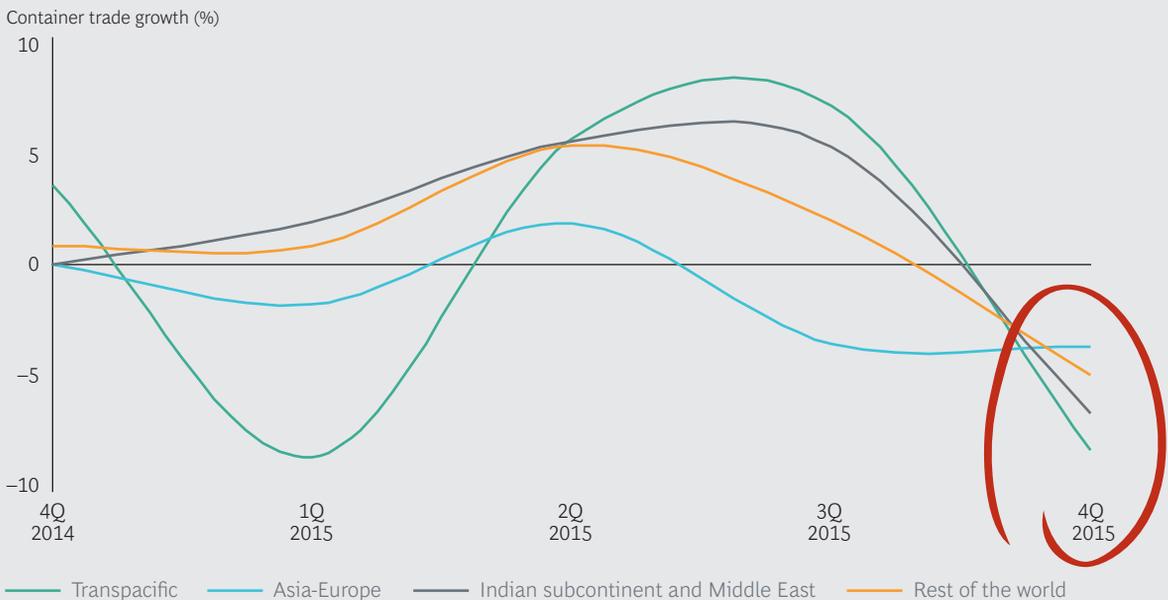
2014 SET HIGH EXPECTATIONS...

...BUT REALITY HIT HARD IN 2015

	Share of world trade, 2014 (%)	Change, 2013–2014 (%)	Change, 2014–2015 (%)	
Asia-Europe and Intra-Europe	20	5.6	-2.6	<ul style="list-style-type: none"> <li>Northern European imports fell; Russia accounted for less than 50%, and Germany, France, and Italy accounted for 10% of losses</li> <li>Central and Eastern European economies showed resistance; imports remained steady</li> </ul>
Transpacific	14	3.9	3.5	<ul style="list-style-type: none"> <li>Peak head haul performance (7.1%) hindered by negative backhaul</li> <li>US economy rebound saved the trade</li> </ul>
Intra-Asia	29	0.1	2.4	<ul style="list-style-type: none"> <li>China had less than stellar demand</li> <li>Southeast Asia posted double-digit growth</li> </ul>
Indian subcontinent and Middle East	12	6.0	5.1	<ul style="list-style-type: none"> <li>UAE and Saudi Arabia led, driven by infrastructure materials and nondurable consumer goods; backhaul was also solid</li> </ul>
Latin America	3	0.8	-0.9	<ul style="list-style-type: none"> <li>A sharp swing to negative territory was largely due to the economic implosion in Brazil, where demand contracted</li> </ul>
Africa	5	5.1	0.1	<ul style="list-style-type: none"> <li>There was stagnation across the continent; a commodity crisis resulted in declining imports and exports from major contributors Nigeria and Angola</li> </ul>
Global		3.3	1.9	

Sources: IHS World Trade Service; Drewry Shipping Consultants; Clarkson Research Services; BCG analysis.  
 Note: UAE = United Arab Emirates.

## EXHIBIT 2 | Container Trade Growth Plummeted in Late 2015



Sources: Clarkson Research Services; BCG analysis.

multiplier of less than 1. (See Exhibit 3.) This development raised questions: Was 2015 merely an anomaly, or was it a manifestation of a troubling new normal that's here to stay? Will the GDP multiplier be the most useful KPI for tracking? Although it's a well-known metric, it is a backward-looking multiplier, measuring only what has already happened. To make savvier decisions, shipping companies need to consider more forward-looking trends that illuminate developments in trade

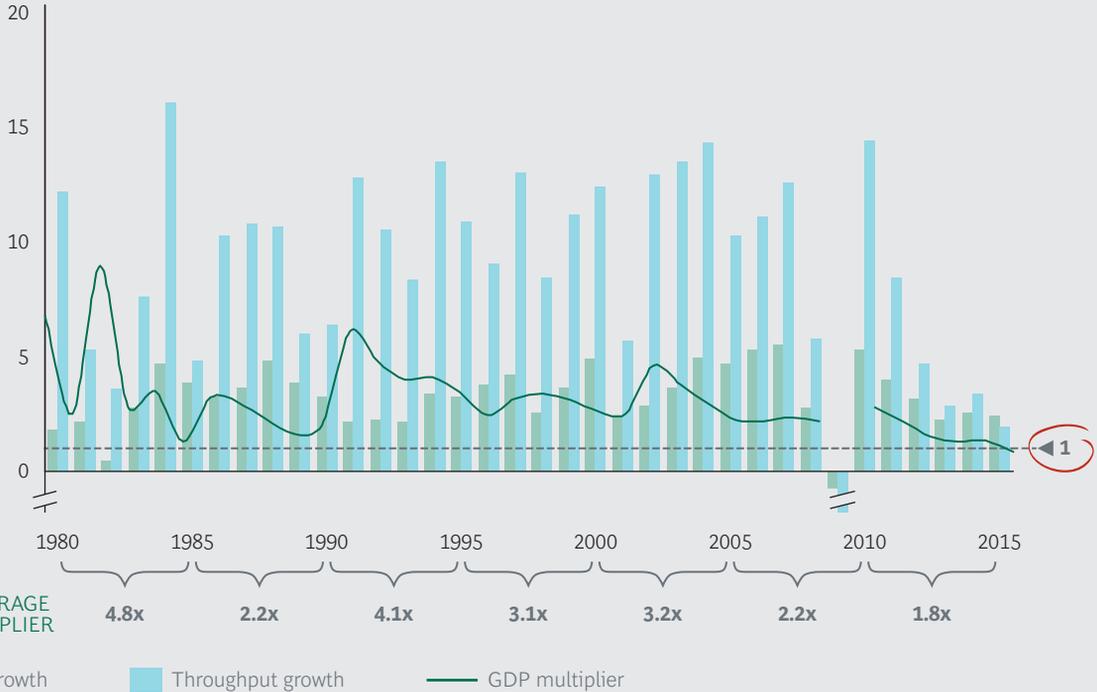
volumes. Later in this report, we examine 15 such trends in greater detail and consider their implications for specific trades.

**NOTE**

1. Asia-Europe includes the Far East to Northern Europe and the Mediterranean. Transpacific includes the Far East to the North American West Coast and East Coast.

**EXHIBIT 3 | For the First Time in History, Container Demand Growth Lagged Behind GDP Growth**

Container trade growth as a share of world GDP growth (%)



**Sources:** IHS World Trade Service; World Bank; IMF; Economist Intelligence Unit; UN Economic and Social Commission for Asia and the Pacific; Alphaliner; BCG analysis.  
**Note:** The GDP multiplier for 2009, an outlier, has been excluded.

# A CLOSER LOOK AT THE TRADES

**W**HAT DO THESE DEVELOPMENTS imply? For the major trades, how will container demand evolve through 2020? To explore possible answers, we analyzed the performance of key trades that collectively represent more than 80% of total container trade worldwide: Asia-Europe, Transpacific, Intra-Asia, Indian subcontinent and Middle East, Latin America, and Africa. Because trade is fundamentally demand driven, we looked at developments in the forces that affect demand, such as industrial and consumer demand, as well as other forces that affect trade, including currency and structural changes in major economies. For each trend, we assessed whether the trend is temporary or a symptom of more enduring change.

## Asia-Europe: Shrinking Imports

This trade saw imports from Asia into Northern Europe shrink by 3% from 2014 through 2015. (See Exhibit 4.) The contraction was triggered by a number of forces. Russia accounted for more than 50% of the volume loss, suffering a recession that was provoked by the sharp drop in oil prices and EU and US trade embargoes. Russian GDP growth fell from 0.4% in 2014 to -3.7% in 2015, and by the end of 2016, GDP growth will likely have dropped an additional 1.2%. What's more, the Russian ruble declined against other currencies, eroding Russia's purchasing power and thus its ability to import goods. Consequently,

imports contracted, diminishing container demand for all commodities.

Sluggish European industrial demand in the EU's Big Three—Germany, France, and the UK—accounted for 6% of the drop in import volume from Asia into Northern Europe.

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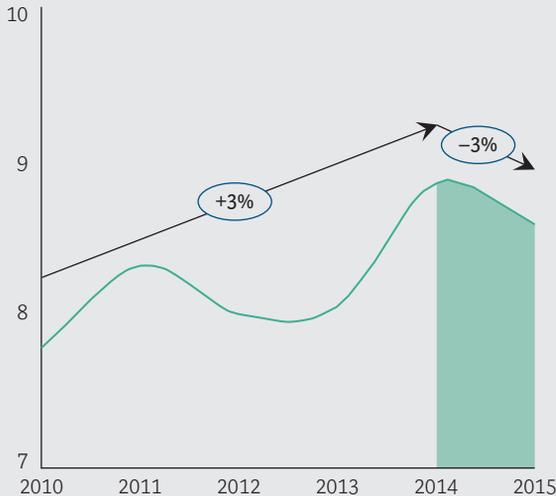
Imports from Asia into Northern Europe shrank, triggered by a number of forces.

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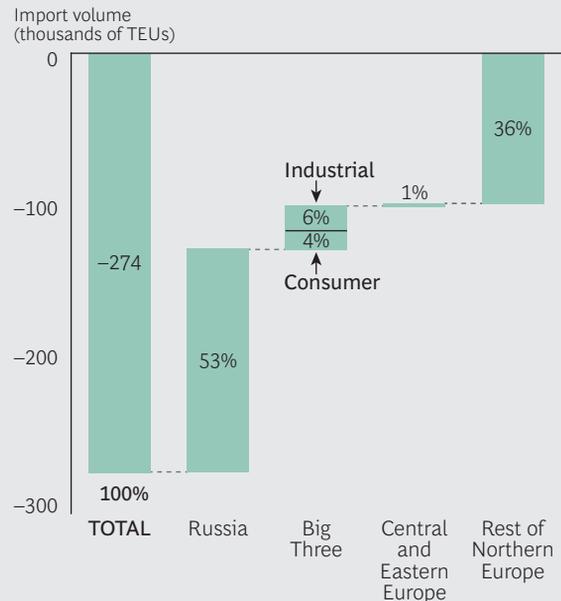
Industrial export volumes from Europe to China also decreased. European manufacturing output is driven by overseas reexports, primarily to the US and China. With the slowdown in China's economy and its government's aggressive campaign for economic self-reliance, growth in European industrial-export volumes to China dropped from 15% from 2005 through 2011 to just 2% from 2011 through 2015. Over the next several years, European industrial reexports will likely show only modest growth, as the impact of China's economic slump eclipses brisker growth of reexports to the US. Indeed, US industrial imports from Europe would have to increase at a CAGR of 11% from 2015 through 2020 to offset the China effect.

## EXHIBIT 4 | Imports from Asia into Northern Europe Shrank

Northern European import volume from Asia (millions of TEUs)<sup>1</sup>



RUSSIA ACCOUNTED FOR HALF OF NORTHERN EUROPEAN IMPORT DECLINE IN 2015



Sources: IHS World Trade Service; BCG analysis.

Note: TEU = 20-foot-equivalent units; Central and Eastern Europe = Poland, Czechia, and Slovakia; Big Three = Germany, France, and the UK.

<sup>1</sup>Accounts for imports to Northern European coasts only.

In addition to the decline in industrial demand, the Big Three saw consumer spending contract. This was prompted by the region's difficult economic recovery and consumers' resulting pessimism—even as governments tried to stimulate spending by decreasing interest rates. European imports from Asia of retail goods—including toys, appliances, tires, leather goods, and apparel—fell from 2014 through 2015. Shipping companies blamed European retailers for reducing inventory stocks in response to weak consumer demand. But a number of indexes, as well as data from big retailers and consumer goods companies, show that inventories and procurement activity actually grew during 2015. Thus, the import slump cannot be attributed to destocking.

On a more positive note, the Central and Eastern European economies fared better than Russia and the Big Three in terms of industrial and consumer goods imports. From 2014 through 2015, these countries' imports remained steady. Poland, in particular, shows potential for robust growth in domestic and transshipped cargo. Local economic growth in the countries of Central and Eastern Europe is being boosted by industrial output and con-

sumer demand, as well as by their sound infrastructure, which enhances accessibility. A number of new services have recently been launched in Poland by liners seeking to capitalize on the opportunities there.

Still, taken together, all of these trends suggest that through 2020, Northern European imports from Asia won't likely enjoy the strong growth rates of the past. The Russian economy will probably rebound during that period, as the effects of external shocks fade. But chances are small that European industrial demand will recover to precrisis growth levels. And any rebound in European household demand will still be tied to the restoration of consumer confidence.

Of course, uncertainty associated with Brexit, Britain's historic vote to exit the EU, could constrain imports into the UK and affect other European countries. After the referendum, the International Monetary Fund acknowledged such a possible impact by revising downward the UK's 2017 outlook on GDP growth from 2.2% to 1.3%, the biggest reduction among advanced economies. Across Europe, Brexit will likely have ripple effects on

trade if political turmoil and uncertainty over Europe's cohesiveness, further exacerbated by security concerns, put the brakes on capital investment and consumer spending.

### Transpacific: Imminent Slowdown

Transpacific routes account for more than 60% of total US imports, which have been experiencing decent growth. In this trade, US imports achieved 8% year-on-year growth from 2014 through 2015, thanks mostly to significant increases in imports of consumer goods. In the US, per capita personal disposable income rose 2.3% from 2013 through 2015, and consumer sentiment proved sunny too. The result was growth in aggregate consumption and a corresponding jump in imports of consumer goods from Asia.

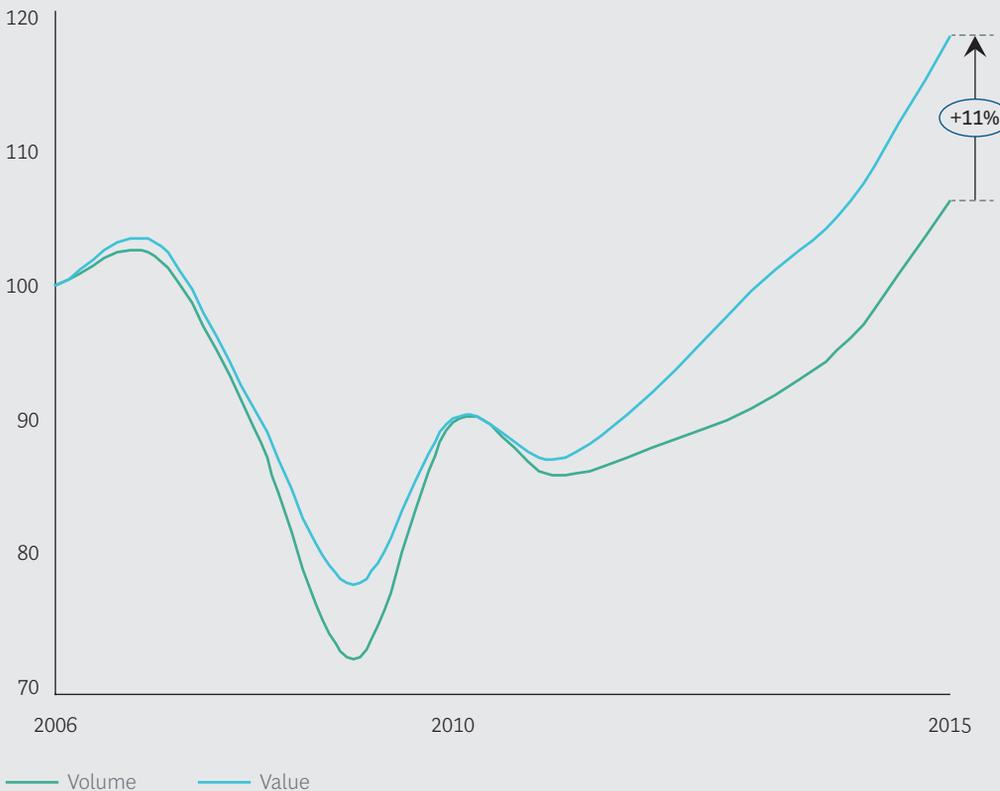
But we question whether this momentum can endure. For one thing, the economic rebound in the US is unevenly distributed, with the li-

on's share of increased disposable income going to higher-income consumers. According to the American Economic Association, as their wealth expands, affluent families spend more on education and domestic services than on consumer goods. Thus, it's important to distinguish between value growth and volume growth of imported consumer goods. (See Exhibit 5.) Meanwhile, families in the lower income brackets are exhibiting a savings mindset, choosing to salt away any pay increases they get rather than stepping up their spending on consumer goods. And baby boomers are retiring, while millennials are opting to spend more on experiences than on goods.

In the meantime, for some years now, rising manufacturing labor costs in China and other erstwhile low-cost countries have prompted many US companies to think about reshoring their manufacturing work. If this trend continues, we expect that Transpacific imports into the US will slow down in the coming

#### EXHIBIT 5 | In the US, Value Growth of Imported Consumer Goods Outpaced Volume Growth

US imports of consumer goods, 2006–2015  
(2006 = 100)



Sources: IHS World Trade Service; BCG analysis.

Note: Value growth refers to trade measured in constant 2005 dollars.

years. However, collapsing energy prices and volatile foreign-exchange rates could delay this effect. In a BCG survey conducted in 2015, participating executives said that they believe that the US will account for a slightly lower portion of their companies' global production capacity than they had indicated in 2014. (See *The Shifting Economics of Global Manufacturing: How Cost Competitiveness Is Changing Worldwide*, BCG report, August 2014, and "Reshoring of Manufacturing to the US Gains Momentum," BCG article, December 2015.) Indeed, findings from BCG's manufacturing survey show that appetite for reshoring has stagnated over the past two years.

### Intra-Asia: The China Effect

Since 2010, this trade has enjoyed faster growth than several other key routes. Overall, the growth has been driven primarily by developments in China. With the maturation of the Chinese economy, several forces have exerted a complex but overall dampening effect on growth on Intra-Asia trade. As a result, trade volume has lost some momentum since 2012, downshifting from 11% annual growth from 2010 through 2012 to just 2% from 2012 through 2015.

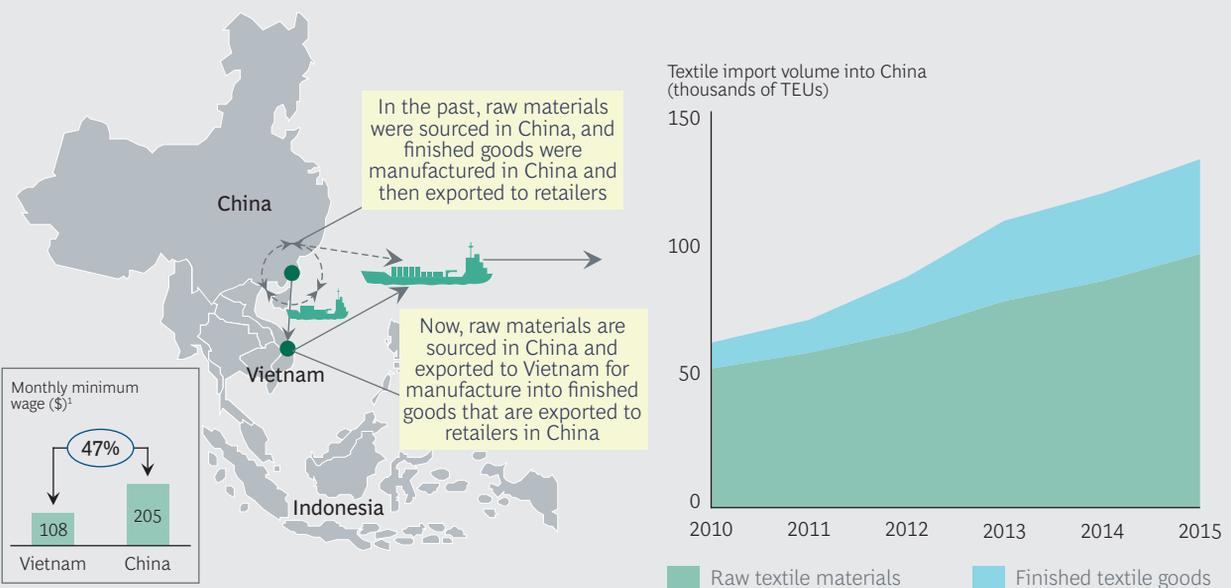
No longer on a sky-high growth trajectory and experiencing a natural deceleration, China has also slowed its import and export of industrial goods. The structural transitions taking place in the economy—including greater reliance on domestic industry and a shift to consumption- and service-led growth and higher-value-adding goods—have further moderated trade growth. One development, the concentration of the entire supply chain within China, has had a key role in reducing Intra-Asia trade volumes. For instance, in the past, Chinese automotive companies had engine-manufacturing plants in Thailand and shipped the engines from there to China for automotive assembly in China's domestic market. Now, the engine factories are located in China itself.

Furthermore, as the country's minimum wage rises, China is offshoring low-value-adding industries (such as apparel manufacturing) to countries such as Vietnam. (See Exhibit 6.) This structural shift has provided a boost to trade in consumer goods. Additionally, Chinese consumers' confidence levels remain healthy, even as their trading-up intentions have stalled. As of mid-2016, consumption patterns in China were holding up despite

## EXHIBIT 6 | Textile Supply Chains Are Moving from China to Southeast Asia

CHINA IS SHIFTING MANUFACTURING OF LOW-VALUE TEXTILE PRODUCTS TO CHEAPER LOCATIONS...

...AND IMPORTING THEM AS READY-FOR-CONSUMPTION GOODS



Sources: International Labour Organization; IHS World Trade Service; Statista; *Wall Street Journal*; BCG analysis.  
<sup>1</sup>In 2014 dollars.

slowdowns and volatility in other areas. If these trends continue, we expect to see increased back-and-forth trade in finished consumer goods (such as food, footwear, and textiles) between China and Southeast Asia.

Meanwhile, Vietnam is becoming the fastest-growing exporter of finished goods in Southeast Asia, thanks to energetic investment in its infrastructure. This has driven up imports of industrial goods. What’s more, Asian countries dominate as sources of the inbound foreign direct investment supporting Vietnam’s industrialization, further fueling the growth of Intra-Asia trade.

As for Indonesia, because of currency depreciation and tariffs that hamstrung imports in 2015, the nation’s otherwise solid trade has proved disappointing. Nevertheless, we expect its large emerging middle class to re-charge import trade in the future, providing a long-term boost to Intra-Asia. (See *Consumer Durables: Capitalizing on a Growing Population of Shoppers*, BCG Focus, December 2015.)

Looking at the Intra-China trade, which represents a significant portion of total Intra-Asia trade, we estimate that volume may have

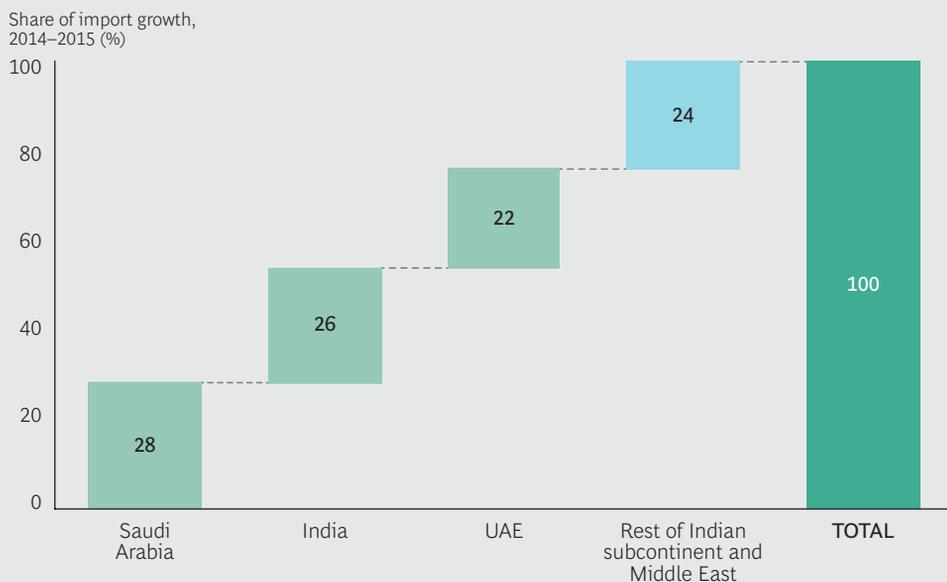
reached roughly 17 million TEUs in 2015. Strict cabotage rules make it difficult for international players to penetrate the Intra-China market, and the lack of robust and complete port data make it a “black box” for outsiders to analyze.

As for this trade’s outlook, improvements in availability and the quality of labor and transportation infrastructure in inland China have prompted many Chinese businesses to shift manufacturing for local consumption and export from coastal areas to the interior. There, shipping by truck currently dominates. Moreover, improved rail shipping will likely take a large share of inland transport, possibly reducing the available business for container liners across China’s coastal and river ports.

### Indian Subcontinent and Middle East: A Rosy Outlook

This trade saw 6% head haul and intra-region growth from 2014 through 2015. Saudi Arabia, India, and the United Arab Emirates led growth in this trade, accounting for as much as 76% of the total year-on-year increase in importing. (See Exhibit 7.) The future of the trade looks positive overall.

**EXHIBIT 7 | Saudi Arabia, India, and the UAE Led Import Growth in the Indian Subcontinent and Middle East Trade**



Sources: IHS World Trade Service; BCG analysis.

Saudi Arabia's continued dependency on oil, as well as an expected slowdown in GDP growth, will likely lead to a contraction in importing. Port traffic data already indicates that growth in imports slowed since container port throughput in Jeddah fell in 2015. The UAE's Dubai saw a 2.6% increase in container port throughput over the same time frame. And Iran made its debut by registering a 10.6% jump, likely from the elimination of sanctions.

Developments in Iran and the UAE could help offset the impact on trade growth in Saudi Arabia. Indeed, Iran will play a pivotal role in the future: the nuclear deal with the US and other nations and the lifting of sanctions will boost the country's trade volumes, enhancing imports and trade growth in this trade overall.

Meanwhile, imports into the UAE grew during 2015 and made a strong start in 2016 despite low oil prices. Even though falling prices affected the UAE's GDP, the government has strived to diversify the economy by investing in sectors such as hospitality, manufacturing, real estate, construction, and financial services. The effort seems to have paid dividends for trade, especially industrial imports.

India, for its part, saw imports increase by 7%, owing to strong demand for industrial goods that was driven by growth in capital expenditure, for example, for the construction of new factories. Industrial importing added more than 100,000 TEUs to container demand in 2015. That's more than twice the amount added by consumer imports and significantly more than the amount added by industrial and consumer exporting. Indeed, we believe that India has considerable latent potential and is limited only by how well its infrastructure can support its trade needs.

India's containerization rate is still low compared with the global average (in 2015, 25% versus the 60% to 70% global average), and its port infrastructure is commonly viewed as suboptimal. But if the country can overcome these issues, it could see its port capacity climb by as much as 50%. Such an increase would lift trade traffic growth through 2020.

## Latin America and Africa: Great Expectations Not Yet Realized

These two trades experienced a slowdown in 2015: both saw trade volume growth flatten. Together, the two regions accounted for as much as 10% of global trade in 2015, but they contributed only 2% of the addition to global volume growth that year.

In Latin America, Brazil's recession led to a 4% contraction in GDP in 2015. Impacts included currency deflation and plummeting business and consumer confidence, which dragged down trade growth in the region overall. Latin America will likely continue to feel the effects of economic events in Brazil. But we also expect to see a countereffect from the steady increases in import and export CAGRs that Colombia, Peru, and Chile enjoyed from 2010 through 2015. Colombia's gains were the most impressive: import and export CAGRs of 8% and 5%, respectively.

In Africa, trade growth stumbled after a currency depreciation—catalyzed by plunging oil and commodity prices—struck the key markets of Nigeria and Angola, the region's two largest oil producers. The result was a sharp decrease in imports in these key markets, leading to stagnation in trade growth throughout Africa. In addition, as China slowed exports, it imported fewer raw materials from African countries, further affecting volumes in this trade.

Still, we believe that trade growth in the region will revive, thanks to rising urbanization and income levels as well as reforms that, together, will open up markets. GDP growth throughout Africa proved relatively impressive from 2000 through 2015, and overall trade hasn't experienced a contraction during that time frame. Thus, we expect to see trade grow through 2020.

# ANTICIPATING THE GLOBAL CONTAINER-SHIPPING PICTURE

**I**N ADDITION TO ANALYZING demand volumes in 2015 for key trades, we assessed the main drivers of demand, considering how they might affect global container shipping through 2020. In doing so, we sought to answer the question, Was the 2015 dip cyclical or an indication of a new normal for global trade?

We developed bearish and bullish scenarios that represent the lower and upper limits of what could happen, as well as a base scenario that represents a more moderate picture. Using such scenarios, a carrier can plan its investments for the fleet. It can also prepare the company to navigate effectively in the soft market we expect for the next several years.

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Was the 2015 dip cyclical or an indication of a new normal for global trade?

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Below, we take a closer look at the next few years and the future of several key elements of the industry. We focus especially on container demand CAGRs and the container supply-and-demand balance. Container demand growth indicates the market's health. Supply is also critical, given that the industry

has been overinvesting and deploying additional capacity (supply) that is out of proportion to demand growth. When supply grows faster than demand, freight rates decrease, threatening revenues.

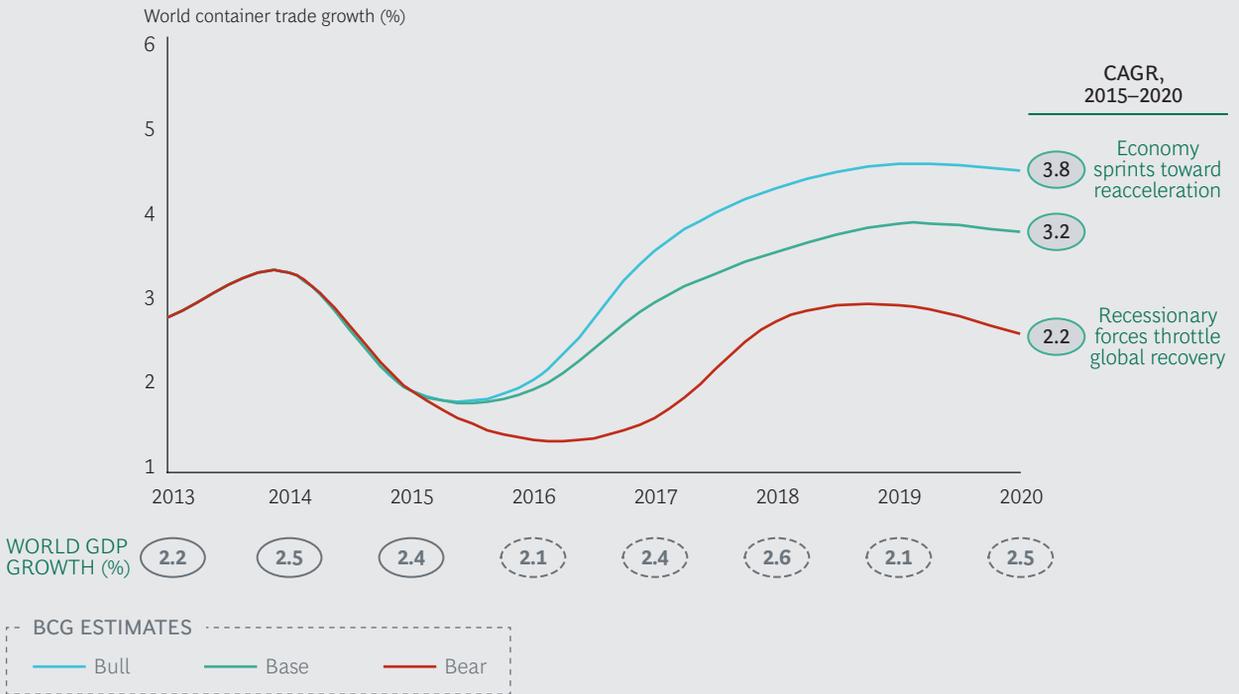
## Container Demand CAGRs, 2015–2020

In light of the trends analyzed in the preceding chapters, we expect annual growth in global container traffic to be between a bear scenario of 2.2% and a bull scenario of 3.8%, with the base scenario of 3.2%. (See Exhibit 8.) Corresponding container trade could reach 170 million TEUs to 183 million TEUs in 2020.

**Base Scenario.** The base case envisions a CAGR of 3.2% from 2015 through 2020 for global container demand, driven mainly by the Intra-Asia, Transpacific, and Indian subcontinent and Middle East trades. (See Exhibit 9.) As we've seen, many developments in these trades are driven by structural changes, which create more enduring shifts than do cyclical forces. The base scenario implies the following:

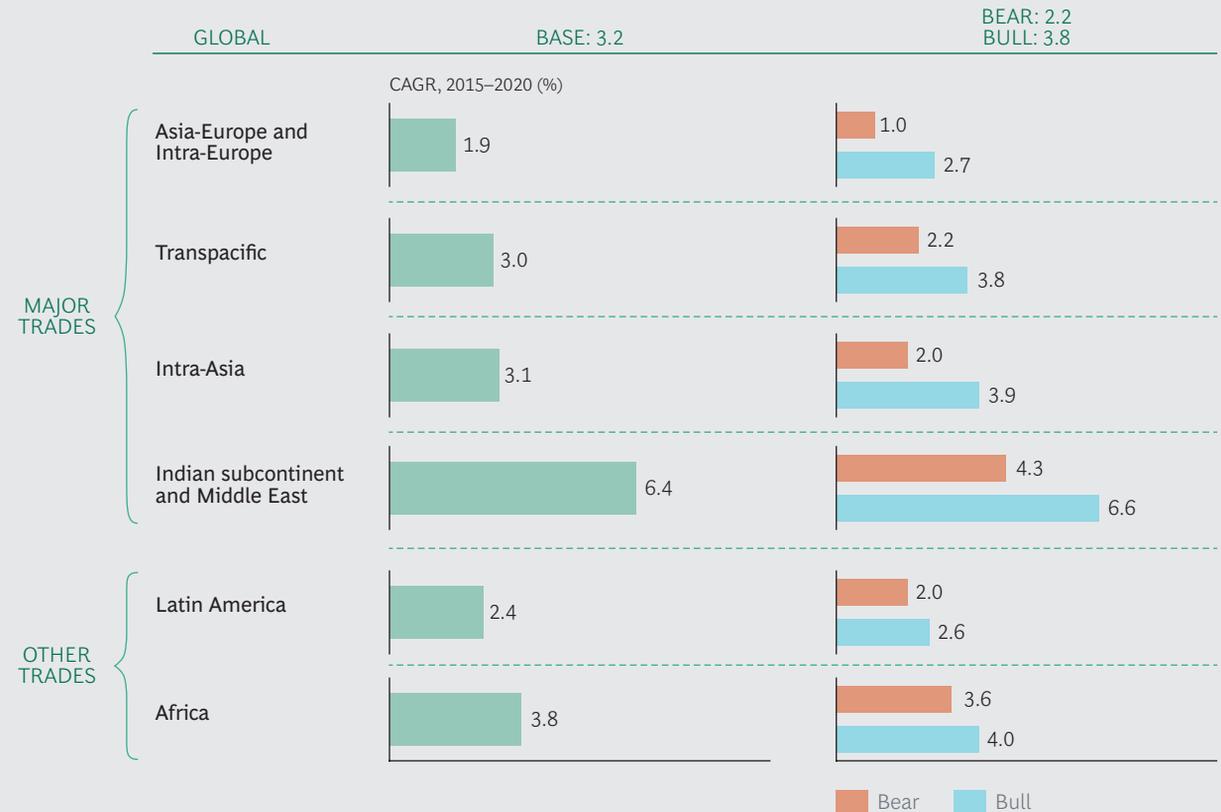
- Asia-Europe grows at a CAGR of 1.9% because the economic recovery in the EU is tempered by post-Brexit uncertainty and the Russian economy has yet to rebound. However, growth pockets in Central and Eastern Europe are being tapped.

### EXHIBIT 8 | Container Trade CAGR, 2015–2020



Sources: Economist Intelligence Unit; IHS World Trade Service; BCG demand model.

### EXHIBIT 9 | The Five-Year Outlook, by Trade



Source: BCG analysis.

- Transpacific grows at a CAGR of 3%, thanks to an uptick in the US economy. Still, brisker consumer spending doesn't translate into proportional gains in trade volume, owing to uneven income distribution.
- Intra-Asia records a CAGR of 3.1%, as China's rebalancing leads to more self-sufficiency that is countered by more Chinese offshoring to rapidly developing economies, and Vietnam and Indonesia deliver a boost.
- Indian subcontinent and Middle East logs a CAGR of 6.4%, as UAE imports show resilience in the face of low oil prices, India tops the Gulf region as a trade growth engine, and Iran makes its debut there.
- Latin America and Africa see CAGRs of 2.4% and 3.8%, respectively. In Brazil, importing fails to recover, though trade gains momentum in the continent's western countries, particularly Colombia, Peru, and Chile. In Africa, trade growth rebounds, thanks to solid demand fundamentals, and Nigeria leads imports while South Africa leads exports.

**Bear Scenario.** The bear scenario forecasts a CAGR of 2.2% from 2015 through 2020 for global container demand. It implies the following:

- Asia-Europe grows sluggishly with a CAGR of 1% until 2020 as Brexit fuels further concerns about EU cohesion, and the lack of structural adjustment results in stagnating industrial output and weak consumer sentiment. Businesses hold back on investments.
- Transpacific grows at a CAGR of 2.2% owing to uneven distribution of wealth and rising interest rates in the US that reduce both consumer spending and imports. China's economic slowdown means lower exports of industrial goods from North America.
- Intra-Asia registers a CAGR of 2%. China's mounting corporate debt and its slowing economy reduce container demand

related to China. The structural rebalancing at the core of China's growth strategy exerts a negative impact on trade volumes—both importing and exporting. Simultaneously, slow or restricted foreign direct investment from China to rapidly developing economies in Southeast Asia drags down growth.

- Indian subcontinent and Middle East shows a CAGR of 4.3%. The prolonged fall in oil prices causes Gulf countries to restrict infrastructure funding, tightens budgets, and induces a drop in imports. At the same time, India fails to deliver on its infrastructure investment promise.
- Latin America and Africa see CAGR growth of 2% and 3.6%, respectively. In Latin America, socioeconomic woes and cheap oil hold back Brazil's economy, and in Africa, the commodity price crisis and weak currencies stifle trade.

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The bear scenario forecasts a CAGR of 2.2% from 2015 through 2020.

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**Bull Scenario.** The bull scenario's forecast CAGR of 3.8% from 2015 through 2020 is driven by a confluence of positive developments in the key trades. The bull scenario implies the following:

- Asia-Europe comes back with a CAGR of 2.7%. EU cohesion refuels consumer confidence, while Russian sanctions ease up and the ruble appreciates.
- Transpacific achieves a CAGR of 3.8% as the US economy keeps growing at a healthy, stable pace that is driven by a positive job market and pressure to keep interest rates low, fueling consumer demand. China's capital investment appetite supports imports of industrial goods from North America.
- Intra-Asia sees a CAGR of 3.9%, thanks to China's offshoring to Southeast Asia and a

consumption-led Chinese economy that boosts back-and-forth trade.

- Indian subcontinent and Middle East springs forward with a CAGR of 6.6%, thanks to diversified investments in the Middle East that protect economies in this region from the impact of the oil price slump. Moreover, improvement of port and inland logistics infrastructure ramps up in India.

- Latin America and Africa achieve CAGR growth of 2.6% and 4%, respectively. In Brazil, a rebound in oil prices provides relief, boosting imports. In Africa, commodity price upticks inspire capital investments.

The base scenario anticipates a GDP multiplier closer to 1.5 in 2020. But since the multiplier is a backward-looking indicator, we propose 15 more forward-looking trends. (See Exhibit 10.)

### EXHIBIT 10 | Trends That Will Affect the Industry Through 2020

Asia–Europe (and Intra-Europe)	Recession in Russia	1	Plunging oil export revenues and international embargoes upset domestic demand; ruble depreciation reduces imports
	Slow, fragile recovery in Europe	2	Consumer demand in major EU economies is fragile despite enhanced access to credit; imports from Asia lose momentum
	Low industrial output in Europe	3	Industrial demand of the Big Three doesn't recover, because of slowed demand from China
	Central and Eastern European growth pockets	4	Central and Eastern European economies see rising overall demand, but not enough to balance challenged Asia-Europe trade
Transpacific	Uneven distribution of US consumer demand	5	Household disposable income increase is driven by higher income brackets, which do not drive volume
	US reindustrialization	6	Industrialization boosts US self-sufficiency, but momentum is delayed because of a strong dollar and oil crisis
Intra-Asia	China's maturation	7	China offshores labor-intensive production to rapidly developing economies, focuses on higher value-added segments, and becomes self-reliant, decreasing intermediary imports
	China's slowdown	8	Natural deceleration and structural economic change drive down industrial-related trade
	Healthy consumer sentiment in China	9	Healthy Chinese consumer sentiment drives Intra-Asia trade of consumer goods
	Growth in Vietnam and Indonesia	10	Capital formation and strong infrastructure drive industrial demand
Indian subcontinent and Middle East	Resilient Middle East	11	Imports in the UAE and Saudi Arabia hold against decelerating economy; Iran makes its debut
	Logistics infrastructure in India	12	India invests in ports and hinterland infrastructure
Latin America	Outlook for Brazil	13	Currency deflation and plummeting confidence lead to a recession
Africa	Currency impacts on Africa trades	14	Imports decrease owing to oil-related currency depreciations in Nigeria and Angola
Global	Commodity and oil prices for producer countries	15	Producer countries dependent on commodities and oil risk economic slowdown

EXPECTED EFFECT ON CONTAINER TRADE THROUGH 2020

- Positive
- Negative
- Mixed
- Neutral

Source: BCG analysis.

Instead of examining one indicator, carriers would benefit by closely following a set of trends. The reason is that forces shaping the industry—including the introduction of counterbalancing effects in which various forces push trade volume movements in different directions—have grown more complex. To anticipate market developments, carriers must analyze a wider range of trends than in the past, especially those trends that can shed the most light on what might happen in the future.

## Container Supply-and-Demand Balance

In 2015, the gap between container supply and demand stood at 7%. BCG projects a CAGR of 3.7% for cellular fleet tonnage (including order book, scrapping, slippage, and cancellations) from 2016 through 2020, down from the 6.6% seen from 2012 through 2015. (See Exhibit 11). Using BCG’s proprietary supply-and-demand model, we forecast a supply-demand gap in 2020 ranging from 8.2% to 13.8%. (See Exhibit 12.)

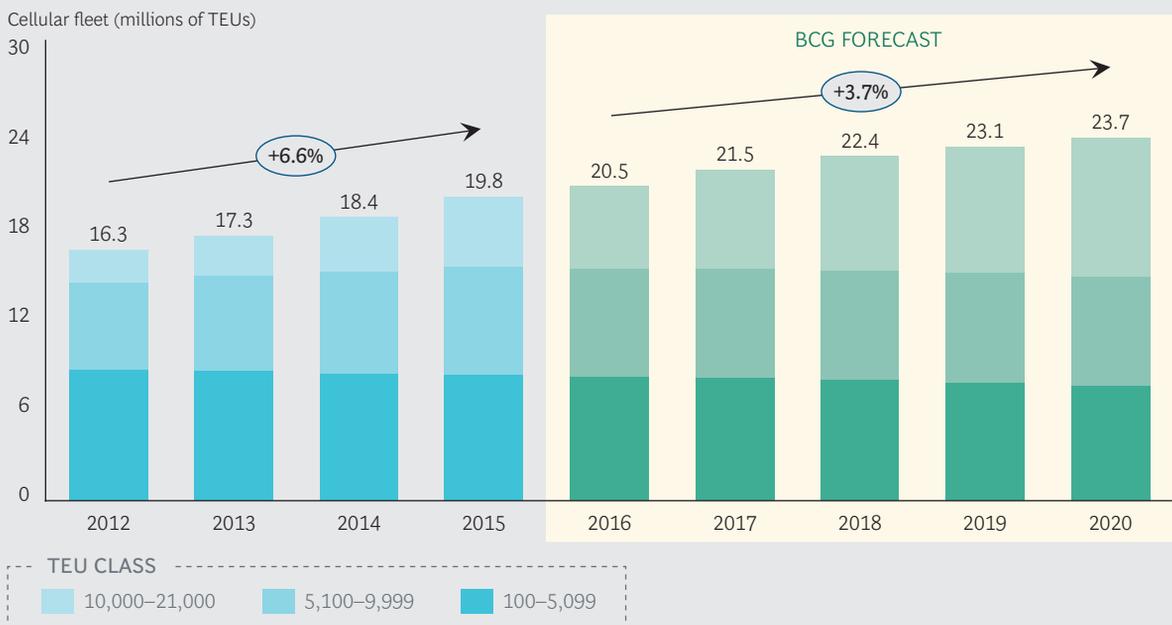
**Base Scenario.** The base scenario assumes a supply-demand gap of 9.4% in 2020. This scenario hypothesizes a restrained improve-

ment in container demand, with net capacity increasing at a steady and controlled pace. New orders would be driven by falling shipbuilding prices and favorable financing conditions. We expect slow-steaming practices to persist, while scrapping and idling capacity would follow recent historical averages.

**Bear Scenario.** The bear scenario’s 13.8% gap would be driven by weak container demand, and industry players’ continued moderate capacity additions. Such additions are made with an eye to upgrading the fleet by taking advantage of lower capital costs and capturing operational efficiencies of new assets to drive down unit costs even more. We assume that liners will maintain their current slow-steaming practices.

**Bull Scenario.** The bull scenario’s 8.2% gap rests on the assumption that container demand will rebound and carriers will speed up marginally by 1 to 2 knots. The aim of increased speed will be to take advantage of a prolonged period of low fuel prices and efficient assets, and it will be possible to release some of the capacity absorbed as a result of the current level of slow steaming.

### EXHIBIT 11 | Cellular Fleet Expansion Is Slowing

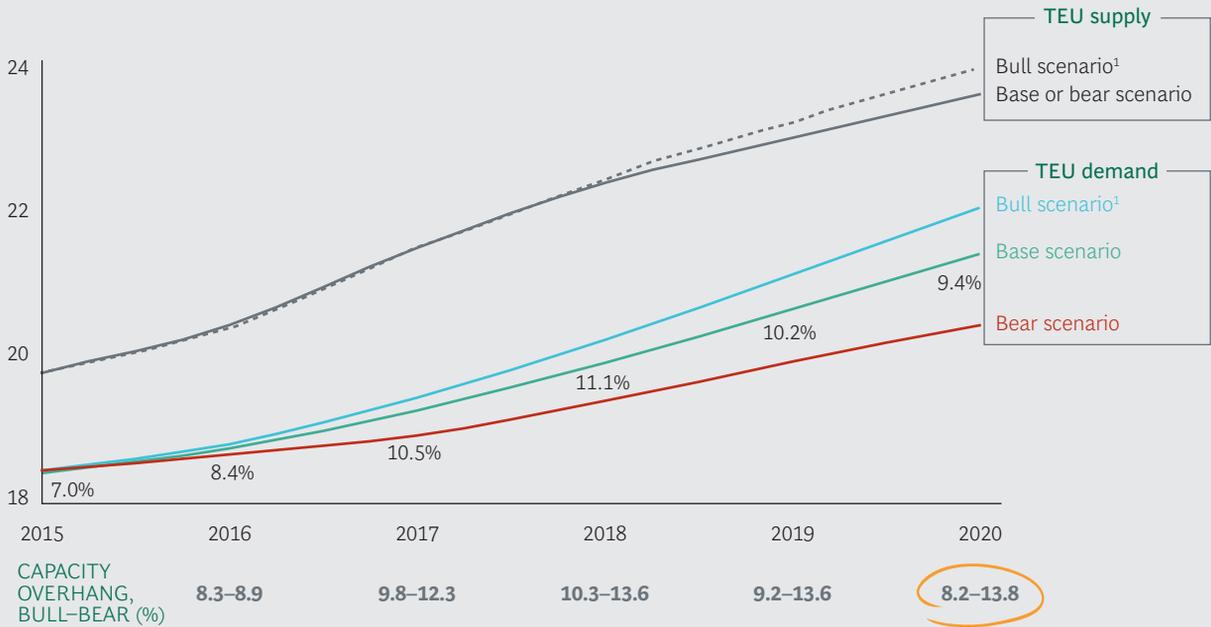


**Sources:** Alphaliner; Maritime Strategies International; Drewry Shipping Consultants; BCG analysis.

**Note:** Projections are based on the current fleet estimates, April 2016 order book, scrapping forecast, and expected delivery slippage.

## EXHIBIT 12 | The Container Supply-Demand Gap Could Rise to 13.8% in 2020

TEU CAPACITY ON WATER VERSUS CONTAINER DEMAND (MILLIONS OF TEUS)



Sources: IHS World Trade Service; Alphaliner; Drewry Shipping Consultants; BCG container flow model.

<sup>1</sup>With prolonged bullish demand, ships will speed up and idled ships will come on line; effective capacity on water is forecast to increase by 0.5% in 2018, 1% in 2019, and 1.5% in 2020.

**The Supply-Demand Gap.** By the end of 2020, oversupply in vessel capacity will stand at 2 million to 3.3 million TEUs—equivalent to some 90 to 150 or more Triple E class ultra-large container vessels. The year 2016 seems ready to set a new record for a reduction in capacity: seven months of scrapping (January through July) affected roughly 300,000 TEUs, and the age of vessels at their scrapping—20 years—dropped to a two-decade low. However, it's uncertain how much more reduction is to come. Industry players are in a race for lower slot costs to ensure competitive advantage. The bigger, newer, and more efficient the vessel, the lower the slot cost, which is why companies want to invest in larger vessels.

More broadly, liners are part of an ecosystem: no single company can by itself exert full influence on that ecosystem, which includes shipyards, ship-financing banks, and the local and state governments that have interests at stake. For example, shipyards represent high political stakes in Japan, South Korea, and China, where they employ thousands of workers. And ship financing is linked tightly to

state-related financial institutions. Liners can get favorable financing for vessels, because the need to keep a shipyard active can extend beyond any economic rationale and is a political imperative. Only if the ecosystem addresses the situation collectively can there be a possibility of containing fleet expansion.

The supply-and-demand fundamentals of this industry appear to indicate the emergence of a new normal. Before 2015, the industry's major challenge was overcapacity. During 2015, demand proved weak, and trend analysis suggests that this lower demand will characterize the industry. In today's challenging environment, carriers have to do even more to survive, never mind thrive. We believe they will need to craft increasingly sophisticated battle plans that enable them to further improve their own performance, so they can successfully "sail in strong winds."

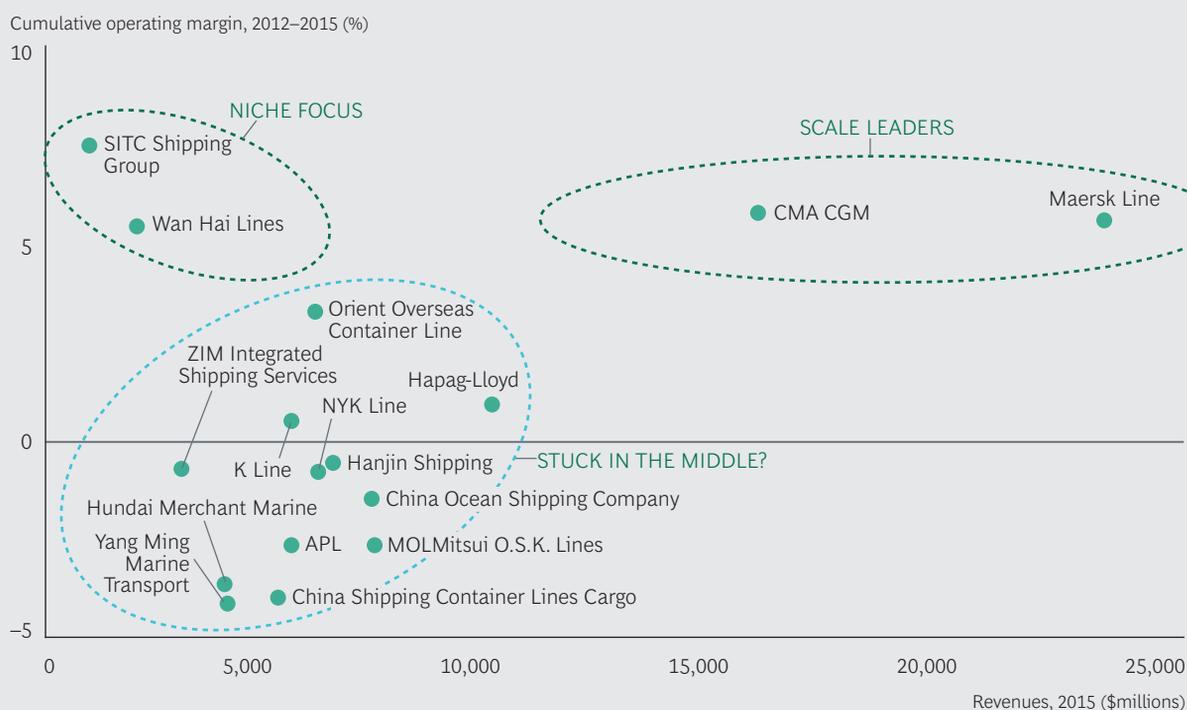
# CRAFTING A BATTLE PLAN

**O**UR EXAMINATION OF THE performance of shipping companies globally revealed only two viable paths: becoming a scale leader or becoming a niche player focused on certain trades. Companies that haven't adopted either of these approaches appear to be stuck in the middle. They lack sufficient scale to drive down costs and the differentiation

that can offer unique commercial value or command premium rates. (See Exhibit 13.)

This is a dangerous position in an increasingly commoditized industry. The number of alliances has grown, and offerings are becoming more and more similar on numerous fronts, such as schedule reliability and the

**EXHIBIT 13 | Many Carriers Seem to Be Stuck in the Middle**



Sources: Alphaliner; BCG analysis.

provision of direct service. And thanks to more advanced technology platforms, customers now have more options and can shop around, further contributing to commoditization in the industry. Additionally, freight forwarders are gaining market share and capturing more direct customer relationships, especially profitable midsize clients.

On the basis of our work with clients, we believe that container liners can improve their performance under these harsh conditions by making the following moves:

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## Conventional alliances are no longer enough.

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- **Driving Further M&A and Unlocking Synergies.** Liners can boost their scale on their own (rather than by joining an alliance) by using a blend of global mergers and smaller M&A deals that can help drive down costs. Beyond the increase in scale that a merger brings, it can also unlock synergies, which will prove critical. Companies must harvest synergies by being savvy in their deployment of their fleet and network coverage. They also need to reassess their terminal and intermodal contracts and adjust their commercial networks in view of new market dynamics. For instance, carriers will want to increase their presence in specific locations where further growth opportunities do exist. In addition, they might consider streamlining their commercial networks where demand has decreased and will remain low. Developing an efficient platform of shared-service centers will also prove crucial for improving the productivity and service quality of an ever-larger range of services. And eventually, globalizing the flow of empty containers will help cut repositioning costs from surplus to deficit markets.

However, to capture the full potential of synergies from M&A deals, companies need to move quickly to a common IT

infrastructure and shared processes. Our client work suggests that maximizing synergies through such means could decrease the cost base of a combined company by 5% to 10%.

- **Pushing Alliances to the Next Level.** Even companies that have not engaged in M&A deals will have to unlock more synergies from their alliances. Carriers have been shy about going after the full benefits alliances offer, such as cost savings from joint procurement or joint operations. Today, with a low bunker cost, the slot-cost advantage of ultralarge vessels is weaker than it was in times of super-high bunker costs. Additionally, alliances that comprise many players are complex, especially in terms of operations, and they generate a degree of rigidity that can hinder optimization of networks and operations.

To attain further benefits from alliances, members should, for example, explore the possibilities afforded by forging joint procurement and joint operations, pooling equipment such as container boxes, and combining shared-service centers in critical regions. Our work with clients in this industry suggests that maximizing alliance synergies in these ways can lift EBIT by roughly 3%.

Still, as we pointed out in our 2015 report on container shipping, capturing these gains will require sophisticated alliance models characterized by better integration of operations and assets. Conventional alliances and vessel-sharing agreements (which focus on optimizing slot costs and extending network reach) are no longer enough. Moreover, in a traditional alliance model, the cost of the additional complexity that's created through collaboration with many alliance partners may offset potential benefits.

- **Optimizing the Core Business.** Companies need to rethink their product offering and network of services. Most companies have grown their service offerings aggressively over the past ten years by, for example, adding more departures and

calling at additional ports. A new chessboard of alliances and M&A characterize the industry today, so it's time to assess the economic rationale for the services network. In particular, carriers need to challenge the setup of their network of services and optimize their fleet deployment. These moves can be tricky, given the nature of today's alliances, which involve many players and leave limited room for maneuvering. At the same time, controlling costs remains table stakes for staying competitive. Our experience with clients indicates that such moves can deliver EBIT improvements of 5% to 7%.

- **Enhancing Commercial Excellence.** Even in an industry that has grown increasingly commoditized, players can create a competitive advantage by excelling on the commercial front in areas such as yield, sales force effectiveness, and channel strategy. In particular, they can take advantage of new technologies. For example, the powerful commercial platforms developed by freight forwarders indicate that market share can be grabbed, especially in the more profitable segments comprising midsize customers. Our experience with clients indicates that such moves can deliver EBIT improvements of 3% to 5%.
- **Extracting Value from Adjacent Markets by Maximizing Share of Wallet.** Companies should consider accelerating the development of more forwarding services, possibly in rapidly developing economies where logistics "corridors" (door-to-door logistics services) are nascent and supply chains are still fragmented. Countries and regions such as the Indian subcontinent, the Middle East,

Africa, and Latin America are apt examples. Additional adjacency strategies include offering new logistics concepts (such as warehousing hubs) that use depot networks. The results of our work with clients suggest that adjacency strategies could deliver improvements of 4% to 6% in carriers' returns on assets.

- **Digitizing the Business.** Companies can use digital technologies to improve the effectiveness and efficiency of their commercial platforms and booking systems. Such technologies would also help them boost the efficiency of internal processes and better manage the fleet. Examples include on-board technology that supports system monitoring and data exchange between ships and shore. In addition, smart use of technology can position the various players in the value chain (liners, terminals, intermodal players, customers) to communicate and collaborate more easily and successfully.

**B**CG analysis of volume growth in key global trades during 2015—along with assessments of important drivers of container demand—affirms that the global container-shipping industry is entering a new-normal period characterized by daunting challenges. These include persistent overcapacity, as well as overall sluggish growth in trade volumes stemming from a complex confluence of forces across key trades worldwide. To succeed in these challenging conditions, each player needs to keep driving change aimed at butressing its individual performance. It will not be easy to meet these imperatives, but carriers that embrace the effort now stand the best chance of weathering the difficult times to come.

# FOR FURTHER READING

The Boston Consulting Group has published other reports and articles that may be of interest to executives in the manufacturing and shipping industries. Recent examples include the publications listed here.

## **Masters of the Corporate Portfolio**

The BCG 2016 M&A report, August 2016

## **Five Trends Transforming China's Consumer Economy**

An infographic by The Boston Consulting Group, July 2016

## **African Consumer Sentiment 2016: The Promise of New Markets**

A Focus by The Boston Consulting Group, June 2016

## **Building Capabilities for Transformation That Lasts**

A Focus by The Boston Consulting Group, June 2016

## **China's Consumers Stay the (Slightly Slower) Course**

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## **Forks in the Road: Navigating Industry Disruption**

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## **Think Outside Your Boxes: Solving the Global Container-Relocation Puzzle**

An article by The Boston Consulting Group, November 2015

## **How the Panama Canal Expansion Is Redrawing the Logistics Map**

A Focus by The Boston Consulting Group, June 2015

## **The Transformation Imperative in Container Shipping: Mastering the Next Big Wave**

A report by The Boston Consulting Group, March 2015

## **Manufacturing Moves Back to the U.S.**

An infographic by The Boston Consulting Group, January 2015

# NOTE TO THE READER

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