WHITE PAPER

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LATIN AMERICA'S HYDROCARBON CHALLENGE

MEXICO OPENING THE WAY FOR DOWNSTREAM INVESTMENT

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Latin American crude exporting and product importing countries are all shouting the same thing: "We have no money! We have to cut costs!" Over the last few years, crude exporting countries such as Brazil, Mexico, Colombia, Peru, and Ecuador have seen revenues fall dramatically.

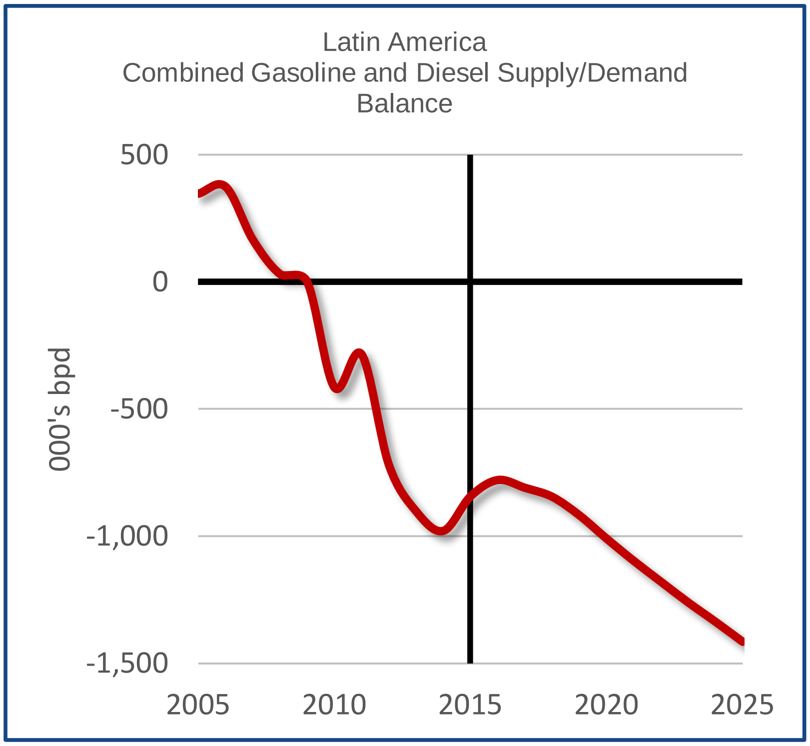
Meanwhile, despite lower energy prices, trade deficits have worsened as costs have continued to rise for steadily increasing quantities of oil product imports.

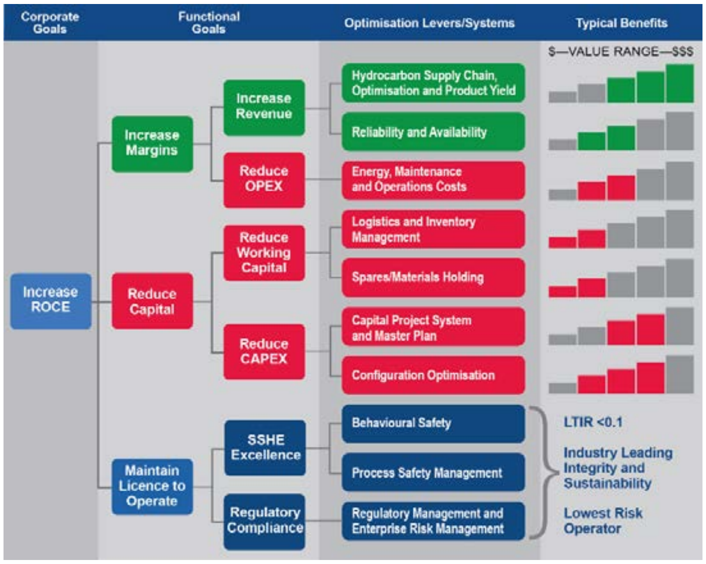
> Whether crude exporter, product importer, or refiner, today's challenge is the same: how to increase revenue and reduce cost while operating under mandated spending reductions.

Near-Term Conditions

Global crude and feedstock supply continues to overrun demand. The economic incentive to convert that supply bounty into usable products is one of the best refining opportunities in the past 40 years. Both National Oil Company (NOC) and Independent Oil Company (IOC) refiners should be seeing some of the best refining margins in living memory—but are they?

Low absolute energy prices have spurred global product demand. Refiners should be operating at high utilisation rates and maximising on-stream operations. Cost containment doesn't mean no cost. But it does mean spending on *revenue generating activities* (See the green elements next page).





For upstream IOCs maximising revenue, or for NOCs supporting a national budget, the focus today is on monetising already discovered oil and gas by generating more sales revenue. And *that* means selling national crude to those that value it the most—even export sales in preference to domestic refineries.

For refiners, it means optimising feedstocks by even using some non-national crudes—there is nothing wrong with a country simultaneously exporting and importing crude oil.

Whether an IOC or NOC, upstream or downstream, *all* companies should be focused on driving down operational costs and increasing free cash flow. But the drive to cut costs to zero isn't realistic and there is little point in using foreign loans and credit to operate uneconomically. Smart crude sales, feedstock selection, and product slates made from consistently high throughputs are the keys to increased profitability.

Focus On Profit

Enlightened leaders understand the need to set out a vision and inspire others to help them achieve it. Cost control has always been critical to profitability, but by itself, it is not sufficient. There are smart ways to spend your budget —focusing on revenue generation may actually mean *increased* spending on manpower training and reliability programs designed to get full use of all the operational capacity you have paid for.

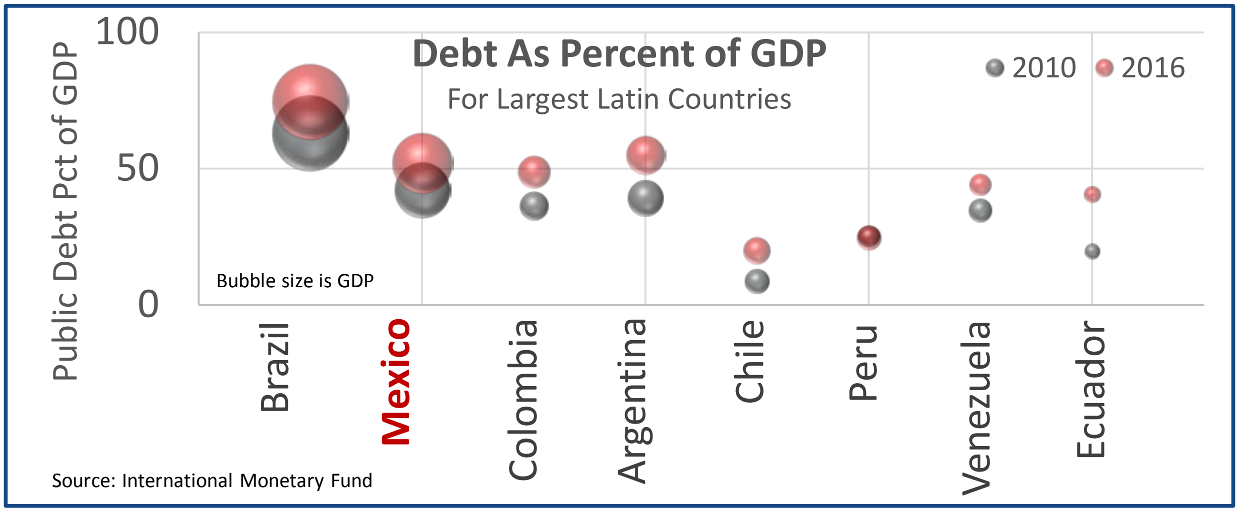
Today US refiners are seeing some of the best refining margins in a lifetime. Much of that is because they have led the way in lean and reliable operations. There is no reason Latin American refiners can't participate in that same bounty.

Mexico's Downstream is Now Open for Business

Pemex's new CEO Snr. Jose Antonio Gonzalez Anaya, recently said that 2016 production is expected to drop by an average 100,000 bpd. This comes as the company also drops its 2016 crude price forecast and announces a US$5.75 billion budget cut—US$3.6 billion in upstream. The company has now lost money for thirteen straight quarters; US$9.3 billion in 4Q15 and a total of US$32 billion for the full year.

Pemex remains a major revenue source for the national budget and has been aggressively pursuing asset sales and increased debt to support the government. Futhermore, nearly half of the government's budget cuts have come from Pemex alone, The country's debt-to-GDP ratio has grown from 42 to 52 percent since President Nieto took over three years ago—far higher than the 2 percent rise over the same period prior to his inauguration, and now the highest since 1995.

While debt-to-GDP was rapidly increasing, GDP increased only modestly from US$1.25 trillion to $1.32 trillion. However, the Mexican economy is still the second largest in all of Latin America, trailing only Brazil. While Brazil's economy is nearly 80% larger than Mexico's, it is also *contracting*. Brazil's economy reached a near-term peak in 2013 and 2014—coincident with presidential elections that saw Dilma Rousseff return to power.



While Brazilian GDP is shrinking and debt relative to GDP is growing, the Mexican economy continues to expand. Mexico is also only one of four[1] countries in Latin America that retains an investment grade credit rating and is judged 'stable' by all four rating agencies. Brazil's outlook is rated as 'negative' by all four agencies.

Mexico is also quite active in the international debt markets, where it pays lower interest rates than the rest of the region (though still 3.6% above US Treasuries). In short, the Mexican economy is robust, growing, and credit-worthy despite a recent deterioration in its ability to pay external debts. Much of this decline, of course, has come with a drop in international crude prices.

Mexico has recently relied on monetary policy to help address the budgetary shortfall. Interest and exchange rates are common tools available to most governments. Unsurprisingly, the peso has dropped nearly 5.5% against the US dollar over the last year. Mexico also appears to be taking many of the more painful but necessary structural steps to address the fiscal shortfall. Budgets have been cut, cross-rates have dropped, and open-market legislation now appears to be irreversible. Still, the belt-tightening will not last forever.

The rate of Mexico's current account defict deterioration is slowing while structural changes, particularly in the petroleum sector, are now underway. At the end of February President Nieto announced that private party imports of diesel and gasoline would be allowed starting April 1, 2016—nine months earlier than mandated by law. Already, the Secretariat of Energy (SENER) has received hundreds of requests for permits to build new independent service stations.

Permission to import transport fuels alone is not enough for the real Mexican energy revolution. Government control of pricing has to be rolled back, and it soon will be. Article 14, Section 1 of the new Law allows the Government to set maximum retail prices between January 1, 2015 and December 31, 2017. However after January 1st, 2018 and for the first time since nationalisation in 1938, retail prices will be determined directly by the market itself. Still more deregulation - from storage, to distribution and even refining and petrochemical plants is coming.

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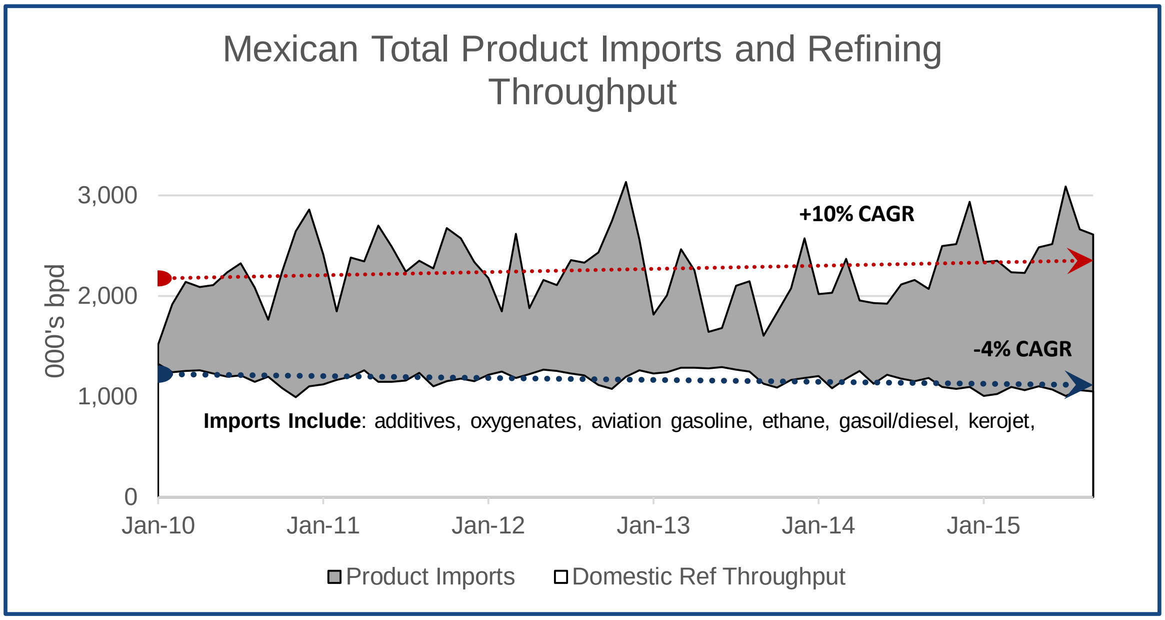
[1] *Chile, Peru and Brazil*



More product supply is still sorely needed. The nearby chart shows total Mexican product imports have grown 10% on average over the last five years. At the same time, domestic refining throughput has actually *dropped* by four percent. Mexican refiners have not only fallen behind demand growth, but their ability to keep existing equipment up and running has deteriorated. This highlights both room for improvement in Mexico's existing refineries and opportunities for market entry for new players.

KBC has been active in Mexico for decades and understands the Mexican downsteam. We also understand where this underutilised capacity is, and what its capabilities are. The real decision is not just to simply 'import product', but a classic "buy-versus-build" decision. What is the real cost of unleashing unused refining capacity sitting idle today? Is it less, or more expensive, or faster than building or buying product import capability? What is the best way to participate in Mexico's downstream Mexican energy revolution? If you are asking these questions, have a word with KBC.

About KBC

KBC Advanced Technologies is a leading consultancy and software provider to the global hydrocarbon processing industry. With over 30 years of experience, KBC combines industry leading technology with experienced engineers and operations personnel using robust methodologies to create personalised, sustainable solutions for its clients.
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