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2016

MYANMAR

ECONOMIC INSIGHT

MACROECONOMICS • BUSINESS ENVIRONMENT • FDI • BANKING & FINANCE
INFRASTRUCTURE • AGRICULTURE • OIL & GAS • DIGITAL ECONOMY • TOURISM

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Foreword

Dear Readers

We at New Crossroads Asia/Myanmar Market Intelligence believe that 2016 is going to be a year filled with significant change, as the country's newly elected government – the first in half a century – moves to cement its place at this most historic time.

As the National League for Democracy (NLD) and its leader Aung Sang Suu Kyi transition into a new era of governance, they will be sure to have victories that will provide enduring progress for those who so badly need it. There will also likely be teething problems as the NLD, minority parties and the previous regime attempt to find their footing in this burgeoning democracy.



William (Billy) Selig

Managing the transition process will take time and patience, but if the last five years is any indicator, Myanmar's trajectory into the global community is an encouraging foundation for it to work from and gain even further momentum.

Given that Myanmar lived in bitter isolation and there was little or no access to information, the need for transparent data and analysis has never been more important. For more than four years, New Crossroads Asia (NCRA) has worked tirelessly to cover the developments taking place in Myanmar's economic and business arenas, so that potential foreign and domestic market players can get a true picture of current and emerging policies and trends.

Our sector research, business data and publications serve as a conduit to understanding how business and foreign direct investment affects change in this rapidly changing country. Our products provide new market participants with all the essential tools they need to make informed business decisions. It is now my distinct pleasure to offer you our newly re-branded and enhanced products, which will be known henceforth as Myanmar Market Intelligence (MMI).

After two successful years of producing a yearly report on Myanmar's economy, we are now rebranding this flagship product as Myanmar Market Intelligence's Myanmar Economic Insight. This in-depth report, which spans over a hundred pages, provides an all-encompassing view of the drivers affecting business and economics here in Myanmar and includes home-grown data points and analysis.

Indeed, as we move toward our new distribution platform, we will be increasingly active in rolling out additional data driven products, which deliver reliable and unique insights and information about Myanmar. I would like to thank each of our readers for your continued support. We are constantly striving to improve our products and encourage you to send us candid feedback.

I hope you enjoy Myanmar Economic Insight 2016.

Regards

William (Billy) Selig
CEO, New Crossroads Asia/Myanmar Market Intelligence

Are you thinking of setting up a business in Myanmar?

Myanmar Market Intelligence



Walk with us on our journey to economic prosperity.

To increase investments (local investment & foreign investment)

To encourage private entrepreneurship

To take part in regional and international economic cooperation

Dear Readers,

Myanmar stands at a crossroads; on the one hand, it has opened its door to invite more foreign investment, and on the other it has been revising its policies to create a better investment environment. In this regard, it has been formulating four salient reforms; reform for legal and regulatory framework, procedural reform, institutional reform and investment policy reform for the improvement of the foreign investment environment in Myanmar.

As the largest country in mainland Southeast Asia, Myanmar has one of the lowest population densities in the region, with fertile lands, significant untapped agricultural potential, and a rich endowment of natural resources. Its geographic location at the intersection of China and India -- two of the world's most dynamic economies -- makes it well-positioned to resume its traditional role as a regional trading hub and a key supplier of minerals, natural gas, and agricultural produce.

Myanmar Investment's strategy is to foster a diverse range of foreign capital inflows as the country rejoins the ranks of thriving Asian economies. This process requires substantial investment in the country's infrastructure and an upgrade of the logistics and capacity associated with the manufacturing sector and agro-industry.

Rekindled consumer demand will require a rapid development of Myanmar's financial services industry and a resurgent tourism sector will require a significant increase in facilities to cope with demand. Myanmar Investments seeks to participate in this exciting journey by providing a legitimate and safe channel for overseas investors to invest in businesses led by dynamic and visionary Myanmar entrepreneurs, and in some instances it will co-invest alongside established international companies.

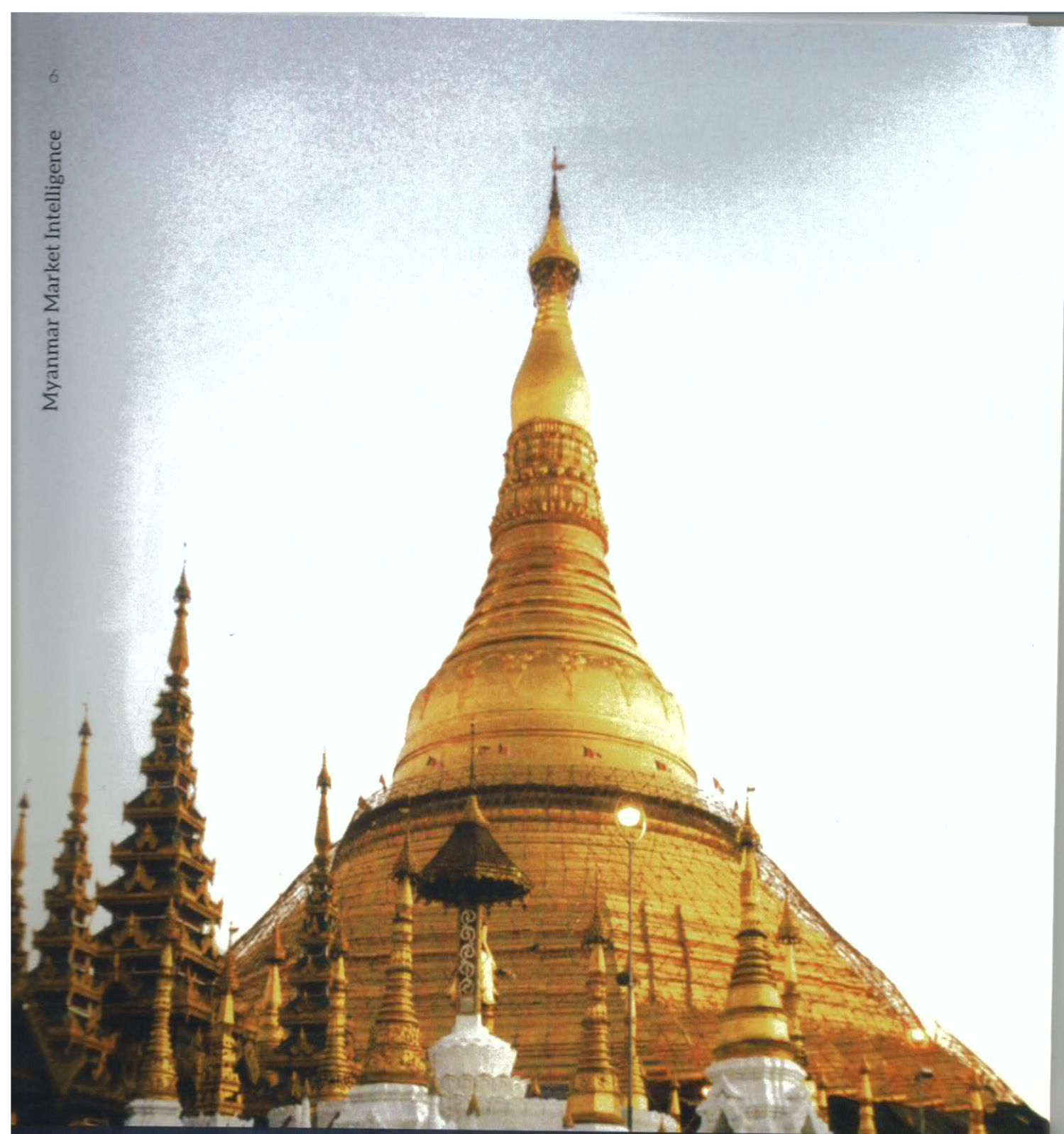
Certainly, there is a need for a reliable mainstream source of information on foreign investment in Myanmar; therefore, the Directorate of Investment and Company Administration (DICA) is collaborating with New Crossroads Asia Co., Ltd. to publish its Myanmar Market Intelligence reports, designed for investors wishing to learn more about business environment in Myanmar. We invite you to explore our website and get in touch with us.

U Aung Naing Oo
Director General of DICA



U Aung Naing Oo





Introduction

Cautious optimism surrounds Myanmar as the country welcomes its first democratically elected government since 1962.



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Population

In the last few years, multinational corporations, institutional investors and business leaders have paid increasing attention to Myanmar. The country is widely regarded as the last frontier for the type of transformative growth that has been seen in wider Asia in the past two decades. In this report, our third annual report on Myanmar and its prospects, we assess the immense potential of Myanmar in light of recent political, economic, and social reforms. In some areas, the last three years were quite transformative, but as we will see throughout this report, in many other areas, the country's hidebound economy and equally rigid military-political ruling class have struggled to adapt to 21st-century norms and ideas.

While global media have focused on Myanmar's equally historic election - its first in 25 years - a clear-eyed look is necessary to reflect on the significant economic progress that has been made in recent years, as well as missed opportunities and shortcomings under the departing administration.

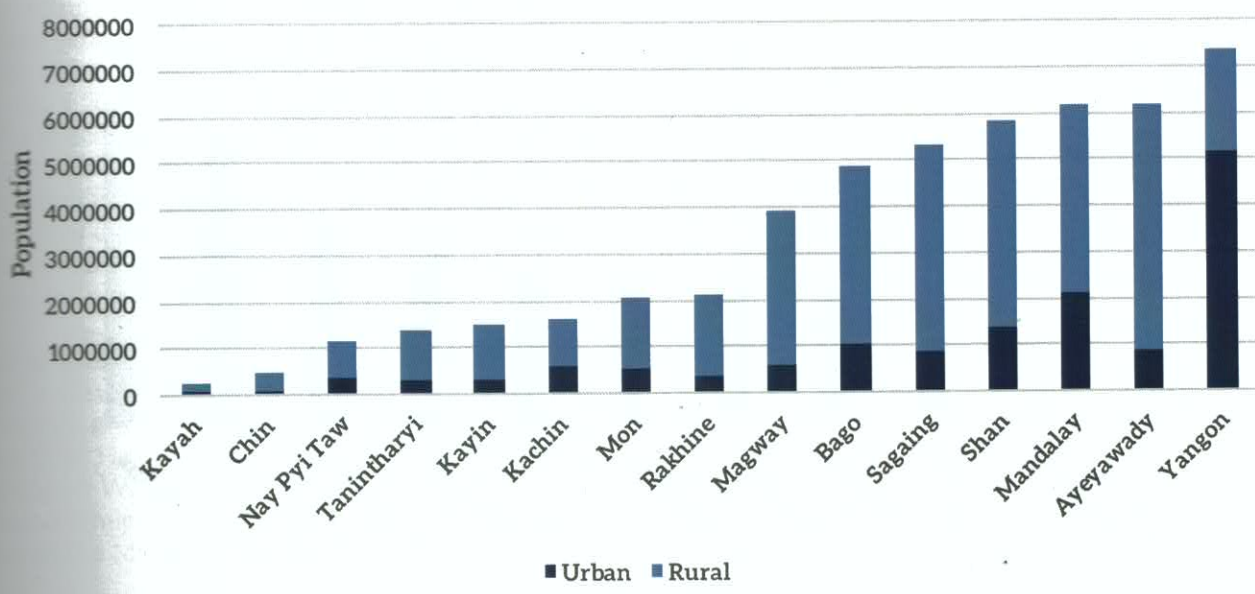
Strategically located between India and China, Myanmar has one of the largest populations in Southeast

Asia, with 51.4 million people in 2014¹. The median age of the population is 27 years, below the Asia Pacific average, with 46 percent of the population under 24 years of age. The country conducted its first census in 30 years between 29 March and 10 April 2014. Before this, Myanmar had not conducted a formal census since 1983 and when the preliminary census figures were released in August 2014, they came as a surprise to both local and international observers. Previously, the government of Myanmar has claimed that the country has over 60 million inhabitants; but this census implied a shortfall of more than 9.5 million people.

The shortfall is most notable in the Ayeyarwady Delta, which the government estimated to have had two million more people than the census actually discovered. The rice-producing delta region was severely ravished by Cyclone Nargis in 2008, which caused flocks of residents to flee their homes.

In fact, migration might account for 5 to 10 million Myanmar nationals who might be working in neighbouring countries. The International Organisation for Migration (IOM) has estimated that two to four mil-

Exhibit 1 Population of Myanmar by Region
Source: Myanmar Census 2014



lion workers from Myanmar are currently in Thailand, with perhaps another half-million in Malaysia, and more than 100,000 in Singapore. It is unknown how many Myanmar workers are in China, but given the two countries' geopolitical and commercial links, the number is thought to be large.

Population shortfalls are also found in the ministerial heartland of Upper Myanmar, in the states of Mandalay, Sagaing, and Magway, where there were 4.2 million fewer people than previously thought². Urbanization has contributed to this fall: urbanization is progressing at approximately 2.9 percent of the population each year with 70 percent of the country still residing in rural areas³.

At current economic growth rates, Myanmar is poised to become a major economic force in Southeast Asia in the coming decades; the country has a huge endowment of resources, ranging from fertile land to mineral extractives, a long coastline and a number of significant tourism sites, a consuming class that is bound to grow, and several missing economic segments, which when filled will sustain Myanmar's economic growth in the coming decades.

Yet, Myanmar also faces enormous challenges. Due to a lack of investment, Myanmar's infrastructure was for many years basic with a low level of healthcare and electrification and poor telecommunication and transport networks. In addition, unlike in other parts of Asia which are relatively peaceful, conflict holds back development in a number of regions of Myanmar. These conflicts come in various guises, ranging from secessionist insurgencies to racial and nationalistic bigotry to communal violence. Corruption and weak governance are also hindrances on the econo-

my. Transparency International ranks Myanmar as 156 out of 175 countries in its Corruption Perception Index⁴ - the third worst rating in Asia.

Despite an economic boom in last few years, the number of Myanmar citizens living in poverty has not declined significantly. While productivity is expected to rise and minimum wages have been introduced, these will not quickly translate into rising incomes and improved living standards; already, bitter controversies over minimum wage and employees' welfare have erupted in Yangon's industrial zones over the last few months.

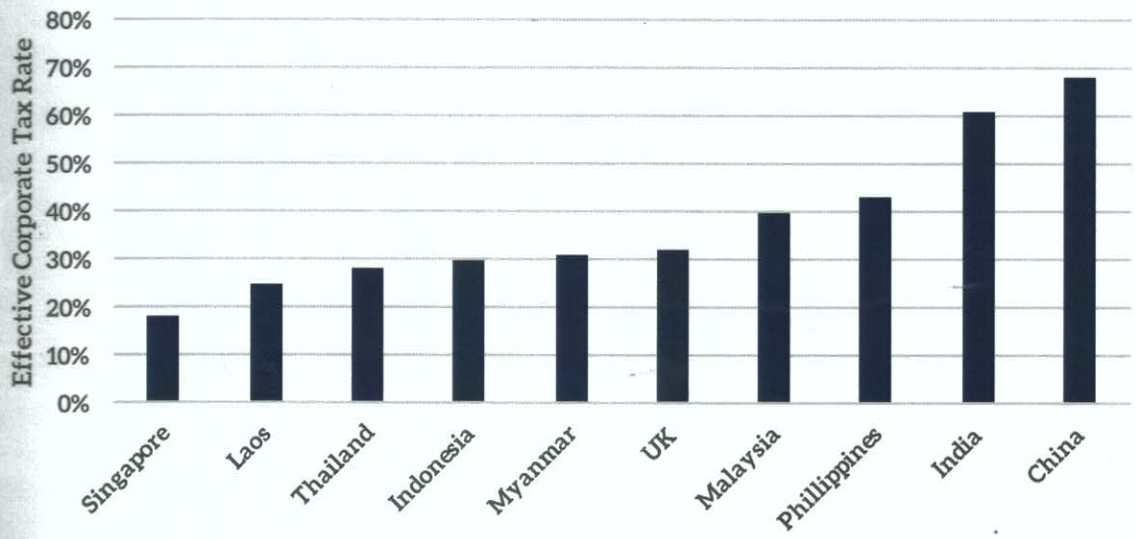
In rural areas, one third of the population lives below the poverty line due to low farm output, poor access to markets, and lack of economic infrastructure. In urban areas, employment remains informal (and tends to be underemployment). According to the census, own-account workers (8.7 million) outnumber people formally employed by the private sector (7.4 million).

MYANMAR'S TROUBLED PAST

Myanmar has had a troubled history. Following sixty years of colonial rule, it gained independence from the United Kingdom in 1948. Born alongside the country's independence were civil wars, some of which continue today. In late 2015, a provisional ceasefire was signed between the government of Myanmar and several insurgency groups, but this

Exhibit 2

Effective Corporate Tax Rates
Source: World Bank Doing Business 2016



ceasefire and fight groups through

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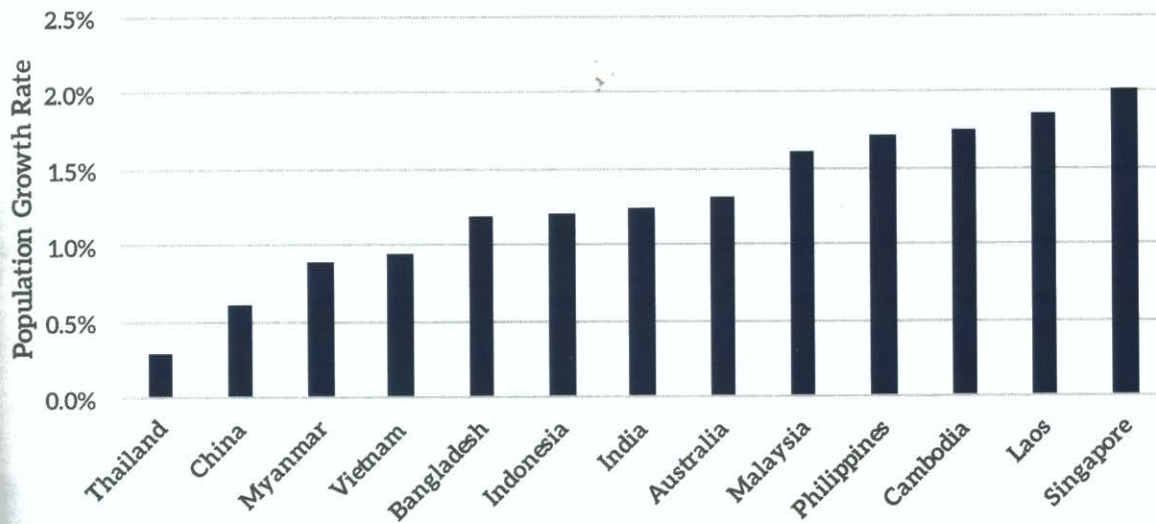
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Exhibit 3

Population Growth Rate

Source: UN Population Bureau



ceasefire only covered about half of the guerrillas, and fighting between Myanmar's army and the rebel groups intensified in the Kachin and the Shan states throughout 2015.

These long simmering civil wars have allowed Myanmar's army to position itself as the only force capable of holding the country against internal and external enemies. This ramshackle excuse was repeatedly used by the army to stage coups and hold onto power with a stifling chokehold since 1962. Meanwhile, the country's infrastructure and social services crumbled. Sanctions were imposed by the EU and the US, amongst others, based on its lack of democracy and human rights infringements.

The administration under President Thein Sein, a former general who was selected to lead a quasi-military, quasi-civilian government, came to power in February 2011. It began undertaking a series of political and economic reforms ranging from the release of political prisoners to the deregulation of several state-dominated economic sectors. It has passed laws that allow collective action and strikes, make Myanmar more attractive to foreign investors and partially promoted press freedom.

Due to these reforms, the county has attracted foreign investors and multinationals, leading to fast economic growth. Foreign companies such as Visa, Coca Cola, Heineken, Carlsberg, Standard Chartered, Hutchison Whampoa, WPP, Telenor, Mitsubishi, Sumitomo, Unilever, Colgate Palmolive, and Hilton have entered the Myanmar market.

ELECTION 2015

Myanmar held its first freely democratic elections in 25 years on November 8, 2015, with the opposition pro-democracy National League of Democracy party winning 80 percent of all contested seats. Many expected NLD to win, but the landslide confounded even the most versed psephologists. The party is led by Ms. Aung San Suu Kyi, a Nobel Peace Prize laureate and the daughter of Myanmar's founding father, General Aung San. Compared at various times to luminaries such as Nelson Mandela, Ms. Suu Kyi has campaigned mostly on her courage and charisma, while her election manifesto shows she is not afraid to shake up Myanmar's sclerotic state⁵.

The economic portion of the manifesto gets to a good start with a pledge to cut taxes. Ms. Suu Kyi hopes to broaden the tax base by reducing tax rates, which shows the superb understanding of the Laffer curve. In Myanmar, the top income tax rate (25 percent) kicks in at annual income of 30 million Kyats (equivalent to monthly salary of around US\$2,000), and the corporate tax rates are on average 31.4 percent.

Elsewhere, there are a lot of sensible ideas: the NLD pledges to devolve more financial control to the regions and regional governments. On agriculture, the party touts the importance of high quality seeds, fertilizers, and mechanization for increasing productivity, but also goes one step further: it hopes to establish a land registry and easy access to land records.

This is a much needed reform in a country where land tenure rights are unclear, and land seizures by the government and by well-connected oligarchs are rife. Simultaneously, the party hopes its reforms can prevent women from losing their land tenure rights within the family.

Another proposed reform will also bring benefits to women and to the country. In education, the party's first priority is to establish childhood care programs. Benefits of these programs, which are currently non-existent in Myanmar, are twofold. Firstly, they will increase female participation in the workforce. In the labour force participation rate (F/M ratio), Myanmar scores 0.5, slightly behind regional peers such as Malaysia, Indonesia, and the Philippines. Studies prove that early childhood care programs help women to re-enter the workforce quickly after they have children.

Secondly, childhood care programs can raise fertility. The recent census reveals that while fertility rates remain above replacement levels, total population growth is at the lower end of the spectrum (due to outward migration). Myanmar needs a bigger workforce if the country is to meet its development and social goals in the long run. In the clearest example, cheap nurseries helped Quebec raised its birth rate from one of the lowest in Canada to one of the highest.

Elsewhere, the state Ms. Suu Kyi hopes to lead will be getting out of people's way to allow enterprises to grow on their own. Universities will be given autonomy to choose their own curriculum. Media will be allowed to 'self-regulate'. She has also signalled that the government may subsidize newspapers, while the preferential treatment of government joint-ventures to particular media outlets might end: they will have to "compete openly on the free market" the manifesto read. (In the last two years, the Ministry of Information which oversees the media market has been mired in controversy over the lack of transparency in a tender process and its profit-sharing agreement with SkyNet, a private media provider).

Another sea-change is planned in the energy policy. The Myitsone Dam on the headwaters of the Ayeyarwady River, which the current administration has merely postponed, seems doomed. The manifesto declared that "construction of the large dams...causes major environmental harm" and simply said, the NLD will generate electricity from, and repair and maintain "existing dams". This is a coded, but clear message to those attempting to build massive dams along Ayeyarwady and Salween rivers. Instead, the NLD is likely to shift the focus, not to coal or gas, but to renewable energies (solar, biogas, mini-hydropower); however, as shown below in the figure, only some renewable sources will be competitive in price with fossil fuels and large scale hydropower (which generates electricity cheaply).

NCRA'S MYANMAR OUTLOOK 2016

All in all, we are cautiously optimistic about Ms. Suu Kyi's plans, and our Myanmar Market Intelligence 2016 broadly reflects this line of thinking. We believe Ms. Suu Kyi and her economic team has a lot of good ideas and throughout this report we will be examining Myanmar's economic status and prospects by juxtaposing them to hopes and goals of Ms. Suu Kyi's economic policies.

After discussing 2015's changes in macroeconomics as well as business environment and foreign direct investment, our report focuses on six areas: financial services, agriculture, infrastructure, oil and gas, tourism and digital communications. These six areas will be tremendously important to Myanmar if the country wants to realise its economic goals, and they will be instrumental in the country doubling or tripling its GDP in the near future.

Your trusted advisor in Myanmar.



Enhancing enterprise value

For over 3 years NCRA has been providing key decision makers with the essential products and services needed when conducting business in Myanmar.

Market Entry Services

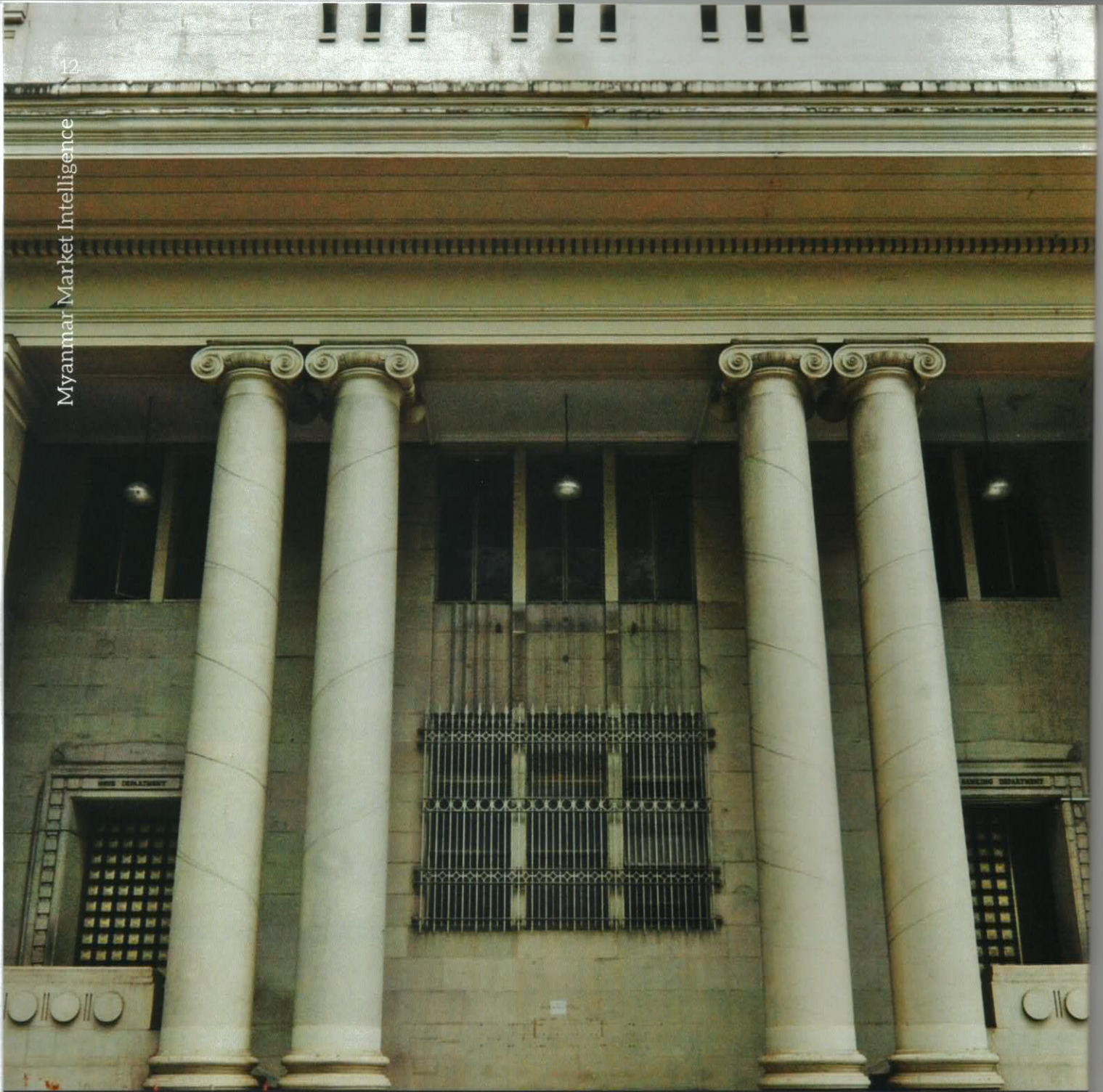
- Legal
- Regulatory
- Partner Alignment

Macro Country Research

Sector Specific Research

Asset Valuations

Market Survey Services



Macro- economics

Myanmar has defied the emerging markets slowdown and is slated to grow more than 7% in 2016.

GROSS DOMESTIC PRODUCT

According to the government, Myanmar's Gross Domestic Product (GDP) was 65 trillion Kyats (US\$ 51 billion) as of end of March 2015. The country's economy is still largely agrarian, with agriculture (including livestock, fisheries and forestry) representing a large portion of GDP. The sector employs 57 percent of the total employment, and 11 percent are employed in manufacturing, 4 percent in mining, power, energy and construction, and 28 percent in services, of which 16 percent are in trade (retail and wholesale trade).⁶

The country's GDP is estimated to have grown by 8.5 percent in 2014, according to IMF, accelerating from 5.9 percent in 2012. The government claimed an even more optimistic figure, aiming at 8.7 percent growth, driven by a boom in construction, mineral extractives, and telecoms sectors⁷. The government predicts the economy to grow by 9.3 percent in fiscal year 2015-2016, and hopes that GDP contribution from the industrial sector to overtake agricultural sector for the first time, spurred by double-digit growths in construction and manufacturing sectors due to increased FDI.

However, historically, the governments of Myanmar had been consistently optimistic about GDP growths.

In 2010 and 2011, the government reported the GDP growth of 10.6 percent and 10.4 percent - in line with double digit growth the military governments reported for most of the previous decade to World Bank. In between 2003 and 2006, the government reported annual growth of over 12 percent. However, IMF reports that the country has grown by less than 5 percent annualized during that time.

This slower growth rate is supported by satellite photos of the night sky over the country. Generally, the intensity of artificial light over a country at nighttime increases proportionally with incomes and GDP; and this analysis (Measuring Economic Growth from Outer Space) suggests that Myanmar's GDP has grown at annualized rate of 5.8 percent between 1993 and 2003, and with annualized growth rate of 3.26 percent since 2004 until the recent reforms began in 2011⁸.

The country's economy is still largely agrarian, with agriculture (including livestock, fisheries and forestry) representing a large portion of GDP. As of March-2015, agriculture GDP is 19 trillion Kyats (\$14.8 billion), to which contribution from farming is 14 trillion Kyats; therefore, agriculture sector in Myanmar contributes 29 percent to GDP in nominal prices. Industrial and services sectors make up 35 percent and 36 percent respectively. GDP contribution from service sector includes trading, which represented 19 percent of GDP (12 trillion Kyats).

Exhibit 4

Gross Domestic Product

Source: IMF (October 2015)

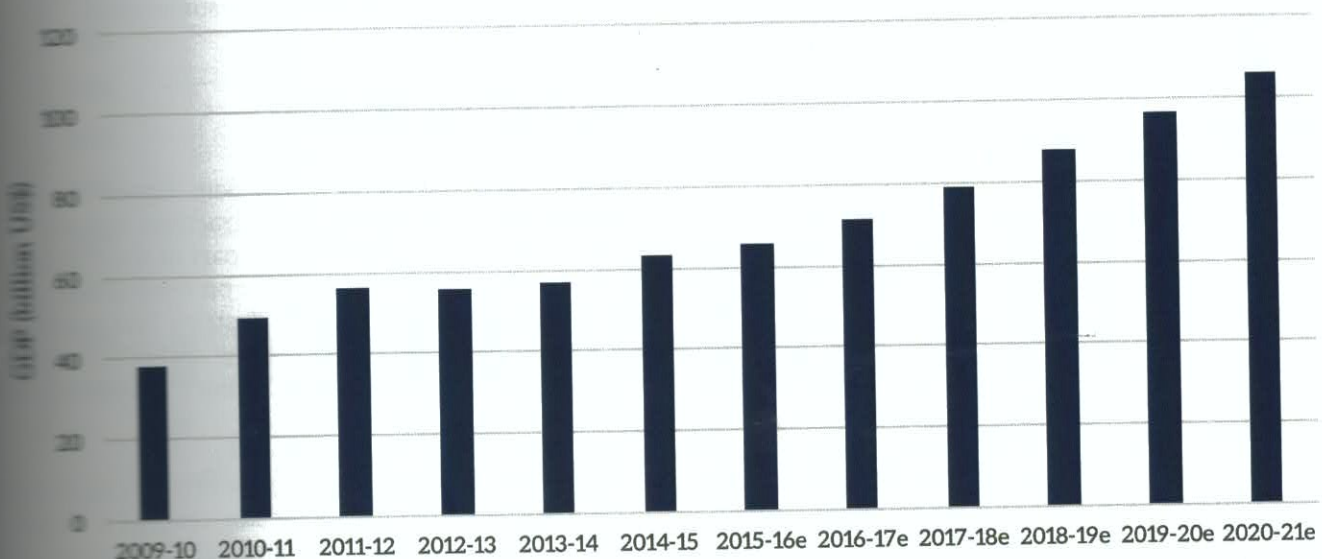
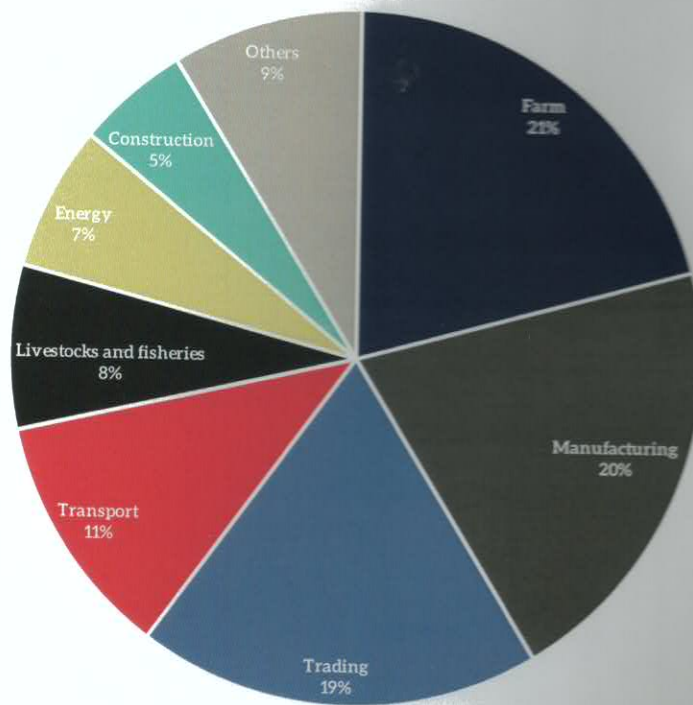


Exhibit 5

GDP by Sector

Source: Government of Myanmar



GDP contributions by different regions of Myanmar are largely uneven. The main commercial hubs are Yangon and Mandalay, both former capitals on Myanmar under various past governments. Yangon is highly-urbanized: there are 7.3 million people living in the state of Yangon, of which 5.2 million people live in the city of Yangon. Yangon Region, which has 14.3 percent of population, contributes around 22 percent to GDP (14.4 trillion Kyats). Underperformance of Myanmar's peripheral regions is especially concerning. In 2014-2015, ten of fifteen states in Myanmar missed their GDP targets⁹.

POVERTY ALLEVIATION

It has been noted that Myanmar's recent growth has not been sufficiently broad-based to alleviate poverty on a big scale. The country's most comprehensive poverty assessment was conducted by the UNDP in 2009-2010, and it found that people living in absolute poverty is 26 percent of the population (slightly down from 32 percent in 2005, but not very significantly)¹⁰. However, in eight of fourteen states, poverty is higher than national average: in conflict torn Rakhine state and far-flung Chin state poverty rates are especially high, and since these states are severely hit by the recent floods, their future remains grim.

In addition, while there is a reduction in absolute poverty, income distribution shows that the majority of people live marginally above the poverty line, which is defined by the UN at US\$1 per day. In fact, nearly 60 percent of the population lives between US\$1 per day and US\$2 per day. Thus, using a more recent World Bank's measure of moderate poverty set at US\$2 per day, 86 percent of the population in Myanmar can be considered as poor. This is a bad indicator in a country which needs to promote a consumer class.

EXTRACTIVES INDUSTRY

In late 2012, President Thein Sein signed a presidential decree to render the extractives industry in Myanmar more transparent, as part of the efforts to join an international framework on mining and minerals called the Extractive Industries Transparency Initiative (EITI). Myanmar became an EITI candidate country in July 2014, and in January 2016 produced its first EITI Report.

The report surveyed 57 companies (which represent 100 percent of oil and gas sector revenues, 53 percent of revenues from Gems and Jade Emporium and 45 percent of revenues from other minerals) and 11

Population Under Poverty Line

government agencies, for fiscal year 2013-14. The report noted that total revenue the state collected from extractive sector amounted in FY13-14 was 3 trillion Kyats (US\$2.35 billion) and about 85 percent of this amount was collected from the State Owned Enterprises (SOEs).

The 3 trillion Kyats equals around 24% of the budget of the government in FY13-14. Of these revenues, 2.5 trillion Kyats come from oil and gas sector, while other extractive industries (of whose production amounts are discussed below) didn't contribute significantly, despite jade industry in Myanmar being enormous in size.

IMPORTS AND EXPORTS

As noted above, the oil and gas industry plays a large role in government budgets and natural gas also has also dominated Myanmar's exports over the last decade. The share of natural gas had steadily increased from 30 percent in 2002-4 to 42 percent in 2013-2015¹¹. There is a remarkable similarity between the export structure in the early 2000s and that in the early 2010s, suggesting that Myanmar has had difficulty in diversifying its exports.

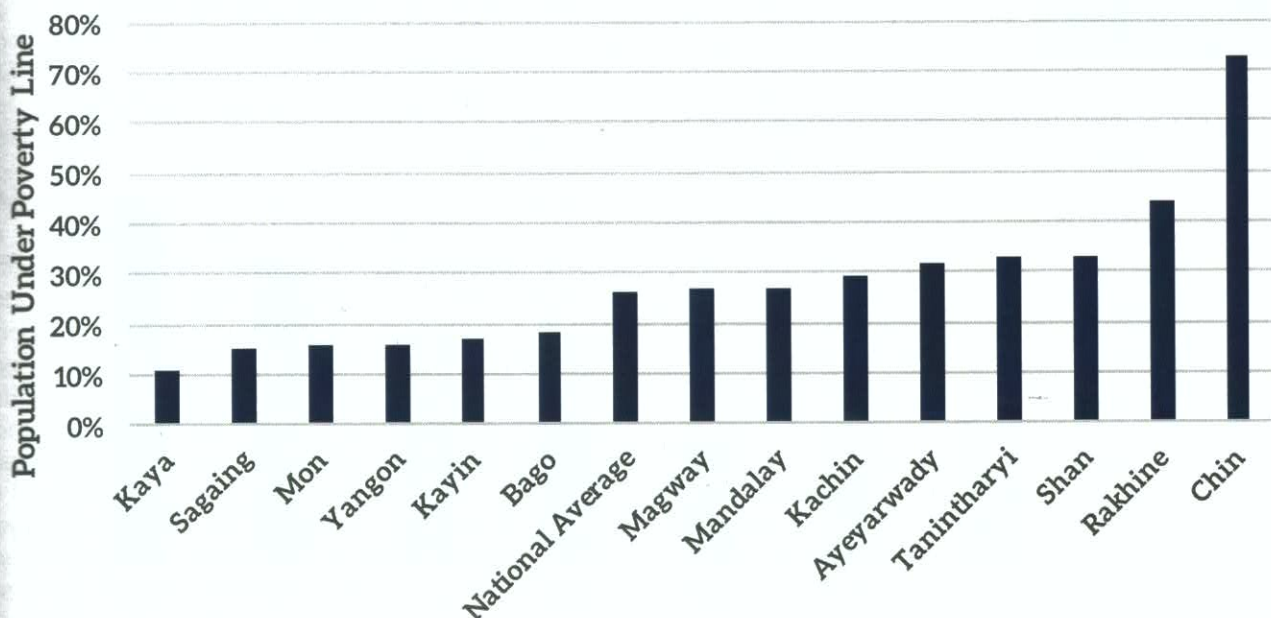
On the import front since 2011, Myanmar saw a surge, driven by the dismantling of the previous governments' 'export-first' policy. Under this policy, both state-owned and private companies had to export goods before they would be eligible to import goods. 'Import permits' were issued in two ways: if a company exported US\$100 worth of goods, it would get US\$100 worth of 'export-earning credits' which it could use to import other goods or sell to another company which could then use the credits.

In the 2013-2014 fiscal year, exports increased by 25 percent from the previous year. International experts have noted that these numbers are due to Myanmar catching up after decades of isolation, as the country has a export/GDP ratio comparable to Vietnam in 1989 or Indonesia and Thailand in the early 1980s¹². In the same period, imports, however, soared by 52 percent, the biggest contributor being capital goods imports. This could be a positive sign if capital goods are being used to enhance raw materials/semi-finished goods for subsequent export and improvement of infrastructure. Increases have been less dramatic in FY14-15, as exports increased by 12 percent and imports by 20 percent between 2013-2014 and 2014-2015. Import growth will be slower in 2015, however, as Myanmar Kyat has depreciated (see below), making imports more expensive. From April to December 2015, Myanmar's imports increased by only one percent compared to the similar nine month period in the previous year.

Exhibit 6

Poverty in Myanmar

Source: Government of Myanmar



In the 2014-2015 fiscal year, total trade as reported by customs was US\$29 billion with Myanmar having a trade deficit: total imports are US\$4.1 billion larger than total exports, widening from a deficit of US\$2.5 billion in the previous fiscal year. Exports are led by gas exports, totalling around US\$5.2 billion, and agricultural products, totalling around US\$3 billion. Export figures disappointed as the government has aimed to increase exports to US\$13 billion, while maintaining similar imports levels (US\$13.5 billion). In reality, Myanmar imported US\$16.6 billion worth of goods, while exporting only US\$12.5 billion.

It should however be noted that exports of services have also increased dramatically, making up for the trade deficit in terms of income. While service exports are not well documented, increase in travel and tourism industry can be gauged as a proxy for the growth in service industry. In 2005, travel and tourism spending in Myanmar was around US\$300 million, but in 2014, the spending was US\$1.7 billion – a nearly six-fold increase.

EXTRAORDINARY GROWTH

As most of the economic data is inaccurate in Myanmar, we can rely on several proxies to actively gauge the changes in Myanmar's economy. As China's economic measures are equally weak, its prime minister relies on three indicators (the railway cargo volume, electricity consumption and loans disbursed by banks) to gauge the economy. In Myanmar, we can also look at electricity consumption (outside household consumption) to see extraordinary growth. In the last three years, non-household electricity consumption has gone up by 2.5 billion kilowatt hours,

with the increase coming from private turnkey projects the government has only recently initiated.

Another goods measure is the amount of white goods imports. A big factor in the country's current over import appetite for major appliances is due to the fact that most of its large population has been deprived these goods by low incomes and the country's isolation. Admittedly, there are some negative aspects using white goods imports as a proxy for Myanmar's economic well-being, as the relatively small percentage of households are responsible for these imports. However, with the country opening up, more people will have income and access to buy these goods. The tourism boom that welcomed three million international visitors and businessmen is also driving up demand for white goods (refrigerators, air conditioning washing machines). Air-con unit imports were up from US\$45 million to US\$90 million, and other white goods imports increased fourfold (albeit from low bases). Key suppliers of Myanmar's white goods imports include China, Thailand, Singapore, Indonesia, Malaysia, and Japan and Turkey.

TRADING PARTNERS

Exports are concentrated on a few destinations. Over 79 percent of exports go to just two markets – China and Thailand. In fact 38 percent of exports go to China, and 41 percent of exports go to Thailand (the proportions are even more dramatic when illegal border trade flows in gems, drugs, and timber are included as we shall see in the following pages). Likewise, 12 percent of all tourists come from China and 17 percent from Thailand.

Exhibit 7

Electricity Consumption (Excluding Household Use)

Source: Government of Myanmar

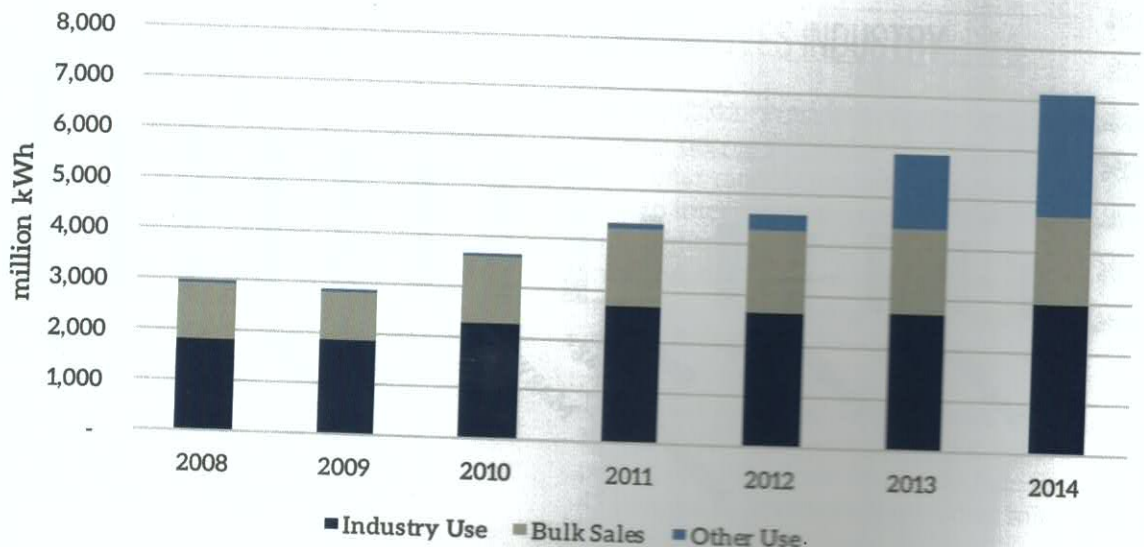
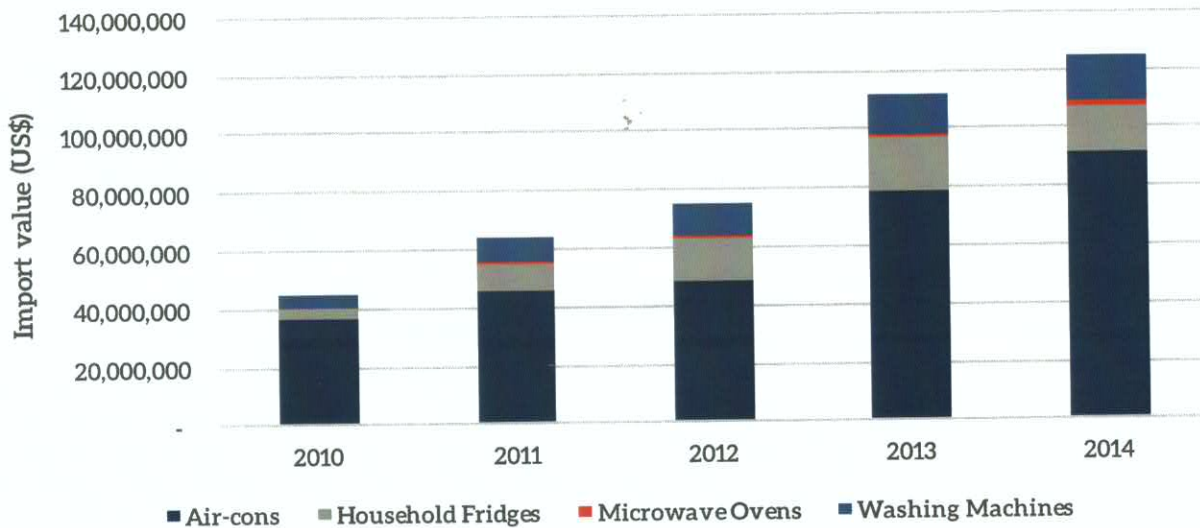


Exhibit 8

White Goods Consumption in Myanmar

Source: Government of Myanmar



While exporting goods and services substantially to two markets is not a cause of concern in itself, Myanmar is extremely vulnerable to shifts in Chinese and Thai market conditions. Already, the slowdown in China has impacted Myanmar's economy and currency, while a recent bombing in Thailand has sent shockwaves into Myanmar's tourism industry.

The lack of exports to other markets should be addressed in order to increase exports and reduce dependence on neighbouring markets. Prior to sanctions, Europe and the US were significant markets for Myanmar, particularly for garment exports (these two regions account for up to 90 percent of garment exports at their peak, but now Japan and South Korea predominantly imports Myanmar's textiles). From 2002 to 2004, Myanmar exported 11.1 percent of its goods to the US, and an additional 10.6 percent to the EU-3 (UK, France, and Germany). The country has been attempting to regain these trade links in recent years.

Myanmar and Russia signed a bilateral trade deal to increase trade from US\$114 million presently to US\$500 million a year by 2017. Vietnamese Investors hope to increase trade between Myanmar and Vietnam to reach US\$700 million. Taiwan has also signalled its intention to grow trade up to US\$200 million by the end of 2014, and hopes to invest in a sprawling economic zone. Even American companies, despite sanctions, are optimistic about business in Myanmar. A 2014 US Chamber of Commerce Survey showed that two-thirds of respondents expect their businesses to continue growing in ASEAN over the next five years, with 91 percent of those expecting business in Myanmar to stay strong¹³.

BORDER TRADE

BORDER TRADE WITH CHINA

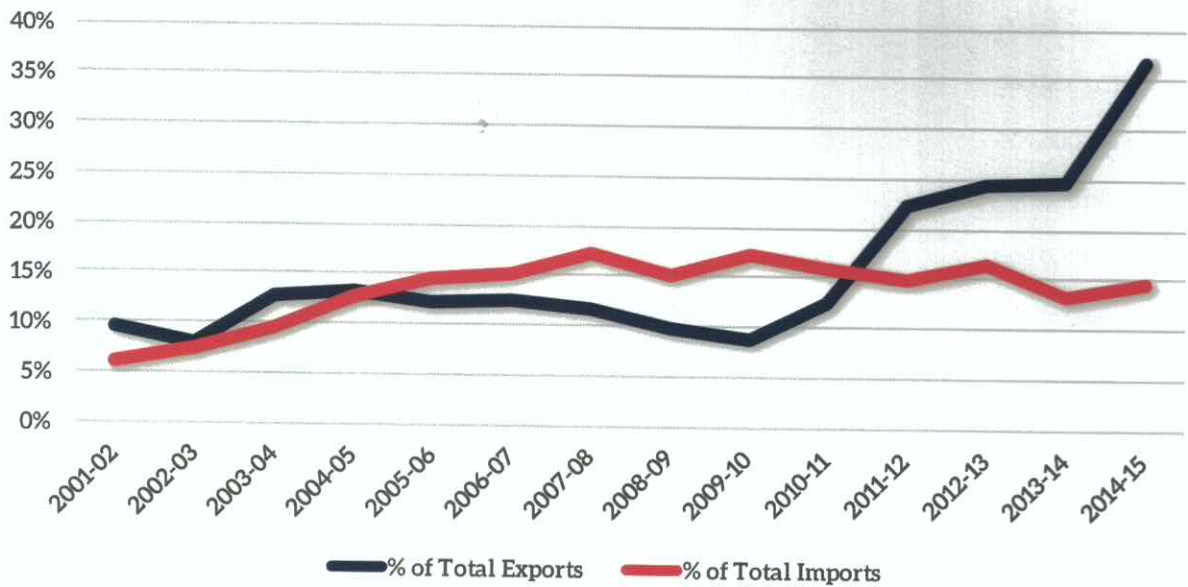
A row of trees separate the Myanmar town of Muse from the Chinese border. Beyond the leafy demarcation is the city of Ruili in Yunnan Province. Every December since 2001, a trade fair between Myanmar and China has been held in Muse, and bilateral border trade has boomed. For the border fair's latest iteration in December 2014, there were 88 Myanmar companies and 124 Chinese companies involved.

Through Muse and Ruili, 78 percent of Myanmar's total border trade was conducted in 2014-2015. US\$5.1 billion worth of goods changed hands in Muse. Each daybreak, about 30 to 40 rice brokers enter Muse from the Chinese side for the Muse commodity exchange centre, where trade is carried out via a guanxi network of brokers who have connections to Chinese buyers. Rice, agricultural products, wood, textiles, and even cattle were exported via Muse into Yunnan, a backwater among China's 31 provinces. (Only two provinces have a lower GDP per capita than Yunnan). Enterprising Myanmar merchants even rely on modern technology, such as Alibaba, to trade with the Chinese customers, and border trade with China has grown from 10 percent of total exports in 2008 to around 28 percent of total exports by 2014-2015. (Border trade figures do not include natural gas exports).

Exhibit 9

Border Trade

Source: Myanmar Customs



Both China and Myanmar have ever higher hopes for Muse and Ruili. Up to 95 percent of cross-border trade between China and Myanmar is now tax-exempt. A sprawling border economic zone is planned for Muse and a glossy pamphlet advertising residential and commercial properties at the zone has been circulated at an investment forum in Myanmar. In November 2014, China Unicom, a state-owned telecoms company, completed an optical cable link between Yunnan and Myanmar's Shan state through Muse. China's leaders have also outlined grand One Belt, One Road plans to link their country with Southeast Asia. These include establishing a US\$50 billion Asian Infrastructure Investment Bank (in which Myanmar is a founding member), and a US\$40 billion Silk Road fund. Taken together, the purpose of these two dowries - China's Marshall Plan, as experts dubbed them - is to build a modern network of high-speed rail, motorways, pipelines, ports, power plants, and fibre-optic connections.

Myanmar and Muse can greatly benefit from China's ambitions, although it might not be straightforward. In mid-2014, plans to build a railway line from Kunming, the capital of Yunnan province, through Ruili and Muse, to the special economic zone at Kyauk Phyu were put on hold. The MOU to develop the railway, signed between the previous military government of Myanmar and China, was allowed to lapse after disagreements over 7 percent interest rate Myanmar will have to pay back China after completion of the railways¹⁴.

BORDER TRADE WITH THAILAND

With other neighbouring countries, bilateral trade is booming too. In early September 2015, the section of Asian highway linking Myanmar to Thailand was opened. Present at the opening were a Burmese Vice President, a Thai Deputy Prime Minister, and the Chairman of the Karen National Union, which has since signed the National Ceasefire.

This being Myanmar, there were hiccups. BurmaLink, a refuge NGO, urged international community and local leaders to boycott the road because it legitimized the government's use of Force, Land Confiscation and Displacement. In July, the government clashed with a local Karen armed group (DKBA), which had placed tollgates on the highway. Despite this, the highway became operational in August, and in 2016, Myanmar is set to open the section linking to it to the Indian side at Manipur.

Construction of this important Asian linkage which will connect Cochinchina to northeast India began in 2012. Myanmar's infrastructure problems have plagued regional linkages for as long as anyone can remember. The narrow road through the Dawna mountains between Kawkaik in Karen State to Thai border was passable in one direction at a time until mid-2015 (i.e., on odd numbered days, traffic flows from Myanmar to Thailand; on even numbered days, it flows in opposite direction). Moreover, the

rough conditions of the road meant that the 32-km journey took as long as four hours by car.

The Asian highway project was reduced this time to less than an hour, turning the small trade post at the town of Myawaddy (population 210,000) into a major border crossing. Myawaddy, which is the second busiest border trade post after Muse at the Chinese border, has seen a surge in trade. Over 300 heavy trucks pass through the town now, according to a border official.

Between April and September 2015, US\$300 million worth of trade passed through Myawaddy, nearly double from US\$158 million in the same period the previous year. (By comparison, total trade across all Myanmar borders only increased by 10 percent). Imports have ranged from cars and motorbikes, spare parts, fuel, and cement to cooking powers, sugar, electrical equipment, construction and farm machinery, food staff and textiles.

BORDER TRADE WITH INDIA

Border trade with India accounts for less than one percent of Myanmar's trade. However, this figure is likely to be larger. Quite uniquely, border trade with India was conducted in a barter trade system since 1997. Barter trades are useful when the baskets of goods traded and banking presence are limited. How-

ever, the volume of barter trade is not usually reflected in the trade statistics.

Under the barter system, traders can exchange goods worth less than US\$20,000; popular barter trade items include cement, pulses and beans, fruits and vegetables, spices, bamboo, and tobacco. With the Myanmar-India portion of the Asian Highway project soon to be opened in early 2016, the Indian government has decided in November to do away with the barter trade system¹⁵. With India's "Look East" Policy, the link between Myanmar and India at Moreh is likely to become a major trading post in the coming decade. A second trade post exists at Zowkhatar-Reed and a third is expected to be opened at Avakhung-Pansat/Somrai.

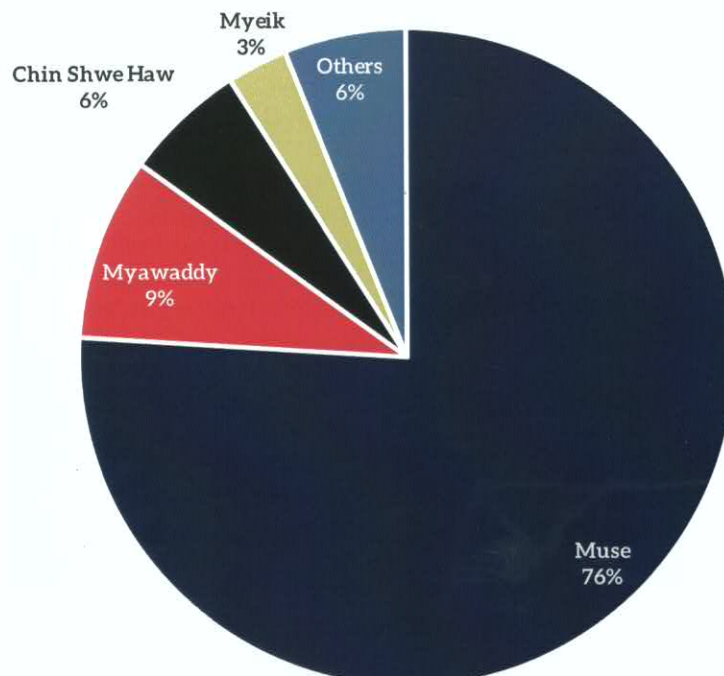
ECONOMIC GREY AREAS

One misconception often held by those outside Myanmar is that extractives are the dominant sector and the engine of growth of the Myanmar economy, making it as dependent on resources and commodity prices as several Middle Eastern economies. However, due to the idiosyncratic nature of Myanmar's GDP calculations, this is not true: in the past, to conceal extractive industries, Myanmar's government has largely left them unreported in GDP figures. Even today, the size of the mining industry in Myanmar is likely to be underreported: in 2014-2015, the com-

Exhibit 10

Border Trade by Post

Source: Ministry of Commerce



bined GDP from oil and gas and mining is just 4.8 trillion Kyats (7.3 percent of GDP)¹⁶. Thus, while Myanmar is classified by the media as “resource-driven”, 92 percent of its reported GDP is outside the resources sector.

However, the actual gross domestic product is certainly bigger; the country has a sizeable amount of unrecorded economic activities or ‘black market’ activities. Published statistics on foreign trade are largely understated. Border trade figures typically do not account for cross-border smuggling of gems, timber, and drugs. According to a parliamentary member of USDP party, quoted in *The Myanmar Times*, illegal trade revenues across border trade exceed formal trade 15 to 20 times over¹⁷. Formal border trade in 2013 was US\$4.5 billion. Another way to understand the illegal trade is to gauge formal trade as a percentage of GDP figures. In Myanmar, trade amounts to 49 percent of the total GDP; in Cambodia, Thailand, Vietnam, and Malaysia, the figures are 136 percent, 130 percent, 146 percent and 139 percent respectively¹⁸.

Even in non-border trade, export/import values of goods are understated to avoid higher taxes. Myanmar’s actual GDP is thought to be significantly larger than 65 trillion Kyats (US\$ 51 billion) – the officially reported number. The government figures are usually underestimates, especially in the service sector as a statistical system geared to measuring factory production and government expenditures is slow to cope with the recent boom in restaurants and bars, clothing stores, car dealerships, bookshops, private hospitals, language classes, and beauty salons. In many of these businesses, small, private, and often unregistered companies, have escaped notice, and therefore taxes.

Thus, by some estimates the black/grey economy in Myanmar could add around 50 percent-80 percent to the GDP. This is typical of other developing Asian countries, where the black economy adds around 25 percent or more to the GDP figures according to academic research; in Thailand and Cambodia, the black economy is estimated to add around 50 percent-55 percent of the GDP. Thailand’s black economy a decade ago was around 70 percent of the GDP according to Friedrich Schneider in *The Shadow Economy*¹⁹. It is assumed that Myanmar’s black economy is equally large as Thailand’s back then. In three areas, the black economy stands out:

TIMBER

In late 2015, World Forestry Congress met in Durban, South Africa to unveil their quinquennial survey *The Global Forest Resources Assessment*. The survey assessed 234 countries and territories and returned an unfavourable verdict on Myanmar’s forestry, which suffered the third worst deforestation amongst the countries surveyed. In five years since the last survey in 2010, Myanmar has lost 546,000 hectares of forest (1.7 percent of total wooded area in 2010). That is an annual loss around the size of Hong Kong.

Myanmar began banning log exports, at least on paper, starting in April 2014. The reasons behind the ban are twofold. Firstly, the government hopes to protect the country’s rapidly declining forests. Secondly, the government wishes to develop a strong wood processing industry locally. According to the Myanmar Timber Enterprise, foreign direct investment in wood processing is around US\$50 million – a minnow compared to the amount of investment flowing into other manufacturing industries in Myanmar.

Exhibit 11

Timber Exports as Reported by Government

Source: Government of Myanmar

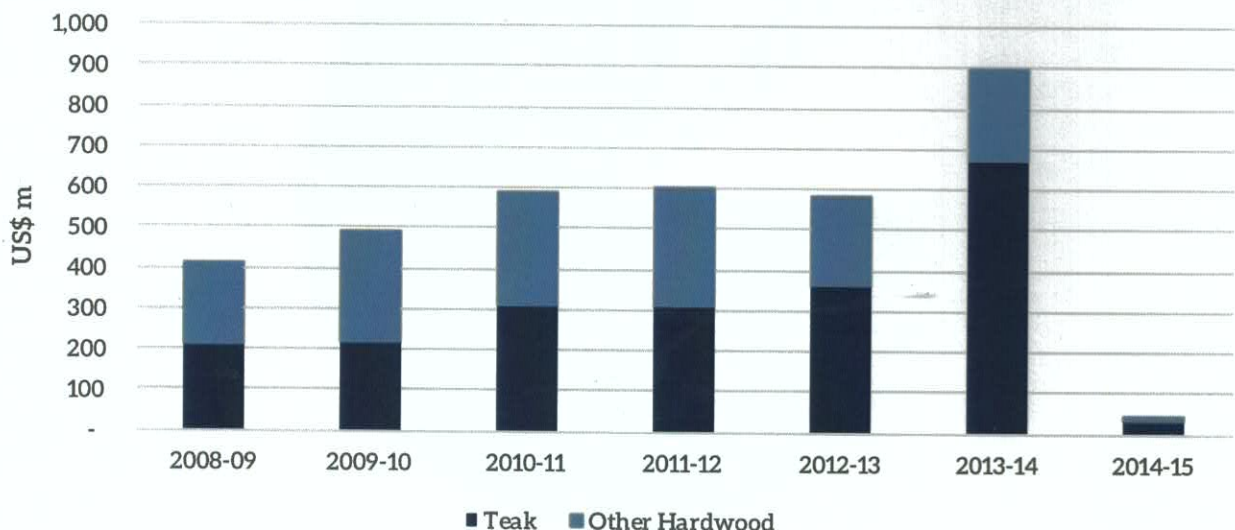
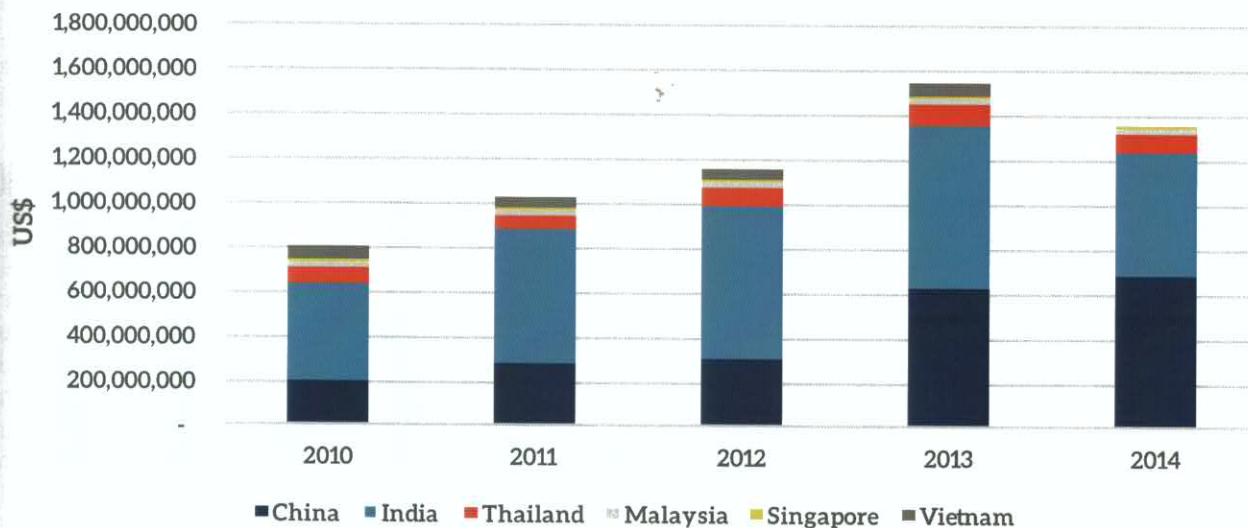


Exhibit 12

Timber Exports as Reported by Trade Partners

Source: UN Comtrade



Since the export ban, Myanmar has lost a recorded US\$900 million in export revenues. According to the government's data, Myanmar received US\$900 million from timber exports alone in FY13-14, but only US\$44 million in FY14-15. Experts question the effectiveness of the ban, as ethnic groups in border areas will continue logging and exporting illegally. Import data from Myanmar's trading partners also suggest that timber trading has continued largely unabated. In the 2014 calendar year, Myanmar's log exports to six major trading partners (China, India, Thailand, Malaysia, Vietnam, and Singapore) was slightly down from US\$1.5 billion to US\$1.3 billion. However, timber trade with China increased from US\$620 million to US\$677 million in the same period²⁰.

Exports to India, however, have gone down from US\$735 million in 2013 to US\$565 million in 2014, and more dramatically since, according to industry insiders. Indian buyers started looking for alternatives in African and Latin American Hardwoods. Experts also said exports are still high because the timber investment cycle in Myanmar is at least six months (i.e., from the day of log purchases to the final shipping). Log extraction is still happening at 30 percent of the original level prior to the log export ban, according to experts.

Demand for teak has also gone down due to higher prices. Although there is very little or no competition to Burmese teak (in terms of size and quality), pricing and rigid norms of sawn size exports are keeping potential buyers away, and contributing to illegal loggings. Ironwood (pyinkado) is currently experiencing competition from other red-coloured hardwoods from Papua New Guinea and Africa; a major competitor

is Cambodia, although the legality of cross-border ironwood trade between Vietnam and Cambodia is also doubtful. However, Cambodian ironwood is around 30 percent-50 percent cheaper than Burmese ironwood.

JADE

Another glaring discrepancy between the Myanmar government's figures and internationally-reported data is in the gems trade. Myanmar produces jade in the conflict-torn Kachin state, especially around the town of Hpakant. The town, where mine workers live in abject poverty, and where drug abuse and disease are rife, contains around 35,000 acres of land which is teeming with jade deposits. Among Myanmar's gems exports, jade is especially popular in China, where it is valued as an imperial symbol of wealth and prosperity.

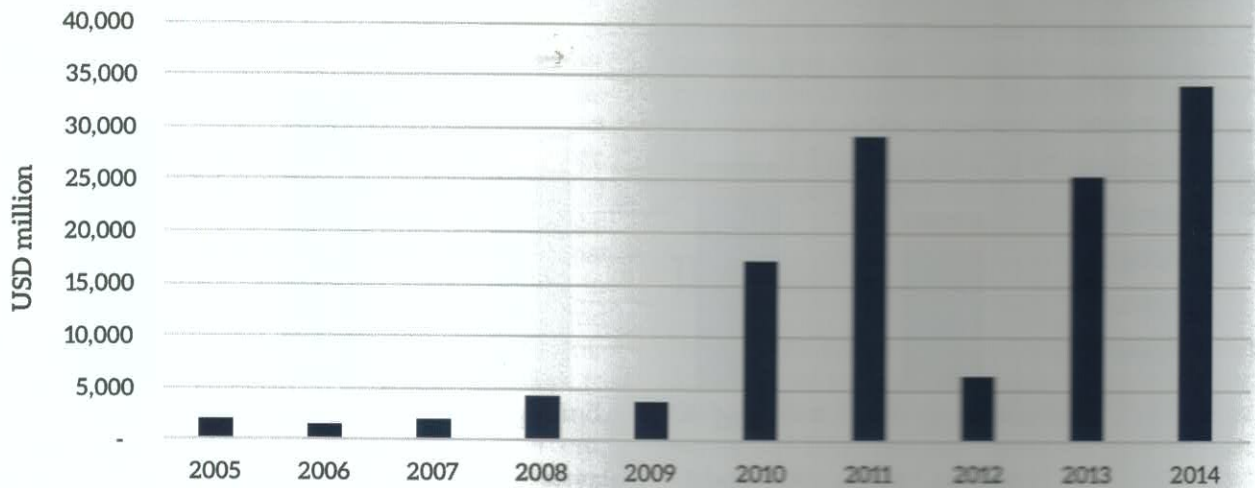
After decades of fudging jade import data, in 2014, China relented in a drive for transparency following the Communist party's recent purge of corrupt officials in the Yunnan province bordering Myanmar. Chinese government reported that China imported US\$12.3 billion worth of jade stones from Myanmar in 2014²¹. Myanmar has always insisted that its gems and jade exports are around US\$2 billion annually.

As huge as the US\$12.3 billion figure suggests, observers are saying that it underestimates the true value of Myanmar's jade production. Global Witness has estimated that Myanmar's official jade production in 2014 is US\$31 billion (and cumulatively US\$122.8 billion from 2005-2014). If this figure were true, it

Exhibit 13

Myanmar's Jade Industry

Source: Global Witness



will increase Myanmar's official GDP by 48 percent²²; Global Witness went so far as to say that its estimation is likely conservative as another method of calculation pegs jade production at US\$38 billion.

More shockingly, as Global Witness' estimates are based on official production data, they do not take into account the significant portion of jade that is produced illegally (or output which is kept entirely off the books and never recorded by the authorities). According to an official at the state-owned Myanmar Gems Enterprise, quoted in **The Irrawaddy**, although around 600 jade mining firms operate on 20,000 acres around Hpakant, activity is dominated by about 10 firms, most of them Chinese-led ventures. Ahead of the incoming NLD-led government there has been a frenzied last-minute activity among those firms a rush to excavate more jade before the new government takes power²³.

However, these wild mining activities are happening even as China's jade market withered domestically in 2015, as President Xi Jinping cracks down on corruption (and conspicuous consumption). The Economist noted that rents have fallen by three-quarters in Jieyang, Guangdong – the city which is considered as China's jade capital – and jade carvers there are idle for eight days out of ten²⁴. Even as the NLD-led government plans to bring competition, taxation, and transparency to the sector, the momentum already seems to be draining out of it.

OPIUM

Another dark area of trade is in illegal narcotics. Opium production has historically been a major contributor to the economy in Kachin and the Shan states; the country is the world's second largest producer of opium after Afghanistan, producing around a quarter of the world's opium.

Production is mainly concentrated in Shan and Kachin states, and nearly 200,000 households are involved in the industry. Due to poverty, opium production is attractive to impoverished farmers as the financial return from poppy is several times more than that of rice: the value per hectare for poppy is around US\$3,200 per hectare whereas the value per hectare for rice is around US\$300-\$400 per hectare. Revenues used to be higher when yields per hectare were higher, and average farm-gate prices were higher due to higher quality of poppy being cultivated, but lowering revenues give Myanmar an opportunity to offer the poppy-farmers substitute crops (fruits, vegetables, coffee), which yields equally high revenues; equally noteworthy is the fact that around 23,000 households have stopped producing opium between 2012 and 2015.

Annual production is around 650 tonnes, with estimated farm-gate value of about US\$300 million. When opium production and refining businesses

were included, the narcotics industry in Myanmar is thought to be around US\$1.5 billion to US\$2 billion, and the drug money has penetrated other sectors of the Myanmar's economy, distorting sectors such as real estate. However, it should be encouragingly noted that in the most recent years, opium production has declined due to increased government efforts to eradicate the crop²⁵.

CORRUPTION

These grey trades in timber, jade, and opium were carried out without much impunity in Myanmar due to widespread corruption. Myanmar ranks 156 out of 175 in Transparency International's "Corruption Perception Index 2014", alongside Cambodia and Zimbabwe. Corruption pervades the entire economy from high level nepotism and cronyism to everyday bribery and harassment. Businesses and individuals requiring licences and permits from government officials are often asked for bribes – colloquially referred to as 'tea money'.

Corruption acts as an added and unpredictable tax on companies of all kinds. More than 50 percent of firms reported to a World Bank survey that bribes were necessary for being granted an import licence²⁶. Many international companies are sensitive to public

opinion in the developed world and are acutely aware of the potential damage bribe paying could have on their reputation. If corruption is viewed as a necessary part of doing business in a location, companies may simply choose not to enter the market. The government has taken steps in the right direction: the country enacted a new Anti-Corruption Law in 2013, replacing the 1948 Suppression of Corruption Act. Parliament has appointed a 15 member anti-graft commission in early 2014. In addition, money-laundering laws have been enacted (2002, and the Rules in 2003), and Myanmar acceded to the United Nations Convention against Corruption (UNCAC) in December 2012. The Ministry of Home Affairs formed a Special Investigation Bureau and Financial Intelligence Unit (FIU) in the same month and these two bureaus are said to be working closely with international organizations.

However, the Anti-Corruption Commission has also come under criticism for lacking impartiality, as its commissioners are appointed by the President. The commission is chaired by Mr. Mya Win, a former major general, and since the formation of the commission, less than 150 officials have been disciplined by the commission and the commission has managed to recover only 20.7 million Kyats (an amount less than the annual salary Mr. Mya Win receives)²⁷.

Exhibit 14

Myanmar's Opium Industry

Source: UNODC

	2015	2014	2013	2012
Total opium poppy cultivation	55,500 ha	57,600 ha	57,800 ha	51,000 ha
Opium cultivation in Shan state	50,300 ha	51,400 ha	53,300 ha	43,000 ha
Average opium yield	11.7 kg per hectare	11.7 kg per hectare	15 kg per hectare	13.5 kg per hectare
Total production of dry opium	647 tonnes	670 tonnes	870 tonnes	690 tonnes
Average farm-gate price	\$273 per kg	\$414 per kg	\$498 per kg	\$520 per kg
Average price by sown area	\$3,200 per hectare	\$4,800 per hectare	\$7,500 per hectare	\$7,000 per hectare
Total opium production value	\$236 million	\$340 million	\$540 million	\$420 million
Number of households cultivating poppy	173,000 households	182,000 households	192,000 households	196,000 households

COMMODITIES TRADING

2015 was not a good year for commodities generally across the world: the economic slowdown in China has diminished its appetite for raw materials and various commodities. Oil prices have also slumped. In mid-2015, NCRA began monitoring how these changes affect commodity prices in Myanmar for a selected group of major commodities imported, exported, and consumed in Myanmar.

GOLD

Myanmar people invest in gold as a hedging tool against inflation and price fluctuations in US dollar. It is considered as a safe instrument for investment in Myanmar like other Asian economies. Gold prices in Myanmar touched a peak of 800,000 Kyat per tickal (1 tickal = 16.3293 grams) but it slowly came down to 750,000 by end of the year. In last 6 months, gold gained 3 percent in local market whereas in international market gold traded in the range between \$1,070 and \$1,080 for last few months. There is a general view in the market that there are still fundamental factors that are likely to hold prices lower in the medium term.

RICE

In August 2015, Myanmar witnessed floods in major agricultural regions. Since then, rice prices have hiked up and remained volatile. Prices for Paw San (Shwe Bo) variety of rice price increased by 5 percent whereas Paw San (Phyer Pone) increased by 6 percent. Paw San (Phyer Pone) prices decreased by 9%. The maximum price increases were in prices of Ma Naw Thuka, which increased by 30%.

RUBBER

2015 was one of the worst years for rubber farmers across globe as rubber prices slumped towards a six-year low. Global demand for natural rubber, used mostly in tires, is slowing as the economy cools in China. In Myanmar local market prices crashed by more than 30% in the last 6 months of 2015.

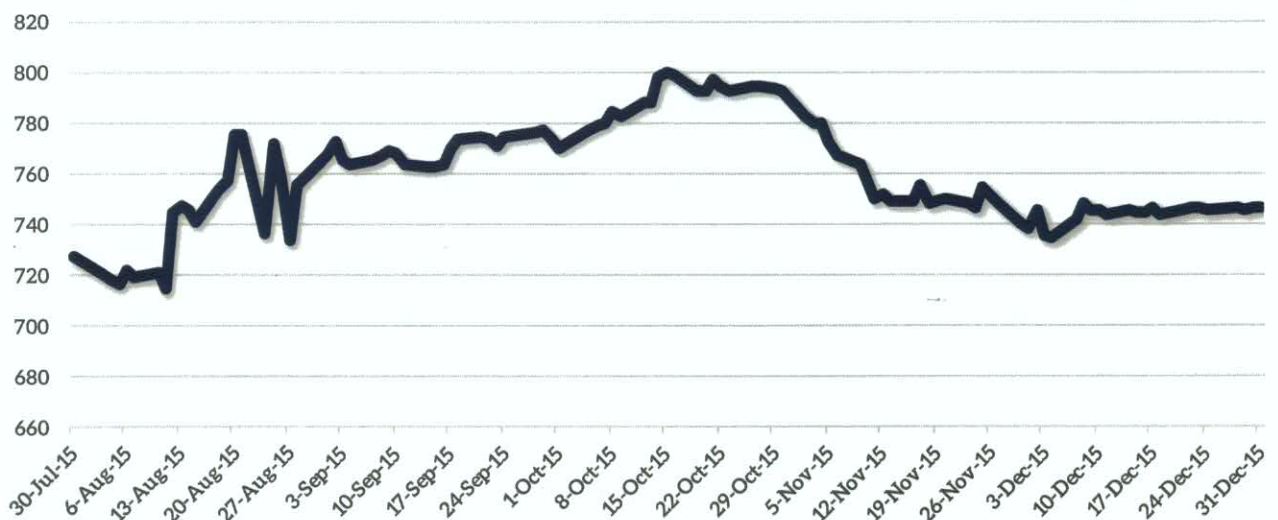
Myanmar's rubber producers have struggled in recent years and the government announced in March that natural rubber has been selected as a product to be promoted under its new National Export Strategy 2015-2019. As part of this strategy, the government

Exhibit 15-19

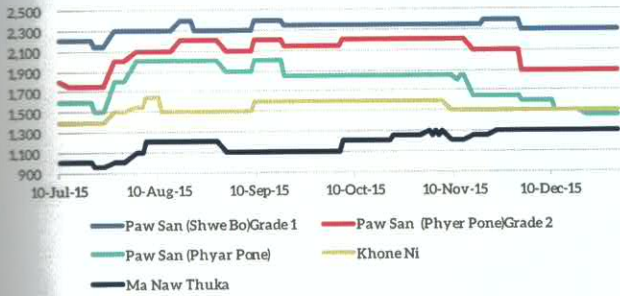
Commodities Indexes

Source: NCRA Research

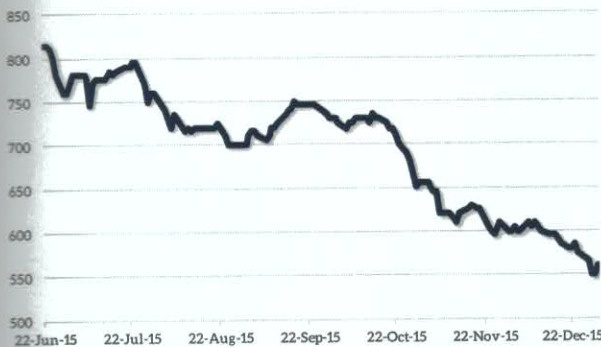
Gold Index



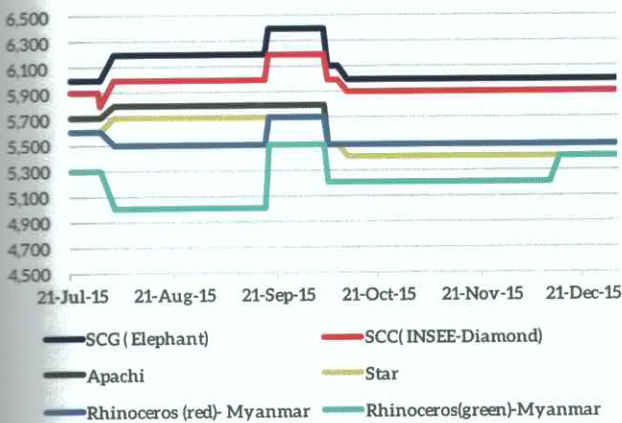
NCRA-Myanmar Rice Index



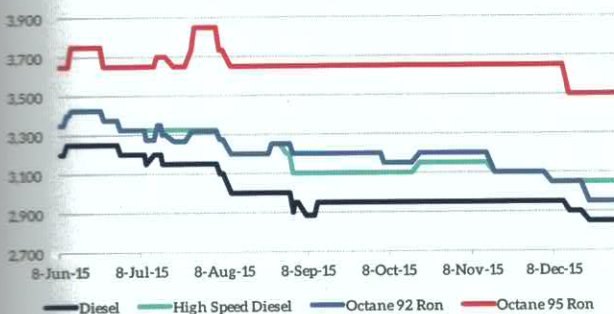
Myanmar RSS 3 (Kyat/lb)



Cement Index



NCRA-Myanmar Fuel Index



announced plans to establish centralized rubber markets across Myanmar. Myanmar has 600,000 hectares of rubber plantations, and over 160,000 acres in Mon State alone.

In 2014-2015, Myanmar exported 76,000 metric tons of rubber (around half of its total production), earning US\$113 million. Thus, the price of Burmese rubber is on average around \$1,480 per ton, slightly below average international rubber prices of \$1,650 per ton. This discount is due to the fact that Burmese rubber is of poor quality and of inferior seeds, another reason plaguing the rubber industry: at around 760 kilograms of rubber per hectare annually, rubber productivity in Myanmar is half the global standard. (In Malaysia, rubber yields 1,500 kilograms per hectare; in neighbouring India, rubber yields are 1,750 kilograms per hectare).

CEMENT

In 2014, Myanmar imported 4.3 million tonnes of cement, worth earning US\$273 million – this is a significant increase from 3.5 million tonnes of cement imported in 2013 (valued at US\$230 million). Cement prices of SCG cement and SCC cement remained stable in last year where prices of Apache cement and Star cement came down by 5 percent and 4 percent respectively. Rhinoceros (red), is a local brand whose prices reduced by 2 percent in the last 6 months. Local cement producer Arr Thit Man plans to double its cement production capacity from 5,000 tonnes per day to 10,000 tonnes per day by 2016. The company makes the Double Rhinos brand cement from its plant in Kyaukse, Mandalay. Siam Cement Group is building a 1.8 metric tonnes per year cement plant in Mon, which it expects to be operational in 2016. Star brand's owner, Lafarge-Holcim has set up a 20,000 metric tonne cement repacking plant at Thilawa Terminal.

GASOLINE

Annually, Myanmar imports more than \$2.5 billion worth of fuel products as per custom data. Myanmar's fuel market is controlled by Singapore based Hin Leong firm who supplies 70 percent of overall market demand. With local oil prices in record lows, fuel prices in Myanmar for all categories have gone down from 4 percent to 14 percent in the last 7 months in Myanmar. Octane 92 ron price decreased most dramatically and 95 ron price declined least. Normal diesel and high speed diesel both lost value by 12 percent and 10 percent respectively in the local retail market.



Business Environment

Low skill levels, logistics problems, and lack of clear regulations constrain foreign investments.

Gaps in Myanmar's business environment continue to be a constraint on growth. Despite recent improvements, Myanmar still has a reputation for tough business conditions. In 2015, Myanmar stood at 189 in the ranking of 189 economies on the ease of starting a business, according to the World Bank. Since that ranking, the country has improved a little – in 2016's "Doing Business Report", the country climbed up to 160 out of 189 economies in starting a business.

As one of the most difficult countries in the world to do business, the business environment suffers from a number of difficult regulatory processes. According to the World Bank report, it takes 85 days to register a property in Myanmar, compared to 20 days in China, 13 days in Malaysia, and 3 days in Thailand. Approval by the municipal authorities is required, and that takes an average of thirty days to secure. Similar hurdles exist for gaining construction permits.

Exporting and importing is another major administrative hurdle; Myanmar ranks 140th out of 189 economies for trading across borders. It takes 288 hours and US\$570 per container to export, and 168 hours and US\$480 to import. Foreign companies are not allowed to trade, and instead rely on local companies as conduits to export and import their products.

Based on a WEF survey of businesses, six concerns stand out for Myanmar employers. They are limited

access to financing; corruption; inefficient government bureaucracy; inadequately educated workforce; policy instability; and inadequate infrastructure.

COMPANY REGISTRATIONS

A foreign company can do business in Myanmar as a representative office of the parent company. However, such a representative office will be subjected to higher taxes. Otherwise, foreign companies can form a local limited liability company, registering under the Myanmar Companies Act (MCA) as either a manufacturing or service company. For further favourable terms, foreign companies can register under the Myanmar Foreign Investment Law (MFIL). To qualify, the investor will need to submit an investment proposal together with the justifications on how its investment will bring benefits to the country to the Myanmar Investment Commission (MIC).

There are both pros and cons for registration under MFIL. Under the MFIL, an investment will be treated to favourable terms and tax exemptions, but also subjected to higher paid-up capital requirements:

If the investment is capital intensive (e.g. oil and gas, factories), it is better to invest under MFIL. As a consultancy or other services company, it is better to incorporate under the MCA. In any case, only half of the capital required will have to be remitted

Exhibit 20

Company Registration Requirements

Source: DICA

	Manufacturing	Services
MCA-registered company	USD 150k	USD 50k
MFIL-registered company	USD 500k	USD 300k

into Myanmar upon incorporation. For instance, a MFIL-registered manufacturing company can remit half the required capital (US\$250,000) upon incorporation and the other half at a later date only when its business requires.

Most recently in late August 2014, MIC further liberalized MFIL when it reduced the number of prohibited economic activities for foreigners and foreign investments ("the negative list"). MIC also sets out in which sectors foreigners can or cannot invest. Recently, the number of economic activities which are not allowed to be carried out by foreign investors is reduced from 21 to 10. The number of economic activities to be allowed only by joint venture with Myanmar citizens is reduced from 42 to 30.

Simply put, low tech, less capital intensive sectors (e.g., small-scale trading, restaurant, or retail) are reserved for Myanmar people. In sectors which require foreign tech and capital (e.g., onshore and shallow-water oil and gas exploration, stock exchange licenses), a foreign entity can operate via a JV with a local partner. The JV ratio between local and foreign entity varies from sector to sector. Generally, local company must hold at least 20 percent of the shares in the JV entity. In some industries, the minimum amount is higher (40 percent in warehousing; 50 percent in securities

business; 51 percent for publishing of journals and magazines). In high tech or capital intensive sectors (e.g., telcos, deep-sea exploration, wholesale banking), foreigners can own 100 percent of the investment. The State-owned Economic Enterprises Law (SEE Law) specifies 12 economic activities that are closed to private investment and can only be carried out by the government. In order to operate in these activities, either a joint-venture with the government or a state-owned corporation is needed. For instance, oil and gas extraction is one such restricted sector, where Myanmar Oil and Gas Enterprise (MOGE) serves as the local JV-partner for foreign super-majors.

EMPLOYMENT

Unemployment in Myanmar is low at around 4.0 percent for the population aged between fifteen and sixty-four. In the same age group, employment-to-population ratio is 64.4 percent, suggesting healthy labour force participation rates. However, it should be noted that female participation is only 48.4 percent. Despite the low unemployment rate nationwide, there are high unemployment rates in Rakhine State (10.4 percent) and Kayin State (7.5 percent).

Underemployment (defined as working less than 44

A company investing in Myanmar under MFIL can receive the following favourable terms:

Exemption from income tax for 5 years. This exemption may be extended by the MIC for a further period, depending on the success of the enterprise.

Exemption or relief from income tax on profits of the business that are re-invested within in the business.

Deduction for depreciation of plant and plant equipment or other capital expenditures in Myanmar.

Exemption or relief from custom duties or other internal taxes or both on machinery, equipment, instruments, machinery components, spare parts and materials which are imported during the period of establishing local presence.

Exemption or relief from customs duties or other internal taxes or both on raw materials imported for production during the first three years of operation.

Exemption or relief from commercial tax on the goods produced for export.

Deduction for research and development expenses in Myanmar.

Relief from income tax of up to 50 percent of the profits accrued on exported goods.

Right to pay income tax on the income of the foreign employees at the rates applicable to citizens residing within the country.

Right to carry forward and set off losses for up to three consecutive years from the year the loss is incurred.

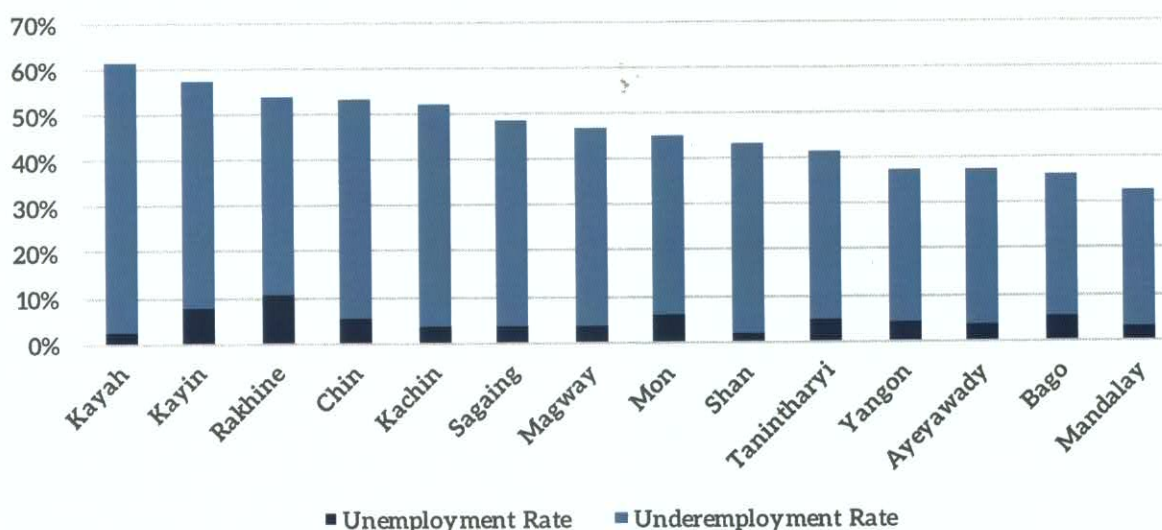
Right to lease land for over 50 years.

Guarantee against nationalization.

Exhibit 21

Unemployment and Underemployment

Source: DICA



hours in past 7 days) however is eye-wateringly high in Myanmar. In a largely agrarian country, underemployment is a significant problem with pronounced seasonal dimensions. According to the latest UNICEF/UNDP surveys, underemployment has actually increased between 2005 and 2010. Overall, underemployment stood at around 37 percent of the working population in 2010. This suggests that Myanmar has a large workforce whose full productivity can be unlocked in a short time, if underemployed workers are shifted into a formalised 9-to-5 work in manufacturing sector. However, it should be noted that even some service sectors are seasonal. According to NCRA's survey of hotels in Myanmar, 15 percent of the employees are part-time (i.e., in off-season during monsoon, some hotels in Myanmar are closed, and the employees are on the furlough).

LOW SKILL LEVELS

However, low-skill levels still plague the workforce. Well-educated workers are the building blocks of a modern, productive and diversified economy. Low skills limit worker productivity and effectiveness, as well as wages. Higher skills translate into higher productivity and pay. Wages in Myanmar are low, but the country has a great deal to do to improve education and training.

Less than 2.5 million (out of 27 million citizens who are above the age of 25) have university-level degrees or diplomas. The result of the poor performance of Myanmar schools is an adult population with large skill gaps. Employers frequently note that Myanmar

people have low job readiness, work experience, and high rate of turnover, which adds to the cost of recruiting and hiring. In a recent survey, 43 percent of the businesses sampled reported having experienced technical or professional skills problems in the workforce²⁸. These skills problems are prevalent in sectors across the industries, ranging from manufacturing to agriculture.

These skill gaps severely constrain economic activity and the effectiveness of government. On-the-job training is usually not an option: most businesses are small and informal and unable to provide training. Larger companies that hire informally typically do not invest as much as they should in training.

HIRING HURDLES

There are no restrictions on the number of expatriate employees to be hired by foreign companies registered under the MCA. Generally, foreigners cannot be appointed as directors in local companies formed under the MCA and owned by Myanmar citizens. Foreigners, however, can serve as management on such companies.

Under the MFIL, there are restrictions on appointing foreign personnel. In jobs requiring special skills, at least 25 percent of the workforce shall be local citizens in the first two years, 50 percent within the second two years and at least 75 percent within the third two-year period. The foreign investor shall employ 100 percent local employees for jobs which do not require special skills. However, the MIC tends to grant

exemptions to these rules. Even for construction projects, which do not require special skills, the MIC has recently allowed the employment of foreign manual labourers (an allowance which the MIC has indicated will be temporary). This is due to the aforementioned problem of the lack of quality skilled labourers. HR managers and recruiters frequently cite following reasons for their difficulties:

- Lack of verbal or language skills
- Lack of writing skills
- Lack of computer/IT proficiency
- Lack of industry-specific qualifications and certifications

The job market is strong in Yangon, but weak in other areas of Myanmar. Of around 9,000 job vacancies NCRA surveyed last year, 85 percent of vacancies on offer are in Yangon. Even workers in Mandalay, the country's second biggest city, complain about the scarcity of jobs in their area.

MINIMUM WAGE

Myanmar recently instituted a nationwide minimum wage of 3,600 Kyats per 8-hour working day. This translates to 108,000 Kyats per month (US\$84 dollars) which is the lowest minimum wage in the region, apart from Bangladesh (US\$68 per month).

The latest minimum wage is the culmination of the government's two-year long struggle to impose one. On 22 March 2013, the Parliament passed a new law on Minimum Wages to it at 30,000 Kyats (then around US\$32) per month. This wage was considered to be too low, and parliament set out a broad framework to determine the minimum wage in various sectors, and formed a select committee. The government also conducted a nationwide survey in 1Q15 to effectively set the minimum wage by sector. The labour right activists campaigned for 5,000 Kyats per diem, while the most vocal opponents of the minimum wage wanted it to be set at 2,500 Kyats. Eventually, a compromise was reached in mid-2015, but not before a rancorous debate between labourers and garment manufacturers, who are the industrialists most heavily affected by the new minimum wage. In most garment factories, the Dickensian owners have curtailed their employees' perks (which include shuttle buses to work, and offer to food and accommodation) due to pay rises.

Encouragingly, in the wake of the new minimum wage, 30 European and US brands (including Tesco, Marks & Spencer, H&M, Primark and Gap) have written to the government stressing that "a minimum wage that has been negotiated by all parties will attract rather than deter international companies from buying garments from Myanmar"²⁹.

WORKING HOURS

Currently, the total amount of employer and employee contribution towards social security is 4 percent of the employee's total salary. Employer's contribution is 2.5 percent (1.5 percent for the Health and Social Insurance System and 1 percent for the Employment Injury Insurance System). The employee's contribution is 1.5 percent. These are small contributions compared to international rates of social security contribution. An unemployment insurance system was also introduced in the new Social Security Law in 2013. The total contribution to be paid into the unemployment insurance system is 2 percent of the salary (1 percent by employer and 1 percent by the employee).

Working hours, meanwhile, vary from sector to sector. The 1951 Leave and Holidays Act stipulates 48 hours of work per week for employees of "companies, trading centres, factories", 44 hours per week for employees of "oil field and mines" and 40 hours per week for employees of "underground mines."

The Labour Organization Law of 2012 repealed an old law that banned labour unions and industrial action. Now, strikes can be staged with three days' notice in the private sector, and fourteen days' notice in the public sector.

Some companies in Yangon offer accommodation options for their employees. Under the current income tax law, tax on salary includes perquisites (benefits) in cash or in kind. For instance, the rental value of free accommodation is usually calculated at 10 percent of the employee's gross salary or at 12.5 percent if the accommodation is furnished.

OCCUPATIONAL SAFETY

Another pitfall for international businesses is when it comes to labour rights and occupational safety. Since the calamitous fire at a garment factory in Bangladesh in 2013, multinational businesses are increasingly cautious with their choice of local partners, suppliers and the countries they choose to do business with. While Myanmar has low employment costs, the lack of labour regulations and occupational safety procedures is making multinationals think twice before investing.

Since the Ne Win junta came to power in 1962, Myanmar has churlishly refused to ratify a slew of ILO treaties, including the 1947 Convention on Labour Inspectors and the 1981 Convention on Occupational Safety and Health Convention³⁰. The incoming NLD government has pledged in its manifesto to "sign up to the International Labour Organisation conventions that are relevant to Burma", but there needs to be actions beyond ratifications. According to the Myanmar Centre for Responsible Business, underreporting

workplace accidents is rife. Moreover, multinationals cannot ascertain whether or not their contractors or subcontractors are using sub-par, outdated practices as the country has only a limited number of labour inspectors. The Asian Development Bank (ADB) has noted, more in sorrow than anger, that some inspectors cannot speak the languages of the workers and managers when they were carrying out inspections.

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Especially shocking is in garment manufacturing, a notable FDI attractor, where 43 percent of the workers in a recent survey noted they did not feel safe, primarily due to the risk of fire – conjuring up images of Triangle Shirtwaist fire a century ago. More than a third of workers (39 percent) also said they had sustained injuries while at work³².

Such dangerous practices were apparent throughout 2015. In June, the collapse of steel scaffolding at the construction site for Pullman Hotel, Mandalay left two workers dead and 18 injured; the country doesn't have a National Building Code yet, although several drafts had been submitted to the government by industry organisation and international donors in the last few years. The year closes with tragic deaths of over a hundred pan-miners in Kachin State following two separate rockslides at jade mines in Hpakant. Earlier alarm bells went unheeded: in January at least four miners died in an identical accident, but this major loss of life has at least spurred the lame-duck parliament to tighten small-scale mining regulations.

LOGISTICS

Myanmar should, by all rights, have a robust logistics sector. It has a long coastline, is well situated between India and Southeast Asia. Myanmar also has an extensive inland water system, and has nine existing ocean ports. It is at a crossroads location ideal for development of freight transport; the country's ports can be used to receive cargo and then transport it to hinterlands of India and Southeast Asia and to South-west China.

However, due to isolation, sanctions and poor management, road and maritime infrastructure is underdeveloped and has indeed fallen into disrepair. This makes the logistics of distributing cargo within Myanmar a daunting challenge, let alone the country becoming a logistics hub for Southeast Asia and China.

Yangon Port in some ways remains decidedly 19th century. Cargo handling is still manual and paperwork is still processed the old fashioned way – three copies of the same documentation must be brought to three separate offices by a shipper. There is no single window and no electronic reporting; Bills of Lading cannot be accessed via the Internet and tracking is done by hand, making it difficult to know the precise

Exhibit 22

ILO Regulations Unratified by Myanmar

Source: Myanmar Centre for Responsible Business

ILO Labour Inspectors Convention (C81, 1947)

ILO Right to Organise and Collective Bargaining Convention (C98, 1949)

ILO Equal Remuneration Convention (C100, 1951)

Social Security (Minimum Standards) Convention (C102, 1952)

Abolition of Forced Labour Convention (C105, 1957)

Discrimination (Employment and Occupation) Convention (C111, 1958)

Medical Care and Sickness Benefits Convention (C130, 1969)

Minimum Wage Fixing Convention (C131, 1970)

Holidays with Pay (Revised) Convention (C132, 1970)

Workers' Representatives Convention (C135 of 1971)

Minimum Age Convention (C138, 1973)

Migrant Workers (Supplementary Provisions) Convention (C143, 1975)

Occupational Safety and Health Convention (C155, 1981)

Indigenous and Tribal Peoples Convention (C169, 1989)

ILO Maternity Protection Convention (C183, 2000)

location of containers (which sometimes go missing). Machinery and equipment, where they exist, are often obsolete, while training is sufficient and capacity is low.

With constantly increasing cargo traveling through the port of Yangon, there are growing congestion problems at the seaport terminals, while similar traffic is growing nearby on connecting roads leading to the city centre. Congestion does not only create delays and frustration, but also financial loss for carriers.

According to truck drivers, the transit time between Mandalay and Yangon is about 24 hours (including 6 hours rest). It takes about a week to carry cargoes by water between Yangon and Mandalay, but freight rates are lower than trucking and railway services.

Myanmar performs abysmally on logistics performance, even when compared with low income and regional peers. From being ranked 1 (worst), and 5 (best) in logistics performance, Myanmar rated 2.25 in 2014.

The overheating and overworked country has performed slightly worse than it did in 2012, when it ranked 2.37; and in 2010, when it ranked 2.33. While the country showed small improvements in customs, infrastructure, and competence over the last four years of liberalization, it performed worse in timeliness and international shipments categories, suggesting capacity challenges.

Time taken to clear customs is around three days. A small problem is likely to be resolved within a week, but a bigger issue might take up to 2 weeks to resolve. It is paramount that the forwarder or shipper has a solid relationship with customs. The customs authorities in downtown Yangon's colonial-era Customs House have sheepishly acknowledged such delays by conceding to the fact that some imports which are time-sensitive (such as newspapers and corpses) can be expedited, although this category is only narrowly defined.

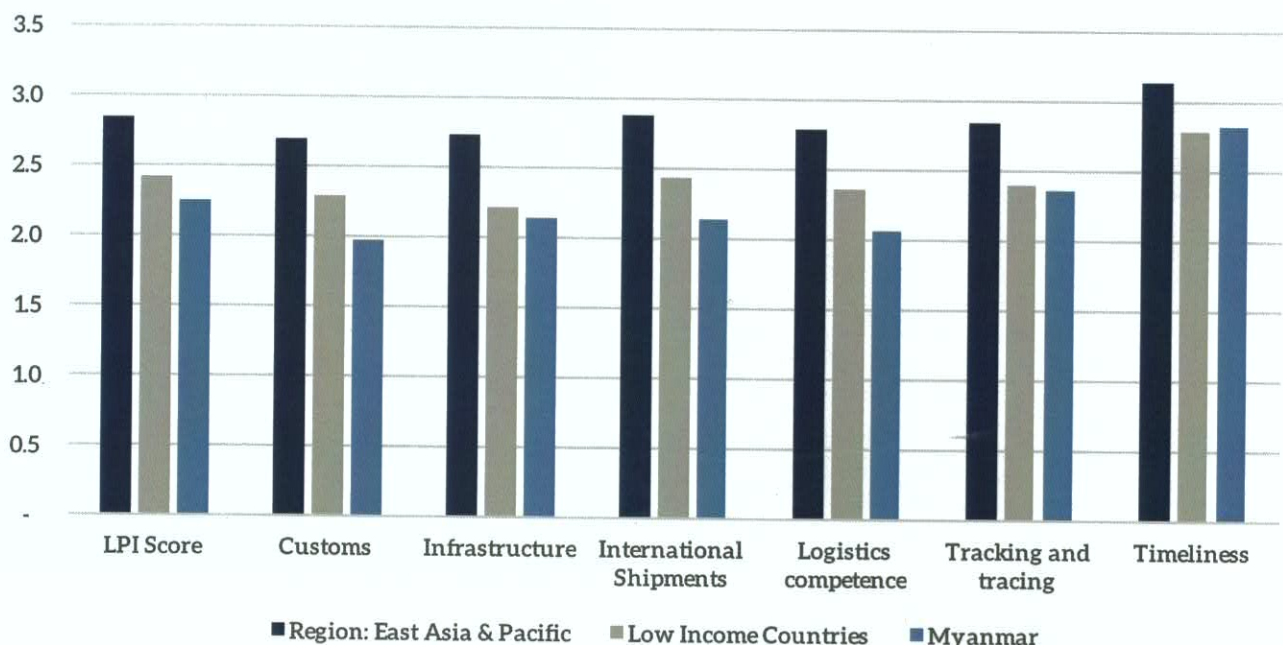
Simple administration/documentation errors can cause significant delays. Even a simple inconsistency between the expiry date on the product and that written on the licence agreement will result in the cargo being withheld indefinitely. Due to widespread corruption, it would be fair and prudent to expect that the process of customs clearance can be accelerated by paying some "service fees" to those in charge. However, for NGOs and companies whose internal strictures prohibit such spending, customs clearance can pose an insurmountable problem.

We have interviewed a number of people from product end users, to freight forwarders, to port owners. Apparently, the biggest single problem in supply chain management is government policy. There is a very limited flow of information between the Trade Department and the Customs Department, so when there are changes, for example in documentation requirements, there is often an unforeseen requirement to pay a fine for getting the procedure wrong.

Exhibit 23

Logistics Performance Index (2014)

Source: LPI Survey, World Bank



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We are Myanmar's most comprehensive travel booking website, with an extensive range of e-products, **flymya.com** aims to promote tourism in Myanmar locally and internationally. Offering domestic flights booking, tour packages and transport rentals online, Myanmar is now more accessible to those who wish to discover the beauty of this lively country.



Foreign Direct Investment

Extractives still dominate FDI inflows but investment opportunities in telcos and manufacturing are thriving.

Before 1989, the only foreign company in Myanmar was Fritz-Werner, a German company which manufactured arms and ammunition for the Myanmar army. Since 1989, Myanmar opened its doors to foreign investors – and in the previous decade they have been largely state-owned Chinese corporations, investing in Myanmar’s oil and gas and hydroelectricity sectors. Starting in 2011, following the reforms of the present administration, FDI to Myanmar has accelerated; the country has attracted over US\$ 18.5 billion in FDI since April 2012.

However, official FDI figures – in both absolute and relative terms – should be taken with a grain of salt. The US\$ 60 billion figure widely quoted in local and foreign media as the cumulative FDI in Myanmar (from 1989 to present). This figure might be US\$10 billion higher than the actual FDI invested; actual FDI invested is probably closer to US\$50 billion due to some companies withdrawing after their business approval cut-off period had expired, others failing to make the full investment, which they had initially indicated, as is the case with stalled Dawei Special Economic Zone (see below). Even when the investment had been made, annual FDI figures – as monitored by authorities via the project approvals – may be different from actual FDI inflows, as total investment often spread out over several years.

Some foreign investments in Myanmar are not recorded as FDI if they do not require the approval of Myanmar Investment Commission. Such investments are common in smaller scale investments and

for companies forming joint ventures with state-owned enterprises.

The majority of the Foreign Direct Investment that Myanmar has attracted so far is concentrated in extractive industries, such as power, oil and gas, and mining. In existing FDI projects, two thirds are in power and oil and gas industry (27 percent in the power industry and 38 percent in oil and gas industry). These figures are historically higher. Before the recent reforms, these two extractive industries made up four-fifths of total permitted foreign direct investment in Myanmar, a strong indication that foreign investors are interested most in extracting natural resources from Myanmar. Agriculture, which predominantly makes up Myanmar’s economy, attracted the cumulative investments of only 0.4 percent of total FDI.

Cumulative FDI levels were low in economic sectors that require little resource use, but promise high returns, from manufacturing to transport and communication. Since a new Foreign Investment Law (FIL) was introduced in 2012, over three thousand foreign companies and seventy joint ventures have been established in Myanmar, according to the Directorate of Investment and Company Administration (DICA), a government department overseeing foreign investments. Most of these new companies are primarily invested in non-extractive sectors.

With the liberalization of the telecommunication sector in 2013, transport and communication, one of

Exhibit 24 Foreign Direct Investments by Sector

Source: DICA

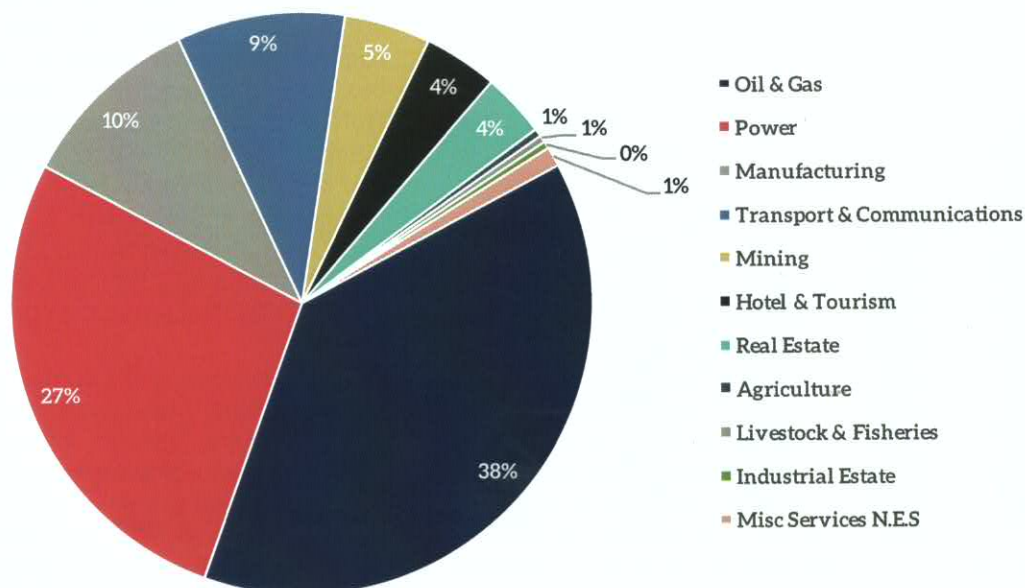
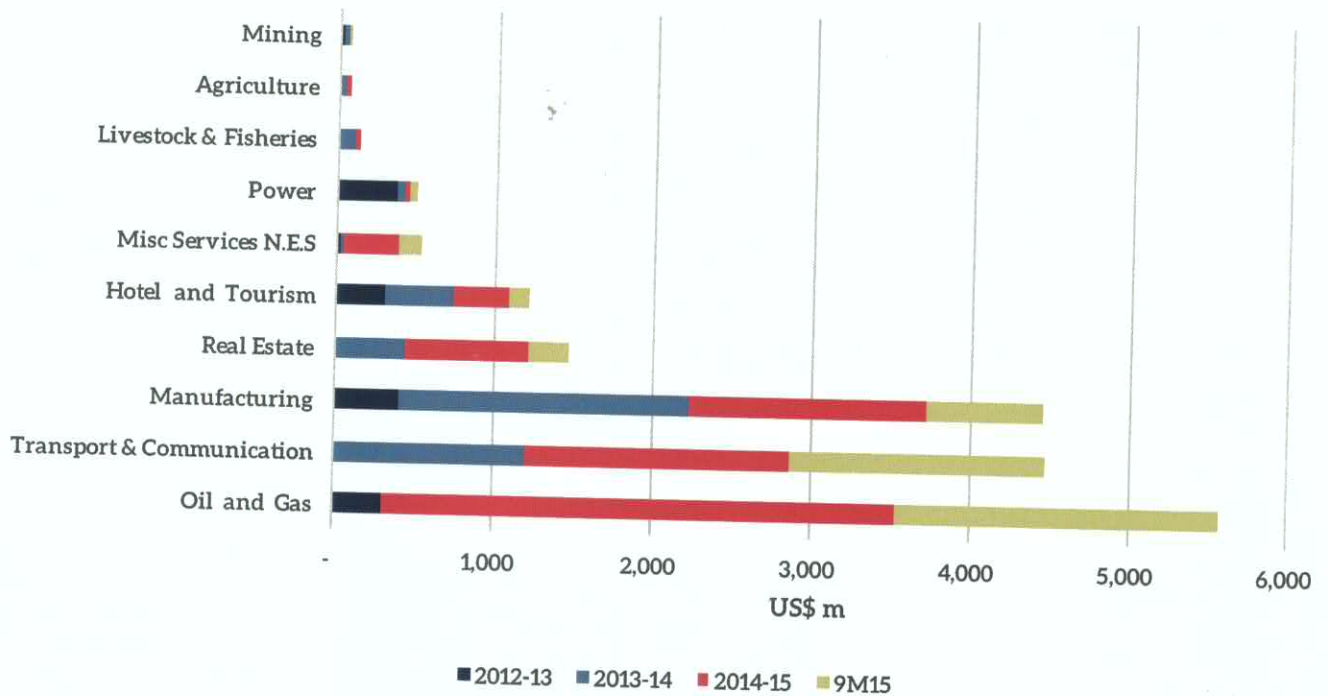


Exhibit 25

FDI to Myanmar in the Last 4 years

Source: DICA



the most important sectors to be developed if Myanmar wants to catch up with global market changes, received US\$ 1.2 billion in 2013-14, and US\$ 1.6 billion in 2014-15 (and the same amount again in April-Dec 2016). Hotel and Tourism, another sector that requires important investments, attracted over US\$1.2 billion since 2012.

GARMENT MANUFACTURING

Garment manufacturing saw a strong recovery in 2013 and investments continued to flow back into the sector in 2014 as well. Myanmar's manufacturing sector attracted US\$1.8 billion investments in 2013-14 and US\$1 billion investments in 2014 (April-November). Most of these investments have gone into CMP-garment factories. (CMP refers to cutting, making, and packing garments; raw materials are imported).

Back in 2000-01 Myanmar had 400 garment factories employing 300,000 people, but by 2003 the industry had virtually collapsed under US sanctions and a few remaining foreign-owned garment factories still ran under nominal Myanmar nationals' control. The authorities have relaxed rules restricting foreign investments in manufacturing sector. Starting in February 2012, the Myanmar Investment Commission (MIC) has allowed foreign investments carried out through a Myanmar citizen 'nominee' to be converted into a

100 percent FDI or a foreign JV (provided that involvement of foreign investor is more than 35 percent). In 2013 a total of 25 such foreign-owned garment factories were re-designated under the new full FDI business category.

The leading foreign investors in Myanmar's garment industry are from Japan, Hong Kong, South Korea and Germany, with South Korea alone making up almost half of the total FDI-factories in Myanmar. Taiwan's Pou Chen Group, one of the world's largest contract manufacturers of footwear, announced in June it would invest US\$100 million for a 16-hectare factory in Yangon, capable of producing 300,000 pairs of shoes each month by the end of 2015. GAP Inc. announced its 'Made in Myanmar' brands to be crafted in its twin production facilities on Yangon's outskirts. Right now, 180,000 workers are in Myanmar's garment industry - almost two-thirds the number the industry had at its apex. Clothing exports have increased from US\$700 million in 2012-13 to US\$1 billion in 2014-2015, and are expected to be around US\$1.5 billion in the current fiscal year.

Food and beverages (F&B) manufacturing is also another thriving investment destination. Coca Cola plans to invest US\$200 million in Myanmar over five years, including a bottling plant in a joint venture with a local company, Pinya. Anglo-Dutch giant Unilever plans to invest US\$650 million within the decade. Brewery licenses have been granted to Carlsberg, Heineken and ThaiBev, and British American

Tobacco plans to invest US\$50 million for a cigarette factory in Myanmar. If political and economic reforms continue, Myanmar will witness a vast growth within its manufacturing sector within five years. According to a recent Economist Intelligence Unit survey, Myanmar will have the quickest growth in manufacturing investment in ASEAN, after Indonesia.

Foreign direct investments in Myanmar for the 2014-15 fiscal year were US\$8 billion, significantly higher than US\$5 billion the government had expected. In 2012-13, Myanmar attracted US\$1.4 billion in FDI, and the following year US\$4.1 billion. Although Myanmar welcomed US\$24 billion between 2010 and 2012, almost of all it had been from China towards oil and gas and hydropower projects, which are controversial with local populations. Therefore, Myanmar is correct in hailing the sea-change in foreign direct investment patterns, which are now more targeted towards manufacturing and services.

However, foreign direct investment seems to have mainly flowed into the commercial capital of Yangon. In a survey of recent FDI projects, 46 percent (US\$6.3 billion) went to investments in Yangon. Among Myanmar's fifteen administrative regions, Kayin and Kayah states received no FDI during that period, while four other states received only one FDI project each. While Kachin State came second among FDI recipient (see figure), US\$4.3 billion the state attracted was for a single hydroelectric project made with China Power Investment (CPI): the 2,000 MW Chibwe Dam and its feeder 99 MW Chibwe Nge Dam. In Mandalay region, which contributes 11 percent of the country's GDP and contains the country's second

biggest city and commercial centre, cumulative foreign direct investment from 2010 to 2014 has been only US\$500 million (or 3.6 percent of total FDI into Myanmar during the same period). Of this investment in Mandalay, 69 percent or US\$358.32 million is invested into manufacturing sector; US\$119.1 million is invested in Oil and Gas sector and US\$19.03 million in Hotel and Tourism sector.

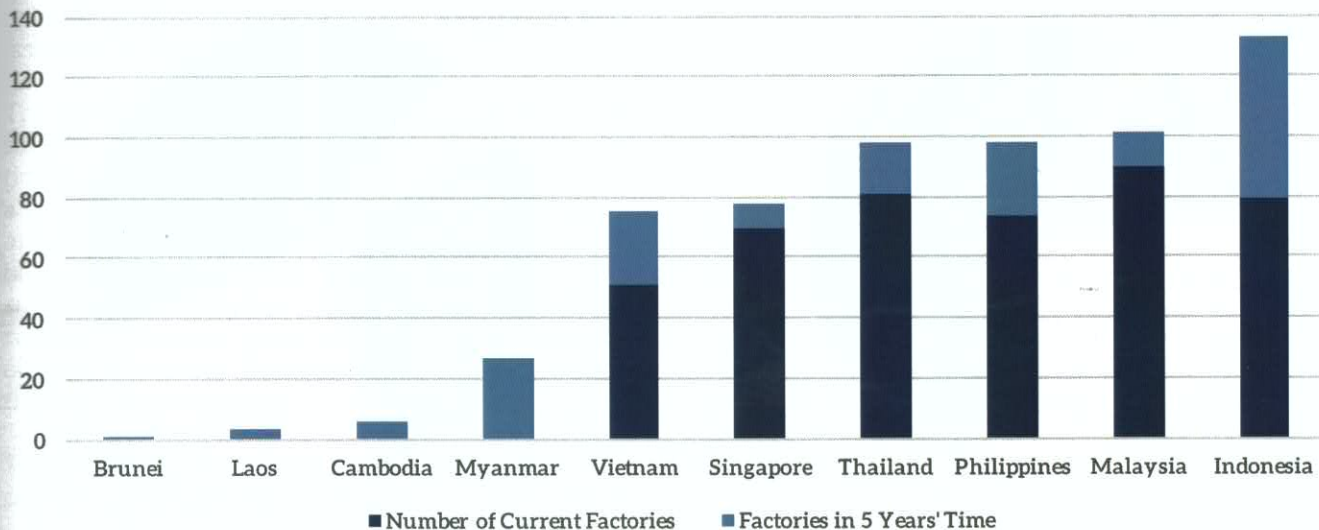
Job-creation, as the result of new investments are encouraging, according to the government's figures. From FY2012 to FY2014, 518 new investments had been approved, creating 250,000 jobs - an average of around 500 jobs per new investment. In FY2015, 211 FDI projects were approved, creating 120,000 jobs, most of which are in manufacturing sector. While this figure seems large, to address the country's high underemployment, which numbers in millions (see above) and which is mostly in hill states to which very little investment has flown in, Myanmar will need significantly more investments and job opportunities in manufacturing jobs.

Also concerning are low wages endemic even at FDI projects. According to research carried out by Oxfam in June and July 2015 on garment workers (which is a main FDI industry as noted above), workers are not earning enough. Nearly half of all workers surveyed (43 percent) reported being trapped in debt, owing an average of US\$46 (57,400 Kyats). Once in debt, many struggled to repay it, as interest rates from informal lenders are around 18 percent on average. There are worries that the new minimum wage of around US\$84 a month will not be sufficient to lift workers and their families out of indebtedness and poverty.

Exhibit 26

Economists Manufacturing Survey, 2014

Source: Economist Intelligence Unit



FDI BY COUNTRY

Most of FDI currently invested in Myanmar comes from China. China had been steadfast in the support of Myanmar's previous government and therefore been rewarded with great extractive concessions, such as Myitsone Dam and Letpadaung Mine, both of which we will encounter later in the book. Currently, 38 percent of total FDI approved is from China (including Hong Kong), down from 42 percent last year. Myanmar is critical to China's geopolitical strategy, known as the "String of Pearls" plan. Access to Myanmar generally, and its ports in particular, is highly prized given China's desire for a western seaport on the Indian Ocean both for geopolitical reasons and to mitigate the threat of piracy in the Straits of Malacca. As such, China continues to court both the current government and the opposition, whilst Myanmar in turn has been urging China to change its investment approach to build factories jointly with local partners for export instead of just importing raw materials from Myanmar.

However, for the fourth year in a row, Chinese investment has declined in percentage terms as other Asian nations - South Korean, Japan, Malaysia, and Vietnam - jockeyed for a head start into the untapped Myanmar market. Since April 2012, China has invested only US\$2.5 billion in Myanmar (13.5% of total FDI during that period). The major investor currently is Singapore: many Western firms have used their Sin-

gapore subsidiaries to invest in Myanmar, therefore skirting the remaining economic sanctions. However, it should be noted that Chinese investment in Myanmar goes deeper than FDI figures. Using guanxi networks and porous borders, Chinese merchants have been living and trading from Mandalay. This flow of money from the Yunnan province, especially intensified following the anti-corruption drive under the current regime in Beijing. Local commentators speculate that major construction projects in Yangon and Mandalay are thus funded by Sino-Burmese businessmen.

Equally opaque are the United Kingdom's officially stated investments in Myanmar; the Myanmar government considers Britain's various crown dependencies as part of UK-sourced investments within their FDI data. Thus counted as 'British investments' are companies both foreign and domestic which have used subsidiaries in British dependencies to skirt sanctions, avoid taxes and disclosure, and do business in Myanmar, including several oil companies. Most are domiciled in that most oxymoronic of isle tax havens, the British Virgin Island. Even some local companies, such as Myint & Associates, an oil producer, have BVI-incorporations. Despite recent efforts by Global Witness to clarify ownership structures in Myanmar's extractive sectors, they are still full of shell companies and mysterious investments. For instance, Berlanga Holding of the Netherlands and CAOG of Luxembourg, both of which have won oil and gas concessions in Myanmar are linked via a

Exhibit 27

FDI by State

Source: DICA

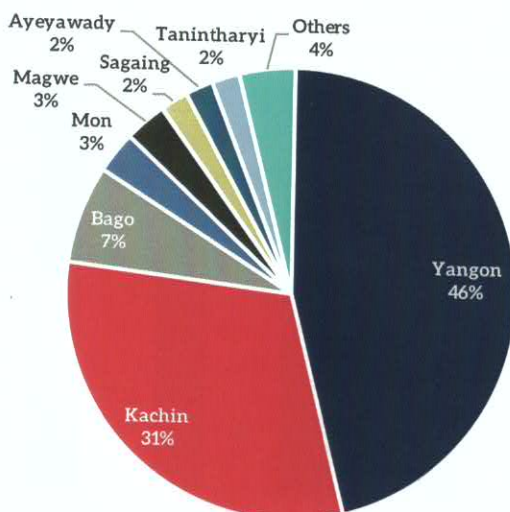


Exhibit 28

Existing FDI by Country of Origin

Source: DICA

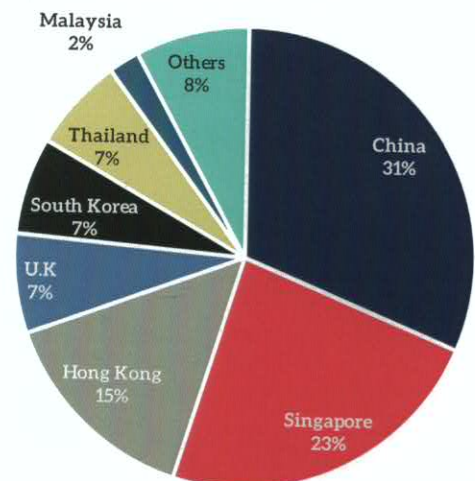
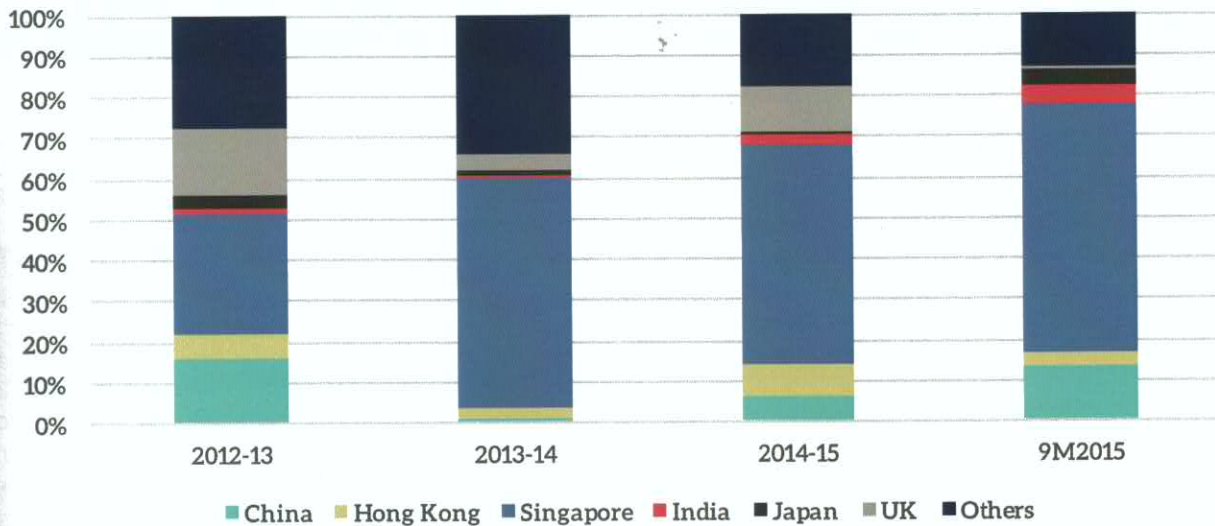


Exhibit 29

Selected Countries Share of Cumulative FDI

Source: DICA



British company and a Bermudan trust to Shyngys Kulzhanov, a Kazakhi oil tycoon.

FOREIGN INVESTMENT LAW

On 31 January 2013, the Ministry of National Planning and Economic Development issued a final notification with respect to the Foreign Investment Law (FIL) Rules. This brought to a close a saga which occupied the two Houses of Parliament and the executive branch for almost a year. During the deliberations, the law underwent several changes notably at President Thein Sein's insistence in order to make it more flexible and liberal. Parliament took more than six months to approve the law, but the president finally signed it in November 2012. The initial law was criticised for lacking sufficient detail and new FIL Rules (which ran to 181 paragraphs and 22 chapters) were issued to ensure greater clarity.

The Foreign Investment Law represents a huge step toward Myanmar's re-engagement with international commerce and investment. The law contains a guarantee against nationalisation and also a guarantee that approved investment activities will not be terminated during the contract period "without sufficient cause". It also endorses that an investor can remit overseas any investment gains in the same foreign currency that it was brought in at inception of the original investment.

The Foreign Investment Rules divide investment opportunities into four categories: businesses where

foreign participation is prohibited; businesses where foreign participation is restricted (maximum 80 percent); businesses where foreign participation is conditional (subject to specific requirements and waivers); and businesses where 100 percent foreign ownership is allowed. There are certain requirements for the employment of locals dependent upon skill levels, with no discrimination in salaries permitted between locals and expatriates at similar employment grade levels. These rules were slightly revised in mid-2014.

There is an exemption from income tax for five years with the possibility of an additional extension compared to three years previously; and other attractive tax reliefs are now also available (such as carried forward losses, customs duty relief on exported machinery, etc.). Land may be leased for up to 50 years with the possibility of two ten year extensions, versus the previous 30 years term with the possibility of two 15 year extensions.

The Myanmar Investment Commission (MIC) now enjoys the discretion to set the minimum amount of investment for each business. The registration and license extension fees for foreign companies were reduced to US\$1,000 and US\$500 respectively. Small-scale investments for foreigners are largely banned and joint ventures in extractive and hazardous sectors are to be tightly regulated. More critically, the MIC has been empowered to interpret the FIL widely and with relatively little oversight. This could lead to some unpredictability in its rulings, but hitherto it has shown itself encouragingly supportive of foreign investment, ably supported by DICA.

Exhibit 30

Notable Changes in Foreign Investment Law in Myanmar

Source: NCRA Research

	1988 Law	2013 Law
Basic Principles	Promote and expand exports	Produce goods to substitute imports
Investment Promotion Guidelines	Extract natural resources requiring heavy investment Acquisition of high technology Regional Development	Focus on businesses beyond financial or technical ability of the state and people Supports exchange of information and technology Exploration of new energy for the development of renewable energy sources Environmental protection and conservation Development of banks and financial institutions, modernised service companies
Foreign Ownership	Minimum of 35 percent Maximum of 50 percent in 13 restricted sectors	Negotiable with local partners
Local Partner	Foreigner cannot own full stake in businesses without any local partner	Not compulsory for all businesses. However, there are bans on 100 percent foreign ownership in many sectors.
Time Frame for Approval	Not Mentioned	MIC shall notify their acceptance of the application documents within 15 days from the submission, and conclude its review within 90 days.
Time Frame for Investing		Approved projects will be held to tight timelines, with possible extensions
Employment		No wage discrimination between local and foreign staff of similar positions. In unskilled positions, only citizens must be employed. There is scheduled increase in citizen participation in skilled positions.
Labour Issues		Disputes will be settled through Labour Dispute Law of 2012, and Social Security Act of 2013. MIC will set some factory worker wages.
Land use rights	30 + 15 + 15 years Can be leased only from government	50 + 10 + 10 years Land lease from private owners approved in 2011. On a case-by-case basis, investors can obtain initial land tenancies more than 50 years if they invest in less-developed regions.
Transfer of Projects		Sale of interests in projects to Myanmar citizens or other foreign investors permissible but subject to approval by the MIC
Tax Incentives	3 years corporate income tax exemption	5 years corporate income tax exemption Tax relief of up to 50 percent on profits of exports
Import Duties	Tax exemptions on imported machineries, materials for construction and expansion of business Tax exemption on imported raw materials for first 3 years of commercial production	Same as before
Restricted Sectors	Not permitted but no clear definition	Restricted sectors are specified, but MIC may grant waiver if proposition is in the interests of the country
Dispute resolutions		Disputes settled in accordance to the provisions of the relevant contract In a conflict between the FIL and an international treaty ratified by Myanmar, the international treaty shall prevail.

In late August 2014, MIC further liberalized the investment law when it amended the list of prohibited economic activities for foreigners and foreign investments. The amendment removed eleven business areas in which foreigners were previously forbidden to invest and reduced the number of business areas where foreigners can invest only in a joint-venture partnership with local businesses from 42 to 30. The MIC will also be transformed into an independent body soon, after the country's two investment laws – one for FDI and one for local investors – are amalgamated. This update law, drafted with international help, was supposed to be ratified by parliament in 2015, but the political exigencies of the election season (not to mention highly controversial readings of the Education Bill and four Race and Religion Bills) clogged the parliamentary timetables.

No law is perfect and while Myanmar's new FIL law has liberalised a large chunk of the economy, it has its shortcomings too. For instance, a handful of foreign companies are rumoured to be attempting to enter into some restricted sectors using legal grey areas and loopholes.

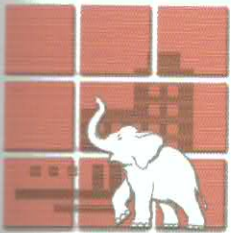
Encouragingly however, government officials and legislators are actively listening to feedback from foreign investors and local companies to amend and improve the law further, including accelerating the approval process. There are also plans to combine the Foreign Investment Law with the Myanmar Citizens Investment Law also passed in 2014. (Myanmar is the

only country in ASEAN that has two laws for investment). In addition, several other reforms are in the pipeline.

More recently, in November 2015, the Ministry of Commerce indicated some changes to foreign companies' permitted trading activities. So far, foreign companies can engage only in the services not in trade. Therefore, foreign companies rely on a local partner to export/import their own products. The ministry has lifted the trading ban for foreign-invested companies a little bit, but allowing foreign companies which are joint ventured with Myanmar companies to trade four goods: fertilizers, insemination seeds, pesticides, and hospital equipment, which are all drastically needed in Myanmar. More importantly, this recent move signals a change in the policy and it is expected that the list of the goods which are allowed to be traded by foreign companies will be gradually changed according to market needs and the economic situation.⁴⁰

Meanwhile, DICA is trying to update Myanmar Companies Act (1914); Special Companies Act (195); Joint Venture Act (1932); State-Owned Enterprises Act (1989). New laws on privatization and statistics have been planned, as well as a wholesale reform of the out-dated Central Statistical Act (1952), led by U Myint, a respected economist and presidential advisor.⁴¹

Reform of the Companies Act is assisted by the Asian Development Bank and US-based law firm Baker &



LOCATION-LOCATION-LOCATION

The Myotha Industrial Park (MIP) & Semeikhon Port (SMP) are Central Myanmar's New Industrial & Logistics Hub developed by the Mandalay Myotha Industrial Development Public Co. Ltd. (MMID)

Invest with Confidence

- ✓ **MMID and the Mandalay Region Government (MRG) are partners in a joint venture to develop a 45 Km² industrial 35 miles from Mandalay and 28 miles from the Mandalay International Airport.**
- ✓ **Greenfield sites, 2,000 m² ready made factories and mixed use commercial/residential buildings are available now in MIP. Infrastructure development is in process.**
- ✓ **MMID is also developing the Semeikhon River Port a 380 acre site with 1,500 meters of jetty located 13.6 miles West of the MIP. This site is fully owned by MMID.**
- ✓ **Full Foreign Investment Law and Myanmar Investment Commission (MIC) investment privileges are available to Local and International Clients.**

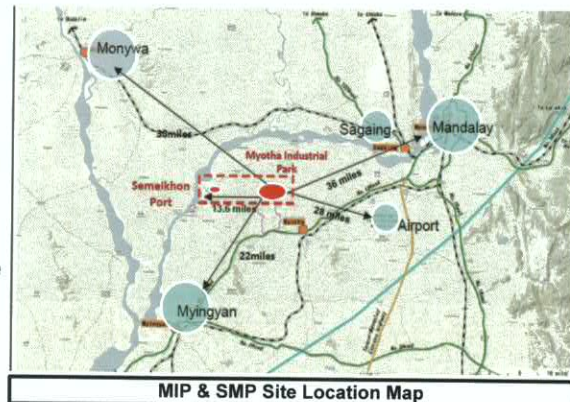
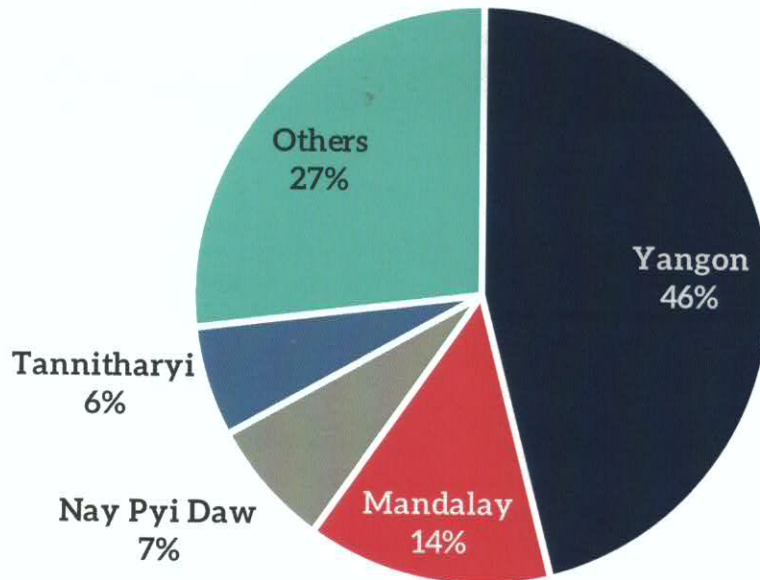


Exhibit 31**Myanmar Citizens' Investment (1994-2015) by Location**

Source: DICA



McKenzie and the new law will follow the corporate law regimes used in other common law jurisdictions, such as Singapore, United Kingdom, Australia, and New Zealand. It is widely speculated that a new Companies Act will allow foreigners to own some shares directly in local Myanmar incorporated companies. This has been the model China and Vietnam have followed in their routes towards market liberalization. There are several public companies and trade associations whose shares are traded over-the-counter; many now need more substantial outside capital to compete with new market entrants. But neither the proposed new stock exchange nor the foreign IPO/RTO route will offer suitable or quick capital-raising solutions for Myanmar companies. A provision allowing foreigners/foreign companies to own some portion of shares in local companies, without having to resort to tortuous offshore incorporations, is an appropriate solution here.

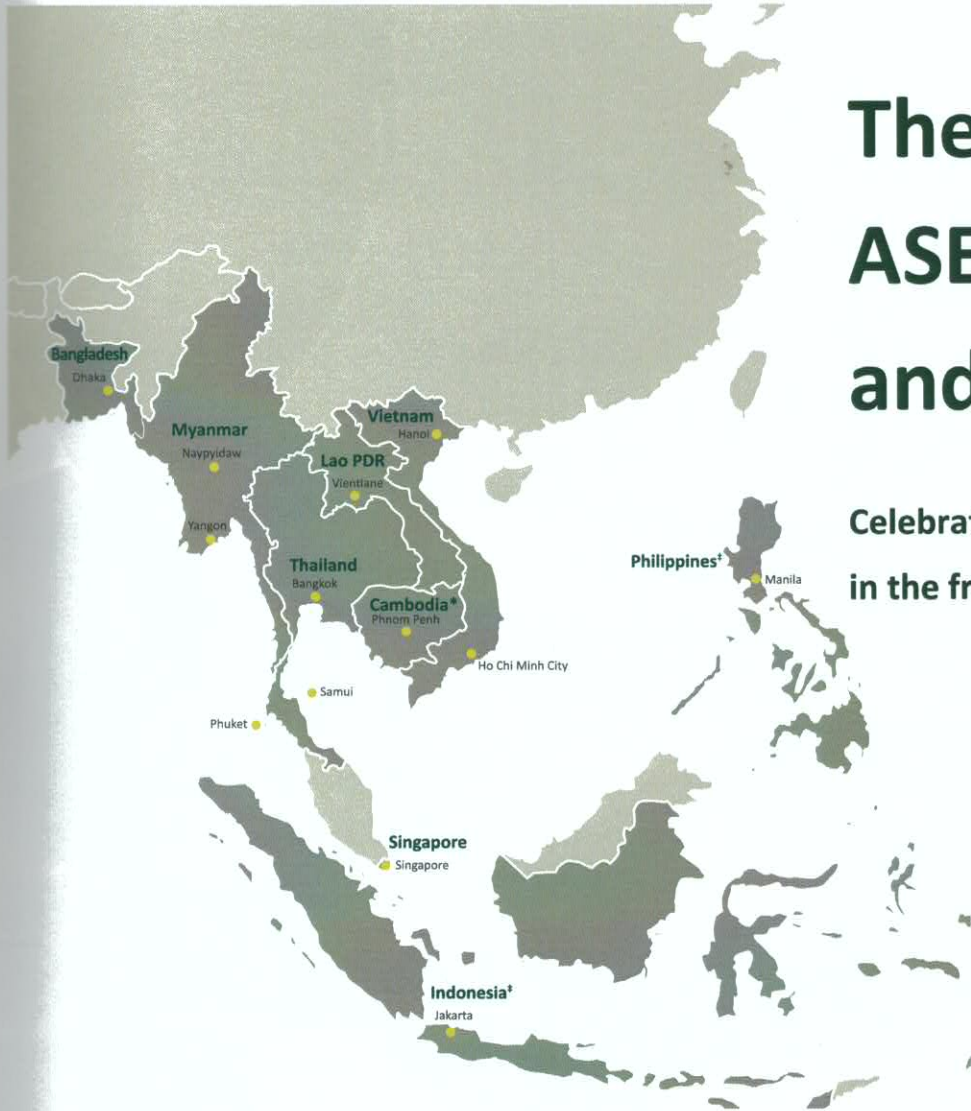
MYANMAR CITIZENS' INVESTMENT

By comparison to frothy FDI figures, domestic investment seemed quiet⁴². Although the number of local enterprises receiving permission to invest was virtually the same as the previous financial year, in 2014-15 local companies invested only US\$455 million and 1.2 trillion Kyats. The previous year, the investment was US\$1.1 billion and 1.7 trillion Kyats. However, it should be noted that investment towards real estate development and construction were significantly higher in 2014-15 than the two preceding financial years.

Here again, NCRA would like to repeat our earlier concerns about the Yangon-centric nature of these investments. According to the Ministry of Planning, 650 billion Kyats (out of 1.2 trillion Kyats invested) went to projects in Yangon. In fact, of 5.3 trillion Kyats invested by local businesses in Myanmar in the last twenty years, Yangon Region attracted 46 per cent.

Job creation under the Myanmar Citizens' Investment is also weaker. In 2014-15, 66 enterprises approved under Myanmar Citizens' Investment Law (MCIL) created 12,760 jobs – an average of 193 employees per enterprise, which is less than half of job creation by the companies approved by Foreign Investment Law (FIL).

Under the previous governments, locals have few investment options. While around 90 percent of the population are unbanked, the remainder is banked solely because of the lack of other investment options. A United Nations study released in May found that only 4 percent of citizens surveyed had savings accounts in their own names, while a 2013 report by the International Finance Corporation estimated that less than 20 percent of Myanmar's 51 million population have access to financial services.



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Finance & Banking

Rapid changes are in store for banking sector as Myanmar welcomes international insurers, banks, and securities houses.

When most households keep their savings under the mattress, banks cannot turn deposits into loans. Banks are also required to hold government debt and deposit citizens' savings at government banks under high reserves requirements. This allowed the government to finance a large portion of its debt at low interest rates.

However, Myanmar's financial sector is growing at an extraordinarily rapid pace, transforming from what was one of the most backward and underutilized financial systems in the world into a still small and young, but ambitious and competitive industry. Bank deposits and loans were respectively less than 6 percent and 3 percent of GDP as recently as 2008, lower than in all but a few of the world's least developed countries. A burst of growth since then brought deposits and loans to the height of 31 percent and 17 percent of GDP as of March 2015, respectively. The IMF has forecast that deposits and loans will reach 40 percent and 24 percent of GDP, by the end of fiscal 2017-18 (March 2018); this forecast is revised down from a previous forecast which hoped to reach this numbers by March 2016.

Beginning in 2013, domestic banks started to offer bank financing in automobile and real estate, but NCRA understands this method is severely underutilized by locals who are unfamiliar with the system. Another development in 2013 was the arrival of ATM machines and Master and Visa cards to Myan-

mar. Now there are 5,000 credit- and debit-card machines, and 1000 ATMs, according to industry sources. Myanmar nationals can also now sign up for Master and Visa cards at local banks.

Changes in Myanmar's banking sector unfurled dramatically; 2013 also saw the Central Bank of Myanmar being granted independent autonomy. Despite opposition from local banks, the Central Bank in 2014 allowed the entry of foreign banks into Myanmar. These developments led us here at NCRA to believe that Myanmar would become incorporated into the international banking system in the near term.

CENTRAL BANK OF MYANMAR

The IMF had previously criticized Myanmar's Central Bank (CBM) for its lack of independence from the government. Under the 1990 legislation, the Central Bank was a unit of the Ministry of Finance and Revenue and was little more than a financing vehicle for Myanmar's chronic fiscal deficits which in essence constituted 'money printing' on a vast scale, leading to drastic expansion of money-supply and double-digit inflation. However, the Central Bank has been granted independence by a law passed in July 2013. The legislation granted the Central Bank full autonomy

over the issuance of currency, inflation, regulation of local and foreign banks, oversight on capital markets and foreign reserves. The bank is also established as a lender of last resort.

The CBM's priority plans for capacity building include macro prudential and crisis prevention and resolution, risk management systems (since credit risk is no longer the sole risk in an evolving financial system), and risk-based supervision. In general, the plan was to follow the ASEAN framework plan for economic integration by the end of 2015.

The CBM has an unusual system for controlling interest rates, which relies heavily on direct regulation. Although the Central Bank has begun to move towards more standard methods of regulating liquidity, it still relies primarily on directly dictating the minimum interest rates that banks must pay on savings deposits and the maximum interest rates that can be charged on loans.

The main benchmark interest rate is the discount rate, which is the rate at which the Central Bank lends to commercial banks. Banks in turn must pay a minimum interest rate of two percentage points below the discount rate on Kyat savings deposits, and banks aren't allowed to make loans at more than three percentage points over the discount rate.

Thus, with the current discount rate of 10 percent, banks must pay at least 8 percent interest on savings deposits, and they can charge no more than 13 percent interest on loans (or effectively no more than 14 percent, after an allowed 1 percent fee). The cap on lending rates is especially important, as it further restricts a pool of eligible borrowers already greatly limited by the requirement that all loans be strictly collateralized. As a result, banks tend to lend only to large companies or very wealthy families.

The term "savings deposits" in Myanmar refers to a specific type of short-term deposit that can be withdrawn from once a week without penalty. Since actual demand deposits pay no interest and longer time deposits pay relatively small spreads over savings deposits, the vast majority of funds deposited at banks are in savings deposits.

Since 2012 the CBM has been preparing to switch to a system of paying interest on commercial banks' central bank deposits, the method used by most of the world's central banks to regulate liquidity and market interest rates. The CBM holds regular fortnightly auctions where it offers small quantities of interest-bearing deposits with maturities of two to six weeks. Auctioned deposits typically yield between 3 percent and 5.5 percent annual interest. However, so far these auctions have amounted to little more than trial exercises, as the quantities offered are too small – typically up to 40 billion Kyat, worth around US\$40 million – to change liquidity conditions.

BANKS IN MYANMAR

LOCAL BANKS

In last year's *Myanmar Market Intelligence Report*, we predicted that in 2015 and beyond, Myanmar's private banks would become more independent and more innovative as they increasingly compete with one another and international banks. And they have. Myanmar's two largest banks, Kanbawza Bank (KBZ) and Ayeeyarwady Bank (AYA), are rolling out credit cards and credit rating systems. Many top-tier local banks have invested in online portals, and greatly expanded their branch and ATM networks. As of October 2015, Myanmar now has 1,500 bank branches, an increase of around 400 branches from the previous year.

They have also managed to whittle down the market share of state-owned banks. According to the IMF, assets owned by private banks now account for half of the total banking sector assets, a 12.5 percent increase from last year. New private banks have also been formed. These are termed policy banks by the IMF, as they are sponsored by a government ministry (with private sector equity contributions) and have a narrow sectorial focus for lending (tourism, gems, or construction). Some of them are limited geographically as to where they can operate. In our view, however, these policy banks resemble America's credit unions, as their equity is controlled by a handful of businessmen who share a trade or a geographic interest. However, we are worried that their narrow sectorial focus in lending can create big external shocks.

To receive a banking license in Myanmar, a retail bank needs 20 billion Kyats (US\$20 million) in paid-up capital, while each additional branch requires an increase in paid-up capital by 700 million Kyats in cities and 300 million Kyats in rural areas. (These policy banks had been approved with 10 billion Kyats in paid-up capital, but under the draft banking and financial institution law, the paid-up capital is 20 billion Kyats).

Domestic banks have to adhere to floors and caps that the Central Bank imposes on the interest rates that banks pay and charge, which are currently set administratively at 8 percent and 13 percent per annum respectively. This small spread on lending-saving rates make banks to compete within a narrow band around these interest rates (typically 8.25 percent to 10 percent for savings) and in reality banks can only compete on service standards and accessibility, not interest rates. The fixed interest rate structure has meant that real interest rates have been very volatile (given the variance in inflation). The fixed interest rate structure also permits banks to use their excess liquidity to purchase treasury bonds, but liquidity

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shortages are somewhat more difficult to manage in the absence of a secondary market. However, the non-performing loans in Myanmar are very low (under 5 percent), but this is because loans are being covered 100 percent by collateral.

There are four state banks in Myanmar: the Myanma Economic Bank (MEB), the Myanma Foreign Trade Bank (MFTB), the Myanma Agricultural Development Bank (MADB), and the Myanma Investment and Commercial Bank (MICB). They were created mainly to carry out social responsibilities imposed by the state and aggressive private banks have rapidly eroded their market share among deposits and loans. State banks are treated in a very privileged way. For example interest income on deposits with state banks is non-taxable; state banks are not subject to oversight by the Central Bank, state agencies are required to conduct their financial transactions through state banks. Furthermore, state banks do not even have exposure to financial risk at all because their lending is largely to government and because government guarantees ensure that banks will be recapitalized in the event of insolvency.

Capital adequacy requirements for state-owned banks are also lower than those for private banks, and state banks are not subject to on-site supervision, as private banks are. State banks are not restricted

in opening branches, whereas private banks are required to increase their capital each time they open a new branch. More worrisome is the fact that state-owned banks have never been audited by the Central Bank. All state-owned enterprises are audited by the Auditor General's Office, which does not have to comply with International Standards on Auditing (ISA).

It is perhaps then encouraging that opaque the state-owned banks' share of deposits have been declining in recent years. FY2009-10 was the last period when the state-owned banks held more deposits than private banks (the category 'private bank' however includes semi-governmental banks). As of early 2015, there are over 15 trillion Kyats (US\$12 billion) deposited in Myanmar's banks; of this, 70 percent are in private banks (in the previous year, only 62 percent of all deposits were in private banks). Since restrictions on deposits (formerly maximum 10 times paid-up capital) were lifted in 2011, private banks have increased in size and number. The most aggressive entrants were four banks - Asia Green Development Bank (AGD), United Amara Bank (UAB), Myanmar Apex Bank (MAB), and AYA, all controlled by big local conglomerates - which were given banking licenses in August 2010. They have rapidly expanded, opening branches in smaller cities, but for banks, returns from additional branches often depends on factors such as property prices.

Exhibit 32**Banking Licenses Issued to Foreign Banks***Source: Central Bank of Myanmar*

	Name	Country of Origin
1	ANZ Bank	Australia
2	ICBC Bank	China
3	Bank of Tokyo-Mitsubishi UFJ	Japan
4	Maybank	Malaysia
5	Mizuho Bank	Japan
6	OCBC Bank	Singapore
7	Bangkok Bank	Thailand
8	Sumitomo Mitsui	Japan
9	UOB Bank	Singapore

Note: The second stage of granting licenses to foreign banks will take place at the end of March.

FOREIGN BANKS

On the corner of Latha and Strand Roads in downtown Yangon stands a state depository bank. The hundreds of people shuffling in and out of the building on their way to settle payments and money orders were likely unaware of the edifice's grand history. Half a century ago, the building was the Rangoon headquarters of Oversea-Chinese Banking Corporation, now better known as OCBC. Its logo – a Chinese junk inside an O – is still visible on the building, although it had been painted over by the Socialist Burmese government which nationalized it in 1962.

When OCBC entered what was then British Burma in the 1930s, the country was a banking centre. Before Singapore or Hong Kong were ever financial metropolises, Rangoon was a thriving entrepot between Calcutta and Shanghai. Rangoon's now decaying colonial buildings, many of which are on Phayre Street (renamed Pansodan Street) were occupied by the grand old names of international finance: Lloyds', the Chartered, Grindlays', National City, Yokohama Specie.

OCBC itself had entered Burma to finance a Burma-China railway, plans for which had evaporated during the Second World War. OCBC opened two offices, one in Rangoon and one in Lashio, and from 1945-1962, settled into a comfortable position, financing delta farmers and handling remittances of Chinese nationals in Burma.

OCBC attained its banking license in Myanmar in October 2014, along with eight other foreign banks. However, its present day activities in Myanmar will be vastly different and largely diminished from what it managed to do a century prior. OCBC might not be able to finance farmers or general public. Protec-

tionist sentiment runs high inside the local banking sector, which has successfully pressured the government to allow foreign banks to finance only foreign corporations. Local companies wishing to tap into foreign capital will have to go through local banks first.

The licensing process, which was advised by Roland Berger, the same German consultancy which advised the government on the tender of telecoms, was brief and internationally lauded, but locally contentious, largely due to protectionist rumblings from smaller local banks.

The Central Bank of Myanmar only expressed its desire to allow the first group of foreign banks to set up wholly owned subsidiaries in the country only in the first quarter of 2014. The CBM has declined to disclose the number of banks which will be allowed to do so until the last moment, noting that between five and ten banks will be issued wholesale banking licenses.

In late 2015, the CBM further issued a request for proposals for further wholesale banking licenses; these additional licenses will be issued to banks which are not domiciled in the countries whose banks won the first round of banking licenses (Australia, China, Japan, Singapore, Malaysia, and Thailand).

The CBM made the move after heavy lobbying by foreign banks and embassies, especially from Japan and Singapore. As a member of ASEAN, Myanmar is facing a deadline to open up broader access to its banking system by 2020, when an ASEAN treaty meant to allow banks from any ASEAN state to operate anywhere in the ten-country bloc is scheduled to be implemented.

Wholesale banking licenses meant that foreign banks would only be allowed to provide banking services to corporate customers such as local private banks, other financial institutions, and foreign corporates. According to bank regulators, the banks would be permitted to conduct services such as project financing, international remittance, treasury and trade banking services for local and international traders. Furthermore, the banks would be permitted to sell consumer finance and investment products such as auto loans through local banks. The banks, however, would be limited to opening a single branch for an initial period.

The preliminary approval is valid for 12 months, during which time nine banks will have to comply with requirements laid down by the Central Bank. Upon fulfilment of the CBM requirement, the CBM will grant the final license to operate in Myanmar. Based on a recommendation from the World Bank, a minimum paid-in capital of US\$75 million will be required by selected foreign banks, of which US\$40 million will be locked in.

A notable surprise during the licensing process was that Standard Chartered – which had long history in local banking before 1962, and which has been advising the government on various fiscal issues – decided not to apply for a banking license. The UK-based bank has been reeling from accusations that it helped Iranian, Sudanese, Libyan and Myanmar entities skirt sanctions and gain access to the United States' financial system. In 2012, StanChart paid US\$667 million to settle the criminal case, but US authorities reopened an investigation around the time Myanmar announced plans for banking licenses. Standard Chartered's reluctance to re-enter Myanmar might be caused by this, as well as by the bank's takeover rumours and thinning margins due to the economic cool-down in China.

Although the branches of foreign banks are being given unusually restrictive licenses that will allow them to offer only a limited range of services and only to foreign or foreign-owned entities and local banks, it was nonetheless a landmark move in a country that has for decades had no foreign participation in its banking sector at all. Before the licenses were granted, 43 banks had set up representative offices in Myanmar, but they were not allowed to conduct any banking business, and opportunities to arrange cross-border banking on behalf of their home banks were limited.

Local banks strongly resisted the CBM's move, which they saw as akin to a bait-and-switch that threatened to take away the businesses serving foreign companies that they'd built up since being licensed to provide international banking services in 2012. Although the local banks didn't fully win their case, the CBM did respond to their concerns by severely restricting the foreign branches' scope of operations. The foreign bank branches are being kept out of the retail market

and out of the competition for Kyat deposits entirely. The restrictions in foreign bank branch licenses include:

- Branches can't take deposits from or lend to individuals.
- Branches can't take deposits from and can't directly lend to domestically owned non-banks, but branches can indirectly lend to domestically owned companies through partnerships with domestic banks.
- Branches can't pay interest on Kyat deposits or lend directly to any client in Kyat, but they can lend indirectly in Kyat through partnerships with domestic banks.
- Branches are limited to a single location.

Those are just the main points, and there are additional details that further protect local banks and ensure they don't lose all their business serving foreign investors. Foreign banks were also required to inject US\$75 million of initial capital into the branches, a hefty sum given the restricted scope of business.

Banks which received licenses are a good mix of regional and super-regional banks. The authorities also managed to license one bank each from important trading partners: Bangkok Bank, Maybank, ICBC, etc. In choosing Thai banks, the government went with Bangkok Bank, which is a top lender in Thailand. Maybank is known for Islamic banking, which might come in handy to court Islamic investors.

ANZ, a super-regional bank, has strong relationships with miners and drillers, and many Australian miners are interested in Myanmar. (ANZ's website claims it banks "60 percent of the top 50 resources companies on the ASX 300"). Japanese banks which have recently reclaimed biggest cross-border lender title (for the first time since 1980s) are well-positioned to make significant investments in Thilawa as well as possibly Dawei Special Economic Zones.

United Overseas Bank (UOB) has become an early mover, and announced in May 2015 that it is offering onshore financing to Rangoon Excelsior Company Limited, a French-Myanmar joint venture, which is refurbishing a historic building into a boutique hotel.

FOREIGN EXCHANGE

In May 1977, the Kyat, was officially fixed to Special Drawing Right (SDR), IMF's own in-house currency at 8.5085 Kyat per 1 SDR; it meant that the Kyat is officially fixed at 6 Kyats per dollar – an anachronistic overvaluation that remained intact for 35 years despite most locals using a parallel rate which was more reflective of market conditions. The average parallel exchange rate in 1988 was 42 Kyats per dollar; at its absolute nadir in the latter half of 2007, it was 1,400 Kyats per dollar.

The out-dated peg was scrapped in 2012, when multiple informal foreign exchange rates were unified under a Central Bank-managed float; originally, it was 818 Kyats to 1 US dollar, but since then the Kyat has steadily depreciated against the US dollar. Recently, the Kyat traded at lows of 1,300 Kyats to US\$1. The Central Bank sets a benchmark band against the dollar each day, which all the banks and moneychangers are supposed to honour, but during the latest depreciation of Kyats, there is as much as a 50 Kyat discrepancy between the Central Bank's reference rates, banks' rates, and outside market rates.

Although the policy shift from peg to free exchange is widely considered to be a positive development in the liberalisation of Myanmar's economy, the Kyat is currently not a freely convertible currency. The government of Myanmar does not guarantee that hard currency will be available to businesses or that it will receive any priority if there is a shortage. Businesses cannot even hedge against a decline in the value of their investments as the hedging mechanisms are non-existent.

The foreign exchange of Myanmar Law (FEML) replaced the CBM approval requirements under the 1947 Foreign Exchange Regulations Act for every foreign currency payment out of the country. The FEML is intended, among other things, to liberalise transfer payments relating to 'current account transactions' which include: (i) remittances for trading,

services fees, settlement of short term bank loans; (ii) remittances for payment of interest on loans and net income from investments; and (iii) instalment loan payments or depreciation on direct investments. Under section 25 of the FEML, current account transactions 'shall not be restricted directly or indirectly for settlement or remittance out of the country'. However, there is evidence that local banks do not yet know how to implement these new rules and until the publication by the CBM of the implementation of the notifications relating to the FEML, there will be little evidence or understanding as to how the regime of remittances will work in practice.

Approval for such activities is also required from the Myanmar Investment Commission if the borrower is doing business under the FIL. If a foreign lender makes a loan to a borrower in Myanmar without the above mentioned approvals the loan agreement will be void and unenforceable.

KYAT'S RECENT DECLINE

The Myanmar Kyat has depreciated by around 5 percent against the US dollar in 2014, to around 1,000 Kyats per dollar at the beginning of 2015. In December 2015, the Kyat diminished further to around 1,300 Kyats per dollar. Last year, we noted that Kyat's depreciation was lesser when compared against the currencies of other Southeast Asian countries. The

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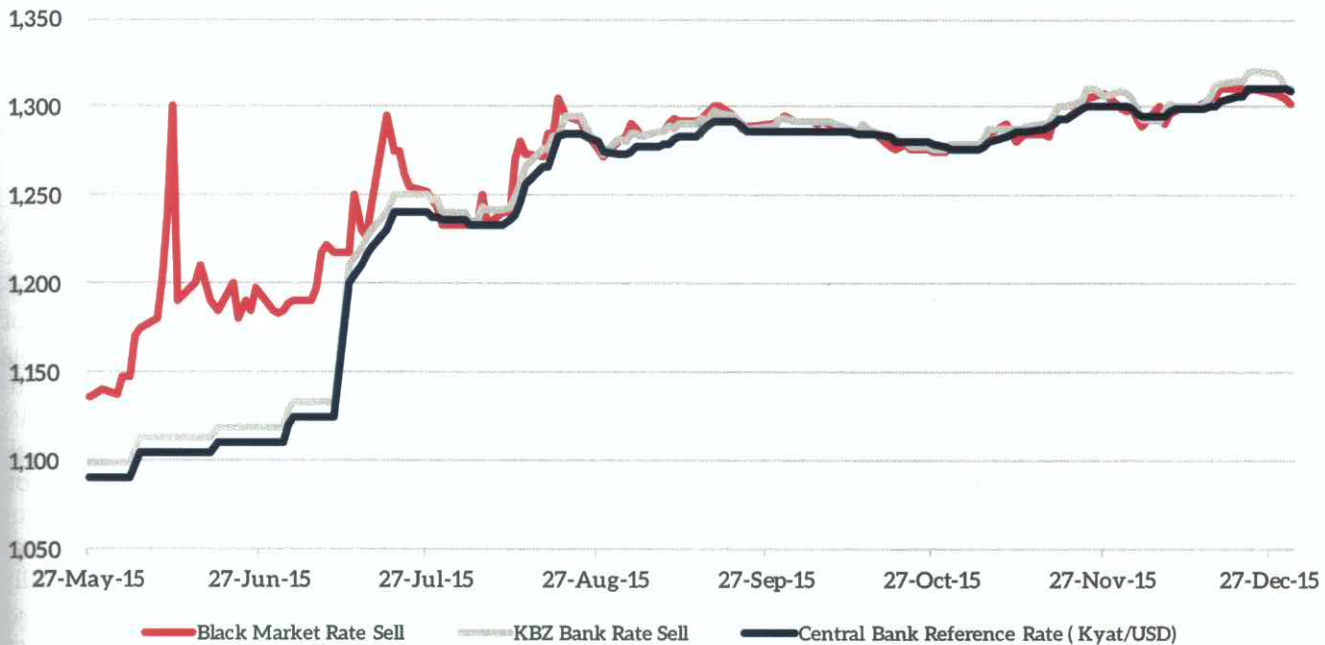
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Exhibit 33

NCRA Myanmar Currency Tracker

Source: Central Bank of Myanmar



same is true in 2015, with Malaysian and Indonesian currencies depreciating worse than the Kyat against the US dollar.

The region-wide malaise is due to the strength of the US dollar and the slowdown in China. In mid-September when the Chinese yuan tumbled, the Myanmar Kyat fell precipitously too. However, there are other reasons for the Kyat's weak performance in 2014. Myanmar has been running trade deficits to import much needed capital and intermediate goods. In October 2014, there was a mini-bank run on United Amara, a local bank, following the news that the US government had blacklisted a prominent local politician linked to the bank.

The bank run was short, and was effectively contained by quick media responses from Amara Bank and the Central Bank. However, the fright has nonetheless led to the savers in Yangon withdrawing their deposits and to a flight to quality. This panic was repeated in 2015, when another prominent local politician was purged by the ruling party in an internal struggle. Again, a short bank run against a handful of banks reportedly linked to the purged politicians' family commenced, and flight a quality (gold and foreign currencies) ensued.

Throughout 2015, the government has repeatedly fretted that Myanmar's economy might become dollarized - i.e., day-to-day transactions will be conducted in dollars only. While we do not see dollarization

as a problem (a dollar-denominated economy in fact forces governments into fiscal prudence) and ironies are rife in the government's demonization of private sector dollarization, while itself simultaneously imposing dollar-denominated entry fees at tourist sites, the Central Bank of Myanmar (CBM) has nonetheless drawn up a comprehensive plan to tackle dollarization. The Central Bank announced it has revoked all private sector foreign exchange licences (apart from those held by banks), thus annulling around 800 money changers' licenses.

CREDIT AND DEBIT CARDS

In pushing for de-dollarization, the Central Bank has emphasised that Myanmar people have begun to use debit cards in their daily transactions. Credit cards were introduced earlier in 2015 and ATMs have proliferated across major metropolitan areas throughout the country. There were around 3,000 POS terminals and 1,500 ATM machines as of late 2015.

However, the Myanmar Payment Union (MPU), a local alternative to Visa and Mastercard, set up under the auspices of the Central Bank, has a long way to go with merchants. Local vendors are reluctant to surrender a 0.6 percent cut of each sale to MPU, while in fact fees in other countries are higher at 2 percent to 3pc. The Central Bank has urged MPU to reduce its cut, but such a move would be unprofitable for the card-maker.

Currently, 15 banks issue MPU cards and another 8 are preparing to issue them. The MPU has also signed agreements with Japan Credit Bureau and China Union Pay to issue co-branded cards. However, where a customer can use a MPU card remains limited. Although many supermarkets, including the country's largest retailer, City Mart, accepts MPU payments, even at City Mart, the option to pay with cards are limited to only a handful of its retail outlets. At other retailers, card access is patchier, as they depend on internet connections. According to the card-maker, it has around 1.2 million users, but has average monthly transactions of only around 70 million Kyats.

Card-users still prefer ATM transactions over POS terminals, ATM transactions still outnumber card payments by 10 to one, according to MPU. Dreams of leapfrogging Myanmar and a cashless society remain distant.

INFLATION

Prices in Myanmar have been going up without fail for the last twenty-one months⁴³. The IMF believes inflation will rise to 13 percent by the end of this fiscal year; currently, the latest figures put year-on-year inflation figures for October at a whopping 16 percent. One-off impact of nationwide flooding in July and August that submerged over 1 million acres of farmland will have dire consequences, as food prices increase and several crops which are supposed to be harvested soon are delayed, due to the logistical and environmental impact of the floods.

In Chin State, which is severely affected, year-to-year CPI (as of October 2015) increased by a whopping 40.7 percent, and CPI for food nationwide by 20.5 percent. The price of cooking oils, which are largely import-

ed from abroad, increased by 26 percent, due to the fall in Kyat. However, depreciation and floods cannot solely be blamed for price increases. The government's inept import/export policies should also take some blame. For instance, the price of onions crept up from around 900 Kyats per viss (1.63 kilogrammes) in September to 1,200 Kyats per viss in October, and a whopping 4,000 Kyats per viss by late November 2015. A year ago, even the best quality onions fetched only 500 Kyats per viss.

Such price hikes happened for a variety of reasons, including floods and logistical disruptions, but the biggest problem in Myanmar remains that food supply shortages are not filled by imports. Markets for grains and vegetables are highly protectionist. Big traders lobby the government to ban foreign food imports, a policy which benefits traders but severely disadvantage consumers. Import controls are essentially wealth transfers from the domestic consumption class, not towards farmers, but towards predacious middlemen and traders, and this is a lesson Myanmar is yet to learn. Also increasing in price dramatically (year-to-year) are garlics (48.6 percent) and tomatoes (87.9 percent). These increases have all but cancelled out falls in prices of diesel (-21 percent) and gasoline (-15 percent) caused by global oil price slump.

CENTRAL BANK'S RESPONSE

In response, the Central Bank has been tightening its monetary policy. However, at the request of local banks, the Central Bank has extended the deadline to meet a new reserve requirement ratio until January. Amid signs of the economy's overheating, the Central Bank has also been holding deposit auctions every fortnight since 2012 to reduce the currency in circulation.

Exhibit 34

Consumer Price Index

Source: CSO

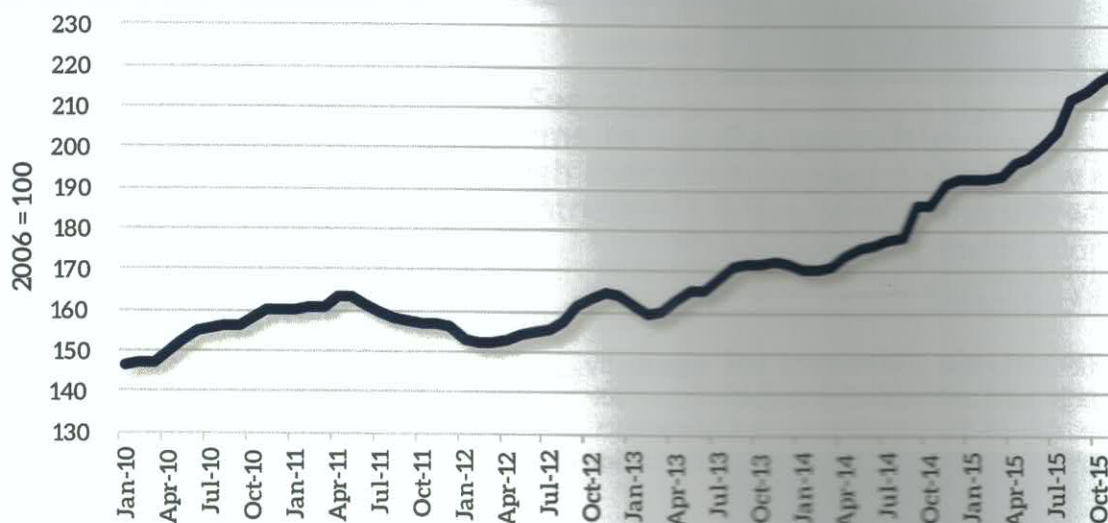
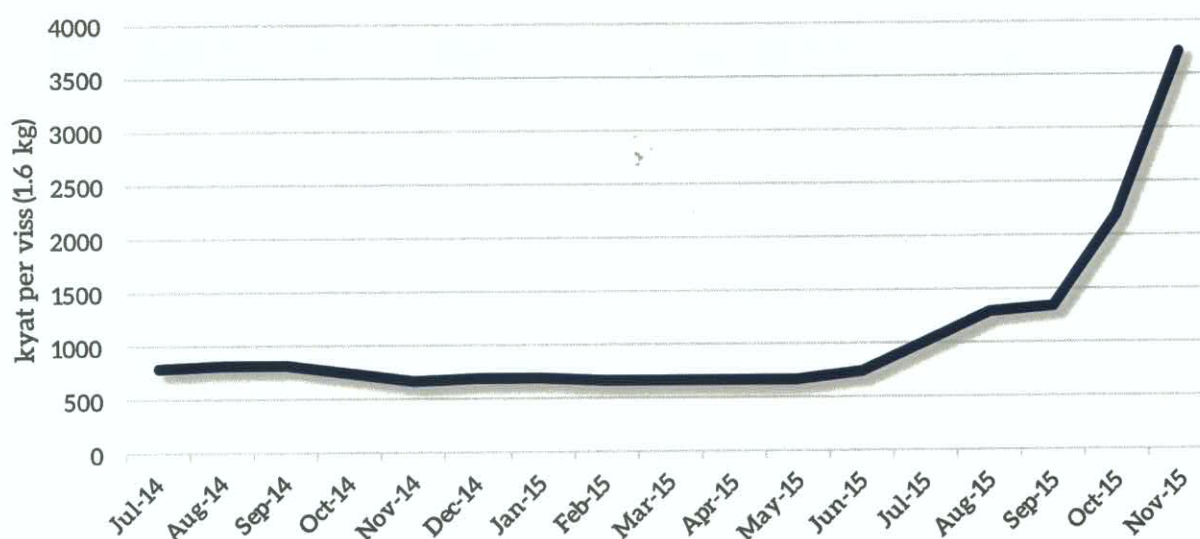


Exhibit 35

Onion Prices in Myanmar

Source: NCRA Research



While monetary authorities elsewhere in the world are able to carry out open market operations to remove liquidity, Myanmar has no secondary bond market and monetary policy tools are limited. The IMF has recommended the Central Bank mop up liquidity by scaling up deposit auctions to contain inflationary pressures and support the Kyat. While deposit auctions have not yet been scaled up, the Central Bank is offering higher interest rates of 8pc, compared with the 4-5 percent offered previously. In its 2015 Article IV Consultation, the IMF recommended a new reserve requirement ratio. Under this requirement, banks are obliged to keep 5 percent of total deposits in cash at the Central Bank. Such a practice will likely reduce future bank runs, but many local banks are finding it difficult to comply with. Under current rules, the reserve requirement ratio is higher, at 10 percent, but up to 75 percent of this requirement can be stored in treasury bonds.

CAPITAL MARKETS

Three years ago, the only Myanmar company listed abroad was Yoma Strategic Holdings, a SGX listed company 100 percent of whose revenues are derived from Myanmar. There are other companies, the majority of whose revenues are derived from Myanmar, such as Interra Holdings. In recent years, various Myanmar companies have explored ways to list abroad, with varying success.

Two notable listings were made at London's AIM. Myanmar Investment International (MIL) debuted in June 2013, and although trading prices increased by 80 percent within three months, with frenzied trading as a Myanmar proxy, it is currently trading

at around 40 percent premium on the offering price. The second company, MySQUAR, a social media company, launched on the AIM in July 2015 and raised US\$2.6 million, valuing the company around US\$29 million. Since the offer, the share price has halved, and in December 2015, the market cap stands at around US\$15 million⁴⁴.

Domestically, the outlook on shares was rosier as things moved forward. After many years of preparation, Myanmar opened its first stock exchange in Yangon called YSX in December 2015. This is the culmination of the Securities Exchange Law which was passed in July 2013. Since then, authorities have been working hard with the support of foreign advisors on the rules and regulations. However, even as the stock exchange opened its doors, there are no shares on offer currently. Securities licenses are not issued yet, and detailed rules on securities, which were approved by the Cabinet in early 2015, are currently waiting implementation.

Notification No. 1/2015 released in January invited companies to submit applications for securities licenses with the deadline for submission originally set for February 27 but then postponed to March 6. Even though foreign investors will not be allowed to invest in the Yangon Stock Exchange when it opens, foreign banks and securities companies can join the securities business via a joint venture with a local partner and they can hold up to 49 percent of the shares.

Four types of securities licenses will be granted. The capital requirements are different for each type of license, but these capital requirements are significantly higher than in neighboring countries. In addition, there are stringent checks on the paid-in-capital (it cannot be filled by a bank loan).

Exhibit 36**Fees for Securities Licenses in CLMV countries***Source: NCRA Research*

Type of license	Myanmar	Vietnam	Cambodia	Laos
Securities Underwriting License	15 million	7.7 million	10 million	12.5 million
Securities Dealing License	10 million	4.7 million	6.25 million	N/A
Securities Brokerage License	7 million	1.2 million	1.5 million	3.75 million
Securities Business Advisory License	30,000	470,000	1 million	625,000

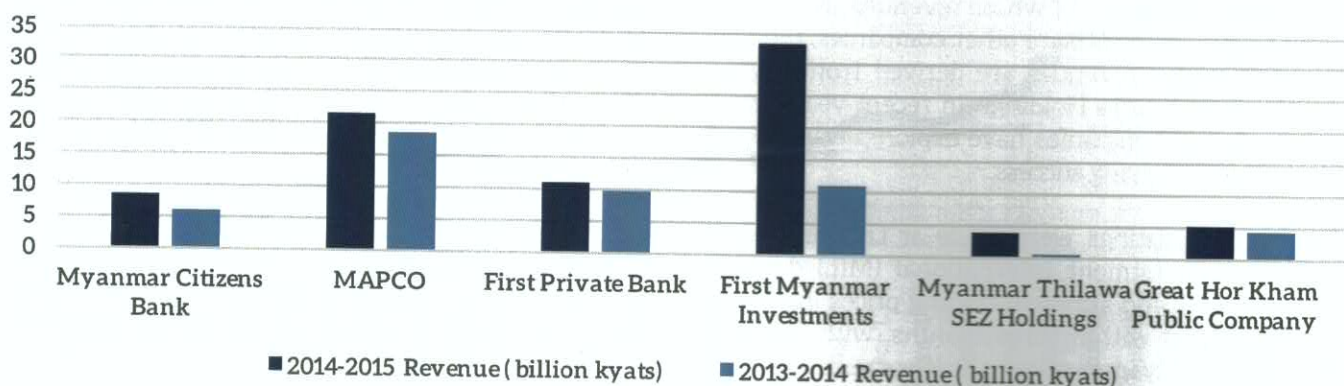
The stock exchange also requires the applicants for the securities licenses to have minimum experience requirements, not only for management but also for their directors. The majority of the directors of the company must have at least one year of experience in the securities industry or some other relevant financial services institution and the applicant should have one technical officer who has at least three years' experience in the securities business. Since Myanmar does not yet have a stock exchange nor the institutional memory of good financial services, foreign experts and Myanmar citizens with overseas experiences will dominate the top positions in the securities industry.

Around 80 firms applied for the four types of securities licenses, but the Myanmar Securities Exchange Commission (SEC) only issued a limited number of licenses. The winners of the licenses were supposed to be announced in April 2015, but they weren't informed privately until mid-October 2015 and publicly until December 2015, thus giving these companies very little time to prepare for the actual opening of the bourse on 9 December 2015. As the result, the bourse opened with no shares currently trading, but six companies were in the process of listing. However, these list-

ings will be technical listings (whereby already trading OTC shares are converted into exchange-traded shares without additional share offerings).

These six companies are FMI, Yoma Strategic's local arm; MAPCO, an agricultural company; FPB and MCB, two mid-size banks, Great Hor Kham, a little known constructor of power projects; and Myanmar Thilawa SEZ Holdings, a special economic zone company (see below in the infrastructure section).

Currently, these and several other local companies trade their shares over-the-counter in OTC facilities set up at their offices. (OTC means that share transactions are negotiated directly between buyer and seller, rather than by an exchange.) And this trend will continue, not least because so far (as of mid-December) only the name of one securities company has been announced. However, in the past, for OTC shares at least, companies have managed a work-around. When Thilawa SEZ sold its shares last year, the issue was underwritten not by banks, but by big local conglomerates. Under current Myanmar laws, only citizens can buy shares in local companies, but this provision is expected to change with the upcoming reforms of the Myanmar Companies Act.

Exhibit 37**YSX Company Listed Revenues***Source: NCRA Research*

OTC

Out of the six companies which are planning to list on Yangon stock exchange (YSX), FMI is the largest company in terms of revenue in the 2014-15 fiscal year. The company, which currently invests in different sectors in Myanmar, is based on a "three pillar" strategy: those core sectors being healthcare, financial services and real estate.

FMI's increased cash flow in the most recent fiscal year partially stems from the fact that it has divested assets that did not fit into its long term strategy. FMI stock gave back almost a 70% return in the last 12 months and in the last month its share price jumped to 35,000 Kyats from 17,000 kyats due to the news of a potential listing on the stock exchange.

Another popular share is those of Myanmar Thilawa SEZ Holdings Public Limited (MTSH). The company is formed by a Myanmar consortium for the purpose of participating in the Class A Project, an industrial park development to be located within Thilawa SEZ. At the most recent annual general meeting in December 2015, MTSH announced a dividend of 2,000 kyat per share to its 16,720 shareholders, and in the last few months, share prices of MTSH have moved from 20,000 Kyats to 50,000 Kyats per share.

Great Hor Kham Public Company Limited has worked as a main contractor since its inception. It has worked on the Muse central business district project, which covers 300 acres. Currently, it is also working on a wholesale dealer terminal for fruits in the border trade zone as well as the Nam Paw Hydropower Project (NPHPP), which will have a capacity of 20 MW. With assets of around 7.4 billion kyats, the company is smaller than others planning to list.

Despite its name, Myanmar Agribusiness Public Corporation (MAPCO) is involved in more than agriculture, agribusiness and trading and processing. It is also involved in the development of Thilawa SEZ as well as in the telecoms, sector. MAPCO is investing in a fully integrated rice mill complex in 130 acre of farmland near Twante Canal and Dala-Twante Road. This complex will consist of high grade per-boil and white rice processing mills that can produce 500 metric tons per day. In Naypyitaw, a semi-integrated rice complex will be constructed on ten acres of farmland at the Ahlinlo village near Yangon-Mandalay Road. In Ayeyarwaddy Region, another semi-integrated Rice Complex will be constructed on 35 acres of farmland on Kyite Lat-Phyar Pon Road and Phyar Pon river bank. The company is running a very low margin business at the moment. With its EBIT margin at less than 1 percent, it has the lowest EBIT margin among the six companies planning to list on the YSX.

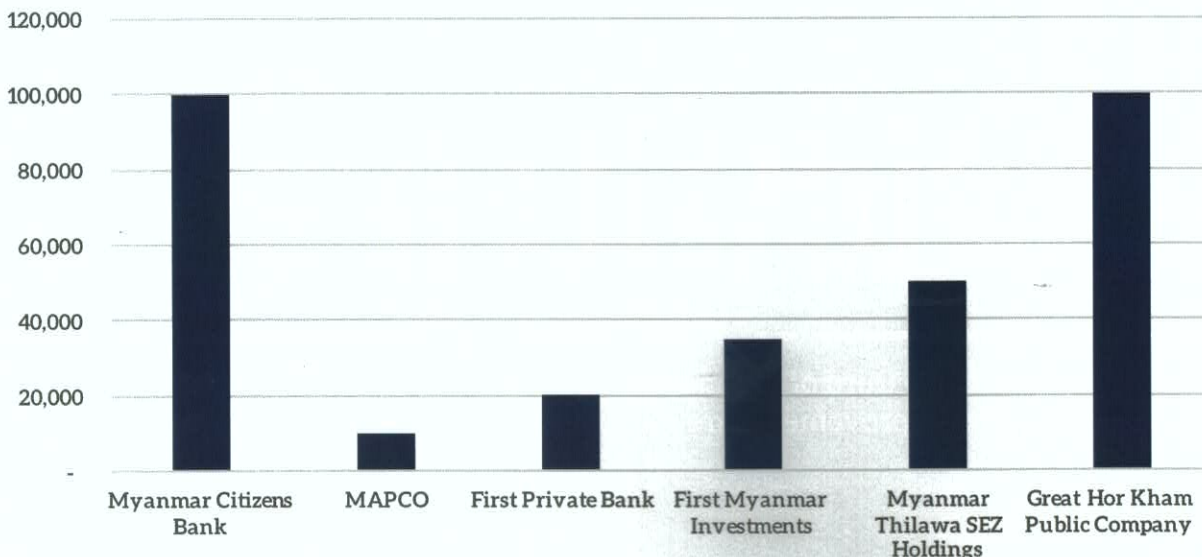
First Private Bank is one of two banks planning to list on Yangon Stock Exchange and it has long history of providing consistent dividends to its shareholders over the last 10 years. It is ranked 10th among private banks in terms of overall assets and has a paid up capital of 20.369 billion kyats. FPB Shares are currently trading at a premium of 10,000 kyats, which means the market value of the shares is 20,000 kyats per share.

The other bank planning to get listed is MCB (Myanmar Citizens Bank). MCB is a public bank partially owned by the government (Ministry of Commerce). The Ministry of Commerce owns 30% of the company and 70% of the shares are available for the public. MCB is a medium-sized bank, and has a money changer license, authorized dealer license and also possesses founder shares in MPU (Myanmar Payment Union), a local debit card enterprise.

Exhibit 38

January 2016 Share Prices

Source: NCRA Research





Agriculture

Agriculture makes up one third of Myanmar's GDP, but more investments and improvements are required.

Myanmar is traditionally an agricultural country and its agriculture sector remains a major contributor to GDP, with a 24 percent share of exports earnings. The estimates of agriculture sector's contribution to GDP vary from source to source. The government claims farming contributes only 20 percent to the GDP, whereas international observers claim it contributes around 30-35 percent. Likewise, employment figures in agriculture are disputed. It is generally accepted that agriculture employs 55-60 percent of the work force (around 17.6 million people), whereas the World Bank has noted that it employs up to 70 percent.

Regardless of these quibbles, it is undeniable that food security for the people and raw material production for domestic agro-based industries are heavily dependent on the agricultural sector. So far, agricultural development in the country is suppressed by poor access to credit, lack of private land ownership, and inadequate infrastructure and inputs. Lifting agricultural productivity will be essential for rural development and inclusive growth, and will free up millions of farmhands and farm-workers to seek more value-added employment in manufacturing and services sector.

CROPS SOWN

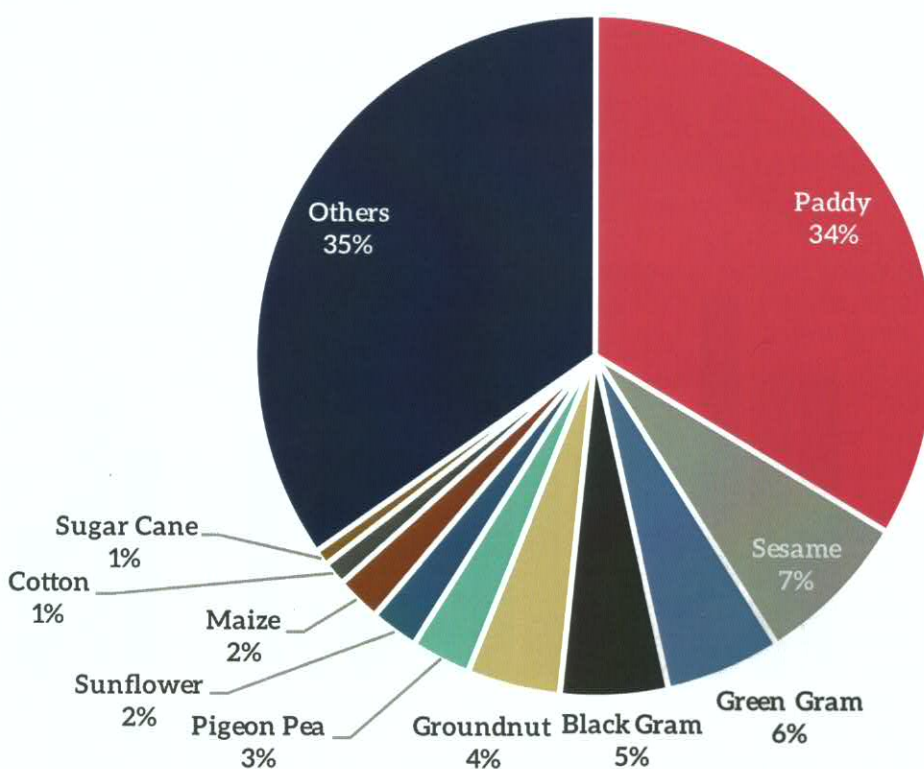
Paddy dominates the agriculture sector, accounting for around a third of the net sown area (if plantations are included) and comprises around 80 percent of the total value of sector production⁴⁵, and 20 percent of the total agriculture exports. Myanmar has a long history of rice exports and in 2014-2015, the country exported 1.8 million tonnes of rice, worth around US\$650 million – an increase from 1.2 million tonnes of rice (worth US\$460 million) exported in the preceding year. However, for 2015-2016, floods are expected to make a dent in Myanmar's exports as rice exports were banned temporarily for three months in July to August.

Exports were driven by high demand and the price of rice in China, and demand is high despite the Chinese restrictions on Myanmar's rice exports. China is the world's largest rice importer, thanks to farm-support policies that inflate its domestic rice prices. Each year, China imports around 50 percent of Myanmar's total rice exports, but these trades do not appear on UN Comtrade records because China considers them illegal trade flows. As the two countries do not have san-

Exhibit 39

Crops Sown by Area

Source: Ministry of Agriculture



itary and phytosanitary (SPS) agreements, Myanmar rice exports break China's plant quarantine rules. Intermittently throughout 2014 and 2015, China has been blocking the import of Burmese rice pending new safety and quality control regulations; but rice trade and informal rice smuggling have thrived despite this.

Rice is grown in nearly 20 million acres (7.8 million hectares), while its closest rival, pulses and beans are grown in 11 million acres (4.5 million hectares). Rice is grown in two crops: the summer crop and monsoon crop. Although summer crops have higher per acre yields, farmers are able to grow it in just over 3 million acres. Other main crops are sesame seed, ground nut, rubber, maize and cotton.

RICE

HISTORY OF RICE PRODUCTION

Myanmar's rice exports developed under the British colonial government, and the recent export heights could not match the records set in the pre-WWII era. In 1934, Burma exported 3.4 million tonnes of rice, setting a world record and making the country the world's largest rice exporter⁴⁶. An extremely high level of productivity was achieved under British rule, due to a mixture of private enterprise and generous agricultural loans. One crucial player was The Chartered Bank of India, Australia and China (now more popularly known as Standard Chartered) which pioneered an agriculture financing scheme that was unmatched in its efficiency.

The bank introduced a 'produce guarantee system' where it financed the storage and milling of rice; it lent against the stored commodities as security, and independent brokers are appointed to rate rice quantity and quality (in a form of modern day credit-ratings agencies). The bank also lent generously (up to 75 percent of the value of the stored commodities) and also introduced a forerunner of the modern day 'margin call', where when the market value of the stored commodities fell, the borrower had to repay part of the loan⁴⁷.

This system was badly bruised by the Japanese invasion of British Burma, which destroyed much of the country's infrastructure stock and farms. However, the country managed to maintain its lead in rice exports. The Chartered Bank also limped on until it was nationalized in 1963, and its extensive network was dismantled under misrule by the socialist junta of General Ne Win. It was no coincidence that 1963 was the last year that Myanmar remained the world's leading exporter of rice.

Ne Win's mismanagement of agriculture was such that his socialist autarchy fittingly came to a calamitous end in 1988 when rice shortages led to a violent civil unrest. Yet much of Ne Win's legacy remains in the agricultural sector. It was to please the curmudgeonly Ne Win that much of agriculture production figures were falsified, and traces of this fabrication remain in unreliable farming statistics and wildly optimistic production figures⁴⁸. His 1963 revocation of the right of landlords to choose tenants or what was grown on the land remains, and his nationalisation of large rice-growing enterprises was a calamity from which Myanmar never recovered. Post-harvest agriculture enterprises today are mainly small, family-operated rice farms, just as Ne Win had willed it half a century ago.

Exhibit 40

Myanmar's Main Agricultural Exports

Source: Ministry of Agriculture

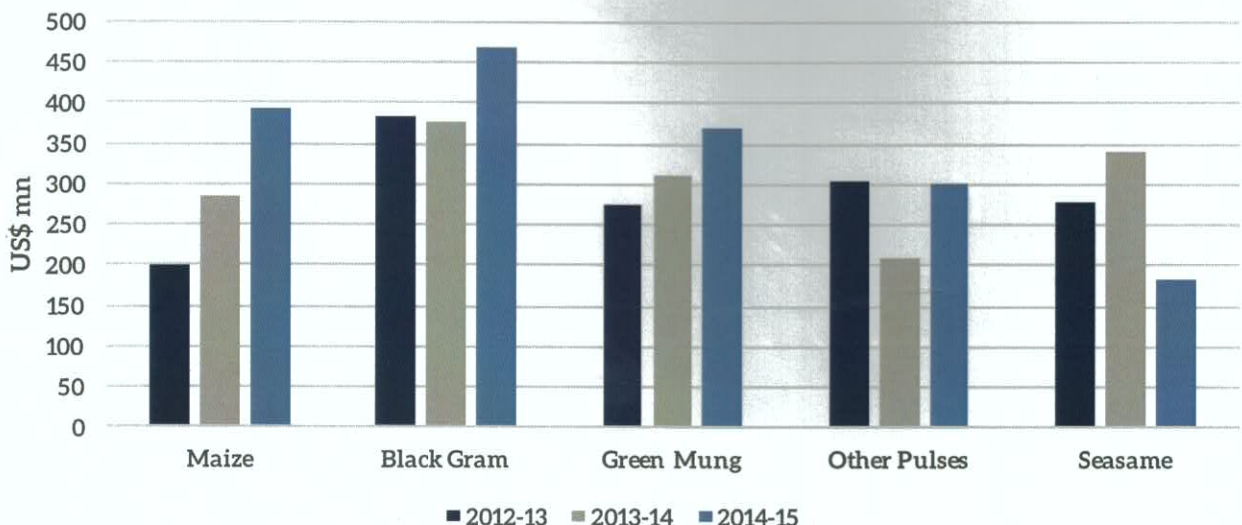
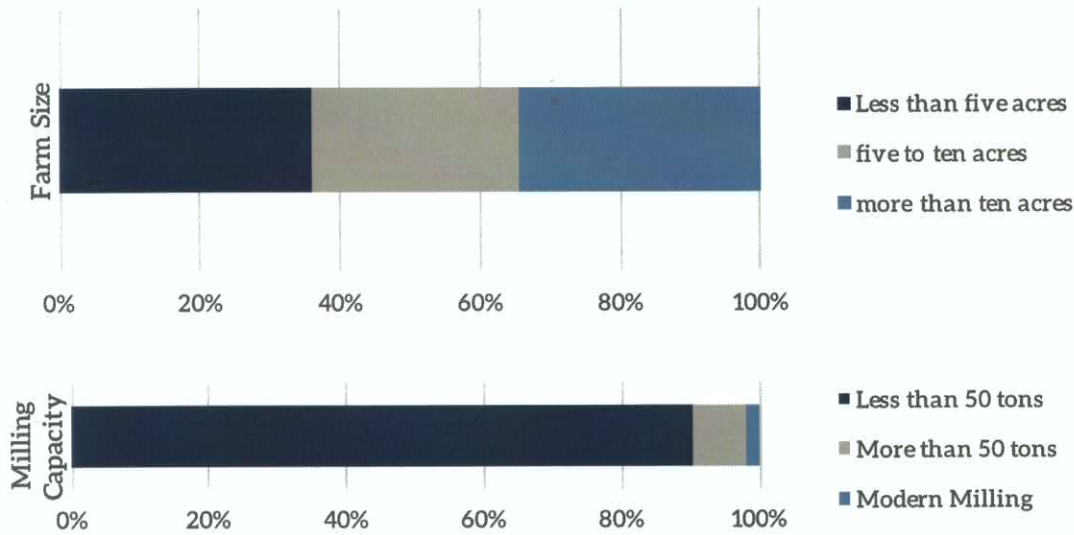


Exhibit 41

Land and Mill Holding Sizes

Source: Ministry of Commerce



RICE PRODUCTION TODAY

According to the Ministry of Agriculture, among Myanmar's farmers, six million grows paddy and there are around 17,000 rice mills. As nearly all rice production (almost 95 percent) is concentrated in the regions of Ayeyarwady, Yangon, Bago and Sagaing, rice milling is also predominantly found in these areas.

Annually, Myanmar produced around 30 million tonnes of paddy, which translates to around 15 million tonnes of rice. The majority of output comes from small landholders and low-capacity mills. Among Myanmar's 16 million or so acres devoted to paddy farming, 5.8 million acres are owned by farmers who each own less than five acres; 4.7 million acres are owned by farmers who each own between five and ten acres. Also, among 17,000 rice mills reported earlier, 15,500 of them can process less than fifty tons.

RICE YIELDS

Rice yields are low, and price it commands is around half of that in Thailand or Vietnam. However, Myanmar can quickly improve its rice productivity by two means.

A monsoon season and the presence of the fertile Ayeyarwady Delta make Myanmar well-suited to rice farming. Between its monsoon crops and summer crops, some regions in Myanmar are harvesting rice 10 months out of the year. However, production

volumes are far below potential. For example, international observers have pointed out that crop intensity (the number of harvests from a plot of land in one year) can be increased. Currently, crop intensity is one, although farmers near rivers and streams have two. With good agricultural practices, modern inputs, and irrigation, Myanmar's weather allows rice farmers to have up to 3.5 harvests per year.

Another means by which Myanmar can increase productivity is the variety of seed used. Recently, Myanmar farmers have slowly moved away from traditional low-yielding local rice strains - which yield only 1-2 tonnes per hectare - to high-yielding varieties (HYV), which yield 4-5 tonnes per hectare. It is estimated that around two thirds of Myanmar farmers use HYV strains now, but this is a high estimate because many farmers mix local strains with HYV strains while planting. This is an inefficient system as different strains respond differently to the particular conditions and cultivation to which they are exposed. Stubborn persistence of local low-yield rice is reflected in Myanmar's consumer price index, where that most popular of historical low-yield strains, Emata, is used as the sole proxy in measuring price inflation of rice.

Local low-yield strains will further prove to be a headache. Other producers of rice have transitioned away from HYV to next-generation hybrids. According to Myanmar authorities, less than two percent of farmers in Myanmar use these hybrids, whose yields are 10 to 15 tons per hectare.

Exhibit 42

Rice Yields

Source: Ministry of Commerce

	Myanmar	Thailand	Vietnam
Yield per Hectare (Metric tonne)	1.5-2.5	3.5	4.5
Price per MT (First point of Sale)	USD 170	USD350	USD270
Income per Hectare	USD 425	USD 1,225	USD1,215

RICE EXPORTS TO CHINA

In September 2014, the Myanmar Ministry of Agriculture and Irrigation and Chinese officials from the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) began negotiations to formalize the informal rice trade. A memorandum of understanding on agricultural standards has been signed by AQSIQ and ASEAN members, the first step towards reaching an agreement on SPS rules. Further negotiations on quotas and taxes are likely to follow before Myanmar can export rice to China by ocean-going vessels directly to the Chinese ports.

Legal imports of Burmese rice to China were to begin in January 2015 (giving Myanmar a quota of 1 million tons of rice, priced at US\$400 per ton), but were delayed. That month, Myanmar's business and government officials travelled to Beijing to discuss further steps and the China Certification and Inspection Group, a quality control monitor, has agreed to set up

offices in Yangon, Mandalay and Muse. Local trade groups on the Myanmar side selected nine rice-trading companies to serve as initial exporters to China, but the small number of traders chosen and the relative inexperience of some of them sparked concerns in the rice industry.

This prompted rice exporters to invite more companies to apply for an export license, but it was noted that there was little show of interest from local exporters. In the long run, Myanmar should also attempt to export to China via ocean-faring vessels. Due to Myanmar's infrastructure and logistic deficiencies, it adds about 80,000 Kyats (US\$80) per ton to transport rice from the rice-producing delta region to the Chinese border. This uses a combination of truck and river traffic, and costs twice as much as shipping rice from Yangon port to East Africa.

Despite China's restrictions, Myanmar still has an advantage over its neighbouring rice exporters as rice

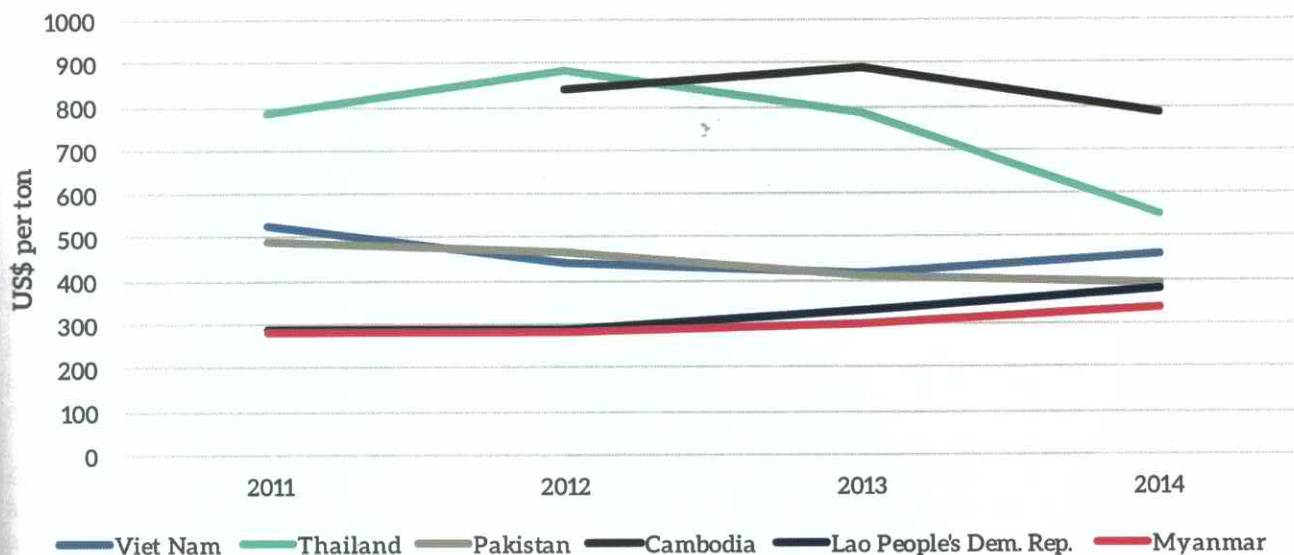


Rubber plantation

Exhibit 43

Rice Import Prices for China

Source: Ministry of Commerce



from Myanmar is still cheaper compared to Thailand, Cambodia and Vietnam. The cost of Myanmar rice is on average around US\$300 per ton, whereas comparable rice from neighbouring producers is US\$50 to US\$100 more expensive. Moreover, while some Vietnamese rice prices are comparable to those from Myanmar, the socio-political conflicts between China and Vietnam have hindered Vietnam from taking advantage of the situation. When tensions over the islands in the South China Sea flares up, demand for Myanmar rice goes up in China as the political atmosphere makes it difficult for the Chinese to purchase Vietnamese rice.

BEANS AND PULSES

EXPORTS OF BEANS

In mid-October 2015, the export price for Myanmar's mung beans reached a record high of around 2.5 million Kyats per ton, a significant increase from around 1.5 million Kyats per ton the bean typically commands. The price of matpe beans has risen to 1.5 million Kyats per ton - more than double the previous year's prices of 700,000 Kyats per ton.

These high prices are due to the fact that India's beans production is disastrously low for the current season. However, Myanmar farmers are not benefiting as much as they should from India's low production, as Myanmar has production constraints as well. The country has also faced significant competition from Canada, the world's largest exporter of beans and pulses, in exporting to the Indian market.

While rice is indeed the main product of the country's agriculture, Myanmar's cumulative beans and pulses exports are already in fact of higher value than rice exports despite its smaller allotment of sown area. In the last three years, Myanmar exported an average of 1.3 million metric tons of beans and pulses annually, earning an average of US\$1 billion in revenues. Outlook for beans and pulses is strong, on the back of growing demand from India and the chance of new markets in China. Currently, India takes approximately 75 percent of all of Myanmar's production of beans and pulses with strong demand of soybeans coming from China. It has been estimated that India's demand for beans and pulses will increase by around ten million tons in the next five years - and Myanmar is geographically well-positioned to supply India's growing demand for protein. Europe is also a potential future area of growth for exporters. Myanmar competes with Canada in beans and pulses exports to India.

Myanmar's government hopes to transform its beans and pulses market into a global leader. To this end, the government has established commodity exchange centres across Myanmar, whose principle trading commodities are beans and pulses. Four major beans grown in and exported from Myanmar are **Matpe** (Black Gram); **Pedesein** (Green Gram); **Pesingon** (Pigeon Pea); and Gram (Chick Pea).

FARM MECHANIZATIONS

Farming techniques in Myanmar have remained unchanged in the last half-century. Largely absent in Myanmar is any mechanized farming equipment, ex-

Exhibit 44

Beans and Pulses Production in Myanmar

Source: NCRA Research

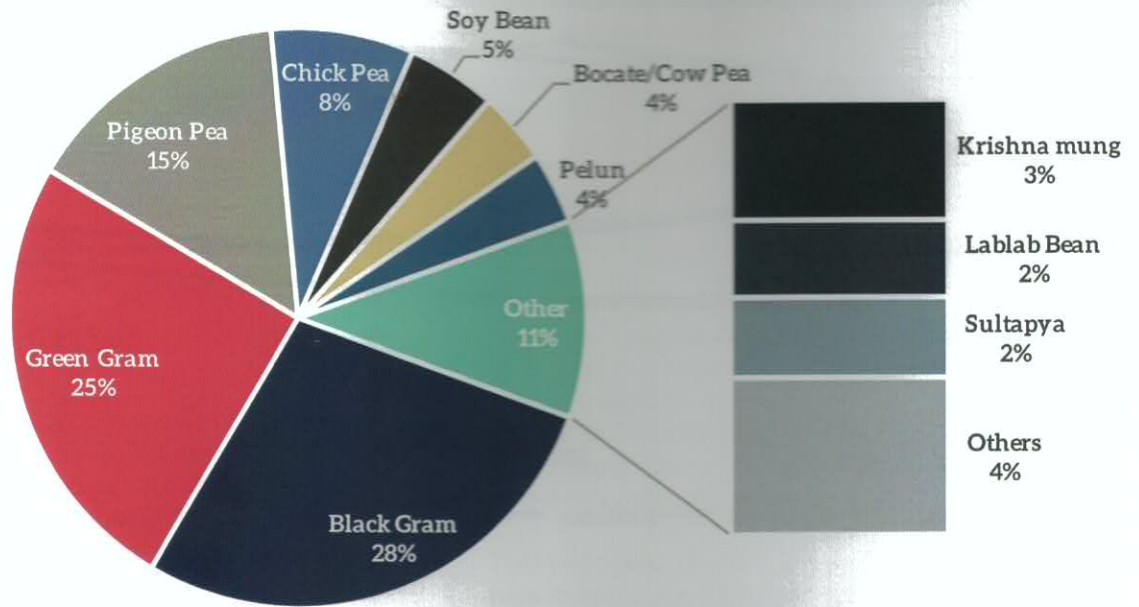
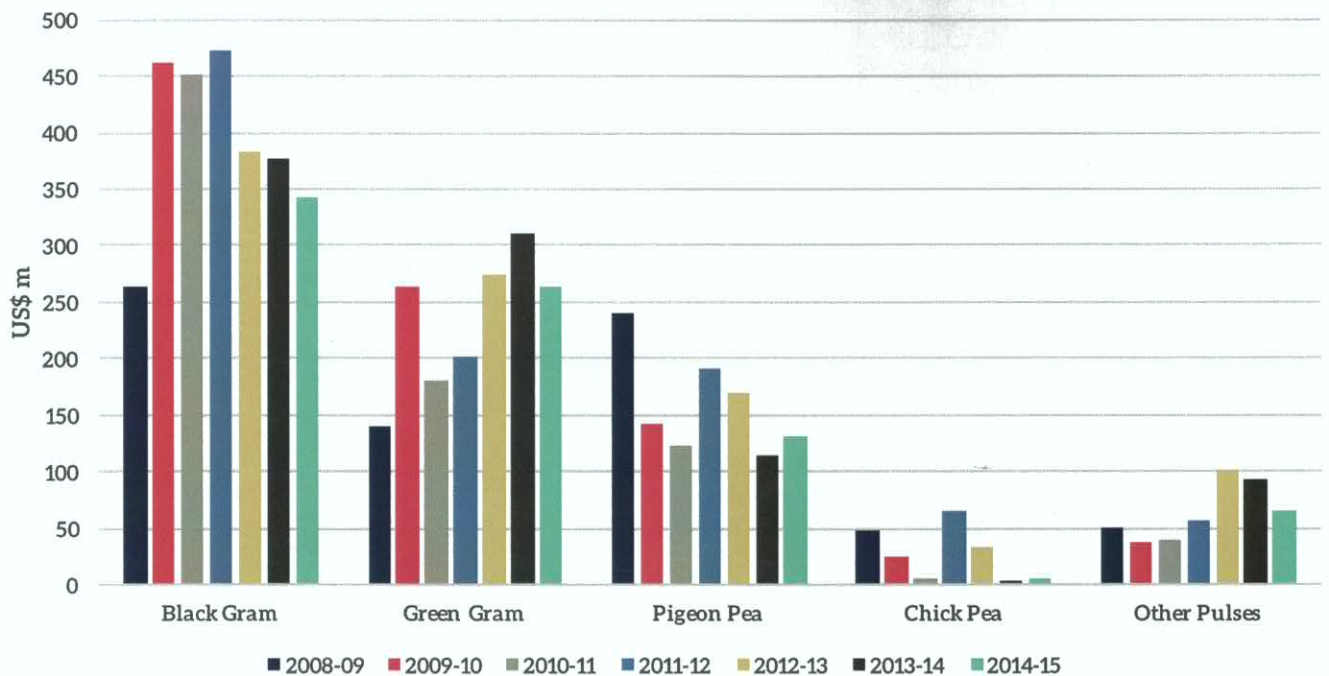


Exhibit 45

Bean and Pulses Exports

Source: CSO



cept for trawler-jeeps and pumps. The former are local variant of three or four-wheeled motorized rickshaws with load-carrying capacity, which are used to carry goods. More ubiquitous still are simple gasoline or diesel engines, which farmers use primarily for irrigation. At the end of the working day, the farmer will transport his engine via a trawler-jeep back to his village to use it for electricity, and perhaps to watch television.

There are many ills bedevilling Myanmar's agriculture sector such as natural disasters and unclear land rights, but a lack of modern farming knowhow is also an important factor. The small farms typically make little use of chemical fertilizers and pesticides and are largely not mechanized, relying on human and animal labour for planting, harvesting, threshing and even transportation to mills.

According to the Ministry of Agriculture, there are around 12,000 tractors in the whole of Myanmar, a number which has remained largely unchanged since 2000 when Myanmar had around 10,000 tractors. In other words, Myanmar has around 0.25 tractors per 1,000 population; by comparison, Vietnam has around 2 tractors per 1,000 and Thailand has 3.48 tractors per 1,000 population. (Myanmar also has higher percentage of people living in rural areas and dependent on agriculture than Vietnam and Thailand, so the shortfall in machinery is even more dramatic.)

Other farming machines are used even less. There are only around 2,000 harvesters and 800 combine harvesters. More tellingly of a labour intensive atmosphere, there are only 300 cultivators in Myanmar; most of the planting is done by hand.

Investment in farm mechanization would lead to significantly higher margins, but the time to recover the initial capital investment and the poor loan terms available to farmers make it unlikely that farmers, who already face substantial risks from weather, blight and price drops, will be able to adopt mechanized farming on a wide scale without government encouragement. In 2014, the Ministry of Cooperatives signed a US\$100 million agreement with Daedong of Korea to buy 4,700 tractors, 1,500 cultivators, and 500 combine harvesters. Farmers need to pay 10 percent in cash up-front, while paying off the remainder in six-year instalments.

While such mechanization is necessary, the deal with Daedong has been criticized as the government intervening too far in the market. A ruling party MP was quoted in *The Myanmar Times* as saying, "It is not suitable for the ministry to lobby for the product of a company at a time when the country is practising a market-oriented economic system. Consumers have the right to buy the machinery that they want." More damningly, the parliamentary budget oversight committee noted the deal was "improperly done".

Myanmar's rough agriculture conditions also make it difficult to use small and hand-operated tractors. In 2014-15, the government ordered US\$100 million worth of tractors (6,000 machines) from South Korea. More than a quarter of the tractors supplied by South Korea are apparently not powerful enough for conditions here and the Korean company concerned, Daedong Industrial, had to replace smaller tractors with bigger ones better suited to local conditions.

GASOLINE ENGINES

For the time being, the main machinery for agriculture mechanization in Myanmar will remain simple gasoline or diesel engine for irrigation (as a combined engine water pump). In a recent survey, engines parts are widely available in the market. In the Delta there is a higher number of dealer shops and therefore prices are very competitive. The Dry Zone tends to have one or two dealer shops located mostly in the main towns. Most of the engines in the market are manufactured in China, Thailand and India. Popular brands for gasoline engines are Kenbo, Corolla, and Robin and for diesel engines: Mercedes, Three Rings, JD, JN, Daiwa, Yong Chai, YMG, AMC, and Kubota. The main importers and distributors include Yee Shin, Good Brother, Tharaphu U Soe Myint, Win Shwe War, Aharthit. Gasoline engines are smaller in horsepower and cheaper.

In October, Proximity Designs, a Yangon-based social enterprise, launched an affordable solar-powered irrigation pump as a possible replacement for diesel engines. In 2012-2013, NGOs tested solar pumps in the Dry Zone, but these initial models cost up to US\$10,000 per pump.

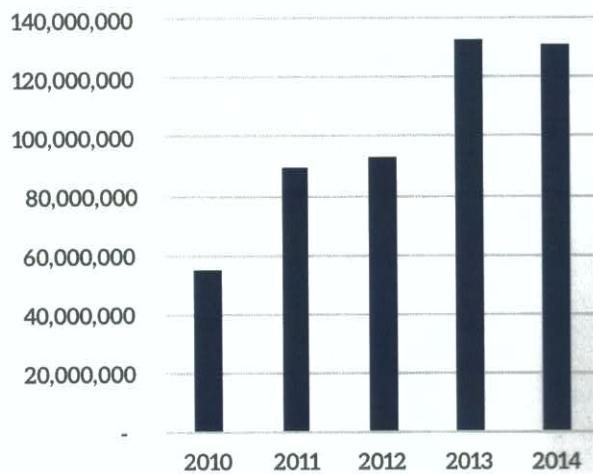
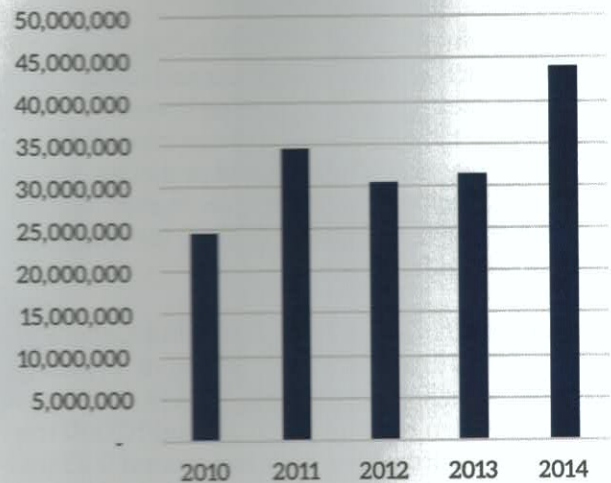
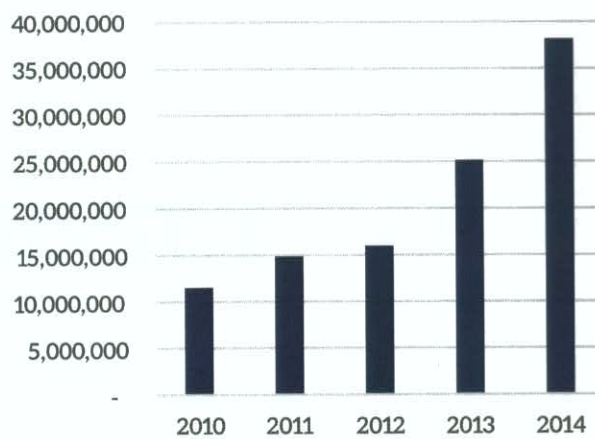
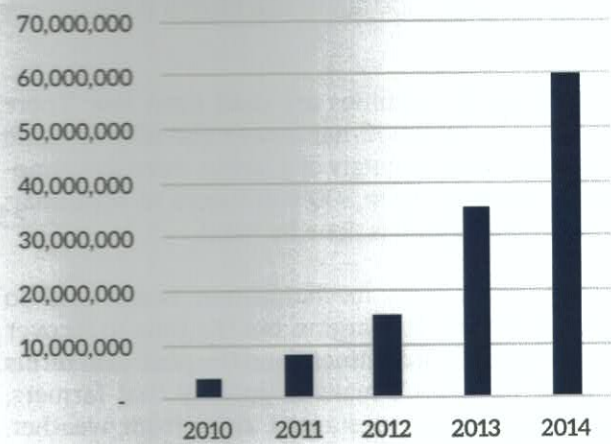
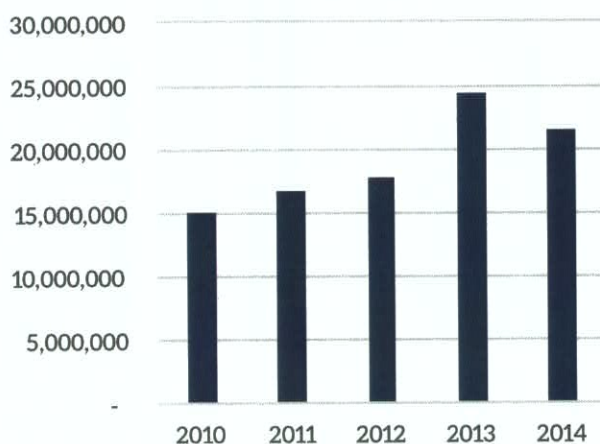
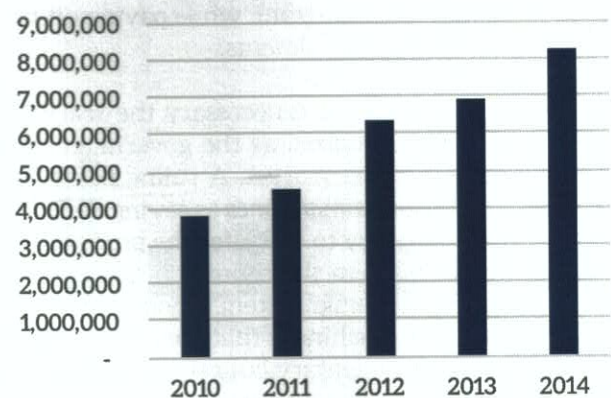
Proximity Designs' work is a development on these earlier efforts with a flow rate of 100 litres per minute and a suction of 50 feet of ground water. Most importantly, the kit, which includes solar panels, a pump and portable, and sun-tracking accessories is currently being priced at US\$350, compared to US\$250 Chinese diesel pumps available in Myanmar. In the long run, Proximity claims its engine, titled The Lotus (Padonmar), will save farmers up to US\$300 per year as Chinese engines have high costs of running (diesel costs), as well as needing constant repairs⁴⁹.

AGRICULTURE INPUTS

Agriculture remains the largest part of the Myanmar economy, but foreign investment in sector is meagre. From April 2010 to March 2015, only 13 FDI projects, totalling US\$208 million were invested in agriculture. Even as billions flowed into the extractive industries, and other neglected sectors attracted large amounts of FDI, agriculture sector, despite its huge potentials, has attracted only US\$ 40 million in 2014-15.

Exhibit 46**Agriculture Product Imports, US\$**

Source: CSO

Fertilizers Imports**Insecticide Imports****Machinery for soil preparation Imports****Harvesting and threshing machinery Imports****Machinery for cereal milling imports****Machinery for cleaning, sorting, and grading seeds and grain imports**

Myanmar has 12.25 million hectares of areable land, the 25th most in the world, meaning the country is ripe for agriculture. Around 8 percent of land in Myanmar (5.4 million hectares, most of which are concentrated in three hilly states: Kachin, Chin and Shan) are wasted land – i.e., fertile land not used for agriculture. It also has 2,832 km of coastline in the Andaman Ocean, so aquaculture could be a dominant force in the country. The central government tries to promote investments in agriculture but the lack of sufficient or clear legal protection remains a difficult obstacle. Under the Foreign Investment Law, FDI in farming is prohibited in "short-term and long term agriculture which can be carried out by citizens," i.e., small-scale agriculture and artisanal cultivations. Investments also will have to follow Fertilizer Law, Seed Law, and other strict agricultural laws.

Among such laws is Farm Land Law (2012), which gives a lot of authority to a newly created body called Farmland Management Body (FAB). FAB is to settle disputes relating to allocation and use of farmland and prohibited such activities as pawning farmland outside a government or authorized bank, farming without FAB's permission, growing crops other than 'authorized' crops. Local farmers are largely displeased with these restrictions. New investors should also take note of a separate law, Vacant, Fallow, and Virgin Lands Management Law. The Law allows public citizens, private sector investors, government entities and NGOs to apply to the governing committee to lease Vacant, Fallow and Virgin (VFV) lands. VFV Law allows VFV land to be leased to foreign investors or organizations consisting of foreign investors – up to 5,000 acres at any one time, up to a cumulative maximum of 50,000 acres.

Another hurdle for foreign investment in Myanmar has been a challenging agriculture supply chain. Farmers in Myanmar do not directly do business with large wholesale traders; they instead rely on several middle parties and brokers, which sometimes include government collectorates. Primary traders that the farmers deal with are traders in their local villages. These traders already lend to the farmers not only money but also agricultural machinery. The traders also determine the prices. Local traders sell their commodities to larger rural companies or cooperatives. These companies have resources to handle the transfer of harvests and crops from villages to towns and eventually to Yangon ports.

Yangon commodity traders use a network of local commodity exchange centres to buy from these larger rural companies. In Yangon and other major cities, the wholesalers own warehouses and additional facilities to process the crops. Deals often involve buying and selling agents that are offered healthy commission fees; even up to one percent of the deal.

On the other hand, the relative backwardness of Myanmar's current agriculture sector has key com-

petitive advantages. The aforementioned 12.25 million hectares of workable land (25th most in the world) can be increased by nearly 50 percent, according to the ADB. Despite widespread conversion of agricultural land into industrial use, the average size of holdings is high compared to other developing neighbours. In Myanmar, the average size of land holdings is over 2.5 hectares compared to 0.6 hectares in China and 1.25 hectares in India. Moreover, Myanmar has four major waterways, and water resources are considerable. Myanmar receives 19,000 cubic meters per capita of renewable fresh water each year, about 9 times more than China, 16 times more than India, 5 times more than Vietnam, and 30 times more than Bangladesh.

Agriculture is the mainstay of Myanmar's economy. It will remain so for decades, even with meagre investments. Significant investments in the sector will make Myanmar agriculture competitive in international markets. Experts estimate that a 23 percent increase in average yields should easily be possible within 5–7 years with effective policy measures.⁵⁰ Currently, the sector is very labor intensive and it is in need of mechanization, basic packing and branding, modern warehousing, distribution and logistics facilities.

Moreover, the farmers have very limited access to credit and suffer from high finance costs. Usage of fertilizers, cultivars, and chemicals is also extremely low in Myanmar. Farmers are forced to rely on poor quality seeds; although the government has seed distribution schemes, these are underfunded. Irrigation is another problem, as evidenced by summer crops having better yields but smaller plantation areas due to irrigation limitations.

To address these problems, the Sector will need large and devoted investments to the sector. The current agricultural loans to farmers by the state are for production of a limited number of staple crops; the production of high-value fruits and vegetables are not covered by government credit schemes. Also lacking state financing are livestock breeding; seeds, fertilizers and cultivars production; and any other high value-added agriculture products⁵¹. These are indeed low-hanging fruits that international and local companies can invest in. Only then, the labour-intensive agricultural sector in Myanmar will become prosperous and competitive, while freeing manpower for other industries and sectors as well.



Infrastructure

Grand projects and transport linkages are **planned but** more needs to be spent on health and education infrastructure.

Infrastructure continues to be a major challenge constraining growth across all sectors. In Myanmar, the electric power infrastructure is inadequate and unreliable, forcing companies to supply their own auxiliary power with expensive diesel generators. The frequent outages also make many forms of manufacturing impractical. Myanmar has also underinvested in transportation infrastructure, which is vital to economic growth. Both rail and road networks are inadequate for a country of Myanmar's area and population.

Despite recent improvements in telecommunications thanks to the privatization of the sector, telecommunications infrastructure is still inadequate and unreliable, which rules out Myanmar for further digital leapfrogging. Internet and broadband access is limited. Water and wastewater systems also need to be built, both to support a growing population and for irrigation, mining processes, and many forms of manufacturing. The country also has a housing deficit of around one million units, pushing up urban rents and contributing to the high cost of living.

TRANSPORTATION

ROAD NETWORK INFRASTRUCTURE

The country's 150,000-kilometre road network constitutes the largest infrastructure asset. Logistics in Myanmar lean heavily on this network. However, the network is severely limited compared with those of peer economies. The road density of Myanmar, at 50 kilometres per 1,000 square kilometres, is just one-tenth that of Malaysia, and one-seventh that of Thailand. The quality is often poor, with large stretches that are either unpaved or in need of repair.

Traditionally, investment in maintenance has not been sufficient to keep up with annual deterioration, which is accelerating due to rising traffic volumes resulting from population growth. During the monsoon season, many unpaved roads are washed away or bogged, and commuters face difficulties in traveling

on them. For instance, the road connecting Kyauk-phyu, a highly anticipated industrial zone on the western coast of Myanmar, with upper Myanmar is only 1.5 lanes wide, with many potholes, and passing trucks were forced off the lanes along the side of the road. Most of the bridges on this route are made from wood and dated, and the roads are not lit and therefore dangerous at night.

Even major highways along the country's main economic corridors (e.g. Yangon-Mandalay-Muse) will soon hit their capacity limit, and recent floods have severely damaged the road along the Mandalay-Tamu corridor. According to traffic projections by JICA, around 2017, traffic along the Yangon-Mandalay corridor will surpass the highway's capacity. This can be temporarily alleviated by allowing trucks to use the National Expressway between Yangon and Mandalay, but no such plans are currently in place (only small trucks carrying perishable goods can use the highway currently).

AIRPORTS

As Myanmar welcomes more and more tourists, the country's infrastructure and ecological resources strains to accommodate these visitors. The biggest infrastructure needs are airport capacity. The number of flights Myanmar welcome a day has increased from 11 in 2008 to 40 currently. The air transportation infrastructure consists of three international and 30 domestic airports. Substantial investment is needed to bring them into line with international standards. In particular, they need improved passenger facilities, increased capacity, and business hubs around the major airports.

Myanmar has 41 airfields with ICAO/IATA codes, but only 30 of them regularly receive commercial flights, and only three are capable of handling 747-class aircraft. Yangon Airport (International Terminal) can welcome over 3 million passengers annually, and an expansion project is currently underway. However, Hanthawaddy Airport - a hub some 50 miles north of Yangon which has been in the planning stage for decades - has been repeatedly delayed as there had been contractor troubles, and overseas development assistance (ODA) has not been as forthcoming as the government has hoped. It is hoped that this airport, which will be able to handle 12-million passengers annually, will be finished before 2020.

Meanwhile, however, Yangon International Terminal is operating above its full capacity; the international terminal has only 30 check-in counters and five boarding gates. International carriers - from the Philippines' Cebu to Taiwan's Eva to Indonesia's Garuda - are either adding Yangon to their routes or expanding their weekly number of flights to Myanmar; further projects to be launched at the airport such as a private jet terminal by Thailand's MJet and Airbus's helicopter rentals will likewise test the airport's capabilities in 2015 and beyond.

A proposed plan to extend the operation hours (presently the airport operates from 6-am to 1-am) into 24-hours will serve as a temporary solution. An expansion project for Yangon Airport will double its capacity to 6 million passengers annually, but will not be finished before 2016. Meanwhile, Japan's Mitsubishi Group, Jalux Inc., and local Yoma Strategic Holdings plans to run Mandalay Airport, which is currently the second-busiest in Myanmar, to become a regional hub.

Exhibit 47

Number of Daily Flights into Yangon

Source: NCRA Research

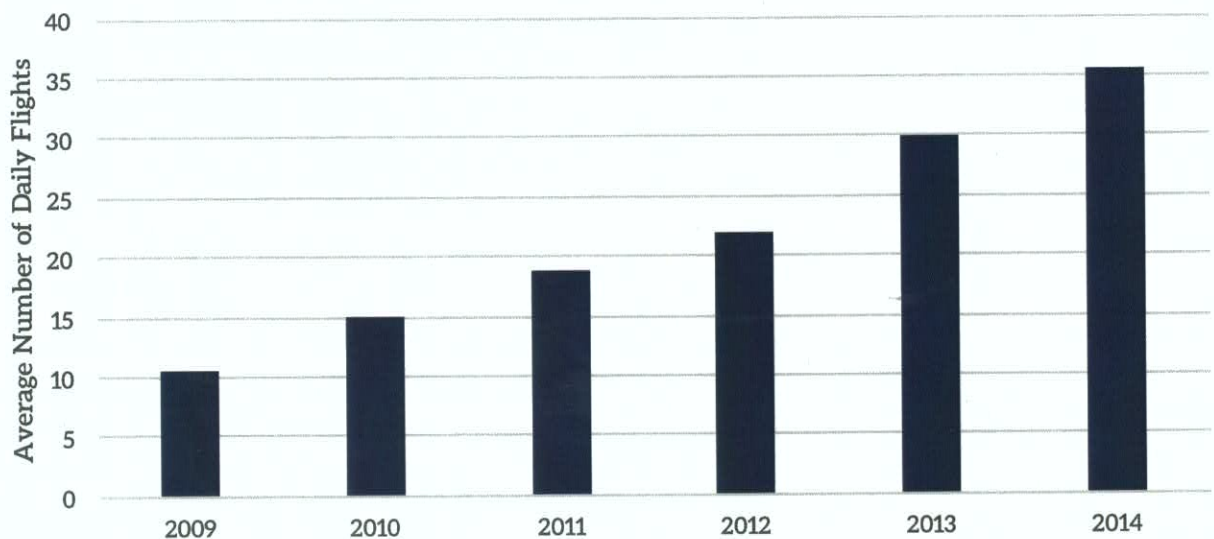
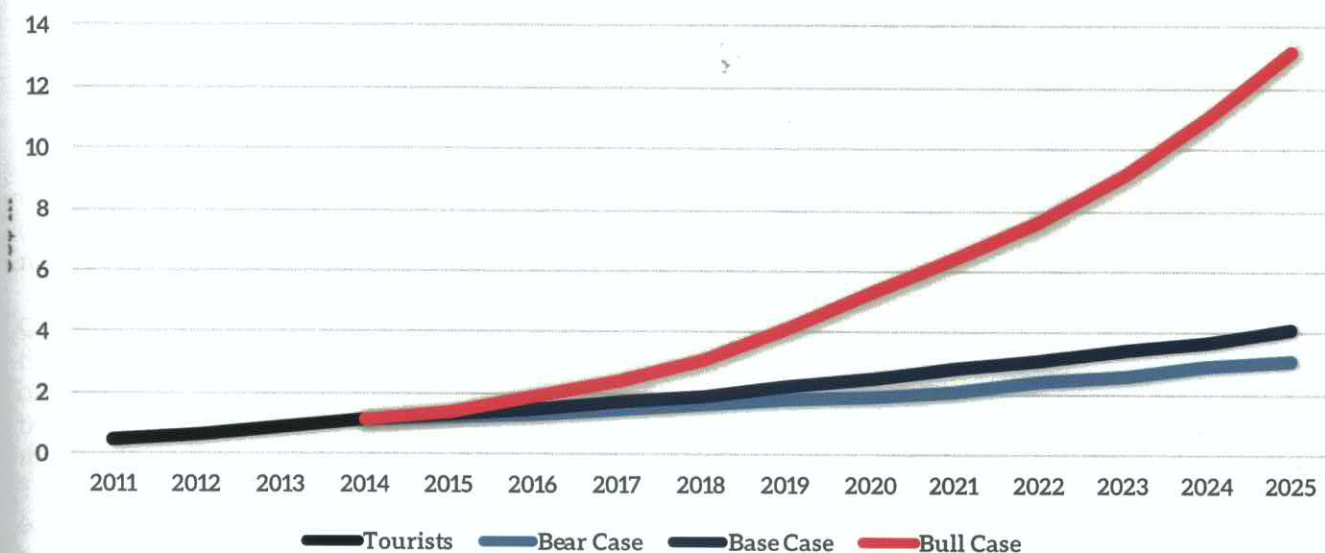


Exhibit 48

Estimates on International Tourist Entries

Source: NCRA Research



In Myanmar, travel booking systems and platforms are inefficient. Many Chinese and Thai tour companies block-book (with small deposits) and then cancel at last minute if there isn't enough demand. In response, airlines cancel flights at the last moment if they learn that too few people are going to be actually flying. This manifests in domestic flights more than in international flights. This unreliability has also negative effects on air freight cargo market, which is yet to be developed in Myanmar.

The most popular routes are between Yangon and Bangkok, Singapore and Kuala Lumpur, which also serve as major transit points. It should also be noted that among the top 10 international air routes into Myanmar, three (Bangkok-Mandalay, Seoul-Yangon, and Tokyo-Yangon) did not exist three years ago.

The ASEAN Economic Community is poised to liberalize and unify air travel within Southeast Asian countries beyond 2016. In 2015, ASEAN countries implemented the Open Skies policy, and the ASEAN Single Aviation Market (ASEAN-SAM) came into effect on January 1, with the aim to increase regional and domestic connectivity. The policy will further boost tourism to Myanmar and the agreement guarantees third, fourth, fifth, and seventh freedoms of the air (the right to fly from an airline's home country to a foreign country, and vice versa; the right to fly beyond the second country to a third country with the right to sell tickets in the second country and the right to fly between two foreign countries while

not offering flights to an airline's home country). But there are expected to be delays in implementing fifth freedom rights.

Due to Myanmar's popularity as a travel destination, airlines were planning expansions in both flight frequency and seat capacity in flights to Myanmar in 2015 and beyond. However, operators should be aware that in recent years, several air routes were discontinued after their occupancy rates proved too low. This includes routes between Yangon and Phuket and Yangon and Frankfurt, which attained only 17 percent occupancy.

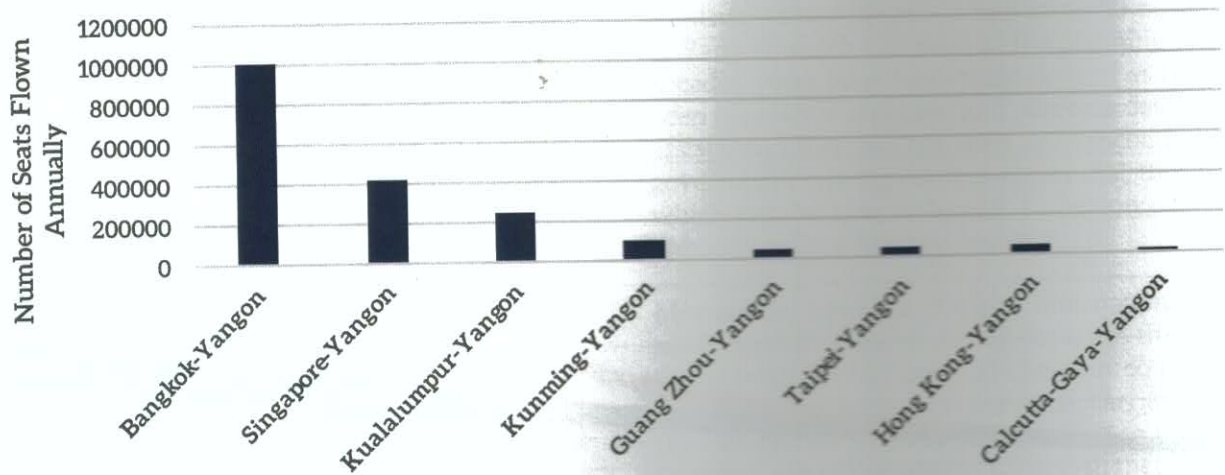
SEA PORTS

The Port of Yangon is Myanmar's premier port and handles about 90 percent of the country's exports and imports. Despite its crucial importance, Yangon is hardly accessible since it is a riverine port. On paper, the draught at Yangon is 9 meter. In practice, utilising the full draught can be a challenge. The existence of two bars, the Inner Bar and the Outer Bar, make navigation tricky and require timing the tides right. Ships must berth during rising tides and daylight hours and can get stuck in the port if they miss the window to get over the bars. From a distance, not much seems to have changed in over a century. Indeed, a captain might still find the old maps on the wall of the Strand Hotel lobby useful.

Exhibit 49

Top Ten International Air Routes into Myanmar

Source: NCRA Research



Ships from the major global lines dock in Malaysia or Singapore and feeder vessels make their way to Yangon Port. Due to the bars, they have to go in at less than capacity. Ships of 20,000 dwt, or container ships of 800 TEUs, can only go upstream 16-km from the mouth of the Yangon River.

During the peak months of March and April, the port is particularly congested and it is difficult to ship at all. In 2014, Myanmar received a score of 6.3 on UNCTAD's Shipping Connectivity Index, a significant improvement from the score of 3.2 in 2011, but the country still has much to go to catch up with regional peers. The index measures a country's integration into the networks of the major global shipping lines, and Indonesia came in at 28.1, Thailand at 44.9, Vietnam at 46.1, Malaysia at 104 and Singapore at 113.2.

All existing ports of Myanmar, including Yangon Port, are river ports and not deep enough for large conventional vessels and container vessels. If in the future the region demands traffic of larger vessels, then the development of Deep Sea Commercial Ports will have to be implemented at suitable sites. Four Projects are planned: at Sittwe and Kyaukphyu on the western coast; at Thilawa near Yangon; and at Dawei on the southern coast.

SITTWE PORT

Sittwe's port currently under development as part of the Kaladan Multimodal Transit Transport Project, which intends to provide better access to land-locked and underdeveloped parts of India (north-eastern Indian states).

The World Bank notes that difficult trade logistics and an absence of transport connectivity in north-eastern

India should be remedied, and the Kaladan Project can provide increased connectivity not only for India but also for neighbouring countries, such as Bangladesh and Nepal. Myanmar's exportation of daily consumption products (e.g., beans, pulses, and lentils) to Northeast India can be significantly increased if the project is completed.

Apart from this, the project will handle general cargo bound for land-locked parts of India, using inland waterways and roads as well. However, it is unclear whether there will be much demand or use by this severely underdeveloped corner of India, and the port will not be able to handle containers. The Sittwe port currently has channel depth/length of 5.0m/15km, which will be expended to a depth/length of 8.0m/25km.

YANGON PORT

The Port of Yangon has six terminals with 23 berths. However, containers are handled at only five terminals: Bo Aung Gyaw Wharves Terminal (BSW), Myanmar Industrial Port Terminal (MIP), Asia World Port Terminal (AWPT), Myanmar International Terminal Thilawa (MITT) and Myanmar Integrated Port Ltd. (MIPL). The five terminals have 14 container berths. There are three inland container depots, one government-owned (ICD-2), one joint venture (ICD-1) and one private-owned (MIP).

New wharfs are being constructed and planned to improve Yangon's maritime logistics. In 2010, a US\$50 million contract was signed to redevelop Hteedan Wharf. The first 183 meters of the project was completed in late 2011, the 600 foot wide modern precast concrete structure replacing an old rice jetty.

A newest wharf was launched in March 2015 with the opening of **Ahlon International Port Terminal**, which is owned by military-owned Myanmar Economic Corporation (MEC). Located on the eastern bank of Yangon River, the wharf has a 600-meter-long bridge and 19.51 hectares of a container space. Three vessels with 20,000 tonnes of load can be received at Ahlone, and it has a container storage capacity of 13,210 TEU in the container yard.

Cargo handled through Yangon ports have increase dramatically in the last four years. In 2011, Yangon handled 383,990 TEUs of cargo; and in 2014, the ports of Yangon handed 719,567 TEU. Of this, 436,936 TEU of cargo has passed through **Asia World Port Terminal** (AWPT) - 60.7 percent of total volume.

Currently, the port of Yangon handles the bulk of the cargo traded: around 24 million metric tonnes of goods annually in 2014. This volume is expected by the Ministry of Transport to rise to 39.7 million metric tons by 2017 and reach 123 million by 2030. To achieve these goals, port areas need to be upgraded and the Myanma Port Authority has also invited competitive bids to redevelop more of the Yangon port area, with eight sections of waterfront identified for investment.

Three jetties - built by Myanma Industrial Port, Myat Myitta Mon and Annawa - have been completed in 2015, and the Authority is overseeing the construction of 10 new jetties - all of which are slated to open in 2015-16. These jetties are being built by a range of companies: Myanma Economic Corporation, Myanma Port Authority, Asia World, Shwe Nar Wha, Shwe Taung and Max Myanmar.

The main export commodities from the port of Yangon are timber, pulses, rice and rice products, yellow maize, and fishery products. Main Imports are construction materials, machinery and equipment, fertilizer, crude oil, palm oil, wheat grain and cement.

YANGON PORT AT THILAWA

Productivity at the port of Yangon is below international standards (15 moves per hour, per crane) but has capacity at Thilawa to move to international standards quickly and with minimal investment. Small handy tankers can call at Thilawa and there is a plan to increase storage capacity at Thilawa to increase the efficiency of liquid bulk operations and reduce logistics costs.

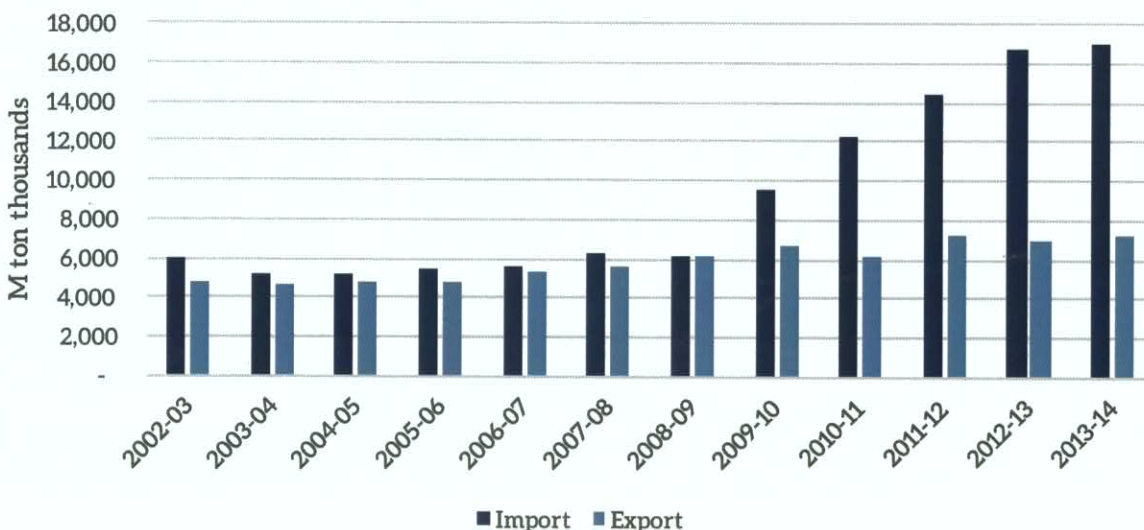
The main port at Yangon is severely constrained by the surrounding city, and its activities will have to be eventually relocated to Thilawa. Thilawa, close to Yangon, has similar channel and drought constraints. Thilawa, while within the Outer Bar, effectively offers one meter of additional draught over Yangon, and other constraints can be addressed more easily than in the main port of Yangon.

Started in 1995, Thilawa was conceived as a replacement for Yangon but its development was constrained by sanctions and the load limits on key bridges between Thilawa and Yangon. Further remedial work is also required on the rail connection at Thilawa. The Special Economic Zone (SEZ) at Thilawa, which is led by the Japanese is slowly improving the surrounding area's attractiveness. Ground transportation to

Exhibit 50

General Cargo Handled at Port of Yangon

Source: Myanmar Port Authority



and from Thilawa remains expensive, making it uneconomic for most shipments. (Containers are transported from MITT terminal in Thilawa to Shwe Pyi Tha Industrial Zone on a container barge!). Until the roads are improved, the Thilawa option will remain one primarily for companies operating in the special economic zone at the port (which will also be the case for Dawei and Kyaukphyu).

The main terminal at Thilawa is **Myanmar International Terminals Thilawa** (MITT), which is Myanmar's first multi-purpose container terminal. The terminal is operated by Hutchinson Whompoa, and has total berth length of 1,000 meters, and 20,000 square meters of warehouse storage space. MITT has berthing capacity for five ocean-going vessels of up to 2,000 TEU feeder ships and conventional cargo ships of 35,000 tonnes deadweight.

KYAUKPHYU DEEPSEA PORT

A more ambitious project is the **Kyaukphyu** port, which will serve the Special Economic Zone being developed. The port terminals will be located at two sites, on Made Island – with a proposed quay length of 2,500m and a terminal depth of 600m (150 hectares) and on Yanbye Island, with a proposed quay length of 1,600m and terminal depth of 600m (96 hectares). A causeway connecting Made Island to the main Yanbye Island will also be constructed.

The Myanmar Oil and Gas Enterprise (MOGE) and China National Petroleum Corp (CNPC) have been jointly implementing a tanker port on Made Island for Myanmar-China crude pipeline. The tanker Port is 480 meters long and can accommodate 300,000 DWT vessels. The tender decisions for SEZ port development and project implementations have been delayed for several reasons.

Being a deep sea port, Kyaukphyu will be able to handle ultra large container ships (ULCS) and very large crude carriers (VLCC). The port was planned as a gateway for China to accept crude imports and avoid the Straits of Malacca. However, moving cargo is out of Kyaukphyu to China or even Myanmar hinterlands will depend on more developed road connectivity.

DAWEI DEEPSEA PORT

The ambitious SEZ project at Dawei includes the construction and development of a deep sea port to accommodate 50,000 DWT and 300,000 DWT general/container vessels and break bulk vessels.

As such, two deep sea ports are planned. Deep sea port (North) will have area of 2.7 sq. km., with a 1.5 sq. km. cargo yard and 1.4 sq. m. ship building yard. Deep sea port (South) will have area of 3 sq. km., with a 1.5 sq. km. ship agriculture yard. Total handling capacity of the port will be 200 million tonnes, of which 45 million tonnes will be via 3.2 million TEUs.⁵²

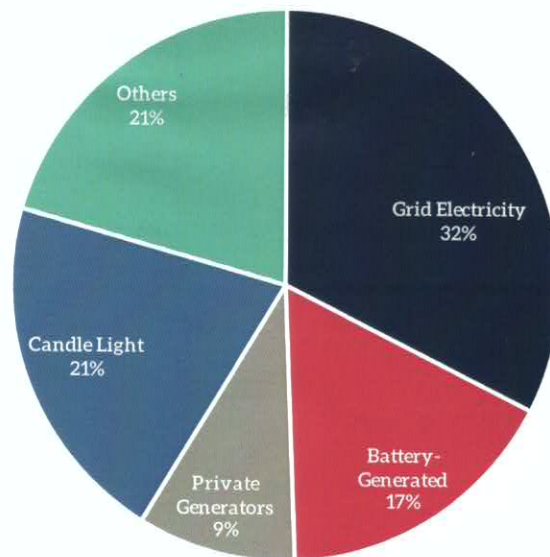


Yangon Port

Exhibit 51

Source of Lighting

Source: Census 2014



The port is a bold strategic development that will rely on the industrial areas to surround it to provide the market for the port. Thailand, proposed as the market for the economic zone, is too far from the port, which is better supported by Map Tha Phut and Laem Chabang and not well enough connected to the port by road.

Dawei is proposed to lessen the growing problem with shipping traffic jams at the Strait of Malacca. When it is completed, the project would reduce logistical and labour costs for GMS members as well as creating job opportunities for Myanmar people.

ELECTRICITY GENERATION

The lack of reliable electricity supply in Myanmar is one of the country's biggest weaknesses. Installed generation capacity is 4,900 megawatts (MW)⁵³, and current output is only 14 million kWh and demand dramatically outstrips both. Major causes of low utilization include heavy reliance on seasonal hydropower, historically poor maintenance of infrastructure, and limited ability to evacuate power (manage flow). While Myanmar produces 14 million kWh worth of electricity, only 11 million kWh are delivered to end users due to transmission and distribution losses.

Moreover, electricity supply is irregular and blackouts are common: even in downtown Yangon, a majority of households surveyed witnessed one to three brownouts per month during the summer season, and only slightly over a quarter of the households

received regular electricity supply during the period. According to our survey conducted in June 2015, 8 percent households saw blackouts lasting up to three hours⁵⁴. Unreliable electricity forces many businesses and households to install their own generators, at significant cost and reduces Myanmar's attractiveness as an investment destination for manufacturing.

With a population of 51.4 million, Myanmar's per capita electricity consumption was only 216 kWh per year in 2015. This figure, while up from the 2011 figure of 126 kWh, remains the lowest in Southeast Asia. However, with electrification rates improving, industrial bases developing and investment growing, electricity needs will become higher. In the future, the need for electricity will become dire. ADB noted that the future power demand was to double to 25 billion kWh in 2018-19.

Only 32 percent of all households are connected to the grid. Others rely on private generators or batteries, and on more primitive forms of lighting and cooking, such as firewood and candles. A lack of maintenance has led to transmission losses of as much as 20 percent. The power sector has recently undergone a privatisation process that is intended to improve the electricity generation. However, these privatisations are in their early stages and the effects are too early to be assessed.

Myanmar's power is predominantly generated from hydropower, gas and coal, representing over 62 percent, 35 percent and 2 percent of the total power generation respectively. In the recent past, the reliance

on hydropower is more dramatic - with the recent launch of several turnkey gas projects in the last two years, the share of electricity generated by hydropower has come down from 72 percent to 62 percent. Due to the lack of water during the dry season, hydropower generation has not been able to operate at full capacity and therefore electricity supply has been unstable during that time.

To reduce the country's reliance on hydropower, the Ministry of Electric Power (MOEP) in its five year plan (2011-12 to 2015-16) set an ambitious target to add 1,740MW of gas-fired generation capacity by 2015-16, which will increase the gas-fired capacity to over 50 percent of the total generation mix. New gas supplies will become available from the Shwe Gas Supply pipeline (see below), and the proposed development of gas fired power plants in Myanmar make economic sense. However, there will remain a big medium-term problem with electricity supply in Myanmar, as there will be only modest additions to hydroelectric and gas capacity in the period from 2014 to 2019. One exception was a recent (December 2015) MoU between MOEP and France's Electricite De France (EDF) for phase three of the Shweli hydropower, wherein EDF will invest US\$1.4 billion in for a 1,050 MW plant.

Meanwhile, some hydro that is now exported may be switched to domestic use. While exports of electrical energy to China have been falling in recent years, Myanmar still sells around 1,500 million kWh of electrical energy to China in 2014, earning around US\$47 million. These exports were contracted under power purchase agreements whereby China builds hydropower dams in Myanmar and claims a share of electricity for a nominal sales price (around 30 cents per kWh). For instance, at 600MW Shweli (Phase I),

50 percent of the electricity generated is exported to China, and 90 percent of the electricity generated from 408MW Dapeyin I & II plants is exported to China⁵⁵. These exports should be renegotiated and slowly phased out. Meanwhile, some old gas-fired units should be updated with more efficient new equipment so they will be able to produce more electricity from the same amount of gas.

In October 2014, several memorandum of understandings (MOUs) between the Ministry of Electricity and foreign investors were signed for feasibility studies regarding coal-fired and solar plants. Japan's Marubeni will work with Thai PTT's subsidiary - Global Power Synergy EGAT to conduct a feasibility study for a 1,800 to 2,000 MW coal-fired power in Myeik.

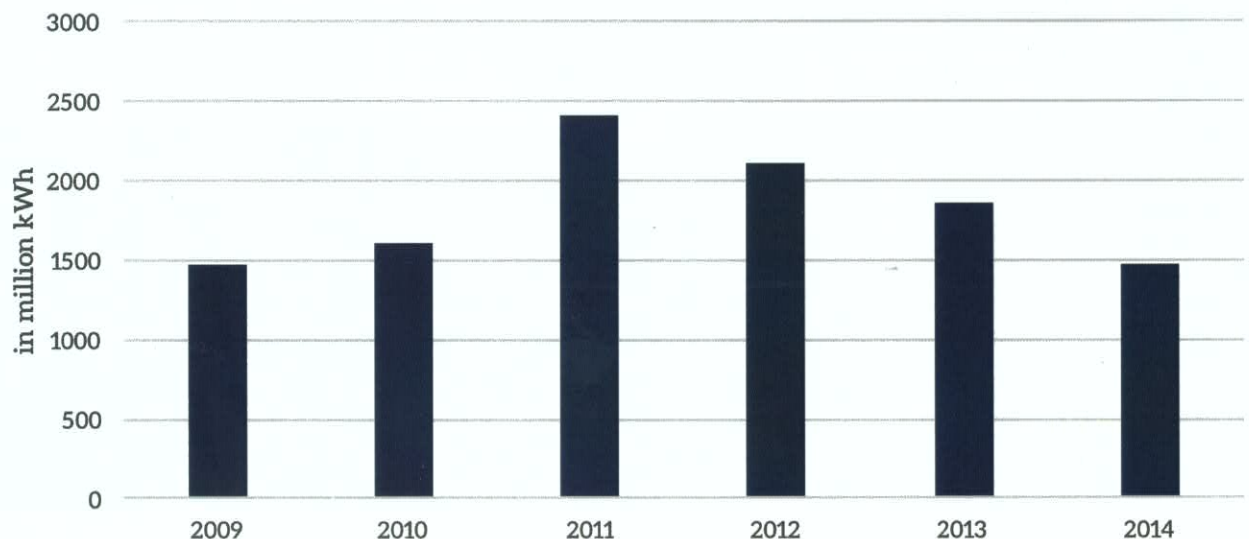
Thai Ratchaburi Electricity Generating Holding will team up with its home country partner Blue Energy Environment Co. Ltd. and two local partners for a coal-fired power plant with capacity of 2,460 MW. Green Earth Power from Thailand signed a new MOU to conduct a feasibility study of a 210 MW solar plant.

Recently, Singapore's Asiatech Energy Private Limited and Thai Toyo Corporation have signed agreements with Myanmar lighting IIP Co and MEPE, respectively, to develop a 230 MW and a 120 MW gas-fired power plant in Yangon. U.S-headquartered APR Energy PLC will build a 100 MW gas-fired power plant in the central Mandalay region. Toyo also made plans to invest US\$2.7 billion in a 1,280 MW coal-fired power plant in Mon state. However, coal-fired power plants are controversial and local protests are especially fierce towards coal-fired power stations.

Exhibit 52

Electrical Energy Sales by Myanmar to China

Source: UN



HYDROPOWER

Myanmar has 20 grid-connected hydroelectric power plants; all operated by Hydropower Generation Enterprise (HPGE). Their installed capacity is 3,271 accounts for 66 percent of national capacity. In the last four years, 700 MW of hydropower capacity has been added, 271 MW of which are from private or JV hydropower projects.

During the wet season (June-September), the power plants are able to generate at optimum capacity. However, in the dry season, insufficient water storage leads to production drops that necessitate significant load-shedding. Firm capacity is thought to be halved during the dry season.

The exploitation of hydroelectric sites has been a thorny issue with local communities. In 2015, the Snowy Mountains Engineering Corporation (SMEC), an international consultancy tasked with conducting assessments for Mongton Dam has faced significant local opposition since holding its first public consultations on the project in March 2015. At 241 meters in height, the 7,000 MW dam is the largest of six dams planned along the Salween River. Supporting various hydropower projects in Myanmar is the IFC, which has noted Myanmar is only tapping into less than 5000 megawatts of its 100,000MW hydropower potential, and "unleashing this potential could turn Myanmar into the largest energy producer in the region with the ability to supply electricity to neighbouring countries".

There is a wide gap between international investors and local communities as investors prefer high mega dams as they offer a better rate of return. However, high dams displace more people, and local groups prefer dams of medium height or even run of the river dams that do not store large amounts of water and produce much energy.

The incoming NLD party is of a similar mind. In its manifesto, it has already declared, "the construction of the large dams required for the production of hydropower causes major environmental harm. For this reason, we will generate electricity from existing hydropower projects, and repair and maintain the existing dams to enable greater efficiency." Instead, it will focus on small productions from mini-hydropower systems.

Exhibit 53

Hydropower Stations in Myanmar

Source: NCRA Research

Hydropower stations	MW
Yeywa	790
Shweli-1	600
Paunglaung	280
Tapein-1	240
Baluchaung-2	168
Upper Paunglaung	140
Thauk-ye-khat	120
Thauk-ye-khat-2	120
Cheebwenge	99
Mone	75
Shwegyin	75
Kyee-on-Kyee-wa	74
Kun Chaung	60
Kinda	56
Keng Taung	54
Baluchaung-3	52
Namcho	40
Phyu Chaung	40
Others	188
Total	3,271

GAS-FIRED POWER STATIONS

The state-owned Myanmar Electric Power Enterprise (MEPE) owns eleven gas-fired power stations, with a installed capacity of 1,200 MW, which account for a quarter of national grid capacity. These plants use gas produced in the offshore fields of Yadana and Yetagun, and onshore fields operated by the Ministry of Energy. The output from these plants has been below expectations owing to low calorific value of local gas (high Nitrogen content) and low pressure without compression.

Since 2013, the government has allowed private sector participation in gas power plants. In 2013 and 2014, around 373 MW of capacity has been added from such power plants. In addition, four turnkey projects, totalling around 260 MW were commissioned by the government from major international players, such as Aggreko and APR.

For instance, in February 2014, APR Energy won a bid to develop a gas-fired plant with 100 MW capacity in Kyauktse, in Mandalay region of central Myanmar. APR became the first American company to sign a contract with the government of Myanmar since the United States lifted sanctions on the country in 2013.

Under the turnkey nature of the project, APR imported 68 of gas-fired generators, worth US\$1.4 million each (APR says it has spent between US\$80-100 million on the project), and finished it in three months. This has been a temporary solution for the electricity needs of Kyauktse, and the generators will stay in Myanmar for only 18 months.

The government paid US\$30.5 million to rent APR gas-fired engines, and an additional 700 million Kyats (about US\$725,000) for installations. In November 2015, APR then announced that the project has been extended through 2016. After initially commissioning 82MW of generating capacity in April 2014, APR Energy installed an additional 20MW during the first quarter of 2015 to help offset the reduction of hydro-power during the annual dry season in spring.

Exhibit 54

Gas-Fired Power Stations in Myanmar

Source: NCRA Research

Name	Installed Capacity
State-owned Plants	
Kyungchaung	54.3
Mann	36.9
Shwedaung	55.3
Mawlamyaing	12
Myanaung	34.7
Hlawga	208.7
Ywama	122.3
Ahlonge	275.2
Thaketa	145.6
Thaton	51
Ywama (EGAT)	240
Private-owned Plants	
Ahlonge (Toyo Thai)	94
Hlawga (Zeya & Co)	26.65
Ywama (UPP)	52
Thaketa (Max Power)	53.58
Mawlamyaing (Myanmar Lighting)	152
Turnkey Plants	
Kyauk-Tse (APR)	100.3
Kyauk-Phyu (V Power)	49.92
Myingyan (Aggreko)	103.04
Dawei (Kanpauk)	6
Total	1873.49

MYINGYAN GAS PROJECT

In a landmark 'fast-track' project sponsored by the International Finance Corporation (IFC), the government has tendered a power plant in Central Myanmar to Sembcorp Utilities Pte. Ltd. The company is currently developing a 225MW Combined Cycle Gas Turbine (CCGT) power plant in Myingyan Township, Mandalay Region which will come online in March of this year.

Sembcorp has been selected by the Ministry of Electric Power (MOEP) of the government of Myanmar (GOM) as a private sector Independent Power Producer (IPP) to develop the Project on a Build, Operate and Transfer (BOT) basis. The international financing was provided by the Asian Development Bank (ADB) and IFC. The project will operate on natural gas provided by the Shwe Gas Fields, and the electrical capacity and electricity generated will be sold under a 22-year Power Purchase Agreement (PPA), as agreed with MEPE.

This plant is a landmark deal because the Myanmar government has been sorting through various PPA variants. Since December 2012, the ADB has been providing ad hoc support to the MOEP on drafting and development of a master power purchase agreement for independent power projects (IPPs) and

providing capacity development on key elements of the agreement, including tariff design, operational requirements, and legal issues. The above list of privately owned plants are notable for their smallish size: work on power plants slated to generate about 300 MW of electricity have been stalled, waiting for government approval for a standard PPA.

Two larger plants, whose combined capacity is 1,030 MW, are currently being built in Thaketa and Hlawga, with help from South Korea's BKB and China's Hydrolancang respectively. However, further development of gas-fired power plants in Myanmar will be restricted by Myanmar's low gas production (for domestic use) and lack of facilities for imports.

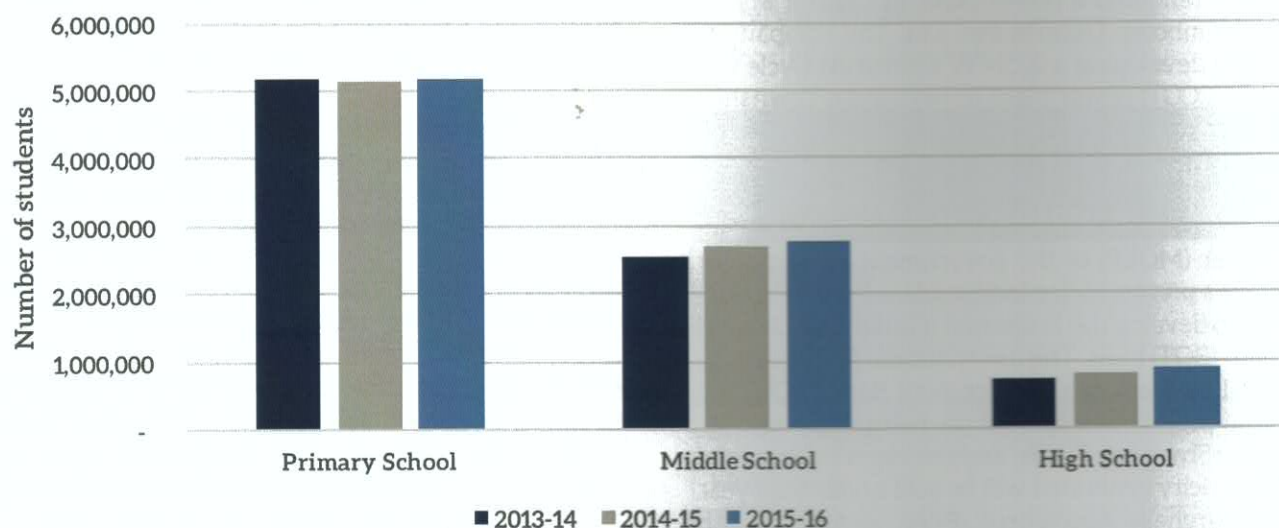
Gas-fired power plants in Myanmar use both liquefied petroleum gas (LPG) and liquefied natural gas (LNG) as fuels. LNG is typically delivered in super-tankers which are very large - up to 12 meters in draught and LNG require specialised storage facilities on shore.

As noted in the sea ports section above, currently, Myanmar does not have not deep water ports capable of handling LNG ships, thus limited further development of gas-fired power plants in Myanmar. However, it should be noted that Sumitomo Mitsui is exploring the feasibility of a US\$700 million receiving facility for LNG in offshore Thilawa/Yangon.

Exhibit 55

School Enrollments

Source: Ministry of Education



INSTITUTIONAL INFRASTRUCTURE

EDUCATION

While the Constitution of Myanmar guarantees that “the Union shall provide a free, compulsory primary education system,” there have been debates in recent months about whether to extend this free compulsory education to middle and high school levels. In Myanmar, thanks to the current free primary education system, school enrolment in primary school is high, while subsequent enrolment figures fall off dramatically.

In 2014-15, budgeted spending for education was 5.4 percent of the total government expenditure, amounting to Ks 1.101 trillion. The education budget has increased significantly since 2010-12 when it was 310 billion Kyats and 2012-13, when it was 639 billion Kyats. Most of this budget is spent on basic education.

The education sector is known for a number of systemic problems: enrolment rates are low, pass-through rates from primary to middle school are poor. A recent study noted that, “the education system is characterized by poor quality, out dated pedagogy and insufficient geographic coverage, with rural and border areas being poorly served” as well as rote learning⁵⁶.

Teachers

There is a chronic shortage of teachers. There are around 8.7 million students in basic education (primary school, middle school, and high school) and only 300,000 teachers, implying a student teacher ratio of 29:1. However, this number belies severe shortages in the urban areas as in small schools in rural areas have student-teacher ratio of 3:1. In popular public schools in urban Yangon, the student teacher ratio is around 50:1.

In addition, there are vacant positions for school teachers as the government has failed to fill around 60,000 teaching positions. Most of these vacancies (27,000 teaching posts) are in primary school, and the Ayeyarwady region has the most severe shortage of teachers. A basic assessment of Burmese education system shows that the quality of instruction, not access, is the biggest issue. The shortage of teachers leads to lack of effective engagement in classrooms, which in turn leads to higher dropout rates.

The government has relaxed hiring rules and initiated programs in which the recently-retired and pensioned teachers are rehired under two year short-term contracts. However, there is very little interest from retired teachers in these jobs.

HEALTHCARE

"National Health" is enshrined in the Constitution, which gives exclusive legislative and administrative powers to the Union government for public health. Hardly any decision-making power has been delegated to lower levels in the Ministry of Health, and the planning and budgeting of public health sector remains centralized.

In 2014-15, the Myanmar government's budgeted spending for health was 3.26 percent of total government spending, amounting to just Ks 662 billion. Indications are that the allocation of health spending continues to be based on incremental year-on-year growth, rather than a review of health conditions and needs⁵⁷. After decades of stagnation in the budget for public health, the national health budget has dramatically increased over the last few years from 92 billion Kyats in 2010-2011. While this is a substantial increase, health spending as percentage of general government spending (GGE) still only amounts to a half or a third of the average amount spent by other countries in the region on healthcare.

Besides increasing the public health budget, the government of Myanmar has started a more structural measure to improve the quality of public health care. In its Framework for Economic and Social Reforms (FESR), which is the government's major policy document for the 2012-2015 period, the government attempts to update its overall health strategy, to re-

view current health policies and the current National Health Law.

An important decision for the incoming government to make is whether to devolve more healthcare spending to local and regional governments. Currently, regional government does not have a line budget item or individual minister portfolio for health – decisions and budgets are still decided by the government in Naypyitaw.

Quality of Healthcare

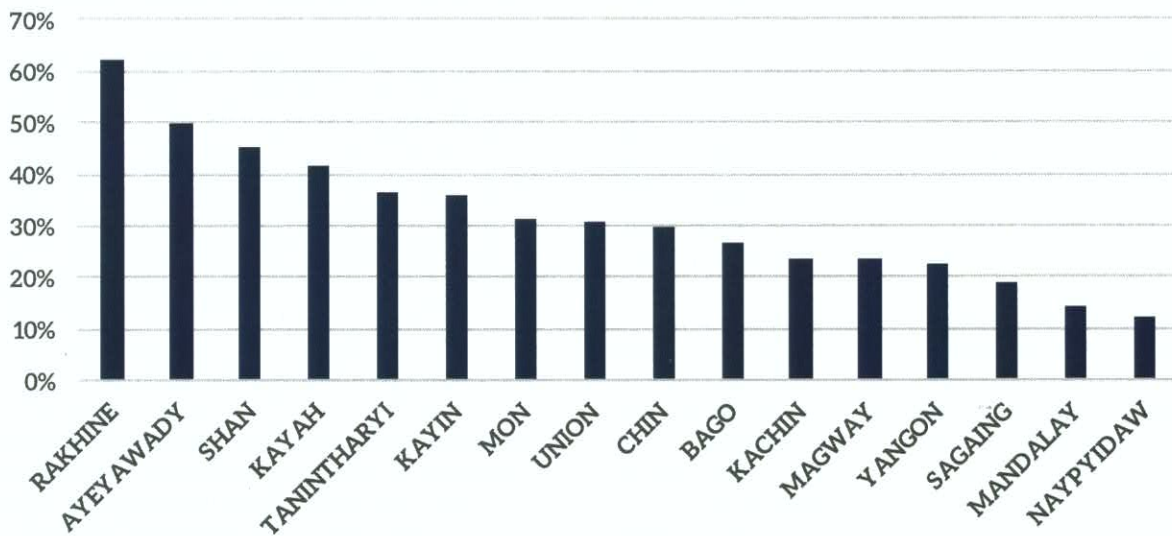
On average, a child born in Myanmar today can expect to live 6 years longer than a child born 25 years ago. Births attended by skilled health staff have increased from 46 percent to 71 percent in the same period⁵⁸. However, much remains to be done. An infant mortality rate of 62 per 1,000 live births exists, according to the latest census. This figure has largely remained unchanged since the late 1990s, and remains double or triple the number of regional peers.

There is substantial room for improving the quality of healthcare. Myanmar has fewer hospital beds per capita than any other Southeast Asian country⁵⁹. Regional inequality is also significant. A resident of Yangon can expect to live 10 years more than a resident of Magwe or Ayeyarwady, where infant mortality is also nearly double. Part of the reason for this is large income inequalities between those regions.

Exhibit 56

% of Population without access to Improved Water

Source: Ministry of Education



ACCESS TO WATER

Myanmar has four major waterways, and water resources are considerable. Myanmar receives 19,000 cubic meters per capita of renewable fresh water each year, about 9 times more than China, 16 times more than India, 5 times more than Vietnam, and 30 times more than Bangladesh.

Providing safe and reliable access to drinking water is one of the main functions associated with modern government. Myanmar's government has struggled with delivering this goal. In Myanmar, only 70 percent of the population have access to water from an improved source (for drinking water) but access can be uneven and differs greatly by season, by geographic location and in terms of the quality of the water obtained.

Only 16 percent of urban dwellers and 6.2 percent of rural inhabitants have access to publicly delivered tap water grid, and even in urban Yangon, most households and businesses rely on tube wells (boreholes) which are detrimental to urban planning/ground-water management. In corybantic Rakhine state, a whopping 62 percent of the population does not have access to "improved water resources", defined as tap water, tube or protected ground-wells, while agrarian Ayeyarwady region is totally unconnected to the water grid⁶⁰.

Even in Yangon, the government's water supply is inadequate. Daily, 205 million gallons of water were supplied to urban Yangon, which has around five million residents: thus, on average, each user can use around 40 gallons of water. On average, a person uses between 80 to 100 gallons of water per day, suggesting that even for downtown Yangon, government water supply is inadequate.

One problem is that responsibility for delivery of drinking water is divided between various municipalities for urban supply, and the Department of Rural Development (DRD) for rural supply. In addition, there is no responsible ministry at the union government level to coordinate development of water grids. This has proven to be an uphill battle in industrial zones, where many foreign investors demand steady supply of water, and industrial zone developers cannot meet the supply solely via their own boreholes.

WASTE MANAGEMENT

Currently, there are dire problems in the Municipal Waste Management systems even in urban areas due to a lack of equipment (e.g. vehicles) and personnel, improper collection and management of disposal sites. Disposal sites are mostly run as semi-landfill systems, and awareness of waste management is low. There are currently no recycling facilities in Myanmar.

The feature of solid waste collection in Myanmar is labour-intensive work and mainly relies on manual labour and non-specialized vehicles. Waste collection systems include block collection, communal depot collection, house-to-house collection, limited collection and street sweeping. Currently, recycling of municipal waste is not fully nor systematically developed as the budget allocation covers only routine works. Also, a framework for hazardous waste management has yet to be developed in Myanmar.

In addition, the main toilet facility in Myanmar is improved pit latrine (water seal), according to the census, with 72.2 percent of households reported using this facility; only 2.1 percent of the households in Myanmar have flush toilets. It is also important to note that 14.4 percent of households do not have a toilet facility. The prevalence of communicable diseases in Myanmar are caused by the lack of access to clean drinking water and sanitation facilities.

SPECIAL ECONOMIC ZONES

In the near future, increased strains on infrastructure will come from three special economic zones being planned by the government in coastal Myanmar - at Thilawa near Yangon, at Dawei in southern Myanmar near Thailand, and at Kyaukphyu in western Myanmar near the Shwe gas pipelines being developed by China. The term 'Special Economic Zone' or SEZ was borrowed from the Chinese, who in turn modelled their SEZs on 'Export Processing Zones' in other countries. In Myanmar SEZs, a company which exports more than 75 percent of its products abroad will have preferential tax treatments. The SEZ law has recently been updated with the technical assistance from Nippon Koei Consulting to better reflect exigencies of Myanmar's industrial sector.

Managed by a Japanese consortium, the Thilawa SEZ is likely to be the first of these special economic zones to come online and is also the closest project to the trade hub of Yangon. The industrial zone is 38km away from Yangon airport, 23km away from downtown Yangon and 18km away from the Port of Yangon. The Thilawa SEZ covers an area of approximately 2,400 hectares, with 400 hectares considered Class A. Phase 1 of Class A Project (around 189 hectares) was completed in mid-2015, although some land compensations are still ongoing.

Thilawa successfully completed its local fundraise in April 2014. Share sales in the local Myanmar consortium were oversubscribed by about five times. The company, Myanmar Thilawa SEZ Holdings Public Limited (MTSH), sold out 2.145 million shares allotted for the public at par value of 10,000 Kyats each, raising around US\$20 million. This was the first truly

widespread public offering in Myanmar, as 182 bank branches (in 48 townships) were used for the share sales. When the company's over the counter (OTC) share sales opened in the following quarter, the trading price have jumped to 15,000 Kyats due to strong demand, and by October 2015, just as MTSH mulls listing on the Yangon Stock Exchange, the prices have touched 50,000 Kyats per share.

MTSH was formed by a Myanmar consortium comprising nine prominent local businesses. At the conclusion of the IPO, the public owns 55 percent of the company, while the nine businesses own 45 percent. The company will participate in the Class A Project, an industrial park development to be located in the Class A Area within the Thilawa SEZ. The Class A area covers approximately 400 hectares out of the 2,400 hectares total land area of the entire Thilawa Special Economic Zone. MTSH will hold 41 percent of the shares in a Myanmar-Japanese JV company developing the project. The JV Company will have an initial paid-up share capital of US\$50 million, with MTSH, the Thilawa SMC and Japanese consortium of MMSTD holding 41 percent, 10 percent and 49 percent of the paid-up share capital respectively.

Land rental at Thilawa was US\$70 per sq. m. and 39 companies, most of them Japanese, have already applied to do business in Thilawa SEZ. Altogether, they have pledged to invest nearly US\$350 million in building factories at Thilawa, and 15 have already commenced their operations⁶¹. The biggest investors are Japan's Golden Dowa, a waste management consultancy, which plans to invest US\$36 million and US's Ball Corporation, a soda can manufacturer, which plans to invest US\$33 million.

Dowa is planning to build a solid waste management plant in Thilawa, Myanmar's first such facility. France's Lafarge also opened a 20,000-ton cement re-packing and storing factory there, along with two local companies: Aung Myin Thu and My Associates⁶².

Compared to Thilawa, the delay of the special economic zone at Dawei are instructive. The Dawei SEZ, in the southern tip of Myanmar, will have a deep sea port plus an industrial estate that covers 205 sq. km. (50,675 acres)⁶³. The ambitious project was drafted to include road, rail, and pipeline connectivity to the whole of continental Southeast Asia via Kanchanaburi and Bangkok in Thailand.

Meanwhile, the SEZ itself was to focus on heavy industry, including steel milling, oil refining, petrochemical manufacturing, and fertilizers, while also anticipating the arrival of oil tankers from the Middle East. Its proximity to the Thai border make it an ideal docking station for goods to make their way overland into the southern Thailand. Dawei is also perfectly suited as a supply base for nine oil and gas blocks in the Gulf of Martaban.

The first phase of construction was initially planned for completion by the end of 2015 but has already faced numerous delays.

Initially envisioned as Myanmar's first SEZ back in 2005, when the previous government signed a deal with Thaksin Shinawatra, the former Thai leader, the project had developer problems. In November 2013, work was stopped as the governments of Myanmar and Thailand questioned the competence of its current developer, the Italian-Thai Development Company (ITD) and took back the land concession⁶⁴. The Myanmar government defended the move by saying the project is quite extensive and ITD had not been able to invest as substantially as the government had hoped. The project is already running years behind schedule after ITD failed to secure private investment and agree upon a power source for the zone.

The government has solicited international experts. It engaged Ernst & Young to conduct a due diligence assessment on whether ITD has fulfilled its investment goals and plans, and engaged Roland Berger as project management officer for a selective bidding process (limited tender) that it is planning to undertake to rehabilitate the project. Under the new terms, ITD will have to compete with other international investors.

The Myanmar government has been courting the Japanese, who are currently developing Thilawa to step in at Dawei, and asked Japan's Ministry of Economic, Trade and Industry (METI) to review the project.

In October 2014, the Thai and Myanmar governments agreed to revitalize the project by letting more Thai firms operate the SEZ when Thai prime minister Prayut Chan-o-cha paid a state visit to Myanmar. Thailand has agreed to issue 1 billion Thai Baht in subsidies and 4 billion Thai Baht in loans to build Mae Sot-Myawaddy Road and Kanchanaburi Road respectively in January 2015.

If all the kinks are ironed out, Dawei will be structured similarly to Thilawa: two special purpose vehicles will be formed. SPV-1 will be formed 50-50 between Thailand's Neighbouring Countries Economic Development Corporation (NEDCA) and Myanmar government's Foreign Economic Relations Department (FERD).

SPV-2, which will take charge of operations, will be similar in composition and function to MTSH. Right now, however, these holding structures remain distant dreams. Three extensive studies, one via ERIA-Mekong-India Corridor initiative, another via METI, and a third under ERIA-Japan Research Institute, were launched to assess feasibility and EIRR of the project.

The government showed it has learnt the lessons from ITD and Dawei when it unveiled the plans for

Exhibit 57

Dawei Road Map

Source: Government of Myanmar

	Time Frame	Area Under Consideration	Goals
Phase 1	5 years	2,500 acres	Small and Medium Industry/Light Industry, Small Port
Phase 2	6-10 years	4,000 acres	Steel Factory, Fertilizer Factory, Oil Refinery, a car factory
Phase 3	11-20 years	13,500 acres	Plastics Industry, Chemical Industry, Petrochemical Industry, General Industries
Phase 4	21-40 years	12,500 acres	Continuation of existing operations
Phase 5	41-75 years	All the remaining land	Continuation of existing operations

the third SEZ at Kyaukphyu (KPSEZ). In December 2008, China and Myanmar signed a deal to construct an oil pipeline at Kyaukphyu, signing a US\$2.4 billion loan deal to construct the 660 miles (1,060 km) pipeline from Kyaukphyu to Kunming in Yunnan province, China. These construction projects allowed China to directly obtain oil from the Middle East (via the port terminal at Kyaukphyu) and natural gas from Shwe Gas Fields in Myanmar, thereby avoiding shipping through the Malacca Straits.

An onshore gas terminal and pipeline was built by South Korea's Daewoo International in a consortium with state-owned Myanmar Oil and Gas Enterprise (MOGE) and others. From May 2013, the pipeline can pump up to about 12 billion cubic metres of natural gas annually, most of which will also go to China.

The SEZ project at Kyaukphyu was conceived to attract more Chinese businesses that will come with oil and gas pipeline projects. Kyaukphyu boasts a deep sea harbour and abundant oil and gas and marine resources; the SEZ will include a deep sea port, a 500 hectare residential area, and a 1,000 hectare industrial park. Textile/garment and construction material manufacturing industries will be the core focus of the Kyaukphyu SEZ, while a separately demarcated industrial park will be set aside for fishery processing – a historically lucrative industry in Myanmar.

With this in mind, the government began tendering process to develop KPSEZ in early 2014. A Singaporean bid evaluating consultancy, Creative Professional Group, was engaged in May 2014 and the government undertook roadshows for KPSEZ in Yangon

and in Singapore in July 2014. Requests for Proposals for three separate developments (Deep Sea Port, Industrial Park, and Integrated Residential Project) were issued in July-August 2015.

A majority of the applicants were Chinese companies: for the deep sea port, two Chinese companies, as well as one each from Myanmar, Switzerland, and Hong Kong applied. For the industrial park, three Chinese companies and a Thai firm applied. For residential projects, only three proposals were received, all from Chinese companies.

This has presented a dilemma for the government, who has undertaken the whole tendering process to thin out the large Chinese involvement with KPSEZ; it has gone through various bouts of soul-searching and while it admitted that it has already chosen the bid winners of the tender, their names had so far not been made public as of late December 2015. Two consortia led by China's CITIC won the tenders the development of the deep-sea port and the industrial zone. Meanwhile, a tender for the development of a high-class housing project was rejected as bids for the project did not meet with the requirements. CITIC's consortia include China Harbor Engineering Company Ltd., China Merchants Holdings, TEDA Investment Holding and Yunnan Construction Engineering Group. The only non-Chinese company included is Thailand's Charoen Pokphand Group (CP Group), and CITIC claims that two projects will bring approximately US\$10 billion in annual GDP growth and US\$15 billion in tax revenues cumulatively. In addition to special economic zones, three further internationally-backed economic zones are current-

ly being laid out; more Chinese investors are backing the economic zone at Muse.

Taiwan is planning an investment of US\$450 million (14 billion Taiwanese dollars) on an industrial project in the Ayeyarwady Delta. As anti-Chinese sentiment grows in Vietnam, Taiwanese investors are increasingly looking into moving their manufacturing centres into Myanmar in the medium term; a 1,400 hectare zone will be backed by TEEMA, Taiwan Electrical and Electronic Manufacturers' Association.

TEEMA's chairman, Guo Tai-chiang, said that Taiwan is keen to focus more on Myanmar to get greater access to the ASEAN market, which is set to launch a tariff-trading bloc among its 10 member countries at the end of 2015. Another advocate of Taiwan's business interests in Myanmar is Pou Chen Group, the world's largest contract manufacturer of footwear which has decided to invest US\$ 100 million to set up a plant in Myanmar in an effort to diversify its production centres after the recent wave of anti-China protests in Vietnam.

Meanwhile, Surbana, Singaporean architectural planners, who are already behind a couple of residential and town-planning projects in Yangon, are leading a Singaporean-consortium which is going to develop i-Land industrial park in Bago. The 400-acre park will be located on the highway from Yangon to Naypyidaw, fifteen minutes away from the planned Hanthawaddy International Airport; the industrial park will cater to light and medium industries, from

garments and textiles to electronics manufacturing. In the future, we sense strong interest from foreign investors, not just in building factories on Myanmar's special economic zones, but also in developing industrial estates themselves. This suggests that a significant increase in construction activity is set to take place.

Myanmar's rapid development and abundant availability of low-skilled cheap labor are expected to lead to further rises in investments. The whole of Myanmar's construction and infrastructure sector will be significantly dependent on the success of Thilawa and two future SEZs. Within these manufacturing laboratories, Myanmar's severe deficit in infrastructure, communications networks and industrial and commercial assets will be addressed. This will result in a lot of value creation in the country's construction and infrastructure sectors, leading to corresponding GDP growth.

Here too, a balancing act will be necessary. The export-oriented nature of Myanmar's special economic zones will help with the country's chronic trade imbalances. However, Myanmar will need to develop a manufacturing base outside of SEZs to address the demands of a growing domestic consumer base too. Likewise, the development of wider Myanmar will also mean applying the lessons learnt during the creation of these SEZs across the country. The country's lack of infrastructure networks and manufacturing assets will not simply disappear just because glittering SEZs rise on coastal Myanmar.

Exhibit 58

Notable Infrastructure Projects in Myanmar

Source: NCRA Research

AIRPORTS

The government plans to upgrade 30+ domestic airports. Major expansion projects are underway for Yangon and Mandalay International Airports. The USD 1.1 billion dollar, 12-million passenger Hanthawaddy Airport project some 50 miles north of Yangon is still planned. However, the project is delayed as the lead operator (Incheon, Korea) has dropped out, and the replacement developer had been found only in late 2014 (Yongnam, Singapore).



SPECIAL ECONOMIC ZONES

Three SEZs on coastal Myanmar are planned at Kyaukphyu, Thilawa, and Dawei, with the help of Chinese, Japanese, and Thai governments respectively. First phases at Thilawa and Kyaukphyu will cost US\$380 million and US\$270 million respectively. The Dawei project remains on ice.



HOTELS & TOURISM

Melia and Novotel have opened five-star hotels in Yangon in 2015, and Keppel Group has expanded its current hotel. Hilton Hotel group will open up to five hotels in Myanmar, starting with downtown Yangon Center-point Hotel. Accor Group will also open several hotels across Myanmar. We estimate each hotel investment to be in US\$30-80 million range. The government's tourism master plan will require spending US\$450 million. Currently, around \$1 billion in hotels are under construction.



OTHER ECONOMIC ZONES

Ten to fifteen local economic zones are planned across the countryside. Taiwan plans to invest US\$450 million on an industrial project in the Ayeyarwady Delta. A Singapore consortium is developing a 400-acre industrial park fifteen minutes away from the planned Hanthawaddy airport. Notable industrial real estate is being developed at Myotha in Mandalay and Muse on Chinese border.



BRIDGES

The government plans to build around twenty bridges with partial or full foreign aid. In Yangon alone, government plans four additional bridges. The most important, the bridge from Dala to Yangon, which was postponed in 2013 due to land speculations (Much of the speculation surrounded a housing project called "Myanko" that was allegedly being jointly developed by South Korean and Myanmar developers), has resumed. South Korea will provide \$138 million and Myanmar \$30 million for the bridge.



PUBLIC WORKS

Under the current budget allocations, which might increase FY2015 onwards, ministry of education is allocated US\$75 million to build and maintain schools; the Ministry of Health will spend US\$80 million to build hospitals, and the Ministry of Construction will spend US\$300 million annually for transport linkages. ASEAN and Asian Highway projects will be completed by 2020. ADB and Myanmar signed an \$80 million loan agreement to rehabilitate a major road in the Delta region.



RESIDENTIAL YANGON

There are two major mixed-use BOT developments in Yangon: Singapore-led Golden City project (US\$230 million) and Vietnam-led HAGL Yangon (US\$440 million). Yoma is planning a US\$350 million landmark project in downtown. Shwe Taung group plans to spend US\$500 million in Yangon in the next five years developing property. An additional twenty or so skyscrapers currently being constructed will add around US\$5 billion to infrastructure assets.



OIL & GAS

Thailand's PTTEP plans to spend US\$3.3 billion over the next five years to develop its onshore and offshore assets in Myanmar. Daewoo will spend US\$600 million in 2014-15 to finish its Shwe project. Additional spending is planned to rehabilitate existing projects. In 2014, the government approved exploration and drilling rights in 20 offshore fields, allowing supermajors to enter Myanmar. If new fields are discovered, oil rig projects will add around US\$1.5 billion per field to infrastructure assets.



YANGON 2030

Yangon's municipality predicts that Yangon will have to spend US\$4.5 billion in next fifteen years to build bridges, upgrade road, sewage and sanitation networks, implement a viable mass rapid transport system, and to build six satellite towns to cope with burgeoning population. A development plan for such a town, worth around US\$5-8 billion, is currently under tender process. The Ministry of Rail also hopes to plan ambitious mass transit systems for Yangon.



TELCOS

In 2013, the government granted two telecom licenses to Telenor and Ooredoo, hoping to increase mobile penetration in Myanmar. So far, two have altogether spent nearly US\$1 billion, and industry insiders predict that each of the companies will have to spend around US\$500 million more in building cell towers and networks. Japan's KDDI plans to invest up to US\$2 billion in Myanmar's telco sector, and a fourth operator might also have to spend around \$500 million.



ENERGY INFRASTRUCTURE

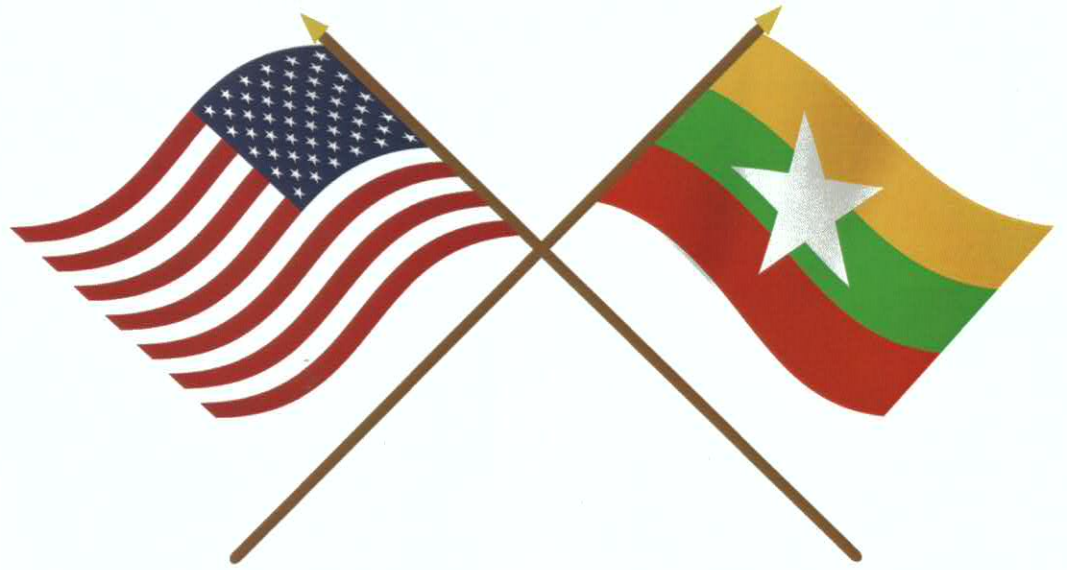
In December 2013, Asian Development Bank approved a US\$60 million loan to improve electricity linkages and networks. In 2015, ADB extends US\$ 80 million loan for electricity transmission upgrade. Sumitomo Mitsui is exploring the feasibility of a US\$700 million receiving facility for LNG in offshore Thilawa. France's EDF plans to spend US\$1.4 billion for a 1,040 MW hydropower plant.



PRIVATE COMPANIES

Coca Cola and Unilever each plan to spend US\$1 billion in Myanmar in the next decade, with around US\$200 million to set up plants within next two years. Siam Cement (SCG) plans to invest US\$400 million to build its first "clean and green" cement plant in Mawlamyine, 300 km southeast of Yangon.





AMCHAM MYANMAR CHAPTER

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Oil & Gas

Foreign investment accelerates and new discoveries abound on the Arakan coast but global forces might make them unviable.

IN July 2014, Myanmar became a candidate member of the Extractive Industries Transparency Initiative (EITI), a global transparency standard which recommends that the identities of individuals who own and control oil, gas and mining companies are published. Myanmar's accession report was submitted to the EITI International Secretariat on 2 January 2016.

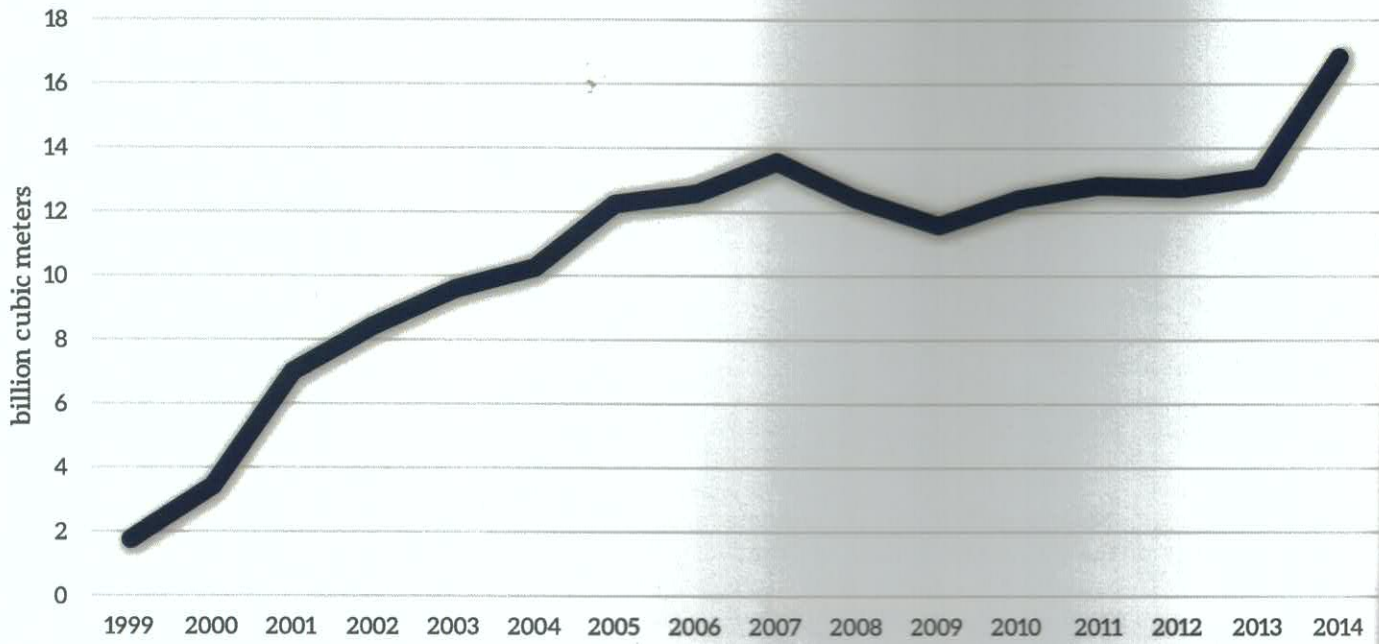
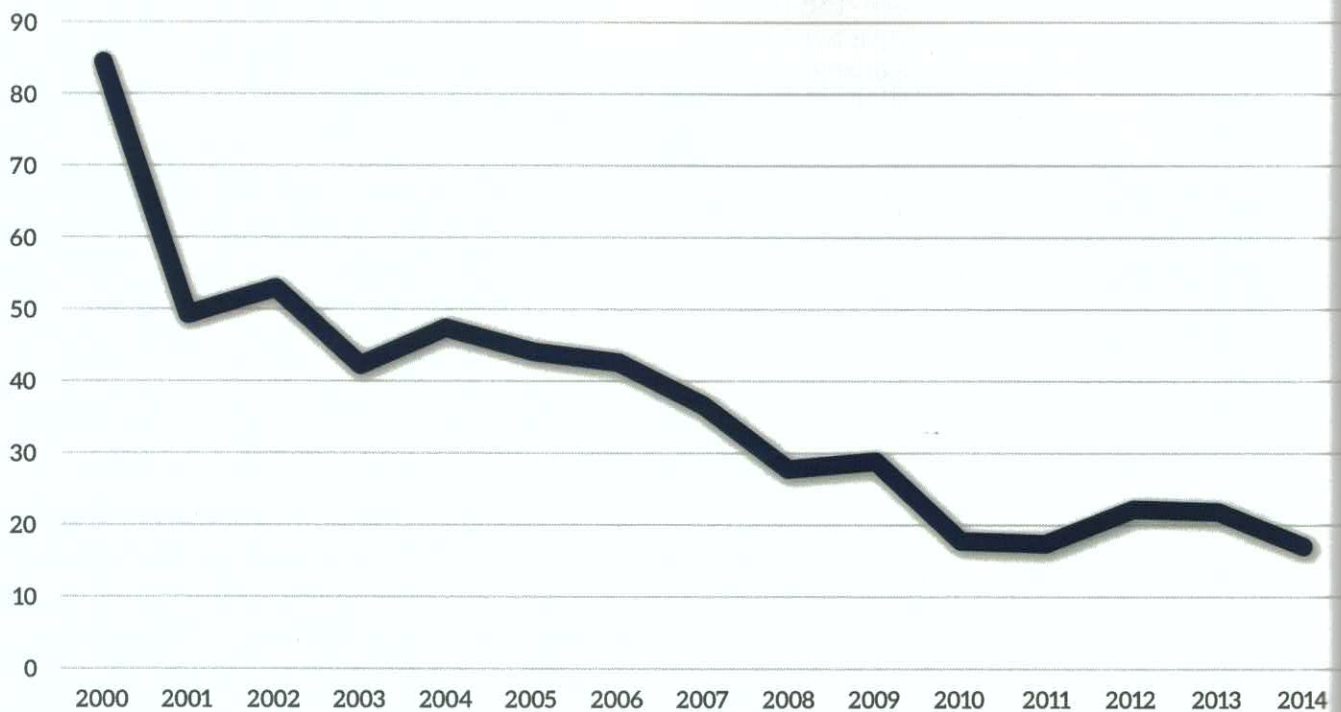
Domestic demand for crude oil is 60,000 barrels per day and for gas is 590 million cubic feet per day. However, only 33 percent of crude oil demand and 41 percent of gas demand is met through domestic supplies. According to data from the Ministry of Energy reported to EITI, Myanmar produced only 42% of gasoline and 11% of the diesel consumed in the fiscal year 2013-14. The shortfall was met by importing 97 million gallons of gasoline and 330 million gallons of diesel. Myanmar has large gas reserves, but there is insufficient supply to meet local demand. This is caused by the previous government selling gas to China and Thailand to raise funds while international sanctions were in place.

Myanmar is thought to have nearly 90 trillion cubic feet (tcf) of gas reserves, mainly offshore. Currently only around 10 trillion cubic feet of gas are left in reserves, down from around 19 trillion cubic feet in 2006 (the peak reserves year). At current production rates, the reserves-to-production ratio is 16.8 years, the country's lowest in recorded history.

As of September 2015, there are 93 FDI projects in the oil and gas sector in Myanmar, comprising 40 percent of total FDI investments. Roughly 30 foreign companies, mostly from Southeast Asia and China, dominate FDI in oil and gas sector, although western oil majors, such as Chevron and Total also have operations in the country. In more recent oil and gas auctions, western firms – such as Royal Dutch Shell, ENI, and ConocoPhillips – have gained considerable concessions both onshore and offshore.

While small onshore oil production is also found, to the tune of around 50-60 million cubic feet per day (mmcfd), the international oil majors are more attracted by Myanmar's offshore. Offshore, there are only four major O&G projects, but offshore Myanmar is largely unexplored due to the government's technical limitations, and therefore promised to hold large reserves, to the degree of around 90 trillion cubic feet (2.6 trillion cubic meters) of natural gas.

Myanmar's natural gas production is at its highest in history. In 2014, the country produced 16.8 billion cubic meters of natural gas. From 2010 to 2013, Myanmar averaged 12.7 billion cubic meters in production annually. In 2014, Shwe exported around 2.2 billion kilograms of natural gas (3.2 billion cubic meters) to China, earning around US\$1.3 billion in export revenues.

Exhibit 59**Natural Gas Production in Myanmar***Source: Ministry of Energy***Exhibit 60****Reserves-to-Production Ratio***Source: BP Statistical Review*

On the flipside of these increased revenues is that Myanmar's reserves-to-production ratio (R/P) is at its lowest on record. At the current rate of production, Myanmar will run out of natural gas in 16.8 years, if no new discoveries are made. The government is aware of this problem when offshore exploration blocks were auctioned off in 2013 and 2014.

Alarm bells were sounded earlier in 2015 when Yetagun, one of the four current offshore projects, declined in productions. The rig, currently operated by Malaysian state firm Petronas, has been producing for 15 years, and production rates have dropped to 360 million cubic feet per day (mmcf) – below 400 mmcf minimum required under the sales agreement with Thailand. In the past, the Yetagun field exported between 400 and 460 mmcf to Thailand but starting in mid-2014, production fell to about 360 mmcf.

A review is currently underway, which can see production from Yetagun decrease to 200 mmcf. This is a worrying sign, not only for Myanmar but also for Thailand. At present, around 20 percent of Thailand's natural gas demand is met through Myanmar's gas fields, a share which will grow in the future as Thailand's R/P ratio is now quite low at 5.7 (suggesting Thailand will run out of natural gas by 2020).

The shortfall from Yetagun will be covered by Zawtika project which came online in 2014. Shwe project also added to increased production in 2013-14. However, it should be noted that after Zawtika was discovered in 2007, no major discoveries have been made in Myanmar's oil and gas sector.

With this in mind, the government has recently solicited foreign companies to develop onshore and offshore oil fields. In March 2014, 20 offshore blocks (10 deep water and 10 shallow water) were awarded to 18 international and local investors.

After a long delay, the first four offshore production sharing contracts (PSCs) were signed in December 2014, and the final signings were done in early 2015. The companies now need to complete environmental and social impact assessments and they will probably be able to start exploration in early 2016. Altogether, investors have pledged to spend around US\$4.4 billion to explore these 20 blocks, with Royal Dutch Shell alone promising to spend US\$1.2 billion to develop three blocks and BG/Woodside consortium pledging US\$1 billion.

However, with the oil and natural gas prices plummeting, it is doubtful whether this amount of money will actually be spent as supermajors cut their exploration budgets and grimly note that most of newer discoveries will not be tapped.

However, supermajors will at least have something to cheer about in Myanmar. After months of back-and-forth disputes between various stakeholders and government departments (which delayed the signing

of Production Sharing Contracts (PSCs), the Myanmar Investment Commission has confirmed that corporate income tax rate for oil and gas companies will be 25 percent. It was previously discussed that extractive projects should be taxed 35 percent.

The first major find from the recent oil and gas tenders was announced in January 2016, from a block entitled A-6, which is jointly being explored by Woodside Energy, Total, and Myanmar's MPRL E&P Pte Ltd. The companies exploring the block discovered a gross gas column of approximately 129 m – a find of significant size which the government of Myanmar hailed a "major discovery"⁶⁵. The discovery, named Shwe Yee Htun-1, is along the Saung Anticline, a geographical area of interest off the coast of Rakhine which is thought to hold several such gas deposits. However, it will be considered as an ultra-deepwater well, and its viability in current atmosphere of low gas prices remains uncertain.

OFFSHORE OIL PROJECTS

YADANA PROJECT

The 1,826 acre Yadana gas field is located 60 km offshore off Myanmar in the Andaman Sea. The field has reserves of more than 180 billion cubic meters (6.5 trillion cubic feet) of natural gas and has an expected field life of over 30 years. Currently, the output averaged 700 million cubic feet per day – of which 125 million cubic feet is reserved for domestic use.

The field was first discovered in 1983, but initial low gas reserves estimates and socialist policies of the then government hindered its development. Total began developing the field in 1995, and the first gas was produced in 1998. The project cost US\$1.2 billion to develop.

Total is the lead operator and Chevron has a 28.3 percent non-operated working interest in the PSC. Currently, natural gas is produced from Yadana and Sein fields, within Blocks M5 and M6. The PSC expires in 2028.

Produced gas is exported through two pipelines:

- 409-km pipeline from Yadana to Daminseik to the Thai border has a capacity of 500 million cubic feet per day (14 million cubic meters per day). Construction finished in 1998.
- 287-km pipeline from Yadana to Yangon has capacity of 150 million cubic feet per day (4.2 million cubic meters per day). This was completed in 2010.

An expansion project called Badamyar-Low Compression Platform (LCP) is currently underway in Block M5 to maintain the existing production plateau. The 800 million dollar investment at Badamyar-LCP

Exhibit 61

Oil & Gas Exports
 Source: Government of Myanmar

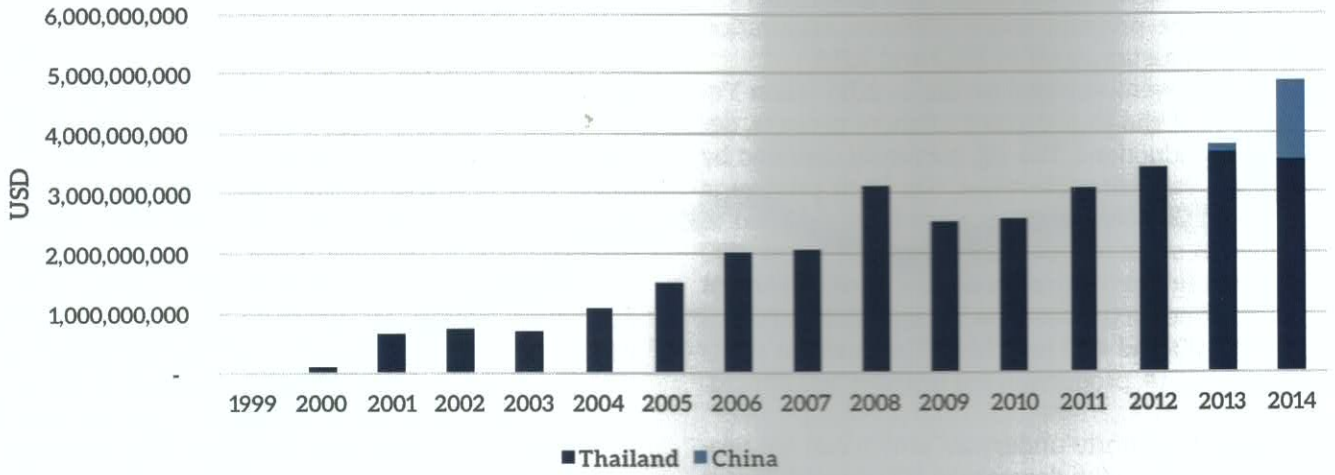
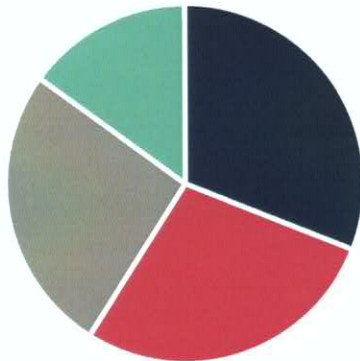


Exhibit 62

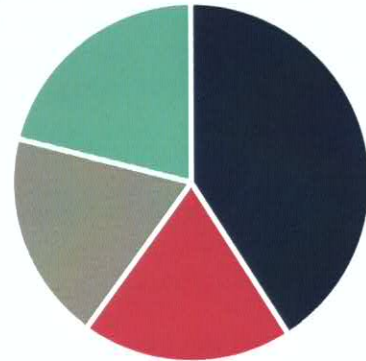
Offshore Oil Projects
 Source: NCRA Research

Yadana Fields



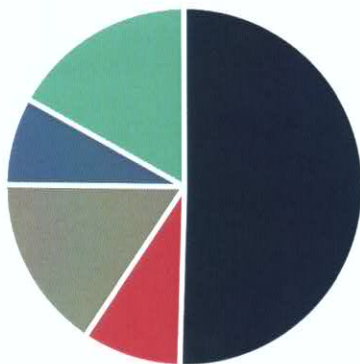
■ Total ■ Chevron ■ PTTEP ■ MOGE

Yetagun



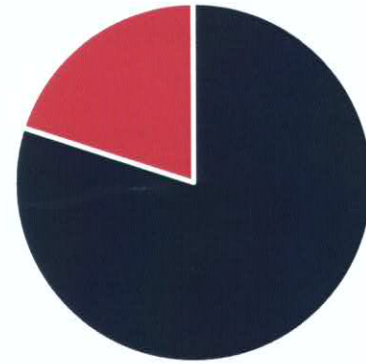
■ Petronas ■ Nippon ■ PTTEP ■ MOGE

Shwe Fields



■ Daewoo ■ ONGC ■ GAIL ■ KOGAS ■ MOGE

Zawtika Fields



■ PTTEP ■ MOGE

is designed to maintain production from the Yadana Field by lowering wellhead pressure and includes a compression platform, a remote wellhead platform and four development wells in the Badamya Field. A final investment decision was reached in 2H14, and first production is expected in 2017. At the end of 2014, proved reserves have been recognized for this project, and a 3-D seismic survey for Blocks M5 and M6 was completed.

YETAGUN PROJECT

Covering 24,000 sq km in the Mottama offshore area, straddling three shallow water blocks – M-12, M-13 and M-14 – the Yetagun gas field was thought to contain a reserve estimated at 4.16 trillion cubic feet (117 billion cubic metres), but more recent revisions believe it can be as low as 3.16 trillion cubic feet.

The field was discovered in 1992 and project development began in late 1996. The first gas was produced in May 2000. Yetagun was originally a joint venture between Texaco (50 percent), Premier Oil (30 percent), and Nippon Oil (20 percent). The project cost over US\$700 million, with an additional US\$140 million in upgrades in the 2000s.

Under political and economic pressures, Texaco withdrew in 1997 and Premier Oil in 2002. Malaysia's Petronas became the lead operator of the fields. Produced gas is exported through a 272km pipeline to Thailand. About 230km of the pipelines is undersea, and the rest of it is onshore, where it links with the Yadana pipeline.

Production at Yetagun varies from 200 to 400 million cubic feet of gas per day. In addition, Yetagun could produce 8-9000 barrels of gas condensate per day. Under the Export Sales Gas Agreement, Yetagun does not have an obligation to supply to the domestic market, but condensate, which is stored in a floating storage offtake facility nearby, is given to local market.

Currently, about 60 percent of Yetagun's potential has been tapped. Daily gas production has come down from 400 million cubic feet per day to around 360 million cubic feet per day. Currently, studies are underway to cap daily production at 200 million cubic feet of gas, and to renegotiate the sales agreement with PTTEP for this lower number. Meanwhile, condensate production decreased from 12,000 barrels per day to 9,000 barrels per day.

For Yetagun, production was 3.4 million barrels of condensate and 137.8 billion cubic feet of gas in 2013-14. In 2014-15, this went down to 2.9 million barrels of condensate and 127.8 billion cubic feet of gas.

Yetagun currently has 14 wells in operation, and a new project to increase gas production is currently underway. First Gas Achievement for Yetagun North Development Project (YNDP) was accomplished on October 7, 2014. The US\$270 million project is expected to increase daily production by 50 million cubic feet of gas.

SHWE PROJECT

In August 2000, Daewoo International was granted the rights to explore two blocks off Myanmar's Arakan coast. In 2004, Daewoo acquired the offshore block A3. In addition, Daewoo also acquired rights to field AD-7, which it will jointly explore with Australia's Woodside Petroleum, which is the 40 percent partner.

In January 2004, natural gas reserves were discovered in the Shwe, Shwe Phyu, and Mya fields. The fields are estimated to hold 4.8 to 8.6 trillion cubic feet of gas. The drilling began in late 2011. In the first gas from the Shwe Gas Fields began to flow in July 2013.

The production platform is capable of extracting 640 million cubic feet of gas daily, with a possible future expansion of 320 million cubic feet of gas. Currently, the fields produce around 560 million cubic feet of gas daily, up from 200 million cubic feet of gas in 2014.

Daewoo has already invested around US\$1.7 billion at Shwe Project as of the end of 2014. The fields are under a 30-year contract to supply 500 million cubic feet of gas daily to China (assuming the fields have 6.5 trillion cubic feet of reserves). The fields began exporting gas to China in late 2013. Currently, Myanmar takes 60 mmcf for domestic use, with an option to take 40 mmcf more in near future.

The future success of the Shwe fields depends on the Chinese side's commitments. China National Petroleum Corporation (CNPC), which developed the pipeline to transport Shwe gas to China, has recently been mired in China's anti-graft campaigns, which saw the purge of many former senior figures. Low natural gas prices and a sluggish economy have also led to a glut of natural gas at storage facilities in China. CNPC admitted that it is also facing difficulties in developing the market for natural gas in China's southwestern provinces.

The pipeline was designed to transport up to 12 billion cubic meters a year, but in 2014, the first fully functional year, it carried only 3.2 billion cubic meters of gas. The CNPC estimated it will take another at least another three years for the pipeline to function at full capacity. More significantly, the company incurred losses of 1.267 billion yuan (US\$202,000) from sales of 1.311 billion cubic meters of natural gas from Myanmar in the first half of 2014.

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ZAWTIKA PROJECT

The Zawtika project includes the development of three fields called Zawtika, Kakonna and Gawthaka fields, located in blocks M9 and M11 of the Gulf of Martaban. All the three fields were discovered in 2007. The first gas flowed from the fields in 2014. The project is estimated to contain nearly two trillion cubic feet of gas.

In the current first phase, 36 wells are in operation. In 2016, the second phase of the project will begin, with the construction of four platforms and 35 wells. In the third phase, two additional platforms and 26 wells will be added.

Originally, the planned daily production is 300 mcf/d, of which 60 mcf/d will be for domestic use. The operators are currently hoping to increase production to 350 mcf/d, of which 100 mcf/d is for domestic use, and the rest exported to Thailand.

The Petroleum Authority of Thailand Exploration and Production International (PTTEP International) is the operator of the project. The feasibility of the project has been called into question several times as capital expenditure at Zawtika are thought to be as heavy as in other offshore productions in Myanmar, but the production is about half of the others.

ONSHORE OIL PROJECTS

Since the 9th century, there has been oil production in Upper Myanmar. In the 18th century the oil fields were handed to a hereditary corporation of 24 families, all of them nobles. Their hereditary rights were reaffirmed under the British colonial rule in 1893. The Burmah Oil Company (BOC), which was one of the precursors of BP, discovered oil in Yenangyaung Field in 1887 and BOC enjoyed a virtual monopoly until Standard Oil entered the market in 1901.

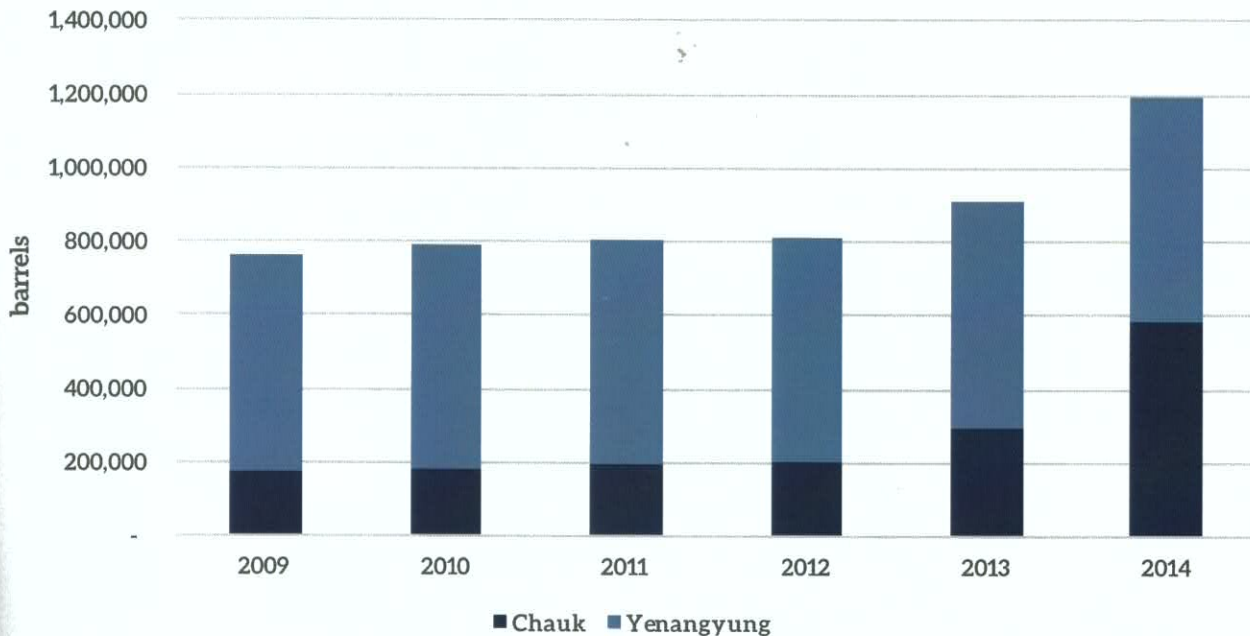
In 1954, the then-government became a 33 percent shareholder in the BOC. In 1961, it acquired a 51 percent share and on January 1, 1963, the company was nationalized as the government bought out the remaining assets for 62.5 million kyats. The National Oil Company (later Myanma Oil and Gas Enterprise) was formed in its place.

Detailed records of the oil productions were not kept after the nationalization; before 1963 Chauk and Yenangyaung oil fields had an annual production of 3.99 million barrels. New fields were later discovered and production reached a peak of 11.20 million barrels in 1984-85. The previous peak year was 1918, when the Yenangyaung oil field produced 16,000 barrels/day.

Exhibit 63

Production at Chauk and Yenangyung Fields

Source: Interra Resources



CHAUK AND YENANGYAUNG FIELDS

Yenangyaung oil field located in Yenangyaung, Magwe Region is about 32km long and 3km wide. It was first drilled in 1887 and has total oil-in-place of 540 million barrels, with more than 251 million recoverable. Cumulative production to October 2005 was 229.37 million barrels. Peak production was 16,000 bpd in 1918 and average production in December 2005 was 1810 bpd.

Chauk-Lanywar oil field is located in Chauk Township, Magwe Region and is about 17km long and 1.5km wide. It was discovered in 1901 and has total oil-in-place of more than 400 million barrels, with 169 million recoverable barrels. Cumulative production was 149.3 million barrels until October 2005, when 19.8 million barrels, or less than 12 percent of total recoverable oil, remained. Peak production was 12,805 bpd in 1941 and average production was 541 bpd in December 2005.

In 1996, improved petroleum recovery contracts for both fields were signed between MOGE and Goldwater. The current operators of the fields are Goldpetrol, a joint operating company created in 2003 by French company Geopetrol and Singapore-based Interra Resources.

The contracts have been very successful as of late. Interra drilled 28 shallow-to-intermediate depth development wells in 2014, up from 24 wells in 2013. Of the twenty-eight wells drilled in 2014, 24 were completed as oil producers. The combined gross oil production of the two fields was 1,192,523 barrels, 30.9 percent more than the 910,875 barrels produced in 2013. The success is primarily due to directional drilling under the Ayeyarwady River. The gross oil production at Chauk field was an impressive 583,299 barrels, almost double that of the preceding year (in 2013, it was 297,676 barrels). In 2014, the Yenangyaung field produced 609,224 barrels



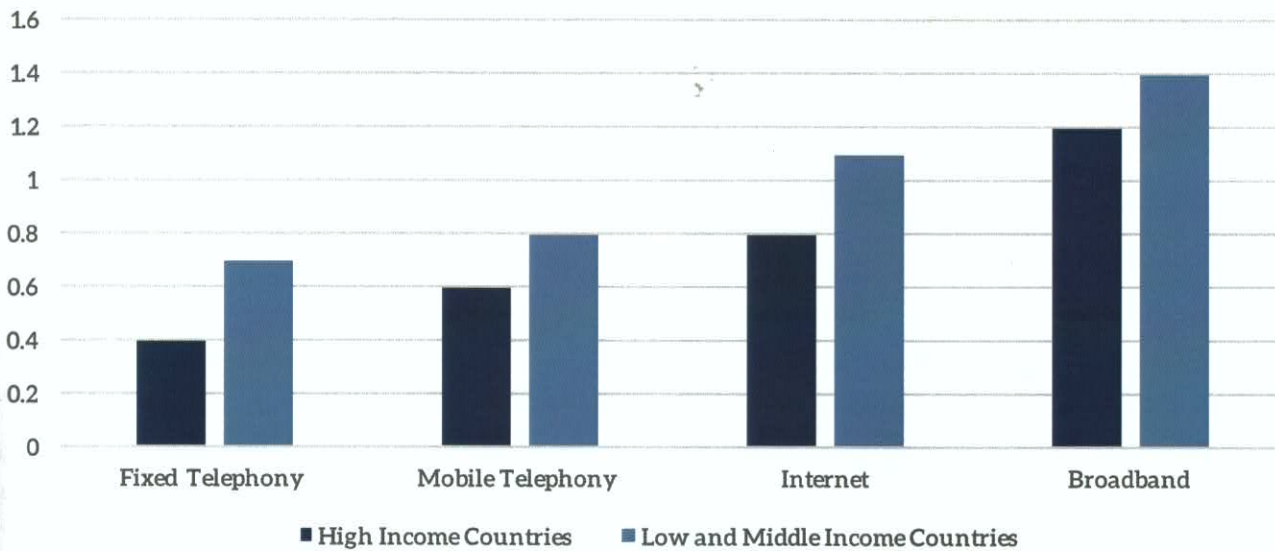
Digital Economy

Myanmar is quickly catching up in connectivity, digital services, and e-commerce. Market consolidation is expected.

Exhibit 64

% Increase in GDP, due to 10% increase in penetration

Source: World Bank



In the coming years, Myanmar's great catching-up to the wider world will be decided in digital telecommunications. In OECD countries, the telecommunications sector contributes to 2-4 percent of GDP; in developing countries, contribution can be up to 5-6 percent. Telecommunications sector is capital-intensive and potentially high value-added. The sector has enormous network effects across the economy, as there is a positive relationship between investment and infrastructure, social, and commercial developments.

Access to mobile communications is instrumental in increasing the productivity of workers across sectors in both rural and urban areas. Farmers and rural workers can cut the middlemen out of their trading operations. Better connectivity improves information flows within companies and between buyers and sellers. It encourages work flexibility and a "sharing" economy. It promotes businesses in previously underserved areas.

Productivity gains come from the fact that better connectivity reduces travel times and costs, improves job search and information flow, creates market efficiencies and encourages entrepreneurialism. No established economic methodology exists to estimate GDP and employment effects of such productivity improvements across the economy.

Such developments are more in evidence in less developed countries. In India, a 10 percent increase in investment on telecommunications led to a 1.2 percent increase in GDP, according to Vodafone.⁶⁶ Deloitte estimated that productivity within the Bangladeshi economy grew up 10 percent annually over the

period 2004-2007, when telecom penetration dramatically increased.

Although telecoms employment is typically less than 1 percent of the total workforce, it can alter the labour landscape. According to one study, only 14 percent of jobs created by the telco industry were indirect businesses. Indirect and tertiary businesses (which include sales and marketing, logistics, transport, and management) reap the boom from the flowering of the telecom industry.

In addition, Myanmar's GDP will receive growth from mobile and internet penetration. Penetration rates increased from around 10 percent of the population to 60 percent in the last 18 months, although it is perhaps lesser if multiple SIM cards per user are accounted for. This means that the rapid increase in penetration will contribute long term economic benefits. Several studies have shown that a strong relationship exists between telecommunications penetration (originally fixed line, and more recently mobile) and economic growth. According to the World Bank⁶⁷, in a low-income country, 10 percent increase in mobile phone penetration can lead to 0.8 percent additional growth to GDP, while 10 percent increase to internet penetration can lead to 1.1 percent growth to GDP.

Moreover, there will be social benefits, as better connectivity contributes to the development of democracy and open societies an increase in education and literacy in rural areas, and the extension of communications to those on low incomes. It promotes social cohesion and helps with an array of social issues, from pension disbursements to disaster relief.

TELECOMMUNICATIONS

Myanmar is currently considered to be one of the last "green-field", "un-phoned" opportunities in the world. By the end of 2015, Myanmar had approximately 35 million SIM-cards, a dramatic increase from 1Q2015 when it had 20 million SIM-cards, and three years ago, when the country had less than one million mobile users. As of 3Q2015, state-owned MPT is thought to have sold over 17 million SIM cards, while Telenor and Ooredoo have respective sales of 13 million and 5 million cards. However, industry insiders estimate penetration rates to be around 30 percent of the population (15 million people) as subscribers in urban areas use multiple SIM cards per person. Yet in absolute terms, Myanmar was the fourth largest telco market in the world in 2015, after India, China, and the United States⁶⁸.

The spectrum auction which Telenor and Ooredoo won, was one of the biggest stories coming out of Myanmar in recent years and cemented in many a foreign investor's mind the government's commitment to economic reforms and transparency. Overseen by international consultants, the process was praised as fair and transparent. This being Myanmar, post-auction was not so smooth: legislators called for protectionist measures to let spectrums allocated to local businesses; the government dithered in drafting telco laws and bylaws, delaying issuance of licenses by months; and nationalists and monks boycotted Qatar-based Ooredoo as a Trojan-horse for an imagined 'Islamification' of Myanmar.

Despite these problems, at the end of January 2014, Telenor and Ooredoo were granted formal licenses to operate wireless networks in Myanmar. Telenor launched services within nine months, while Ooredoo, which has pledged an investment of US\$15 billion, did so within seven months.

MPT has since announced a development and technology partnership with KDDI Summit Global Myanmar ('KSGM'), a joint venture between Japan's KDDI and Sumitomo Corporation, into which they have committed to invest US\$2 billion over the next decade. MECTel, another incumbent provider which is owned by the powerful Myanmar military, is reduced to being a mere mobile virtual network operator (MVNO), leasing spectrum from MPT and operating under its license.

Telenor vs. Ooredoo

Although emphasizing on 2G initially to cater to the poor and the rural areas, Telenor is building 3G/4G-ready network using Ericsson's HSPA and LTE-ready technologies that matches the sophistication of other leading networks around the world. In July, Telenor exercised an option in its license contract to acquire an additional spectrum for US\$75 million.

Ooredoo is focused on delivering innovative solutions across Nokia Solutions 3G networks using 2100 and 900 frequencies, specifically to support high speed data services. According to an official filing by the Myanmar regulator, Telenor committed to achieving nationwide geographic coverage of 83 percent for voice and 78 percent for data within five years. Ooredoo has committed to 84 percent geographic coverage for both voice and data within the same timeframe.

So far 2G technology has paid off for Telenor - it has 13 million subscribers compared to Ooredoo's 5 million. However, it should be noted that the latter faced significant opposition from Burmese nationalists across the country who dismiss it as being a brand originating in a Muslim country. In terms of revenues, Telenor has doubled its revenues from US\$99 million in the first quarter of 2015 to US\$181 million in 3Q15, whereas Ooredoo's revenues increased by only 15 percent during the same period.

In the early stages, user acquisition was key and Telenor added more than four users for each new user Ooredoo did in last two quarters, which is hurting the latter's top and bottom lines. EBITDA for Telenor increased by 40 percent in the last quarter (3Q15) while EBITDA for Ooredoo was negative and nosedived. However, there is some respite for Ooredoo in Average Revenue per User (ARPU) as it has led Telenor consistently in the last three quarters, due to its focus on 3G. In the third quarter, Ooredoo's ARPU reached \$6.5, whereas Telenor's behind at \$5.34.

Fourth License

Due to protectionist objections from parliament, two domestic licenses were also issued. One licensee was for the incumbent provider, MPT. The second one will soon go to a company which is a consortium of local players and a foreign telco operator. Worryingly, most of the local players making up the consortium have no telco experience: three of the eleven members of the consortium are agriculture companies. These will instead rely on the foreign telecom partners to bring in the necessary expertise⁶⁹.

The government has noted that "the entry of the fourth operator is expected to make telecom services available to the public at affordable tariffs". However, it might be counterproductive. For most of the previous decade, having four mobile operators was the norm in many countries. Regulators were wary of having less than four, fearing prices might go up otherwise. However, times have changed. Internet services, such as VoIP and mobile instant messengers, have thinned mobile operators' margins. In many countries, third, fourth, and subsequent operators are underperformers. Having too many operators also leads to price wars and subsequent underinvestment in infrastructure.

A consolidation is underway. Sprint and T-mobile, America's perennial third and fourth carriers by market share, considered a merger in 2014. While this was soon abandoned after regulatory concerns, industry insiders believe a merger is inevitable.

The European Commission, which has long been skeptical of telecoms mergers in the EU, has also been relenting. In 2014, it gave permission for Telefónica to take-over German operator E-plus – the first time the operators are reduced from four to three competitors in a large EU country.

The UK went from five network operators to four in 2010, and is now on course to reduce that number to three if Orange and Three merge. Regulators are likely to approve that deal as well as a merger between Jazztel and Orange which will also reduce the number of operators in Spain to three.

Similar calls for consolidation ring throughout Asia too. After a wave of consolidations in 2008, China has only three mobile telecom operators (all state-owned). India's fractured telecom market is set to consolidate through takeovers, spectrum trading and sharing, especially after a recent new spectrum auction where four operators won 85 percent of new spectrum on offer.

In 2013, Indonesia claimed that 92 percent of its telco sector's revenues come from just three operators; the ministry officials in Indonesia have encouraged the companies to merge. In Vietnam, APRUs fell dramatically and stood at cost price (around US\$ 4.11 per month) after a frenzied roll-out, which saw up to eight mobile phone operators competing in the market.

The situation is a little different for Myanmar where a large population is unphoned and there can be a large niche for a potential fourth operator to fill the market. Yet, confusion over what form this operator should take has delayed its entry, now postponed until late 2016.

The new company will now have to compete not only with the market leader MPT, but also with Ooredoo and Telenor. The latter two now have early mover advantages: they now have millions of users, thousands of towers, and qualified local and foreign staff. A new operator will lack nationwide distribution channels, cell towers, and a large workforce initially. It will struggle to catch up with three existing players, and international experience shows that laggards never truly catch up in the telco industry. In its typical plodding fashion, Myanmar's telco authorities have already missed a chance to have a competitive fourth operator. Had they issued a fourth operator license at the same time as Ooredoo and Telenor, it might have been able to compete. Now it might be too late.

Exhibit 65

Members of Local Consortium

Source: MCIT

Myanmar Technologies and Investment Corporation

Myanmar ICT Development Corporation

Myanmar Agribusiness Public Corporation

Shwe Pyi Tagon Telecommunications Company

Golden Land East Asia Development

Myanmar Edible Oil Industrial Corporation

Myanmar Industries Alliance Co.

Myanmar Agriculture and General Development Co.

International Power Generation Co.

Royal Yatanarpon Telecom Company

Mahar Yoma Public Company

SUPPORT INFRASTRUCTURE

Beneficiaries of a fourth operator will be support infrastructure providers. Recent growths have triggered a remarkable growth and capital investments in telecommunications. The entire telco ecosystem has been overhauled with the entry of several infrastructure service providers, such as tower companies, server companies, and other tech players.

Big investments are to be expected further, and with the success of telco operators, momentum is with the industry. According to the Myanmar government's draft telecommunications master plan, by 2020, the government hopes to achieve more than 90 percent of the population having mobile phone access, more than 85 percent of the population having internet access, and more than 50 percent of the population having high speed Internet. These are ambitious goals, and significant capital expenditures will be needed further.

Various Telco Licenses

After a long delay, the Post and Telecommunications Department (PTD), the regulatory arm under the Ministry of Communications and Information Technology (MCIT) began licensing processes for telecom support companies in October 2014. There are four types of licenses (in addition to nationwide operator licenses, issued to MPT, Telenor, and Ooredoo):

- Network Facilities Service (Individual) License (NFS (I) license)
- Network Facilities Service (Class) License (NFS(C) license)
- Network Service License (NS license) and
- Application Service License (AS license).

As of mid-December 2015, 68 companies have been issued licenses. Most of the licenses are individual licenses or class licenses, which allow the licensee to own telecommunication facilities and infrastructure. The holder of these licenses can also become MVNO (mobile virtual network operators), as with MECTel/Myanma Economic Corporation, a military-owned corporation currently franchising under MPT. NS licensees and AS licensees can own network facilities and infrastructure, or transmission capacity. NFS (C) licensees provide passive telecommunication network infrastructure to NFS (I) licensees. An NFS (I) licensee is licensed to perform all NFS-C, NF, and AS activities.

The NFS (I) License is the general operator's license awarded to foreign companies selected under the bidding process, as well as to the existing state-owned corporations which are already operating. The NFS-I License allows for the construction, maintenance and operation of a telecommunications network and associated facilities and infrastructure, and is consid-

ered an "all of the above" license that allows a licensee to engage in all telecommunications-related activities allowed under Myanmar law.

The NFS (C) License allows for the construction, deployment, maintenance and lease of passive telecommunications network infrastructure. Unlike the I-License, the C-License does not allow for actual operation of a telecommunications network. However, the C-License is highly sought after by foreign companies which did not win the bidding process, but wish to enter Myanmar's market. Under this license, two important projects licensees can undertake are tower construction and laying of fiber-optic cables.

Meanwhile, the NS License and AS License have limited scope. These licenses allow the licensee to lease services from an entity operating under a NFS (I) License or a NFS (C) License. The NS License allows a licensee to lease transmission capacity for providing domestic or international telecommunication services; the AS License allows for the lease of capacity for providing only domestic telecommunications services.

INTERNET SERVICES

Another unique feature of Myanmar's telco growth will be in internet connectivity. Low-cost Android-based smartphones will ensure a dramatic acceleration of individual online connectivity from the outset; this will drive higher data usage and reduce dependence on voice traffic relative to regional peers. This connectivity will also reduce the reliance on more traditional internet service providers and disrupt their business models.

This disruption will even be felt in the wider ICT industry. Myanmar consumers will largely experience their first Internet connection through mobile devices, enabling households to bypass the more traditional and expensive route of acquiring broadband-connected desktop devices and desktop programs.

According to government data, in May 2014 there were 3 million Internet users in Myanmar, or 6 percent of the population. According to mobile operators themselves, now around 60-70 percent of their subscribers are using smartphones – a uniquely high uptake at this early stage of development.

By comparison, Thailand also has around 70 percent of mobile customers using smartphones, but Thailand is considerably more developed; in Vietnam, online connectivity stalled for a while with around 40 percent of the population connected in 2010-2013.

Myanmar has bucked these trends: even by conservative estimates, the country has now around 20-25 million smartphone users, each of whom has, on aver-

age, less than one year experience with smartphones. Telenor has noted that its 13 million subscribers on average use 12 MB of data daily.

This has made Myanmar an attractive market for international mobile and apps players. Development of an app-developer community in Myanmar will take time. ICT companies in Myanmar are predominantly importers of hardware from abroad, who resell computers and mobile devices locally. Software developer community (especially for mobile devices) is still in its infancy. Moreover, according to Myanmar Computer Federation, outside Yangon, ICT companies are largely non-existent.

Things are evolving. Several incubators, technology hubs and hackathons have sprouted up in Yangon. Over the last three years, Project Hub, a local incubator, has hosted entrepreneurship weeks, and even events in Mandalay and Taunggyi. Ooredoo itself has supported a 600-sq m technology hub called SuleTech which offers incubation and acceleration services.

Through the USAID-funded ADEPT program, Hewlett-Packard is sponsoring a state-of-the-art computer lab in SuleTech called HP LIFE (Learning Initiative for Entrepreneurs) Centre. More importantly, SuleTech has reciprocal relationships with ICT Hubs in Singapore and Indonesia, and will be able to access their network of mentors, investors and companies.

E-commerce

With a limited local tech developer scene, the most successful tech enterprises in Myanmar had been those transplanted from foreign countries. Particularly successful has been Rocket Internet, the German-headquartered Internet company, which is commonly referred to as a "business factory", which launches identical services across various countries with minimum tweaks.

Rocket began in Myanmar with two services – auto trading site (motors.com.mm) and general e-commerce site (ads.com.mm). A job board (jobs.com.mm) was later added. The company now has seven online businesses in Myanmar, with its latest venture, an online hotel aggregating platform (Jovago.com) being launched in November 2015.

Among the new services being offered in Myanmar are cash-on-delivery services which gives the user the ability to purchase goods online and not pay until they are delivered. In other countries with equally dire financial penetrations (say India), this type of service has been a key driver behind the e-commerce sector. In Myanmar, virtually all e-commerce transactions are cash-on-delivery.

With momentum on their side, the list of vendors is expected to continue growing. Players are exploring new business models including stock-and-sell, consignment and group buying. Catering to a traditionally price sensitive audience, e-commerce websites

have stood to benefit from offering a wider range of products at reduced prices, as their operational and inventory costs are much less than those of offline retailers. External factors, such as road congestion worsening in Yangon, have also enticed customers to online shopping.

However, the e-commerce industry represents less than 0.2 percent of the overall retail industry in Myanmar. As such, major challenges remain as e-commerce sites still have a long and expensive way to go in order to educate people about their services.

Social Media

A notable story from Myanmar's tech sector in 2015 was the listing of local social media company MySQUAR, – specialising in chat apps on the AIM sub-market – on the London Stock Exchange in July. The company raised £1.67 million (US\$2.6 million) valuing the company at around US\$29 million. At the time of the listing, the company's user count was around 775,000 and thus the market has valued each existing user at around US\$37 – a notably high valuation per user. (By comparison, each user of Viber was valued at US\$3 and each Weibo user was valued at US\$17).

These high hopes didn't really pan out as MySQUAR has struggled in user acquisition in recent months. Many had hoped that after the listing, MySQUAR would have deeper pockets to pursue user acquisition. In October, it did announce that it had more than 1.5 million user accounts – although this number is small compared to around 15 million Internet users Myanmar had at the time.

Consequently, the firm's share prices dipped starting from its first day. After briefly recovering in a post-election bounce, the prices are now half of the offering prices – the firm's market capitalisation now stands at around US\$15 million.

A problem it faces in Myanmar is that its main rivals in Myanmar are international giants such as Viber and Facebook, which are entrenched players, as well as Line, an aggressive new entrant to Myanmar, which has partnered with MPT and has been offering tailored solutions (including customized stickers) to businesses.

According to a 2014 study by On Device Research, a mobile market research company, 79 percent of mobile Web users in Myanmar use Viber, while 27 percent use Facebook. According to Viber, the app has 18 million user accounts in Myanmar as of December 2015 – a number which tracks the total number of mobile internet users – up from 12 million in mid-2015 and 5 million the previous year⁷⁰.

ECOMMERCE INDUSTRY IN MYANMAR



MARKET POTENTIAL

Without the encumbrance of legacy equipment, technology and cabling, Myanmar is positioned to leapfrog developments that other countries took decades to master. A fall in prices of both smartphones and SIM cards means that Myanmar will rapidly catch up with the rest of the Asia Pacific region in coverage and penetration. Thus, regional comparisons are imperfect; however, they are good indicators of where Myanmar can be if economic reforms and political stability continue.

Telenor and Ooredoo both bring regional expertise. Both are well established in South Asia and the ASEAN region: Telenor is in Thailand (dtac), Malaysia (DiGi), India (Uninor), Bangladesh (Grameenphone) and Pakistan (Telenor), while Ooredoo is in Indonesia, Singapore, Laos and the Philippines. Their past experiences in rolling out greenfield networks in Bangladesh, Pakistan and India has played – and will play – a significant role in shaping their network and service strategy for Myanmar. Here, everything is being built from the ground-up with a view to establishing an

advanced distribution system that reaches the most remote and rural areas.

We estimate Myanmar to gain mobile network coverage on a time schedule similar to its neighbouring countries during their periods of liberalizations in the telecom sector. New mobile license holders are racing to achieve 75 to 80 percent 'state-of-the-art' 3G/4G-ready network coverage by March 2016.

Myanmar is expected to attain a much steeper mobile penetration curve, reaching the levels presently achieved by neighbouring countries in, perhaps, a third of the time (or, say, in three years, rather than ten years).

According to an official filing at the Myanmar regulator, Telenor is committed to achieving nationwide geographic coverage of 83 percent for voice and 78 percent for data within five years. Ooredoo has committed to 84 percent geographic coverage for both

voice and data within the same timeframe. Unlike Indonesia or the Philippines, Myanmar has continuous land territory, which aids with tower roll-outs. Although we projected 95 percent network reach by 2022, realistically this will be difficult due to ongoing political tensions in the remaining uncovered areas.

Currently, ASEAN countries have over 100 percent mobile penetration, meaning that each subscriber uses multiple SIM-cards. In Indonesia, penetration is 125 percent, in Vietnam 135 percent and in Thailand and Cambodia 138 percent. We believe that Myanmar's mobile penetration will reach 135 percent by 2024. If multiple SIM-cards are not accounted for, we forecast 90-93 percent of the population will have mobile phones by 2024.

Industry experts believe that incremental subscribers will increasingly come from individuals living in high levels of poverty (classified as living on less than US\$2 per day by the United Nations). These subscribers will need to spend a significant portion of their income to access mobile services compared to subscribers with higher income levels.

A price competition is already underway. In January 2015, the incumbent operator, MPT, announced that under the new 'Swe Thahar' plan, call rates will drop from 50 Kyats to 35 Kyats per minute, SMS rates will decrease from 25 Kyats to 15 Kyats and data charges will change from 4 Kyats per minute of internet use to 15 Kyats per MB. (Data charges were further reduced to 7.5 Kyats per MB in April).

However, the government's plans to introduce a commercial tax on phone bills can negatively impact growth rates. As per a government directive, 5 percent commercial tax will be applicable on all top-up cards in 2016 - the tax was delayed from being implemented in June 2015 after many subscribers objected. Myanmar has an extremely narrow tax base, and the government is trying to vigorously expand the tax base and narrow the budget deficit. However, this tax, deemed to be regressive as mobile subscribers will increasingly come from individuals living in high levels of poverty as elsewhere and has been opposed by several parliamentarians and economists.

Even if the government aims to expand the tax base, this new tax will not bring in much revenue. The average revenue per user (ARPU) in the telecom sector is around US\$6 per month. Assuming 40 million subscribers in 2016, a 5 percent tax will raise US\$144 million annually. This figure pales in comparison with around US\$4.4 billion in taxes the government raised through income and commercial taxes in the 2014-2015 fiscal year.

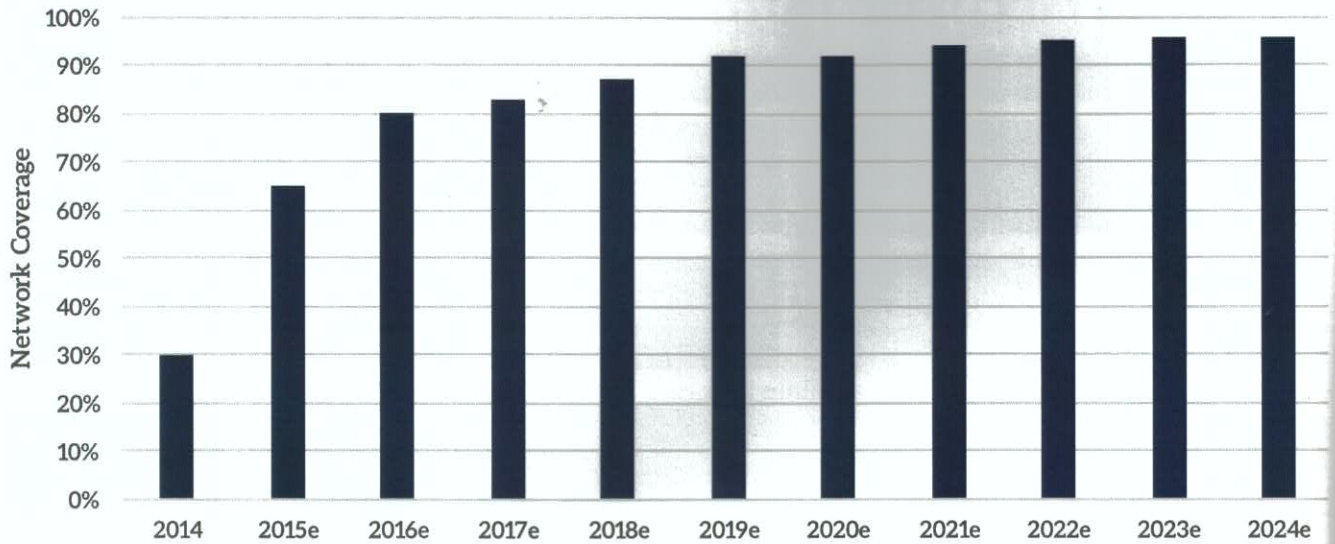
LESSONS FROM NEIGHBORS

Myanmar is a late-comer to the telecommunications game, and thankfully, this means that investors and companies operating in the telecommunication sector can learn various lessons from regional experiences. Myanmar should also look to experiences in India and Thailand with regards to regulating and liberalizing the industry. Myanmar will have only 4 operators, far less than the 9 to 12 per operating region that India introduced. Although market leaders are extremely profitable, India's telecom market is famous for low returns and financial distress of most operators. This stems from government policies in India that seem explicitly designed to extract as much revenue as possible from the telecom sector to shore up state coffers rather than prioritize the development of a healthy industry that can provide its citizens with the highest quality services.

In Thailand, the telecom sector has fared much better. Thai telecom stocks have performed well in recent years. However, there have been years of lost opportunity cost for Thailand as a whole because the Thai government put too high a priority on protecting its state-owned companies, the Telephone Organization of Thailand (TOT) and the Communication Authority of Thailand (CAT). Both have arguably been obsolete for at least a decade, yet they continue to play a disruptive role in the development of the industry.

Currently, Yangon's mobile users spend about US\$5 to US\$7 on their monthly phone bills and made total calls of over 180 minutes, according to NCRA's surveys. This is in accordance with average revenue per user (ARPU) in the developing world, but ARPU is driven by Internet usage as many do not have cable Internet connections and rely on Internet usage via phones. In India, ARPU averaged just US\$2.90 a month; in Vietnam, it is around US\$4. In Thailand, ARPU is around 200 Baht per month (US\$6). Myanmar's ARPU will need to catch up to other developing countries like Brazil and Mexico, where ARPU averages around US\$15 per month.

Despite having low ARPUs, leading Indian players enjoy profit margins of around 30 percent. Indian telcos have accomplished these high margins through two means: by sharing infrastructure such as the tower, shelter, or generators and by outsourcing. Outsourcing to third parties reduces high fixed costs of backbone items such as networks, information technology maintenance and services, and data transmission. Separating tower firms from operators creates efficiencies, especially in a country such as Myanmar, as it will allow them to play to their strengths: tower companies can focus on securing leases and building

Exhibit 66**Mobile Network Coverage in Myanmar (2014-2024e)***Source: NCRA Analysis*

towers, and mobile operators can focus on their customers and services. In Myanmar, land registration and obtaining building permits are significant challenges for operators that tower firms can address.

Sharing passive infrastructure is something Myanmar's new telcos have so far not done but should do so in the near future. In India, sharing or leasing towers saved as much as 25 percent of tower costs due to tenancy increases. There are additional savings when the telcos begin sharing active infrastructure like antennae, feeder cables, nodes and transmission systems. Telenor and Ooredoo, despite sharing some infrastructure, have not cooperated as such. Another worry is that price wars among the operators will hinder their ability to make capital investments and increase penetration rates in less developed regions. 2015 saw the repeated slashing of prices: MPT decreased their rates from 50 Kyats to 35 Kyats to eventually 23 Kyats per minute. In data as well; price slashings abound.

Since it is starting from a very low base, the telecommunications industry in Myanmar has many years of profitable growth ahead of it. Ericsson, which provides network services to Ooredoo and Telenor, estimates that the mobile communications industry will employ approximately 66,000 full-time employees in Myanmar, with an additional 24,000 full-time jobs created in the wider economy.

To be successful, these companies will have to learn from the lessons outlined above, and strike a balance between investment and profitability. Several looming factors make this a challenge: namely growing beyond the cities. Telcos will have to cater to poorer, more cost-conscious locals, while facing diminishing returns in rolling out towers and services to increasingly distant areas. The subscriber growth rate will begin to slow down as market saturation increases. Such challenges are common in all countries, and in Myanmar, it will happen sooner than anyone has predicted.



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Tourism

Even the most optimistic predictions for tourist inflows have been surpassed, but bottlenecks and environmental concerns have become clearer

These are heady days: celebrations tout the accomplishments of Myanmar's tourism sector. On September 30, the vice president smiled and posed for the cameras as he marked World Tourism Day at Myanmar International Convention Center in Naypyitaw. He proclaimed that tourist arrivals are expected to exceed 4.5 million in 2015 despite recent flooding and bombings in Bangkok. The next day, it was the turn of the Minister of Tourism, Mr. Htay Aung, to be bombastically optimistic: he touted an even larger number: "7.5 million tourists by 2020," he said, as he opened the new wing of Sedona Hotel in Yangon.

Myanmar's opening has done wonders for the country's tourism sector and the people who depend on it for their livelihoods. The country features prominently on international magazines' best exotic locales to visit.

Although the country still has one of the lowest number of international visitors of any ASEAN country except Brunei, the number of tourists to Myanmar

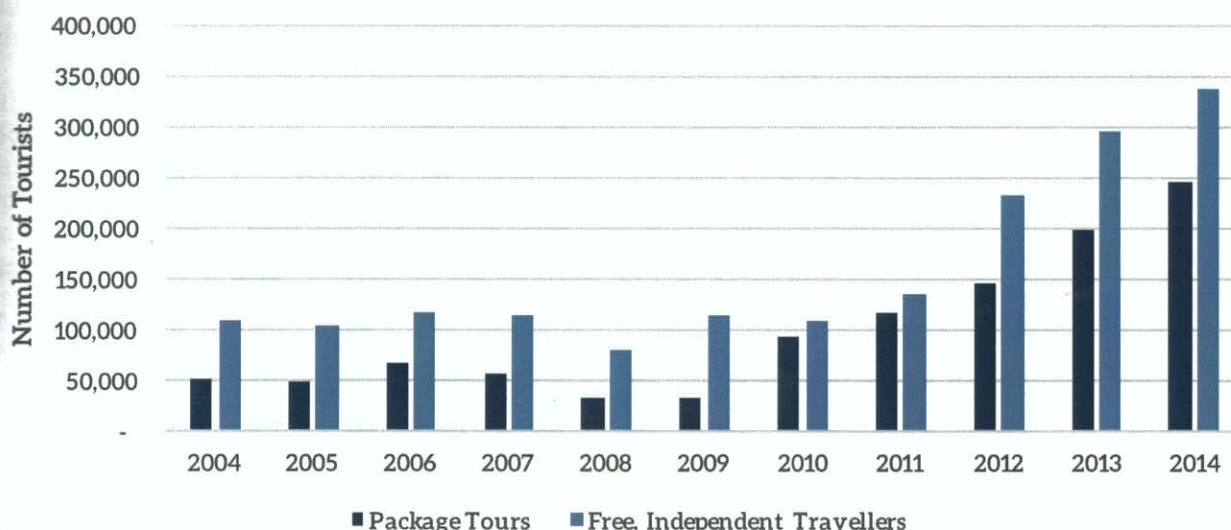
has increased dramatically in recent years: in 2010, Myanmar issued 200,000 tourist visas; in 2014, the country issued 580,000 tourist visas. The number of business tourists has likewise increased dramatically from around 50,000 in 2010 to over 200,000 in 2014. If all visas (business, tourism, border trade, repatriated Burmese) are considered, Myanmar reported that three million tourists entered the country in 2014 - a significant improvement on 700,000 visitors in 2010. However, these figures include cross-border traders from neighbouring countries. Actual visitors who entered Myanmar by air in 2014 are around 1.1 million people, according to the Ministry of Hotel and Tourism.

It cannot be denied that international visitor arrivals to Yangon have grown rapidly; it has been achieving year-on-year growth of 24 percent, 51 percent, 30 percent and 19 percent in 2011, 2012, 2013, and 2014 respectively. Visitor arrivals are expected to remain strong for 2016, as many hotels in Yangon have reported strong bookings for the coming high tourist season (September to March).

Exhibit 67

Package and Independent Tourists to Myanmar

Source: NCRA Research



Around 22 percent of visitors to Myanmar come in on packaged tours – higher than in neighbouring countries. This figure has come down from around 26 percent in 2010. Around 40 percent are above 50 years in age. These figures suggest Myanmar attracts a more affluent crowd than neighbouring countries.

International tourists to Myanmar mainly come from neighbouring countries; in 2014, around 18 percent of visitors were from Thailand and 11 percent from China. Growth from these two markets has slowed a bit since they are starting out from much larger bases. Visitors from other countries have grown more strongly. Between 2011 and 2014, the growth in numbers of tourists coming from Japan, Australia, the United Kingdom, and other Western European countries significantly outpaced the total growth in the number of tourists.

Visitor arrivals to Myanmar are seasonal – i.e., dictated by the dry and wet season of the country. The dry season occurs from October to March, and the wet season from April to September. As a result of potential flooding, tourists usually shun Myanmar during the wet season, although the rains are not severe in other parts of the country away from Yangon.

A typical tourist to Myanmar spends 8-10 days in the country. According to a survey conducted in late 2012 at Yangon International Airport by the Ministry of Tourism, a typical visitor is older than 35 years of age (70 percent) and university-educated (78 percent). Most were traveling independently (67 percent), either alone or in small groups.

A typical tourist flies into Yangon, whose international airport handles 90 percent of international

flights into Myanmar, (the airport is currently slightly over capacity; its optimum capacity is 2.7 million passengers a year).

Today, six flagship destinations receive the majority of tourists: Yangon, Bagan, Inle Lake, the Golden Rock, Mandalay, and Ngapali beach. A quarter of tourists entering Myanmar head to Bagan and Mandalay, while 15 percent go to Inle Lake.

In June 2014, Myanmar managed to list its first UNESCO World Heritage site – the ancient cities of Halin, Beikthano and Sri Ksetra dating back to the Pyu civilization. These three cities have already proved to be popular with tourists. Local tourism agencies are also hoping to promote attractions in the northernmost parts of Myanmar, such as Indawgyi Lake, which is a hibernating site for migratory birds from Siberia, and the snow-capped mountains of Putao.

Authorities are planning to issue licences to operate guesthouses and hotels in the Chin Hills, an unspoilt state which is about the size of Belgium, and located in the north-western part of the country. It is an effort to bring prosperity to Myanmar's most impoverished state.

On average, a tourist in Myanmar spends US\$1,000 throughout the duration of his/her stay in the country. This is significantly higher than how much a typical tourist spends in regional and neighbouring countries. On average, a visitor to Laos spends US\$200, and a visitor to Cambodia spends US\$650 during his/her stay. In the same survey quoted above, average daily expenditure was around US\$100 (excluding accommodation); a tourist spent US\$129 per night for accommodation and a quarter of respondents spent

Exhibit 68

Business Travellers in Myanmar

Source: NCRA Research

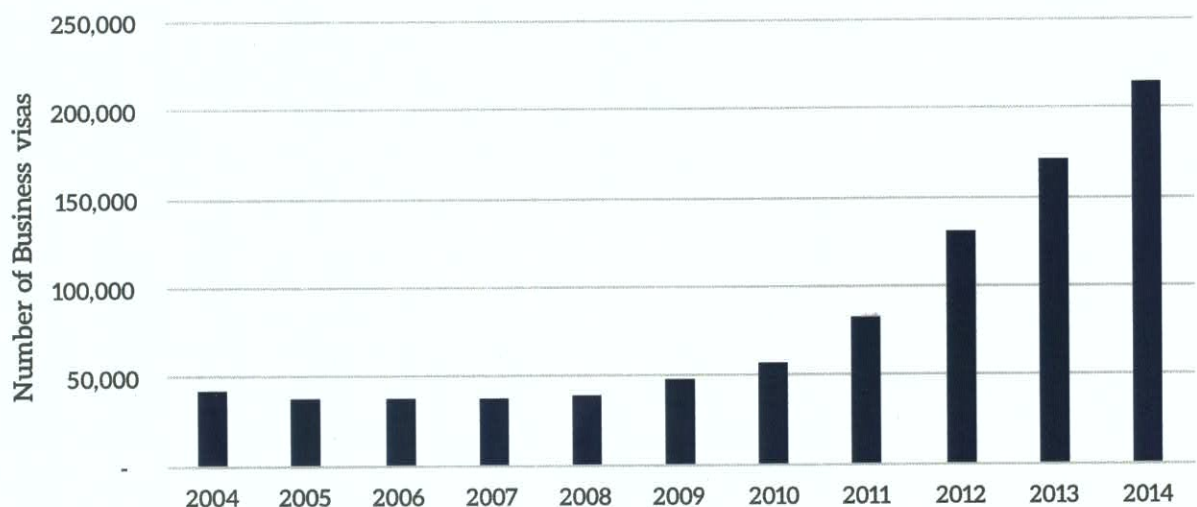
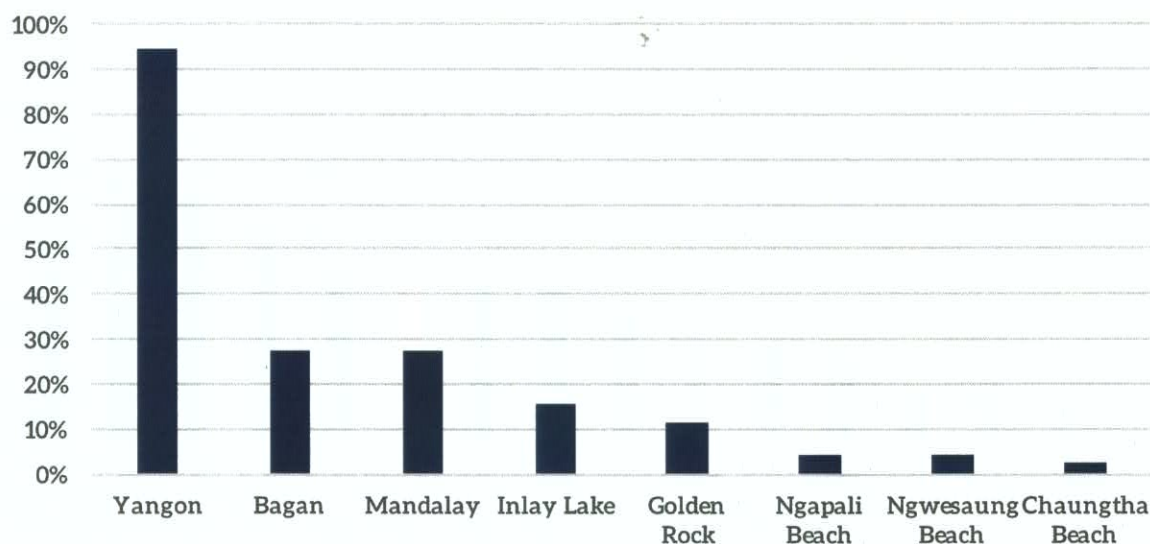


Exhibit 69

Tourists to Myanmar by Desitanation Visited

Source: Tourism Master Plan (2012)



between US\$200 and US\$299 per night for a hotel in Yangon.

Various tourism magazines, trade journals, airline brochures, and entertainment websites currently tout Myanmar as an unspoiled travel destination, but a high cost of traveling in Myanmar means that the country is currently not on the mass-tourism or casual tourism circuit.

The road ahead for tour agencies in Myanmar is somewhat steep. In late 2015, it suffered a sharp downturn as international tourists wait out the uncertainty of the outcome of the elections. This very much suggests that the growth of Myanmar's tourism industry is utterly dependent upon the country's further opening and its country's political future.

On the other hand, many Hotel, Retail, and Catering (HoReCa) businesses face currency problems as the Central Bank of Myanmar has revoked all private sector foreign exchange licences. Tour guides and restaurants can easily switch prices to Kyat, but some other companies such as airlines and hotels are having more trouble adjusting to currency fluctuations.

HOTEL INFRASTRUCTURE

There were over 1,220 hotels and nearly 48,000 hotel rooms in Myanmar as of mid-2015. However, most of these are small guesthouses.

YANGON

Around 44 percent of tourists to Myanmar currently enter through Yangon. The 2,500-year-old Shwedagon Pagoda is the most popular tourist destination for people visiting the city. The pagoda is arguably the most important Buddhist site in the whole of Myanmar, and is visited by around 30,000 tourists each month.

Other pagodas such as Sule Pagoda, which was built before Shwedagon Pagoda, are also popular with tourists, who often visit Yangon to experience its rich culture and explore its various temples and historical locations. The Strand Hotel, run by the famous Sarkies brothers in its early days, once hosted famous writers such as Rudyard Kipling and George Orwell. It is now an iconic luxury 5-star hotel visited by many who wish to escape to the stately colonial masterpiece from the bustle of downtown.

In mid-2015, Yangon had 311 hotels and over 14,500 rooms. The number of hotels in Yangon has grown dramatically in recent years from around 200 (and 8,000 rooms) in 2012. Of these hotels, 24 were opened between January and July 2015. Several international hotel chains, such as Melia, Wyndham, and Sheraton are also preparing to enter Yangon.

In 2012, hotels in Yangon had triple-digit RevPAR growth. The Shangri-La Sule Hotel has RevPAR growth of 124 percent. The Park Royal Yangon has

Exhibit 70

Average Expenditure per Tourist

Source: NCRA Research

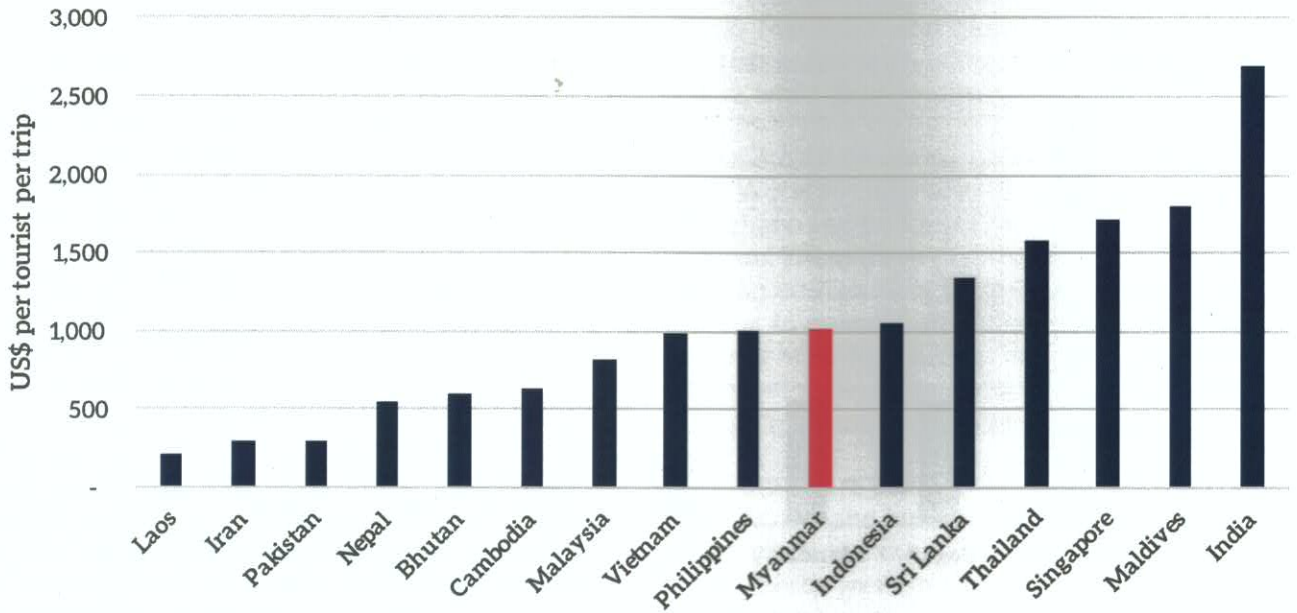
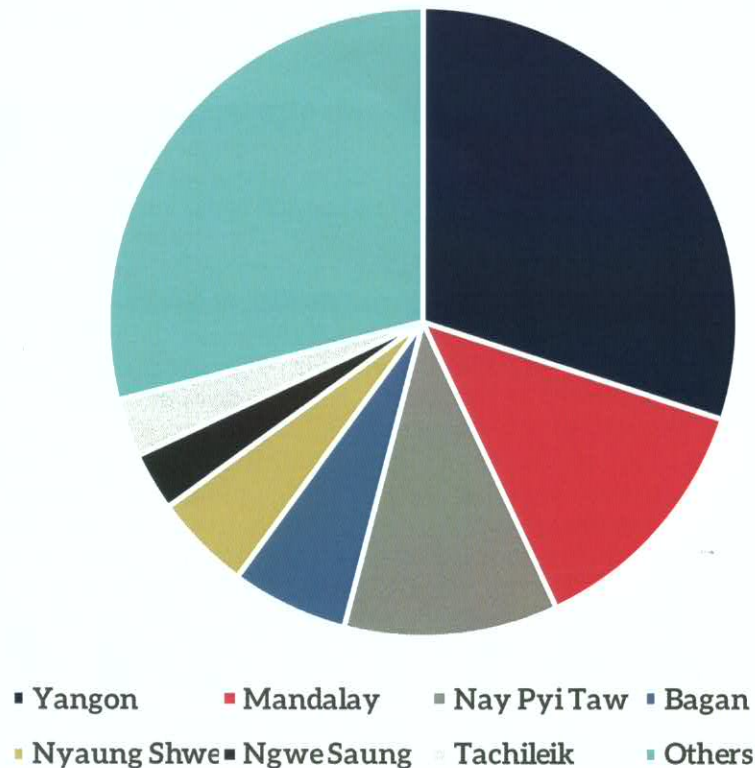


Exhibit 71

Hotel Rooms in Myanmar, by Geographic Location

Source: NCRA Research, Ministry of Hotels and Tourism



RevPAR growth of 118 percent. Increases in average room prices is a major contributor towards RevPAR growth.

However, more recently, RevPAR has been declining as international visitors move away from top-brands due to their high prices. Between 2013 and 2014, RevPAR decreased by 12 percent at Shangri-La as occupancies declined percentage points to 61 percent (However, this is because Sule Shangri-La increased its number of rooms from 320 to 472 in April 2014). A similar trend is seen in Pan Pacific's Park Royal, where RevPAR decreased to 10 percent in 2014 due to a 7 percentage point drop in occupancy to 70 percent and a 3 percent lower average room rate.

MANDALAY

Mandalay is described by some as the center of Burmese culture, housing the former Royal Palace and the sacred Mandalay Hill. Mandalay Hill is one of the most popular sites for tourists, as it provides a spectacular view of scenic locations such as the Ayeyarwady River. The sparkling Mahamuni Paya is a popular historical site with a rich history, and is known for the 13-foot-tall statue of the seated Buddha, which is covered in 6 inches of solid gold, and is thought to be 2,000 years old.

In November 2015, Mandalay had 164 hotels, and over 6,600 rooms. The number of hotels has doubled, from around 72 (and 3,000 rooms) in 2011, and by 2018, the city hopes to reach 200 hotels (10,000 rooms) – enough rooms to receive around 2.5 million visitors annually. However, it should be noted that the city welcomed only 650,000 visitors in 2014 (240,000 foreign tourists, and 410,000 local tourists), and it has a long way to go to meet its intended visitor numbers.

BAGAN

Bagan is home to thousands of temples and stupas, which sport brilliant architecture and intricate carvings. It is a popular destination for those looking to immerse themselves in the rich Buddhist culture and explore historical sites such as the stunning Ananda Pahto.

Bagan has increasingly becoming more popular with tourists since 2012 and it continues to host many tourists with its relatively large range of available accommodation. In 2014, the town attracted 230,000 foreign tourists and 130,000 domestic travellers, a 20 percent increase on previous years.

As of 2015, Bagan had 78 hotels and nearly 2,500 rooms. This number has largely remain unchanged in the last five years despite Bagan's increasing popu-

larity on the tourist trail. This is because Bagan's hotel zone is already congested and the government is reluctant to approve additional hotel projects in Bagan due to the sensitivities regarding the ancient temples.

Since the 1990s, the government has been trying to list Bagan as a UNESCO World Heritage site. However, UNESCO has been unwilling to approve it as such – one reason being the sprawling hotel zone and its eyesore observation tower. In 2005, UNESCO criticized the previous military junta's restoration works on Bagan as "a Disney-style fantasy version of one of the world's great religious and historical sites" and noted that the government is using "the wrong materials to build wrongly shaped structures on top of magnificent ancient stupas."

In Bagan and in many other Buddhist pilgrimage sites, a battle rages on between the believers who wish to renovate, alter, and gild the ancient Buddhist temples and the preservationists who believe such changes are damaging to the historic (and therefore tourism) value. An institutional disagreement is also waged between the Ministry of Culture, which wants to dezone commercial and hotel developments in the Bagan heritage area and the Ministry of Hotels and Tourism, which does not.

NGAPALI

Ngapali, located in Rakhine State and stretching along the Bay of Bengal, is one of the most famous beaches in Myanmar. As a location primarily reached by air travel, it is not an affordable destination and is not on backpacking trails, and thus remains relatively quiet and peaceful. It is most popular during October and May, where it is frequented by many tourists and Burmese citizens from the upper classes.

INLE LAKE

Popular during the months of September and October, Inle Lake is one of the most traditional tourist locations in Myanmar, with its numerous floating gardens and wooden villages on stilts. This idyllic location has many small guesthouses and hotels for visitors looking to enjoy the natural scenery Inle Lake has to offer.

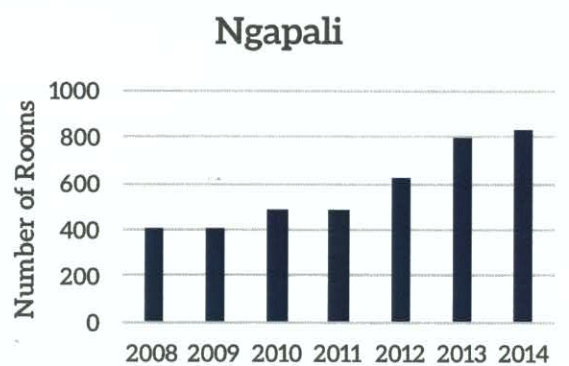
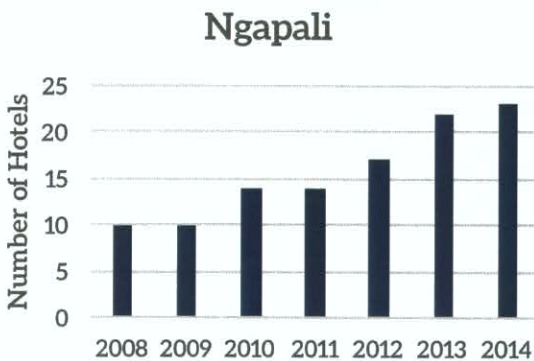
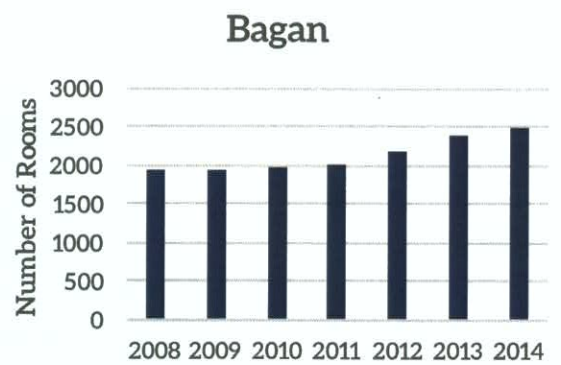
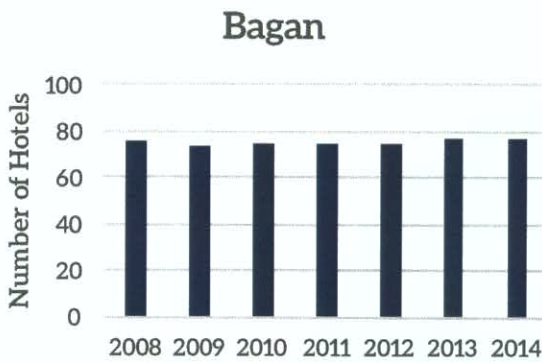
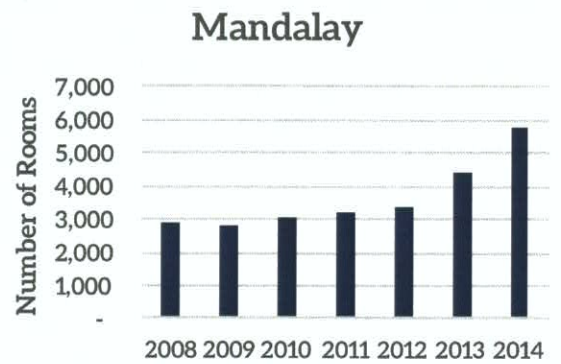
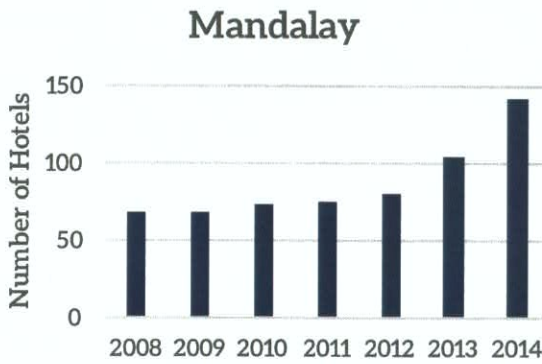
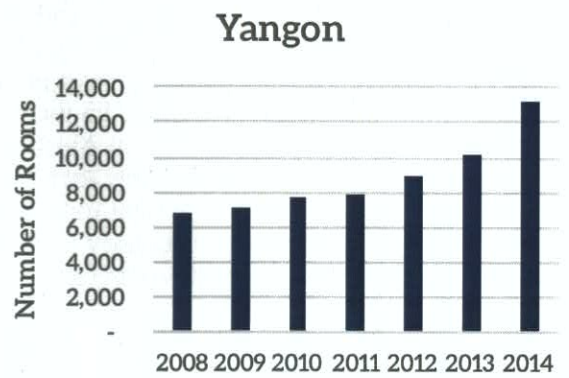
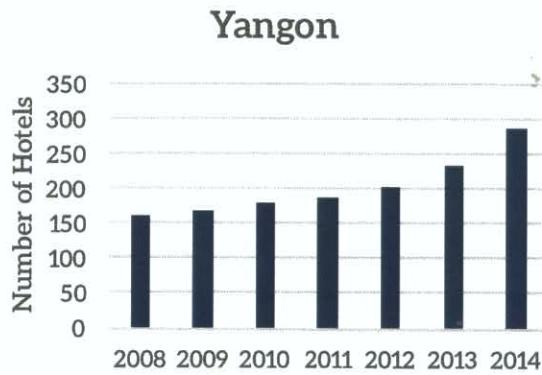
MRAUK-U

One of Myanmar's most important archaeological sites, Mrauk U is located in Rakhine State near the Bay of Bengal. It is home to many temples and pagodas, which were built over a period of 350 years. Mrauk U is not one of the most popular tourist sites in Myanmar, but its status as the ancient capital of the once powerful Mrauk U empire makes it worth visiting.

Exhibit 72-75

Rooms and Hotels in Yangon, Mandalay, Bagan, and Ngapali

Source: Ministry of Hotel and Tourism



NAYPYIDAW

Naypyidaw is Myanmar's new capital, which has been promoted by the government of Myanmar as a conference destination. Each year, several international conferences supported by the government, such as Euromoney, take place in Naypyidaw. Government offices and officials are located in Naypyidaw, making it a business destination.

Between 2006 and 2014, the government granted cheap or free land in Naypyidaw to developers to construct hotels. Favourable governmental loans were granted to developers to make a posh hospitality sector in Naypyidaw. Due to these efforts, rooms in Naypyidaw increased from 141 in 2008 to over 5,000 as of August 2015. International chains entered, including Kempinski and Park Royal (Pan Pacific). However, this increase in rooms is not matched by the increase in demand or popularity: in Naypyidaw, occupancies are in single digits. During the biggest conference of the year (Euromoney), there were only around 1,500 visitors to Naypyidaw, hinting at the amount of idle keys.

FDI IN HOTELS

There were over thirty FDI-hotels in Myanmar providing over 5,000 rooms. Although this number hasn't changed in recent years, there are 13 FDI hotels currently under construction or planned. The biggest FDI hotel still under development is Vietnam's HAGL City project, which includes service apartments and residential real estate but is categorized as a hotel FDI. The US\$440 million project makes up 17-percent of total FDI in Myanmar's hotel sector. Other international hotel conglomerates have used their Singaporean subsidiaries and vehicles to invest, and Singapore makes up 60 percent of the investment, with 20 hotel assets across Myanmar. China, a leading player in other FDI segments in Myanmar, is altogether absent from the hospitality sector.

Most of the high-end hotels in Myanmar are FDI-funded. Kempinski Group opened a five-starred hotel in Naypyidaw in anticipation of Myanmar's ASEAN summit chairmanship in late 2014. U.S. President Barack Obama stayed at Kempinski's 15,000-square foot Grand Royal Suite during the ASEAN Summit.

Kempinski is working with Thailand's Kanok to develop its second Myanmar project in Yangon. The 229-room hotel in Yangon will be housed in the colonial splendour of the State House building. Hilton Hotel group is working with a local conglomerate, Eden Group, to manage two of the latter's hotels, Thingaha Garden in Naypyidaw and Thingaha Ngapali at the Rakhine State beach resort. At a cost of US\$47 million, the 202-room Thingaha Garden Hotel was upgraded to become Hilton property. In January 2015, Thingaha Ngapali was upgraded into Hilton Ngapali Resort and Spa, which features 51 rooms and villas. Hilton projects in Bagan and Inle will open in 2016, which will be followed by the Hilton Mandalay in 2017.

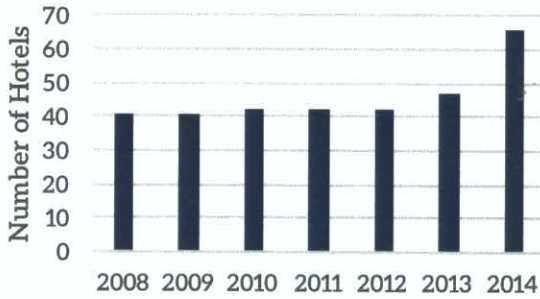
However, Hilton's first property in Myanmar - the 300-room Hilton Centerpoint Yangon, which is under a joint management agreement with Thailand-based LP Holding - has been repeatedly delayed. Delays are common in Yangon's construction sector due to optimistic initial estimates, low-skill local labor and long monsoons.

Another delayed FDI project was Novotel Yangon, which was slated to open in 4Q13 but opened in 1Q15. However, France's Accor group, which is behind Novotel-brand, is ploughing ahead with its other developments in Myanmar. These include Novotel at Inle Lake, which opened in October 2014; Pullman Yangon; The Sebel Yangon; and the Lake Garden in Naypyidaw. Yet another project in Bagan is planned. These are Accor's first properties in Myanmar since 2002, when it pulled out of the country for political reasons.

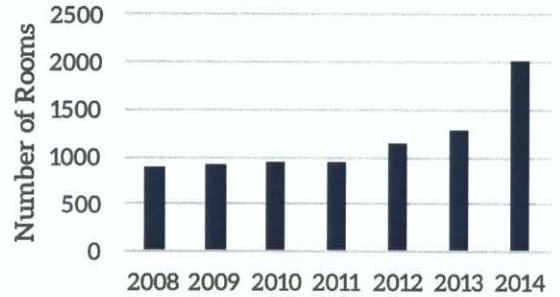
Exhibit 76-78

Rooms and Hotels in NyaungShwe, Mrauk-U, NayPyiTaw
 Source: Ministry of Hotel and Tourism

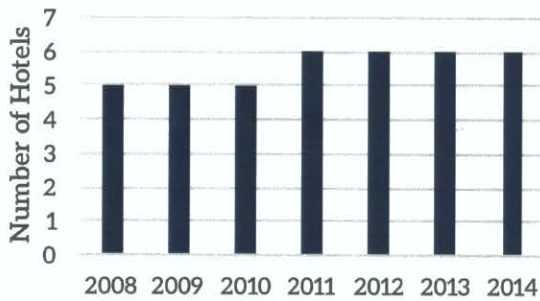
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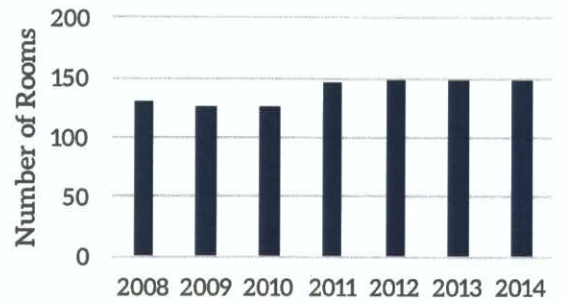
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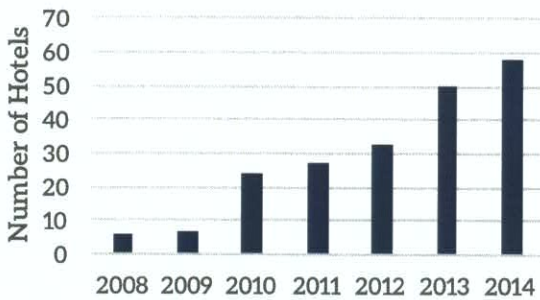
Mrauk-U



Mrauk-U



NayPyiTaw



NayPyiTaw

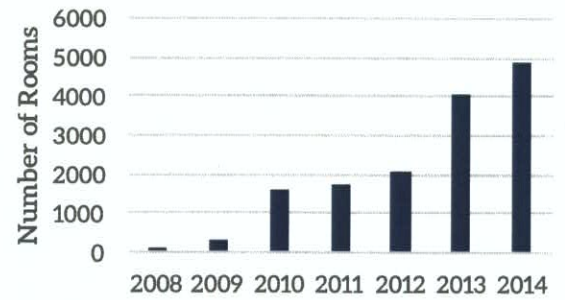
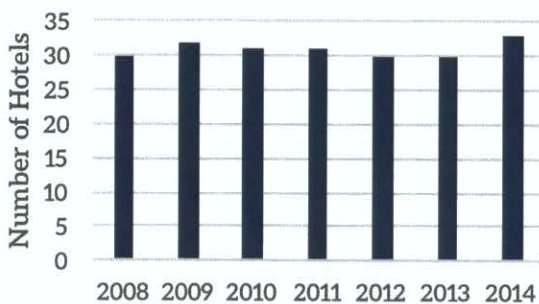


Exhibit 79

FDI Hotels and Rooms in Myanmar
 Source: Ministry of Hotel and Tourism

Hotels



Rooms

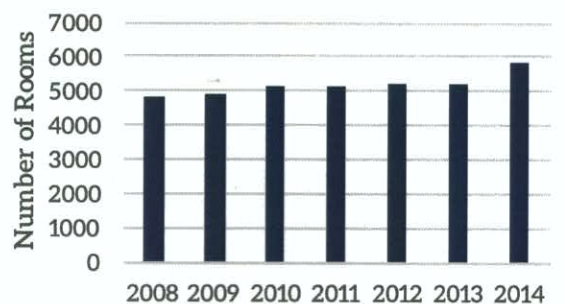
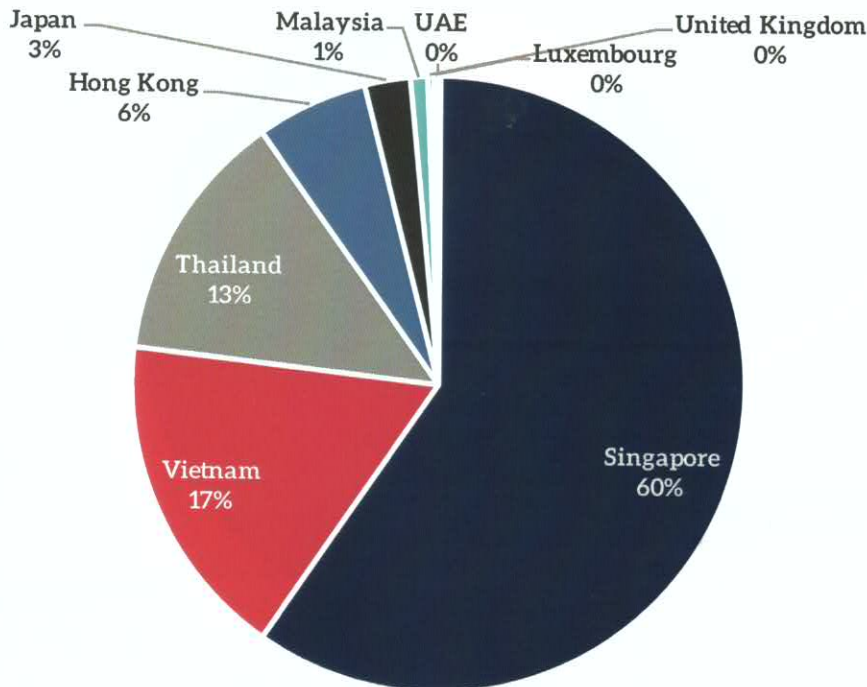


Exhibit 80

FDI in Hotels by Origin

Source: Ministry of Hotel and Tourism



MARKET POTENTIAL

Currently, a typical visitor to Myanmar spends around \$170 per day during their nine days in the country. Myanmar's Tourism Master Plan have identified three possible scenarios for tourism growth in Myanmar. In the best case scenario, Myanmar hopes to attract 10 million tourists by 2020.

Tourist spending per day was expected to reach \$170 in 2017, but the country has met this target three years early. Accordingly, income from tourism can grow from \$1.8 billion in 2015 to \$4 billion in 2020 and \$10 billion by 2025.

In the following two graphs, we chart international tourist arrivals and tourist income. Our analysis does not include corporate (business travellers) and border traders. We have also relied on official tourism receipts data.

We predict 10 percent year-on-year growth. In the base scenario, we predict 15 percent annual growth from 2015–2020, and 10 percent annual growth from 2020 onwards. In an alternative, bullish scenario, we predict 30 percent annual growth from 2015–2020, and 20 percent annual growth from 2020 onwards. It should be noted that in the last three decades, in-

ternational arrivals to ASEAN countries increased on average by 7.3 percent per year.

In the bull case, we predict that Myanmar's tourism sector can attract US\$20 billion in tourism spending within a decade, if the present rate of development and political reforms continue. While this is 20 times the present tourism receipts in Myanmar, such a figure is not far-fetched. Tourism spending in Thailand and Malaysia reached US\$20 billion by 2010 and 2012 respectively. Additional revenues can also come from legalized gambling. The Ministry of Hotels and Tourism has announced that three-star hotels in border areas will be allowed to open casinos.

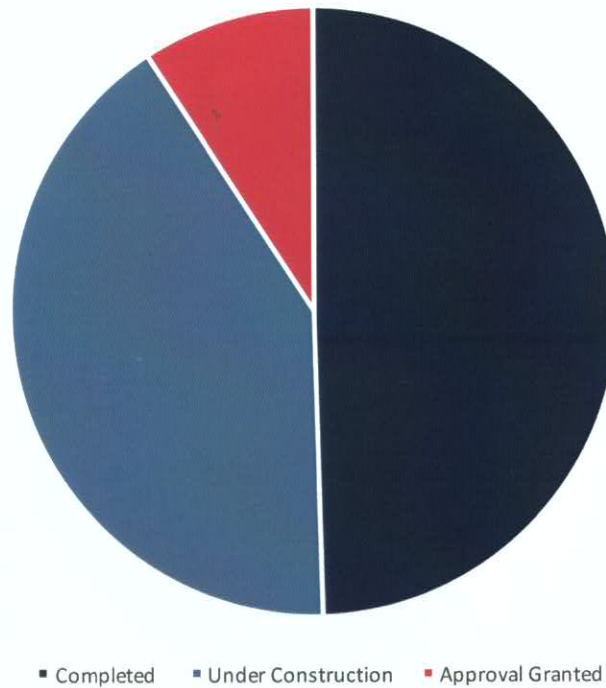
Only foreigners will be allowed to gamble in those casinos, while locals will be prohibited from taking part. According to the ministry, the border areas have more than 100 hotels, which have expressed interest to apply for casino permits, but not all will qualify.

Likewise, over 20 million tourists visited Thailand and Malaysia in the 2010s. Within a decade, Myanmar can attract a fraction of these visitors with additional improvements in infrastructure and political stability. (Myanmar is about 30 percent larger than

Exhibit 81

FDI in Hotels by Status

Source: Ministry of Hotel and Tourism



Thailand). McKinsey predicts that Myanmar will attract 13.5 million visitors staying an average of seven nights by 2030. Its assumptions are that tourist arrivals will increase by 27 percent each year for the first six years starting in 2010 and then at 18 percent each year to 2030. (This was the growth rate Cambodia experienced between 2000 and 2010).

In addition, by 2030, tourism services could contribute \$14.1 billion to GDP and employ around 2.3 million people, according to a McKinsey report.

UNESCO World Heritage designation arrived to Myanmar in 2014 when it received such status for three ancient Pyu cities. The most accessible of these, the dig at Sri Ksetra, some 8 kilometres east of Pyay, has received increased interest due to the listing. According to a ministerial official quoted in *The Myanmar Times*, tourist numbers have increased from 600 in 2010-11 to about 9,000 in 2014-15.

The cities of Pyay and Sri Ksetra showed signs of regeneration and frantic activity. In Pyay, where there are only 13 hotels, a few hotels are being hastily built; a small 3-room museum had been renovated in preparation for the World Heritage status, and new educational panels have been put up with text and pictures. A Pyu Ancient Cities Coordinating Committee (PYUCOM) has been established; the Myanmar Restaurateurs' Association is setting up restaurants and souvenir shops and the ministry has been training local residents as tour guides. Riverine cruises have added Sri Ksetra as a stop on their journeys up

the Ayeyarwady. In July 2015, the ministry started charging tourists pay US\$4 to visit the archaeological site.

Knowledge transfer from UNESCO will be useful in guiding Myanmar officials in how to manage the heritage sites. According to research by UNESCO, "decentralized nominated" sites such as Sri Ksetra gain significant tourism growth in the first few years following being listed. However, a year after its listing, Sri Ksetra appears not quite ready for the spotlight. Restaurants are unfinished and transportation to the archaeological sites is difficult – locals in the area still rely on bullock carts. Other tourism-related infrastructure (brochures, multi-lingual signs, toilets, rest-stops, trashcans) are non-existent.

Under proper management, these bottlenecks common to many off-the-beaten-track tourism destinations in Myanmar can be addressed. The country must balance tourism development with sustainability. Inle Lake, a popular destination for tourists, is cluttered with trash as the natural reserve groans under increased popularity. In developing a next-tier of destinations such as Sri Ksetra, the government and the local community must try harder to develop sustainable tourism as the site's popularity increases, and prove to UNESCO and the global observers that Myanmar can protect its heritage even as even larger number of tourists flow into the country. Otherwise the economic growth that comes with tourism may leave nothing more than discarded crisp packets and cigarette butts.

Exhibit 82

Estimates for Myanmar's Tourism Income

Source: NCRA Research

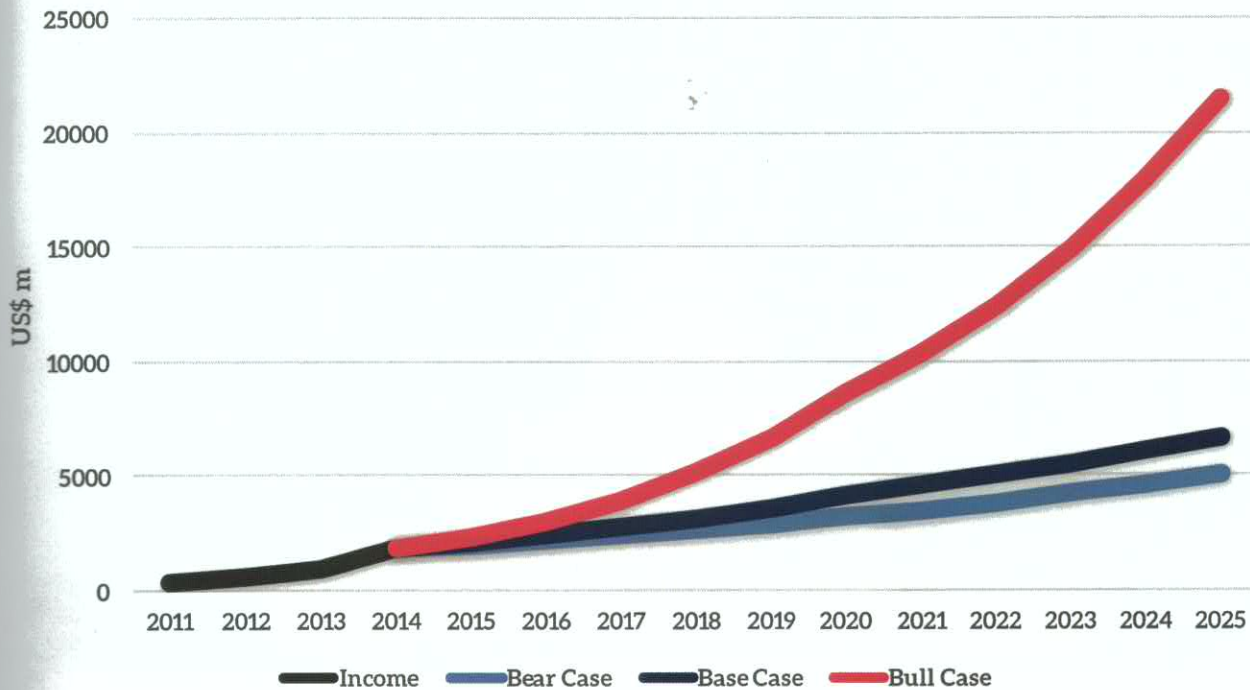
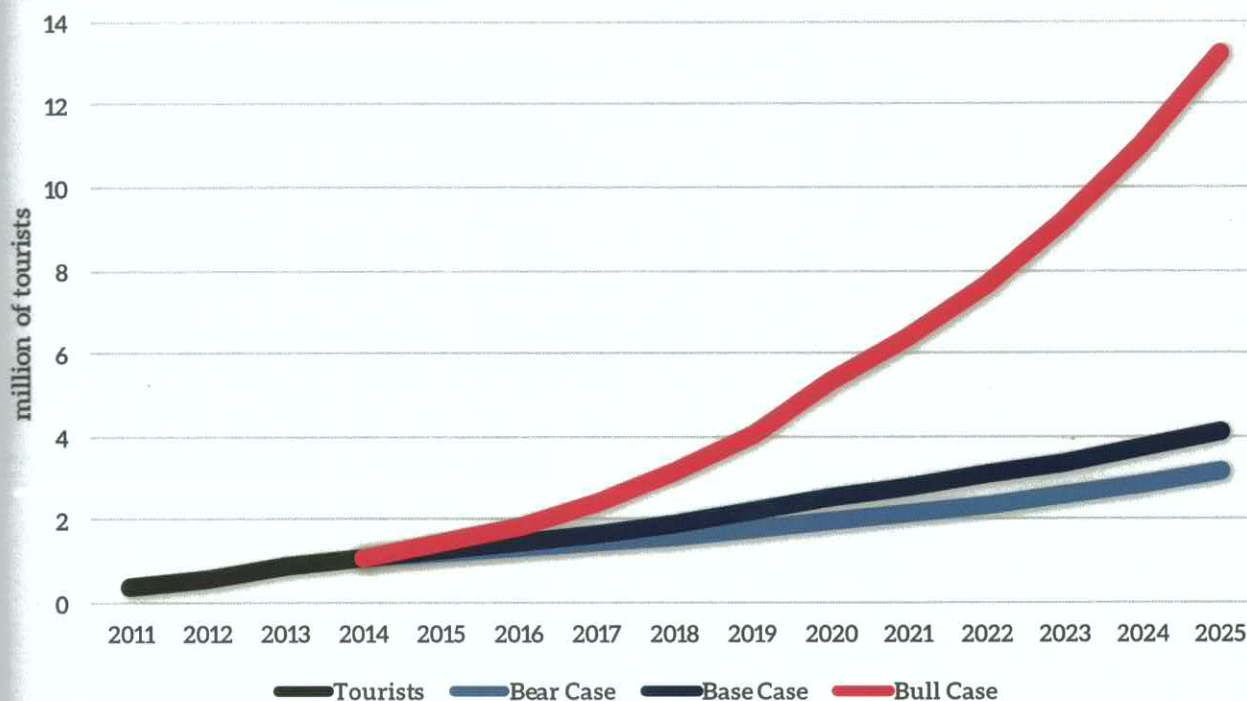


Exhibit 83

Estimates for Myanmar's Tourism Income

Source: NCRA Research





Afterword: Myanmar Beyond 2016

How long will Myanmar be able to sustain its rapid economic growth?

The general election in November 2015 has ushered in a new era of politics in Myanmar. If Ms. Suu Kyi is allowed to form a government in the coming months, Myanmar will embrace development and continued economic reform. Her victory will lead to Myanmar opening itself more broadly to the outside world, and the outside world will likely reciprocate with increased foreign direct investment and aid. Her manifesto pledge to ratify the International Labour Organization's labor rights rules also bodes well for Myanmar if it is a signal of Myanmar joining other international and regional frameworks in the near future.

On this strong basis, Myanmar can expect continued strong economic growth through to 2030. Even in our most conservative assumptions (based on the current status quo of political and economic outlook), we predict an average annual GDP growth of 6-7 percent a year to 2030.

Myanmar can build a program of internal modernization, and a transition from its agricultural base toward manufacturing and services. The easing of sanctions by the United States following a democratic handover of power will lead to normalizing trade relations between the two countries and Myanmar regaining its GSP status and LDC tax breaks with the United States. Before American sanctions were imposed in the early 2000s, over 10 percent of Myanmar's exports went to the United States (mainly in the form of garments and marine products) and the rediscovery of these markets will add further vigor to Myanmar's economy.

After low-hanging reforms and structural readjustments are done, Myanmar's economic growth will benefit from a number of powerful, positive ongoing trends. Wider Asia's consumption growth, powered by urbanisation is a piece of geographical good fortune for Myanmar. These consumers are already pushing up demand for Myanmar's exports, such as agricultural products and energy. Broadly speaking, Myanmar benefits from two trends in next few years: demographic dividends; and wider ASEAN integration, as well as Myanmar's reintegration back into the global economy. Simultaneously, Myanmar should be wary of two things: its overheating economy (with inflation concerns); and the financial sector's adaptability.

DEMOGRAPHIC DIVIDENDS

On the road to economic recovery, Myanmar is aided by this demographic boon. The demographic dividend is powered by Myanmar's youthful population, whose median age is 27. Youth dependency ratios have also fallen more dramatically than the rise in old-age dependency ratios. There are 14.5 million people in Myanmar who are between the ages of 5 and 19. This large segment of the population will enter the workforce in the next 10 years, bringing with them increased labor productivity.

Many countries have achieved economic success by capitalizing on their demographic dividends. In the 1980s, additions to the working-age population contributed more than a percentage point per year to

China's GDP, and in the 1990s, Brazil relied on its demographic dividend to drive growth.

The existence of an even larger workforce in the near future will lead to an abundance of low-wage labor in Myanmar, even as regional manufacturing powers such as China and Vietnam are aging rapidly. An abundant labor force can be directed toward the manufacturing sector, which can be expected to grow at a compound annual growth rate of more than 11 percent from 2016 to 2020. Not content with simply serving a growing domestic market, Myanmar needs to also expand its exports of manufactured goods, especially products such as textiles and footwear, abroad. In the last 10-12 years, Myanmar has not managed to diversify its export product mix, but demographic dividends presently create unprecedented opportunities for the country. However, it should be noted that while Myanmar's dividend is still growing, Myanmar could experience rising poverty rates and higher risks of social upheaval if millions of young people coming into the labor force cannot find jobs. Student protests in 2015 can be viewed under this light as a portent of the young people's frustrations with an education system which they believe ill-prepares them.

ASEAN INTEGRATION

Myanmar's ascension into free trade areas will forge greater investment links within the region; however, the country will have to lower its current commercial tariffs of goods imposed on other ASEAN countries from 25 percent to 5 percent. Myanmar joining a regional free trade agreement is a must and will bring many economic benefits to the country. According to think tank Copenhagen Consensus Centre, a free trade agreement between ASEAN countries and China, Japan and South Korea (known as ASEAN+3) will bring US\$243 trillion in trade benefits (or US\$3,438 per dollar spent) for the countries involved.

With Myanmar's entry into the ASEAN Economic Community (AEC) in 2015-2017, the liberalization and integration of Myanmar's service sector will follow. ASEAN integration will allow Myanmar to rapidly expand across a range of sectors including retail and transportation. Myanmar has recently seen a boost to its tourism sector and increases will become more dramatic when the ASEAN single visa is introduced in the coming years.

Myanmar's crucial location between India and China means that there will soon be a surge of interest in Myanmar's infrastructure and residential and commercial real estate by other ASEAN investors. Meanwhile, the country's exports of commodities such as rice will grow briskly, as tariff and non-tariff barriers to other rice-importing ASEAN markets such as Malaysia and Indonesia withered thanks to AEC.

AN OVERHEATING ECONOMY

Despite these outsized promises, Myanmar still faces numerous bottlenecks and challenges. On November 17, 2015, a fire broke out on the 22nd storey of an ongoing construction site in Yangon, and raged for hours as the local fire department did not have the capacity to pump water to the 22nd floor, where the fire was spreading. This story is a perfect metaphor for Myanmar's growing economy as the authorities and infrastructure have failed to keep up with rapid developments within the country.

In the coming years, emerging markets across the world will enter recessions. In Myanmar, the monetary and fiscal authorities will be faced with surging inflation, and a deteriorating trade balance. Vietnam, during a similar overheating phase in its development in 2010-2011, witnessed inflation rates of 20 percent, devaluation of its currency four times in 20 months, and a credit downgrade. Myanmar's authorities will have to be exceedingly nimble to avoid a similar fate.

FINANCIAL SERVICES

The banking sector is especially vulnerable to the risks and uncertainties that come with economic booms. In the last two years, Myanmar has witnessed at least two (albeit minor) bank runs due to rumors and mass panic. In both cases, the panic was indirectly linked to political events (US sanctions on a politician in one case, a power struggle inside the ruling party in another), highlighting the interconnected nature of politics and banking in Myanmar.

We share the IMF's and other international observers' worries about state-owned banks and recently introduced state-sponsored development banks. A large share of Myanmar's financial system is run by state banks, some of which may, at times, lend based on political or policy grounds rather than on financial merit. For instance, development banks dedicated to construction, tourism, and mining are mandated to lend only within their own sectors. Regional banks are dedicated to lend only within their own regions. These restrictions, as well as the fact that many of these development and regional banks are new entities that were launched in the last 18 months, make them especially vulnerable to sectorial shocks and downturns.

At root, Myanmar needs to tackle limited governance and transparency issues. Financial reporting standards and risk management techniques practiced by the banks are still a long way from Basel II or Basel III standards. While non-performing loans are low on paper, it is unclear what criteria is used to judge non-performing loans (NPLs). The country could also benefit from running a series of bank stress tests to

identify banks that are struggling and separate them from those that are performing well to prevent further bank runs.

BEYOND 2016

Even for a country with such a tumultuous history, 2015 was an eventful year. Much of 2016 will be spent trying to make sense of these changes. We are not just talking about the election and the upcoming transfer of power, but they will no doubt loom large in solving many of the economic shocks 2015 left behind. Inflation and the depreciation of the Kyat will have to be tackled. A recent report by Global Witness on the jade industry also lands on the new government's agenda. Decisions ranging from Kyaukpkyu to the Yangon Stock Exchange to a fourth telco operator will have to be addressed.

Politically, it will be fraught as a new inchoate administration struggles with the legacy the old guard has left behind – and the remaining old guard itself, which has entrenched itself as businessmen, directors, generals and permanent secretaries.

Four race-and-religion laws are a particularly noxious legacy and stain Ms. Suu Kyi's democratic escutcheon. Another legacy is the 2014 census, where race and religion data was collected but not published. The new government should do well to publish this data to see whether education, health, and social welfare shortcomings are based along racial or religious lines.

The incoming administration's lofty spending goals on universal healthcare, education and social programs will have to be squared with the country's current low tax intake and tax avoidance. In education, the fraught 2014-2015 law will have to be implemented, and here at least, Ms. Suu Kyi has an ace: Dr. Aung Thu, a member of her transition team, is a respected academic.

But the biggest question of them all as Myanmar moved into 2016 is this: Who will be the next president? Ms. Suu Kyi is currently barred from the position and her recent comments that she will be above the president has put too much strain on Myanmar's constitution. Investors, economists, and other assorted prognosticators do not have a clear idea of how a new government can be effective given the current rules.

As Myanmar considers these questions, the country will be buffeted by external events. ASEAN will come to Myanmar in 2016 in the form of free trade areas, bringing its own challenges. The bloc will move closer toward trade liberalization, posing dangers for Myanmar's uncompetitive domestic industries. Consumers will be pleased as cheaper imports flow in. If the transition goes well, Myanmar will be something

of a faint glimmer of hope in a region increasingly beset by authoritarianism, from Malaysia to Cambodia.

Indeed, the future of Myanmar will be made not just in Naypyidaw, but in capitals far away from Myanmar's shores. Beijing will be loath to see Myanmar warming up to the West and its economic heft in the country may diminish. Many insurgencies in Myanmar's periphery use Chinese territories to threaten Myanmar, and the Sino-Myanmar relationship will remain crucial for the years to come.

Politics in Washington D.C., meanwhile, will be equally impactful to Myanmar. The Democratic presidential frontrunner Hilary Clinton will hope to point Myanmar out as one of the few successes of her stint as Secretary of State. Meanwhile, her Republican opponents will want to prevent her from doing so. Sanctions on Myanmar are unlikely to ease soon, as acknowledged recently by Obama administration officials.

Meanwhile in Yangon, skyscrapers and flyovers will go up. Despite reeling from currency depreciation, businesses will have a cheerful 2016 as international interest in Myanmar once again rekindles under a NLD-led administration. Global brands in fast food, electronics, and fashion will expand their reach in Myanmar. The tourism sector should outperform expectations again. Mobile banking and e-commerce will develop faster than anyone expects. The entry of foreign banks and securities houses will also be key developments to monitor.

To reach its maximum potential, Myanmar will need a systematic approach to improving the environment for growth and enabling various industries to reach their full potential. In some areas, this approach will come from deregulation. In other areas, it will come from trade liberalisation and the promotion of joint ventures and international businesses' entry.

However, as the past few years have shown, industrial or GDP growth alone will not lift Myanmar out of poverty or provide economic or social stability. To make sure that another decade does not go by in which the rich grow richer and the poor do not progress, Myanmar, its government, civil society, and local businesses, will need to become part of a national mission to ensure that growth is inclusive.

Appendix A

Macroeconomic Indicators

Source: IMF Reports (2013,2014,2015)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16e	2016-17e	2017-18e
Output and Prices									
GDP (kyat billions)	34,958	39,847	43,238	47,722	54,699	62,834	76,471	92,641	109,600
GDP (US\$ billions)	38.1	49.8	56	55.6	56.7	63.1	65.8	71.3	79
GDP (per capita)	587	742	1,118	1,100	1,112	1,228	1,269	1,364	1,502
Real GDP growth (authorities)	10.6	10.4	5.6	7.3	8.4	8.7	9.3	N/A	N/A
Real GDP growth (IMF estimates)	5.1	5.3	5.6	7.3	8.4	8.5	8.5	8.4	8.3
CPI	7.7	8.9	-1.1	4.7	6.3	7.4	13.3	10.2	8.2
Government Accounts									
Total Revenues (kyat trillion)	10.7	11.4	12.1	23.4	23.3	26.4	20.8	20.6	20.8
of which: tax revenues (kyat trillion)	2.3	2	3.9	7.1	7.8	8.2	8.2	8.5	8.8
of which: State Owned Enterprise Revenues (kyat trillion)	7.2	7	7.8	15.4	13.7	13.8	10.1	10	10.3
Total Expenditures (kyat trillion)	15.6	16.9	16.7	25.1	25.1	29.3	25.6	25.2	25.3
Budget Surplus (+)/Deficit (-) (kyat trillion)	-4.9	-5.4	-4.6	-1.7	-1.8	-2.9	-4.8	-4.7	-4.6
Domestic Public Debt (kyat trillion)	18.7	21	22.6	17.8	16.8	17.2	17.6	17.1	17
Money and Credit									
Broad Money (kyat trillion)	34.8	36.3	26.3	46.6	32.7	21.7	31.7	28.4	24.4
Domestic Credit (kyat trillion)	34.8	34.4	25.1	5.1	24.6	28.8	34.7	30.3	27.9
Private Sector Credit (kyat trillion)	36.9	65.4	60.1	50.5	52.5	35.5	45.2	36.7	30.2
Balance of Payments									
Current Account Balance (US\$ billion)	-1.3	-1.9	-1.9	-4.2	-5.2	-6.1	-8.9	-8.3	-7.7
Trade balance (US\$ billion)	1.3	0.9	-0.3	-3.8	-4.6	-8.2	-11.6	-11.1	-10
Exports (US\$ billion)	19.9	17.4	18.3	18.6	19.9	19.6	18.9	20.4	21.8
Imports (US\$ billion)	-18.6	-16.5	-18.6	-22.4	-24.4	-27.8	-30.5	-31.5	-31.8
Official Reserves									
in millions of US\$	2,809	3,754	922	3,062	4,546	5,070	5,075	5,374	6,539
in months of total imports	3.7	3.9	0.8	2.4	2.8	2.8	2.5	2.3	2.5
External Debt									
In billions of US\$	13.8	14.4	15.3	13.7	10.2	8.8	9.7	11.2	12.8
In percent of GDP	36.1	29	27.4	24.7	18	14	14.7	15.7	16.2

Appendix B

Imports and Exports

Source: NCRA Research

in million US\$	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (to Nov 2016)
Total Exports	5232.68	6401.71	6778.85	7586.94	8861.01	9,135.6	8,977.0	11,204.0	12,523.7	7,204.4
Agricultural Products	931.13	1221.22	1403.17	1678.36	1800.39	2,372.6	2,696.7	2,661.0	2,919.6	1,639.4
Animal Products	10.3	13.07	10.16	24.15	93.77	90.7	32.9	15.4	8.3	5.0
Maritime Products	491.58	554.5	464.9	466.9	498.61	705.9	624.2	516.0	421.1	288.5
Mineral Products	499.36	741.99	708.13	1017.57	2274.07	897.7	399.1	1,339.5	1,498.9	841.5
Forestry Products	620.43	640.02	516.65	561.52	644.7	642.0	595.6	948.0	94.4	128.7
Industrial Products (including Oil and Gas)	2329.46	2826.07	2686.18	3238.9	2907.95	4,083.9	4,492.9	4,637.5	6,524.6	3,971.4
Other Exports	350.42	404.84	989.66	599.54	641.51	342.8	135.6	1,086.5	1,056.8	329.9
Total Imports	2936.73	3353.42	4543.45	4181.4	6412.73	9,035.1	9,068.9	13,759.5	16,633.1	10,917.4
Capital Product Imports	839.77	1146.93	1824.4	1530.53	2480.68	3,718.0	3,842.5	5,692.0	8,037.6	5,742.8
Intermediate Product Imports	1377.8	1254.89	1597.38	1635.98	2628.97	4,071.6	3,728.8	5,684.0	5,682.5	3,118.4
Consumer Production Imports	719.16	951.6	1121.67	1014.89	1303.08	1,245.5	1,497.6	2,383.5	2,913.1	2,056.2
Total Trade	8169.41	9755.13	11322.3	11768.34	15273.74	18170.665	18045.929	24963.464	29156.863	18121.725

Appendix C

Population

Source: Census 2014-2015

	Area (sq km)	Population	Density (ppl per sq km)	Urban Population	Urbanization Rate	15-64 Population	15-64 Population as % of Total	Number of Households
UNION	676,577.23	51,486,253	76	14,877,943	29%	32,982,768	64%	10,877,832
Kachin	89,041.80	1,689,441	19	592,368	35%	1,084,096	64%	269,365
Kayah	11,731.51	286,627	24	72,418	25%	176,934	62%	57,274
Kayin	30,382.77	1,574,079	52	329,166	21%	888,642	56%	308,041
Chin	36,018.90	478,801	13	99,809	21%	264,605	55%	91,121
Sagaing	93,702.48	5,325,347	57	911,335	17%	3,468,865	65%	1,096,857
Tanintharyi	43,344.91	1,408,401	32	338,419	24%	858,419	61%	283,099
Bago	39,404.43	4,867,373	124	1,072,336	22%	3,175,185	65%	1,142,974
Magway	44,820.58	3,917,055	87	588,031	15%	2,578,796	66%	919,777
Mandalay	30,888.09	6,165,723	200	2,143,436	35%	4,186,385	68%	1,323,191
Mon	12,296.64	2,054,393	167	572,189	28%	1,278,995	62%	422,612
Rakhine	36,778.05	3,188,807	87	354,288	11%	1,305,561	41%	459,772
Yangon	10,276.71	7,360,703	716	5,160,512	70%	5,219,941	71%	1,582,944
Shan	155,801.38	5,824,432	37	1,395,847	24%	3,712,196	64%	1,169,569
Ayeyawady	35,031.88	6,184,829	177	872,600	14%	4,004,350	65%	1,488,983
Nay Pyi Taw	7,057.10	1,160,242	164	375,189	32%	779,798	67%	262,253

Appendix D Onshore Operators in Myanmar's O&G Sector

Source: NCRA Research

Block	Operators	Local Partner	Status
EP-1	Brunei National Petroleum (Brunei)	IGE	2013 Auction
EP-3	ONGC Videsh (India)	Machinery & Solutions	2013 Auction
EP-4	JSOC Bashneft (Russia)	UNOG	2013 Auction
IOR-2	Goldpetrol (Indonesia) Interra Resources/Geopetrol Singu		Production
IOR-3	Unbid in 2013 Auction		
IOR-4	MPRL E&P (Myanmar, BVI)	MPEP	2013 Auction
IOR-5	Petronas (Malaysia)	UNOG	2013 Auction
IOR-6	MPRL E&P (Myanmar, BVI)	MPEP	2013 Auction
IOR-7	Petronas (Malaysia)	UNOG	2013 Auction
MOGE-1	Goldpetrol (Indonesia) Interra Resources/Geopetrol Singu		Production
MOGE-2	MPRL (Myanmar)		Production
MOGE-3	PTTEP (Thailand) Palang Sophon Offshore (Thailand)	Win Precious Resources	2013 Auction
MOGE-4	CAOG s.a.r.l. (Luxembourg)	Apex Geo Services	2013 Auction
PSC-A	Nobel Oil (Russia)		
PSC-B1	Nobel Oil (Russia)		
PSC-B2	ONGC Videsh Limited	Machinery & Solutions	2013 Auction
PSC-C1	Pacific Hunt Energy (Canada)	Young Investment Group	2013 Auction
PSC-C2	CNOOC (China) CNPC (China)	Golden Aaron	Exploration
PSC-D	Sinopec (China)	-	Exploration
PSC-F	North Petrol (China)		
PSC-H	Pacific Hunt Energy (Canada)	Young Investment Group	2013 Auction
PSC-J	Petroleum Exploration (Pakistan) Siren E&P (UK)	Parami Energy	2013 Auction
PSC-K	ENI (Italy)	MPEP	2013 Auction
PSC-L	Essar Group (India)		Exploration
PSC-M	Unbid in 2013 Auction		
PSC-O	Petroleum Exploration (Pakistan) Siren E&P (UK)	Parami Energy Precious Stone Mining	2013 Auction
PSC-R	SNOG & UPR (Singapore)		
RSF-5	ENI (Italy)	MPEP	2013 Auction

Appendix E

Offshore (Shallow-Water) Operators in Myanmar's O&G Sector

Source: NCRA Research

Block	Operators	Local Partner	Status
A-1	Daewoo (South Korea)		Development
A-2	Essar (India)		Exploration
A-3	Daewoo (South Korea)		Development
A-4	Woodside Energy (Australia) BG Group (UK)	MPEP	2014 Auction
A-5	UNOCAL/Chevron (US)	Royal Marine Engineering	2014 Auction
A-6	MPRL (Myanmar)		Exploration
A-7	Woodside Energy (Australia) BG Group (UK)	MPEP	2014 Auction
M-1	Rimbunan		Exploration
M-2	PetroVietnam		Exploration
M-3	PTTEP (Thailand) MOECO (Japan)		Exploration
M-4	Oil India (India) Mercator Petroleum (India) Oil Max Energy (India)	Oil Star Management	2014 Auction
M-5	Total (France)		Production
M-6	Total (France)		Production
M-7	ROC Oil (Australia) Tap Oil (Australia)	Smart E&P International	2014 Auction
M-8	Berlanga Holding (Netherlands)	A-1 Mining	2014 Auction
M-10	CNOOC (China)		Exploration
M-11	PTTEP (Thailand)		Exploration
M-12	Petronas (Malaysia)		Production
M-13	Petronas (Malaysia)		Production
M-14	Petronas (Malaysia)		Production
M-15	Transcontinental (Australia) Canadian Foresight (Canada)	Century Bright Gold	2014 Auction
M-16	KMDC		Study Period
M-17	Reliance (India)	United National Resources Development Services	2014 Auction
M-18	Reliance (India)	United National Resources Development Services	2014 Auction
YEB	Oil India (India) Mercator Petroleum (India) Oil Max Energy (India)	Oil Star Management	2014 Auction

Appendix F Monthly Household Expenditures

Source: 2012 Survey

Block	Operators	Local Partner	Status
AD-1	CNPC (China)	MOGE	Exploration
AD-2	Woodside Energy (Australia) BG Group (UK)	-	2014 Auction
AD-3	Ophir Energy	Parami Energy	2014 Auction
AD-5	Woodside Energy (Australia) BG Group (UK)	-	2014 Auction
AD-6	CNPC (China)	MOGE	Exploration
AD-7	Daewoo (South Korea)	MOGE	Development
AD-8	CNPC (China)	MOGE	Exploration
AD-9	Shell (UK, Netherlands) MOECO (Japan)	-	2014 Auction
AD-10	Statoil (Norway) ConocoPhillips (US)	-	2014 Auction
AD-11	Shell (UK, Netherlands) MOECO (Japan)	-	2014 Auction
MD-2	ENI (Italy) PetroVietnam (Vietnam)	-	2014 Auction
MD-4	ENI (Italy) PetroVietnam (Vietnam)	-	2014 Auction
MD-5	Shell (UK, Netherlands) MOECO (Japan)	-	2014 Auction
MD-6	Petronas (Malaysia)	UNOG	Exploration
YWB	Total (France)	-	2014 Auction

Appendix G Foreign Direct Investments

Source: DICA

in US\$ million	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	9M15-16
Agriculture		138.8		9.7	20.3	39.7	
Livestock and Fisheries				5.6	96.0	26.9	
Mining	2.5	1,396.1	19.9	15.3	32.7	6.3	2.2
Manufacturing	33.2	66.3	32.3	400.7	1,827.0	1,502.0	724.5
Power and Energy		8,218.5	4,344.0	364.2	46.5	40.1	47.0
Oil and Gas	278.6	10,179.3	247.7	309.2		3,220.3	2,049.2
Transport and Communication			0.6		1,190.2	1,679.3	1,598.9
Hotel and Tourism				300.0	435.2	357.9	112.8
Real Estate					440.6	780.7	239.6
Industrial Estate							10.0
Others				14.8	18.5	357.3	114.8
TOTAL	314.3	19,999.0	4,644.5	1,419.5	4,107.1	8,010.5	4,915.8

Appendix H Monthly Household Expenditures

Source: 2012 Survey

2012 Survey, Monthly Household Expenditures	Urban Value		Rural Value	Rural
TOTAL	202,155.3	100.0	152,010.3	100.0
1 FOOD AND BEVERAGES TOTAL	121,843.0	60.3	99,455.5	65.4
Rice	23,810.5	11.8	26,073.4	17.2
Meat	16,593.6	8.2	12,484.1	8.2
Food Taken Outside Home	13,604.2	6.7	7,013.4	4.6
Fish and crustacea (fresh)	11,747.8	5.8	8,129.6	5.4
Vegetables	10,900.7	5.4	10,627.2	7.0
Cooking oil and fats	8,863.4	4.4	7,799.8	5.1
Fish and crustacea (dried)	6,701.4	3.3	4,213.6	2.8
Wheat and Rice products	6,158.9	3.1	3,873.5	2.6
Fruits	6,138.8	3.0	4,370.3	2.9
Beverages	5,189.3	2.6	3,474.7	2.3
Eggs	4,019.5	2.0	3,076.6	2.0
Pulses	2,985.3	1.5	2,914.9	1.9
Ngapi and nganpyaye	1,914.1	1.0	2,376.1	1.6
Spices and condiments	1,295.8	0.6	1,185.2	0.8
Milk and milk products	1,125.9	0.6	438.8	0.3
Sugar and other food	793.6	0.4	1,404.3	0.9
2 NON-FOOD TOTAL	80,312.3	39.7	52,554.8	34.6
Travelling expenses (Local)	12,067.1	6.0	7,698.4	5.1
Fuel and light	10,176.2	5.0	8,517.3	5.6
Charity and ceremonials	7,128.2	3.5	6,496.1	4.3
House rent and repairs	5,921.0	2.9	2,937.7	1.9
Education	5,742.8	2.8	3,363.2	2.2
Other expenses	5,736.0	2.8	3,023.5	2.0
Clothing and apparel	5,068.5	2.5	4,286.5	2.8
Cleansing and toilet	4,375.3	2.2	3,290.0	2.2
Medical care	4,247.0	2.1	2,818.3	1.9
Personal use goods	3,953.2	2.0	2,941.5	1.9
Furniture	719.1	0.4	513.0	0.3
Stationery and school supplies	732.2	0.4	146.7	0.1
Tobacco	622.1	0.3	835.1	0.6
Travelling expenses (Journey)	549.1	0.3	445.0	0.3
Recreation	334.4	0.2	258.0	0.2
Crockery	200.8	0.1	202.8	0.1
Other household goods	12,739.3	6.3	4,781.7	3.2

Appendix I

Tourism: Number of Visitors

Source: NCRA Research

Country of Origin	2008	2009	2010	2011	2012	2013	2014	%of Total Visitors	Growth in 2011-2014
ASIA	128,279	161,133	212,454	259,692	380,404	630,399	807,806	71.4%	211%
1 BANGLADESH	1,001	1,212	1,441	1,988	1,737	1,981	3,654	0.3%	84%
2 CHINA	30,792	36,341	46,141	62,018	70,805	90,550	125,609	11.1%	103%
3 HONGKONG	2,410	2,747	3,081	3,820	4,826	7,874	8,522	0.8%	123%
4 INDIA	7,173	8,609	9,849	12,318	16,868	21,042	32,306	2.9%	162%
5 JAPAN	10,881	13,809	16,186	21,321	47,690	68,761	83,434	7.4%	291%
6 KOREA	12,369	12,508	18,930	22,524	34,805	54,934	58,472	5.2%	160%
7 MALAYSIA	8,268	9,668	16,186	23,287	30,499	39,758	46,534	4.1%	100%
8 SINGAPORE	8,599	10,712	12,114	15,391	26,296	39,140	47,692	4.2%	210%
9 TAIWAN	11,472	12,276	14,170	15,542	22,060	30,699	32,664	2.9%	110%
10 THAILAND	27,311	43,254	59,692	61,696	94,342	139,770	198,229	17.5%	221%
11 OTHERS	8,003	9,997	14,664	19,787	30,476	135,890	170,690	15.1%	763%
WEST EUROPE	37,156	48,527	59,817	80,895	130,296	158,163	186,828	16.5%	131%
1 AUSTRIA	1,212	1,447	1,896	1,964	3,489	3,959	4,022	0.4%	105%
2 BELGIUM	1,386	1,848	2,411	3,376	4,627	5,946	6,252	0.6%	85%
3 FRANCE	8,217	10,458	13,143	19,414	30,064	35,462	41,453	3.7%	114%
4 GERMANY	8,947	9,608	11,082	14,006	23,063	27,712	32,265	2.9%	130%
5 ITALY	3,030	5,975	7,169	9,710	10,830	11,728	12,613	1.1%	30%
6 SPAIN	2,588	4,481	5,812	6,659	6,688	5,588	7,955	0.7%	19%
7 SWITZERLAND	2,482	3,229	4,168	5,545	8,034	9,547	11,267	1.0%	103%
8 U.K	5,397	6,171	7,340	11,056	24,296	33,203	40,921	3.6%	270%
9 OTHERS	3,897	5,310	6,796	9,165	19,205	25,018	30,080	2.7%	228%
THE AMERICAS	15,229	17,440	18,911	25,365	44,074	67,253	81,942	7.2%	223%
1 UNITED STATES	13,195	15,053	16,504	21,680	37,589	53,653	62,631	5.5%	189%
2 CANADA	2,034	2,387	2,407	3,685	6,485	8,975	12,268	1.1%	233%
OTHER AMERICAS	929	1,222	1,669	2,380	3,535	4,625	7,043	0.6%	196%
OCEANIA	6,079	8,005	8,695	11,622	20,650	28,079	33,421	3.0%	188%
1 AUSTRALIA	5,374	7,163	7,693	10,415	18,261	24,718	29,175	2.6%	180%
2 NEWZEALAND	691	830	993	1,188	2,342	3,318	4,090	0.4%	244%
3 OTHERS	14	12	9	19	47	43	156	0.0%	721%
EASTERN EUROPE	3,729	4,623	6,118	7,622	9,077	10,183	13,592	1.2%	78%
1 RUSSIA	1,726	2,070	2,757	3,496	3,749	4,117	4,835	0.4%	38%
2 OTHERS	2,003	2,553	3,361	4,126	5,328	6,066	8,757	0.8%	112%
MIDDLE EAST	1,379	1,564	2,208	2,607	3,747	3,396	4,714	0.4%	81%
AFRICA	539	764	816	993	1,598	2,688	3,321	0.3%	234%
TOTAL	192,390	242,056	309,019	388,796	589,846	900,161	1,131,624	100.0%	191%

2016 Taiwan Trade Shows

Where Opportunities Get Activated



	TAIPEI CYCLE <small>عربي</small> ★ Taipei Int'l Cycle Show	Mar. 2-5		Foodtech & Pharmatech TAIPEI <small>عربي</small> ★ Taipei Int'l Food Processing & Pharm. Machinery Show	June 22-25
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	SPOMODE ★ Taipei Int'l Sports Textile & Accessory Expo	Mar. 2-5		Taiwan HORECA ★ Taiwan Int'l Hotel, Restaurant and Catering Show	June 22-25
	DiWaS ★ Taiwan Int'l Diving and Water Sports Show	Mar. 2-5		HALAL TAIWAN ★ Taiwan Int'l HALAL Expo	June 22-25
	Taiwan Int'l Boat Show ★ Taiwan International Boat Show	Mar. 10-13		TCFB Taichung Int'l Tea, Coffee and Bakery Show Greater Taichung Int'l Expo Center	July 15-18
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	AutoTronics Taipei ★ Taipei Int'l Automobile Electronics Show	Apr. 6-9		INST ★ Taipei Int'l Invention Show & Technomart	Sept. 29-Oct. 1
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	TIS Taipei IN Style Taipei	Apr. 14-16		TIGS ★ Taiwan Int'l Green Industry Show – Energy, Environment, Water Technology & Urban Planning	Oct. 12-14
	Giftionery Taipei ★ Taipei Int'l Gift & Stationery Show	Apr. 22-25		TITAS ★ Taipei Innovative Textile Application Show	Oct. 17-19
	TAIWAN SOUVENIR ★ Taiwan Souvenir & Handicraft Show	Apr. 22-25		Aqua Taiwan ★ Taiwan Int'l Water Show	Oct. 20-22
	Houseware Taiwan ★ Taiwan Houseware & Home Décor Show	Apr. 22-25		PHILATAIPEI World Stamp Championship Exhibition	Oct. 21-26
	MT duo ★ Taipei Manufacturing Technology Show	May 5-8		Kaohsiung Food Show ★ Kaohsiung Food Show	Oct. 27-30
	YODEX ★ The 35th Int'l Young Designers' Exhibition	May 13-16		Kaohsiung Horeca ★ Kaohsiung Int'l Hotel, Restaurant, Baking and Catering Show	Oct. 27-30
	COMPUTEX TAIPEI <small>عربي</small> ★ Taipei Int'l Information Technology Show	May 31-June 4		Taiwan Fishery ★ Taiwan Int'l Fisheries & Seafood Show	Nov. 9-11
	MEDICARE TAIWAN ★ Taiwan Int'l Medical & Healthcare Exhibition	June 16-19		TIS Taipei IN Style Taipei	Nov. 10-13
	SENCARE ★ Taiwan Int'l Senior Lifestyle and Health Care Show	June 16-19			
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END NOTES

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