



## MIRAE ASSET LENS ISSUE 7 PART II

### Where to Invest in Korea When Deflationary Risks are Rising

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## Where to Invest in Korea When Deflationary Risks are Rising

Korea's economy looks set to experience further deflationary pressures, prompting some investors to worry that investment opportunities in the country have dried up. We need only to look at neighboring Japan and the damage caused by deflation in the 1990s as evidence of the dangers facing Korea. However, in our view, Korea Inc. remains alert and agile, allowing it to capitalize on new global trends due to the country's high research and development (R&D) capabilities and ensuring that its companies will continue to be globally competitive.

### Japan's Cautionary Tale of Deflation

As an equity investor, we are concerned that the Korean economy is heading to a Japan-style deflationary environment, where domestic companies are unable to deliver growth for an extended stretch of time.

Japan has recorded merely a 1% compound annual growth rate (CAGR) in its gross domestic product (GDP) in the past two decades while inflation remained flat at around 0% CAGR over the same period.<sup>1</sup> The stock market has also been anemic since 1992. Mr. Abe's inauguration as Prime Minister in late 2012 breathed some short-lived life into the market, as his "Abenomics" platform stoked hype that Japan might finally get out of its deflation loop.

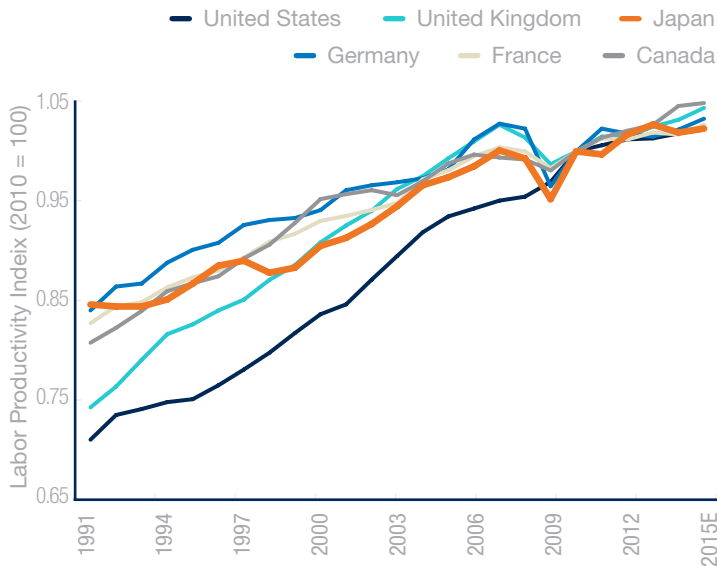
<sup>1</sup> Bank of Japan (2015)



Many critics attribute Japan's decades-long deflation to the investor mania that contributed to the property bubble in the late 1980s and the government's poor handling of the event. The asset bubble triggered by the strong yen and loosening monetary policy was an exceptionally wild one: at the peak, land in Tokyo's Ginza district was reported to trade at JPY 90 m/ sqm (USD 750k /sqm at the time) while TOPIX was trading at five times price-to-book ratio (bank stocks were trading at 60 times price-earnings ratio).<sup>2</sup> Worse, after the bubble burst, Tokyo delayed corporate restructuring and banking recapitalization, only to create and prolong the existence of unprofitable "zombie" companies. But that was only part of the problem.

### Labor Productivity of Select Developed Countries

Source: OECD Economic Outlook: Statistics and Projections (2015)



Secondly, throughout modern history urbanization has served as a major GDP growth driver by increasing labor productivity. Unfortunately, Japan had already reached 80% urbanization when the working population began to wane.<sup>4</sup> While Japan continues

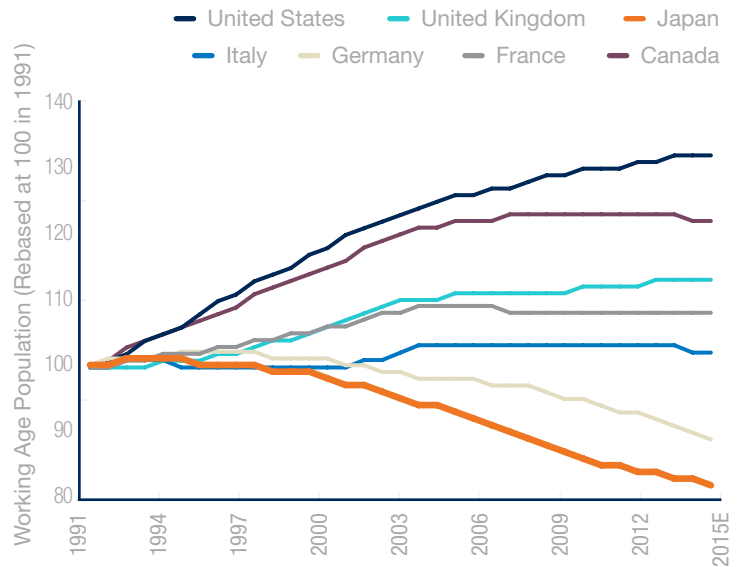
### Running on Fumes

The main culprit of this decade-long spiral of deflation was that Japan's economy had nearly exhausted all major fundamental growth drivers by the early 1990s.

Firstly, Japan has long had an aging population. Surprisingly, Japan's labor productivity, or the output per person employed, in the past 25 years was actually better than the US (see chart below). Indeed, the working age group in the US has grown 30% in the past 25 years while Japan's decreased by 17%.<sup>3</sup> Japan's working population peaked around 1990 and the ensuing decline has been a drag on the pace of economic growth ever since.

### Working Age Population (15-64 years old) of G7 Countries

Source: United States Census Bureau, International Programs (2016)



to urbanize (Tokyo is the world's largest city, with more than 30 million people<sup>5</sup>), many of the benefits from this urbanization trend had already dissipated by the early 1990s.

<sup>2</sup> Nomura Global Research (2016)

<sup>3</sup> United States Census Bureau, International Programs (2016)

<sup>4</sup> World Bank (2015)

<sup>5</sup> Ministry of Internal Affairs and Communications, Statistics Japan (Accessed 2016)



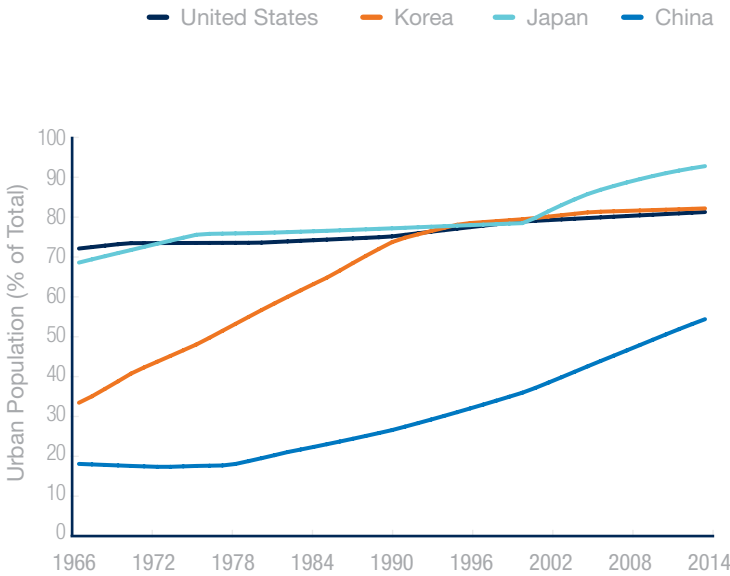
Thirdly, Japan's economy was experiencing deep deflationary pressures just as Japanese manufacturing began to go abroad for foreign direct investment (FDI). Japan Inc.'s offshore manufacturing as a proportion of total climbed from single digits in the early 1990s to reach 22% in 2012.<sup>6</sup> This rise can partially be explained by the Plaza Accord struck in 1985, where finance ministers from G5 countries<sup>7</sup> agreed on measures to depreciate an overvalued U.S. dollar, triggering a significantly stronger yen.

The appreciating yen movement served to discourage Japan Inc. from investing domestically, prompting a vicious feedback loop.

Fourthly, Japan Inc. lost its manufacturing competitiveness, eroded by fast-rising neighbors such as Korea, Taiwan and China. Sony and Panasonic held global influence until the 1990s but they have since been overshadowed by the likes of Samsung and LG of Korea, Foxconn of Taiwan, and Lenovo and Huawei of China.

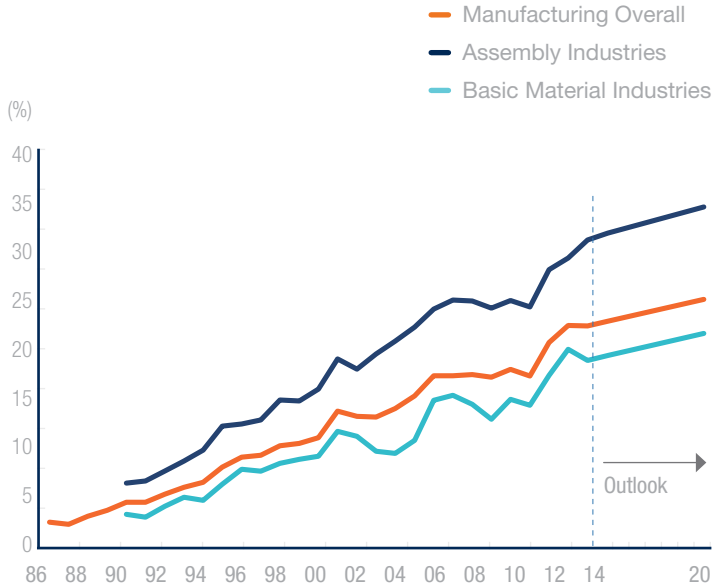
**Asia's Urbanization Ratio**

Source: World Bank (2015)



**Timeline of Japanese Manufacturing Industry's Offshoring**

Source: Goldman Sachs Global Investment Research (2015)



**An Early Adopter**

Japan's experience makes us concerned about Korea's economy, as the working population in Korea is set to peak in 2016 and urbanization has already reached over 80%.<sup>8</sup> Similar to Japan, Korea is an ethnically homogenous society, which tends

to be reluctant to accept immigration, hence Korea does not have readily available structural levers to replenish its peaking working population unless re-unification with North Korea occurs.

<sup>6</sup> Goldman Sachs Investment Research (2015)

<sup>7</sup> France, Germany, Japan, the United Kingdom, and the US

<sup>8</sup> Statistics Korea (Accessed 2015)



While Korea does not show the promising domestic growth displayed by other emerging Asian markets, we have identified attractive aspects to the Korean market that differentiate it from Japan and other Asian countries.

Firstly, Korea Inc. is a fast and early adopter of global innovations and the government has been quick to allocate national resources towards adapting to new trends. For instance, the biotechnology industry (“bio”) is widely expected to become one of largest industries in the future, already generating USD 250 bn in revenues (by comparison, smartphones generated USD 340 bn in revenues last year).<sup>9</sup> Korea Inc. houses a large number of bio companies and holds Asia's only meaningful presence in the bio industry, both in bio-similar production and bio-drug development.

The backstory for this present-day advantage dates back to the 1990s. Korea's private and public sectors were attuned to the nascent appearance of the bio industry and consequently encouraged the younger generation to study bio-related sciences, with incentives for universities undertaking bio research. In addition, mass media highlighted that bio was the next big thing for the country, much like semiconductors were in the past. Many young brilliant students rushed to major in bio sciences, which yielded a rich pool of talented, well-educated graduates for relevant companies. The Korean bio industry remains in its early phases, but thanks to the high quality of researchers and buildup of decent research infrastructure, major Korean bio players are already competing on the world stage.

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## Bold Bets in Research & Development

Compared to most emerging countries, Korea Inc. is willing to take risks in the pursuit of erecting new business models. Electric vehicles (EV) are set to become the next big thing in the USD 2-trillion revenue auto industry, and two out of the top five global EV battery makers hail from Korea: LG Chem and Samsung SDI.<sup>10</sup> Both companies were early investors in researching and producing EV batteries, despite incurring heavy losses. LG Chem is said to have amassed USD 1 bn in losses during early stages building up EV battery competitiveness over the past five years. Thanks to the company's brave (reckless by some opinions) willingness to take upfront losses, LG Chem is now a best-in-class EV battery manufacturer, attracting global top auto original equipment manufacturers including VW, BMW, GM and Ford.

Samsung's success story is another typical case in point: when Samsung Electronics placed bets on producing semiconductors starting in the 1980s, many investors strongly objected to the strategy. They feared that the gamble would put the wider Korean economy at risk as its project required multi-billion dollar investments, huge sums of money for an emerging economy at that time. History vindicated the audacious move. Samsung executed its strategy well and climbed the corporate rankings to become the Number 2 semiconductor player in the world, second only to Intel.<sup>11</sup>

Korea's commitment to anticipating and responding to forward-thinking shifts can be further evidenced in allotments to science, technology, engineering, and math. Korea is Number 2 in the world for R&D expenditures as a percentage of GDP, which has climbed steadily over the past several decades. Korea is one of only two countries, alongside Israel, that spends more than 4.0% of its GDP on R&D activities.<sup>12</sup>

<sup>9</sup> Bloomberg, Mirae Asset Global Investments (2016)

<sup>10</sup> Lux Research (2015)

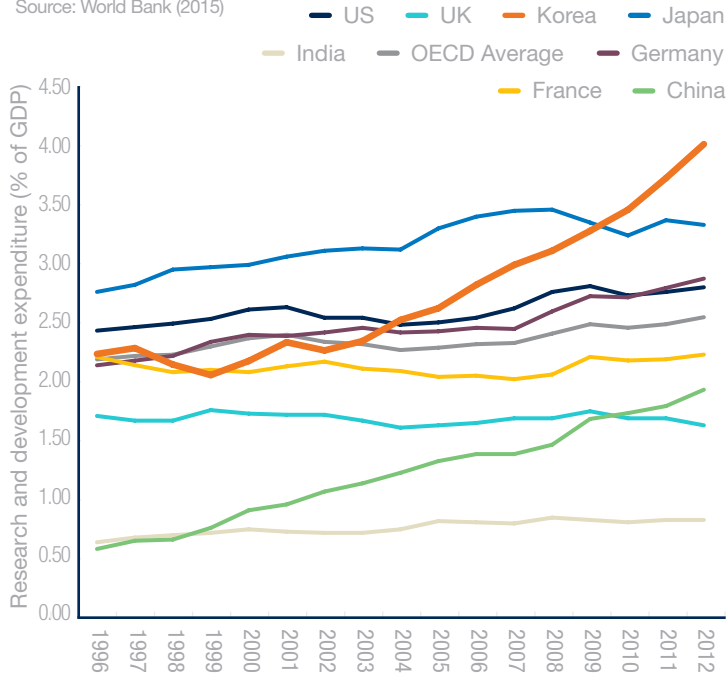
<sup>11</sup> IC Insights (2015)

<sup>12</sup> United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics (2013; Accessed 2016)



## Elevated Korea R&D Expenditure as % of GDP among OECD Countries

Source: World Bank (2015)



Recent new trends that have begun to gain traction in Korea range from entertainment (K-pop culture has spread throughout Asia) and Internet businesses (Naver's LINE, the mobile messenger platform popular in Japan) to mobile game developers (Netmarble, partially owned by CJ) and cosmetics brands (Amore Pacific and LG Household & Healthcare). These trends are predominantly related to software contents, additional proof that Korea Inc. is agile and adaptive to the new era of social media and mobility that will increasingly define the 21<sup>st</sup> century.

To be sure, there are less desirable side effects stemming from Korea Inc.'s willingness to make global-size bets. We are not very inclined to invest in Korea's financial sector, as banks would be first in line to absorb any eventual fallout from failed initiatives and non-performing loans (this helps explain why the cost of credit for Korean banks is among the highest in middle-income countries).<sup>13</sup>

The quick reactions of Korea's labor force and educational focus may also be detrimental for certain individuals. As mentioned above, the government encouraged students to devote their professional life to the hitherto unproven biotech industry in the 1990s. As a result, Korea now has an oversupply of super-educated graduates with doctorate degrees in bioscience, with many facing difficulties in finding an appropriately high-skilled job. However, this translates into a favorable business environment for any biotech venture companies in Korea.

### Focusing on the Positives

In conclusion, while we are concerned about deflationary risks in the Korea economy, it has many companies well positioned to grow into global leaders across emerging industries such as bio, EV, entertainment, software and online content.

We began with Japan's bad experience and would like to end with a more positive aspect of Japan's experience. While Japan Inc. suffered immensely from deflation, it has still managed to generate prominent and successful 'multi-bagger' companies, such as Fast Retailing, NIDEC, Toyota, Makita, Fanuc, Rakuten, and Softbank, among others. We believe Korea Inc. can learn from Japan's example and navigate toward a prosperous and vibrant future.

“In conclusion, while we are concerned about deflationary risks in the Korea economy, it has many companies well positioned to grow into global leaders across emerging industries such as bio, EV, entertainment, software and online content.”

<sup>13</sup> Credit Suisse (2015)



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