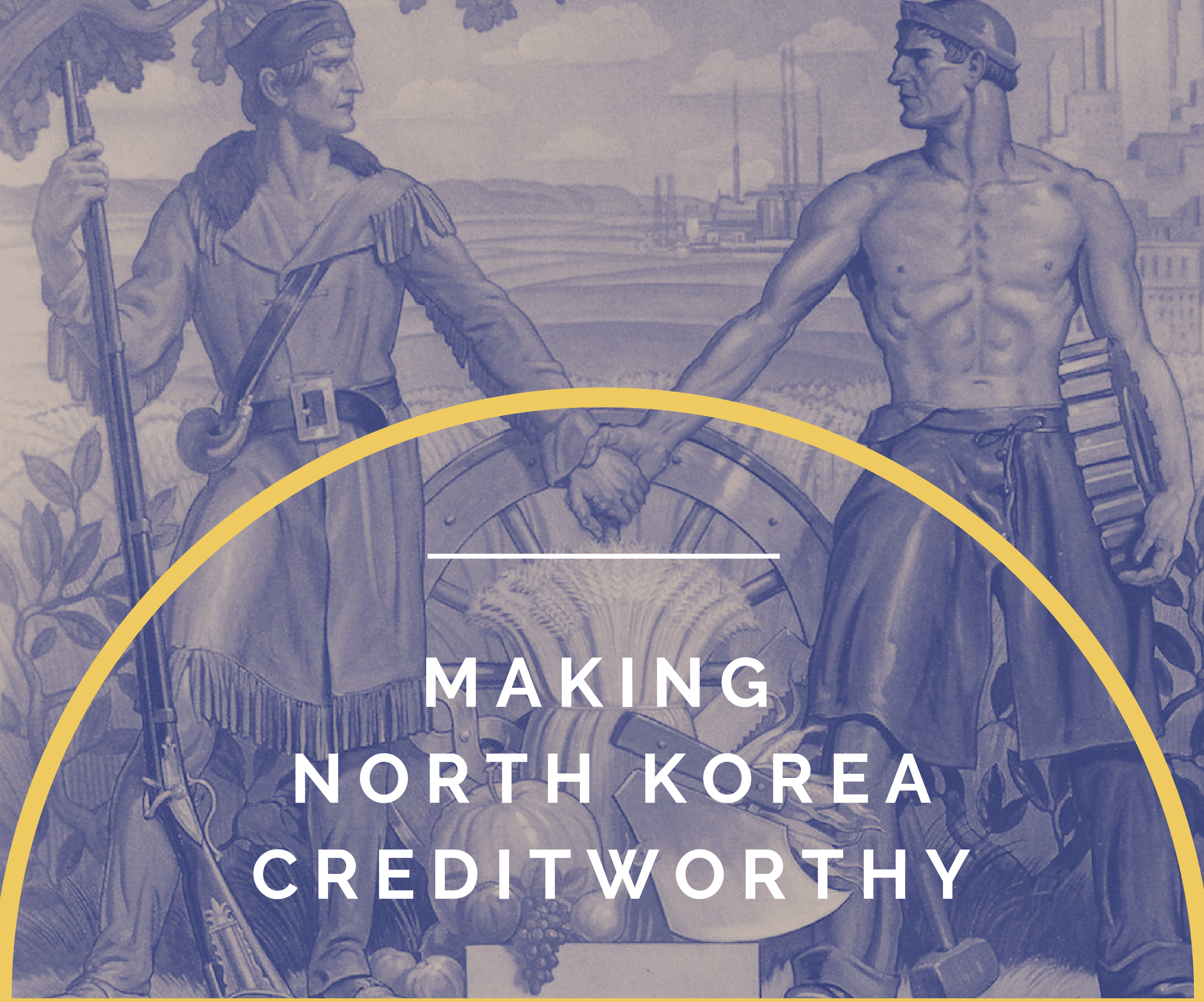

MAKING NORTH KOREA CREDITWORTHY

WHAT WILL IT TAKE TO FINANCE ITS POST-NUCLEAR DEVELOPMENT?

TOM BYRNE
JONATHAN CORRADO

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What will it take to finance its post-nuclear development?

“Commercial credit is the creation of modern times and belongs in its highest perfection only to the most enlightened and best governed nations. Credit is the vital air of the system of modern commerce. It has done more – a thousand times more – to enrich nations than all the mines of the world.”

- Daniel Webster, U.S. Senate, 18 March 1834

Abstract

The U.S. and South Korea have promised a bright future for North Korea if it denuclearizes. Reform is fundamentally North Korea's choice. But a successful economic transition will take a long time given that North Korea remains stuck in a low-income trap. Pyongyang’s “marketization from below” and ring-fenced infrastructure projects will not be enough. North Korea will require substantial and sustained amounts of external financing, hence the need for it to establish creditworthiness. The path to a bright future is institutional reform and the normalization of relations with the international community, and the gateway is the IMF.

Korea Society Team

The primary authors of this title are project director Tom Byrne and Jonathan Corrado. Sally Son and Sunyoung Chang provided invaluable contributions as discerning researchers and talented analysts. Thanks to The Korea Society’s Dr. Stephen Noerper for his suggestions as project advisor.

Image Description

The cover page shows Louis Frederick Grell’s Depression-era mural titled, “Credit, Man’s Confidence in Man.” A frieze of the painting is now reproduced in Moody’s 7 World Trade Center corporate headquarters. It can also be seen in Harvard’s Business School.

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Executive Summary

The inspiration for this paper stems from events in 2018 suggesting that North Korea is committed to denuclearizing and ending its international isolation. International verification and monitoring would be a necessary element in the process of denuclearization. A similar process of monitoring and capacity building by international financial institutions would be necessary to kickstart a systematic process of development. If North Korea's objective is to achieve peace and prosperity, then logically it must also normalize its relations with the global financial community.

Every country that has transitioned from central planning to a market economy has sought membership in the International Monetary Fund (IMF) early on as a means to strengthen its institutions and benefit from financial ties with the international community. This includes the People's Republic of China, the Socialist Republic of Vietnam, the Russian Federation and the other countries of the former Soviet Union in 1992. But the Republic of Cuba and the Democratic People's Republic of Korea are the only two exceptions.

It took time for those countries that did transition to build market institutions, strengthen governance and cultivate investor and creditor rights. Success in domestic reforms was greatly enhanced by openness to trade. China's transformation is the most remarkable and provides an example for North Korea. Deng Xiaoping rapidly embarked on the "reform and opening" policy only two years after the death of Mao Zedong and the implosion of the Great Cultural Revolution, which had devastated China politically, socially and economically. However, it took the authorities almost two decades to restructure effectively the state enterprise, banking, fiscal and exchange rate systems. The World Bank played an influential role in advising the Chinese government. Institutional reform provided the foundation upon which China achieved its spectacular decade of growth in national income, a process that was hyper-charged after it acceded to the World Trade Organization in 2001.

North Korea is mired in a low-income trap. There are signs of prosperity in Pyongyang stemming from the positive effects of the boom in trade with China in the early years of the Kim Jong Un era and the positive effects of bottom-up marketization. However, North Korea's nationwide per capita income remains comparable to income levels in heavily indebted poor countries (HIPC). The country's infrastructure has remained largely neglected since the collapse of the Soviet Union. The best that can be said about the North Korean economy is that although it never fully recovered from its post-Soviet era collapse, at least it has not melted down as Venezuela's and Zimbabwe's have recently.

This paper examines what it will take for North Korea to finance its development and rebuild its infrastructure. The South Korean government's engagement strategy has prioritized inter-Korean infrastructure development — once denuclearization takes place, or significant progress towards that end has taken place. The Moon Jae-in government also believes that inter-Korean economic cooperation will build trust between Seoul and Pyongyang and lead to an era of peace and prosperity on the Korean peninsula.

While South Korea could initiate infrastructure development, the government and its policy banks and corporations alone may find it too burdensome to finance North Korea on a sustainable, long-term basis. Neither will concessional, official development assistance (ODA) from the international financing institutions (IFI) such as the World Bank, Asian Development Bank (ADB) and Asia Infrastructure Investment Bank (AIIB). North Korea's ability to join the IMF is a prerequisite for broad IFI support. However the IMF itself does not provide project financing, and its ability to give North Korea access to its concessional financing facilities faces two considerable obstacles — North Korea's complete lack of transparency in its central bank's balance sheet and its long-standing external debt arrears.

Therefore, North Korea will eventually need to turn to private markets. But for North Korea to tap the global financial markets, it must first become creditworthy. The history of the economic transitions of the 1970s, 1980s and 1990s teaches us that this process requires the following: a commitment by the leadership for economic reform and opening demonstrated by normalization of financial relations with its creditors; joining the international financial community through membership in the IMF; transparency and openness to international financial monitoring; and, ultimately, an assessment of creditworthiness as indicated by gaining a rating from an international credit rating agency. This would allow investors to benchmark and price in risk, thereby widening access to financing.

The transitional experiences of China and Vietnam, along with the resource-rich Central Asian countries, attest to the salubrious effects of establishing creditworthiness, even if on a relatively risky basis. In the case of China, within two years of embarking on reform and opening, it had joined the IMF and within ten years, it had gained an international credit rating. This sequence of events was also repeated by Vietnam and the Russian Federation.

In summary, the tasks that North Korea must accomplish to establish even a modicum of creditworthiness include in general order of priority:

- Restructure external debt, normalize relations with creditors
- Engage the IMF, join the World Bank and regional development banks
- Seek technical assistance for capacity building
- Improve transparency
- Obtain an international credit rating
- Further strengthen economic institutions

The report opens with an overview of North Korea's economic landscape. Per capita incomes have risen since South Korea's sunshine policy era, but not enough. The lack of willingness to reform systemically is a constraint more fundamental than roadblocks posed by U.N. Security Council and U.S. sanctions. Marketization in North Korea is characterized by the rise of the *donju,* the entrepreneurs who operate in political and legal limbo. The commercial and financial activities of the *donju* fill a gap left from the collapse of the centrally planned system. By tolerating and co-opting the *donju*, the government seem to have, so far, avoided extending inflationary, or hyper-inflationary, amounts of credit to state enterprises and their workers.

Section Two discusses North Korea's external debt and payments record, and concludes that North Korea's track record has historically demonstrated an unwillingness and inability to develop sovereign creditworthiness. North Korea has long-standing, unresolved debt arrears with foreign banks and foreign governments, including South Korea. It has not entered into a comprehensive restructuring agreement with all of its official, government creditors, as Cuba did in its 2015 Paris Club restructuring, thus starting to establish its creditworthiness. A related observation is that the reconstruction of post-war Iraq featured not only an international funding consortium led by the U.S. government, but also a debt restructuring among Paris Club creditors—with a huge writedown.

Section Three highlights North Korea's considerable infrastructure and development financing needs under a denuclearization scenario. The message is that while not astronomical, these needs will likely prove too large for the South Korean government and public sector alone to meet. Putting aside the question of how much South Korean citizens are willing to sacrifice to improve the welfare of the people of North Korea, the ability of the South Korean government to support the North will come under increasing strain over time. Its own public sector debt dynamics will weaken in the future, albeit from a strong position now, as potential GDP growth slows and demographic pressures rise.

The international financial institutions can only play a limited direct role financially, but they could play a huge role indirectly through institutional capacity building. Given the North's relatively large financing needs in relation to the availability of public-sector resources, South Korean and global investors would have to step in. And over the very long run, North Korea will have to rely on its own financial markets, a huge task in view of their current backwardness. This analysis therefore underscores the need for tapping global markets, which would be facilitated by North Korea developing creditworthiness

A key point we highlight is that although an easing of sanctions imposed on the North because of its nuclear weapons program is necessary, it is not sufficient for the North to gain full access to the global capital market. Concentric layers of U.S. and international financial prohibitions, including concerns over money laundering and the integrity of North Korea's regulatory system, would have to be peeled away. This dynamic underscores the importance of making substantive progress toward the first principle agreed upon during the Singapore Summit: the establishment of new U.S.-DPRK relations.

Section Four observes that every country that has made the transition from central planning to the market has early on engaged the IMF and other international financial institutions. North Korea's membership in the IMF would improve transparency and policy accountability. The record shows institutional reform in frontier market economies best takes place with the active assistance of the IMF and multilateral development banks. Although financing would jump-start economic modernization, the IMF would provide a catalyst for sustaining financing from other official and private creditors

We conclude in Section Five with a simplified scorecard of economic, financial, and institutional indicators relevant for an assessment of creditworthiness. On a comparative basis, North Korea considerably lags two peers we chose, Cuba and greatly more so, Vietnam. North Korea's data and governance gaps have not narrowed in the Kim Jong Un era, despite the chairman's stated emphasis on creating economic prosperity. Appendix A adds more global context on North Korea's governance deficiencies.

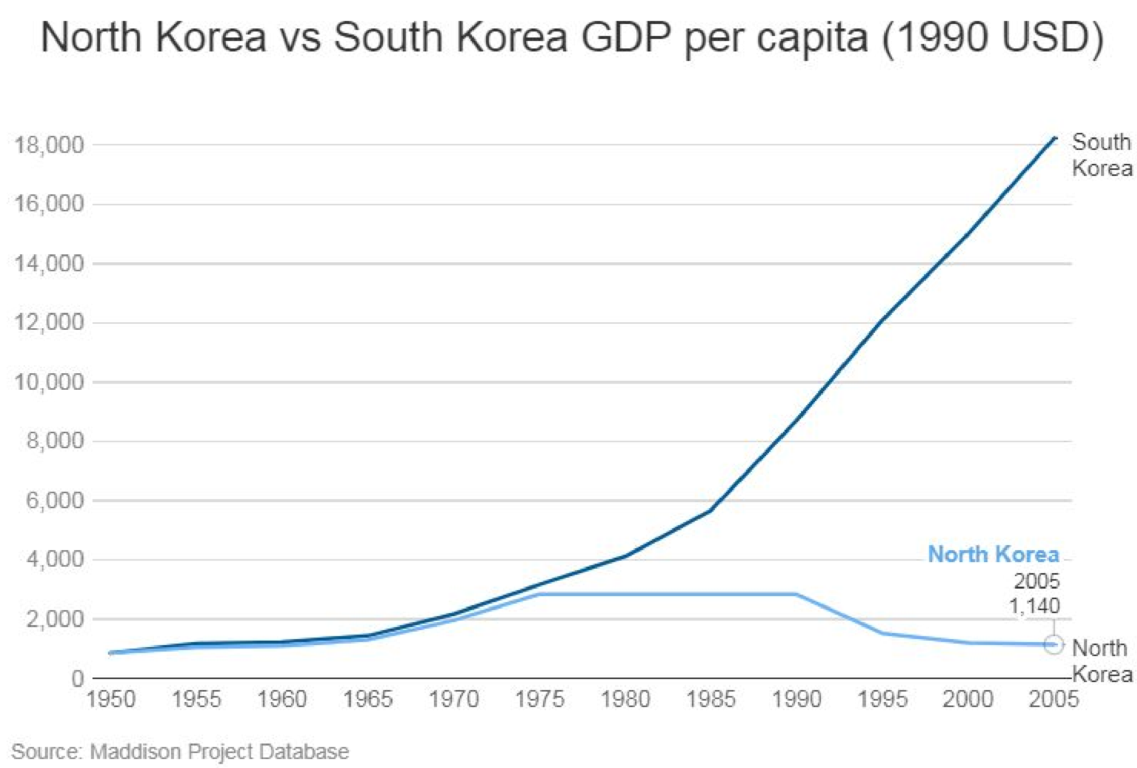
The annexes provide background material in support of themes discussed in each of the sections, and are placed separately so as not to bog down the narrative of the text. These are:

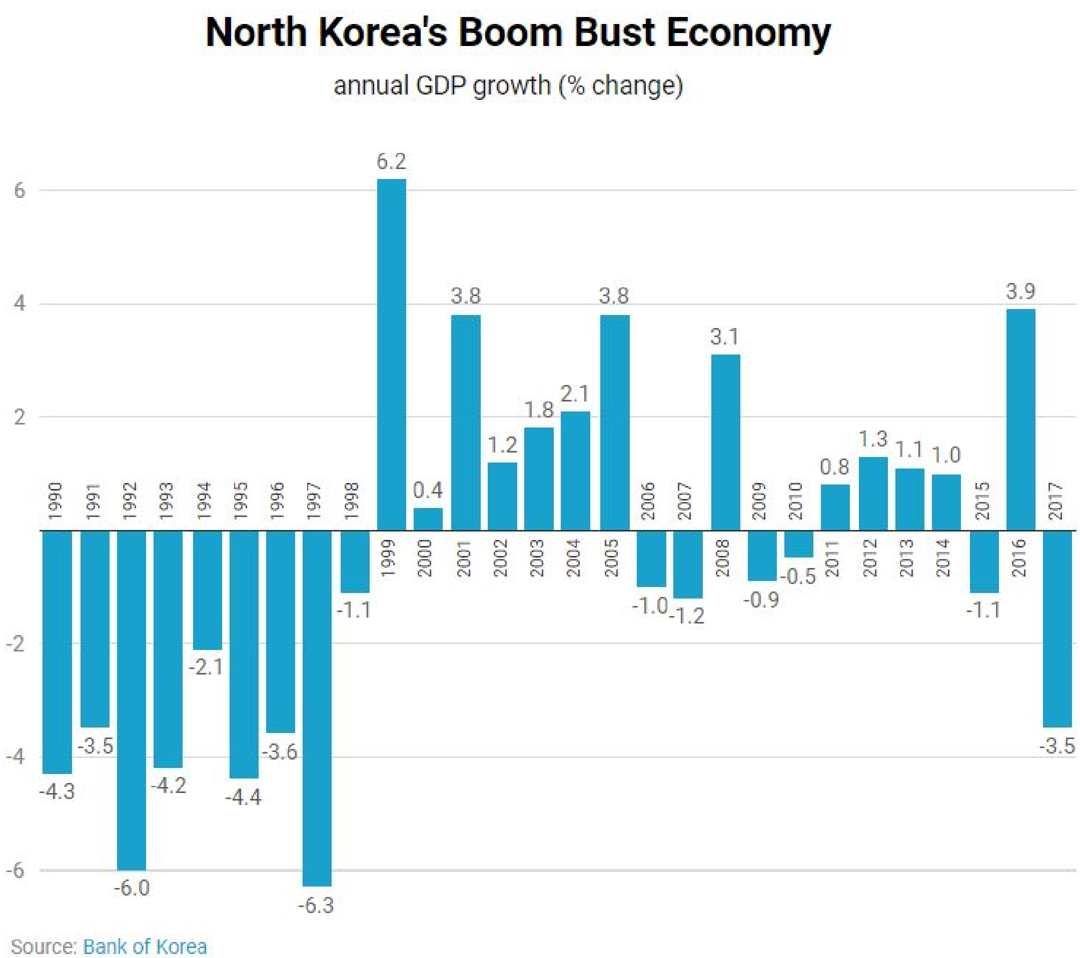
A. A closer look at North Korea’s credit fundamentals: Governance and the rule of law
B. A closer look at North Korea’s credit fundamentals: Statistics and transparency
C. Overview of what do we know about North Korea’s economy
D. Collection of statements by the Trump and Moon administrations related to the benefits of denuclearization
E. North Korea’s economy and the effects of sanctions.
F. Credit rating symbols and definitions

1. North Korea’s economic and financial landscape

Overview

North Korea’s status as a poor country trapped in low-growth dynamics has persisted into the Kim Jong Un era. North and South Korea had similar levels of income growth until a gap opened in the late 1970s. Following a relatively good run during the period of South Korea’s Sunshine Policy from 1998 to 2008, the North’s economy relapsed into up-down cycles, with economic growth contracting 3.5% in 2017, according to the South’s Bank of Korea. There were some signs of improvement after Chairman Kim Jong Un assumed leadership, but more substantive gains have been blocked by the shallowness of internal reform and sweeping international sanctions.





A Brief Economic History

As the Korean War drew to a close with the signing of the Armistice in 1953, North Korea began to build up the elements of a socialist economy -- nationalizing enterprises and collectivizing farms. It inherited natural resource-based industrial production facilities from the occupying Japanese.[1] Kim Il Sung decided to focus on heavy industry and collectivized agriculture. Markets were made unnecessary by the existence of a functional public distribution system (PDS) -- the means through which the government provides compensation to workers in state enterprises, factories, and farms.

A handful of factors have consistently undercut North Korea's economic performance and growth capacity. First, security considerations have overshadowed economic imperatives. Kim Il Sung bristled when the Soviet Union suggested he diversify industrial production away from heavy industry in order to boost light industry. Doing so would have increased the availability of consumer goods, but could have created trade dependencies viewed as strategic vulnerabilities.

[1] Babson, Bradley O. *The North Korean Economic System: Challenges and Issues.* DPRK Economic Forum, U.S.-Korea Institute, SAIS.

Second, the North has historically relied on forced work mobilizations to compensate for supply shortages and disorganized planning schemes. These campaigns have not sustainably boosted economic performance and in fact have probably catalyzed inefficiencies. Third, the leadership's involvement in the economy has been counterproductive. In particular, Seoul National University economics Professor Kim Byeong-yeon argues that the leader-implemented production quota system and on-the-spot guidance damages firms' ability to carry out central plans.[2]

This doesn't mean there has been no economic policy innovation throughout the years. Pyongyang's state planners have acknowledged inefficiencies and attempted to address them through various schemes. Most typically, chronic shortages of supplies and intermediary goods triggered variations in management structure, but these attempts stopped short of the kind of systemic reform and institution building that will be necessary to make North Korea's economy internally successful and externally complementary with the international economic community. In most cases -- as discussed below -- brief experiments with increasing local autonomy and injecting market incentives have been eclipsed by subsequent moves to centralize resources and reassert Party control.

When North Korea refused to become a member of the Council for Mutual Economic Assistance (COMECON), the Soviet Union reduced provisions of aid. Kim Il Sung responded with the *Chollima Movement* in the late 1950s.[3] By affording greater budgetary independence and increasing autonomy to country-level Party representatives, it was hoped that local industry would become more efficient. This system, however, ignored cost accounting, and so it ultimately failed to reduce supply waste and improve efficiency, according to Kyungnam University Professor Phillip Park.[4]

A makeover in management style in 1961 attempted to compensate for input shortages and a disconnect between central planning and local conditions, with Worker's Party Committees assuming control of enterprises. The *Taean Management System* strived to recognize market incentives by providing profits to enterprises according to output and permitting local managers to allocate workers. But two contradictory plans aimed at increasing party control over enterprise planning -- called *unified planning* and *detailed planning* -- fell short of their goal to reduce stock shortages and ended up eroding the incentives created by the *Taean Management System*. As stagnation began to set in during the 1980s, it became apparent to certain state planners that cost, price, profit and management needed to answer to rational economic principles. In the mid 1980s, the *Industrial Complexes System* was rolled out to cluster factories by type and allow the clusters to use self-supporting accounting, acquire supplies, pay wages, and make plans under the guidance of the State Planning Commission. But implementation was uneven and the gains

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[2] Kim Byung-yeon. *Unveiling the North Korean Economy: Collapse and Transition*. Cambridge University Press, 27 May 2017. https://www.amazon.com/Unveiling-North-Korean-Economy-Transition/dp/1316635163

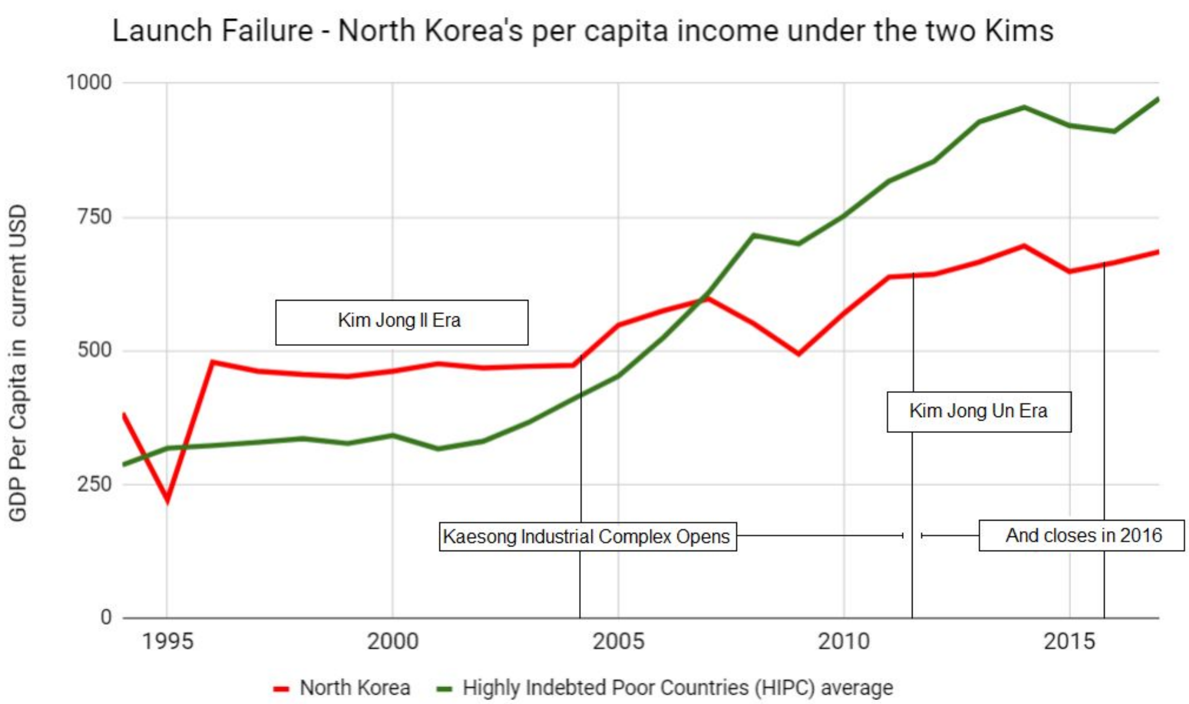
[3] Later, North Korea did participate in the COMECON trading system.

[4] "Light and Shadow: A Review of 'Rebuilding North Korea's Economy.'" *DailyNK*, 20 Sept. 2016, www.dailynk.com/english/light-and-shadow-a-review-of-rebui/

were commensurately meager. Policy innovations in this era stopped short of addressing underlying problems. North Korea resisted the formalized establishment of a role for private initiative, as Pyongyang remained wary of the Chinese style *Gǎigé kāifàng* reform and opening pursued by Deng Xiaoping.

Economic Crisis and "Reform from Below"

The dissolution of the Soviet Union spelled disaster for the North Korean economy, which relied heavily on barter-trade for oil and fertilizer to supply its heavy industries. Lacking the foreign currency to purchase these inputs from Russia, industrial paralysis and famine followed in short order. Agriculture was hit particularly hard. The public distribution system shrank and withered. Starvation and illness led to the tragic death of 500,000 to 1 million people, though some estimates for the death toll range up to 3 million.[5] Since then, North Korea has eked out a relatively limited amount of growth under Kim Jong Il and Kim Jong Un. While highly indebted poor countries (the green line below) were able to leverage IMF membership to restructure their debts and set off an explosive growth trend, isolated North Korea (red line) has languished.



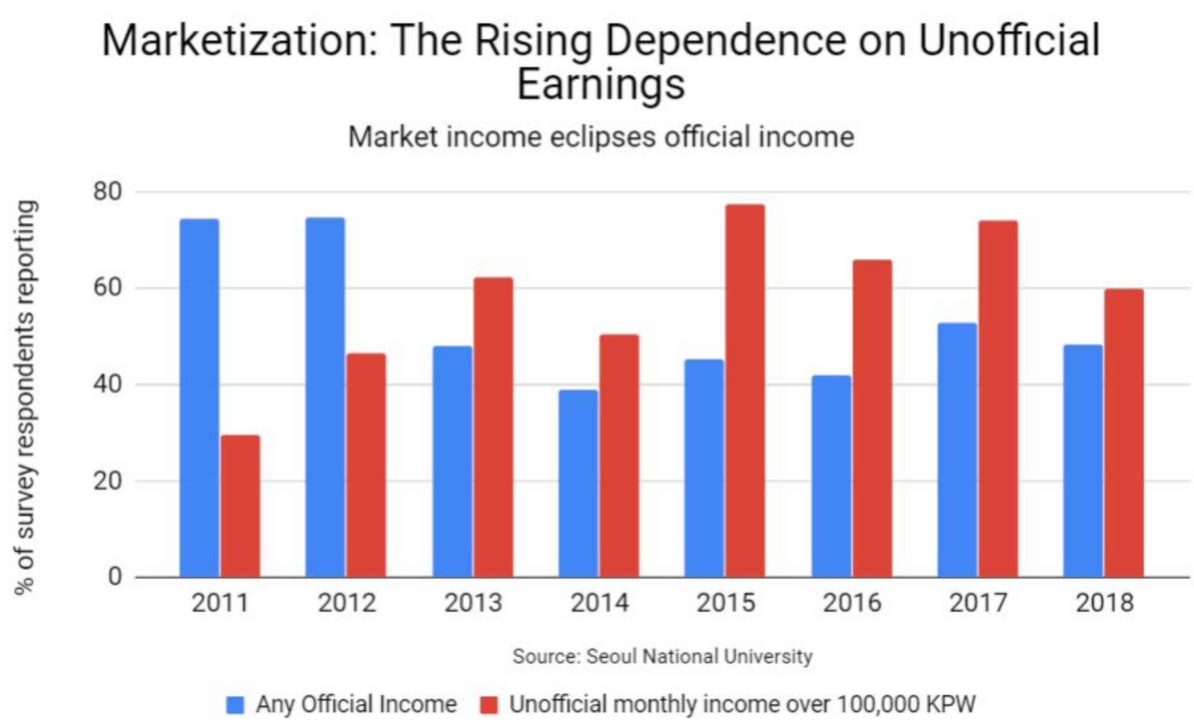
Source for North Korea data: United Nations Statistics Division. Source for HIPC data: World Bank.

Unable to acquire food and goods through official means, North Korea's population turned to unofficial marketplaces -- called *jangmadang* -- to buy and sell essential goods. Some policy

[5] Natsios, Andrew. "The Politics of Famine in North Korea." *United States Institute of Peace*, 26 May 2015, www.usip.org/publications/1999/08/politics-famine-north-korea

liberalizations were introduced -- such as allowing cottage industries to sell in the marketplace and permitting county level complexes of firms and farms greater autonomy -- but the most significant economic development was the tacit acceptance and tolerance of the *jangmadang*. Attempts by the authorities to throttle these markets did little to stifle their explosive growth in size and significance, ushering in profound socio-economic changes to the makeup of North Korean society. Pressure built as a growing collection of informal economic activities expanded outside the orbit of the centrally planned economy and the black market exchange rate drifted further and further away from the official rate.

Reforms were made to codify the state's tacit recognition that private entrepreneurs had become indispensable, and to ensure that the authorities retained control of and derived benefits from the evolving system. The constitution was revised in 1998 to normalize the role of profits in motivating state enterprises. Changes to the Cabinet brought in a new generation of technocrats and empowered them to move forward with policymaking.[6] In 2002, the government passed the July 1st Measures, allowing enterprises to set prices, sell in markets, and formulate some plans under the guidance of the National Planning Committee. The reforms, however, resulted in inflation and failed to generate a boost in productivity.[7] In 2003, the General Market Plan was approved by Kim Jong Il, opening the door to a surge of official marketplaces (called General Markets or *jonghap sijang*) cropping up throughout the country. These markets are overseen by market management offices on site. The marketplace quickly became the most important source of income for most North Koreans. Since 2011, the average person's official



[6] Babson, Bradley O. "How Vietnam's Transition Experience May Be Helpful for North Korea Today | 38 North: Informed Analysis of North Korea." *38 North*, 8 Feb. 2019, www.38north.org/2019/02/bbabson020719/
[7] ibid.

state wages have progressively lessened, with over half of respondents reporting last year that they received no income from the state. On the other hand, unofficial income has grown rapidly, according to a survey of defectors carried out by Seoul National University in 2018.[8] The accompanying graph illustrates this point.

General Markets began as a site of exchange for simple foodstuffs and consumer goods, but they evolved into a diversified market wherein a wide array of products including capital goods like injection molding can be purchased. Alongside these changes, the role of private actors in the economy became more sophisticated - opening up spaces for private financiers, wholesalers, service providers, and engineers to team up with state enterprises to earn a profit.[9]

As markets and marketization grew in number and importance for the economic well-being of the population, the authorities struggled to strike a balance between maintaining control and suppressing the engine of North Korea's economy. A relaunch of the PDS petered out in 2005. A bond sale in 2006, attempting to raise money from private actors, failed to generate significant revenue. Age minimums for sellers and time limits on markets were set in order to reduce the number of market participants. General Markets were also briefly shuttered. This cumulative effect of these anti-market policies was a surge of noncompliance and pushback from both ordinary residents and Pyongyang's power elites. Markets were subsequently reopened. It was a watershed moment, suggesting that putting the genie back into the bottle would prove impossible.[10]

The transition from socialist economic organization to a system that incorporates some market incentives has happened gradually and in fits-and-starts, as firms and households have pursued their interests in contravention of central planning and informal mechanisms for market exchange and private ownership have emerged to cope with breakdowns in North Korea's socialist organization. Lacking the fiscal provisions to stock its firms, central planning made way for localized planning and sourcing by firms and regional governments. Starting in 2012, the government has pursued policies that, "strengthen incentives at the individual and production-unit level."[11] Giving enterprises the slack necessary to acquire their own inputs had downstream effects on the whole population. Markets gradually became the overwhelming source of income and expenditures for most households. Economic incentives replaced revolutionary zeal for most ordinary people. What followed was an ongoing, country-wide negotiation for economic autonomy between state and society in North Korea, as rigidly

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[8] "North Korean Public Perception on Unification. *Seoul National University Institute of Unification and Peace Studies,* [서울대 통일평화연구원 통일학연구 43] 북한주민통일의식 2018." 11 Mar. 2019, http://tongil.snu.ac.kr/xe/sub733/98899

[9] "Report: The Creation of the North Korean Market System." *DailyNK*, 7 June 2018, www.dailynk.com/english/database/?mod=document&uid=68

[10] Foster-Carter, Aiden. "North Korea: It's the Economy, Stupid." *North Korean Economy Watch*, 4 Mar. 2010, www.nkeconwatch.com/2010/03/04/north-korea-its-the-economy-stupid/

[11] "Report: The Creation of the North Korean Market System." *DailyNK*, 7 June 2018, www.dailynk.com/english/database/?mod=document&uid=68

centralized political institutions condoned gradual decentralization in exchange for a cut of the profits.

The Kim Jong Un Era

Since coming to power, Kim Jong Un has devoted attention and priority to economic development. In his yearly New Years Address, Kim regularly emphasizes raising the standard of living through “economic management improvements in our own style.” He has increased incentives for agricultural output, created development zones throughout the country, and condoned the expansion of the General Markets -- but has stopped short of systemic reform. A document apparently laying out the five year plan described by Kim at the Party Congress in 2016 emphasizes stepping up trade with Russia and the introduction of a new economic management method to achieve an 8% annual GDP growth rate.[12] But despite Kim’s continued emphasis on the economy and mention of management changes, analysts remain skeptical about the seriousness of Pyongyang’s intent to undertake structural reform.[13] In fact, even the word “reform” remains verboten.[14]

New regulations in 2014 shrank collective farm units, opened up the door for a proportion of industrial output to be sold at markets, and empowered SOE managers to make more decisions. The general trend towards decentralization and enhanced incentives has basically continued through today. The May 30th Measures, an unofficial designation for directives laid out by Kim Jong Un under the “our way of economic management” moniker, involves three elements. The first is an agricultural reform. The second reform permits factories and businesses to sell excess products in the market, and accords some greater degree of autonomy. The third reform allows transactions between retail and productions, permits cash use in trading goods, and grants each commercial agency the right to adjust the prices of goods according to demand and supply. Many of these measures were post facto recognition of changes that had already occurred on the ground. We might best understand the policy changes as an attempt to bring marketization under the thumb of the state.

Kim Jong Un’s 2019 New Year’s Address placed a heavy focus on economic development. From this speech, we see that Kim envisions a style of economic development that enhances North Korea’s self-sufficiency -- helping to alleviate the country’s dependence on the outside world and diminish its subsequent vulnerability to international sanctions. The ideal economy for Kim is “self-supporting, independent and juche-oriented. “Our state is fully capable,” he said, “of

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[12] Silberstein, Benjamin Katzeff, "Possible North Korea five-year strategy document leaked, says Japanese newspaper," North Korean Economy Watch, 22 April 2019, www.nkeconwatch.com/2019/04/22/possible-north-korea-five-year-strategy-document-leaked-says-japanese-newspaper/?c=1559239130134

[13] Tertitskiy, Fyodor, "A brief history of North Korean reforms: Despite some tentative steps, Pyongyang remains a long way away from serious change," NK Pro, 12 July, 2018, https://www.nknews.org/pro/a-brief-history-of-north-korean-reforms/?c=1559239130134

[14] Foster-Carter, Aidan, "Castles in the air: North Korea’s delusional economic 'strategy,'" NK News, 17 May, 2019, https://www.nknews.org/2019/05/castles-in-the-air-north-koreas-delusional-economic-strategy/

dynamically advancing along the road of development of socialism of our own style by dint of our people's great strength and efforts, without any external assistance or any others' help."[15] An April 1, 2019 editorial in the *Rodong Sinmun* explores this policy in further detail. The article explains, "Right now, countries all over the world are searching for their own path to development. Rather than pursuing a methodology appropriate for their conditions, some countries blindly rely on foreign capital and foreign aid. This is not the road to authentic prosperity. Depending on foreign powers is the road to ruin. Only by achieving salvation through one's own efforts [자력갱생] can a splendid reality blossom in which all the people's dreams are realized."[16] A May 2019 *Rodong Sinmun* article warned that anti-socialism caused the collapse of the Soviet Union and warned North Korean people against "foolish fantasies about capitalism."[17]

North Korea remains a tax-free country--constitutionally. However, through a number of practices, many layers of the bureaucracy have devised systems to collect rents from the population's private economic actors. For example, workers are permitted to leave their state employer if they pay a fee to their factory manager, as per the provisions of a policy called the August Third Movement.[18] Vendors are permitted to rent a stall and sell goods in the market place if they pay a stall fee. The General Markets -- now more elaborate than ever and numbering over 440 by latest count -- are estimated to net the regime a yearly revenue stream of $56 million, according to research carried out by the Center for Strategic and International Studies.[19]

The limited reforms pursued in the Kim Jong Un era have apparently not succeeded in stimulating productivity. For one such example, we can turn to the agriculture sector. Despite the introduction of incentives aimed at boosting household farming, output in the agriculture, forestry, and fishing sectors decreased by 1.3% in 2017, and crop production decreased by 4.7%, according to estimates by the Bank of Korea. The situation continued in 2018, with the FAO reporting production shortfalls resulting in most households experiencing, "borderline or poor food consumption rates." According to a May 2019 report by the UN World Food Program (WFP), over 10 million North Koreans comprising 40% of the population are undernourished and 2018 crop yields are estimated to have reached a 10 year low.[20]

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[15] "Kim Jong Un's 2019 New Year Address." *The National Committee on North Korea*, 1 Jan. 2019, www.ncnk.org/resources/publications/kimjongun_2019_newyearaddress.pdf/file_view.

[16] "자력갱생의 길은 변함없이 이어가야 할 길." *Rodong Sinmun*, Apr. 2019, www.rodong.rep.kp/ko/index.php?strPageID=SF01_02_01&newsID=2019-04-01-0012

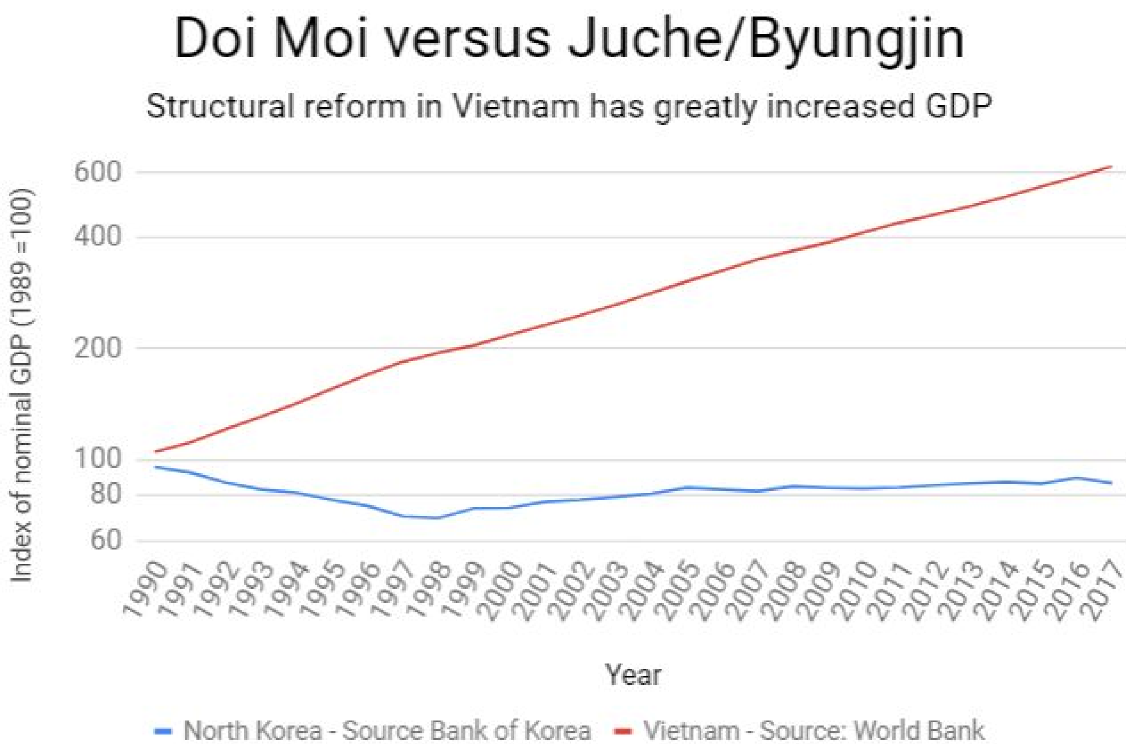
[17] Ji, Dagyum, "North Koreans must fight 'dangerous' anti-socialist phenomena: Rodong Sinmun," NK News, 31 May, 2019, https://www.nknews.org/2019/05/north-koreans-must-fight-dangerous-anti-socialist-phenomena-rodong-sinmun-says/

[18] Corrado, Jonathan. "Will Marketization Bring Down the North Korean Regime?" *The Diplomat*, 18 Apr. 2017, www.thediplomat.com/2017/04/will-marketization-bring-down-the-north-korean-regime/

[19] Cha, Victor, and Lisa Collins. "The Markets: Private Economy and Capitalism in North Korea?" *Beyond Parallel*, 28 Aug. 2018, www.beyondparallel.csis.org/markets-private-economy-capitalism-north-korea/#en-2181-20

[20] "Democratic People's Republic of Korea (DPRK) May 2019 FAO/WFP Joint Rapid Food Security Assessment." Food and Agriculture Organization of the UN and World Food Programme, May 2019,

Shallowness of reform has hemmed in North Korea's economic growth. The benefits of opening and reform are most clear in the context of a comparison to other socialist states that have done so. Vietnam provides one such example. The economic gains derived from Hanoi's decision to reform and open up are exemplified by the consistent GDP gains shown in the graph below. *Doi Moi* -- Vietnam's market-oriented reforms initiated in 1986 -- evidently outmatched North Korea's economic policies of *juche* and *byungjin*, neither of which emphasize reform.



Despite the enticing growth potential of this path, we should acknowledge that transformational reform and opening would entail political risk for Kim Jong Un. Institutionally formalizing the private sector to the degree necessary to ensure investor protections would introduce disruptions to the government's existing patronage networks. By establishing joint ventures and patron-client relationships with the budding private sector, local and national authorities have been able to overcome the limits imposed by insufficient state budgets and salaries. The rent seeking opportunities associated with these networks serve as the primary incentive for large portions of North Korea's party cadres, thus providing an adapted form of gift politics that is crucial for Kim Jong Un's grasp on power. According to Seoul National University economics

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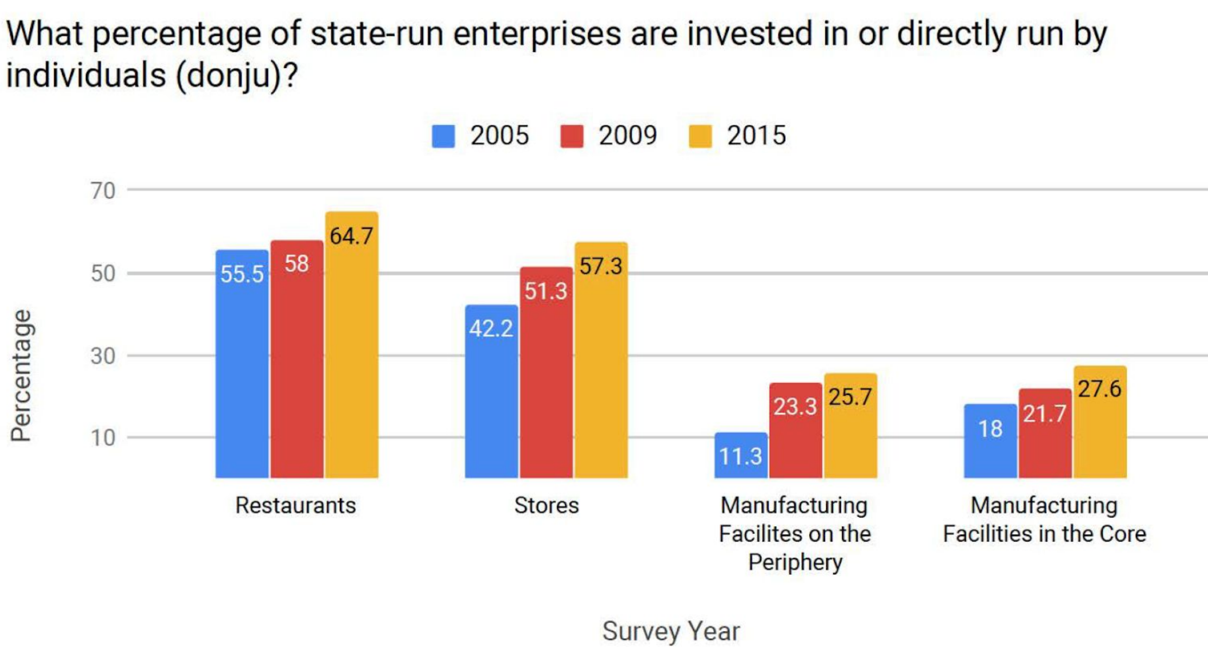
https://docs.wfp.org/api/documents/WFP-0000104948/download/?_ga=2.86528337.831253573.1556905348-1014297787.1556905348

Professor Kim Byeong-yeon, the state's bribery income from households is several times larger than was that of the Soviet Union's.[21]

The Rise of the Donju

Private economic actors, known as money masters or *donju*, have emerged as a new engine for North Korea's economy. In the 1990s and early 2000s, they operated on the margins. But since the mid 2000s, they have become central figures in North Korea's "reform from below." They play key roles in the financial system, real estate market and construction sector.[22] In the early days, most donju shared one very important comparative advantage -- a foreign connection with access to cash and a willingness to do business, such as an ethnic Korean relative in China or Japan. Over time, the donju have played a greater role in the official economy, expanding into economic sectors once reserved for state enterprises like construction, mining, and manufacturing. There are 240,000 Donju, each with around $50,000 to $100,000 in assets, according to a 2018 estimate by South Korea's intelligence agency.[23] If that estimate is accurate, it is a huge amount for an economy that the Bank of Korea estimates only has an annual GDP of $34 billion. The accompanying graph shows how donju investment has become an increasingly important source of funding for state enterprises over the last few decades.



Yang Mun-su of the University of North Korean Studies in Seoul and Yoon In-ju, of the Korea Maritime Institute in Busan. "De Facto Privatization of North Korean Enterprises: A Quantitative Approach on Level and Trend."

[22] "[서울대 통일평화연구원 통일학연구 43] 북한주민통일의식 2018." Seoul National University Institute of Unification and Peace Studies, 11 Mar. 2019, http://tongil.snu.ac.kr/xe/sub733/98899
[23] 이학렬 . "[MT리포트]북한 사금융 이끄는 '돈주', 그들은 누구인가." *Money Today*, 6 Aug. 2018, www.news.mt.co.kr/mtview.php?no=2018080609523555339

Between 2005-2015, the percentage of state-run enterprises operated by donju or in receipt of investment from donju has ramped up across diverse sectors like retail, restaurants and manufacturing, according to survey research conducted by Yang Mun-su of the University of North Korean Studies in Seoul and Yoon In-ju, of the Korea Maritime Institute in Busan.

Donju team up with state enterprises for critical functions like sourcing raw materials for factories.[24] In some instances, the donju acquire usage rights to fulfill requests for manufactured goods that are then sent along to state trading companies for export. Donju pay a certain percentage of their profits for the rights to use the names and licenses of official state-owned enterprises, institutions, and factories. For permission to operate for-profit transportation services called *servicha*, donju pay People's Committees to register as the transportation agency for the relevant city or county. Donju can acquire unofficial "contracts" from cabinet, Party, and military officials to finance construction projects in return for "residency permits."[25] These permits approximate but do not equal property rights, and are traded on a secondary market.[26]

The donju face high risks with little or no legal protections. A research project by Daily NK argued that, "Given the struggle amongst cadres to demonstrate loyalty and for economic power, entrepreneurs face the constant threat of losing investments."[27] At the same time, the government recognizes the importance of the donju. The Ministry of Unification's 2018 *Understanding North Korea* white paper says, "While the North Korean authorities occasionally check the expansion of the Donju's influence, economic activities in the official economic sector is gradually increasing amid cooperative relations with the Donju."

KEI researcher Yonho Kim describes the role of donju as financial intermediaries in telecommunications and private transportation.[28] The first method involves the use of donju as an intermediary between wholesalers looking to pay in cash, but hoping to avoid unnecessary costs and risk. To connect traders in disparate locations, donju intermediaries operate "transfer houses" that can link up payments between different cities. Trust-based relationships between the transfer house operators are the crucial enabling factor of this system, hinting at the budding start to a credit culture in North Korea, at least informally.

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[24] Cheng, Jonathan. "North Korea's 'Money Masters' Hold Keys to Kim's Economic Revival." *The Wall Street Journal*, Dow Jones & Company, 26 Aug. 2018, www.wsj.com/articles/north-koreas-money-masters-hold-keys-to-kims-economic-revival-1535299201

[25] Lee, Je-hun. "[News Analysis] The 'Masters of Money' behind North Korea's Development Projects." *[News Analysis] The "Masters of Money" behind North Korea's Development Projects : North Korea : News : The Hankyoreh*, 6 Feb. 2019, www.english.hani.co.kr/arti/english_edition/e_northkorea/881066.html

[26] 주성하. 평양 자본주의 백과전서: 주성하 기자가 전하는 진짜 북한 이야기. 2018, pp. 52 https://lib.seoul.go.kr/search/detail/CATTOT000001228444

[27] "Report: The Creation of the North Korean Market System." *DailyNK*, 7 June 2018, www.dailynk.com/english/database/?mod=document&uid=68

[28] Kim, Yonho. "North Korea's Mobile Telecommunications and Private Transportation Services in the Kim Jong-Un Era." *HRNK Insider*, Committee for Human Rights, 10 Jan. 2019, www.hrnkinsider.org/2019/01/north-koreas-mobile-telecommunications.html

The domestic financial system

The underdeveloped state of the financial system leaves it mired in a very grave state of "original sin," a term coined by the U.S. economists Barry Eichengreen, Ricardo Hausmann, and Ugo Panizzato. This means the North Korean government's ability to fund itself in domestic currency (in both domestic and foreign markets) is heavily constrained. Historically, this condition forced North Korea to issue international bank debt in the 1970s and currently makes the country exceptionally hemmed in by UN Security Council and U.S. financial sanctions.

North Korea's financial system is also non-transparent and underdeveloped. It is very difficult to assess how the system functions. "Probably the greatest mysteries (in this era of marketization) surrounds the financial market," as Stephan Haggard noted.[29] North Korea does not publish a monetary survey of the assets and liabilities of the banks in the system. North Korea's mono domestic system is dominated by the Chosun Central Bank in which policy lending is not differentiated from commercial lending. It operates a number of subsidiary state banks that offer an expanding array of services to firms and individuals, but has struggled to attract depositors.[30] Other banks, such as the Foreign Trade Bank and Daesung Bank are evidently not well integrated into the domestic system.

North Korea established outward-facing banks to manage foreign transactions and bring in foreign currency in the 1970s.[31] For example, Daesung Bank was created in 1978 as part of the Party's Room 39, which is responsible for producing funds for the Kim family. Other examples include Kumgang Bank associated with Korea Pyongyang Trading Company and Korea Ponghwa General Corporation, which operated under the External Economic Committee of the Cabinet. A more recently established bank, Daesung Credit Development Bank, advertises trust fund accounts with generous rates of return. It is sanctioned by the U.S. and South Korea. A pamphlet promoting its services says, "Credit is the foremost principle of the bank, and the confidentiality of the customers' entrusted properties is the basis of the development of the bank."[32]

North Korea does not have a domestic capital market; there is no equity market in Pyongyang. There is no payments settlement system nor a financial sector supervisory body, which means

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[29] "Report: The Creation of the North Korean Market System." *DailyNK*, 7 June 2018, www.dailynk.com/english/database/?mod=document&uid=68

[30] ibid.

[31] "North Korean banks' main role is to manage party and weapon funds," Money Today, 8 Aug, 2018, https://www.msn.com/ko-kr/money/topstories/mt%EB%A6%AC%ED%8F%AC%ED%8A%B8%EB%B6%81%ED%95%9C-%EC%9D%80%ED%96%89%EC%9D%80-%ED%86%B5%EC%B9%98%EC%9E%90%EA%B8%88-%EA%B4%80%EB%A6%AC%C2%B7%EB%AC%B4%EA%B8%B0%EA%B8%88%EC%9C%B5%EC%9D%B4-%EC%A3%BC%EC%97%85%EB%AC%B4/ar-BBLyt71#page=2

[32] Ji, Dagyum, "North Korean bank blacklisted now providing trust fund services: leaflet." NK News, 19 April, 2017,https://www.nknews.org/2017/04/north-korean-bank-blacklisted-by-ofac-now-providing-trust-fund-services-leaflet/

that the new donju market participants operate in essentially one big shadow system, in which risks are magnified by the absence of legal creditor rights and private property rights. Some private lending may be backed by documents that approximate contracts which, however carry no legal force.

The hodgepodge of recent reforms and fairly recent legal acts such as the Chosun Central Bank Law in 2005 and the Commercial Bank Law in 2006 have yet to transform the country's financial infrastructure. The banking system is evidently still not yet doing a good job of intermediating savings into market-based indirect lending financing. In recognition of the problem of "idle funds," the Chosun Central Bank's president of staff Kim Cheon-gyun said in 2015, "The North Korean government is implementing major financial policies like promoting the use of credit cards and improving financial business methods under the goal of economic construction via domestic financing."

However, the risk of wealth confiscation by the state, highlighted by the so-called currency reform of 2009, has led to a dollarization (and yuanization) of the monetary system and has hindered individuals from depositing their savings in banks, and therefore crimps the role of banks as financial intermediaries.[33] The lessons of the 2009 currency exchange have not been forgotten and have, "shattered any faith that North Koreans had in their banking system, prompting most to keep as much of their savings as possible in foreign cash."[34]

The financial sector is increasingly dominated by private lending by donju. Typically, loans are given in the form of foreign currency and interest rates fluctuate between 25-40%. Lending periods are short - less than a year, and homes are offered up as collateral.[35] Moreover, the donju and money lenders are increasingly seen as the major source of financing for the North Korean economy. Statements by outside experts suggest that lending capacity of the donju is greater than non-inflationary lending by the Chosun Central Bank. Vague statements have referred to donju liquid, cash assets, including foreign currency, as exceeding the Chosun Central Bank's cash deposits.[36] However, given the opacity of the formal and shadow banking system, it is impossible to fact check or clarify such statements.

Also reflecting the growing financial clout of the donju, North Korea revised its enterprise law in 2014, permitting, "enterprises [to] use the idle currency and funds in the hands of people to overcome the lack of working capital."[37] This is the first example of the establishment of a legal foundation for the use of private capital for state enterprises. But to put such reforms into

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[33] ibid.
[34] Abrahamian, Andray, "Banking on North Korea's Banks," 38 North, 3 Feb, 2017, https://www.38north.org/2017/02/aabrahamian020317/
[35] "Report: The Creation of the North Korean Market System." *DailyNK*, 7 June 2018, www.dailynk.com/english/database/?mod=document&uid=68
[36] Kim Young-hee. "[제5권 제1호] 북한의 금융과 통일을 위한 과제: 정책금융과 민간금융을 중심으로." Financial Supervisory Service, Financial Services Commission, 30 Apr. 2018. http://www.fss.or.kr/fss/rsh/bbs.jsp
[37] "North Korea Revises Business Law to Legalize Private Investments." *NK Briefs*, 8 June 2017, www.ifes.kyungnam.ac.kr/eng/frm/FRM_0101V.aspx?code=FRM170613_0001

perspective, an analysis by Kyungnam University's Institute for Far Eastern Studies concludes, "the recent statutory revisions seem to reflect Pyongyang's intent to gradually expand its private economic sector and promote reform and liberalization in its own way while not deviating too much from the boundary of planned economy." The state envisions the use of "idle funds [to] meet the funding needs of the state and serve as a source of supplementary income to increase state revenue."[38]

The domestic government debt market

There is none, currently. Or at least we could not find information on government domestic debt. The IMF did not report such debt in their 1997 mission report. We found references to "People's Livelihood Bonds" which were issued from May to November 2003.[39] We also found a reference to a "People's Economic Development Bonds" issued in 1949 and 1950 to help finance the North Korean army during the Korean War. But that's about it.

Evidently the government has not run budget deficits. At least that is what the limited data they provided to the IMF in 1997 shows, except for a small deficit in 1996. The would help explain why inflation seems to be low in North Korea, as there apparently is no Chosun Central Bank financing of government fiscal deficits or state-enterprise budget deficits. That is good for price stability, but bad for domestic capital market development. But the absence of a government bond market means there is no low-risk or no-risk benchmarket for state enterprise or private, donju, lending. (Note: Singapore runs a balanced budget but issues government bonds to development and benchmark the local debt market.) This situation hinders the development of credit culture should some corporate or donju proto-bond market emerge.

2. North Korea's external debt and payments record

Sovereign creditworthiness reflects the willingness and ability of a national government to manage its borrowing and repay its debt--North Korea currently has neither.
North Korea has a longstanding track record of default. It turned to foreign borrowing to finance the import of machinery and plant facilities from advanced industrial countries in the early 1970s, but defaulted. North Korea borrowed from international banks in the late-1970s and had also defaulted by the mid-1980s.

North Korea's economic system has been an impediment to creditworthiness. Centrally planned, inward-oriented and undiversified, it did not have the resiliency to cope with the terms-of-trade shock from the fall in prices of its main commodity exports and rise in oil import

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[38] "Mobilization of idle funds emphasized for fiscal expansion." *North Korean Economy Watch*, Institute for Far Eastern Studies, 18 Jun. 2014.
http://www.nkeconwatch.com/2014/06/20/mobilization-of-idle-funds-emphasized-for-fiscal-expansion/
[39] Kang, Tae-jun. "Investing in North Korean 'Bonds.'" *The Diplomat*, 20 June. 2018,
https://thediplomat.com/2018/06/investing-in-north-korean-bonds/

prices from the two oil shocks in 1973 and 1979. Thus its ability to repay its debt was constrained.

North Korea first demonstrated poor creditworthiness in its financial transactions with the Soviet Union in the 1970s. "Export arrears were substantial" and it repeatedly failed to fulfill its trade obligations to the USSR. North Korea blamed its inability to deliver its goods on infrastructural weaknesses and political tensions on the peninsula.[40] It is probably not a coincidence that at the time it was having payment difficulties with the Soviet Union and could not increase its trade accounts, North Korea turned to the West for financing in the 1970s. This prompts us to wonder if Western creditors were aware of North Korea's weak payments performance with the Soviet Union.

North Korea did restructure Soviet-era debt owed to Russia (Russia has across the board written down such debt with most, if not all, of its Soviet-era debtors), has a restructuring agreement with Swiss Export Risk Insurance (SERV) and has rescheduled some of its debt to Japan. North Korea also rescheduled debts with Sweden, West Germany, France and Austria in 1974.[41] But it seems the debts were either not repaid or had gone back into arrears.

But North Korea has also failed to cure arrears to foreign banks.[42] And Pyongyang is in arrears to Seoul for food-aid loans extended during the Sunshine era. Such a payments record indicates a very weak willingness to pay on the part of the North Korean government. Yet, until it normalizes its financial obligations to both private sector and public sector creditors, it will remain deprived of the benefits of credit to finance its infrastructure and economic development.

Except for sporadic cases of foreign governments extending loans for policy purposes, North Korea has lost access to international credit since the 1980s. U.N. Security Council and U.S. sanctions adopted since North Korea first tested a nuclear bomb in 2006 have now fully sealed the country off from new international credit.

North Korea's external debt is shrouded in mystery. There are no up-to-date, comprehensive authoritative figures, only piecemeal data. Historical data, too, are incomplete and sources are inconsistent. The OECD and the government of South Korea stopped estimating North Korea's external debt by 2000, when South Korea estimated it to amount to $12.5 billion.

Nonetheless, based on available data North Korea appears to be less in debt than estimate in 2000 but still carries a heavy debt burden. We very roughly estimate that North Korea's external

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[40] See entries in three documents: https://digitalarchive.wilsoncenter.org/document/110129 ; https://digitalarchive.wilsoncenter.org/document/120642; and https://digitalarchive.wilsoncenter.org/document/110126.

[41] Ibid.

[42] SERV Swiss Export Risk Insurance, 2017 Annual Report, page 15, https://www.serv-ch.com/fileadmin/Files/PDF/online-schalter/geschaeftsbericht/SERV_Geschaeftsbericht_2017_e.pdf

debt might be around $5.5 to $7.5 billion, including interest arrears on bank debt but excluding any debt that might be owed to China. At the upward bound, debt would amount to around 20% of GDP in 2017, but more than 400% of 2017 merchandise exports. Sanctions led to a 37% drop in North Korean merchandise exports in 2017 to $1.8 billion. Even assuming services exports and income receipts amount to another $1 billion (of which half would be labor remittances), a key indicator of sovereign repayment capacity--the ratio of current account receipts to external debt--would be around 270% in 2017, compared with 160% for Cuba according to Moody's, and in line with the cohort of countries with the weakest creditworthiness rated by Moody's.

We have identified around $2.5 billion in debt owed to foreign governments and their agencies, excluding China, all of which is in arrears, apparently, except perhaps for $1.1 billion owed to Russia and managed by the state development bank, Vnesheconombank. In the only clear cut case of debt restructuring we found, the Russian Federation wrote off 90% of $11 billion in Soviet era debt on 12 September 2012, early in the Kim Jong Un era. This large "hair-cut" was not a special favor to Chairman Kim but was in line with other restructurings made by Russia for unpaid credits extended during the Soviet era. The remaining 10%--$1.1 billion--is to be re-invested in North Korean economic development projects.[43]

Total debt to Western banks might amount to about $3-$5 billion, including principal and interest arrears, according to estimates made by the Peterson Institute for International Economics and Charles Blitzer, a debt restructuring expert and former IMF staffer.[44] However, the Bank for International Settlements (BIS) reports only $103 million in BIS-reporting area bank claims on North Korea at end-2018.[45] North Korea borrowed 680 million Deutsche marks (DM) and 455 million Swiss francs (CFH)--rounding off approximately $800 million--in syndicated loans from nearly 100 foreign banks in the late 1970s, but had defaulted by 1984. U.S. banks were not exposed as Treasury sanctions had blocked lending even back in the 1970s. During a round of debt restructuring talks in London in 1987, North Korean refused to pay and demanded new loans."[46] Subsequent efforts to reach a loan-rescheduling agreement evidently failed.[47]

The defaulted bank debt however has been traded on the secondary market and its price has waxed and waned according to the market's mood on the prospects of unification. The French

[43] Zakharova, Liudmila. *Russia-North Korea Economic Relations.* KEIA, 2016, http://keia.org/sites/default/files/publications/joint_us-korea_2016_-_russia_nk.pdf
[44] Strohecker, Karin. "Amid nuclear standoff, frozen N.Korea debt untradeable due to sanctions." Reuters, 11 Aug. 2017. https://www.reuters.com/article/us-northkorea-debt/amid-nuclear-standoff-frozen-nkorea-debt-untradeable-due-to-sanctions-idUSKBN1AR1S8
[45] Bank for International Settlements (BIS), Counterparties Resident in North Korea, https://stats.bis.org/statx/srs/table/A6.1?c=KP&p=&f=pdf
[46] Kristof, Nicholas D. "North Korea is Told of Loan Default." The New York Times, 23 Aug. 1987, https://www.nytimes.com/1987/08/23/world/north-korea-is-told-of-loan-default.html
[47] Kristof, Nicholas D. "North Korea, in Default, Said to Relent on Debt." The New York Times, 17 Sept. 1987, https://www.nytimes.com/1987/09/17/business/north-korea-in-default-said-to-relent-on-debt.html

bank BNP Paribas in 1997, then BNP, repackaged DM 293 million and CHF 217 million of the bank debt into two tranches of zero-coupon, no-income special purpose vehicle bonds called NK Debt Corporation, incorporated in the British Virgin Islands.[48] The debt's trading price had risen slightly to 14 to 18 cents on the dollar, compared with 13 to 15 cents, after the death of Kim Jong Il in 2011. But subsequently the debt was reportedly trading in the single digit range when financial sanctions quashed secondary market trading around 2013.

The below table tracks information that we gleaned from media articles on debt owed to foreign governments or their agencies, with debt owed to Western governments, Russia and Japan amounting to roughly $2.5 billion.

North Korea's External Public-Sector Debt by Country

	Outstanding Debt	Notes
China	$7 billion	According to a 2013 Washington Times article, North Korea owes about $14 billion to 30 foreign countries, about half of which is owed to China.[49]
Russia	$1.1 billion	Russian government wrote off 90% of $11 billion in Soviet era debt in 2012, leaving $1.1 billion outstanding.
Japan	8.4 billion yen (about $76.5 million)	North Korea made a partial payment of some 80 million yen in interest in fiscal-year 1996 on government rice-related loans extended, but has since failed to make payments. The outstanding balance was 8.4 billion yen 2.8 billion yen in interest plus the principal of 5.6 billion yen on the debt extended in 1995.[50]
Sweden	2,731 million SEK (About $304 million)	According to the Swedish Export Credit Agency's annual report in 2017, North Korea's outstanding debt to Sweden is 2,731 million SEK as of December 2017 and claims paid in 2017 were zero.[51] In 1974, Sweden sold 1,000 Volvos to North Korea as a part of a $131 million trade package, but payments have not been made in over four decades and the accumulated debt with interest reaches $328 million.[52]

[48] Natarajan, Prabha and Erin McCarthy. "North Korean Bonds? Now Could Be the Time." The Wall Street Journal, 23 Dec. 2011, https://www.wsj.com/articles/SB10001424052970204464404577114961074711158
[49] Gertz, Bill. "Inside the Ring: Targeting N. Korea's Funds." The Washington Times, 24 Apr. 2013, https://www.washingtontimes.com/news/2013/apr/24/inside-the-ring-dempsey-and-china-friction/
[50] "North Korea ignoring payments on debt to Japan." The Japan Times, 20 Jan. 2003, https://www.japantimes.co.jp/news/2003/01/20/national/north-korea-ignoring-payments-on-debt-to-japan/#.XCy_p88zY1g
[51] 2017 Annual Report. EKN (Swedish Export Credit Agency), 2017, https://www.ekn.se/globalassets/dokument/rapporter/arsredovisningar/en/ekn-annual-report-2017.pdf
[52] Kim Youngnam. "N. Korean Debt to Sweden Remains Unpaid After Four Decades." VOA News, 26 Oct. 2017, https://www.voanews.com/a/north-korean-debt-sweden-remains-unpaid-after-four-decades/4087799.html

Switzerland	208.9 million CHF (about $209 million)	North Korea's outstanding debt to Switzerland is 208.9 million CHF as of December 2017.[53] While the Swiss Export Risk Insurance Agency reached a debt restructuring agreement in October 2011, the Swiss government stated that "there has not been a debt settlement with North Korea," and writing off the debt has not been under consideration.[54]
Finland	Euro 32 million (about $36 million)	North Korea's outstanding debt to Finland is over 32 million euros, which is originated from North Korea's import of paper machines and equipment from Finland in the 1970s.[55]
Hungary	29.6 million RUB	Hungary has outstanding debt of 29.6 million in Russian Roubles,[56] but according to the Financial Times, "North Korea asked Hungary to write off more than 90% of its outstanding debt when the financial crisis hit in 2008. But Hungary reportedly wrote off only part of the debt." [57]
Czech Republic	$10 million	North Korea also asked Czech to reduce the $10 million outstanding debt by 95% and to pay the remaining 5% in ginseng.
South Korea	$724 million food loan	South Korea asked North Korea in 2012 and 2013 to repay a $5.83 million installment of its $724 million food loans given in rice and corn by South Korea from 2000-2007.[58]

Paths taken in debt restructuring and its benefits

For North Korea to establish even a modicum of creditworthiness and ability to access international credit, it will have to restructure its debt. The IMF will not lend into arrears, and the Fund no longer lends without private creditors having restructured their claims on a country in default so as to "bail in" rather than "bail out" such creditors. North Korea, like Cuba, has a clean slate with the IFIs from its non-member status. This simplifies somewhat any North Korean effort to normalize relations with its creditors and begin to establish creditworthiness. In contrast, Vietnam had to put into place bridge financing in 1993 to repay arrears to the IMF before it could receive financial support from the Fund and broaden access to international financing.

If North Korea's debt burden is unsustainable, then the way out is debt relief. The Latin American bank debt crisis of the 1980s was at long last resolved by the Brady Plan. Debt was exchanged for a bond having a reduced face value and collateralized by U.S. Treasury zero

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[53] "Annual Report 2017." SERV Swiss Export Risk Insurance, 2017, pp. 15, https://www.serv-ch.com/fileadmin/Files/PDF/online-schalter/geschaeftsbericht/SERV_Geschaeftsbericht_2017_e.pdf

[54] Kim Youngnam. "N. Korean Debt to Sweden Remains Unpaid After Four Decades." VOA News, 26 Oct. 2017, https://www.voanews.com/a/north-korean-debt-sweden-remains-unpaid-after-four-decades/4087799.html

[55] "North Korea owes Finland millions in decades-old debt." *Uutiset*, 29 Apr. 2017, https://yle.fi/uutiset/osasto/news/north_korea_owes_finland_millions_in_decades-old_debt/9588973

[56] Around $0.43 million based on the exchange rate of Jan.2, 2018

[57] "Hungary reveals North Korean debt request." Financial Times, 19 Aug. 2010, https://www.ft.com/content/3096db7c-aab4-11df-80f9-00144feabdc0

[58] "S. Korea again asks North to repay food debt." Yonhap News Agency, 24 May 2013, https://en.yna.co.kr/view/AEN20130524004800315

coupon bonds. Creditors or investors holding defaulted North Korean bank debt are highly unlikely to receive full repayment of the face value of the debt (perhaps even under a unification by absorption scenario by South Korea, which this paper does not presume). Seventeen countries had restructured commercial bank debts in the first ten years of the Brady Plan, mostly Latin American but also Vietnam and several former Soviet republics.

North Korea's low per-capita income, around $1,000 depending on the source, puts it in the group of countries, at least on that score, which has received comprehensive debt relief under the World Bank's Heavily Indebted Poor Countries (HIPC).[59] For example, Afghanistan's was $560 while Bolivia's was $3,130 in 2017 --the diverging per capita income trends are illustrated in the exhibit in Section One. Wiping the slate clean would greatly benefit North Korea, with its debts to Western government export credit agencies. North Korea's exclusion from HIPC consideration is another example of how North Korea has missed opportunities to improve its economy by not having integrated itself into the international community following the collapse of the Soviet Union.

The HIPC initiative aims to ensure that no poor country faces a debt burden it cannot manage. A reduction in budgetary debt service payments also increases room for spending on education, health and in other areas that reduce poverty. Of the 39 countries eligible or potentially eligible for HIPC Initiative assistance, 36 are receiving full debt relief from the IMF. And even Sudan, Somalia and Eritrea are under consideration as "pre-decision point" countries for HIPC inclusion. But again, even without the political obstacles, the catch for North Korea's benefitting in this initiative would be its institutional deficiencies. Recipient countries must be a member of the IMF and be eligible to borrow from the World Bank's International Development Agency, which provides interest-free loans and grants to the world's poorest countries, and from the IMF's Poverty Reduction and Growth Trust, which provides loans to low-income countries at subsidized rates. Also, a recipient country must have an established track record of reform and sound policies through IMF and World Bank supported programs.

Cuba took a big step to join the global financial community in 2015 when it restructured its debt to 14 Paris Club governments. The followed a normalization of relations with the U.S in so far as diplomatic recognition. The benefits of external debt restructuring are evident in Cuba's case. Firstly, the country's debt burden and debt servicing requirements were greatly reduced. Debt to the Paris Club of government creditors was reduced by 81% in two negotiations concluded in December 2015. Russia forgave over $25 billion in Soviet-era debt in 2014. Second, 14 country lenders under the aegis of the Paris Club wrote down 43% of affected debt in 2016. Notably, negotiations with the Paris Club involved full recognition of the outstanding debt by the

[59] "Debt Relief Under the Heavily Indebted Poor Countries (HIPC) Initiative." International Monetary Fund, 19 Mar. 2019, https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/11/Debt-Relief-Under-the-Heavily-Indebted-Poor-Countries-Initiative

government of Cuba, including interest arrears and penalty charges incurred during the default of official debt going back to 1986.[60]

Secondly, international banking data show that new lending ensued after the restructurings. Even if modest and most likely short-term trade financing, it "nonetheless denotes warmer creditor sentiment since the agreement with the Paris Club. This also reflects Cuban actions to remain current on debt-service obligations to banks and countries participating in Paris Club negotiations."[61] Even though Cuba has not yet completed a restructuring agreement with foreign bank debt, it has begun to regain access to cross-border credit, which provides the "vital air" necessary for commerce.

3. North Korea's infrastructure and development financing needs

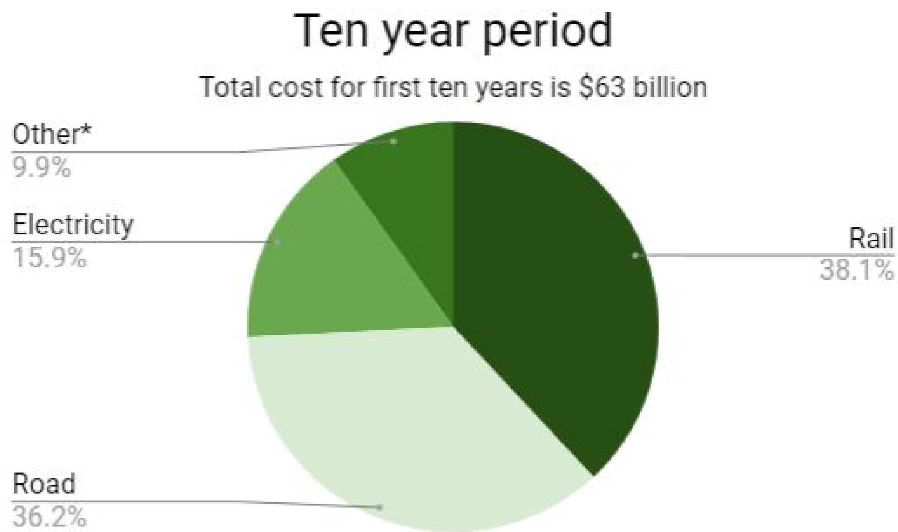
South Korea is willing to take the lead in financing the North's economic revitalization in a denuclearization scenario. The initial focus would be on investing in rail and road infrastructure, which North Korea has largely ignored since the early 1990s. The South Korean government evidently would tap budgetary and off-budget fiscal resources, namely the Inter-Korean Cooperation Fund (IKCF) and financial and non-financial policy institutions, such as Korea Land and Housing Corporation, Korea Export-Import Bank and Korea Development Bank. However, given estimates of the substantial costs over the long-term, sustainable financing for North Korea will most likely also require Official Development Assistance (ODA) from multilateral development banks, foreign capital market and private sector financing as well self-generated funds from North Korean domestic resources.

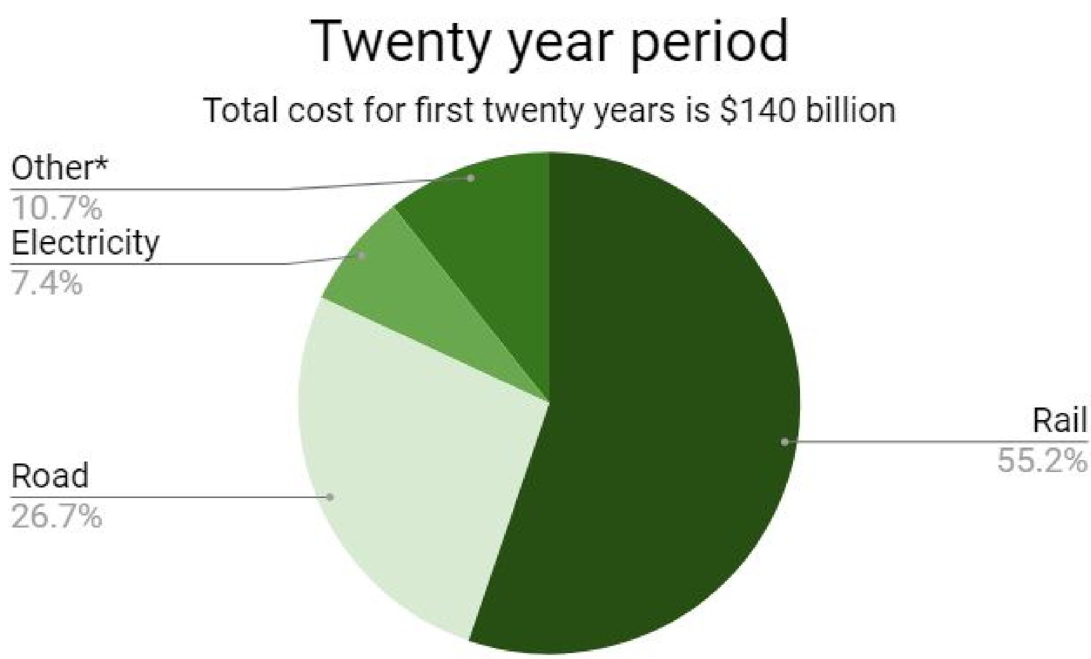
Potential amounts of ODA, however would be too small for the task, although its catalytic role would be quite significant. South Korean government financing might not be open ended in a two state scenario, and would likely be constrained to a critical degree by political willingness and concerns by the government to protect its own fiscal space in view of rising domestic pressures over the long term. Hence the need for North Korea to establish creditworthiness, even if it were initially assessed as highly speculative or subject to substantial credit risks, is essential for not just its infrastructure renovation, but also of its long-term economic revitalization. North Korea needs a financial *juche* policy.

The cost of repairing and building up North Korea's infrastructure is estimated by the Korea Research Institute for Human Settlements (KRIHS) to cost $63 billion, including $24 billion for rail, $22 billion for roads, and $10 billion for power plants. Over a twenty-year period infrastructure costs double to $140 billion mainly in the rail, road and power sectors. The costs for infrastructure development over the two timelines are shown below.

[60] Luis, Luis R. "Foreign Finance to Cuba Restarts After Debt Restructuring." Association for the Study of the Cuban Economy, 18 Sept. 2018, https://www.ascecuba.org/foreign-finance-cuba-restarts-debt-restructuring/
[61] ibid

Infrastructure costs over two time horizons

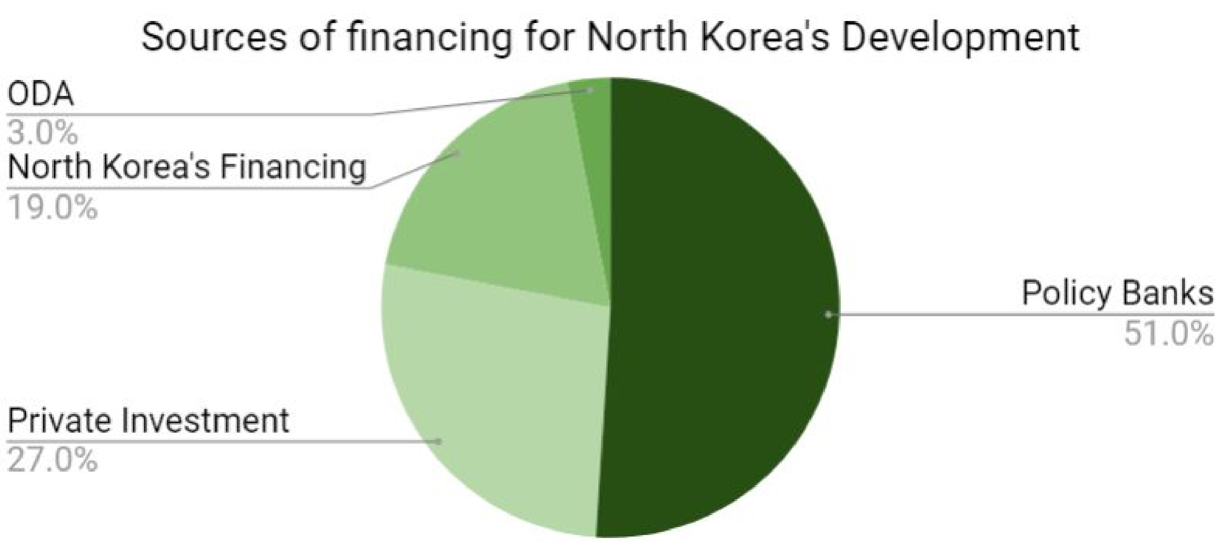




Sources for ten year period chart: Kyoung Sool Kim et al, 'Main development tasks on North Korea's energy, resource, and transportation sectors', KRIHS, Dec. 2013. Note: Costs are shown in 2018 USD. 1070 KRW = USD $1.0 in 2013 = $1.06765 in 2018. "Rebuilding N. Korea: What it means for S. Korea's Economy/Equities," Citi Research, June 26, 2018. Source for twenty year period chart: Financial Services Commission (FSC), however the FSC issues a disclaimer that the research is not the Korean government's official stance.

To help put that amount in context, $63 billion is equal to one and a half times South Korea's defense budget for 2019, and twenty times its ODA budget, but spending would be spread over ten years.[62] In 2019, the Ministry of Unification announced it will increase its IKCF to $991 million, with $386 million of that earmarked for economic projects and $108 million for loans.[63]

Multilateral development banks could help defray this financial burden. Additionally, their seal of approval would go a long way toward allaying the concerns of private investors. The World Bank, Asian Development Bank, European Bank for Reconstruction and Development (which lends to Mongolia and other Central Asian former Soviet Republics) and even the new Beijing-based Asian Infrastructure Investment Bank (AIIB) could possibly offer capital inflows on relatively favorable terms that would help catalyze lending from other public and private sources. But access to these banks can only be achieved if North Korea first joins the IMF. North Korea will also need to develop internal financing capacity, which will ultimately need to shoulder a significant portion of the infrastructure funding burden. The accompanying pie chart shows a breakdown of financing sources, which is estimated at more than $500 billion (mid-point of $540 billion in $470 billion to $600 billion lower and upper bounds) over 20-years. This estimate for the cost of development targets raising North Korea's per capita income to $10,000 in 20 years, of which $140 billion would be spent on infrastructure.[64] The foreign public sector would provide only slightly more than half of required financing, while private foreign would proved about one-fourth and North Korean domestic financing one-fifth.



[62] "ROK's ODA Budget for 2019 Set at 3.4922 trillion Won." Ministry of Foreign Affairs of the Republic of Korea, 22 Jun. 2018, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=319912&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1&titleNm

[63] Ji, Dagyum. "Seoul to Increase Inter-Korean Cooperation Budget to over $990 Million: MOU." *NK News - North Korea News*, 28 Aug. 2018, www.nknews.org/2018/08/seoul-to-increase-inter-korean-cooperation-budget-to-over-990-million-mou/

[64] Source: "Unification in the Korean Peninsula, role of finance and policy tasks ahead." Financial Services Commission, Nov. 19, 2014. This may not represent the view of the Korean government.

For context, North Korea's long-term development financing requirement would be about 33% of South Korea's 2018 nominal GDP, while South Korean government debt was 40% of GDP according to the IMF and non-financial public sector debt was another 22% of GDP (2017). Because development spending would be spread out over a long time span, the annual fiscal implications would be much less.

Nonetheless, there will be an additional fiscal burden placed on South Korea over a time its public sector debt dynamics will come under strain, albeit from a strong position now. South Korea's potential GDP is forecasted by the IMF to slow to around 2.0% annually over the next 10-20 years, from an actual 5.7% during the decade of the first Sunshine Policy. The decline in the labor force and rise in pension and health related public spending will combine to reduce the fiscal space South Korea currently has to support North Korea.

In the case of German reunification in the 1990s, Germany's development bank (KfW) provided 56.8% of the funds needed to develop East Germany, equalling 315 billion Deutsche Marks, or about $175 billion if converted from euro without adjusting for inflation. Most of the total amount, 82.9%, was raised from the capital market, in both German marks and dollars, while only a relatively small portion was directly financed from the German Federal Budget, 17.1%. Nonetheless, Germany's government debt rose 22 percentage points in the six-year period following unification.

The financing scenario discussed above did not consider the possible role of regional trust funds. Former US-ROK Combined Forces Commander General Vincent Brooks recommends the creation of an international development fund that North Korea could access after it demonstrates a commitment to denuclearization.[65] The Korean Peninsula Development Corporation was one such fund. The governments of Japan, the U.S. and EU provided $1 billion supplementing the $1.2 billion by the South Korean government between 1995 and 2006 for the light-water nuclear reactor project as part of the 1994 Agreed Framework. And in the U.S-led Iraqi Relief and Reconstruction Fund (IRRF), the U.S Congress authorized $20.9 billion in civilian funds in 2003 while 40 countries and international institutions pledged $13.5 billion in aid to Iraq over four years (2004-2007).[66] And importantly, the Paris Club forgave at least 80% of Iraq's approximately $40 billion debt to its member governments. Neither case, however, is as large as North Korea's development financing requirements, nor were any carried out over such a long time horizon that will likely be fraught with political risk.

Foreign Direct Investment--realities and limits

As an alternative to debt financing, foreign direct investment (FDI) has been a powerful catalyst for helping to develop the economic potential of a country, particularly for those with a rich

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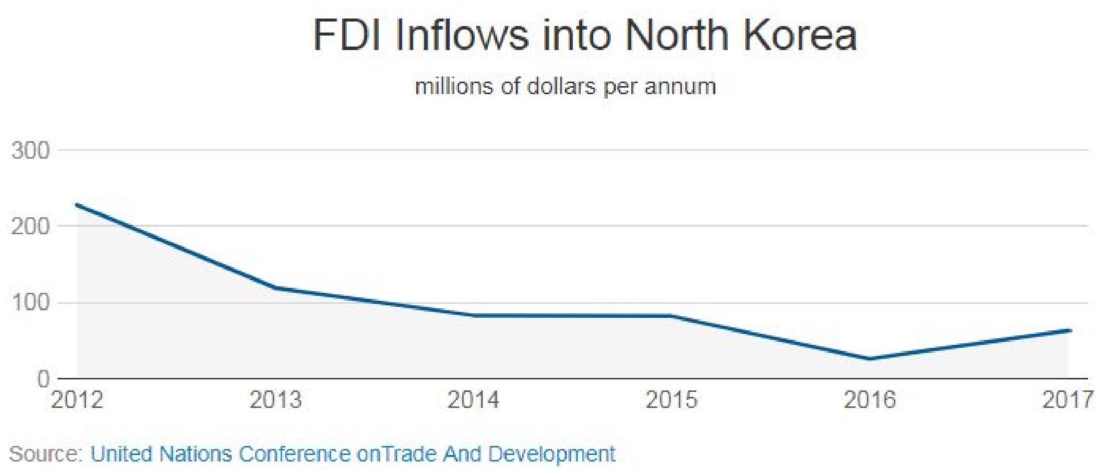
[65] "Next Steps on the Korean Peninsula." The Korea Society, 3 Apr. 2019, www.koreasociety.org/policy-and-corporate-programs/item/1291-next-steps-on-the-korean-peninsula

[66] "Rebuilding Iraq: U.S. Achievements Through the Iraq Relief and Reconstruction Fund," U.S. State Department, Feb 2006, https://2001-2009.state.gov/p/nea/rls/rpt/60857.htm

resource endowment, as North Korea apparently has. It supplements a Frontier Market's shallow financial and capital markets and provides financing that otherwise would not be available. While FDI does not usually play a big role in infrastructure in Frontier Markets, if successful it does generate fiscal revenues and foreign exchange earnings, without directly adding to government external debt, and therefore enhances a country's creditworthiness.

For countries such as Mongolia, Mozambique and the Republic of the Congo, FDI inflows provide much of each country's external financing, ranging from 9.6% to 18.1% of GDP in 2017. In contrast, FDI into North Korea has slowed to a trickle to $63 million, which was only 0.2% of GDP in 2017, one year after the Park Geun-hye government shutdown the Gaesong Industrial Complex.[67] That estimate, however, would probably not capture informal Chinese investment in mining or garments industries.



Data from UNCTAD (the United Nations Conference on Trade and Development) show that over the most recent five-year period of reporting, North Korea's FDI inflows are on a downward trend. The reason could be North Korea's temporary, six-month shut-down of the Gaesong Industrial Complex in 2013. But UNCTAD does not single out North Korea for analysis in its regional review as developments are insignificant, not influencing or influenced by global trends. The stock of FDI is relatively paltry, too, at $815 million as of 2017, less than one percent of Vietnam's and about 4.5% of Mongolia's.

U.N. Security Council investment sanctions since 2017 prohibiting joint-ventures and investment in the natural resource and garment industries will further crimp FDI inflows in 2018 and into the future. And the outlook is bleak as long as sanctions remain in place. But that is not the whole story. Poor infrastructure and a very weak institutional and regulatory framework remain fundamental obstacles despite increased attention that the authorities have given enacting new investment laws and expanding SEZs.

[67] "World Investment Report 2018." United Nations Conference on Trade and Development (UNCTD), 2018, https://unctad.org/en/PublicationsLibrary/wir2018_en.pdf

North Korea has expanded the number of SEZs since the Rason (Rajin-Sonbong) was established in 1993, but with little durable economic effect. The Rason SEZ law provided tax incentives and devolved regulatory authority for granting approvals, land use right, labor employment and infrastructure development to a municipal people's committee. This is the biggest operating SEZ, with 250 foreign ventures having invested $500 million, according to North Korean officials cited by the Associated Press.[68] The Sinuiju Special Administrative Region was created in 2002, but immediately languished despite its proximity to China. Another SEZ was created in 2011 near Dandong, China and 14 new SEZs were established with investment incentives but with reduced local autonomy, with management by central, Ministry of External Economy guidance. Currently, 27 SEZs are operated by provincial authorities and offer tax incentives foreign owned firms and joint ventures.[69] These have all languished.[70]

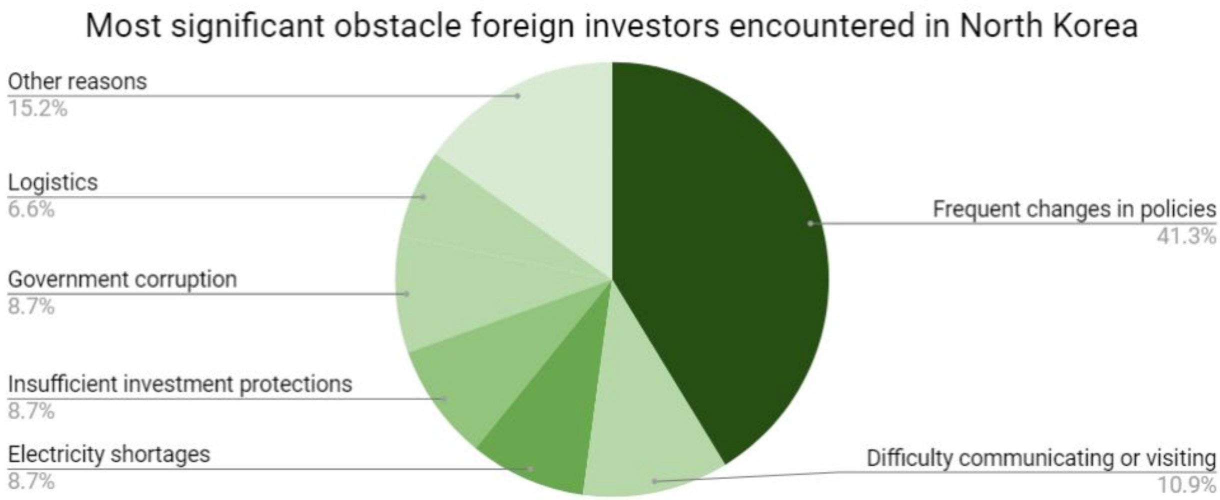
The most successful SEZs were the South Korean invested Gaesong Industrial Complex (GIC) and Mt. Geumgang Tourist Zone, both established in 2004 and both shuttered now. (As a technicality, South Korean firms fall under the Inter-Korean Economic Cooperation Act rather than the Foreign Investment Act, and the authors of this paper do not know whether the UNCTAD FDI data include or exclude South Korean investment). At its peak in 2015, exports from the KIC to South Korea had climbed to $1.5 billion and employment exceeded 50,000 North Korea laborers, whose wages, to the KIC administration, were paid in US dollars.

Joint ventures and foreign firms are no longer required to remain in SEZs, according to analysis by NK Pro researcher Peter Ward. Also, there has been a convergence between more permissive SEZ regulations and regulations that govern the general domestic economy, such as the right of joint-ventures in SEZs to set their own prices, a right allowed to state enterprises, too, in 2014. This, actually, is not necessarily an encouraging development in the North Korean context. The benefit of SEZs and free-trade zones is that they ring fence a higher quality investment environment from the political interference, corruption, infrastructure deficiencies and legal weaknesses of the host economy at large.

Relying on a survey of 250 Chinese businesses engaged in trade and investment in North Korea, Marcus Noland and Stephan Haggard asked in a 2018 paper whether formalized institutions like third party dispute mechanisms have emerged to support the sharp rise of pre-sanctions bilateral economic activity across the Sino-Korean border. They found, "Chinese firms have extremely negative views of the policy environment in the country, and essentially make money by circumventing it, including through bribery. A substantial share of firms do not

[68] Talmadge, Eric. "Trade zone bustle exposes limits of North Korea sanctions." AP News, Sep. 13, 2016, https://apnews.com/ae51b57f7de94972b93ec268a8fbaad2
[69] Ward, Peter. "Why, increasingly, North Korea's economy looks like its Special Economic Zones." NK Pro, 13 Mar. 2019, https://www.nknews.org/pro/why-increasingly-north-koreas-economy-looks-like-its-special-economic-zones/
[70] Feron, Henri. "The Hermit Kingdom's Chinese Reforms: The North Korean Foreign Investment Regime." Columbia University Law School, 25 Jan. 2019, https://ssrn.com/abstract=3322232

believe that they have recourse to any third party to settle disputes."[71] A survey of foreign investors active in North Korea by SNU Professor Kim Byung-yeon found "frequent changes in policies" to be the top constraint.[72] The accompanying pie chart shows the other constraints that foreign investment firms encountered.



Similarly, Professors Justin V. Hastings and Yaohui Wang conducted 22 interviews with Chinese business people active in the border region and engaged in trade and investment with North Korea.[73] Contrary to the hypothesis that the presence of foreign firms will transform North Korea's business environment from the inside out, they conclude that successful firms behave like North Korean entities -- for instance bribing customs agents, cadres, and military officers -- and tend to "minimize contact with North Korean infrastructure, workers, and institutions." Investors complained that it was difficult to determine how much to bribe and whom to bribe: cultivating relationships with the right cadres was not easy. Many chose to reduce risk by staying out of the country entirely, relying on their North Korean partners to meet at the border and conduct all in-country operations. Long term contracts are avoided and payments are often given in kind.

The experience of foreign investors and traders active in economic relations with North Korea varies depending on the nature of the firm they deal with. Research by Seoul National University economics professor Dr. Kim Byung-yeon sheds light on how foreign businesses navigate North

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[71] Noland, Marcus. "Networks, Trust and Trade: The Microeconomics of China–North Korea Integration." *North Korea: Sanctions, Engagement and Strategic Reorientation, Asian Economic Policy Review,* 2019. https://onlinelibrary.wiley.com/doi/abs/10.1111/asej.12159
[72] Kim Byeong-yeon. *Unveiling the North Korean Economy: Collapse and Transition.* Cambridge University Press, 27 May 2017. https://www.amazon.com/Unveiling-North-Korean-Economy-Transition/dp/1316635163
[73] Hastings, Justin V. and Yaohui Wang. "Chinese Firms' Troubled Relationship with Market Transformation in North Korea." *Asian Survey*, University of California Press Journals, Vol. 57 No. 4, July/August 2017 (pp. 618-640) https://as.ucpress.edu/content/57/4/618

Korea's business environment.[74] Kim interviewed 176 firms in the Chinese border city of Dandong from 2012 to 2013, including traders and investors. Although conditions have shifted since the survey was conducted, it remains a landmark study in terms of comprehensiveness and insights, and so it deserves some contemplation. Survey respondents who did business with individual-run trading firms were most likely to believe there had been no improvement in adherence to the terms of the contract over the past five years compared to respondents who dealt with firms associated with the army, party, cabinet, or regional government-run trading firms. Businesses who dealt with firms related to individuals and regional governments found laws and regulations to be more unpredictable than those who dealt with firms associated with the army, party, or cabinet. Those who engaged in business with army-affiliated firms were on average more profitable than businesses that dealt with other types of North Korean firms.

Haggard and Noland conclude, "The absence of institutions deters integration, deters investment relative to trade, probably limits the extent of purely private exchange and inhibits the development of informal networks and relational contracting."[75] Bradley Babson, a North Korean expert and former World Bank staff wrote, "Some limited efforts have been made to establish the legal underpinnings of a modern financial system that will attract foreign direct investment, but these have not been effectively implemented and are not comprehensive."[76] Professor In Sup Han, of Seoul National University's College of Law, contends that, "The law in practice in North Korea cannot be presumed from a knowledge of the law in code. Rather, we can read the regime's changing concerns by the code changes in North Korea."[77] And that concern is probably closer to a desire to maximize rents rather than to catalyze economic development.

Regardless of the future of sanctions, North Korea has a long way to go in establishing a uniform, predictable and corruption-free investment regime that protects the rights of investors. And that is besides improving the country's poor power supply and transportation networks, as identified in the constraints to investment by Professor Kim Byung-yeon.

Further limits - Disentangling from sanctions

Joining the international economic community will involve the relaxation of concentric layers of U.S. and international financial prohibitions to reinforce North Korea's positive structural changes and moves towards transparency. Any successful process of integration will necessarily be collaborative and require Pyongyang's commitment to building out robust

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[74] Kim Byeong-yeon. *Unveiling the North Korean Economy: Collapse and Transition.* Cambridge University Press, 27 May 2017. https://www.amazon.com/Unveiling-North-Korean-Economy-Transition/dp/1316635163

[75] Noland, Marcus. "Networks, Trust and Trade: The Microeconomics of China–North Korea Integration." *North Korea: Sanctions, Engagement and Strategic Reorientation, Asian Economic Policy Review,* 2019. https://onlinelibrary.wiley.com/doi/abs/10.1111/asej.12159

[76] Babson, Bradley O. "How Vietnam's Transition Experience May Be Helpful for North Korea Today | 38 North: Informed Analysis of North Korea." 38 North, 8 Feb. 2019, www.38north.org/2019/02/bbabson020719/

[77] Han, In Sup. *The 2004 Revision of Criminal Law in North Korea: - a take-off?*, 5 Santa Clara J. Int'l L. 122, 2006, http://digitalcommons.law.scu.edu/scujil/vol5/iss1/7

compliance measures to meet international standards. The brief section below explores sequences for how certain prohibitions could be relaxed.

The sectoral export bans prescribed by the unanimously adopted United Nations Security Council Resolutions over the last few years have resulted in potent revenue restrictions and the North Korean government has expressed keen interest in having them lifted in denuclearization negotiations with the White House. However, relaxing them alone would be insufficient for a North Korea hoping to engage and reap the benefits of interaction with the international economic community. That is because firms and individuals with stakes in the U.S. market would remain skittish of getting involved with North Korea so long as current U.S. Executive and Legislative branch prohibitions stay on the books. For example, a September 2017 Executive Order prohibits foreign financial institutions from opening corresponding accounts in the United States if they have facilitated transactions related to trade with North Korea.[78] In addition, the *Countering America's Adversaries Through Sanctions Act* bans U.S. financial institutions form maintaining "correspondent accounts used by foreign financial institutions to provide indirect financial services to North Korea."[79]

The U.S. is also concerned about the risks posed by North Korea's money laundering. In 2016, the Treasury Department determined that North Korea is a jurisdiction of "primary money laundering concern" under Section 311 of the Patriot Act.[80] This prohibits "financial institutions from opening or maintaining in the United States correspondent accounts for, or on behalf of, North Korean banking institutions," and requires financial institutions to conduct special due diligence to determine as much.[81] Incentives have been built into congressional legislation to induce North Korea to improve regulatory measures to prevent laundering. Sanctions prescribed by *The North Korea Sanctions and Policy Enhancement Act of 2016* may be waived for a period of up to one year if, among other things, the President certifies to the Congress that North Korea has taken steps to cease and prevent the laundering of monetary instruments. To have the Section 311 determination lifted, North Korea will need to undertake an incremental, years-long process of reform creating a system robust enough to create a culture of compliance and convincingly reduce potential risk to financial counterparties.

U.S. legislation prescribes the path by which North Korea could access funds through the IMF. Step one would be denuclearization. According to the Congressional Research Service, "U.S.

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[78] "Presidential Executive Order on Imposing Additional Sanctions with Respect to North Korea." White House, 21 Sept. 2017, https://www.whitehouse.gov/presidential-actions/presidential-executive-order-imposing-additional-sanctions-respect-north-korea/

[79] Summary of bill H.R. 3364 - Countering America's Adversaries Through Sanctions Act by 115th Congress (2017-2018). https://www.congress.gov/bill/115th-congress/house-bill/3364/

[80] "Treasury Takes Actions To Further Restrict North Korea's Access to The U.S. Financial System," June 1, 2016, https://www.treasury.gov/press-center/press-releases/Pages/jl0471.aspx

[81] "Advisory on North Korea's Use of the International Financial System," United States Department of the Treasury FinCen Advisory, 17 November 2017, https://www.fincen.gov/sites/default/files/advisory/2017-11-02/DPRK%20Advisory%20FINAL%20508%20C.pdf

representatives in the international financial institutions (IFI) are [legally] required to vote against any support for North Korea due to its nuclear weapons."[82] Next, *The Bretton Woods Agreements Act* requires the Secretary of the Treasury to direct the U.S. Executive Director of the IMF to oppose the use of Fund credit by a Communist Dictatorship.[83] However, in certain circumstances, an exception can be made. The U.S. Executive Director of the Fund can vote for a drawing if the Treasury Secretary informs Congress 21 days in advance that said drawing would either: 1) restore a sustainable balance of payments position, 2) advance market forces in the country, or 3) contribute to the economic interests of the majority of the population.

For reasons both legal and reputational, a North Korea that does not improve its human rights situation could still struggle to attract investors, even in the case that Pyongyang denuclearizes and implements reforms that meaningfully enhance the business environment. First, U.S. domestic legislation requires the President to consider human rights when lifting sanctions against North Korea. Among other requirements, Section 402 of *The North Korea Sanctions and Policy Enhancement Act of 2016* mandates that if the U.S. wants to waive sanctions, the President must certify to Congress that North Korea has released political prisoners, ceased censorship of peaceful political activity, and established an open, transparent, and representative society.[84] Even if legal hurdles are cleared, reputational risks could still restrain investors' enthusiasm. After terminating its nuclear program in 1989 and dismantling existing warheads in 1990,[85] South Africa continued to experience the negative effects of Apartheid-motivated private disinvestment campaigns even as the country made strides towards its first general election with universal suffrage in 1994. Only after those two obstacles were eliminated did foreign direct investment in South Africa soar from just $3.4 million in 1992 to $3.8 billion in 1997.[86]

4. Engaging the IMF and the International Financial Institutions

One of the first steps for establishing creditworthiness would be for North Korea to join the International Monetary Fund (IMF) since this is a prerequisite for membership in the World Bank and Asian Infrastructure Investment Bank (AIIB). Although not an explicit criteria for the Asian Development Bank (ADB), American and Japanese support would be required. Thus, North Korea would most likely be boxed out of membership until that country demonstrates that it is

[82] "North Korea: Legislative Basis for U.S. Economic Sanctions." Congressional Research Service, June 11, 8, https://www.everycrsreport.com/files/20180611_R41438_c5b95ceec44ef9de79dca6ed301030996250646e.pdf
[83] Bretton Woods Agreements Act [International Monetary Fund/World Bank Group], Ch. 339 of 79th Congress, Approved 31 July 1945, As Amended through P.L. 114-113, Enacted 18 Dec. 2015. https://legcounsel.house.gov/Comps/Bretton%20Woods%20Agreements%20Act,%20(International%20Monetary%20Fundworld%20Bank%20Group).pdf
[84] North Korea Sanctions and Policy Enhancement of 2016 (H.R. 757), S. 302, 114th Congress, 2016. https://www.congress.gov/114/plaws/publ122/PLAW-114publ122.pdf
[85] "Nuclear Disarmament South Africa." Nuclear Threat Initiative, 2 Jan. 2019, https://www.nti.org/analysis/articles/south-africa-nuclear-disarmament/
[86] "Foreign direct investment, net inflows (BoP, current US$) [of South Africa]." World Bank Group, 2017, https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2017&locations=ZA&start=1970&view=chart

ready to join the international community. Optimistic expectations in 2000 during the initial years of South Korean President Kim Dae-jung that North Korea will join in a few years were thwarted by opposition from the U.S. and Japan.[87]

IMF assistance could begin with the provision of technical advice, not only in improving and standardizing data standards and dissemination, but also in advising on how to develop functional systems and institutions. North Korea might even follow in Vietnam's footsteps by receiving technical assistance training from the IFIs before normalizing relations with them, with the caveat that sanctions would limit the scope of such assistance. Technical training can allow North Korea to acquire the knowledge necessary to adapt to the international economic system by gradually learning how market economic concepts like price, cost, and profit apply to national economic management and how to acknowledge privatization, according to South Korea's National Assembly Budget Office.[88]

The author of this report had the opportunity last autumn to ask South Korean President Moon Jae-in about Pyongyang's willingness to do so, and President Moon replied, "I've confirmed that the North Korean side has the will to engage in reform and opening by joining several international organizations such as the IMF and World Bank."[89] IMF membership would come after North Korea's denuclearization, according Kim Hoe-jeong, deputy minister for international affairs at South Korea's finance ministry.[90] That being said, it is never too early to start planning. Indeed, satisfying conditions for membership will entail systemic transitions for North Korea, which will not be readily accomplished. The below table looks at the specific requirements for a small collection of IFIs.

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[87] "North Korea will join in a few years," Asian Development Bank Vice President Shin Myoung Ho said at the World Economic Forum conference in Melbourne. .https://www.wsj.com/articles/SB968852647612563219

[88] "북한 경제개발 재원조달을 위한 국제기구와의 협력방안," National Assembly Budget Office, 6 Dec. 2018, https://www.nabo.go.kr/Sub/01Report/01_02_Board.jsp?funcSUB=view&bid=19&arg_cid1=0&arg_cid2=0&arg_class_id=0&currentPage=0&pageSize=10&currentPageSUB=0&pageSizeSUB=10&key_typeSUB=&keySUB=&search_start_dateSUB=&search_end_dateSUB=&department=0&department_sub=0&etc_cate1=&etc_cate2=&sortBy=reg_date&ascOrDesc=desc&search_key1=&etc_1=0&etc_2=0&tag_key=&arg_id=6805&item_id=6805&etc_1=0&etc_2=0&name2=0

[89] "Our Greater Alliance, Making Peace: A Conversation With President Moon Jae-In." *Council on Foreign Relations*, Council on Foreign Relations, 25 Sept. 2018, www.cfr.org/event/our-greater-alliance-making-peace-conversation-president-moon-jae

[90] Kim, Kwang-tae. "N. Korea's Denuclearization Is Prerequisite for Joining IMF: Official." *Yonhap News Agency*, 15 Apr. 2019, http://yna.kr/AEN20190415002800320

Figure 2 Terms of Membership for International Financial Institutions

Financial Institution		Terms to Become Member State	North Korea's Potential to Join
IMF		Approval from two-thirds of the membership	On 9th May 2018, South Korean Finance Minister Kim Dong-yeon noted that it would take around 3 years for North Korea to be able to join the IMF.
World Bank	IBRD	Membership is only available to countries who are members of IMF	The World Bank noted that it would participate in assisting North Korea if it reforms and opens up, South Korean Finance Minister Kim Dong-yeon said in an interview on 9th May 2018.
	IDA	Membership is only available to countries who are members of both IBRD and IMF	
ADB		Approval from two-thirds of the membership out of three-fourths of voting participation	North Korea's application was rejected in 1997 due to opposition of the US and Japan. North Korea's second application in Aug 2000 did not make progress.
AIIB		Membership is open to countries who are members of IBRD or ADB.	The AIIB also requires IMF membership for lending to recipient countries, although there is an exceptional work-around arrangement.
OECD Financial Action Task Force (FATF)		Asia/Pacific Group on Money Laundering (APG). In 2014, North Korea became an Observer Jurisdiction, denoted as "considering APG membership."	"International standards issued by the FATF… remain the key measures for APG members to implement as part of their legal, financial and law enforcement strategies to combat money laundering, terrorist financing and the financing of proliferation."

Source: IDA, IMF, ADB, AIIB, Hankyoreh, WSJ, The Korea Herald, Chosun Ilbo, Citi Research IBRD: International Bank for Reconstruction and Development.

North Korea has never officially applied for IMF membership, but it did conduct initial consultations. As North Korea's economy fell into crisis in 1997, it became more willing than ever to dialogue with actors in the international economic community. A meeting between IMF New York office Director Justin Zulu and North Korea's UN ambassador led to a fact-finding trip in September 1997 by IMF Asia and Pacific Department Senior Advisor Margaret Kelly and other Fund staff.

In Pyongyang, the IMF staff provided information about membership requirements. North Korea provided statistics painting a dire picture -- North Korea's economy was in crisis, with output cut in half inside four years.[91] During the fact-finding trip, North Korea "expressed a strong interest

[91] Boughton, James M. *Tearing Down Walls: the International Monetary Fund 1990-1999.* Ch.2 "Becoming a Universal Institution: Expansion of Membership." International Monetary Fund, 2012, pp. 49-79, https://www.elibrary.imf.org/fileasset/IMF_History/tearingDownWalls.pdf?redirect=true

in joining the Fund to obtain access to its financial resources…, training, and technical assistance."[92] It also "requested the Fund to organize a workshop on the IMF for a group of government officials as well as a six-month course providing training in 'western' economics." North Korea also demonstrated interest in: "reorganizing the Ministry of Finance, compilation of fiscal and other economic statistics, and computerization of Ministry of Finance accounts."[93]

At the same time, Pyongyang's officials displayed concern about the level of data transparency necessary for membership and conditions for borrowing. During the course of the fact-finding trip, it became clear that the North Korean authorities believed that the fundamental cause of the ongoing economic contraction was natural disasters. The IMF staff disagreed, recommending in their report that, "a reversal of the economic decline would require a fundamental change in policies, along with large amounts of investment to restructure the economy, particularly the industrial and agricultural sectors. To attract the increase in foreign investment required for this purpose it will be necessary to demonstrate that such funds will be used efficiently and to increase the transparency of government operations. It will also be necessary to find a solution to the long-standing issue of external debt default."

Afterwards, the South Korean government voiced support for North Korea's accession to the Fund and World Bank, saying this "would expedite [North Korea's] integration into the world economy and contribute significantly to the political and economic stability of East Asia."[94] Japan and the U.S. demurred on the question of IMF membership. But in 1998, the IMF decided to provide technical assistance, arranging for a short training workshop in China. This was to be followed by, "a six-month economics training course for around 10 officials at a suitable university or training institute." Before this could occur, however, North Korea hesitated, and the relationship came to a standstill.

Even if North Korea is willing to approach the IMF for membership, the transparency hurdle it faces would be even more challenging today than it was in 1997. A relevant case in point is Vietnam in 2002. The IMF suspended disbursement of a three-year Poverty and Growth Facility loan following a prolonged dispute between the IMF and that government over the transparency and accountability of the State Bank of Vietnam, the central bank. The particular weaknesses included external audit, financial reporting and internal controls. Vietnam refused to cooperate in regard to the IMF's "safeguard" procedures because it would contravene Vietnamese law.[95] Safeguards Assessments, which apply to all member countries with arrangements for use of IMF resources approved after June 30, 2000, aim to provide reasonable assurance to the IMF

[92] "Democratic People's Republic of Korea—Fact-Finding Report," EBS/97/204, 12 Nov. 1997.
[93] "Democratic People's Republic of Korea—Request for Technical Assistance," EBS/98/63, 30 Mar. 1998.
[94] Statement by the Hon. Kyong Shik Kang, Governor of the Bank and the Fund for Korea, at the Joint Annual Discussion; Annual Meetings Press Release No. 42, September 23–25, 1997; IMF archives, Historian's files.
[95] "Vietnam loses IMF funding after dispute." Vietnam Investment Review, 19 Apr. 2004, https://www.vir.com.vn/vietnam-loses-imf-funding-after-dispute-1412.html

that a central bank's framework of reporting and controls is adequate to manage resources, including IMF disbursements.[96]

Russia's entry to the IMF is instructive of the importance of political leadership and confidence building actions.[97] USSR President Mikhail Gorbachev and U.S. President George H.W. Bush were the key actors. Gorbachev's *perestroika (*restructuring) and *glasnost* (opening) reforms demonstrated willingness for broad cooperation with the international community, although *perestroika* ultimately failed to overcome internal opposition to comprehensive economic reform. Nonetheless, Gorbachev sought entry to the IMF in the late-1980s and the dismantling of the Berlin Wall in 1989 provided the political opening to the West. The following year, President Bush announced that the IMF should establish a "special association" for the USSR as a preliminary step for membership, as doubts persisted in the U.S. and Europe that the Soviet Union was ready to accept the responsibilities of membership in the international financial community. The Executive Board of the IMF's approving of Special Association in September 1991 led to its setting up permanent office in Moscow and the start of a massive staff effort to help prepare in collaboration with the Soviet authorities a comprehensive reform program and IMF membership. Tumultuous political events saw the collapse of the Soviet Union in December 1991, with the Russian Federation joining the IMF as a member with a borrowing quota in June 1992.

The lesson for North Korea from the Russian case is that joining the IMF and international financial community will not be easy. It will require the willingness and ability of Chairman Kim Jong Un not only to shed light on the state of the economy, but also to neutralize vested interest opposition to comprehensive reform. Needless to say, the immediate daunting obstacle is North Korea's weapons programs and the U.N. and U.S. sanctions adopted in reaction to that country's nuclear and ballistic missile tests since 2006. It is very difficult to see even progress towards Special Association status without bold political and economic steps taken by the North Korean leadership.

The importance of early entry into the IMF once the political decision is made to embark on comprehensive economic reform is seen in the table below. China, Vietnam, Russia and Mongolia (the second country to adopt communism in 1921). All four countries signaled the intention to join or gained entry to the IMF very early in their reform programs or at the time of political transition or state collapse. Fourteen of the 15 former Soviet Republics joined within a year after the collapse of the USSR.

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[96] "Safeguards Assessments Completed to Date." International Monetary Fund, 23 May 2019, https://www.imf.org/external/np/tre/safegrds/complete/index.aspx

[97] The chapter, "Becoming a Universal Institution: Expansion of Membership," provides an authoritative account of how Russia joined the IMF. https://www.imf.org/external/pubs/ft/history/2012/pdf/c2.pdf

IMF Membership Spurs Reform Deepening and Creditworthiness

	Year of reform or transition	Membership/access		International credit rating assigned (1)	Int'l gov't debt security issuance began (2)
		IMF	WTO		
China (PRC)	1978	1980	2001	1988	Q1 1993
Vietnam, Socialist Republic	1986	1993 (3)	2007	1997	Q1 1998
Russian Federation	1985-1991	1992 (4)	2012	1996	Q4 1996
Mongolia	1991	1991	1997	1999	Q4 2012
North Korea	--	--	--	--	--
Notes:					
(1) Initial ratings were assigned by Moody's Investors Service, except for Mongolia, which was assigned by S&P. Moody's Investor Services' rating was assigned in 2005 (2) The Bank for International Settlements, Debt Securities Statistics					
(3) Vietnam clears arrears to the IMF and US drops opposition to lending (4) On 30 September 1991 The IMF Executive Board approved Russia's Special Association status					

Technical assistance from the IMF and World Bank helped guide national authorities to implement comprehensive institutional reforms, which eventually led to credit ratings assigned by the large international credit rating agencies. Credit ratings widened domestic bank access to foreign credit and eventually, to sovereign international debt issuance. In the case of Mongolia these steps were prerequisites for its ability to tap the international capital markets to help finance the expansion of mineral resource projects. In this regard, North Korea with its apparently large mineral resource endowment should learn from Mongolia. The growth of international trade that sovereign credit ratings helped to facilitate, together with further institutional reforms, led to accession in the World Trade Organization (WTO), which boosted export growth for all countries.

5. Conclusion: Simplified comparative credit scorecard

Both North Korea and Cuba are the only two sizable countries which are not members of the IMF. However, in some regards Cuba could serve as an example to North Korea, if not a model, on how to begin a process of integration into the international financial community. To start with, Cuba restructured its external debt arrears to the Paris Club group of government creditors. It normalized its relations, diplomatically at least, under the Obama administration. And it took another step to integrate itself into its greater region by becoming a member of the Central American Bank for Economic Integration (CABEI), the first multilateral organization that received it as one its members.[98] Thirdly, Cuba's institutional governance indicators are significantly stronger than Cuba's in regard to the Rule of Law and Control of Corruption. Lastly, Cuba meets the threshold of financial and economic information to receive a monitored rating from an international credit rating agency, Moody's, despite significant data gaps.[99]

The sovereign credit scorecard which summarizes and encapsulates much of Moody's sovereign rating methodology is presented below. It shows that Cuba (rated Caa2, meaning in poor standing with very high credit risk) has glaring data gaps and weaknesses, but it also shows some surprising relatively strengths for a Frontier Market economy, namely in some aspects of Institutional Strength. Cuba also has eked out a modicum or economic growth in recent years until the collapse of its economic patron, Venezuela. It has also started to gain creditworthiness. That is demonstrated in the resumption of net international financing inflows following its Paris Club restructuring.

Vietnam's scorecard serves as a reference for a former centrally controlled economy whose leaders chose the path of economic reform and opening, with successful results. While Vietnam's Institutional Strength remains "Low" and susceptibility to Event Risk "High" (minus) thirty-three years after the Doi Moi policy was announced (the broad categories are Very High, High, Moderate, Low and Very Low; high, flat, minus), its Economic Strength is "High" and Fiscal Strength are both stronger, assessed as "Moderate." Vietnam's Ba3 credit rating corresponds to one with speculative and substantial credit risks, but it is only three notches below the investment grade threshold rating but five notches above Cuba.

North Korea's scorecard is based on data reported in the 1997 IMF report and on BOK figures for 2017. Credit weaknesses of North Korea stem from, relative to Cuba is that has a smaller economy, lower per capita income, much weaker institutional strength and a much weaker external payments position. Moreover, North Korea has not sought to normalize its relations with foreign creditors in any systematic way since the 1980s. This cursory comparison shows that North Korea's credit quality has not improved since 1997. And this does not fully take into account the negative effects of strict sanctions put into place since 2016   Therefore, the rating factors alone suggest to the authors of this paper that if it were rated, it would score Very Low in all fundamental categories and Very HIgh in event risk--weaker than Cub and much weaker than Vietnam.

[98] Cuba completed a two-year process in July 2018 for integration into CABEI, which is the first multilateral organization that received it as one of its members.
[99] Moodys' initially assigned an investor initiated rating at the Caa1 level in April 1999 and lowered its rating for Cuba to Caa2 in April 2014, three notches above its lowest rating, "C."

Sovereign Credit Scorecard - North Korea v. Cuba v. Vietnam

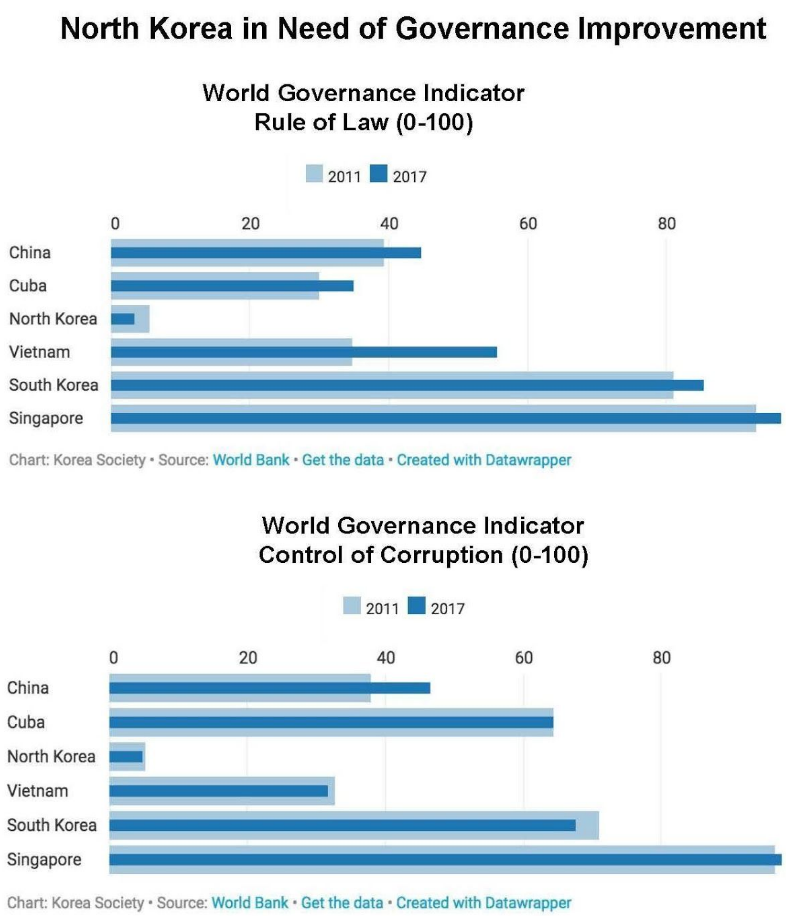
		Vietnam	Cuba	North Korea Today		North Korea 20 years ago
	Moody's Rating	Ba3	Caa2			
1. Economic Strength		**High +**	**Low**	***Very Low***	*Year(s)*	***Very Low***
Nominal GDP (US $bn)	2017	220.5	95.5	34	1996	10.6
GDP per capita (PPP/Nom US$) [1]	2017	6928	--	1.367	1996	480
Avg real GDP growth (% change)	2013-2022	6.4	1.7	-3.9	1993-1996	-15.1
Volatility in real GDP growth (ppts)	2008-2017	0.6	1.3	0.5	1993-1996	-7.5
WEF Global Competitiveness Index	2017	4.4	--	--	1996	--
2. Institutional Strength [2]		**Low +**	**Very Low +**	***Very Low***		***Very Low***
Government effectiveness index	2017	43.2	32.3	4.3	1996	1.6
Rule of Law	2017	52.2	26.3	3.4	1996	15.1
Control of Corruption	2017	24.6	61.6	4.8	1996	4.8
Average inflation (% change)	2013-2022	3.8	1.8	--	1996	--
Volatility of inflaiton (ppts)	2008-2017	7.1	2.0	--	1996	--
External debt default/arrears history		No	Yes	Yes		Yes
Debt restructuring history		Yes	Yes	No		No
Member of IMF		Yes	No	No		No
Access to IMF [3]		No	No	No		No
3. Fiscal Strength		**Moderate**	**Moderate +**	***Very Low***		***Very Low***
Gen. govt debt/GDP	2017	51.8	25	--	1996	--
Gen. govt debt/revenue	2017	201.2	45.5	--	1996	--
Gen. govt interest payments/revenue	2017	7.7	3.2	--	1996	--
Gen. govt interest payment/GDP	2017	2.0	1.8	--	1996	--
Gen. govt financial balance/GDP	2017	-3.5	-9.1	--	1996	-0.3
4. Event Risk		**High -**	**Very High -**	***Very High***		***Very High***
Current account balance/GDP [4]	2017	2.9	0.2	-4.4		-6.5
Gen. govt external debt/GDP	2017	44.8	--	--		120
External Vulnerability Indicator	2018	39.3	--	--		--
Source:		Moody's	Moody's	BOK		IMF

Notes:
[1] nominal per capita GDP for North Korea
[2] percentile, Cuba based on rated governments, North Korea on a larger World Bank cohort
[3] Vietnam has not completed the IMF Safeguards Assessment.
[4]Trade balance for North Korea for 1996 and estimated current account balance 2017

Appendix A: A closer look at North Korea's credit fundamentals: Governance and the rule of law

Looking at relevant aspects of governance and rule of law indexes composed by credible international organizations, research institutes, and NGOs, we can see a dismal picture for North Korea which is not improving with time.

- The graph below suggests that Kim Jong Un's rise to power has not led to sizable improvements in North Korea's governance. The country has continued to score well below both Cuba and China on the "Rule of Law" and "Control of Corruption" metrics in the World Bank's *World Governance Indicators*.[100]



[100] Kaufmann, Daniel, and Aart Kraay. "Worldwide Governance Indicators (WGI) 2018 Interactive." *World Bank Group*, 2018, www.info.worldbank.org/governance/wgi/#home

- In addition to the World Bank, Transparency International composes a *Corruption Perceptions Index*, scoring countries according to perceived levels of public sector corruption. North Korea's 2018 score (14 out of 100) puts it at the bottom of the list, near Somalia (10), South Sudan (13), Syria (13), and Yemen (14).[101]
- Freedom House evaluates political rights and civil liberties for its annual report, *Freedom in the World*.[102] In 2018, North Korea received the lowest possible rank for both political and civil liberties, with a holistic score of 3 out of 100. The report notes that, "Corruption is believed to be endemic at every level of the state and economy, and bribery is pervasive. There are no independent or impartial anti-corruption mechanisms… Information about the functioning of state institutions is tightly controlled for both domestic and external audiences."
- North Korea is the least free country included in the Heritage Foundation's 2019 *Index of Economic Freedom,* with a score of 5.9 out of 100.[103] Venezuela was the second lowest ranked country, with a score of 25.9. The report says, "While certain industries are permitted to sell some of their output in the marketplace and seek private investment from the 'new rich,' or donju... the country lacks even the most basic policy infrastructure of a free-market economy."

Although North Koreans indicate that their monthly income has increased under Kim Jong Un, they also point to a widening wealth gap between the rich and poor, according to a survey of defectors carried out by Seoul National University in 2018.[104] When asked to identify the primary reason for economic troubles, 34.5% said an inordinately large military budget, 19.5% said the lack of reform and opening, and 9.2% said the bureaucratism of party cadres. Between 2017 and 2018, the amount of respondents blaming government policies dropped about 5% and those who blamed party cadres increased by 5%, indicating a shift in blame away from the central government and towards regional party officials.

When asked about their range of freedom to conduct economic activities in North Korea, 84% of defectors said they were "not free at all," according to research conducted by Seoul National University's Dr. Kang Chae-yeon, based on interviews with 50 respondents.[105] When asked to identify the most significant impediment to business activities, 90% said regulation and control by government agencies, and 80% said a lack of mobility. Asked which government agency

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[101] "How Corruption Weakens Democracy." *Transparency International*, 29 Jan. 2019, www.transparency.org/news/feature/cpi_2018_global_analysis
[102] "Freedom in the World 2018 - North Korea." *Freedom House*, 16 Feb. 2018, www.freedomhouse.org/report/freedom-world/2018/north-korea
[103] "North Korea Economy: Population, GDP, Inflation, Business, Trade, FDI, Corruption." *The Heritage Foundation*, 2019, www.heritage.org/index/country/northkorea
[104] "서울대 통일평화연구원 통일학연구 43 북한주민통일의식 2018." Seoul National University Institute of Unification and Peace Studies, 11 Mar. 2019, http://tongil.snu.ac.kr/xe/sub733/98899
[105] Kang, Chae-Yeon. "The Reillumination on the Nature of the North Korean Economic System: 'Bureaucratic Market Economy.'" *DBPia*, Seoul National University Institute of Peace and Unification Studies, Dec. 2018, www.dbpia.co.kr/journal/articleDetail?nodeId=NODE07610680&language=ko_KR

directly interfered in their economic activities, 64% of the respondents pointed to by party organizations, 62% said Ministry of People's Security, 36% said military institutions, 24% said Ministry of State Security, and 14% said the Prosecutor's Office.

The nature of bribery in North Korea hints at how ordinary people experience rule of law. As marketization has taken hold, more bribes are given for the sake of keeping businesses in operation. When asked why bribes are necessary, half of defectors surveyed in 2011 said the bribe was given to continue work in the informal market, a 25% jump compared to just seven years earlier. People involved in market activities were perceived to be the biggest contributors of bribes. Over half of the respondents believe that police officers are the major recipients of bribes, while 22% said National Security Agents, and 11% said high ranking officials. Kim Byeong-yeon's research shows that the average percentage of household income devoted to bribes has not significantly fluctuated in 10 years, suggesting that an equilibrium has been struck between the leadership, officials, and market participants. Kim believes the equilibrium, however, could be fragile, placing pressure on the leadership to maintain control over a system that is exposed to internal and external vulnerabilities.

Appendix B: A closer look at North Korea's credit fundamentals: Statistics and transparency

Producing reliable statistics will be an important element for establishing North Korea's creditworthiness. For North Korea, this presents two challenges, one political and the other technical. First, it will need to make the political decision to become more transparent. Second, it will need to apply systemic changes in order to improve the objectivity of its data. One requirement for membership in the IMF is the "furnishing of information" such as national income, exchange controls, and international balance of payments. Other nations with centrally planned economies have also faced this hurdle and overcome it, suggesting that the risk could be justified in the case of North Korea.[106]

North Korea's Central Bureau of Statistics manages the production and collection of statistical information. It uses this information for the purpose of planning and keeps a very tight lid on who can receive access to view the consolidated reports. Branches of the Ministries of the Cabinet collect the information and feed it to the Central Bureau of Statistics, which organizes and analyzes it. Aside from reports on the budget growth rate released during the Supreme People's Assembly each April and in certain cases to receive humanitarian aid, collected information is not shared with the outside world.[107]

The quality and reliability of the data is suspect, since each branch of each Ministry has an incentive to inflate its production figures, etc. so as to avoid punishment for not reaching quotas set by the central plan. Much of the information fails to meet international standards, as production figures are not expressed in value terms and no base year is indicated in macroeconomic data. Korea Development Bank (KDB) researcher Lee Youngseok argues that, "Even for internal purposes, North Korea must have objective statistical data to attract investments from international society to promote economic development."[108] Judging by current capacity it will take decades for North Korea to educate and train professional analysts and managers to collect information that is consistent with international standards. Lee further argues that collaborative interactions with South Korea and multilateral agencies would be essential for helping North Korea to produce information that will be needed to measure the risk of investment and plan for economic cooperation initiatives.

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[106] Erikson, Daniel P. "Bridging the Gap: IMF and World Bank Membership for Socialist Countries." *Association for the Study of the Cuban Economy (ASCE)*, 30 Nov. 2003, www.ascecuba.org/asce_proceedings/bridging-the-gap-imf-and-world-bank-membership-for-socialist-countries/

[107] Frank, Ruediger. "The North Korean Parliamentary Session and Budget Report 2018: Cautious Optimism for the Summit Year | 38 North: Informed Analysis of North Korea." *38 North*, 19 Apr. 2018, www.38north.org/2018/04/rfrank041918/

[108] 이영석. "북한의 통계 생산현황, 이영석, KDB 산업은행." SPN (서울평양뉴스), Korea Development Bank, 29 Nov. 2018. http://www.spnews.co.kr/news/articleView.html?idxno=15286

What do we know about North Korea's economy?		
	Sources	Limitations
Fiscal[109]	North Korea's Supreme People's Assembly, annual report	Data limited to changes in revenue and expenditure and extent to which targets were met. No details on revenue sources and expenditure categories, as well as on financial balances. No data on government debt.
National accounts	GDP growth data are produced by South Korea's central bank. Seoul National University Professor Byeong-yeon Kim applies a different methodology and has his own GDP per capita estimate better capturing the value added provided by services, as does the UN.	Professor Stephan Haggard believes that GDP calculations based on physical outputs are underestimates, since private economic activity has ballooned of late.
Marketization	Surveys of North Korean defectors.	Sample size is usually small and sample bias might be a factor, since the profile of a defector does not represent the average North Korean person.
External accounts	Merchandise trade figures are compiled from partner customs data by South Korea's trade promotions agency, KOTRA and by the Bank of Korea.	No current account reporting. Service trade and remittances not covered by the BOK. Foreign exchange from illicit trade could be significant. External assets and foreign liabilities of North Korea are not reported by the authorities. No information on foreign exchange holdings of the state.
Monetary statistics and banking survey	None reported	
Domestic price inflation	Daily NK, an online newspaper.	A consumer price index is not available. Limited commodity coverage by Daily NK. Extent of dollarization is also not known[110]
Economic regulations and policy statements[111]	North Korean economic policy journals and state media.	No domestic discussion or critique of policy or regulatory measures in media or journals. Government statistical publications are rudimentary.

[109] Frank, Ruediger. "The North Korean Parliamentary Session and Budget Report 2019: Signs of Economic Stagnation and an Open Claim to Leadership on the Korean Peninsula | 38 North: Informed Analysis of North Korea." *38 North*, 13 Apr. 2019, www.38north.org/2019/04/rfrank041319/

[110] Brown, William. "Is 'Byungjin' Working? A Look at North Korea's Money." *Korea Economic Institute of America*, http://keia.org/%E2%80%9Cbyungjin%E2%80%9D-working-look-north-korea%E2%80%99s-money

[111] "Light and Shadow: A Review of 'Rebuilding North Korea's Economy'." *DailyNK*, 20 Sept. 2016, www.dailynk.com/english/light-and-shadow-a-review-of-rebui/

Appendix D. Collection of statements by the Trump and Moon administrations related to the benefits of denuclearization

Date	Official	Statement
4.15.2019	Secretary of State Mike Pompeo	“I would love nothing more than to lift the sanctions on North Korea. President Trump talks frequently and tweets almost as often about a brighter future for North Korea, right?”
4.8.2019	Unification Minister Kim Yeon-chul	"I will work hard to strengthen a virtuous circle in which we strengthen peace by using business as a link and strengthen economic cooperation [with North Korea] again based on peace."
3.28.2019	President Moon	"A peace-driven economy will help the Koreas become the world's most lucrative business market."
3.2.2019	President Trump	“North Korea has an incredible, brilliant economic future if they make a deal."
3.1.2019	President Moon	“I will help usher in an era of a peace-driven economy on the Korean peninsula."
2.27.2019	President Trump	"Your country has tremendous economic potential, unbelievable, unlimited. I look forward to watching it happen... and we will help it to happen."
2.25.2019	President Moon	"President Moon said the country is ready to play that role by reconnecting inter-Korean railways and roads and launching inter-Korean economic cooperation projects if asked by President Trump."
2.24.2019	President Trump	"Chairman Kim realizes… that without nuclear weapons, his country could fast become one of the great economic powers anywhere in the World. Because of its location and people (and him), it has more potential for rapid growth than any other nation!"
2.7.19	Secretary of State Mike Pompeo	"We'll, in turn, fulfill the commitments we made towards stability on the peninsula and a better future, a brighter future, for the North Korean people."
1.31.2019	US Special Rep to NK Stephen Biegun	"At the appropriate time, with the completion of denuclearization, we are prepared to explore with North Korea and many other countries the best way to mobilize investment, improve infrastructure, enhance food security, and drive a level of economic engagement that will allow the North Korean people to fully share in the rich future of their Asian neighbors."
4.30.2018	Presidents Trump and Moon	In a phone call, President Trump and President Moon "emphasized that a prosperous future for NK is contingent on denuclearization."

Source: U.S. State Department, Yonhap News, Korea Times, Reuters, NK News, BBC, Yonhap News, Associated Press, Korea Times, U.S. State Department, White House

Appendix E: North Korea's economy and the effects of sanctions.

The impact of sanctions is explored in the table below.

How hard have sanctions hit?	
Trade	Combined, UN Security Council Resolutions make illicit $2.9 billion of North Korea's 2016 export revenues.[112] This caused an 88% drop in annual North Korean exports to China in 2018, according to China's General Administration of Customs.[113]
State Enterprises	State owned enterprises in Pyongyang shut down and laid off workers in March due to financial problems, according to reports citing sources inside North Korea.[114]
Capital Goods	There has been a large year-on-year drop from 2017 to 2018 in industrial imports from China for trucks, machinery, and fertilizer relevant to agriculture, manufacturing, and construction.[115] UNSC Resolutions also restrict the allowable amount of crude oil and refined petroleum into North Korea.[116]
Diplomacy	North Korea's primary request at the Trump-Kim summit in Hanoi was for the most stringent UN Security Council sanctions be eased, suggesting urgency.
Overseas Workers	Reduction in overseas workforce estimated to earn the government $500 million per year. UN Security Council Resolution 2397 requires all member states expel all workers by the end of 2019.

[112] "FACT SHEET: Resolution 2375 (2017) Strengthening Sanctions on North Korea." *United States Mission to the United Nations* , U.S. Department of State, 11 Sept. 2017, www.usun.state.gov/remarks/7969

[113] Nagai, Oki. *North Korea Trade Shrank Significantly in 2018, Beijing Says*. Nikkei Asian Review, 14 Jan. 2019, www.asia.nikkei.com/Politics/International-relations/North-Korea-trade-shrank-significantly-in-2018-Beijing-says

[114] Mun, Dong Hui. "Majority of Pyongyang State-Run Factories Close after US-DPRK Summit Fails to Bear Fruit." *DailyNK*, 18 Apr. 2019, https://www.dailynk.com/english/majority-of-pyongyang-state-run-factories-close-after-us-dprk-summit-fails-to-bear-fruit/

[115] Silberstein, Benjamin Katzeff. "The North Korean Economy in April 2019: Sanctions Are Pinching-But Where and How Much? | 38 North: Informed Analysis of North Korea." *38 North*, 23 Apr. 2019, www.38north.org/2019/04/bkatzeffsilberstein041919/

[116] "FACT SHEET: UN Security Council Resolution 2397 on North Korea." *United States Mission to the United Nations*, U.S. Department of State, 22 Dec. 2017, www.usun.state.gov/remarks/8238

Appendix F: Credit rating symbols and definitions.

Moody's	S&P	Rating Description		
		General	**Risk**	**Classification**
Aaa	AAA	Prime	Judged to be of the highest quality, with minimal risk.	Investment
Aa	AA	High Prime	Judged to be of high quality and are subject to very low credit risk.	
A	A	Upper medium Grade	Considered upper-medium- grade and are subject to low credit risk.	
Baa	BBB	Lower medium Grade	Subject to moderate credit risk. They are considered medium-grade and as such many possess speculative characteristics.	
Ba	BB	Speculative	Judged to have speculative elements and are subject to substantial credit risk.	Speculative
B	B	Highly Speculative	Considered speculative and are subject to high credit risk.	
Caa	CCC	Substantial Risks	Judged to be of poor standing and are subject to very high credit risk.	Junk
Ca	C	Extremely Speculative	Highly speculative and are likely in, or very near, default, with some prospect of recovery in principal and interest.	
C	D	In default	The lowest-rated class of bonds and are typically in default, with little prospect for recovery of principal and interest.	