The Graying of Korea
demographics and retirement policy
in the Land of the Morning Calm

presentation by
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Korea today is still a demographically youthful nation. Korea, however, is about to be overtaken by an age wave of stunning proportions.

A half century ago in 1960, there were 18 Koreans under age 20 for every one Korean aged 65 or older. A half century from now in 2050, there will be three Korean elders for every one Korean child.
A young Korea is about to grow old.

NPS Expenditures as a Percent of GDP, Current-Law Projection, 2005-2050

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of GDP</td>
<td>1.7%</td>
<td>3.2%</td>
<td>5.7%</td>
<td>11.4%</td>
<td>21.5%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>

Source: Moon (2006)
Behind Korea's age wave: A dramatic decline in fertility.

Korean Total Fertility Rate, 1960-2006

Source: KNSO (2006)
Behind Korea's age wave: An equally dramatic rise in life expectancy.

Source: KNSO (2006), Kwon (2003), and U.S. Census Bureau (2006)
The inversion of the age pyramid.

Throughout history, the age structure of Korea’s population has resembled a pyramid, with many young people at the base and a few old people at the top.

Falling fertility and rising longevity are about to turn the traditional population pyramid on its head.
Pyramid inversion of Korea—1960 to 2050.

KNSO Baseline Scenario

Men

Women

year

1960

median age

19.0

THIS IS WHERE KOREA WAS IN 1960

Population in Thousands

3000 2000 1000 0 100 200 3000

30-34 20-24 10-14 0-4
Pyramid inversion of Korea—1960 to 2050.

KNSO Baseline Scenario

Men

Women

year
2005

median age
34.8

THIS IS WHERE KOREA IS TODAY

Population in Thousands

3000 2000 1000 0 100 200 3000

0-4 10-14 20-24 30-34 40-44 50-54 60-64 70-74 80-84 90-94
Pyramid inversion of Korea—1960 to 2050.

KNSO Baseline Scenario

Men

Women

year

2050

median age

56.7

THIS IS WHERE KOREA WILL BE IN 2050
The rapid aging of Korea’s population will be accompanied by rapid workforce and population decline.
By 2050, there will be one-third fewer working-age Koreans than there are today.

Cumulative Percentage Change in Korea’s Working-Age Population (Aged 20-64), by Time Period

Percentage Change in Korea’s Working-Age Population by Age Group, 2005-50
- Age 20-29: -53.9%
- Age 30-39: -55.8%
- Age 40-49: -46.1%
- Age 50-59: +21.9%
- Age 60-64: +51.3%

Source: KNSO (2006)
The coming age wave will challenge Korea's ability to support the old without imposing a crushing burden on the young.

- Falling fertility and rising longevity translate directly into a falling “support” ratio of workers to retirees.
By 2050, there will be barely one working-age adult available to support each elder.

Aged Support Ratio of Working-Age Koreans (Aged 20-64) to Elderly Koreans (Aged 65 & Over), 1960-2050

<table>
<thead>
<tr>
<th>Country</th>
<th>2005</th>
<th>2050</th>
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<tbody>
<tr>
<td>US</td>
<td>4.8</td>
<td>2.8</td>
</tr>
<tr>
<td>UK</td>
<td>3.7</td>
<td>2.3</td>
</tr>
<tr>
<td>France</td>
<td>3.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Germany</td>
<td>3.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Korea</td>
<td>7.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Italy</td>
<td>3.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Japan</td>
<td>3.1</td>
<td>1.2</td>
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Source: KNSO (2006) and UN (2005)
The coming age wave will challenge Korea's ability to support the old without imposing a crushing burden on the young.

- Falling fertility and rising longevity translate directly into a falling “support” ratio of workers to retirees.
- Traditional family support networks are under increasing pressure from “modernization.”
The share of elders living with their children has fallen steeply over the past 25 years.

Percent of Korean Elderly (Aged 65 & Over) Living with their Children, 1980-2004

Source: Chung (2005) and KNSO (2004)
The coming age wave will challenge Korea's ability to support the old without imposing a crushing burden on the young.

- Falling fertility and rising longevity translate directly into a falling “support” ratio of workers to retirees.

- Traditional family support networks are under increasing pressure from “modernization.”

- A growing share of the burden of supporting tomorrow’s elderly will show up in public budgets—and taxpayer contributions.
Without reform, the cost of Korea’s National Pension System (NPS) will rise explosively.

NPS Expenditures as a Percent of GDP, Current-Law Projection, 2005-2050

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<tr>
<td>2005</td>
<td>0.4%</td>
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<tr>
<td>2010</td>
<td>0.6%</td>
</tr>
<tr>
<td>2015</td>
<td>1.0%</td>
</tr>
<tr>
<td>2020</td>
<td>1.5%</td>
</tr>
<tr>
<td>2025</td>
<td>2.2%</td>
</tr>
<tr>
<td>2030</td>
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</tr>
<tr>
<td>2035</td>
<td>4.1%</td>
</tr>
<tr>
<td>2040</td>
<td>5.2%</td>
</tr>
<tr>
<td>2045</td>
<td>6.3%</td>
</tr>
<tr>
<td>2050</td>
<td>7.3%</td>
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NPS Expenditures as a Percent of Workers’ Taxable Payroll

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Source: Moon (2006)
Despite its unsustainable cost, the benefits that the NPS offers are inadequate.

- Although the NPS is often described as a “high benefit” system, the reality is quite different. Replacement rates are actually very modest by international standards, and are bound to be cut further in the future as costs rise.
Properly measured, NPS benefits are nearly one-third lower than the official figures suggest.

NPS Replacement Rates for Average Earners with 40 Years of Contributions: Current Law versus Government Reform Proposal

Source: NPS (2007) and CSIS calculations
Despite its unsustainable cost, the benefits that the NPS offers are inadequate.

- Although the NPS is often described as a “high benefit” system, the reality is quite different. Replacement rates are actually quite modest by international standards, and are bound to be cut further in the future as costs rise.

- The NPS also leaves a large share of today’s workforce uncovered, which means that a large share of tomorrow’s elderly will have no pension at all.
Just two-thirds of Korean workers are now earning a public pension benefit of any kind.


- **Earning Pension**: 58.1%
  - 12.8% are entirely uncovered
  - 22.7% are NPS: Non-Contributors
  - 6.4% are NPS: Active Contributors
  - 4% are special Gov't Pensions*

- **Not Earning Pension**: 41.9%
  - 100% of labor force

*Public employees, private school teachers, and the armed forces.

If the NPS covered all workers—and if it paid the benefits it appears to promise—its cost would be double current projections.

NPS Expenditures, as a Percent of GDP, Current-Law versus CSIS "No Benefit Gap" Projection for 2050

- **2005**: 0.4%
- **2050 (Current-Law Projection)**: 7.3%
- **2050 (CSIS "No Benefit Gap" Projection*)**: 13.9%

*Assumes that the active contribution rate among NPS covered workers rises to 90% and that the system's actual replacement rates (initial benefits as a % of final salary) will match its nominal replacement rates.

Source: Moon (2006) and CSIS calculations
The NPS isn’t the only government program whose cost will be rising as Korea ages.

Graying also means paying more for health care, nursing homes, and other social services for the elderly.
Under a realistic scenario, total government spending on old-age benefits could easily exceed 25 percent of GDP by 2050.

**Korean Government Spending on Old-Age Benefit Programs, 2005 and Projections for 2050**

- **2005:**
  - Welfare Benefits: 2.6%
  - Long-Term Care: 2.6%
  - Health Care: 7.3%
  - Pensions: NPS: 0.4%

- **2050 (Current-Law Projection):**
  - Welfare Benefits: 18.9%
  - Long-Term Care: 7.3%
  - Health Care: 13.9%
  - Pensions: NPS: 0.4%

- **2050 (CSIS "No Benefit Gap" Projection):**
  - Welfare Benefits: 25.5%
  - Long-Term Care: 13.9%
  - Health Care: 13.9%
  - Special Gov't Pensions: 5%
  - NPS: 0.4%

*Assumes that the active contribution rate among NPS covered workers rises to 90% and that the system's actual replacement rates (initial benefits as a % of final salary) will match its nominal replacement rates.

Source: Moon (2006), Choi (2006), and CSIS calculations
To successfully meet the aging challenge, Korea will have to pursue an ambitious reform agenda on three fronts.

- **First**, reform the public retirement system so that it protects all Koreans and offers more adequate benefits at an affordable long-term cost.
- **Second**, reform the private retirement system to broaden coverage and improve security.
- **Third**, enact broader social reforms that will help maintain economic and living standard growth as Korea’s workforce ages and shrinks.
Reforming the public retirement system.

- The NPS must be fundamentally restructured. Merely raising contributions and cutting benefits will not ensure the system’s economic sustainability—and would worsen its adequacy.

- CSIS recommends a two-step reform:
  - Put in place a universal floor of protection against poverty in old age, either as a means-tested benefit or a universal flat benefit.
  - Transform the current NPS by combining it with a mandatory system of fully funded “add-on” personal accounts.
An overview of CSIS’ National Personal Accounts (NPA) proposal.

- In the minimum plan, the government would raise the NPS contribution rate from 9 to 12.9 percent as currently planned, but the extra 3.9 percent would go to the new NPA system.

- Newly earned NPS retirement benefits would be reduced to meet the limitations of a permanent 9 percent contribution rate.

- The NPA accounts would be mandatory, personally owned, and tightly regulated, with assets annuitized upon retirement.

- A larger NPA plan would require either larger “add-on” contributions or larger reductions in the current NPS benefit formula.
The NPA plan would have many benefits. 

- The NPA plan would deliver higher benefits at a lower contribution rate.
- The NPA plan would be indefinitely sustainable without new contribution hikes. The system would never go bankrupt.
- The NPA plan would improve compliance, participation, and trust in the system.
- The NPA plan would broaden and deepen capital markets and help maintain adequate national savings in an aging Korea.
Reforming the private retirement system.

- Koreans save relatively little for retirement on their own.
Most Korean household wealth is in real estate and bank deposits.

Korean Household Wealth by Type in 2001, as a Percent of Total

- Real Estate: 83%
- Bank Deposits: 13%
- Life Insurance: 3%
- Other: 1%

Source: Yoo (2005)
Reforming the private retirement system.

- Koreans save relatively little for retirement on their own.
- Korea’s traditional employer severance pay system covers less than a third of the workforce—and its benefits are largely unfunded.
Only a fraction of severance pay benefits are externally funded.

<table>
<thead>
<tr>
<th></th>
<th>All Firms</th>
<th>Firms with 30 or More Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Assets</td>
<td>77%</td>
<td>37%</td>
</tr>
<tr>
<td>Book Reserves</td>
<td>23%</td>
<td>63%</td>
</tr>
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*Percent of Severance Pay Assets by Type of Funding in 2004*  

* Data for firms with 30 or more employees are for 2002.  
Reforming the private retirement system.

- Koreans save relatively little for retirement on their own.
- Korea’s traditional employer severance pay system covers less than a third of the workforce—and its benefits are largely unfunded.
- The new corporate pension system is a step in the right direction, but it is off to a slow start.
Participation in Korea's corporate pension system has so far been disappointing.

Source: MOL (2006)
Reforming the private retirement system.

- Koreans save relatively little for retirement on their own.

- Korea’s traditional employer severance pay system covers less than a third of the workforce—and its benefits are largely unfunded.

- The new corporate pension system is a step in the right direction, but it is off to a slow start.

- The government should strengthen incentives for employers to convert severance pay schemes into funded pensions.
The broader social reform agenda.

- By 2050, half of all Korean adults will be over age 60. To prosper while it ages, Korea must encourage longer work lives.
- Korea has both the lowest fertility rate in the OECD and one of the lowest rates of female labor-force participation. It must reform a workplace and family culture that makes it difficult for women to balance jobs and babies.
- Koreans aged 80 and over will be the fastest growing segment of the population. Korea must find cost-effective ways to help families care for the burgeoning number of frail elders.
The oldest elderly age brackets will be the fastest growing of all.

Percentage Change in the Korean Elderly Population by Age Group, 2005-2050

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<thead>
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<th>2050</th>
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<tbody>
<tr>
<td>Elderly (Aged 80 &amp; Over) as a Percent of Total Elderly</td>
<td>15%</td>
<td>23%</td>
<td>22%</td>
<td>29%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Source: KNSO (2006)
Korea still has time to prepare for the impending age wave.

Its population is still young and growing and its public retirement system is still immature, and hence unburdened by the enormous unfunded liabilities that raise the economic and political costs of reform in most developed countries.

Korea must act decisively before the window of opportunity closes.