FN281 - Personal Finance

Group B - Pension System

Penpicha Boonlue 5604641117

Kan Phonsuksiri 5704640563

Krittaphas Denpaiboon 5704640753

Kulgunya Rattayapakul 5704640795

Non Leethochawalit 5704641272

Rossunart Sanghirun 5704641934

Suparerk Vipavakul 5704642148

Varis Ithivatana 5704642502

Varisa Laoboonlur 5704642510

Aj.Chaychai Thisadoldilok

Thammasat University

Semester 2/2016

Automatic Adjustment Mechanisms in Pension System

Rationale and Benefits

Automatic adjustment mechanisms (AAMs)—rules ensuring that certain characteristics of a pension system respond to demographic, macroeconomic and financial developments, in a predetermined fashion and without the need for additional intervention—have been introduced in many OECD countries to tackle public pension schemes' deteriorating financial sustainability. Incorporating AAMs—in particular linking retirement age to life expectancy—can be an important part of pension reforms in Asia. If implemented early, AAMs could help prevent the need for sharp adjustments in the future, increase the predictability and inter-generational equity of pension systems and enhance confidence.

AAMs can help prevent the build-up of inequity across generations due to the pension system and aging. It also acts as a signaling instrument, indicating policymakers' dedication to the pension system's long-term sustainability and, in a manner similar to recommitment rules in fiscal and monetary policy, they can ensure credibility, improve confidence and compliance. It can also be viewed as a commitment to gradual, less painful adjustments.

A structural Framework

There are 4 structural features of AAMs which is The Trigger Variables, The Adjusting Parameters, The Frequency of Adjustment and The Boundaries of Adjustment

The trigger variables could be, **Predicted-Based(ex-ante)** which based on certain sustainability indicators. They are based on projections and expectation, such as future change in GDP or **State of The World(ex-post)** which based on backward-looking or life-expectancy.

For adjusting parameters There are three categories that can be adjust using AAMs which is benefit levels, eligibility criterion and contribution rates. First is benefit Level which can be adjust through Benefit indexation which how the benefits are linked to wage and price inflation and Valorization of past earning which was used as automatic mechanism to ensure intergenerational equity. Second is Eligibility Criteria which is retirement age is the most often adjusted automatically. Increase in retirement age is usually improve the life expectancy. And third is Contribution Rate is the change in social security contribution rates in response to labor market tensions or to improve the public pension. It rarely used for automatic adjustment.

The frequency of change is determined by law. It can be autonomous or contingent on exogenous variable. For instance, benefit may be indexed annually while automatic retirement age increase may happen when observe improvement in life expectancy at retirement reach a predetermined level. Infrequent change or reviews of trigger indicator can lead to larger adjustments. For administrative reasons, automatic adjustment typically take place once a year or less frequently.

The boundaries of adjustment can be expressed in term of the frequency of changes, individual adjustment or compounded impact. For instance, automatic pension indexation may be delayed until compounded price inflation since last adjustment reach predetermined level which may link to inflation. These boundaries can be expressed in term of frequency of change, individual adjustment and compounded impact.

Considerations

Equity and adequacy should be considered when designing AAMs. For example, automatic price indexation may have a small impact on relative pension levels but over time, this policy erodes pension levels so much that an upward shift in benefits may become important. On the other hand, deflation could raise pension levels in relative terms if indexation is not designed to work under deflation.

Furthermore, automatically raising retirement ages for all individuals may need to be reconsidered. People with different educations and skills not only have different life expectancies but also have very different chances of finding employment late in their careers, thus retirement age increases may simply deny them pensions without the opportunity to make up for lost income by working longer.

AAMs can also interact with other institutional features of the economy, especially in labor markets. For example, in Japan the majority of employment is under life-time contracts which could interact with an AAM that calls for automatic adjustments in pension age. There might also be challenges if there is limited demand for older workers which could reflect structural features of the economy and the labor market.

AAMs can also affect the behavior of workers in terms of their labor supply and saving decisions or investment in human capital if they are aware of the significant changes likely to be triggered by AAMs.

AUTOMATIC ADJUSTMENT MECHANISMS IN ASIAN PENSION SYSTEMS

In Asia, financial imbalances still persist, for the fact that expected years in retirement is relatively higher in Asia comparing to others part of the world, thus introducing automatic indexation of retirement can indeed relieve financial imbalance caused by the conventional pension system.

Defined contribution has taken their steps in embodied itself into many Asian nations' pension system, the scheme itself obstructs financial sustainability that could have been achieved by AAMs. However, AAMs can still glow under defined contribution schemes by ensuring pension adequacy through indexation of retirement age to life expectancy. For defined benefit scheme, AAMs plays along well by encouraging its sustainability.

One point needed to be made is that, AAMs is effective under any demographic transition, however the level of effectiveness of the scheme depends on how fast the society is aging, for instance under fast aging society, AAMs can slows down the accumulation of imbalances and under young age society, to prevent imbalances from emerging "sustainability" and AAMs 's system parameter must be linked for the sake of simplicity, moreover incorporating automatism into pension systems could also take place at the level of pension system.

Reducing pension system's benefit is bad for politics, thus many Asian nations have to relying more on AAMs to adjust eligibility criteria, for instance adjustment of retirement age. For raising contribution rates is also bad in a sense that it would affect labor market and growth, but under situation that imbalances are large though contribution rate is still low, then raising benefits might be needed.

Fragmentation in pension system is widely used in Asian countries, noted that an implementation of AAMs under such system is more complex and in some countries consolidation is required before using AAMs. Japan, however is an exception to this as the country has consolidated four separate schemes into one.

Japan

Japan introduced universal public pension scheme since 1961. We could say that it is pay-as-you-go system which means people contribute to the funds while they are working and receive benefit in the retirement period. They are three ties of contribution and benefit the basic pension, past contribution benefit and benefit from voluntary. For categories, they are

also three which consist of employee that pay contribution proportionally to their earning, the employee who is exempted but receive basic pension and voluntary pension.

Japan got aging society which means old people live longer than other countries. The government started a comprehensive reform which includes AAM as a key pillar. The benefits are adjusted to the demographic change and contribution rate increase. The adjustment of replacement ratio will secure the pension system. For example, if the ratio is below 50 percent, reform is needed. The 2004 reform aimed to reduce policy uncertainty and contain growth of pension spending in relation to GDP if it goes as planned.

There are several ways to improve credibility and reduce reliance on tax revenue. The first way is to use more prudent assumptions on key parameters because it will affect the reforming process. The second way is to adjust AAM to work better under a low wage/price inflation or deflation since, AAM of Japan is not working well under deflation and will lead to lower replacement ratio. The last way is to raise the retirement age from 60 to 65 because it would reduce reliance on tax money and improve the replacement ratio while contributing to growth through increasing labor supply.

The automatic adjustment of pension benefits in Japan consists of two stages. The first stage is that the pension benefits are indexed to wages or headline CPI inflation. In addition, if wage increase the pension amount for new pensioners is adjusted. When price inflation increase more than wage inflation, then pension benefit adjusted and if the wage decline and price increase, there is no adjustment. The second stage is that the pension amount is affected by macroeconomic indexing. When price decline, the adjustment in index happen at the same time allow the average lifespan to rise. Unfortunately, Indexing does not work when increase in pension benefits is smaller than the adjustment due to the indexing.

Korea

Aside from Japan, Korea is also facing population aging. This is the result from lower fertility rates and higher life expectancy. Korea's National Pension System (NPS) is a social insurance system. Active members in this fund have to pay a contribution rate of 9 percent of their income then after retirement, they will receive pension payments based on a pre-fixed formula. The contribution of Workplace-based Insured Persons is equally shared by the employer and the employee while Individually Insured Persons pay all of their contributions by themselves. The government's financial support is temporarily provided for some portion of contributions paid by farmers and fishermen. For benefit side, this pension is designed to guarantee an appropriate income for a wide range of social risks, including old age, disability

and death. The pension payments depend on the average income of the entire active participants, their own life-time income averaged in present value terms, and the active participation periods, making it a defined-benefit pension.

However, as time passes, population aging can cause higher dependency ratio which will increase the ratio of the pensioners to the active members. Another problem comes from the pre-fixed formula that pension payments per retiree are set to increase as the retiree's average active participation periods becomes longer. If the contribution rate or the benefits formula is not changed, these problems can worsen the system's fiscal position that it may turn around from currently being fiscal surplus to fiscal deficit in 2044 and the pension assets will be all gone by 2060.

Even though the NPS system is not operating so well, Korea has been trying to improve it from time to time by increasing retirement age, reducing benefit levels and reducing accrual rates. Hence, it should be fixed by an AAM which can help control amount of unfunded liabilities more effectively and predictably than the previous one-shot reforms against uncertain demographic and macroeconomic projections. Moreover, an AAM is also easier to introduce into young systems which give members longer periods to adjust themselves.

To design an appropriate AAM for Korea, a careful analysis of NPS's financial situation and adequacy considerations will be needed. As the retirement age is previously set to increase to 65 by 2034, here, an AAM will link the retirement age to the change in life expectancy and adjust it automatically while allowing enough time for people in various ages to enjoy pension benefits in their retirement planning. This can also help minimize possible cross-cohort fairness issues by providing less life-time average benefit payouts to newer retirees than the older ones.

The goals for further reform by changing retirement rate or pension duration are fiscal sustainability and intergenerational equity. However, there is trade-off between them. If an AAM focuses on maximizing pension fiscal sustainability, there will be less inter-generational fairness and vice versa. Any further AMMs with reduction in benefits or increase in contribution rates would bring more difficulty as benefits have already been cut under the previous reforms or else, pension adequacy issues may arise. In addition, even though Korea's contribution rate is relatively modest, they are rarely used for automatic adjustment given the possible consequences.

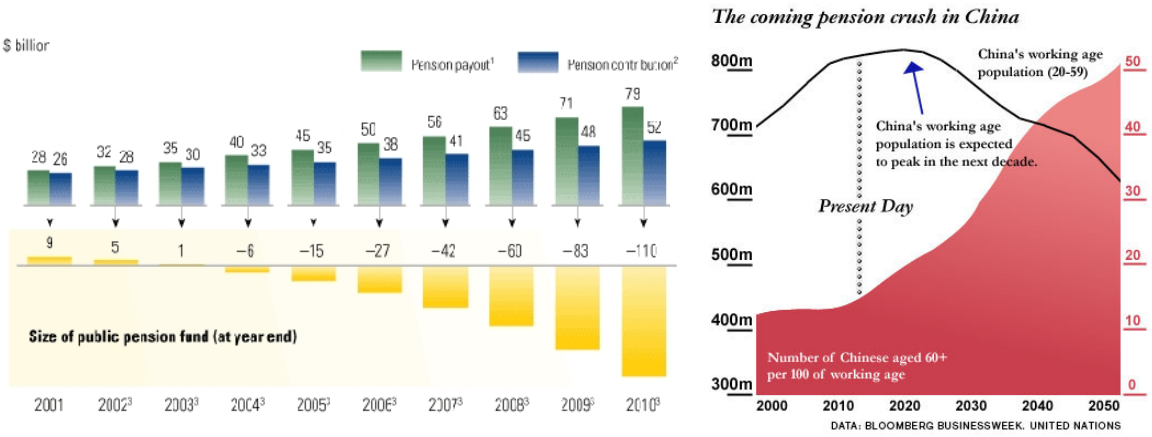
China

In China, separate schemes provide old-age insurance for the salaried workers in the enterprise sector (Urban Workers and Staff, UWS) and for the rest of non-salaried workers (Urban and Rural Residents, URR). The pension system is fragmented both across schemes (UWS and URR are not integrated), and geographically (the central government provides guidelines and financing, but the schemes are administered at the provincial level).

The Pension Scheme for UWS functions on a pay-as-you-go basis, funded by employee and employer contributions, but the central government is responsible for covering deficits. At retirement, benefits are the sum of a traditional defined benefit formula plus a defined contribution portion which in practice functions as a notional defined contribution pension. At retirement, after 35 years of contribution, a worker who is earning the average provincial wage would receive a pension slightly under 60 percent of the average provincial wage. About 30 percent of the workforce currently contributes to these schemes and pensioners are about 40 percent of the population age 60 and older. Total expenditure is near 3 percent of GDP.

The pension scheme for URR combines a funded, individual account component (intended to be fully financed by contributions), with a flat pay-as-you-go basic pension (financed by the state). The flat portion is set by law and remains relatively small at 2½ percent of the urban wage. About 40 percent of the workforce contributes to this scheme and 70 percent of the population age 60 and older receive basic pensions. Total expenditure in this scheme is about 0.3 percent of GDP. There are currently 123 million people in China over the age of 65. The growth of the elderly is more pressing in the countryside, where the elderly remained as their children move to urban areas.

Pension contributions are rising, but not enough to match the growing payouts each year, because increasing in Chinese age 60+ and decreasing in Chinese age between 20-59. Moreover, expected increase in life expectancy would cause more deficit. As you can see in the chart, the pension fund plummets annually.



Source: Bloomberg

Introducing AAMs for retirement ages would enhance sustainability, but might not be sufficient to eliminate the projected imbalances. By implementing an AAM that links retirement ages to life expectancy would thus gradually raise retirement ages to 65 for men and 60 years for women. This would have an important impact in improving sustainability, but a large imbalance would remain—by just linking retirement ages to life expectancy, the projected pension system imbalance in 2015–50 goes from 94 to 72 percent of 2015 GDP.

Beyond AAMs, restoring sustainability would require a combination of other measures. These could include sharper increases in the retirement ages, particularly of women, to align the expected years in retirement with the advanced economies (increasing retirement ages for men and women to age 67 by 2050), modifying the indexing of pensions to price indexing, and changing benefit formulas to reduce average benefits by 5 percent.

Suggestions for Thailand Pension Systems

Due to the aging society, Thailand's population is one of the fastest growing in Asia. In the 1970s, the National Family Planning Program attempted to reduce high fertility rates. The population growth was reduced. The fertility rate was dropped from 6 children per women to 3.8 in 1980, and to 1.8 currently. Hence, Thailand is now facing with a continuous increase of the old-age dependency ratio. We confronted the same demographic challenge as other countries in the region. Furthermore, aging population, low contribution rate, and a high accrual rate, are affecting the system's sustainability.

Briefly explain about Thai pension system, Multi-pillar pension system, the 1st pillar is defined benefited which government promise to provide basic needs to old people who workforce in formal sector consisting of 11 million people. For instance, this include Old Civil Scheme and Social Security fund. Next, the 2nd pillar consists of the Government

Pension Fund, it is defined contribution system for civil servants. For the 3rd pillar, it is a privately-financed personal provision and is voluntary, consisting of Provident Fund, occupational pension. Different from normal savings, people have incentive to volunteer since it comes with tax advantages. Including Retirement Mutual Funds, member has to save money every year to meet tax deductibility. The 4th pillar is involved with nonfinancial instrument, which could be home and others. Last, 0 pillar is a noncontributory. For instance, government give money to retired people about 3,000 baht per month.

Firstly, the simplest solutions to pursue sustainability of the pension system in Thailand is to extend retirement age. As we have discussed in class, retirement age in Thailand is 60, although some pension entitlements can be claimed from the age of 55 years old. One example would be Denmark, which raised the retirement age to 75 years to cope with an average life expectancy of 90 years. Thailand should do the same because their life expectancy is about 75 years, which means the government will have to pay for pensions for 20 years.

Secondly, to reform public-pension expenditure, the government can also reduce the pension commitment to future generations by changing the calculations and entitlements. Pension benefits should be 20 to 25 percent of total retirement income of middle-income people. Thus, the problem of sustainability can be alleviated.

Thirdly, increasing private retirement savings should be imposed as well. For example, Provident Fund, it provides a tool for employees to save concurrently with the employer's assistance. The current rate of contribution is around 2 percent to 15 percent of total monthly income. Another example would be Retirement Mutual Funds, investment is required every year, and the investment amount should be at least 3 percent of taxable income. Accordingly, by raising the rate of private retirement savings would assist the sustainability of the system.

Fourthly, under the current Thai accounting system the benefits are expensed as cash at the point of payment to the employee with no reserve being held in the balance sheet. Therefore, the accounting system needed to be changed to International Accounting Standards. All companies are required to hold a balance sheet reserve. These standards are likely to provide transparency and governance to the Thai accounting system along with improved consistency with other countries.

Fifthly, even though the benefit levels in Thailand is not so high, the government has to decrease benefit levels in the public system and strengthen funded pension systems. Moreover, government must encourage and provide knowledge of how voluntary pension

system works. So, people can rely on both public and private system, not only the aids from the government.

Lastly, apart from the pension system, the country can also introduce incentives to work longer. The cases of motivating are offering an idea of bounty, switching up the work day, and offering equity to employees. Offering an idea of bounty, employees love bonuses which can come in many forms. This also encouraging people to discuss and contribute to the companies. For hourly workers, try replacing the structured work day with an agenda of tasks to accomplish, then let employees figure out how best to accomplish them. Last, offering equity that increases based on the valuation of the company. This will drive people to have more incentives to do their best in their given jobs.

As discussed above, the Thai population is aging rapidly, more old people in the society, and the declining share of working age population. Causing the problems of sustainability, adequacy, and demographic transition. Therefore, improving the pension systems in Thailand is new challenges and opportunities to drive the economic growth as well as maintain the sufficiency in the country.

References

Arbatli, E. C., Feher, C., Lee, J. J., Saito, I., & Soto, M. (2016). *Automatic Adjustment Mechanisms in Asian Pension Systems?* (Working paper).

PINIJPARAKARN, S. (2015). Thailand advised to raise retirement age. Retrieved from http://www.nationmultimedia.com/news/business/EconomyAndTourism/30273718

Thai Pension System. (n.d.). Retrieved from https://www.gpf.or.th/eng2012/about_thaipension.asp

Reforming Pension System in Thailand. (2015). Retrieved from https://www.adb.org/sites/default/files/publication/28598/tha-pension-system.pdf

National Pension Services. (n.d.). Retrieved May 01, 2017, from http://english.nps.or.kr/jsppage/english/main.jsp

The Crisis of Ageing Populations. (2014, April 30). Retrieved from http://www.rollingalpha.com/2014/04/30/the-crisis-of-ageing-populations/

Pension Funds Online. (n.d.). Retrieved from http://www.pensionfundsonline.co.uk/content/country-profiles/south-korea/97

Sutton, L. S. (2015, September 9). 5 Employees Incentives that actually work. Retrieved from https://www.fastcompany.com/3050833/five-employee-incentives-that-actually-work