Thailand

Pension reform in times of crisis

A report requested by the Ministry of Finance

East Asia Subregional Office, Bangkok
Social Security Department, Geneva
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1. Introduction

In early 2009 the Ministry of Finance of Thailand (MOF) requested a mission by social security experts of the International Labour Office (ILO) to undertake a review of recent proposals to reform the pension system in Thailand. The mission was undertaken from 11 to 15 May 2009 by Mr Michael Cichon and Ms Aidi Hu of the Social Security Department of the ILO in Geneva. This report reflects the findings of that mission and the financial and fiscal analyses undertaken during the mission. During a number of technical co-operation projects and technical missions over the last two decades the ILO has built-up a substantial degree of familiarity with the social security system in Thailand. Thus this mission has to be seen as one more element in a long-standing process of policy dialogue between the government and social partners in Thailand with the ILO.

The model developed during the mission will be made available to the MOF. It requires fine-tuning and further technical development by the tax and budget specialists of the MOF. The results presented here are thus inevitably indicative and have the character of mission estimates. However the results presented here should be in the right order of magnitude and permit reasonable policy conclusions.

The mission was facilitated by Ms Suwatana Sripirom and Ms Supanee Chuntramas of the Bureau of Savings and Investment Policy of the Fiscal Policy Office of the MOF. It also benefited greatly from the good offices of Thaworn Sakunphanit, of the National Health Security Office of Thailand, a long standing friend, expert and Maastricht graduate, who provided support and wider insights into the political context and was de facto a member of the mission team. The mission also benefited from the knowledge and support of Hiroshi Yamabana, Wolfgang Scholz, Kemchira Chatraporn and William Salter of the ILO.

2. Economic and policy context

2.1. Economic environment

Like most other countries in the region Thailand has started to feel the full impact of the global financial and economic crisis. Exports are contracting, tourism is in decline, output is expected to contract by between 5 per cent and 9 per cent in 2009, and unemployment will probably reach a record high of 9 per cent. The government has introduced a first stimulus package in the order of 162 billion Baht through a supplementary budget and is poised to launch a further stimulus package in the order of 1.4 trillion Baht (about 42 billion US$) to be implemented during the next three years. The Budget deficit is likely to increase to an unprecedented level of 10 per cent of GDP in 2009 and total debt is expected to rise from 35 per cent of GDP to 60 per cent in 2013 before it is expected to decline (in relative terms). The stimulus package is dominated by investments in public infrastructure but also a – so far – temporary extension of the pension system. At the same time the government is planning to increase tax revenues through the increase of special sales taxes (excise taxes notably on tobacco and alcohol and petroleum). The introduction of a property tax is under consideration. The increasing exploitation of fiscal space at this moment is a partial contribution to the financing of the stimulus packages.

2.2. Pension policy context

The present pension system in Thailand consists of a first, second and third pillar that are in different stages of development.

The first pillar consists of the Social Security Fund (SSF) for the private sector that was introduced in the late 1990s and will commence paying old age pensions only in 2013. It presently covers around 9.8 million active contributors and is financed on the basis of a 6 percent contribution rate that is equally shared between employers and employees. The joint contribution rate has just been temporarily decreased to 3 per cent as a crisis relief measure. Civil servants in the central and local governments enjoy an un-funded defined benefit pension. Government permanent employees (about 0.9 million) will receive only a gratuity from the government when they retire. Temporary government employees are members of the SSF. Most employees of state enterprises and Government related organizations do not have the first pillar pension coverage. Until recently about 23 million people in the informal economy were only benefiting from a social assistance allowance of 500 Baht per month if they were recognized as poor. The benefit has just been extended as part of the supplementary budget to all people over 60 years of age (without another pension income) on a temporary basis (i.e. for 6 months). However, it is expected that the measure will soon be made permanent.

The second pillar consists of a contribution defined Government Pension Fund (GPF) for civil servants. Permanent government employees, employees of state enterprises and Government related organizations have compulsory provident funds. In addition there is a provident fund system for private sector employees that covers around 2 million people.

The third pillar consists of a mutual retirement savings fund that enjoys tax exemptions. Due to the high threshold for income tax payments (which is 150,000 Baht per annum) these tax exemptions have a highly regressive effect and are of limited value for low and middle-income earners in the formal sector.

The fact that:

- the present level of the old age allowance for the informal economy amounts only to about one third of the average per capita poverty line in the country (about 1,500 Baht per months in 2009) and that;

- it is only paid to the poor,

has triggered an intensive national debate on the necessity to strengthen the first pillar notably for the 23 million workers in the informal economy. This issue has made it to the centre ground of the national social policy debate. The models discussed combine a re-distributive universal tax financed component and a fully funded savings component.

The MOF requested the comments of the ILO on its own specific proposal that envisages:

a) to make permanent the payment of a 500 Baht universal pension guarantee for all people over age 60 that receive no other pensions, in order to strengthen and complete the first pillar and

b) the insertion of a fully funded individual account (defined contribution) based National Pension Fund into the present structure that would cover all people in informal sector and the people in the formal sector that are not covered by the existing provident funds in order to extend the coverage of the second pillar. Coverage could be mandatory or voluntary. Workers in the informal sector, who would contribute a flat amount of 100 Baht per month or more, would receive a government subsidy of 50 Baht per month. Formal sector employees are expected to contribute 6 per cent of their income to be shared between employers and employees. The second pillar pension schemes for the formal sector would thus have the same financial "weight" on labour cost as the defined benefit social insurance scheme.

The following figure 1 demonstrates the structure of the MOF proposal.

Figure 1. Suggested structure of the future Thai Pension System (MOF Proposal)

	Thailand's pension system MOF proposal						
	Pillar I			Pillar II		Pillar III	
	social security scheme (SSO)	Govt. pension scheme	Universal tax financed 500 Baht scheme	*National Pension Fund NEW*	Govt Pension Fund	Provident funds	Retirement Mutual funds
Coverage	Compulsory private sector	Automatic government civil servants	Automatic informal sector	voluntray or mandatory coverage informal and formal sector	Automatic government sector	voluntary based on collective agreements	Voluntary individual
Contribution	6% (3%)	imputed contribution	none	6% contributions	no formal but imputed contributions	2-15% contributions	private, tax deductible
Size of the covered population	10 million	1.5 million	23 million	11.5 mill. Not covered employees 23 Mill informal S.		2 mill.	n.a.

3. Comments and suggestions

3.1. General contextual considerations: social security in times of crises

The current global economic crisis will have dramatic social, health and education effects unless decisive action is taken. Social security systems face a double challenge in this situation. On the one hand they are the prime instruments that help a society cope with the social fall out of the crisis and on the other hand, the fiscal and financial space for transfer payments contracts just when they are most needed. This therefore demands some anti-cyclical spending and also a careful design of the transfer system to avoid overburdening public finances in the long term, or to then risk the failure to deliver social security when it is most needed.

The potential role of social security systems in dealing with economic and social crises

In crisis conditions, social security benefits, public health and social services act as social, health and economic stabilizers thereby curtailing the potential social and economic depth of the recession, through avoiding poverty, ensuring continuity in services, and stabilizing aggregate demand.

While short-term ad-hoc cash transfer programmes help to address the short-term effects of the crisis, systemic improvements of the national transfer systems that close coverage gaps are a more valuable component of an overall national poverty reduction and prevention strategy. The Asian crisis in the 1990s has shown that the build-up of a system of basic social security also enhances the ability of countries to respond quickly and effectively to future crises.

The government decision to strengthen the tax financed social allowance for the elderly and turn into a de facto universal pension is a perfectly rational social policy measure. It should be noted in this context that universal pensions are not just an old age benefit. There is ample evidence from around the world that shows that universal pensions have positive nutritional, health and education effects on whole families.

Widespread support is gathering internationally for the policy position that countries can grow in an equitable "pro-poor" way, i.e. by providing some form of social protection and redistribution from the early stages of their economic development. The value of social transfers and expenditures to reduce poverty and ensure access to essential services, as well as the need for social investment and social policies aimed at protecting the most vulnerable, has been recognized in recent international fora legal texts and governing bodies of many UN agencies. They can make a valuable contribution to the attainment of the Millennium Development Goals (MDGs). There is also evidence that economic growth that does not include a concept for equity and equality is not sustainable in the long run. [1]

[1] World Bank (2005). *World Development Report (2006). Equity and Development* (Washington DC. The IBRD/The World Bank). UNDP (2005). *Human Development Report 2005: International Cooperation at a Crossroads: Trade, Aid and Security in an Unequal World* (New York); United Nations (2005), *Report on the World Social Situation 2005: The Inequality Predicament* (New York).

The effect of the economic crisis on social security systems

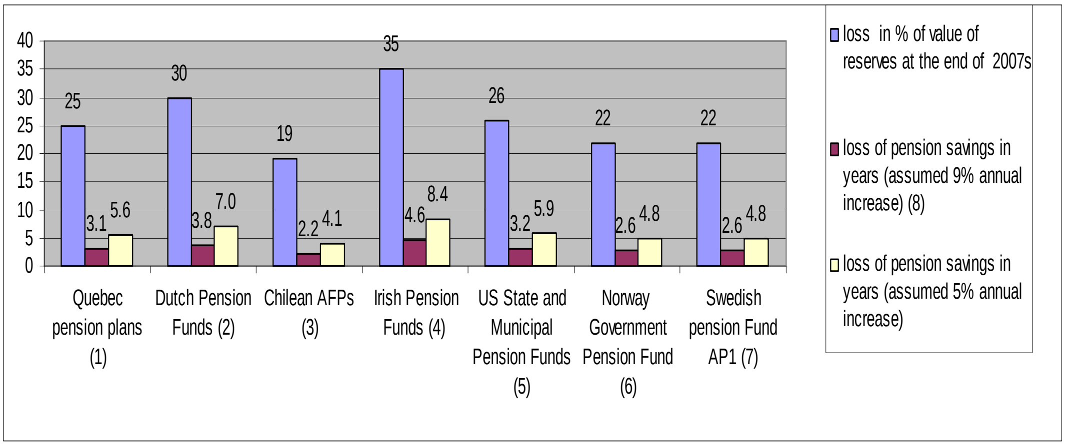
The impact of the present crisis on the financing of social security schemes is obvious, starting with soaring demands on unemployment insurance and social assistance schemes which will be suffering like all other social security schemes from the double burden of declining tax/contribution income, and increasing expenditure due to increasing numbers of beneficiaries. The effect that these developments have on contributors and pension levels is not straightforward. It will most likely affect people that will retire in the near future the hardest.

In defined benefit schemes where pension amounts are calculated without regard to the level of reserves, the immediate impact will be less direct than in defined contribution schemes where benefits guarantees are less effective by nature. However, long-term contraction of employment and hence the number of contributors may also force governments to make downward adjustments to defined benefit schemes.

However, in fully funded pension schemes, pension entitlements in some pension funds might be lost completely. If the crisis turns into a long-term downward adjustment of asset prices, the outcome in defined contribution schemes will inevitably be lower benefits paid at retirement. Any prolonged suppression of interest rates and asset prices will lead to serious difficulties by way of destabilized annuity rates (prices) and management of annuity reserve funds. The size of the long-term effect will depend on the depth and the duration of the downturn of asset prices. If the present price reductions turn into permanent level adjustments then old age income will be reduced. If the downturn is short-lived the effect will be transitory.

Unfortunately, the present picture is rather bleak. Figure 2 (below) reveals the recent losses of national funded pension schemes in a selected number of countries, expressed in the relative shares of their total reserves, and also in the number of years of savings lost (assuming that the funds either recover at the same rate as they increased before the crisis on an OECD average - i.e. 9 per cent per annum - or at a more modest rate – i.e. 5 per cent per annum).

Figure 2. Recent losses of national pension funds in selected countries



Sources: (1) CBC, Canada, 9 Feb. 2009. (2) Central Bureau of Statistics, 7 April 2009. (3) CENDA Chile, for July 2007 till 20 April 2009. (4) Fin Tacts Ireland, 3 April 2009. (5) Financial Times, 7 April 2009. (6) BBC, 11 March 2009. (7) Wall Street Journal, 11 February 2009, gains in 2007. (8) Loss in terms of annual gains (at OECD average rates of increase of reserves 2001-2007 of 9 per cent).

While these losses may not be permanent, the crisis has instigated a giant stress test of national pension schemes. The losses simply indicate the level of uncertainty that funded defined contribution pension schemes embody for the income security of workers in old age, notably for people who are close to retirement and whose savings portfolios might not recover during their remaining active life.

ILO policy positions

Based on decades of monitoring national social security policies and providing advice and technical support for the implementations of such polices, the ILO has adopted a pragmatic general policy position with regard to the reform and design of national social security systems.

The ILO is promoting the reshaping of national social security systems based on the principal of progressive universalism. ILO advice seeks to ensure a minimum set of social security benefits for all called *the social protection floor*. Based on such a floor, higher levels of social security should then be achieved when economies develop and the available fiscal space for re-distributive policies widens.

Based on the human right to social security (i.e. articles 22 an 25 of the Universal Declaration of Human Rights), the principles enshrined in the ILO's constitution and the relevant international labour standards, in particular ILO's Social Security (Minimum Standards) Convention, 1952 (No. 102), the ILO has identified the following basic principles that solidarity based social security systems should comply with:

i) **Universal coverage of income security and health systems**. All residents (both permanent and temporary) should have gender-fair access to an adequate level of basic benefits that lead to income security and access to comprehensive medical care.

ii) **Benefits and poverty protection as a right**. Entitlement to benefits should be specified in a precise manner so as to represent predictable rights of residents and contributors; benefits should protect people effectively against poverty; if based on contributions or earmarked taxes, minimum benefit levels should be in line with the Social Security (Minimum Standards) Convention, 1952 (No. 102), or more recent Conventions providing for higher levels of protection, and the European Code of Social Security of the Council of Europe.

iii) **Actuarial equivalence of contributions and benefit levels**. The benefits to be received by scheme members should represent a minimum benefit replacement rate, and a minimum rate of return in the case of savings schemes, and must adequately reflect the overall level of the contributions paid; such minimum levels should be effectively guaranteed, preferably by the State.

iv) **Sound financing**. Schemes should be financed in such a manner as to ensure to the furthest extent possible their long-term financial viability and sustainability, having regard to the maintenance of adequate fiscal space for the national social security system as a whole and individual schemes in particular.

v) **Responsibility for governance**. Societies, i.e. concretely the State in co-ordination with Social Partners should remain the ultimate guarantor of social security rights, while those who finance, contribute to, or benefit from social security schemes should participate in their governance.

3.2. Specific considerations with regard to the pension reform process in Thailand

As said earlier, the strengthening of universal pension provisions appears to be an adequate response to the current crisis as well as to the general need to find a systemic solution to the alleviation of old age poverty.

However, there are serious concerns with regard to the suggested introduction of a new mandatory defined contribution scheme. The main concerns are:

- *The timing appears to be wrong*

  Presently the government seeks to reduce labour costs through a temporary reduction of the contribution rate to the social security scheme. At the same time Provident Funds are seeking permission from the MOF to suspend employer contributions to the schemes. The simultaneous introduction of a new mandatory scheme appears counterproductive and seems to attract considerable opposition at the moment.

- *It does not provide income security*

  A new mandatory defined contribution schemes will not provide income security as long as the government cannot guarantee a minimum rate of return or a minimum replacement rate that depends on the number of years of service. Relying on the performance of the capital market alone will not provide income security as the present crisis has demonstrated.

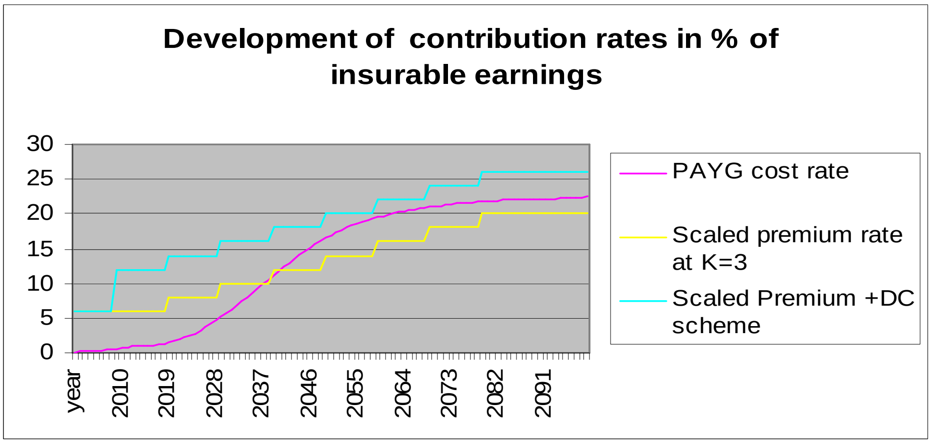
- *It puts downward pressure on the contribution rate of the DB scheme*

  The social security pension scheme of the SSF is financed on a scaled premium basis. That means that the contribution rate will have to be periodically increased to maintain a minimum level of reserves during the coming decades. That process of periodic contribution hikes (till a stationary or quasi-stationary state is to be approached) is a perfectly normal development inherent in the choice of the scaled premium financing system. Had the government opted for a “permanently” constant contribution rate (under the so-called General Average Premium financing system), the contribution rate would have had to amount to 13 per cent of insurable earnings from the first day of the scheme’s existence.

  The government of the time did not feel that the economy could bear that immediate burden and opted for a phasing in of the contribution rate for the national pension scheme. Figure 3 (below) is based on the projection of the expenditure and revenue base of the social security scheme undertaken in the last ILO actuarial valuation of the scheme. [2] It projects the expected development of the Pay As You Go (PAYG) cost of the scheme as well as the suggested step-by-step increase of the contribution rate under the scaled premium approach (requiring a minimum level of reserves of K=3 times the annual expenditure). It also demonstrates the total cost of the pension system as a whole including the 6 per cent contribution rate for the new defined contribution component.

[2] ILO (2004). *Thailand: Actuarial Review of the old-age benefit branch of the Social Security Fund* (Bangkok).

Figure 3. Projected scaled premium and PAYG contribution rates of the social security pension scheme in Thailand



Source: ILO actuarial projections.

The calculations show that the total cost of the pensions system (including the old first and the new second pillar) will already amount to about 16 per cent in 2030. It is feared that total pension costs in that order of magnitude will lead to political efforts to contain the cost. Based on experience in other regions during the last two decades, this might lead to pressure to reduce the cost (i.e. the benefits) under the first pillar defined benefit scheme although this is generally modest and is expected – under the present assumptions – to lead to an ultimate stationary state contribution rate that is not higher than 20 per cent (based on the 2004 assumptions) at the end of the century.

- *From a macro-economic point of view- it is unnecessary*

  If the government seeks to increase the national savings rate through increased forced pension savings, the same effect can be achieved by advancing the unavoidable increases of the scaled premium contribution rates in the SSF defined benefit scheme. This is a more intelligent funding strategy than a fully funding strategy, as it can be flexibly adapted to economic needs and the absorption capacity of the capital market. Under a fully funded defined contribution scheme the level of reserves that the scheme generates is inflexible and only determined by a usually fixed contribution rate and the degree of maturity of the scheme. Inflexibility is a strategic disadvantage as the present situation on the national and global capital markets clearly demonstrates.

- *The new DC scheme is not really necessary for the formal sector*

  The second pillar pension system in Thailand already has a provident fund system that is catering for 2 million out of a potential 13 million formal sector workers. The provident fund system has a more flexible level of contributions (between 2 and 15 per cent) and it might be sufficient to promote a wider coverage of the provident fund scheme to obtain increased second pillar coverage for the formal private sector.

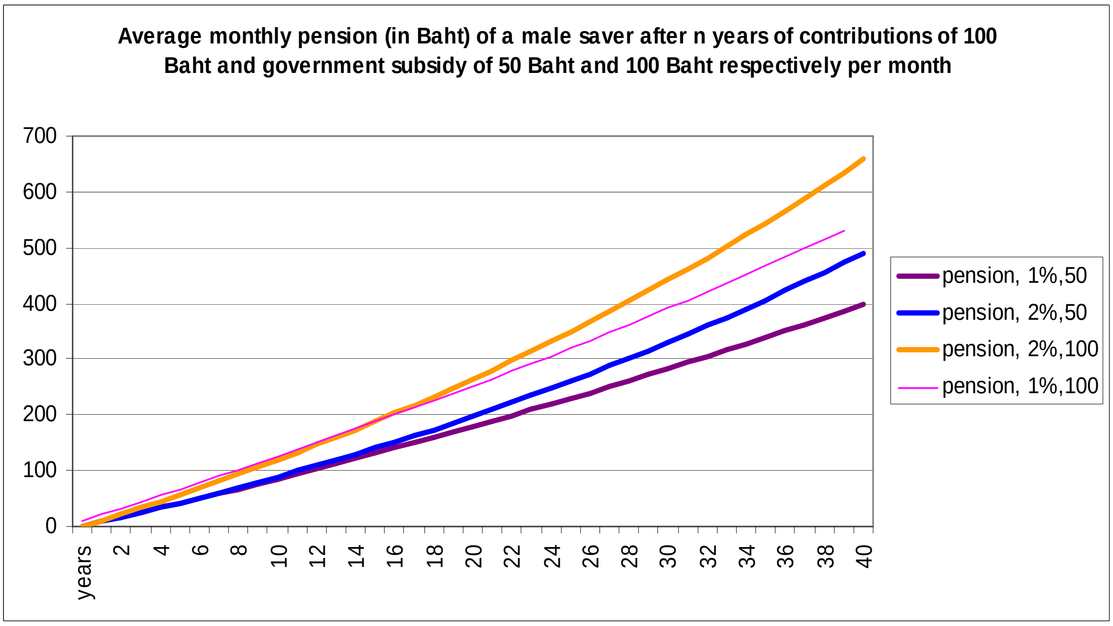
- *Mandatory membership in the informal sector impossible to administer*

  There is no example known to the ILO that shows that a mandatory pension savings scheme can really be enforced in an informal sector environment. While this may be attempted, it is likely that enforcement is both very costly and resources might better be invested to increase the incentive for people to contribute on a voluntary basis.

- *The envisaged pension level in the informal sector is rather low*

  The pension levels that can be achieved by the saving of a total of 150 Baht per month (100 from the individual and 50 Baht from the government) and 200 Baht respectively (shared equally between the individual saver and the government) are very limited as Figure 4 (below) shows. Even at a real interest rate of 2 per cent per annum earned over a forty years saving phase (with a total savings of 150 Baht per month), a saver does not earn a pension of more than 500 per month. A total savings level of 200 Baht per month would earn a pension of 500 Baht after about 33 years.

Figure 4. Average monthly pension (in Baht) of a male saver after n years of contributions of 100 Baht and government subsidy of 50 Baht and 100 Baht respectively per month



3.3. An ILO proposal

In view of the above considerations and international experience with pension reforms over the last decades in various regions, the mission team suggests the following modifications to the MOF pension proposal:

(1) The amount of the first pillar pension scheme for people of over 60 in the informal sector should be increased to 1,000 Baht per month as of 2010. Benefits should be indexed in line with the Consumer Price Index (CPI). The amount of 500 Baht only amounts to about one third of the national poverty line and appears to be too low. In 2004 an estimated 85 per cent of the elderly over 60 were living in households with per capita income under the national poverty line, and the poverty gap per capita amounted to slightly more than 1,000 Baht per month (or about 85 per cent of the poverty line) in 2004.[3] Even if one were to neglect five years accumulated inflation, the 1,000 Baht pension would just close the poverty gap for the elderly in poor households. The elderly would no longer embody a poverty-deepening extra financial burden for other members of the household.

[3] Estimated on the basis of ILO (2004). *Thailand: Social Security Priority and Needs Assessment* (Bangkok, November 2004, Annex Tables C).

(2) Second pillar pension coverage should be extended by a pragmatic extension of *voluntary provident fund coverage*. This could be achieved by creating an Open National Provident Fund that would provide annuity-based pensions at age 60. It would offer coverage to all private sector employees that presently do not enjoy Provident Fund coverage under collective agreements, and to all persons working in the informal economy.

Formal sector coverage would be elective, i.e. each worker could decide to join and their employer would have to pay 50 per cent of the present minimum legal contribution rate to the provident funds (i.e. 1 per cent of the workers' wage). Contributions would remain tax-exempt, even though this does not have a major impact on low wage earners.

Informal sector subsidies should be 100 Baht per month. Subsidies would be indexed in line with CPI. This would permit informal sector workers to achieve after 30 to 40 years of savings, with some degree of probability, a total pension (consisting of the universal pension of 1,000 Baht and the annuity generated from the savings component) that amounts to the national poverty line (see figure 4).

To provide incentives to join the scheme for those formal sector workers that have no existing coverage, the government should guarantee a minimum rate of return. This could, for example, be the long-term government bond rate.

The actual organizational form of this Open Provident Fund has to be developed further. It could be one single Fund operated by a government agency or commissioned to the private sector. Government execution would probably ensure lower administrative cost and more effective supervision. Contributions from informal sector members could be collected by community based social security mutual insurance schemes that are already in existence in about 2000 sub-districts. The Open Provident Fund at the national level should manage funds.

The structure of the ILO proposal looks as follows:

Figure 5. A possible structure of the Thai pension scheme (ILO suggestions)

	Thailand's pension system			ILO suggestion			
	Pillar I			Pillar II			Pillar III
	Social Security Fund	Govt. Pens. System	Universal tax financed 1,000 Baht scheme	*National(open) Provident Fund(s) NEW*	Provident funds	Govt Pension Fund	Retirement Mutual funds
Coverage	Compulsory private sector	Automatic government sector	Automatic informal sector	voluntary/ elective by employee	voluntary based on collective agreements	Automatic government sector	Voluntary individual
Contribution	6% (3%)	imputed contribution	none	2-15% contributions, 100 Baht subsidy for informal sector	2-15% contributions	no formal but imputed contributions	private, tax deductible
Size of the covered population	10 million	1.5 million	23 million	Up to formal sector Emp.s Up to 23 Mill informal S.	2 mill.		n.a.
Other provision				Min. RoR guarantee central administration contribution collection in informal sector through community			

4. Testing financial and fiscal affordability

This chapter analyses the fiscal and financial feasibility of the above proposals. The analysis is limited to a deterministic budgetary assessment of the effects of the above proposal and the effects of the recent government proposals to increase revenues. It cannot take into account the potential macro-economic multiplier effects that would result from the positive growth effects of the higher universal pension on aggregate demand and the effect of potentially increased savings through the new open provident fund. It also cannot take into account the potentially countervailing effects of higher taxes or deficit spending.

4.1. Methodology

The basic structure of the model is mapped out in Figure 6 (below). The basic modelling philosophy follows the pragmatic modelling philosophy of the ILO's social budgeting models.[4] Instead of building a complete national social budget encompassing all social transfers schemes in Thailand, the non-pension parts of a social budget were excluded and the budgetary analysis was limited to the effect of the pension proposals and their impact on the government budget.

The model provides classical and pragmatic "if–then" projections, i.e. it depends on exogenous demographic and economic assumptions and then simulates their impact on expenditure and revenues and the government budget. The observation years are 2008 and 2009 (budget figures including the most recent supplementary budget), and the projection years are 2010 to 2028.

The model consists of three deterministic sub-models that are driven by a set of exogenous assumptions that have been made compatible with the assumptions and results of the government's long and short-term (crisis related) macro-economic projections as well as the demographic projections of the National Economic and Social Development Board (NESDB).

- The first sub-model is a demographic model that projects the population on the basis of national base data and the UN population projection methodology;

- The second sub-model projects the size and structure of the labour force on the basis of assumptions on future development of labour force participation rates;

- The third sub-model projects the cost of the universal pension and the new savings component, as well as the government budget on the basis of a set of economic assumptions using the development of key economic parameters and population data as drivers for individual expenditure and revenue positions.

This simple model thus allows the tracing of the effects of changes in the pension cost on the government's budgetary balance. The model will be made available to the Fiscal Policy Office for further use and refinement.

Three model scenarios were developed. The Status Quo scenario (called Status Quo) reflects the legal status quo, the present assumptions of the government regarding the economic effects of the latest crisis, as well as the budgetary mapping of the first and

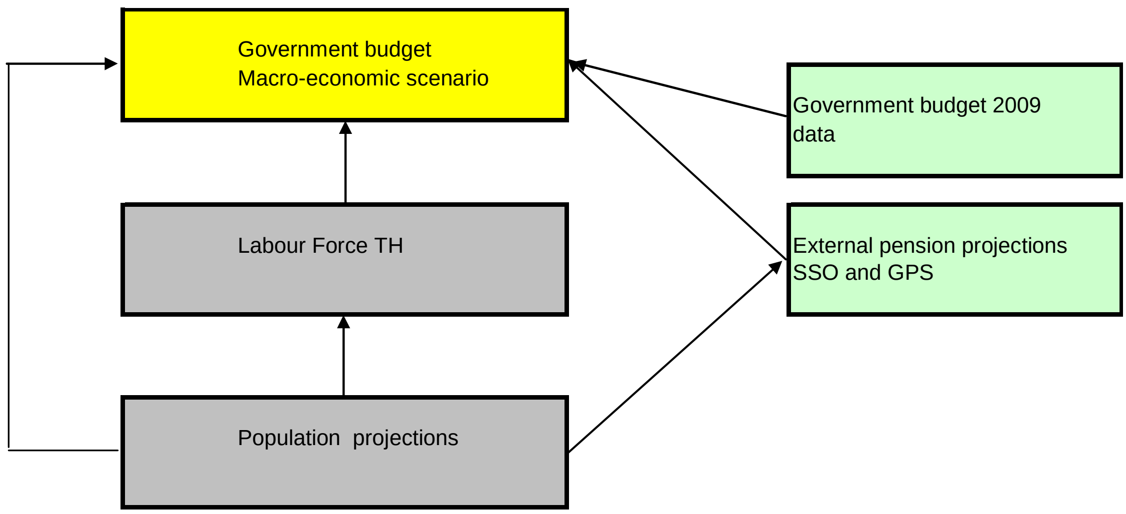
[4] As described in Scholz et al. (2000). *Social Budgeting*. Quantitative Methods in Social Protection Series (Geneva, ILO/ISSA).

second stimulus packages that either have been implemented or have been decided by the government.

The second scenario (called SC1) contains the ILO pension reform proposals. It uses identical demographic and economic assumptions and differs only by the amount of public expenditure for making the basic pension universal to all persons of 60 years of age and above without a pension from the SSF or the Government Pension System (GPS). It is suggested to increase the universal pension to 1,000 Baht per month and the incentive subsidy for pension savings in the informal sector to 100 Baht per month.

The third scenario (called SC2) is on the expenditure side, and is identical to the second scenario, but in addition it takes into account the revenue-enhancing proposal of the government to increase excise tax (estimated annual volume of about 20 billion Baht) and property tax (estimated annual volume of about 100 billion Baht) after 2010.

Figure 6. Structure of the first version of the Pension Reform Budget Model for Thailand

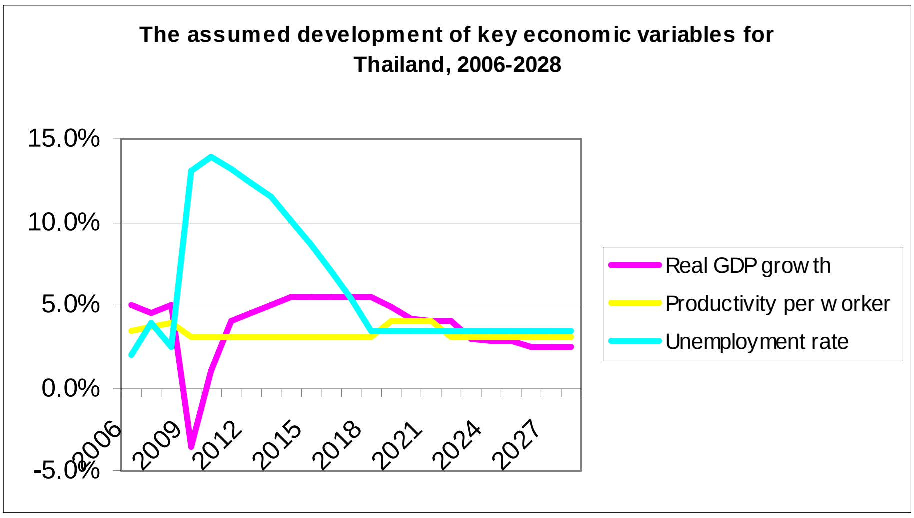


4.2. Main assumptions

The key demographic and economic assumptions are listed in Annex table A1. The most important assumptions are economic growth and labour productivity. Together with the labour force participation rate they determine the level of employment and the average wage increase. Figure 7 shows that in the long run Thailand's economic growth rates may be restricted by demographic development which limits the size of the labour force. Even at – by international standards very high – long-term average productivity increases (of more than 3 per cent per annum) as well as increased labour force participation, the model shows a very fast convergence towards full employment, and future expansion of the economy will probably be hampered by labour shortage. This can possibly be avoided at a later stage if low productivity informal sector labour can be transformed into higher productivity formal sector labour at a much faster rate than observed hitherto.

The model assumptions would need further discussion with experts from economic research institutes and the macro-economic department of the MOF to review the productivity, labour force participation and migration assumptions in the model. The Fiscal Policy Office is expected to work with partners and experts to review these indicators. For the time being it is assumed here that the economy – after the turmoil caused by the latest crisis - will approach a more modest growth path of about 2.5 per cent in real terms towards the end of the projection period in 2028. It is also assumed that the unemployment rate in Thailand will take almost 10 years to return to a level of about 3 per cent, i.e. to the order of the pre-crisis level, which is in line with historical experiences of similar shocks in other countries and regions. In the context of Thailand, the set of assumptions made here appear to be prudent, although they remain highly uncertain due to the unknown depth and length of the effect of the latest crisis on the economies of Thailand's trading partners.

Figure 7. The assumed development of key economic variables for Thailand, 2006-2028



4.3. Results

As has been pointed out earlier, the results of the model are only indicative as this is only a very crude version of what is to be developed into a full national pension or social budget model by the Fiscal Policy Office. However the results of the model can be considered sufficiently robust to draw a first set of conclusions about the affordability of the pension reform strategies that have been suggested by the ILO.

The central results of the projections under the different scenarios are summarized in the following figures. More details are contained in Annex tables A2 – A4. The model estimates show that the overall gross expenditure for the pension proposal would be in the order of 1.0-1.2 percent of GDP once the introductory phase has been completed. The net additional cost (i.e. the cost reduced by the estimated cost of the present means tested 500 Baht scheme) would be less than 1.0 per cent of GDP (Figure 8). The total budget deficit will increase accordingly due to the pension proposal, and is expected to peak in 2012 at slightly over 10 per cent of GDP, i.e. only about 0.6 per cent of GDP higher than under status quo (Figure 9). At the end of the projection period the public deficit is about 1.5 per cent higher than under the status quo conditions. However, even then the deficit will remain in the order of 2 per cent of GDP. As with the Status Quo scenario, total public debt will peak under the reform scenario (Sc1) in 2013, at around 62 per cent of GDP and is then expected to return to a level of 53 per cent of GDP, or 15 per cent-points higher than under the status quo projections in 2028.

The new tax measures just approved by the government will be sufficient to bring the budget balance back into surplus towards the end of the projection period and reduce the total debt to about 29 per cent of GDP (compared to 38 percent in 2008).

As a consequence of the stimulus packages, the total public expenditure ratio will increase steeply from about 18 per cent of GDP to 28 per cent of GDP in 2010. This is still substantially lower that in most OECD countries. Under ceteris paribus conditions the rate will decrease to less than 20 per cent in about 2018 or 2019. Most countries with similar levels of GDP per capita to Thailand at this point in time will have substantially higher ratios of public expenditure to GDP. There were voices among the economists in the MOF that believed that the Thai economy could sustain a level of public expenditure of 25 per cent of GDP in the long run. International evidence seems to support that assumption.

On the whole there is good reason to assume that the suggested pension measures will be financially and fiscally sustainable in the short- and long-run even throughout the latest crisis. However, a basic uncertainty remains with regard to the expected depth and length of this crisis. During the next 6 to 12 months the dimensions of the crisis should become clearer. The date of implementation can then be chosen to avoid coinciding with a peak in the fiscal burden from possible new stimulus packages if that is considered necessary.

Figure 8. Estimated cost of ILO pension proposals in % of GDP

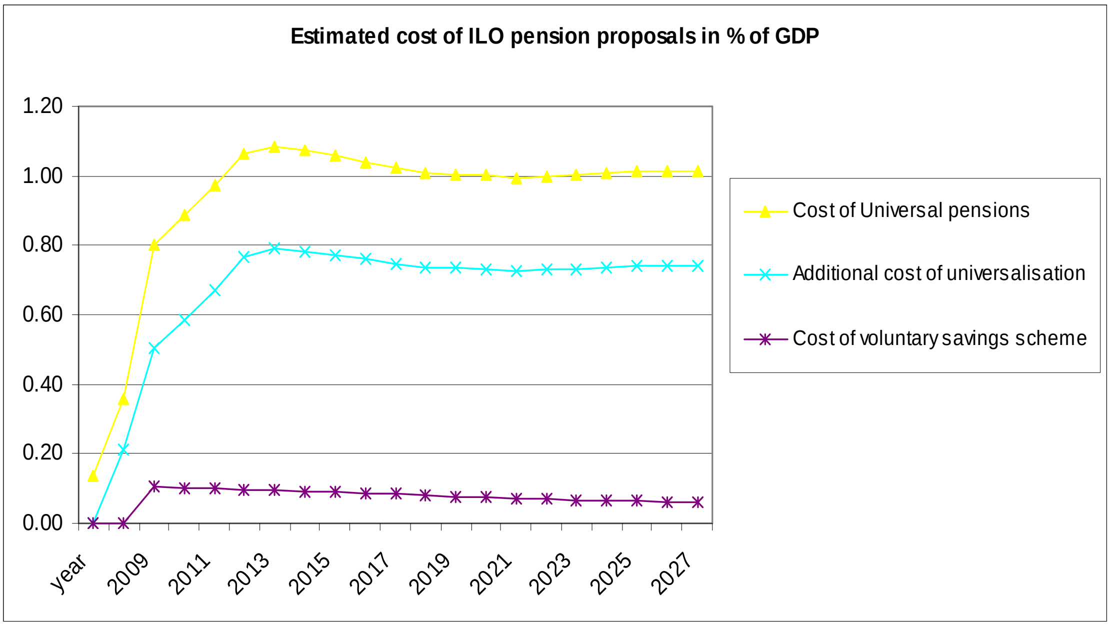


Figure 9. Estimated development of current budget deficits in % of GDP

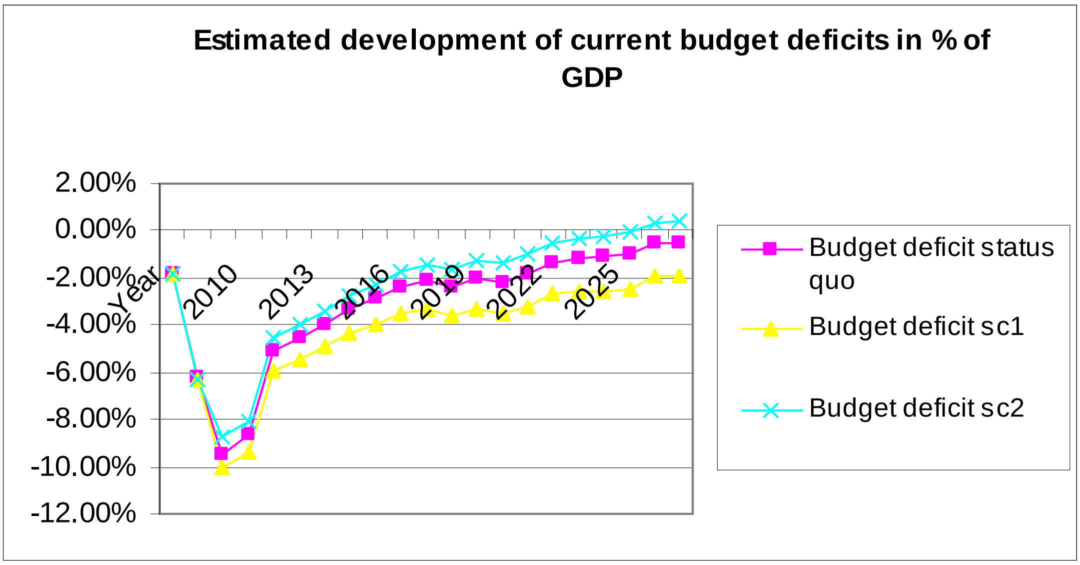


Figure 10. Estimated total government debt in % of GDP

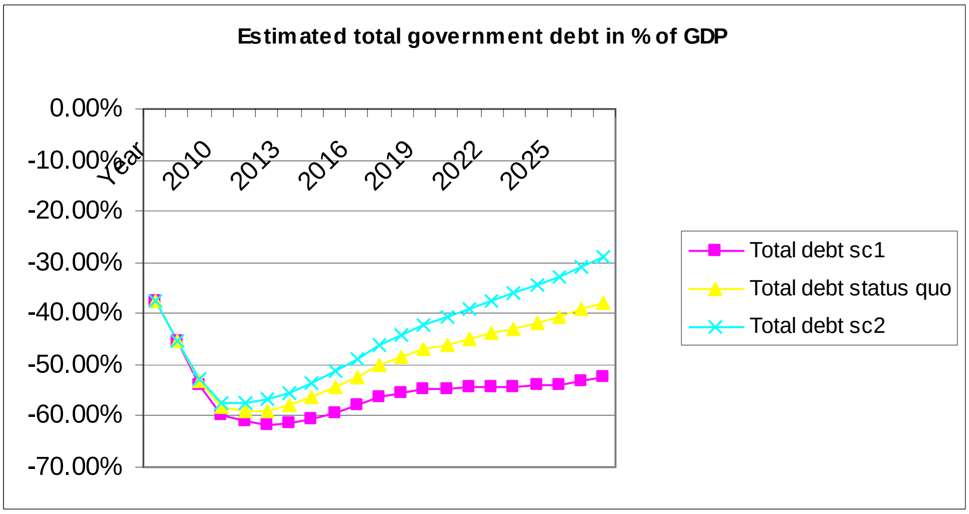
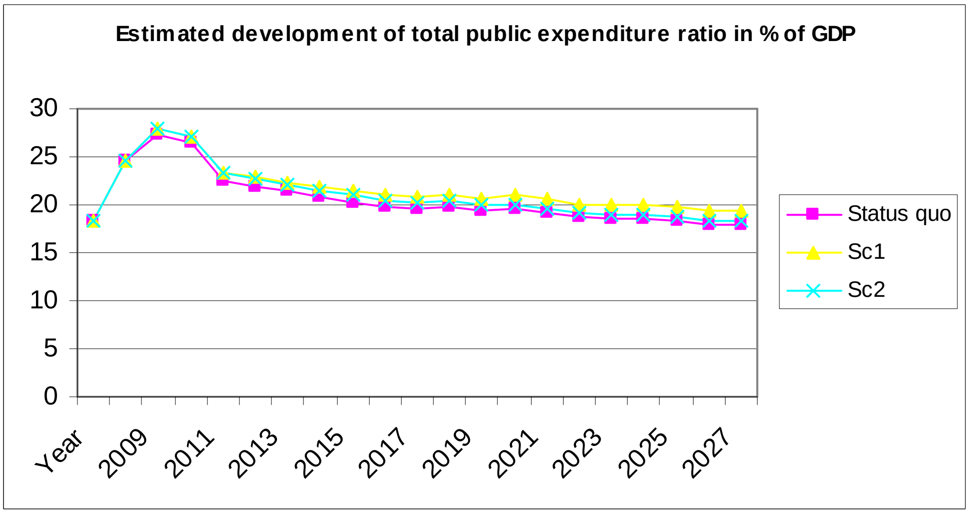


Figure 11. Estimated development of total public expenditure ratio in % of GDP



5. Conclusions

Times of crises are always also times of opportunities. Worldwide, the latest economic crisis has triggered new thinking with regard to the role of social security systems as a crisis management tool as well as with regard to the more systemic and long-term role that social security system can and should play in national social and economic development processes. Increasingly the value of social security systems as economic and social policy instruments are rediscovered after decades of mono-dimensional cost containment policies that only sought to curb their size. The plans of the Thai government to strengthen the national social security system embody one indication of this global trend.

The mission team considers that the suggested structure of the pension system in Thailand:

- embodies an adequate response to still prevailing and serious poverty problems in households with elderly people;
- strengthens aggregate domestic demand in times of crises when exports shrink;
- combines societal, governmental and individual responsibilities for the securing of adequate income in old age in a well balanced way;
- is flexible enough to grow with and adapt to future economic and social developments;
- is a further systemic building block and milestone in the development of the national social security system (after the introduction of the Social security scheme in the early 1990s and the Universal Health Scheme in the first decade of the new century), and in fact constitutes another element of a sound social protection floor for all and;
- according to the analysis presented, the suggested structure appears to be fiscally affordable even in times of crisis.

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Annex Tables

Table A1. Economic and labour force parameters, Thailand 2008-2028

Calendar year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2028**
GDP											
GDP nominal	9,101,841	8783276.306	9,048,531	9,692,787	10,483,476	11,392,917	12,440,211	13,583,778	20,707,272	27,716,968	32,143,185
Change (in % p.a.)	9.0%	-3.5%	3.0%	7.1%	8.2%	8.7%	9.2%	9.2%	7.8%	5.4%	5.1%
GDP at 1988 prices	4,440,496	4,124,234	4,248,786	4,462,058	4,685,486	4,919,760	5,190,347	5,475,816	6,981,738	8,170,188	8,853,380
Change (% p.a.)	5.0%	-3.5%	1.0%	4.0%	4.5%	5.0%	5.5%	5.5%	4.2%	2.8%	2.5%
GDP deflator	3.9%	0.0%	2.0%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	2.5%	2.5%
LF & Employment											
Total Labour Force	36,998	37,382	37,749	38,099	38,431	38,747	39,042	39,303	39,999	39,817	39,358
Unemployed	906	4,872	5,267	5,016	4,740	4,438	3,938	3,386	1,377	1,371	1,355
UE rate (% of CLF)	0.02	0.13	0.14	0.13	0.12	0.11	0.10	0.09	0.03	0.03	0.03
Employment	36,092	32,510	32,482	33,083	33,691	34,309	35,104	35,917	38,622	38,446	38,003
Labour productivity	2.6%	-9.9%	-0.1%	1.9%	1.8%	1.8%	2.3%	2.3%	0.1%	-0.2%	-0.5%
GDP (at '88 price) per empl.	123.03	126.86	130.81	134.87	139.07	143.40	147.86	152.46	180.77	212.51	232.97
Change (% p.a.)	3.9%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	4.0%	3.1%	3.1%
GDP per employed person (1000 baht)	252.18	270.17	278.57	292.98	311.16	332.07	354.38	378.20	532.60	718.79	848.57
Wages											
National average wage (Employees)	12,128	12,505	13,152	13,968	14,907	15,909	16,978	18,119	25,516	34,103	40,260
Change (% p.a.)	8.0%	3.1%	5.2%	6.2%	6.7%	6.7%	6.7%	6.7%	7.6%	5.7%	5.7%

Table A2. Results of the Status Quo Scenario, Thailand 2008-2028

Base line	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2028
Revenues											
Taxes on income and profits		751,000	778,172	835,983	905,480	984,030	1,074,487	1,173,259	1,785,008	2,385,000	2,770,964
Personal		218,000	229,075	247,791	269,306	292,668	319,572	348,948	528,418	703,037	820,403
Corporate		458,000	471,832	505,426	546,656	594,079	648,689	708,320	1,079,771	1,445,289	1,676,092
Petroleum income tax		75,000	77,265	82,766	89,518	97,284	106,226	115,991	176,818	236,674	274,469
Taxes on consumption		918,008	929,699	977,808	1,028,503	1,117,726	1,220,473	1,332,665	2,029,403	2,713,813	3,150,268
General sales tax		567,250	584,381	625,989	677,054	735,788	803,426	877,281	1,337,337	1,790,044	2,075,902
stamp duties		8,250	8,499	9,104	9,847	10,701	11,685	12,759	19,450	26,034	30,192
VAT		540,000	556,308	595,917	644,529	700,442	764,830	835,137	1,273,093	1,704,052	1,976,178
Specific business tax		19,000	19,574	20,967	22,678	24,645	26,911	29,384	44,794	59,957	69,532
Specific Sales tax		350,758	345,318	351,819	351,449	381,937	417,047	455,384	692,066	923,770	1,074,366
consumption tax		192,530	182,311	177,206	162,593	176,697	192,940	210,676	319,031	424,457	495,316
petroleum and pet. products		80,000	82,416	88,284	95,486	103,769	113,308	123,724	188,606	252,452	292,767
Other		78,228	80,591	86,329	93,371	101,471	110,799	120,984	184,429	246,861	286,283
Taxes on international trade		97,600	100,548	107,707	116,493	126,598	138,236	150,943	230,100	307,992	357,176
Other Taxes		1,889	0	0	0	0	0	0	0	0	0
Total Gross tax revenues	1,626,015	1,768,497	1,808,418	1,921,498	2,050,476	2,228,354	2,433,196	2,656,867	4,044,510	5,406,805	6,278,408
Nontax revenue	146,485	131,502	135,473	145,119	156,957	170,573	186,253	203,374	310,026	414,975	481,243
minus: Rebates	277,500	314,500	325,879	350,089	379,192	412,087	449,968	491,332	747,516	998,778	1,160,410
SP1 adjsutment		19,140									
Total Revenues	***1495000***	***1,604,639***	***1618012.7***	***1,716,528***	***1,828,240***	***1,986,840***	***2,169,481***	***2,368,910***	***3,607,020***	***4,823,002***	***5,599,241***
Expenditure											
Current	1,209,547	1,336,269	1,403,929	1,558,275	1,723,374	1,815,793	1,984,833	2,121,984	3,005,043	3,753,821	4,293,671
General public services	75,614	82,938	87,796	93,827	100,732	108,119	116,018	124,461	179,108	242,788	288,062
Defense	141,991	167,807	176,488	187,438	200,033	213,475	227,820	243,129	342,389	457,620	540,244
Public order and safety	82,056	101,446	105,282	111,449	119,104	127,870	137,247	147,275	210,439	290,954	345,513
Education	318,779	352,570	366,667	385,817	407,983	431,908	458,027	485,612	648,935	810,712	933,901
Health	129,775	138,932	147,070	157,171	168,738	181,113	194,345	208,489	300,028	406,700	482,540
Social security and welfare	105,349	117,246	123,808	132,307	142,131	152,929	164,786	177,663	262,058	369,359	454,441
Housing and community amenities	15,338	14,390	14,478	14,854	15,391	16,011	16,644	17,288	20,640	22,968	24,140

Base line	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2028**
Recreation cultural and religious	11,450	11,341	11,411	11,477	11,546	11,605	11,656	11,697	11,759	11,398	11,124
Economic services	94,484	108,902	112,191	120,179	129,982	141,258	154,243	168,422	256,745	343,656	398,536
Interest payments	124,134	129,585	145,403	227,022	306,912	306,456	374,620	403,992	613,846	616,785	620,380
Other	110,578	111,112	113,335	116,735	120,820	125,049	129,426	133,956	159,097	180,882	194,790
Capital repayment	35,722	50,735	41,433	50,349	59,139	64,724	70,071	75,178	97,049	117,683	0
Capital	414,732	420,456	310,000	433,154	463,994	501,844	545,379	595,513	919,134	1,259,194	1,464,553
Replenishment of treas. Acc.		27,540									
SP1		116,700	116,700	116,700	116,700	116,700	58,350	29,175	912	28	4
SP2		200,000	600,000	400,000							
Total expenditure	1,660,000	2,151,700	2,472,061	2,558,478	2,363,207	2,499,061	2,658,634	2,821,850	4,022,137	5,130,726	5,758,227
In % of GDP	18.2	24.5	27.3	26.4	22.5	21.9	21.4	20.8	19.4	18.5	17.9
Current expenditure	13.3	15.2	15.5	16.1	16.4	15.9	16.0	15.6	14.5	13.5	13.4
Capital expenditure (w/o stimulus)	4.6	4.8	3.4	4.5	4.4	4.4	4.4	4.4	4.4	4.5	4.6
Current deficit	-165000	-547,061	-854,049	-841,950	-534,966	-512,221	-489,153	-452,940	-415,117	-307,725	-158,986
In % of GDP	-1.8%	-6.2%	-9.4%	-8.7%	-5.1%	-4.5%	-3.9%	-3.3%	-2.0%	-1.1%	-0.5%
Estimated Public debt, end of period	-3,421,622	-3,968,683	-4,822,731	-5,664,681	-6,199,648	-6,711,868	-7,201,021	-7,653,961	-9,711,017	-11,580,100	-12,182,715
In % of GDP	-37.6%	-45.2%	-53.3%	-58.4%	-59.1%	-58.9%	-57.9%	-56.3%	-46.9%	-41.8%	-37.9%
Parameters											
Interest rate assumption	4.9%	2.0%	4.0%	5.0%	5.5%	5.0%	5.6%	5.6%	6.5%	5.4%	5.1%

Table A3. Results of Scenario One (Including ILO pensions proposal), Thailand 2008-2028

	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2028
Revenues											
Taxes on income and profits		751,000	778,172	835,983	905,480	984,030	1,074,487	1,173,259	1,785,008	2,385,000	2,770,964
Personal		218,000	229,075	247,791	269,306	292,668	319,572	348,948	528,418	703,037	820,403
Corporate		458,000	471,832	505,426	546,656	594,079	648,689	708,320	1,079,771	1,445,289	1,676,092
Petroleum income tax		75,000	77,265	82,766	89,518	97,284	106,226	115,991	176,818	236,674	274,469
Taxes on consumption		918,008	929,699	977,808	1,028,503	1,117,726	1,220,473	1,332,665	2,029,403	2,713,813	3,150,268
General sales tax		567,250	584,381	625,989	677,054	735,788	803,426	877,281	1,337,337	1,790,044	2,075,902
stamp duties		8,250	8,499	9,104	9,847	10,701	11,685	12,759	19,450	26,034	30,192
VAT		540,000	556,308	595,917	644,529	700,442	764,830	835,137	1,273,093	1,704,052	1,976,178
Specific business tax		19,000	19,574	20,967	22,678	24,645	26,911	29,384	44,794	59,957	69,532
Specific Sales tax		350,758	345,318	351,819	351,449	381,937	417,047	455,384	692,066	923,770	1,074,366
consumption tax		192,530	182,311	177,206	162,593	176,697	192,940	210,676	319,031	424,457	495,316
petroleum and pet. products		80,000	82,416	88,284	95,486	103,769	113,308	123,724	188,606	252,452	292,767
other		78,228	80,591	86,329	93,371	101,471	110,799	120,984	184,429	246,861	286,283
Taxes on international trade		97,600	100,548	107,707	116,493	126,598	138,236	150,943	230,100	307,992	357,176
							0	0	0	0	
							0	0	0	0	
Other Taxes		1,889			0	0	0	0	0	0	
Total Gross tax revenues	1,626,015	1,768,497	1,808,418	1,921,498	2,050,476	2,228,354	2,433,196	2,656,867	4,044,510	5,406,805	6,278,408
Nontax revenue	146,485	131,502	135,473	145,119	156,957	170,573	186,253	203,374	310,026	414,975	481,243
minus: Rebates	277,500	314,500	325,879	350,089	379,192	412,087	449,968	491,332	747,516	998,778	1,160,410
SP1 adjsutment		19,140			0	0	0	0	0	0	
Total Revenues	***1495000***	***1,604,639***	***1618012.69***	***1,716,528***	***1,828,240***	***1,986,840***	***2,169,481***	***2,368,910***	***3,607,020***	***4,823,002***	***5,599,241***
Expenditure											
Current	1,209,547	1,336,269	1,402,372	1,558,477	1,726,656	1,822,466	1,997,788	2,141,618	3,085,686	3,903,990	4,502,241
General public services	75,614	82,938	87,796	93,827	100,732	108,119	116,018	124,461	179,108	242,788	288,062
Defense	141,991	167,807	176,488	187,438	200,033	213,475	227,820	243,129	342,389	457,620	540,244
Public order and safety	82,056	101,446	105,282	111,449	119,104	127,870	137,247	147,275	210,439	290,954	345,513
Education	318,779	352,570	366,667	385,817	407,983	431,908	458,027	485,612	648,935	810,712	933,901
Health	129,775	138,932	147,070	157,171	168,738	181,113	194,345	208,489	300,028	406,700	482,540
Social security and welfare	105,349	117,246	123,808	132,307	142,131	152,929	164,786	177,663	262,058	369,359	454,441

	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2028
Housing and community amenities	15,338	14,390	14,478	14,854	15,391	16,011	16,644	17,288	20,640	22,968	24,140
Recreation cultural and religious	11,450	11,341	11,411	11,477	11,546	11,605	11,656	11,697	11,759	11,398	11,124
Economic services	94,484	108,902	112,191	120,179	129,982	141,258	154,243	168,422	256,745	343,656	398,536
Interest payments	124,134	129,585	143,846	227,224	310,194	313,129	387,575	423,627	694,490	766,953	828,950
Other	110,578	111,112	113,335	116,735	120,820	125,049	129,426	133,956	159,097	180,882	194,790
Capital repayment	35,722	50,735	41,530	51,005	60,501	66,980	73,446	79,876	111,460	148,813	0
Capital	414,732	420,456	310,000	433,154	463,994	501,844	545,379	595,513	919,134	1,259,194	1,464,553
Replenishment of treas. Acc.		27,540									
SP1		116,700	116,700	116,700	116,700	116,700	58,350	29,175	912	28	4
SP2		200,000	600,000	400,000							
additional cost of universal pension	0	9,344	45,574	56,792	70,555	87,219	98,647	106,368	152,007	203,660	238,266
additional cost of savings component	0	0	9,418	9,900	10,457	11,042	11,753	12,513	15,990	18,303	19,603
Total Expenditure	1,660,000	2,161,044	2,525,595	2,626,028	2,448,862	2,606,250	2,785,364	2,965,064	4,285,189	5,533,988	6,224,665
In % of GDP	18.2	24.6	27.9	27.1	23.4	22.9	22.4	21.8	20.7	20.0	19.4
Current expenditure	13.3	15.2	15.5	16.1	16.5	16.0	16.1	16	14.9	14.1	14.0
Capital expenditure (w/o stimulus)	4.6	4.8	3.4	4.5	4.4	4.4	4.4	4.4	4.4	4.5	4.6
Current deficit	-165000	-556,405	-907,582	-909,500	-620,621	-619,410	-615,884	-596,154	-678,169	-710,986	-625,425
In % of GDP	-1.8%	-6.3%	-10.0%	-9.4%	-5.9%	-5.4%	-5.0%	-4.4%	-3.3%	-2.6%	-1.9%
Estimated Public debt, end of period	-3,421,622	-3,978,026	-4,885,608	-5,795,108	-6,415,729	-7,035,139	-7,651,023	-8,247,177	-11,354,467	-14,965,180	-16,897,991
In % of GDP	-37.6%	-45.3%	-54.0%	-59.8%	-61.2%	-61.8%	-61.5%	-60.7%	-54.8%	-54.0%	-52.6%
Parameters											
Interest rate assumption	4.9%	2.0%	4.0%	5.0%	5.5%	5.0%	5.6%	5.6%	6.5%	5.4%	5.1%

Table A4. Results of Scenario Two (Including additional taxes), Thailand 2008-2028

	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2028
Revenues											
Taxes on income and profits		751,000	878,172	943,103	1,021,338	1,109,939	1,211,970	1,323,381	2,013,854	2,691,315	3,126,195
Personal		218,000	229,075	247,791	269,306	292,668	319,572	348,948	528,418	703,037	820,403
Corporate		458,000	471,832	505,426	546,656	594,079	648,689	708,320	1,079,771	1,445,289	1,676,092
Petroleum income tax		75,000	77,265	82,766	89,518	97,284	106,226	115,991	176,818	236,674	274,469
New tax on property			100,000	107,120	115,858	125,909	137,483	150,121	228,847	306,315	355,231
Taxes on consumption		918,008	947,930	997,529	1,049,936	1,141,018	1,245,906	1,360,436	2,071,457	2,769,765	3,215,560
General sales tax		567,250	584,381	625,989	677,054	735,788	803,426	877,281	1,337,337	1,790,044	2,075,902
stamp duties		8,250	8,499	9,104	9,847	10,701	11,685	12,759	19,450	26,034	30,192
VAT		540,000	556,308	595,917	644,529	700,442	764,830	835,137	1,273,093	1,704,052	1,976,178
Specific business tax		19,000	19,574	20,967	22,678	24,645	26,911	29,384	44,794	59,957	69,532
Specific Sales tax		350,758	363,549	371,540	372,882	405,230	442,480	483,155	734,120	979,721	1,139,658
consumption tax Increased by 10% (1)		192,530	200,542	196,927	184,025	199,990	218,374	238,448	361,085	480,408	560,608
petroleum and pet. products		80,000	82,416	88,284	95,486	103,769	113,308	123,724	188,606	252,452	292,767
other		78,228	80,591	86,329	93,371	101,471	110,799	120,984	184,429	246,861	286,283
Taxes on international trade		97,600	100,548	107,707	116,493	126,598	138,236	150,943	230,100	307,992	357,176
						0	0	0	0		
						0	0	0	0		
Other Taxes		1,889			0	0	0	0	0	0	
Total Gross tax revenues	1,626,015	1,768,497	1,926,649	2,048,339	2,187,767	2,377,556	2,596,112	2,834,760	4,315,411	5,769,072	6,698,931
Nontax revenue	146,485	131,502	135,473	145,119	156,957	170,573	186,253	203,374	310,026	414,975	481,243
minus: Rebates	277,500	314,500	325,879	350,089	379,192	412,087	449,968	491,332	747,516	998,778	1,160,410
SP1 adjustment		19,140			0	0	0	0	0	0	
Total Revenues	1495000	1,604,639	1736243.81	1,843,369	1,965,532	2,136,042	2,332,397	2,546,803	3,877,921	5,185,268	6,019,764
(1) also corrected for WTO effect											
Expenditure											
Current	1,209,547	1,336,269	1,407,003	1,558,916	1,720,558	1,810,068	1,975,182	2,108,902	2,957,358	3,662,705	4,171,701
General public services	75,614	82,938	87,796	93,827	100,732	108,119	116,018	124,461	179,108	242,788	288,062
Defense	141,991	167,807	176,488	187,438	200,033	213,475	227,820	243,129	342,389	457,620	540,244
Public order and safety	82,056	101,446	105,282	111,449	119,104	127,870	137,247	147,275	210,439	290,954	345,513
Education	318,779	352,570	366,667	385,817	407,983	431,908	458,027	485,612	648,935	810,712	933,901

	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2028
Health	129,775	138,932	147,070	157,171	168,738	181,113	194,345	208,489	300,028	406,700	482,540
Social security and welfare	105,349	117,246	123,808	132,307	142,131	152,929	164,786	177,663	262,058	369,359	454,441
Housing and community amenities	15,338	14,390	14,478	14,854	15,391	16,011	16,644	17,288	20,640	22,968	24,140
Recreation cultural and religious	11,450	11,341	11,411	11,477	11,546	11,605	11,656	11,697	11,759	11,398	11,124
Economic services	94,484	108,902	112,191	120,179	129,982	141,258	154,243	168,422	256,745	343,656	398,536
Interest payments	124,134	129,585	148,478	227,663	304,096	300,732	364,969	390,910	566,161	525,668	498,411
Other	110,578	111,112	113,335	116,735	120,820	125,049	129,426	133,956	159,097	180,882	194,790
Capital repayment	35,722	50,735	41,530	49,819	57,983	62,939	67,676	72,109	88,484	98,808	0
Capital	414,732	420,456	310,000	433,154	463,994	501,844	545,379	595,513	919,134	1,259,194	1,464,553
Replenishment of treas. Acc.		27,540									
SP1		116,700	116,700	116,700	116,700	116,700	58,350	29,175	912	28	4
SP2		200,000	600,000	400,000							
additional cost of universal pension	0	9,344	45,574	56,792	70,555	87,219	98,647	106,368	152,007	203,660	238,266
additional cost of savings component	0	0	9,418	9,900	10,457	11,042	11,753	12,513	15,990	18,303	19,603
Total Expenditure	1,660,000	2,161,044	2,530,226	2,625,281	2,440,246	2,589,812	2,756,988	2,924,580	4,133,885	5,242,698	5,894,125
In % of GDP	18.2	24.6	28.0	27.1	23.3	22.7	22.2	21.5	20.0	18.9	18.3
Current expenditure	13.3	15.2	15.5	16.1	16.4	15.9	15.9	15.5	14.3	13.2	13.0
Capital expenditure (w/o stimulus)	4.6	4.8	3.4	4.5	4.4	4.4	4.4	4.4	4.4	4.5	4.6
Current deficit	-165000	-556,405	-793,982	-781,912	-474,714	-453,770	-424,591	-377,777	-255,963	-57,430	125,638
In % of GDP	-1.8%	-6.3%	-8.8%	-8.1%	-4.5%	-4.0%	-3.4%	-2.8%	-1.2%	-0.2%	0.4%
Estimated Public debt, end of period	-3,421,622	-3,978,026	-4,772,009	-5,553,921	-6,028,635	-6,482,405	-6,906,995	-7,284,773	-8,731,489	-9,521,848	-9,310,092
In % of GDP	-37.6%	-45.3%	-52.7%	-57.3%	-57.5%	-56.9%	-55.5%	-53.6%	-42.2%	-34.4%	-29.0%
Parameters											
Interest rate assumption	4.9%	2.0%	4.0%	5.0%	5.5%	5.0%	5.6%	5.6%	6.5%	5.4%	5.1%