



Actuarial Review of The NSSF Employment Injury Branch and Assessment of Social Health Insurance

for The National Social Security Fund (NSSF) and
The National Social Security Fund for Civil Servants (NSSFC)

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Disclaimer

Endnotes:

1 http://www.who.int/providingforhealth/en/

Executive Summary

According to the most recent general population census, as of 2008, Cambodia's population stood at 13.4 million with an estimated labour force of around 6.8 million including approximately 1.2 million salaried employees. Of these salaried employees, an estimated 860,000 work for registered private sector enterprises, representing about 12.6 per cent of total employment in the country (National Institute of Statistics, 2009).

During the past decade, Cambodia has witnessed a fast pace of economic growth, with real GDP growth averaging 7.8 per cent in real terms over the period 2003 – 2010. With an expanding economy and emerging industrialisation, there is a growing need for the extension of statutory social security provisions in order to ensure a healthy and productive workforce and to provide workers with protection against hardship caused by work-related injuries or diseases, sickness, maternity, unemployment, disability and old age.

The Social Security Law (Royal Kram NS/RKM/0902/018) for employees working in the private sector was adopted by the Cambodian Parliament in September 2002. The law stipulates the introduction of a contributory social insurance system granting workers social security benefits in case of employment injury, retirement, invalidity, death, and/or other circumstances including sickness. The National Social Security Fund of Cambodia (NSSF) started operations in November 2008, and has since been providing compensation to victims of employment injuries and occupational diseases. The implementation of the other social security benefit branches mandated by law has been deferred but is expected to occur in the coming years.

Review of the NSSF Employment Injury Branch

The coverage of NSSF is currently limited to larger enterprises employing eight or more workers, with smaller firms temporarily excluded. The registration of employers progressed rapidly after the launch of the scheme, reaching over 1,800 employers and covering 522,000 workers by December 2010. Initially the scheme covered mainly enterprises in the garment and footwear industries, but the coverage has since been extended to other sectors including the service sector. In the year 2010, about 80.5 per cent of insured members were female, among which about half were below the age of 25.

The benefits provided under the scheme for cases of work-related accidents or diseases include medical care, temporary disability (cash) benefits, death grants, disability pensions, survivor pensions, and caretaker benefits. In 2010, the scheme disbursed benefits amounting to about 2.4 billion Cambodian Riels (KHR) in total (approximately US$600,000), This included about 1.96 billion KHR worth of benefits for medical care and about 356 million KHR for temporary disability benefits disbursed to 2,445 beneficiaries. In the same year, 37 death grants were disbursed, 32 of which went to victims of traffic accidents commuting to/from work. By December 2010, a total of 39 benefits had been awarded for permanent disability, including 29 lump-sum benefits and 10 pensions. In addition, 30 survivor pensions were awarded including 22 to surviving parents, four to widows and widowers, and four to surviving children.

Compared to other countries, the number of work-related injuries reported and benefits paid out so far is low. A possible explanation is that larger factories operate on-site infirmaries staffed with a nurse and/or doctor as per the stipulations of the Cambodian Labour Law. It is suspected that a high percentage of accidents, in particular minor ones, are treated on-site in factories and are therefore not reported.

Due to the low number of work-related injuries reported, the scheme achieved a sizable surplus in the years 2009 and 2010. Operating income in 2010 totalled 19.9 billion KHR, including 5.5 billion KHR in subsidies from the national budget. With operating expenses totalling only 4.9 billion KHR in 2010, the scheme achieved an operating surplus of about 15 billion KHR. Hence by the end of 2010, the scheme had accumulated reserves of about 17.5 billion KHR, not including about 8.8 billion KHR in accounts receivable due for transfer from the national budget.

The pay-as-you-go (PAYG) cost rate for the year 2010 has been assessed at 0.20 per cent of insurable wages, whilst the discounted cost of future liabilities for pensions awarded in 2010 were estimated at 0.02 per cent, yielding a terminal funding cost ratio of 0.22 per cent of insurable earnings for the year 2010. This is quite low in comparison to the current contribution rate of 0.80 per cent. However, in light of the planned increases in benefit levels for death grants and permanent disability pensions, and the expected increase in benefit incidence rates due to improved reporting of occupational accidents, the cost ratio of the NSSF Employment Injury Branch is expected to increase in the near future. It is also noted that currently no funding is allocated for the promotion of occupational health and safety, and the prevention of occupational accidents.

Costing of Social Health Insurance (NSSF)

The introduction of social health insurance (SHI) benefits is currently being prepared by NSSF. A draft Prakas (Ministerial Regulation) has already been prepared but has not yet been submitted to the tripartite board of directors for endorsement. Although some of the features of the SHI Branch have yet to be specified in detail, the draft Prakas outlines the main benefit provisions of the Branch, including medical care, sickness cash benefits, and maternity cash benefits. It is as yet unknown whether the SHI Branch will cover dependent children and spouses of insured workers as common for employment-based social health insurance schemes.

Medical benefits shall comprise inpatient and outpatient care including: diagnostics, medical supplies, and essential drugs; preventive health care services; and medical evacuation. NSSF is planning to contract directly with hospitals at different levels, i.e. health centres, referral hospitals, provincial hospitals, and national hospitals, and possibly selected private providers. However, the detailed provider network and payment mechanism are yet to be finalised. Therefore the cost estimates presented here should be considered as preliminary.

For medical benefits to be provided under the SHI Branch, three alternative policy options have been assessed in order to illustrate the impact of different provisions on overall cost and contribution rates. Option 1 (baseline) reflects the policy design laid out in the draft Prakas and is based on the preparatory implementation plans being considered by NSSF. Options 2 and 3 reflect alternative policy options, assuming the coverage of family dependents, the institution of a referral system, and alternative benefit packages. Assumptions for the main cost parameters (mainly unit cost and utilisation rates) were drawn from the database and benefit experience of the Health Insurance Project (HIP), the social health insurance programme piloted in the garment sector by the French NGO GRET. Assumptions regarding benefit package and unit cost were derived from the HIP experience and provider payment arrangements. The main assumptions and estimated PAYG cost rates are summarised below for the three policy options:

	Option 1	Option 2	Option 3
Coverage	Workers only	Workers & dependents	Workers & dependents
Referral system	None	Strict (OPD & IPD)	Partial (mainly OPD)
Benefit package	Extended	Basic	Extended
PAYG cost rate(1)	1.56%	1.81%	2.29%

(1) Ratio of total cost (benefits and administration) to total insurable earnings.

The cost of maternity cash benefits was estimated based on the proposed benefit provisions, comprising cash allowances at 70 per cent of reference earnings payable for 90 days per delivery. The qualifying conditions require 12 continuous months of contributions before the date of delivery. Based on these provisions, the PAYG cost rate for maternity benefits was estimated at 1.15 per cent of insured earnings for the year 2010.

The Cambodian Labour Law stipulates that employers are liable to pay maternity benefits at 50 per cent of earnings to female workers employed for 12 months or longer at the time of delivery. To avoid a double burden for employers, it is required that the Labour Law and/or the related regulations be amended to exempt contributing enterprises from this obligation.

For sickness cash benefit, the draft Prakas suggests that the benefit shall be payable from the 16th day of sickness at 70 per cent of reference earnings. It is assumed that employers will grant sick leave at full pay during the first 15 days of each sickness spell. Workers will qualify

for sickness cash benefit after three full months of contributions, whereas the entitlement ceases immediately at employment termination.

The cost of sickness cash benefits was estimated for the year 2010 based on the planned benefit provisions and assumed incidence rates drawn from international experience. Based on these assumptions, the PAYG cost ratio for sickness cash benefits is estimated at 0.40 per cent of insured wages for the year 2010.

The total cost of the SHI Branch has been estimated for the following scenarios:

	Scenario 1	Scenario 2	Scenario 3
Medical benefits	Option 1	Option 2	Option 3
Maternity benefits*	Yes	Yes	Yes
Sickness benefits*	Yes	Yes	Yes

* Benefit provisions for maternity and sickness assumed alike under scenarios 1, 2, and 3.

Based on the estimated PAYG cost ratios for the three benefits, the following contribution rates are proposed for scenarios 1, 2, and 3:

	Scenario 1	Scenario 2	Scenario 3
Medical benefits*	1.56%	1.81%	2.29%
Maternity cash benefits*	1.15%	1.15%	1.15%
Sickness cash benefits*	0.40%	0.40%	0.40%
Total PAYG cost rate	3.10%	3.36%	3.84%
Contribution rate	3.20%	3.40%	3.90%

* Pay-as-you-go cost rate for each benefit.

It can be observed that the total contribution rate for the funding of scenarios 1, 2, and 3 is recommended at 3.2 per cent, 3.4 per cent, and 3.9 per cent of insurable wages respectively.

Costing of SHI for Civil Servants (NSSFC)

The introduction of SHI for civil servants, retirees, and family dependents is under consideration by NSSFC. A draft sub-decree was prepared in 2009, but has not yet been submitted for endorsement to the Council of Ministers. Since the detailed benefit provisions have yet to be finalised, the cost estimates presented below should be considered as preliminary.

Based on the data provided by NSSF, the total number of beneficiaries under the planned SHI Branch was estimated at around 700,000, including about 175,000 civil servants, 36,000 retirees, and an estimated 489,000 family dependents (spouses and children). Total annual cost for medical benefits and administration was estimated at about 30 billion KHR for the year 2010. This yields a PAYG cost ratio of 7.2 per cent of total basic salaries, or 3.9 per cent of total wages including salary allowances.

Recommendations:

a) NSSF Employment Injury Branch

It is recommended that all efforts aimed at strengthening the institutional capacity of NSSF be maintained, notably through training of staff, fine-tuning of administrative procedures, and the upgrading of IT systems. The development of a database with individual member records is highly recommended and considered a prerequisite for the successful introduction of social health insurance and pension benefits. Data management deserves more attention in order to ensure that the statistics required for actuarial review and the good governance of the scheme are readily available and consistent.

Regarding benefits, it is recommended that the benefit formulas for permanent disability pensions be reviewed based on earlier International Labour Organization (ILO) recommendations and adjusted accordingly. It is further recommended that employers be encouraged to fully cooperate with NSSF in reporting work-related injuries so as to ensure that all workers have access to the benefits they are entitled to. With regard to financial arrangements, it is recommended to maintain the existing contribution rate and to further build the reserve fund.

However, the financial situation should be reviewed again in the near future (2-3 years), notably to assess the financial impact of the adjusted benefit levels for funeral benefits and permanent disability pensions. It may be sensible to review the contribution rate of the Employment Injury Branch when other branches (e.g., SHI) are being introduced so as to consider any trade-offs and to allocate financing obligations in the most appropriate manner.

b) Social Health Insurance under NSSF

The introduction of SHI is recommended to ensure private sector workers are healthy, productive, and protected against the risk of catastrophic health expenditures. It is recommended that insurance coverage under the SHI Branch be extended to workers' family dependents, including non-working children and spouses. The coverage of dependents will create strong incentives for workers to join the scheme and to remain in employment with a registered employer.

However, the introduction of SHI requires careful planning in order to develop an effective and efficient administration system and to design an attractive and affordable benefit package for insured members. The adoption of adequate provider payment mechanisms and contracting arrangements are equally important to ensure cost-containment and quality assurance by providers.

The introduction of sickness and maternity cash benefits should also be considered to protect workers against the risk of income loss, and to share more evenly the burden of maternity protection amongst all workers and employers. However, it is recommended that possible inconsistencies between the new provisions (for sickness and maternity cash benefits) and existing provisions of the Labour Law be addressed and resolved accordingly.

Regarding financing of the SHI Branch, it is recommended to consider a cost-sharing agreement between workers and employers, as is common for such schemes. It is further recommended that the contribution rate be fixed appropriately so as to allow for an adequate benefit package and sufficient funding for the administration of the scheme.

c) Social Health Insurance under NSSFC

The introduction of SHI for civil servants and their families is also recommended and the same considerations apply as for the private sector. Given the relatively low salaries in the public sector, the introduction of health insurance benefits for civil servants and their families could add to the incentives for qualified workers to join the civil service.

Abbreviations and Acronyms

CAR	Council for Administrative Reform
CBHI	Community-Based Health Insurance
CDHS	Cambodian Demographic Health Survey
CPI	Consumer Price Index
CSES	Cambodian Socio-Economic Survey
GDP	Gross Domestic Product
GMAC	Garment Manufacturers' Association in Cambodia
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GRET	Groupe de Recherche et d'Echanges Technologiques
HC	Health Centre
HEF	Health Equity Fund
HIP	Health Insurance Project
ILO	International Labour Organization
IPD	Inpatient Department
KHR	Cambodian Riel
MEF	Ministry of Economics and Finance
MoH	Ministry of Health
MoLVT	Ministry of Labour and Vocational Training
MoSVY	Ministry of Social Affairs, Veterans, and Youth Rehabilitation
NIS	National Institute of Statistics
NSSF	National Social Security Fund of Cambodia
NSSFC	National Social Security Fund for Civil Servants
OPD	Outpatient Department
PAYG	Pay-As-You-Go
RH	Referral Hospital
SHI	Social Health Insurance
SPER	Social Protection Expenditure and Performance Review
TA	Technical Assistance
TFR	Total Fertility Rate

Foreign Exchange rate: 1 US$ = 4,000 Riels

1. Background and Introduction

This report was drafted in the context of the joint activity on 'A Social Protection Expenditure and Performance Review, and Social Budgeting in Cambodia' undertaken by the International Labour Organization (ILO) and co-funded by GIZ, i.e., Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH. In order to establish the quantitative framework underpinning the planned social budgeting exercise, the two agencies agreed to hire a consultant to undertake data collection, analysis, and actuarial modelling. It was further agreed that the activity be carried out in two phases, with the first phase focusing on the actuarial review of the Employment Injury Branch under the National Social Security Fund (NSSF), and a cost assessment of social health insurance for both NSSF and the National Social Security Fund for Civil Servants (NSSFC). The present report was commissioned under the joint activity's first phase that was funded by GIZ.

The purpose of this report is to present the outcomes of the review of the NSSF Employment Injury Branch and to provide an assessment of SHI for NSSF and NSSFC.

The report is structured as follows: Chapter 2 presents background information and data on the demography, economy, labour market, and employment situation in Cambodia; Chapter 3 summarises the results of the actuarial review of the Employment Injury Branch administered by NSSF; Chapter 4 covers issues related to SHI for NSSF, including scheme design issues and financial assessment; and Chapter 5 presents a brief assessment of SHI for NSSFC, including a discussion of scheme provisions and a preliminary financial assessment. The annexes of the report contain tabulations of background data and other information.

2. Demographic, Macroeconomic, and Labour Market Context

The main demographic, labour market, and macroeconomic data for Cambodia is summarised in the following sections.

2.1. Population

According to the latest population census (National Institute of Statistics, 2009), the total population of Cambodia for the year 2008 was estimated at 13,395,682, of which 10,781,655 individuals were living in rural areas. The life expectancy at birth in the year 2008 was estimated at only 60.5 years for males and 64.3 years for females (ibid.).

The total fertility rate (TFR) for the year 2008 was estimated at 3.1 for the whole country, 2.1 for urban areas, and 3.3 for rural areas (ibid).

The total dependency ratio for the year 2008 was estimated at only 61.2 per cent, which is low when compared internationally.[2]

2.2. Economy

The main economic indicators for Cambodia are summarised in table 2.1 for the years 2003 - 2010.

It can be observed that Cambodia has witnessed a fast pace of economic growth over the past eight years, with real Gross Domestic Product (GDP) growth averaging 7.8 per cent over the period 2003 - 2010. Nominal GDP increased on average by 13.4 per cent per annum, hence the rapid increase of the GDP deflator by an average 5.6 per cent per annum over the period. Consumer prices as measured by the Consumer Price Index (CPI) have also been increasing at a rapid pace averaging 5.2 per cent per annum over the same period. The high and persisting rate of price inflation could become a cause of concern and undermine the expansionary momentum in the coming years.[3] This is particularly relevant in light of the global trend of increasing commodity prices (e.g., oil and food) witnessed throughout the world in recent years. Furthermore, since Cambodia is heavily dollarised, the Central Bank has only limited control over the money supply and cannot fully rely on monetary policy instruments to reign in price inflation.

Despite the risk of an inflationary spiral, the overall economic outlook for Cambodia is considered good for the near future, notably due to its young population, low labour costs, an on-going influx of foreign investment, and the overall high pace of economic growth in the region.

Table 2.1. Economic Indicators, 2003 - 2010

	2003	2004	2005	2006	2007	2008	2009[P]	2010[P]
GDP, current prices (bil. KHR)	18,535	21,438	25,754	29,849	35,042	41,977	41,138	45,246
Change (% p.a.)	10.5	15.7	20.1	15.9	17.4	19.8	-2.0	10.0
GDP, constant prices (bil. KHR)	17,613	19,434	22,009	24,380	26,870	28,668	28,094	29,429
Change (% p.a.)	8.5	10.3	13.3	10.8	10.2	6.7	-2.0	4.8
GDP deflator (% p.a.)	2.0	5.3	6.9	5.1	7.2	13.1	0.0	5.2
CPI, change in % p.a.[(1)]	1.4	5.4	6.8	4.7	5.9	9.0	5.0	3.5
Current account bal., % of GDP	-1.3	-0.9	-1.4	-2.0	-0.9	-5.4	-6.2	-5.9

(1) Urban CPI for the years 2003 – 2005.
Source: IMF data and projections, and NIS Statistical Yearbooks.

2.3. Labour Force and Employment

Recent labour force data is available from the 2008 population census results (NIS, 2009). The total labour force or economically active population for the year 2008 was estimated at about 6.96 million, or about 78.3 per cent of the population aged 15 and above. The total labour force participation rate among the working age population (aged 15 and over) for the year 2008 was estimated at 80.8 per cent for males and 76.0 per cent for females.

Total employment for the year 2008 was estimated at 6,840,795, about 98.4 per cent of the labour force, meaning that only 1.6 per cent of the labour force were reported as unemployed. Employment by status is displayed in table 2.2 for the years 1998 and 2008. The number of employed has increased rapidly by an estimated 3.7 per cent per annum on average during the ten-year period (1998 – 2008). It can be observed that the share of paid employees in total has increased from 12.3 to 17.3 per cent during the decade (1998 - 2008), with the total number of paid employees estimated at 1,183,458 individuals in the year 2008, including 489,618 (41.4 %) women (table 2.2). The same table shows that the number of wage employees has more than doubled over the period, increasing from 584,476 in 1998 to 1,183,458 in 2008, thus indicating a trend of private sector formalisation.

Table 2.2. Employment by status, 1998 and 2008

Employment status	Per cent of total(1)		Persons (estimated)	
	1998	2008	1998	2008
Employers	0.2	0.1	9,504	6,841
Paid employees	12.3	17.3	584,476	1,183,458
Own-account workers	46.1	39.6	2,190,599	2,708,955
Unpaid family workers	41.1	42.9	1,953,007	2,934,701
Other	0.3	0.1	14,256	6,841
Total	100	100	4,751,841	6,840,795

(1) Source: NIS, Population Census 2008.

Table 2.3. Paid employees by age group and sex, 2008

Age group	Per cent of total(1)			Persons (estimated)		
	Male	Female	Total	Male	Female	Total
15-19	8.0	18.5	12.4	55,761	90,823	146,584
20-24	17.5	27.9	21.8	121,497	136,450	257,948
25-29	19.8	20.8	20.2	137,578	102,013	239,591
30-34	9.9	7.6	9.0	68,585	37,426	106,012
35-39	13.0	8.4	11.1	90,419	41,362	131,781
40-44	10.6	5.7	8.6	73,437	28,094	101,531
45-49	8.0	4.2	6.4	55,822	20,473	76,295
50-54	5.9	3.4	4.9	40,980	16,535	57,515
55-59	4.1	2.0	3.2	28,461	9,865	38,326
60-64	1.7	0.7	1.3	12,042	3,545	15,587
65-69	0.8	0.3	0.6	5,716	1,701	7,418
70-74	0.3	0.1	0.2	2,216	666	2,882
75+	0.2	0.1	0.2	1,325	663	1,988
Total	100.0	100.0	100.0	693,840	489,618	1,183,458

(1) Source: NIS, Population Census 2008.

The distribution of paid employees by sex and age group is displayed in table 2.3. It can be observed that about 54.4 per cent of paid employees are in the age group 15 - 29.

It is noted that the total number of paid employees as shown in table 2.3 comprises, apart from private sector workers, also civil servants and workers employed in state-owned enterprises (the breakdown is displayed in table 2.4). It can be observed that the number of employees in the private sector for the year 2008 is estimated at about 862,000 or 12.6 per cent of total employment.

Detailed data on private sector employment is available from the nation-wide listing of enterprises undertaken by the National Institute of Statistics (NIS) in 2009. The number of enterprises and persons engaged is presented in table 2.5 by size of enterprise and sex of employees.

It can be observed that the number of employees recorded in all private sector businesses totalled about 1.47 million. However, it is noted that this figure includes business owners and unpaid family workers.[4] The deduction of micro enterprises (those employing less than five workers - believed to be predominantly family businesses) yields a remaining total number of wage employees of about 827,500. This figure is in line with the figure of total paid private sector employees derived from the census data (861,940).[5]

It can also be observed that the total number of establishments with eight or more employees is estimated at about 26,400, with the total number of employees in those enterprises estimated at 706,842. This figure represents the potential total coverage of NSSF once implemented in all provinces.

Table 2.4. Paid Employees by sector, 2008

Employment sector	Persons	Per cent of employed
Public administration and defence	300,995	4.4
State-owned enterprises	20,522	0.3
Private sector	861,940	12.6
Total paid employees	1,183,458	17.3

Source: NIS, Population Census 2008.

Table 2.5. Enterprises by size and number of employees, 2009

Size of enterprise (# employees)	Enterprises(1)	Number of employees(2)		
		Male	Female	Total
1 – 4	330,528	279,611	362,619	642,230
5 – 9	33,110	112,350	88,716	201,066
10 – 19	8,172	66,635	38,438	105,073
20 – 49	3,512	61,092	38,339	99,431
50 – 99	747	29,219	19,928	49,147
100 – 499	478	40,539	45,975	86,514
500 – 999	108	12,193	61,496	73,689
1000 +	106	25,144	187,418	212,562
All enterprises	376,761	626,783	842,929	1,469,712
8 + (3)	26,367	279,762	427,080	706,842

(1) All sectors excluding agriculture, forestry, and fisheries; including NGOs and state-owned enterprises.
(2) Including owners and unpaid family workers.
(3) Estimated by adding 40% of the 5-9 category to the 10+ category.
Source: Nation-wide Establishment Listing of Cambodia 2009, NIS, (Dec 09).

Endnotes:

2 The total dependency ratio is given by the number of children (0-14) and elderly (65+) divided by the population of working age (15-64).

3 Apart from its impact on economic growth, price inflation also represents a major challenge for the implementation of the social protection policies planned in Cambodia.

4 A business owner is considered as an employee only if s/he draws a regular salary as manager, which is generally the case only for larger enterprises with multiple owners.

5 The discrepancy can be explained by the exclusion of small enterprises (less than five employees) and inclusion of all business owners in the first estimate.

3. Actuarial Review of the NSSF Employment Injury Branch

3.1. Background

The Social Security Law (Royal Kram NS/RKM/0902/018) was adopted by the Cambodian Parliament in September 2002, stipulating the introduction of social insurance benefits for workers in private enterprises. According to the law, benefits shall include employment injury, retirement, invalidity, survivor, and other benefits to be specified later as relevant. However, the provisions as outlined by the law consist mainly of the guiding principles that are not very specific with regard to benefit levels and implementation arrangements.[6]

A sub-decree (AnuKret No. 16 E.S.) on the establishment of the NSSF was passed in March 2007, providing the legal basis for administrative arrangements and the implementation of the scheme. Following the establishment of NSSF in the year 2007, a Prakas (Ministerial Regulation) on employment injury benefits was adopted by the Ministry of Labour and Vocational Training in February 2008 and the scheme started operations in November 2008.

The purpose of the following sections is to review the benefit experience of the Employment Injury Branch during the years 2009 and 2010, and to assess the financial situation of the scheme.

3.2. Data Management

The NSSF operates an electronic database for storing data on daily operations, including records on employers' contributions, accident reports, benefit payments, and financial transactions. A known problem at NSSF is the identification of members, which affects data management and represents a serious impediment for the effective management of the scheme.[7] Due to this issue, an individual member database has not yet been created, and members of the scheme can only be traced through their employer. However, given the high turnover of employment, this can result in a series of problems, notably the assignment of multiple social security numbers to the same person.

It must be stressed that if this problem is not addressed in a systematic way, the implementation of other benefit branches will be seriously jeopardised, particularly for benefits where entitlements are linked to the contribution history of individual members (e.g., pensions and SHI). The NSSF is currently exploring possibilities for implementing a fingerprint-based identification system in the context of the planning on SHI implementation.

Apart from the identification issue, there are other issues affecting data management. Some of the reports are incomplete due to the fact that some employers do not provide the complete information (bio data etc.) on their workers when settling contributions. This is related to the fact that (a) reporting of workers and insured wages, and (b) the payment of contributions, is currently a one-step process, which is not the usual practice. Given the time gap between insurance coverage and contribution payment, the current procedure leaves room for abuse, as employers may not report all employees, notably those that did not suffer a work-related injury during the respective month.[8] In the usual procedure, employers must report all workers at the beginning of the month in order to establish benefit entitlements and to ensure that employers assume the liability related to non-reported workers. Due to the incomplete reporting of member data by employers, the NSSF records are partially incomplete and the reports generated of limited accuracy.

It has generally been observed that only moderate importance is attached to data maintenance at the NSSF. Most of the standard data reports requested by the consultant were not available upon request but had to be compiled or updated in an 'ad-hoc' manner and the data collection therefore turned out to be a rather tedious process.[9] It is recommended that more importance be attached to data storage, processing, and database maintenance to ensure the availability of comprehensive and consistent data on

Table 3.1. Enterprises by size and number of employees, 2009

Economic sector	Workers insured(1)	
	2009	2010
Garment and footwear industries	274,911	373,445
Manufacturing (other)	5,808	13,031
Mining and construction	1,171	2,188
Transport and telecommunications	5,501	9,344
Wholesale and retail trade	3,369	7,108
Services	31,148	75,330
Total (all sectors)	321,908	480,446

(1) Annual average.
Source: National Social Security Fund of Cambodia, IT Division.

scheme operations. This is required for smooth day-to-day operations, statistical analysis, planning, actuarial reviews, and ultimately for sound financial governance of the scheme.

3.3. Coverage

In December 2010, the NSSF reported 522,685 insured workers, about 7.5 per cent of all individuals employed in Cambodia. The average number of insured workers over the 12 months of the year 2010 totalled 480,446, among which an estimated 386,678 were women, accounting for 80.5 per cent of all those insured. The number of insured workers by economic sector is presented in table 3.1 for the years 2009 and 2010.

It can be observed that the total number of workers insured increased from about 322,000 in the year 2009 to over 480,000 in the year 2010. The main sector of NSSF-covered employment is the garment and footwear industries, with more than 373,000 workers insured in 2010, about 78 per cent of all workers insured. It is noted however that the number of insured from other sectors has increased from 2009 to 2010 along with the extension of scheme coverage. Hence, workers in the service industry (mainly hotels and banking) represented about 15.7 per cent of all insured workers in the year 2010, up from 9.7 per cent in 2009.

The number of insured workers by age and sex is pictured in figure 3.1. It can be observed that the majority of insured are young females workers, predominantly employed in the garment and footwear industries.

3.4. Insured Wages and Contributions

The scheme is financed exclusively through employer contributions, since the financing of employment injury benefits is considered an employer liability in Cambodia.[10] Contributions due are calculated at 0.8 per cent of wages as reported by employers according to predetermined wage classes ranging from 200,000 to 1 million KHR per month. The detailed wage distribution of insured workers is unknown since employers report insurable wages by wage class, with the highest wage class capped at 1 million KHR per month. The distribution of insured wages for the 18 wage classes is shown in figure 3.2.

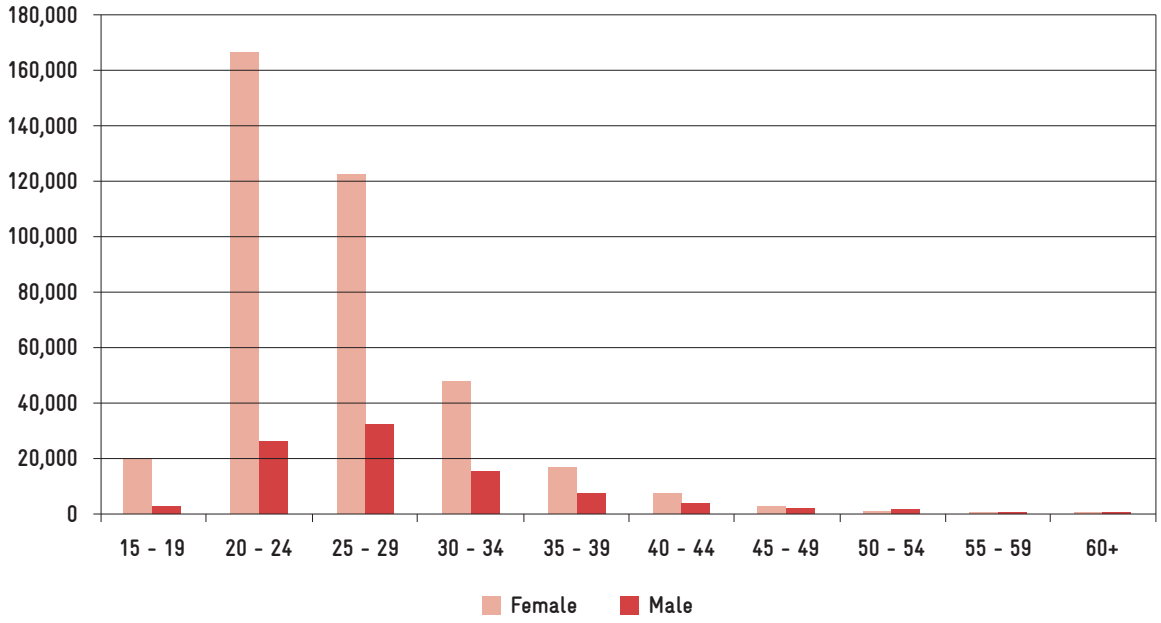
It can be observed that about 66 per cent of female insured workers have wages ranging between 250,000 and 450,000 KHR per month. For male insured workers, it is observed that almost 25 per cent have wages exceeding 1 million KHR per month. The average insured wage in the year 2010 was estimated at about 446,022 KHR per month, an amount equivalent to about US$111.50.

3.5. Occupational Accidents Reported

The total number of occupational accidents reported to the NSSF Employment Injury Branch during the years 2009 - 2010 amounted to 12,237 including 52 fatal cases. The number of reported accidents by type and industrial sector is presented in table 3.2.

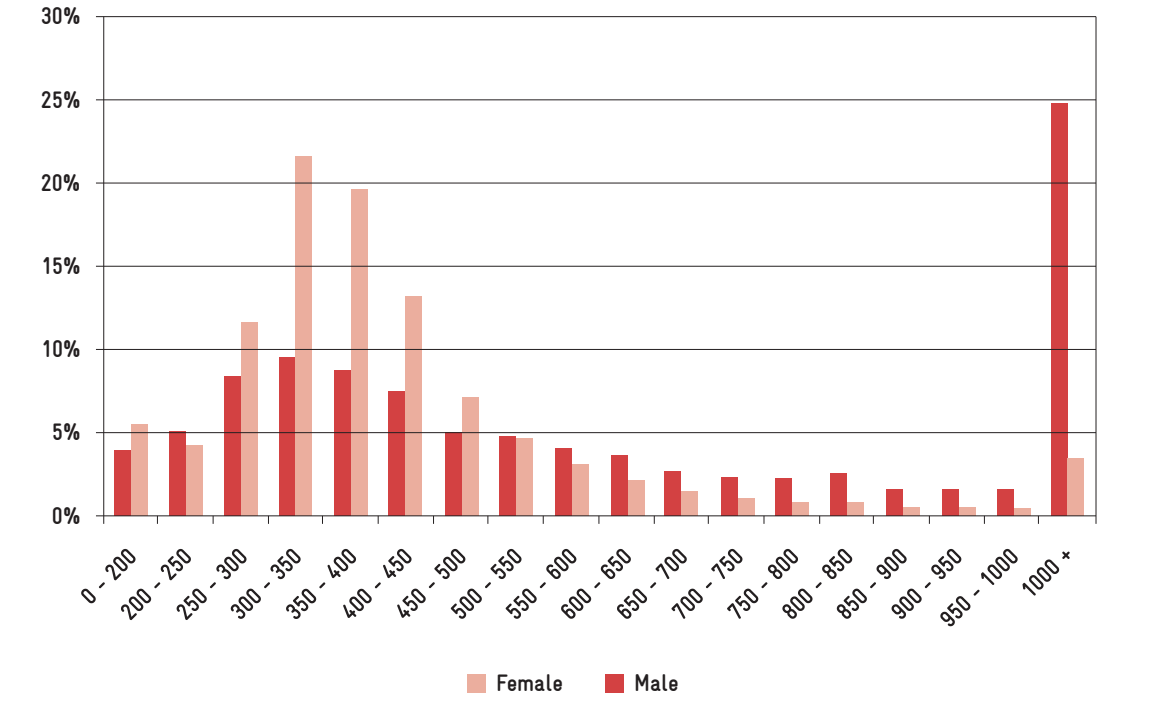
It can be observed that the total number of accidents reported increased from 3,901 in 2009 to 8,336 in 2010,

Figure 3.1. Insured workers by age group and sex, NSSF, July 2010



Source: Estimated from data provided by the IT Division, NSSF.

Figure 3.2. Distribution of insured wages by wage class and sex in thousands of riel, July 2010



Source: Author's calculation from wage data provided by the IT Division, NSSF.

with 37 fatalities reported in 2010 against only 15 in the year 2009. The number of fatalities and death rate by sector is presented in table 3.3. It should be stressed that due to the low number of cases, the resulting death rates do not have statistical significance.

It can be observed that work-related fatalities consisted mainly of deaths relating to commuting accidents, which accounted for 32 of the total 37 deaths reported during the year 2010. The overall death rate is estimated at 7.7 deaths per 100,000 workers per year, which is low by international standards. It can also be observed that for deaths at the workplace, the fatality rate for the year 2010 is estimated at only 1.0 (deaths per 100,000 workers per year). The low fatality rate for workplace accidents can be explained by the fact that a low share of the covered population is employed in hazardous industries, with the mining and construction sector accounting for only 0.5 per cent of the insured population.

Table 3.2. Occupational accidents by type and sector, NSSF, 2009 - 2010

Economic sector	Total accidents(1)		Fatalities (deaths)		Injuries (non-fatal)	
	2009	2010	2009	2010	2009	2010
Garment and footwear	3,284	6,962	14	21	3,270	6,941
Manufacturing (other)	98	254	0	2	98	252
Mining and construction	7	23	0	0	7	23
Transport & communications	8	57	0	2	8	55
Wholesale and retail trade	34	117	0	0	34	117
Services	470	923	1	12	469	911
Total (all sectors)	3,901	8,336	15	37	3,886	8,299

(1) Occupational accidents as reported to NSSF.
Source: National Social Security Fund of Cambodia, IT Division.

Table 3.3. Fatal accidents and death rate by sector, NSSF, 2010

Economic sector	Fatal accidents(1)			Death rate(2)		
	Workplace accidents	Commuting accidents	Total	Workplace accidents	Commuting accidents	Overall
Garment and footwear	1	20	21	0.3	5.4	5.6
Manufacturing (other)	1	1	2	7.7	7.7	15.3
Mining and construction	0	0	0	0.0	0.0	0.0
Transport & communications	0	2	2	0.0	21.4	21.4
Wholesale and retail trade	0	0	0	0.0	0.0	0.0
Services	3	9	12	4.0	11.9	15.9
Total (all sectors)	5	32	37	1.0	6.7	7.7

(1) As reported to NSSF for registered workers.
(2) Deaths per 100,000 workers per year.
Source: National Social Security Fund of Cambodia, IT Division.

The number of non-fatal occupational injuries reported in the year 2010 is presented in table 3.4. It can be observed that a total 8,299 occupational injuries were reported in 2010 including 2,550 injuries related to commuting accidents. It can be observed that most of the incidents were reported in the garment and footwear industries, which accounted for 6,941 injuries, or about 84 per cent of all accidents reported.

The overall incidence rate of non-fatal accidents across all economic sectors is estimated at 1.73 per cent per annum for the year 2010, and at 1.20 per cent per annum for injuries occurred at the workplace. Among the different sectors, the incidence rate was highest in the non-garment manufacturing sector with 1.93 per cent per annum, followed by the garment and footwear industries with 1.86 per cent per annum of workers injured during the year 2010. An international comparison of incidence rates of fatalities and injuries is presented in table 3.5.

It can be observed that the incidence rates of workplace fatalities and non-fatal injuries as reported in 2010 are lower than the incidence rates experienced in the other countries. However, it is suspected that a high share of non-fatal injuries that occurred were not reported to the NSSF, in particular minor ones that did not result in a hospital visit or give rise to a benefit claim. It is also noted that, according to the Labour Law of Cambodia, facto-

Table 3.4. Non-fatal accidents and incidence rates by economic sector, NSSF, 2010

Economic sector	Occupational injuries(1)			Incidence rate (%)(2)		
	Workplace accidents	Commuting accidents	Total	Workplace accidents	Commuting accidents	Overall
Garment & footwear	5,105	1,836	6,941	1.37	0.49	1.86
Manufacturing (other)	158	94	252	1.21	0.72	1.93
Mining & construction	14	9	23	0.64	0.41	1.05
Transport & communications	18	37	55	0.19	0.40	0.59
Wholesale & retail trade	68	49	117	0.96	0.69	1.65
Services	385	526	911	0.51	0.70	1.21
Total (all sectors)	5,749	2,550	8,299	1.20	0.53	1.73

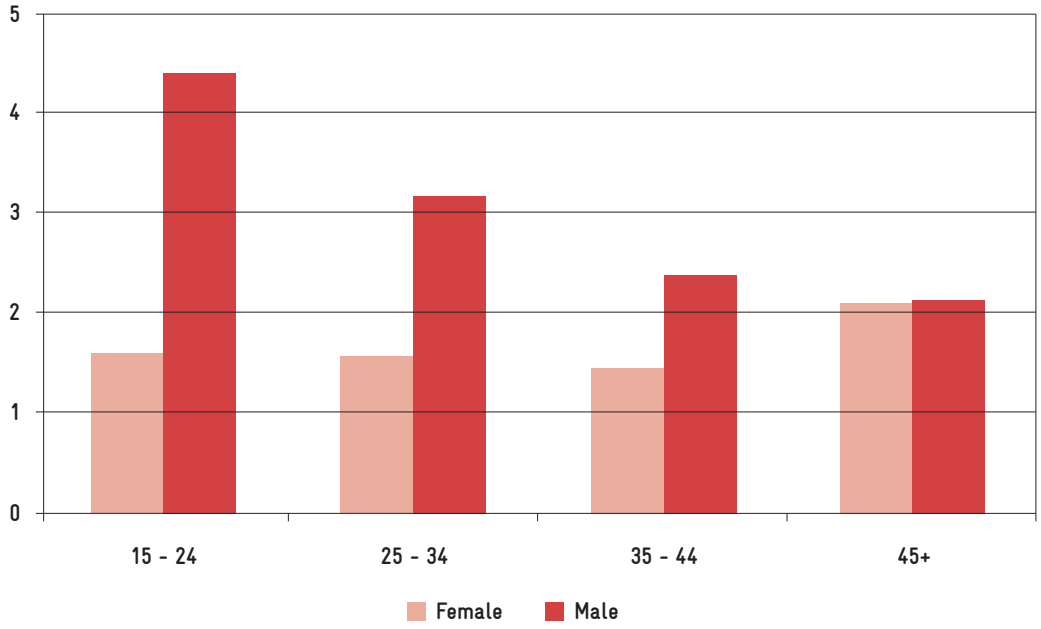
(1) Non-fatal accidents as reported to NSSF.
(2) Per cent of workers injured per year.
Source: National Social Security Fund of Cambodia, IT Division.

Table 3.5. Comparative analysis, occupational fatality and injury rate

	Cambodia (2010)	Thailand (2006)	EU (2000)	USA (2009)
Occupational fatality rate(1)	7.70	10.11	4.6	3.3
Workplace accidents	1.04	n.a.	2.8	1.4
Commuting accidents	6.66	n.a.	1.8	1.9
Occupational injury rate(2)	1.73	2.56	6.7	3.3
Workplace accidents	1.20	n.a.	6.3	n.a.
Commuting accidents	0.53	n.a.	0.4	n.a.

(1) Annual deaths per 100,000 full-time workers.
(2) Non fatal injuries, % of workers injured per year.
Sources: NSSF (Cambodia), Workmen's Compensation Fund (Thailand), Eurostat, and Department. of Labour (USA).

Figure 3.3. Occupational injuries (non-fatal) by age group and sex, NSSF, 2010



Source: Author's calculations based on data provided by NSSF

Table 3.6. Benefit expenditure by type of benefit in million KHR (1), NSSF, 2009 - 2010

	2009	2010
Medical benefits	915.4	1,937.7
Nursing allowance	0.4	18.1
Temporary disability benefits	132.5	356.2
Funeral benefits (death grant)	15.0	37.0
Permanent disability benefits(1)	10.1	45.6
Survivor benefits	2.7	29.0
Rehabilitation benefits	-	-
Total (all benefits)	1,076.1	2,423.6

(1) Total amounts incurred in the respective calendar year (accrual basis).
(2) Including lump sum benefits and permanent disability pensions.
Source: National Social Security Fund, Accounting Division.

ries employing 50 workers or more must run an on-site infirmary staffed with a qualified nurse or doctor. It is suspected that minor accidents are treated on-site and therefore do not result in a hospital visit. Moreover, if injuries treated on-site do not give rise to a benefit entitlement (e.g., for temporary disability cash benefit), it is unlikely that they are reported to the NSSF. Furthermore, anecdotal evidence suggests that employers are reluctant to see workers leave the factory compound during working hours, including for medical reasons, unless there is a real emergency.

It is recommended that an amendment of the Labour Law or the respective Prakas be considered to exempt employers from the obligation to operate a staffed on-site infirmary. Employees should be entitled to seek medical care off-site so as to (i) ensure privacy of medical information, and (2) ensure that workers receive the best care as medically required, without potential interference by the employer.[11]

The occupational injury rate by age group and sex is presented in figure 3.3. It can be observed that in the year 2010, the incidence rate relating to non-fatal injuries was

Table 3.7. Medical expenditure and average amount per claim by provider type, 2010

	Expenditure(1)	Amount per case(2)	
	(mil. KHR, 2010)	KHR per claim	US$ per claim
A. Contracted providers	1,220.4	206,024	51.5
Calmette Hospital	475.4	442,824	110.7
Kossamak Hospital	215.8	226,731	56.7
Khmer-Soviet Hospital	118.0	141,287	35.3
Chey Chomneach Hospital	71.6	115,817	29.0
Kompong Speu Hospital	19.8	89,808	22.5
Bak Chan Hospital	193.0	159,078	39.8
Chy Pho Hospital	90.0	229,704	57.4
Svay Riaeng Hospital	2.3	n.a.	n.a.
Siem Reap Hospital	6.2	140,849	35.2
Sihanoukville Hospital	0.6	100,000	25.0
Kompong Chhanang Hosp.	16.5	39,926	10.0
Kompong Tralach Hospital	10.6	37,958	9.5
Doung Hospital	0.5	8,727	2.2
Bantay Menchey Hospital	0.2	43,750	10.9
B. Non-contracted providers	758.5	161,375	40.3
Total (all providers)	1,979	n.a.	n.a.

(1) Claims reimbursed (cash accounting).
(2) Estimated from available data, not including the months of November and December.
Source: National Social Security Fund, Benefit Division.

higher for males than for females. Male workers in the age group 15 – 24 experienced the highest incidence rate with about 4.4 per cent of insured workers injured in 2010.

3.6. Work Injury Benefits

The benefits provided under the NSSF Employment Injury Branch include the following:

- Medical care (in-kind);
- Nursing cash allowance;
- Temporary disability allowance (income replacement benefit);
- Funeral (death) benefit;
- Permanent disability benefit (pension) and caretaker benefit;
- Survivor benefit (pension);
- Rehabilitation benefit (in-kind).

Total benefit expenditure as incurred in the years 2009 and 2010 is presented in table 3.6 for the different types of benefit entitlements. It can be observed that in 2010, expenditure for medical care amounted to approximately 1.94 billion KHR, accounting for about 80 per cent of total benefit expenditure.

3.6.1. Medical Benefits

The NSSF covers medical care required following a work-related injury or disease, provided either through a contracted hospital or non-contracted provider in case of emergency. Expenditure by provider type and average amount per claim are displayed in table 3.7 for the year 2010.

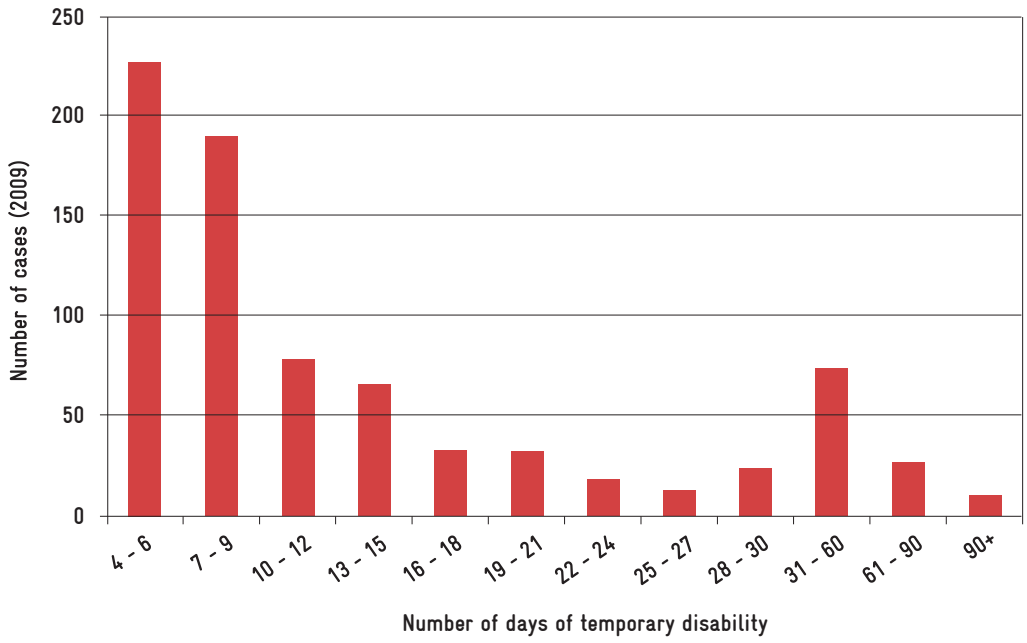
It can be observed that in 2010, the average amount per claim estimated for contracted providers amounted to about 206,000 KHR (approximately US$51.5). For non-contracted providers the average amount per treatment claimed was about 161,000 KHR (approximately US$40.3). It is noted that non-contracted providers

Table 3.8. Temporary disability benefit, expenditure and history, NSSF, 2009 - 2010

	2009	2010
Total benefit amount (million KHR)(1)	132.63	355.96
Number of approved claims	794	2,445
Average benefit amount (KHR/case)	167,044	145,586
Total number of days compensated	13,417	33,220
Average number of days per case	16.9	13.6
Average compensation received per day	9,885	10,715
In % of average insured daily wage of insured	68.7	72.1

(1) Based on benefit claims approved.
Source: National Social Security Fund, Benefit Division.

Figure 3.4. Temporary disability benefit, cases by number of days, NSSF, 2009



Source: National Social Security Fund, Benefit Division.

include health centres and district hospitals that only provide basic services. Severe cases (where surgeries and/or ICU is required) are generally referred to higher-level providers, mainly national hospitals that have been contracted by the NSSF.

3.6.2. Temporary Disability Benefits

A temporary disability benefit consists of a cash (income replacement) benefit payable in case of absence from work due to a work-related injury or occupational disease. The benefit amounts to 70 per cent of the reference salary and is paid from the fourth day of such absence.[12] Benefit expenditure and number of benefits disbursed are presented in table 3.8.

It can be observed that the temporary disability benefit was disbursed to 794 and 2,445 individuals in 2009 and 2010 respectively. The total number of [temporary disability] days compensated in 2009 and 2010 totalled about 13,400 and 33,200 respectively. For those who received

Table 3.9. Permanent disability benefits awarded by degree and sex, NSSF, 2008 – 2010

	Degree of loss of working capacity sustained (%)									Total
	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	16
Male	10	2	4	0	0	0	0	0	0	23
Female	12	5	3	1	0	1	0	1	0	39
Total	22	7	7	1	0	1	0	1	0	16

Source: National Social Security Fund, Benefit Division.

the benefit in 2009, the average number of absence days compensated was 16.9 and the average amount disbursed amounted to 9,885 KHR per day, an amount equivalent to 68.7 per cent of the estimated average daily wage of all those insured. In 2010, the average number of days compensated was 13.6 and the average daily amount disbursed was 10,715 KHR an amount equivalent to about 72.1 per cent of the estimated average insured daily wage. The distribution of temporary disability days per case is presented in figure 3.3 for the year 2009.

Figure 3.4 shows that the majority of claims relate to short periods not exceeding nine days, which accounted for 53 per cent of all claims. However, it can also be observed that 75 claims or 7.5 per cent of all claims were made for periods ranging from 30 to 60 days, and 10 claims were approved for periods exceeding three months or 91 days.

3.6.3. Funeral Benefits

A funeral or death benefit consists of a lump-sum payment of 1 million KHR (approximately US$250) per case. The benefit was disbursed for 15 deceased workers in the year 2009 and 37 in 2010. The NSSF plans to increase this benefit amount to 4 million KHR (approximately US$1,000) starting from 1 January 2012.

3.6.4. Permanent Disability Benefits

A permanent disability benefit is payable for persons who lose part or all of their working capacity due to a work-related injury or occupational disease. The benefit amount is determined as follows:

A. If the loss of working capacity (LWC) sustained is less than 20 per cent:

Benefit consists of a lump-sum (LS) calculated as follows:

$$LS = RWY * 0.7 * \lambda * \underline{0.2} * PVM$$

Where: RWY is the annualised reference wage

λ is the degree of loss of working capacity sustained

PVM is the present value multiplier applicable[13]

B. If the loss of working capacity is equal to or greater than 20 per cent:

Benefit consists of a monthly pension benefit (PM) calculated as follows:

$$PM = RWM * 0.7 * \lambda * \underline{0.8}$$

Where: RWM is the monthly reference wage of the disabled worker

λ is the degree of loss of working capacity sustained

In case of total (100 %) loss of working capacity, the disabled worker is entitled in addition to a caretaker benefit payable at 50 per cent of the amount of permanent disability pension i.e., 0.5 * 0.7 * 1 * 0.8 = 28 per cent of the reference wage of the disabled worker.

It is stressed that the above formulas as currently in use for the calculation of permanent disability benefits do not comply with the standard benefit formulas recommended by the ILO before the launch of the scheme. The factors 0.8 and 0.2 (underlined in the respective formulas) were introduced to the standard formulas recommended by ILO, most likely in order to reduce the overall cost of pension benefits (ILO, 2005). Hence for cases of permanent invalidity with less than 20 per cent loss of working capacity, the lump-sum benefit amount disbursed under current provisions represents only one fifth of the benefit amount recommended by ILO. For cases of permanent invalidity with 20+ per cent loss of working capacity, the pension benefit disbursed is equivalent to 80 per cent of the amount of pension benefit recommended by ILO. It is recommended that the benefit formulas be adjusted upwards in order to ensure appropriate compensation to permanently disabled victims of occupational accidents.

The number of cases of permanent disability experienced during the years 2008 - 2010 is summarised in table 3.9.

It can be observed that more than half of the benefits were paid for cases suffering a loss of working capacity of less than 10 per cent. The average loss of working capacity for all cases reported during 2008 - 2010 was 14.2 per cent.

The benefit expenditure for lump-sum benefits disbursed during the period to victims who suffered of loss of working capacity of less than 20 per cent is presented in table 3.10.

It can be observed that the average benefit amount disbursed amounted to about 1.6 million KHR for an average loss of working capacity of 8.7 per cent among lump-sum beneficiaries. It can further be observed that, if the loss of working capacity is assumed to reflect loss of earnings capacity, the compensation provided to all beneficiaries represented only 14.5 per cent of total earnings lost due to the disabilities sustained.

The benefit data on permanent disability pensions awarded during 2008 - 2010 is presented in table 3.11.

It can be observed that only 10 pensions were awarded during the period, for which the average degree of loss of working capacity was 30.1 per cent. The average monthly benefit awarded was 80,557 KHR (approximately US$20), about 15.7 per cent of the average monthly reference wage of beneficiaries.

It is noted that the Prakas on work injury benefits does not provide for the indexation of pension benefits to account for price inflation. In light of the high inflation rates witnessed in Cambodia in recent years and the inflationary pressures expected in the near future, it is recommended that such a provision be adopted swiftly to avoid the quick erosion of the real value of benefits.[14]

3.6.5. Survivor Benefits

Survivors' pensions are paid to surviving spouses, children, and parents in case of work-related death. The benefit amount for each category of beneficiary is as follows:

Surviving spouse:

- 42% of the reference wage if there are no surviving parents;
- 37.8% of the reference wage if there are surviving parent(s) and child(ren);
- 28% of the reference wage if there are surviving parents(s) and no surviving child(ren);

Surviving child or children:

- 28% of the reference wage if there is also a widow/er or surviving parent or neither;
- 25.2% of the reference wage if there is also a widow/er and surviving parent(s);

Surviving parent(s):

- 28% of the reference wage if there is also a widow/er or surviving child(ren) or neither;
- 7% of the reference wage if there is also a widow/er and surviving child(ren);

The maximum total benefit rate for all survivors is 70 per cent of the reference wage, with the maximum amount disbursed only if there is at least a widow/er and a surviving child.

In comparison to permanent disability benefits, survivor benefits appear as generous and incommensurate. Survivor benefits are generally designed based on the level of the benefit received by the deceased if s/he had survived. Hence, a worker suffering 95 per cent disability from a work-related injury is currently entitled to 53.2 per cent of the reference wage to support him/herself and his/her dependents. However, if the same person dies instead, his/her surviving dependents are entitled to 70 per cent of the same reference wage (in cases where the maximum applies). The benefit level in the second case is higher although there are fewer persons in the same household than in the first case. This imbalance between survivor and permanent disability benefits is due to the reduced amount of permanent disability benefits (see section 3.6.4). If the benefit amounts for permanent disability were to be changed as recommended in this report, this inconsistency would disappear.

The benefits awarded to survivors in 2009 and 2010 are presented in table 3.12.

It can be observed that 30 benefits were awarded in total during the period 2009 – 2010: 22 to surviving parents, 4 to widows/ers, and 4 to surviving children of deceased workers. Given that 52 work-related deaths occurred in the same

Table 3.10. Lump-sum benefits for permanent disability, 2008 - 2010

	2008 - 2010
Number of cases (LWC < 20%)	29
Total of benefits (lump sums) awarded (KHR)	46,146,924
Average benefit amount (KHR/case)	1,591,273
Average loss of working capacity (cases with LWC < 20%)	8.7 %
Average reference wage of beneficiaries (KHR/month)	416,954
Earnings loss compensated (%) (1)	14.5%

(1) Compensation provided compared to present value of earnings lost, assuming that the loss of working capacity (degree in %) reflects the loss of earnings capacity (% of earnings); calculation based on assumed constant real earnings until death discounted at 2 % per annum using the present value factors in force.
Source: Calculation by the author based on data provided by NSSF.

Table 3.11. Permanent disability pensions awarded 2008 - 2010

	2008 - 2010
Number of cases (with loss of WC ≥ 20%)	10
Average loss of working capacity (≥ 20%)	30.1%
Total amount of pensions awarded (KHR/year)	9,666,796
Average reference wage of beneficiaries (KHR/month)	512,083
Average benefit amount (KHR/month)	80,557
% of average reference wage of beneficiaries	15.7%

Source: Author's calculation based on data provided by NSSF.

Table 3.12. Survivors' pensions awarded by type and sex of beneficiary, 2009 – 2010

	Widow/ers			Orphans			Surviving parents			Total pensioners		
	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot
2009	1	0	1	1	0	1	3	3	6	5	3	8
2010	2	1	3	2	1	3	9	7	16	13	9	22
Total	3	1	4	3	1	4	12	10	22	18	12	30

Source: Benefit Division, National Social Security Fund.

Table 3.13. Survivor pensions awarded, 2008 - 2010

	Widow/ers	Children	Parents
Number of benefits awarded	4	4	22
Total amount of pensions awarded (KHR/year)	6,664,000	3,220,000	29,616,852
Average benefit amount (KHR/month)(1)	138,833	67,083	107,359
Average replacement rate (% of reference wage)	36.9%	13.3%	26.1%

(1) For surviving children and parents, the average refers to the benefit amount per individual beneficiary.
Source: Author's calculations based on data provided by NSSF.

period, the number of survivor benefits awarded is disproportionately low.[15] A possible explanation for the low number of benefits awarded relates to administrative requirements for establishing proof of dependency. It has been reported that many workers do not have official documents proving their family status (marriage certificate, family book, etc.). As a consequence, they cannot substantiate benefit claims and thus have to forego the receipt of survivor benefits.

The average monthly benefit amount awarded per type of survivor is displayed in table 3.13. It can be observed that the average replacement rate is estimated at 36.9 per cent for widow/ers, 13.3 per cent for surviving children, and 26.1 per cent for surviving parents. However, as noted earlier there are no provisions in the Prakas to adjust benefits for price inflation, hence the real value of benefits could decrease rapidly in the coming years if not adjusted in line with price inflation or average wages.

3.7. Financial Operations

The financial operations of the NSSF are displayed in Annex D for the years 2009 - 2010.

3.7.1. Annual Revenues and Expenditure

The income statement reveals that for the years 2009 and 2010 the total revenues of the fund totalled about 16.8 and 20.7 billion KHR respectively (see Annex D, table A.1). The annual income from operations amounted to 11.1 and 19.9 billion KHR, of which about 3.1 and 5.5 billion KHR respectively came from contribution subsidies from the national budget.[16] Annual income of the scheme also comprised subsidies from the Cambodian Government for the start-up of the scheme through the transfer of equipment and supplies from the Ministry of Labour. These in-kind subsidies received in 2009 and 2010 were valued at 5.6 and 0.5 billion KHR respectively.

It can further be observed that total expenditure for the years 2009 and 2010 amounted to 2.9 and 5.6 billion KHR respectively. Operating expenses in the years 2009 and 2010 totalled 2.4 and 4.9 billion KHR respectively, whereas total benefit expenditure accounted for 1.1 and 2.4 billion KHR respectively. Administration cost in the year 2010 accounted for 2.5 billion KHR or about 51 per cent of total operating expenditure and about 12.1 per cent of operating income. This is considered high in relative terms, although it must be stressed that given the recent (2008) introduction of the scheme, investments are required to strengthen administrative capacity and to support the extension of the scheme to all provinces.

3.7.2. Annual Balance

It can be observed that NSSF financial operations in the years 2009 and 2010 resulted in an annual surplus of about 13.9 and 15.0 billion KHR respectively. The large operating surplus achieved has provided NSSF with the means to invest in strengthening its administrative capacity through the recruitment of additional staff and the acquisition of modern equipment (e.g., IT systems). The strengthening of administrative capacities is considered as a crucial prerequisite for the streamlining of operations and the implementation of all other benefit braches as stipulated in the Social Security Law (2002).

The sizable annual surpluses achieved in 2009 and 2010 can be attributed to the following factors:

- The on-going extension of coverage of the scheme, which has resulted in increasing contribution revenues, particularly from the services sector. The continuous efforts undertaken by NSSF to enforce compliance and to extend coverage of the scheme to all economic sectors and provinces is commendable; it has resulted in the progressive diversification of sectoral coverage and, indirectly, to a sustained increase of average insured wages and contributions through the inclusion of the service sector. Furthermore, the extension has also led to a decrease in the overall risk exposure due to the fact that the service sector is generally less hazardous than the manufacturing sector where the coverage was focused initially.

- The low incidence of occupational accidents reported by employers, particularly for non-fatal injuries. This may relate to the fact that medium to larger factories operate their own in-house infirmary staffed with a nurse and/or doctor. Since this is a requirement under the Labour Law (for enterprises with 50+ workers) and no exemption has been granted so far for employers contributing to NSSF, it is suspected that the majority of minor injuries are treated on-site in these factories (see also section 3.5).

- The reduced benefit levels adopted for permanent disability, particularly for cases where the loss of working capacity is less than 20 per cent. For these cases the level of benefits was reduced before the launch of the scheme to only 20 per cent of the benefit level recommended by ILO.

- The administrative hurdles for establishing proof of dependency that prevent the award of survivor benefits in case of work-related fatalities.

It must also be stressed that, according to the terminal funding financing system adopted, the scheme is supposed to generate annual surpluses to be allocated to the technical reserve, with annual allocations equivalent to the amount of liabilities accruing each year for pension payments in subsequent years.[17]

3.7.3. Investments

Reserve monies are currently invested in fixed-term bank deposits, for terms ranging from 6 months to 2 years. The interest earned on these time deposits currently varies between 5.25 and 7 per cent per annum depending on the term.[18] Based on the data provided for the year 2010, the rate of return on investment for the reserve was estimated at 4.35 per cent in nominal terms, or 0.85 per cent in real terms.[19]

Since the fund has long-term liabilities on its books, it would make sense to invest a portion of the reserve in long-term investments so as to match the maturity of assets and liabilities. However, due to the absence of a market for government bonds and the under-developed state of financial markets in Cambodia, there are currently few viable options for long-term investments.

Furthermore, a Prakas on NSSF investments has not yet been adopted and the accounting division currently deals with investments based on the respective regulation applicable in the public sector. Given the nature of the fund, the adoption of a tailored regulation on NSSF investments should be considered. It is recommended that a detailed analysis of investment issues be included in the first comprehensive actuarial valuation of the scheme.

3.8. Contribution Rate

The contribution rate for the NSSF Employment Injury Branch was initially fixed at 0.8 per cent of insured earnings, i.e., monthly earnings subject to a minimum amount (floor) of 200,000 KHR and a maximum amount (ceiling) of one million KHR respectively. The purpose of this section is to assess the adequacy of the contribution rate in light of the benefit history of scheme. The PAYG cost ratio of the branch is presented in table 3.14.

It can be observed that in 2009 and 2010 the total PAYG cost ratio of the scheme amounted to about 0.18 and 0.20 per cent respectively. Hence, in the year 2010, total operating expenses represented about 0.20 per cent of insured earnings, whereas operating income represented 0.80 per cent (i.e., the contribution rate of the branch).

However, since long-term benefits (pensions) were awarded in 2009 and 2010, it is relevant to consider the full cost of liabilities, i.e., to include the cost of future pension payments relating to pensions awarded in the respective years [to survivors and workers who sustained a permanent loss of working capacity]. For long-term work injury benefits, 'Terminal Funding' financing is generally considered the appropriate financing system.[20]

The present value of future pension liabilities has been estimated for pensions awarded in 2009 and 2010. The total amount of future liabilities incurred is displayed in table 3.15. It can be observed that the total cost of future liabilities for permanent disability pensions and survivor pensions awarded in 2009 and 2010 is estimated at about 1.02 billion KHR (approximately US$270,000).

The relatively low level of liabilities incurred in comparison to insured earnings can be explained by the low number of pensions awarded in 2009 and 2010 and by the 'reduced' benefit formula in use for permanent disability benefits (see section 3.6.4.).

The estimated Terminal Funding contribution rate for the years 2009 and 2010 is presented in table 3.16. The present value factors currently in use are displayed in table C.1 (see Annex C).[21]

It can be observed that the terminal funding cost ratio for the years 2009 and 2010 is estimated at 0.212 and 0.218 per cent only, compared to the contribution rate of 0.8 per cent. The scope of the surpluses experienced in 2009 and 2010 may suggest that the NSSF Employment Injury Branch is over-funded by about 0.5 per cent. However, given the short history of the scheme, the number of benefit claims is expected to increase in the coming years.[22] Furthermore, it must be stressed that the increase of benefit levels planned for funeral grants and recommended for permanent disability pensions (see section 3.6.4.) will lead to a further increase in benefit expenditure in future years. It is therefore considered premature to undertake adjustments to the contribution rate at this stage.

Table 3.14. Pays-As-You-Go cost ratio, NSSF, 2009 - 2010

	2009	2010
Operating expenditure (mil. KHR)	2,444	4,899
Benefit expenditure (mil. KHR)	1,076	2,424
Administration cost (mil. KHR)	1,368	2,475
PAYG cost ratio(1)	0.176%	0.197%
Benefit expenditure	0.078%	0.097%
Administration cost	0.099%	0.099%
Total insured earnings (mil. KHR)	1,388,005	2,487,902

(1) Annual Expenditure expressed in per cent of annual insured earnings.
Source: NSSF data and calculations of the consultant.

Table 3.15. Estimated pension liabilities and funding cost ratio, 2009 - 2010

	2009	2010
Pension liabilities(1)	500.81	524.42
Permanent disability pensions	220.35	82.60
Survivors' pensions	280.46	441.82
Funding cost ratio(2)	0.036%	0.021%
Permanent disability pensions	0.016%	0.003%
Survivors' pensions	0.020%	0.018%
Total insured earnings (mil. KHR)	1,388,005	2,487,902

(1) In million KHR; present value of liabilities, end-of-year valuation based on the present value multipliers currently in use (see Annex 2) and family assumptions used earlier by ILO (see ILO, 2005).
(2) End-of-year value of total liabilities for pensions awarded in the respective year, expressed in per cent of total insured earnings.
Source: Author's calculations based on data provided by NSSF.

Table 3.16. Terminal funding cost ratio, NSSF, 2009 - 2010

	2009	2010
PAYG cost ratio(1)	0.176%	0.197%
Benefit expenditure	0.078%	0.097%
Administration cost	0.099%	0.099%
Funding cost for pensions(2)	0.036%	0.021%
Permanent disability pensions	0.016%	0.003%
Survivor pensions	0.020%	0.018%
Terminal funding cost ratio	0.212%	0.218%

(1) Annual expenditure divided by insured earnings.
(2) Present value of liabilities, i.e., provisions required under 'full funding' for pensions awarded during each year, based on PV factors currently in use (see Annex C).
Source: Author's calculations based on data provided by NSSF.

In light of the possible introduction of other benefit branches that are currently under consideration, it is recommended that the overall contribution rate for all benefit branches be considered and an appropriate allocation be determined for each branch. It may be relevant at that point to consider a partial reallocation of the current contribution rate of the Employment Injury Branch to other branches (e.g., SHI). It may equally be considered at that point whether excess reserves accumulated in the Employment Injury Branch should be reallocated to other branches for bolstering the contingency reserve of new branches during their phasing-in period.

Endnotes:

6 This is common in Cambodia, where the main features of laws are often specified in the subordinate legal texts and/or through ministerial regulations.

7 The problem stems from the fact that many Cambodians do not have an ID card, and can therefore not be identified via their ID number.

8 At the end of the month employers have information of accidents occurred during the month and have thus an incentive to declare injured workers but not those that remained unharmed.

9 It must be stressed that NSSF is still in the process of streamlining its operations and this has been the first review of the scheme since its inception.

10 This principle is enshrined in the Labour Law of Cambodia, 1997.

11 Medical staff working in factories may face pressure from employers to prescribe treatments aiming to maximise workers' short-term productivity instead of maximising their long-term health status.

12 For the first three days of absence, the employer must provide paid sick leave at full salary.

13 The present value multiplier represents the discounted present value of a life pension of a unit amount (1) per year; it is calculated based on the average estimated life expectancy of beneficiaries, and is used to transform a periodical payment into a lump-sum benefit.

14 It is noted furthermore that the present value factors used for the calculation of lump-sum benefits (LWC < 20%) are based on the assumption that the future (discounted) benefits would not lose value in real terms.

15 The estimated dependency ratios would suggest an estimated 25 surviving spouses and 32 surviving children relating to the 52 deaths occurred.

16 In order to mitigate the adverse effects of the 2008/2009 global financial crisis on employment in the garment and footwear industries, the government pledged in early 2009 to subsidise contributions for those sectors and reduce labour costs of employers so as to pre-empt any layoffs. The contribution rate for these sectors was reduced temporarily (for 2009 and 2010) to 0.5 per cent of insurable wages, while the remaining 0.3 per cent was to be provided from the national budget. Given the relatively swift recovery of demand, the subsidy was phased out as planned in December 2010.

17 With the terminal funding financing system it is assumed that all pensions are fully funded, i.e., there is no accumulation of unfunded liabilities.

18 Interest income on fixed-term deposits is subject to a government tax of 6 per cent of the interest earned.

19 The nominal rate of return was estimated by dividing the total interest earned in 2010 by the estimated mid-year balance of reserves. The real rate of return is obtained by accounting for price inflation reported at 3.5 % p.a. in 2010 (IMF).

20 The 'Terminal Funding' financing system consists in funding the full cost of liabilities for pension benefits awarded in a given year, i.e., including the cost of the reserves required to pay off future payments for pensions awarded in that year. Terminal Funding is thus equivalent to full funding in the sense that the annual cost of the branch is determined to include reserve accumulations required to cover all future liabilities as incurred in that year.

21 A revision of the present value multipliers is beyond the scope of this assessment. Furthermore, an 'official' life table does not yet exist in Cambodia. It is recommended that present value multipliers be reassessed when the first full-fledged actuarial valuation is due.

22 For newly introduced schemes, benefit expenditures generally increase during the first years of operation as employers and workers become increasingly aware of their entitlements. An increase of benefit expenditure can therefore be expected in the coming years.

4. Assessment of Social Health Insurance for NSSF

The introduction of a Social Health Insurance (SHI) Branch is currently under consideration by the NSSF. The purpose of this chapter is to present (i) background information on the planned SHI Branch, and (ii) a preliminary financial assessment of alternative design options.

4.1. Scheme Design

Detailed arrangements for the implementation of SHI have not yet been finalised. However, a working draft for a Prakas outlining the main features of the scheme has been prepared by the NSSF but not yet submitted to the board of directors for endorsement. It is noted that a number of important features of the scheme are not yet spelled out in detail, or are likely to be revised before the implementation of the scheme; in particular the following:

Benefit Package

The benefit package as spelled out in the draft Prakas has been defined based on the standard benefit packages of other existing health financing schemes, i.e., HEF, CBHI, and HIP.[23] The package includes all medical services available at public hospitals with exclusion of a list of specified high-cost treatments, such as haemodialysis, chronic diseases, cancer treatments, and other (see Annex A, benefit package of HIP).

It is observed that this 'basic' package is rather limited, reflecting the nature of the existing schemes and designed mainly for the provision of basic medical coverage to the target population of these schemes (mainly poor or near-poor households). Furthermore, the exclusion of certain items (e.g., chronic diseases) suggests a strategic purpose focused on overall cost containment and limitation of exposure to risks related to adverse selection.[24]

In light of the above, it is questionable whether the 'basic' benefit packages as used by HEF and CBHIs are wide enough in scope to satisfy the expectations of NSSF members, in particular those from the higher income quintiles. It seems obvious that the scheme has to provide services valued by a majority of members to gain overall support and ownership among members. Given that NSSF comprises a non-negligible share of members with decent wages that already have access to medical services, expectations with respect to scope and quality of care will be much higher than among HEF beneficiaries, for instance, since the latter have limited access to care and do not share the cost of the care they benefit from.

Furthermore, given the large pool of NSSF members (approximately 522,000 as of Dec. 2010), the future SHI Branch will fully benefit from risk pooling, and the opportunity will be given to cover selected high cost items without undermining the overall financial viability and/or increasing the contribution rate to unaffordable levels.[25] Since coverage against catastrophic risk is the main benefit of insurance, and carries most of its appeal, it would be unfortunate in the given context not to cover catastrophic risk adequately by excluding high cost treatments on principle without assessing the true cost of their inclusion. The protection against catastrophic risk is considered strategically important in order to increase the appeal of the scheme to the better-off NSSF members who have the ability to pay out-of-pocket for the more common medical services (e.g., primary and secondary care), either from their disposable income or from their savings. Given that SHI is redistributive, with high wage earners paying a higher share of total cost on average, it is considered important (and equitable) that the benefit package be designed to include benefits that are of some value to them.

Ultimately, the benefit package should be designed such that it maximises utility for all members by striking the right balance between affordability, access to quality health care services, and elimination of catastrophic risk for insured persons.

Provider Payment Mechanism

The draft Prakas does not stipulate the provider payment mechanism to be adopted by the scheme but leaves room

for different provisions, including fee-for-service, capitation, and case-based provider payment. It is known that the provider payment mechanism is an important design feature in social health insurance since it directly relates to cost of care by defining the amounts and timing of disbursements to providers. Furthermore, adopting appropriate provider payment provisions can help, together with other contracting instruments (e.g., monitoring), to control and/or change provider behaviour and optimise the overall outcomes of 'purchasing', both financially and quality-wise. It is therefore considered crucial that the provider payment be designed such that it creates the right incentives for providers within the overall objectives of the scheme, i.e., to ensure the delivery of quality care in an efficient and cost-effective manner. In the context of Cambodia it is considered particularly important to incentivise contracts in order to ensure that the medical goods and services required are provided in a cost-effective manner and satisfy minimum quality standards.

Provider Network and Gatekeeping Mechanism

The selection of the provider network will also affect the cost of the future SHI scheme. This is particularly relevant in Cambodia, where no universal and standardised fee schedule is in place.[26] Recent developments related to decentralisation reform suggest a transition towards greater autonomy of district authorities including health offices and service providers, and the use of contracting arrangements for improved health service delivery.[27] This may be a positive feature, although it is yet unclear how contracting at different levels will unfold and how it will impact on quality of care and user fees. In any case, given the large pool of NSSF members and the volume of services involved, the future SHI scheme will have substantial bargaining power to negotiate bulk rates with providers and to achieve cost savings through economies of scale.[28]

One of the most important decisions to be made is whether to institute a referral system, and if so, of what scope. A well-designed gatekeeping mechanism can result in sizable cost-efficiencies as illustrated by the HEFs. This is considered particularly relevant for primary care, where direct access to higher-level providers (e.g., national hospitals) is not desirable from a systemic point of view.

Given the above considerations it must be stressed that, since the detailed scheme features are not yet known, the financial assessment presented below should be considered as preliminary.[29] The objective pursued consists mainly in providing rough estimations aiming to feed into the ongoing design of scheme provisions and financial arrangements.

4.2. SHI Policy Options Proposed (for costing)

In light of the above considerations, three alternative design options were selected for the costing. The baseline option (or option 1) refers to the provisions spelled out in the draft Prakas and provides the reference framework for the costing. The main features assumed for the three respective options are summarised below.

Option 1 (baseline)

- Coverage: employees only (no coverage for dependents)
- Qualifying period: 3 months
- Carry-on period: 3 months[30]
- Benefits:
  a. Medical care (in-kind) as per standard benefit package (see section 4.1.)
  b. Add-on medical benefits (to be specified)
- Provider network: mainly public hospitals and some private hospitals
- Referral system: none (free choice of provider)

Scenario 2

- Coverage: employees + dependents (spouse & children aged 0 - 17)
- Qualifying period: 3 months
- Carry-on period: 3 months
- Benefits: Medical care (in-kind) as per standard benefit package only
- Provider network: public providers only
- Referral system: yes (strict referral)

Scenario 3

- Coverage: employees + dependents (spouse & children aged 0 - 17)
- Qualifying period: 3 months
- Carry-on period: 3 months
- Benefits:
  a. Medical care (in-kind) as per extended benefit package
  a. Add-on medical benefits (to be specified)
- Provider network: public providers only
- Referral system: yes (partial only)

4.3. Financial Assessment

4.3.1 Data Sources

The costing of SHI in Cambodia is not a straightforward exercise due to limited data availability on cost of medical care and incidence rates of diseases, in particular for any specific subset of the population. Furthermore, the cost of any health insurance scheme does not depend on these factors alone, but equally on the actual care-seeking behaviour of insured members and the scope of benefits that are provided.

The main sources on health-related data available at the time of writing in Cambodia, include the following:

- National Statistical Surveys, in particular the Cambodian Socio-Economic Survey (CSES) and the Cambodian Demographic and Health Survey (CDHS). The national health statistics available are considered to have only limited relevance in the given context, since the figures represent health spending and utilisation patterns in the existing country setting; with financing consisting mainly of user-fees paid out-of-pocket by system users. It is believed that the overall use of the existing health system is heavily constrained due to the inequities of access to care that particularly affect the poor and near poor in Cambodia. In addition, it is also believed that the overall low utilisation rates of existing service providers is partly related to the poor and uneven quality of services provided, particularly in rural areas. There is a clear difference here to a SHI setting, where full access to care and minimum quality standards are usually ensured.
- Data from Health Equity Funds (HEFs) and various Community-Based Health Insurance schemes (CBHIs). This data is considered quite relevant in the given context since these health-financing schemes ensure access to care for all their members. However, most of these schemes operate in rural areas and target the poor or near poor, hence comparability to the NSSF target population (workers in mostly urban areas) is limited. Furthermore, CBHI schemes are generally voluntary and the data therefore contains an adverse selection bias that is difficult to quantify.
- Data from HIP, the social health insurance scheme established by the French NGO GRET in 2009 to provide SHI coverage to workers in garment factories. The data collected by HIP is considered the best proxy given the setting of the scheme (employment-based insurance) and the socio-economic profile of its members. A description and data summary relating to the scheme is provided in Annex A.

4.3.2. Assumptions

This section presents the main assumptions used for the costing of the planned NSSF SHI Branch. Most of the assumptions were derived from the historical data gathered by the HIP health insurance scheme (see Annex A) during the year 2010, with adjustments made accordingly where deemed appropriate.

Coverage

For options 2 and 3, it has been assumed that family dependents will benefit from SHI coverage, including spouses of insured workers and all children aged 17 or younger. The estimated number of dependents is displayed in table 4.1. The figures displayed are derived from the dependency ratios by age group and sex, as extracted from the HIP member database (see Annex A). It can be observed that the average total dependency ratio is estimated at 0.98, which means that each contributor has on average one family member that could potentially be covered under the scheme.

Provider Share

Assumptions regarding care-seeking behaviour and service share of different providers under the planned SHI

Table 4.1. Insured and family dependents, NSSF, 2010 (estimation)

	Male	Female	Total
Insured members	93,759	386,687	480,446
Spouses of insured	158,542	49,692	208,234
Children of insured	131,421	131,421	262,842
Grand Total	383,722	567,801	951,522
Assumptions(1)			
Spouse dependency ratio	0.53	0.41	0.43
Child dependency ratio	0.70	0.51	0.55
Total dependency ratio(3)	1.23	0.92	0.98

(1) Estimated from HIP dependency ratios by sex (m/f) adjusted for age structure.

Table 4.2. Assumed service share by type of provider, options 1 – 3

Scenario	Health centres & Referral hospitals	National hospitals(1)	Assumption
Option 1 (baseline)			
OPD	30%	70%	Free choice of provider
IPD	20%	80%	Free choice of provider
Option 2			
OPD	70%	30%	Strict referral system
IPD	50%	50%	Strict referral system
Option 3			
OPD	70%	30%	Strict referral system
IPD	35%	65%	Partial referral system

(1) Could also include a carefully selected pool of private providers if deemed appropriate.

scheme are presented in table 4.2 for the three policy options. It is noted that the share of services to be delivered by the different types/levels of providers will depend mainly on the decision whether to institute a referral system or let patients select providers freely. Since options 2 and 3 assume the coverage to include dependents, a gatekeeping mechanism is deemed necessary to avoid overcrowding of national hospitals. This is considered of particular relevance for non-tertiary outpatient services that should be delivered predominantly by lower level providers in order to avoid over-burdening tertiary hospitals with primary care patients.[31] For inpatient care this consideration is less relevant given the limited capacity of non-national providers to provide the full range of inpatient services, in particular surgeries.[32] For option 1, it is assumed that members can freely select the provider based on convenience and individual preference. Since patients generally have a preference for the higher-level providers, it is assumed that a high share of SHI members will opt to seek care at national hospitals.[33] For option 2, a strict referral system has been assumed, and therefore the service share of national hospitals is assumed lower, at 30 per cent for outpatient contacts and 50 per cent for admissions. For option 3, it has been assumed that a referral system would apply for outpatient care but only partially for inpatient care.[34]

Unit Cost

Unit 'costs' for OP and IP care to be incurred under the future SHI scheme have been estimated based on the negotiated fees paid to contracted providers by HIP in 2010.[35] For inpatient care delivered at national hospitals, the average cost per admission has been estimated based on the lump-sum amount of fees paid by HEFs for inpatient admissions.[36]

Table 4.5. Utilisation Rates, actual (HIP) and assumed for SHI, 2010

Actual (HIP, 2010)(1)	OPD (contacts/pers/year)	IPD (Adm/pers/year)
Male	1.30	0.060
Female	1.70	0.100
Assumptions (NSSF)(2)		
Overall UR (m/f), option 1	1.62	0.092
Overall UR (m/f), options 2 & 3	1.54	0.084

(1) Figures based on HIP rates experienced in 2010 (see Annex A) adjusted for age and adverse selection.
(2) Weighted average based on composition (m/f) of insured population (see table 4.4).

Table 4.3. Average unit fees by type of provider, HIP, 2010(1)

Type of provider	OPD (US$/visit)	IPD (US$/admission)
Health centres & referral hospitals	1.50	30.00
National hospitals(1)	4.00	71.00

(1) Average of negotiated unit fees paid to the respective providers by HIP.
(2) Includes Kossamak and Khmero-Soviet Hospital only. The fee amount displayed for IPD refers to IPD unit fee disbursed under HEFs. HIP paid US$61 per admission but reimbursed in addition the cost of drugs prescribed.

Table 4.4. Unit cost, basic benefit package, options 1-3

Unit cost(1)	OPD (US$/visit)	IPD (US$/admission)
Option 1	3.25	62.80
Option 2	2.25	50.50
Option 3	2.25	56.65

(1) Values displayed are derived from average unit fees displayed in table 4.2; weighted according to assumed provider shares.

Average unit costs across all types of providers have been estimated based on the assumed service share among provider types (see table 4.2). From table 4.4, it can be observed that the resulting unit costs are highest under option 1, given the higher share of services assumed to be provided at national hospitals. For the costing of SHI, unit costs of care have been assumed at the average unit cost displayed in table 4.3 for the basic benefit package.

Utilisation Rates

Assumptions on service utilisation rates are displayed in table 4.5. These are based on the service utilisation rates by sex (m/f) experienced under HIP in 2010 (see Annex A), with adjustments made for adverse selection amongst voluntary members.[37]

Overall, average utilisation rates for all beneficiaries (male and female) were estimated based on the weighted average reflecting the gender-composition (m/f) of the insured population under the respective scenarios.

It can be observed that the overall utilisation rates assumed for policy option 1 are higher due to the higher percentage of female members among the insured population.

4.3.3. Costing of Medical Benefits

The average annual cost per capita of SHI benefits (basic benefit package) has been estimated for the three policy options based on the assumptions outlined in sections 4.1.1 and 4.1.2. In order to reflect the possibility of adopting an extended benefit package broader in scope

Table 4.6. Estimated average annual cost per capita for medical benefits, year 2010(1)

	Option 1	Option 2	Option 3
Utilisation rate			
OPD	1.62	1.54	1.54
IPD	0.092	0.084	0.084
Unit cost (US$/case, basic ben. package)			
OPD	3.25	2.25	2.25
IPD	62.80	50.50	56.65
Annual cost per capita (US$/person)			
Basic benefit package			
OPD	5.27	3.46	3.46
IPD	5.79	4.24	4.75
Total (OPD & IPD)	11.06	7.70	8.21
Add-on benefits(2)	3.32	0.77	2.46
Total cost per capita (US$ p.a.)	14.38	8.47	10.68
Total cost per capita (KHR p.a.)	57,518	33,869	42,709

(1) Average annual cost of medical benefits per contributing member, US$ p.a. per capita.
(2) Assumed at 30% of basic benefit package for options 1 and 3 and 10% for option 2. The exact cost will depend on the scope, incidence rate, and unit cost of add-on benefits to be included in the final benefit package.

Table 4.7. Estimated PAYG cost ratio for medical benefits, year 2010

(million KHR)	Option 1	Option 2	Option 3
Number of contributors (persons)	480,446	480,446	480,446
Number of beneficiaries (persons)	480,446	951,522	951,522
Annual benefit expenditure	27,634	32,227	40,638
Basic benefit package	21,257	29,297	31,260
Add-on benefits	6,377	2,930	9,378
Total annual expenditure	30,398	35,450	44,702
Medical benefits	27,634	32,227	40,638
Administration cost(1)	2,763	3,223	4,064
Total insured earnings	2,571,474	2,571,474	2,571,474
Density of contributions(2)	0.8	0.8	0.8
Contribution collection rate(3)	0.95	0.95	0.95
PAYG cost ratio	1.56%	1.81%	2.29%

(1) Assumed at 10 % of benefit expenditure.
(2) Adjustment factor to account for the fact that, on average, the contributory period is shorter than the period of benefit entitlement by insured members.
(3) Adjustment factor to account for contributions due that cannot be collected (i.e., in case of bankruptcy).
Source: Author's calculations.

than the basic package, a cost allowance for 'add-on' benefits has been assumed for the three options.[38] The cost for supplemental benefits has been assumed at 30 per cent of the basic package for options 1 and 3, and at 10 per cent for option 2.[39] The resulting cost estimates are presented in table 4.6 for the three policy options.

It can be observed that the total cost per capita of medical services as provided under the assumptions of policy options 1, 2, and 3 is estimated at US$14.38, US$8.47, and US$10.68 per annum respectively. Based on the estimated annual cost per capita of medical care the PAYG cost ratio can be derived for the three policy options. The resulting figures are displayed in table 4.7.

It can be observed that for the three policy options the estimated PAYG cost ratio is estimated at 1.56 per cent, 1.81 per cent, and 2.29 per cent respectively. It is noted that administration costs for medical benefits have been assumed at ten per cent of annual benefit expenditure.

4.3.4. Costing of Maternity and Sickness Cash Benefits

The draft Prakas suggests that the SHI Branch will provide for sickness and maternity (cash) benefits alongside medical (in-kind) benefits. The introduction of cash benefits should be carefully considered and any potential inconsistencies with existing provisions under the Labour Law should be addressed.

Sickness Benefit

According to the draft Prakas, sickness cash benefit shall be paid for long-term sickness, starting from the 16th day of continuous absence due to sickness. It is assumed that employers would provide paid sick leave during the first 15 days of illness-related absence. The obligation for employers to provide paid sick leave is stipulated in the Labour Law, although the law does not specify a mandatory duration and level of income replacement to be paid by employers. The Ministry of Labour and Vocational Training (MoLVT) generally recommends sick leave at full pay for a maximum of 30 days per spell.[40]

The cost of sickness cash benefits has been assessed based on the assumptions presented in Annex B. The sickness incidence rate is assumed at 0.5 spells/person/year, whereas the percentage of sickness spells exceeding 15 days is assumed at 15 per cent of total cases, with an average duration for those cases assumed at 20 days per spell following the first 15 days of paid sick leave (see table B.3, Annex B). Based on these assumptions, the total annual cost of sickness benefits is estimated at 9,130 million KHR for the year 2010 (retrospective estimate), see table 4.8.

The estimated PAYG cost ratio for sickness benefit is presented in table 4.9.

It can be observed that the PAYG cost ratio for sickness cash benefit is estimated at about 0.40 per cent of insured earnings. However, it must be noted that given the suggested 15 days of paid sick leave per spell, employers would cover the main burden of the liability for income replacement during sickness-related absence from work.[41]

Maternity Benefit

The draft Prakas suggests that maternity cash benefits would be provided under the SHI branch for a duration of 90 days per delivery at 70 per cent of reference earnings. Paid maternity leave is already an obligation under the Labour Law (at 50 per cent of earnings payable for 90 days) and the introduction of the benefit as suggested would result in overlapping provisions unless the Labour Law is amended accordingly.[42] From a social policy perspective the introduction of maternity cash benefits (through social insurance) is recommended in order to share more evenly the cost of child bearing among all employers and employees (male and female). Maternity insurance protects employers against maternity risk and thereby results in reduced incentives for employers to discriminate against female workers at recruitment.[43]

The estimation of total annual cost of maternity benefits is displayed in table 4.10 for the year 2010 (retrospective estimate). The incidence rate of maternity has been estimated from the age distribution of NSSF members and age-specific maternity rates in urban areas as reported in the last population census (NIS, 2009).

The estimated PAYG cost ratio for maternity benefits is presented in table 4.11.

It can be observed that the PAYG cost ratio for maternity benefits is estimated at 1.15 per cent of insured earnings for the year 2010.

Table 4.8. Sickness cash benefits, assumptions and projected expenditure (year 2010)

Label	Value	
Active insured members	480,446	(2010)
Average insured wage (KHR/year)	5,765,356	(2010)
Average daily wage (KHR/day)	15,795	(2010)
Average benefit amount (LT sickness)	221,137	See note (1)
Sickness incidence rate (cases/pers/year)	0.50	See note (2)
Share of sickness spells with 16+ days	15%	See note (3)
Benefit incidence rate(4)	0.075	benefits/pers/year
Benefit expenditure (mil. KHR)	7,968.3	(2010)
Administration cost (10%)	796.8	Assumption
Total expenditure (2010)	8,765.2	Estimate (2010)

(1) Based on an assumed average duration of 20 days of benefit at 70 per cent of pay.
(2) Assumption, see Annex B.
(3) Assumption, see Annex B.
(4) Obtained by multiplying assumed sickness incidence rate and share of qualifying spells.
Source: Author's calculations based on available data and relevant assumptions.

Table 4.9. Sickness cash benefits, estimated PAYG cost ratio, (year 2010)

Label	Value	
Contribution base (actual, mil. KHR) (1)	2,571,474.0	(2010)
Total expenditure (estimate, mil. KHR)	8,765.2	See table 4.7.
Density factor(2)	0.9	Assumption
Contribution collection rate(2)	0.95	Assumption
PAYG cost ratio	0.40%	

(1) Total insurable earnings, i.e., total of earnings subject to contributions.
(2) The density factor is assumed higher than for medical benefits since there is no carry-on period.
Source: Author's calculations based on available data.

4.3.5. Contribution rate

The estimated PAYG cost ratios and suggested contribution rates are displayed in table 4.13 for the three policy scenarios defined as follows (table 4.12).

It can be observed that the total PAYG cost ratios for the three scenarios are estimated at 3.10, 3.36, and 3.84 per cent respectively. The contribution rates proposed accordingly are 3.20, 3.40, and 3.90 per cent for the scenarios 1, 2, and 3 respectively. It is recommended to provide for a small contingency margin to ensure solvency in case of unexpected increases of expenditure and in order to accumulate a contingency reserve during the phasing-in period.

4.3.6. Expenditure and Service

Volume

The estimated annual service volume and benefit expenditure has been calculated to illustrate the impact of the scheme on providers under options 1, 2, and 3.

It can observed that, if dependents would be covered (scenarios 2 & 3) the annual service volume would total an estimated 1.5 million outpatient visits and about 80,000 admissions per year (2010). Since the coverage of the scheme is expected to increase, the total volume of services to be expected in future years will be even higher than these figures suggest.[44]

Table 4.10. Maternity cash benefits, assumptions and estimated expenditure, year 2010

Label	Value	
Female insured (A)	386,687	(2010)
Average ins. wage females (KHR/year)	4,913,706	Riels
Average ins. daily wage (females)	13,462	Riels
Average maternity benefit amount (B) (1)	848,119	See note 1
Maternity incidence rate (C)(2)	0.0876	Cases/females/year
Qualifying share (D)(3)	80%	% of cases
Benefit incidence rate, females (E = C x D)	0.0700	Assumption
No. of benefits disbursed (F = A x E)	27,084	(2010)
Benefit expenditure (G = B x F)	22,970.6	Million KHR
Administration cost (H)	2,297.1	Assumed at 10%
Total expenditure (I = G + H)	25,267.7	Million KHR

(1) The benefit amount is assumed at 70 per cent of average insured wage for 90 consecutive days.
(2) Estimate based on age-specific fertility rates in urban areas (NIS, 2009).
(3) To account for the qualifying period of 12 months' contributions prior to the expected date of delivery.
Source: Author's calculations based on available data.

Table 4.11. Maternity cash benefits, estimated PAYG cost ratio, year 2010

Label	Value	
Contribution base	2,571,474.0	Million KHR
Total expenditure (estimate, mil. KHR)	25,267.7	See table 4.9
Density factor(1)	0.9	Assumption
Contribution collection rate	0.95	Assumption
PAYG cost rate	1.15%	

(1) The density factor is assumed higher than for medical benefits since there is no carry-on period.

Table 4.12. Policy scenarios

	Scenario 1	Scenario 2	Scenario 3
Assumed benefits			
Medical benefits (in kind)	Option 1	Option 2	Option 3
Maternity benefits (cash)(1)	Yes	Yes	Yes
Sickness benefits (cash)(1)	Yes	Yes	Yes

(1) Benefit provisions according to the draft Prakas for all three scenarios (see above).

The total expenditure of the SHI Branch is estimated at about 64.4 billion KHR, 69.5 billion KHR, and 78.7 billion KHR for scenarios 1, 2, and 3 respectively for the year 2010 (retrospective estimate).

Endnotes:

23 Minor differences exist among the benefit packages of three schemes; the main reference used in the present context is the HIP scheme.

24 It is believed that some of the items (e.g., chronic diseases) have been excluded mainly to reduce the financial burden of adverse selection on the schemes. This may be a relevant concern for voluntary schemes (e.g., CBHI) but is not of major relevance for a compulsory scheme.

Table 4.13. Estimated PAYG cost ratios and proposed contribution rates

	Scenario 1	Scenario 2	Scenario 3
PAYG cost ratios			
Medical benefits	1.56%	1.81%	2.29%
Maternity benefits (cash)	1.15%	1.15%	1.15%
Sickness benefits (cash)	0.40%	0.40%	0.40%
TOTAL	3.10%	3.36%	3.84%
Contribution rate (proposed)	3.20%	3.40%	3.90%

25 This particularly applies for treatments considered as 'high cost' and 'low incidence', i.e., only required in rare cases.

26 User fees in health centres are currently set based on local conditions, mainly ability to pay of the catchment population, although they are subject to approval by MoH. A major costing study is currently being undertaken by MoH and the adoption of standardised user fees at different provider levels is under consideration.

27 Reference is made here to Sub-Decree No. 69 (2009) on the use of 'Special Operating Agencies' (SOAs) within MoH operations. The overall framework is spelled out in Decree 346 (2008) that defines the status of SOAs and provides grater autonomy to local government agencies, and promotes the use of contracting in order to improve public service delivery.

28 This may be the case only in urban areas where catchment areas of providers overlap. It is noted that any bargaining power may be constrained by the limited capacity of the health care system as whole. It could be argued that, on the contrary, due to the limited capacity of providers, a substantial increase in demand for services (through SHI) would result in an increase of cost if supply-side financing is not expanded in parallel. It is assumed in the following that the capacity of providers will be expanded (by MoH) in line with the expected increase in demand for services such that no cost increase will occur as a result of supply constraints.

29 A proper costing would require detailed information on scheme provisions and a comprehensive set of statistical data, both of which are currently not available.

30 The 'carry-on' period relates to the duration of entitlements following employment termination.

31 This should be obvious from a systemic point of view.

32 However, for uncomplicated admissions such as deliveries without complications, this consideration may still have some relevance.

33 This has been experienced by HIP, with about 61 per cent of inpatient care provided by national hospitals in 2010.

34 Assuming a referral is required only for certain types of admissions, e.g., deliveries.

35 It is noted that user fees paid to public providers do not reflect the full cost of the services provided. Since public hospitals are funded through the MoH, the main cost items (infrastructure, staff salaries, and essential drugs) are already provided for via supply-side financing, hence user fees only cover additional cost (mainly operation cost and consumables) and salary allowances (i.e., incentive payments to staff).

36 This does not suggest that NSSF should necessarily use the same payment mechanism.

37 The data suggests that there is an adverse selection bias mainly for outpatient care.

38 Due to the absence of a comprehensive list of benefits to be included in the package, a detailed costing was not possible and the 'budget' approach adopted was deemed the most sensible.

39 It is noted that option 2 assumes the provision of the basic package of benefits. However, in order to reflect minor additions and future cost increases, an additional cost provision assumed at ten per cent of the basic benefit package has been assumed.

40 Paid sick leave is a provision of the standard company regulations promoted by MoLVT.

41 Based on the assumptions used on the incidence of sickness (see Annex B), the total cost for income replacement during sickness (at 70 per cent of wages) is estimated at 1.33 per cent of total insured wages. This means that employers would still cover about 70 per cent of the total liability at the assumed level of income replacement.

42 This could be done possibly by granting exemption to employers covered under NSSF in the subordinate regulations of the Labour Law.

43 If paid maternity leave is purely an employer liability, employers are inclined to favour male workers over females at recruitment so as to minimise their liabilities.

44 In light of the high number of contacts to be expected, a consequential administrative effort is required by NSSF to prepare for adequate back-office processing.

Table 4.14. Estimated service volume and benefit expenditure (2010)

	Scenario 1	Scenario 2	Scenario 3
Annual service volume (2010)			
OPD	741,809	1,488,637	1,488,637
IPD	40,550	80,179	80,179
Benefit expenditure (US$ p.a.)			
Medical benefits	27,634	32,227	40,638
OPD (standard BP)	10,130	13,177	13,177
IPD (standard BP)	11,127	16,120	18,083
Add-on benefits	6,377	2,930	9,378
Maternity (cash) benefits	22,971	22,971	22,971
Sickness (cash) benefits	7,968	7,968	7,968
Sub-total	58,573	63,166	71,577
Administration cost(1)	5,857	6,317	7,158
Total expenditure, SHI branch	64,430	69,482	78,735

(1) Assumed at 10% of total benefit expenditure.

5. Assessment of Social Health Insurance for NSSFC

The National Social Security Fund for Civil Servants (NSSFC) was established in 2008 to manage social security benefits for civil servants and public sector pensioners. The Royal Kret (Decree) No. 0108/039 on 'the Social Security Scheme for Civil Servants', adopted in the year 2008, mandates the establishment of a contributory social security fund for civil servants. The related Sub-Decree no. 14 (2008) spells out benefit provisions and administrative arrangements for the scheme. Although the sub-decree does not mention explicitly the introduction of social health insurance, it refers to the introduction of 'other benefits as relevant', in addition to pensions (for retirees, invalids, and survivors), maternity benefits, death benefits, and work injury benefits.[45] The introduction of social health insurance for civil servants and public sector pensioners has been extensively discussed in 2010 and is under consideration by the NSSFC. A draft sub-decree on SHI for civil servants has already been prepared with the assistance of a technical advisor assigned by the German Development Cooperation.[46] However, so far the draft sub-decree has not yet been submitted to the Council of Ministers, and plans for implementation have been temporarily put on hold.[47]

The purpose of this chapter is to present a preliminary financial assessment of SHI for civil servants and public sector pensioners based on the provisions of the draft sub-decree referred to above.

5.1. Data on Civil Servants

A request for detailed data on civil servants and their family dependents was submitted to NSSFC in mid-2010. Comprehensive data is required for a sound actuarial assessment of all benefit branches of the scheme.[48] However, so far only limited data could be made available. The scheme does not yet have a comprehensive database and still relies for data matters on the Council for Administrative Reform (CAR), the government institution in charge of employment matters for the public sector. According to CAR, a census of civil servants has been undertaken during the year 2010 but the final results are not yet available.

Given the limited data made available on civil servants, notably on age distribution, family composition, and compensation, the results of the assessment presented in the following sections should be considered as a preliminary estimation. It is recommended that all estimates be revised when the relevant data has been made available.

The data made available so far on civil servants and related disbursement of social security benefits during the years 2007 - 2009 is presented in Annex E.

5.2. Scheme Design

The main provisions regarding the planned SHI Branch for civil servants are stipulated in the draft sub-decree (see Annex F). Although it has not yet been passed as law, the draft sub-decree provides a framework for the costing of SHI. However, it must be stressed that future amendments of its provisions may have a financial impact on the scheme that should be assessed. The main provisions of the sub-decree are summarised below:

- Coverage: To include civil servants, age pensioners, and invalidity pensioners, as well as family dependents (spouse and children) of these categories.
- Benefit package:
  b. Medical benefits: 'comprehensive package' to be defined 'in line with national policies and guidelines', exclusions to be defined in consultation with MoH.
  c. Cash benefits: none.[49]
- Provider network: Public and private providers, upon contract with NSSFC; Referral mechanism to be introduced.
- Financing:
  d. Joint contributions of employer and employee to be introduced; government to cover at least 50 per cent of cost. Age and invalidity pensioners to contribute same rate as employees based on monthly pension benefit;

e. Co-payment may be introduced, particularly for high-cost care.

- Transitional arrangements: government to cover full cost initially; contributions for employees and pensioners to be phased in gradually.

5.3. Financial Assessment

The financial assessment of the planned SHI scheme is presented below. Reference is made to the methodology used in chapter 4 (costing of SHI under NSSF) that has been applied in this section given the similarity of provider network and benefit package.

5.3.1. Assumptions

The main assumptions used in the following sections for the costing of SHI are presented in this section. In light of the scarcity of data, most of the assumptions presented below should be considered as preliminary.

The assumed dependency ratios for civil servants and pensioners are presented in table 5.1. The overall dependency ratio is assumed at 2.5 for civil servants and 1.5 for pensioners.[50]

Unit cost by type of provider have been assumed equal to the unit cost assumed for NSSF (see section 4.1.3). This is considered appropriate given that the benefit package is the same 'standard package'. For the assumed service share by provider type, the same assumptions have been used as for NSSF option 3 (partial referral system). Assumptions on unit cost and provider share are presented in table 5.3.

It can be observed that based on the assumptions regarding unit cost and provider share, the average cost per case across all providers is estimated at 9,000 KHR (approx. US$2.25) per outpatient visit and 226,699 (approx. US$56.65) per admission.

5.3.2 Scheme Coverage and Contribution Base

The estimated scheme coverage is presented in table 5.4. According to the draft sub-decree (see Annex F), the SHI Branch shall cover civil servants, pensioners, and immediate family dependents (spouse and children aged 0 – 21) of these two categories.

It can be observed that the total number of civil servants reported for the year 2010 was about 175,000

Table 5.1. Dependency ratios, assumptions

	Male	Female	Total
Total dependency ratio, civil servants	2.50	2.50	2.50
Spouse-dependency ratio	0.80	0.80	0.80
Child-dependency ratio	1.70	1.70	1.70
Total dependency ratios, pensioners	1.50	1.50	1.50
Spouse-dependency ratio	0.50	0.50	0.50
Child-dependency ratio	1.00	1.00	1.00
Overall dependency ratio(1)			2.33

(1) Average number of dependents per contributing member.

Table 5.2. Service utilisation rates (assumed)

	Outpatient Department (1) (contacts/pers/year)	Inpatient Department (1) (Adm/pers/year)
Male	2.00	0.08
Female	2.00	0.10
Average (male & female)	2.00	0.09

(1) Since older civil servants and pensioners are predominantly male, the utilisation rate for outpatient care has been assumed at the same level (2.0) for both male and female. For in-patient care, the utilisation rate for females has been assumed higher than for males to account for maternity-related admissions.

Table 5.3. Unit cost by type of provider (2010), and assumed provider share, NSSFC

Type of provider	Unit cost		Provider Share (Referral system)	
	Outpatient Department (US$/visit)	Inpatient Department (US$/admission)	Outpatient Department (% of visits)	Inpatient Department (% of admissions)
Health centres & referral hospitals	1.50	30.00	70%	35%
National hospitals(1)	4.00	71.00	30%	65%
Average (in US$)(2)	2.25	56.65		
Average (in KHR)(2)	9,000	226,600		

(1) Possibly to include selected private providers.
(2) Weighted average across all providers based on assumed provider share.

Table 5.4. Civil servants, public pensioners, and respective dependents (2010)

	Male	Female	Total
Civil servants(1)	114,709	60,316	175,025
Dependents of civil servants	197,024	240,538	437,563
Spouses of civil servants(2)	48,253	91,767	140,020
Children of civil servants(2)	148,771	148,771	297,543
Subtotal 1	311,733	300,854	612,588
Public sector pensioners	28,863	7,216	36,079
Age pensioners(1)	24,589	6,147	30,737
Invalidity pensioners(1)	4,274	1,069	5,343
Dependents of pensioners	21,648	32,471	54,119
Spouses of pensioners(2)	3,608	14,432	18,040
Children of pensioners(2)	18,040	18,040	36,079
Subtotal 2	50,511	39,687	90,198
GRAND TOTAL	362,244	340,542	702,786

:(1) Figures provided by NSSFC.
(2) Estimated based on assumed dependency ratios, see table 5.1.

Table 5.5. Estimated contribution base, year 2010

Average basic salary, 2010 (US$ p.a.) (1)	500.7
Average full salary, 2010 (US$ p.a.) (2)	980.9
Average pension benefit, 2010 (US$ p.a.) (3)	444.3
Salary base, 2010 (basic salaries, US$ 1000's p.a.)	87,630
Total (basic) pension benefits, 2010 (US$ 1000's p.a.)	16,043
Contribution base, 2010 (US$ 1000's p.a.)(4)	103,673
Full salary and pensions base, 2010 (US$ 1000's p.a.)(5)	191,109

(1) Estimate based on data for the month of May 2009.
(2) Estimate based on data for May 2009; includes all salary allowances.
(3) Estimate based on disbursements for 2009; basic pension benefits excluding allowances; age and invalidity pensions only.
(4) Basic wages and pension benefits.
(5) Including salary allowances and allowances for pensioners.

among which about 60,000 were female. The total number of dependents of civil servants is estimated at about 438,000; including about an estimated 298,000 children. The number of pensioners for the year 2010 is estimated at about 36,000; their dependents are estimated at about 54,000 in total. The total number of beneficiaries for the year 2010 is estimated at 702,786.

The average annual salary and pension benefit of civil servants is presented in table 5.5 together with the estimated contribution base for the year 2010. According to the draft sub-decree, contributions shall be paid from basic salary, i.e., excluding all salary allowances. However, since basic wages of civil servants represent only an estimated 51 per cent of total monthly compensation, the full salary base has also been estimated for comparison.

It can be observed that the contribution base is estimated at about US$104 million. The inclusion of all salary and pension allowances yields an estimated total base of about US$191 million.

5.3.3. Expenditure and PAYG Cost Ratio

The total service volume estimated for the year 2010 is displayed in table 5.6. It can be observed that, based on the assumptions presented earlier, the total number of services that would have been provided during the year 2010 to all beneficiaries of the scheme is estimated at about 1.4 million outpatient visits and about 63,000 inpatient admissions.

The estimated benefit expenditure for the year 2010 is presented in table 5.7. It can be observed that annual expenditure of all medical benefits under a SHI scheme for civil servants would have totalled an estimated 27.15 billion KHR in the year 2010.

The total cost and estimated PAYG cost ratio of the planned SHI Branch (for NSSFC) is presented in table 5.8 for the year 2010. It is noted that administration cost have been assumed at 10 per cent of benefit expenditure.[51]

It can be observed that the total cost of SHI for civil servants and pensioners is estimated at about 7.2 per cent of basic salaries (and pension benefits) and at about 3.9 per cent of full salaries (and pension benefits).

5.3.4. Conclusions

Based on the costing presented in section 5.3.3 above, it can be concluded that the cost of the SHI Branch as spelled out in the draft sub-decree would require the introduction of a contribution rate of at least 7.2 per cent if levied on basic salaries and pension benefits. The total cost of the planned SHI Branch for public sector workers, pensioners, and family dependents is estimated at about 30 billion KHR (year 2010). Since the SHI Branch shall be funded from the national budget initially (see Annex F, draft sub-decree), this amount represents the total fiscal burden that would have incurred in the year 2010. It is noted however that the expenditure figures presented above do not take into account a co-payment by beneficiaries. The adoption of a user co-payment as suggested in the draft sub-decree could help to reduce the fiscal burden and allow for a lower contribution rate.

It must be stressed that due to the lack of reliable data on civil servants, the cost estimates presented above should be considered as preliminary; all calculations should be reviewed once the required data shall become available and when detailed scheme provisions have been adopted.

Endnotes:

46 Nina Siegert, CIM advisor to NSSFC.

47 According to Mr Chourn Rattanak, NSSFC Director.

48 The assessment of the remaining benefit branches, including pensions, is planned under the second phase of the joint GIZ/ILO activity.

49 Civil servants currently have entitlements to sickness and maternity cash benefits as part of their conditions of service; the benefits consist of maternity leave and extended sick leave provisions. It is assumed here that the cost of these benefits will continue to be covered by the Cambodian Government as part of the salary budget for civil servants.

50 The data from the last population census (NIS, 2009) suggests a child dependency ratio of 0.78 for children aged 0-17. Assuming a single breadwinner per family, this would yield an average child dependency ratio of 1.56 per breadwinner in the population. Given that civil servants are older on average than the overall working population and that the dependency ratio increases with age for the working population, an assumed child dependency ratio of 1.7 is considered appropriate.

51 The draft sub-decree does not explicitly stipulate whether administration cost shall be covered from contributions; however, since the Royal Kret (2008) does not stipulate that administration cost shall be covered from the government budget, funding from contributions has been assumed.

Table 5.6. Estimated service volume, year 2010

	Male	Female	Total
Total beneficiaries	362,244	340,542	702,786
Utilisation rates (assumed)			
OPD (contacts)	2.00	2.00	2.00
IPD (admissions)	0.08	0.10	0.09
Total service volume(1)			
OPD (contacts)	724,488	681,084	1,405,572
IPD (admissions)	28,980	34,054	63,034

(1) Year 2010 (hypothetical).

Table 5.7. Estimated SHI benefit expenditure, year 2010

Label	Value
Total outpatient services, 2010 (contacts)	1,405,572
Total inpatient services, 2010 (admissions)	63,034
Unit service cost, 2010(1)	
OPD (KHR/contact)	9,000
IPD (KHR/admission)	226,600
Benefit expenditure, 2010 (mil. KHR)	27,148
Basic benefit package	24,680
OPD	11,947
IPD	12,733
Add-on benefits(2)	2,468

(1) Cost per case, see table 5.3.
(2) Assumed at 10% of basic benefit package..

Table 5.8. Estimated SHI cost and PAYG cost ratio, year 2010

Label	Value
Total SHI expenditure, 2010 (mil. KHR)	29,863
Medical benefit expenditure, 2010 (mil. KHR)	27,148
Administration cost, 2010 (mil. KHR) (1)	2,715
PAYG cost ratio, 2010(2)	
Contribution base 1 (basic salaries)	7.2%
Contribution base 2, (full salaries)	3.9%

(1) Estimated at 10 per cent of benefit expenditure; see section 4.3.3.
(2) Total SHI Expenditure as a percentage of contribution base; density of contributions assumed at 100%.

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Tables and Graphs

ANNEX A

Health Insurance Project for Garment Workers (HIP)

Overview and Data Summary

The HIP health insurance scheme, co-managed by the French NGO GRET and the Garment Manufacturers' Association in Cambodia (GMAC), was introduced in 2009 aiming to provide SHI coverage to factory workers in the garment sector. The main rationale for the scheme was to pilot employment-based SHI in Cambodia, and to gather information and experience data in order to better assess the feasibility of introducing SHI on a wider scale in the private (formal) sector.

The HIP scheme covers mainly female workers and does not provide benefits to dependents. For some factories, coverage includes all workers and the employer pays the full premium (1.6 US$/month per insured), whereas for other companies the employer pays 50 per cent of the premium and enrolment is voluntary.

The main features of the HIP scheme are outlined below.

Benefit Package

The HIP benefit package includes outpatient and inpatient medical care provided via public providers contracted under the scheme, including some health centres, referral hospitals, and two national hospitals (Kossamak and Khmero-Soviet Hospitals). The benefit package comprises most of the services included in the MPA and CPA packages as defined by MoH for health centres and referral hospitals, plus the additional services available at the contracted national hospitals.[52] The main exclusions are: dental care, treatment for chronic diseases, and treatments covered under national programmes (e.g., HIV/AIDS drugs and vaccinations). The list of benefits covered is spelled out in the standard HIP insurance policy as follows:

a) Medical services provided at contracted public health facilities:

a.1) Outpatient care:

- Consultation for general diseases (including ORL);
- Consultation for birth-spacing and antenatal exams;
- Consultation for minor surgery (including ORL);
- Consultations for gynaecology (including injections);
- HIV testing.

Outpatient services include doctors' consultations, drugs as per MoH "essential drug list" (MPA and CPA), laboratory tests, X-Rays, ultrasound, and follow-up consultations.

a.2) Inpatient care (upon referral from first-level contracted providers):

- Hospitalisation for general (non-specific) disease;
- Hospitalisation for surgeries (minor and major);

- Hospitalisation for childbirth (including complications).

In-patient services covered include room & board (standard room), doctors' services, drugs (including 'non-essential' drugs if/when medically required), laboratory tests as available, medical imaging (x-rays & ultrasound), and follow-up consultations.

b) Medical services provided by non-contracted health facilities (public only):

- In Phnom Penh:
  All services covered in case of emergency or upon referral by a contracted provider.
- Outside of Phnom Penh:
  All services covered in case of delivery or emergency.

c) Non-medical benefits:

- Reimbursement of expenses for medical evacuation with public ambulance service;
- Reimbursement of expenses for 'non-essential' drugs purchased at HIP partner pharmacy upon prescription by contracted provider (Khmero-Soviet Hospital only).

d) Exclusions:

- Long-term care for diseases covered under Cambodian national programs, including tuberculosis, leprosy, and HIV/AIDS;
- Cancer treatments (not including cancer-related surgeries);
- Treatment of chronic conditions including diabetes, high blood pressure, arthritis, epilepsy, asthma, hepatitis B & C, adenoma prostate, eczema, ulcer Gastro – Duodenal chronic, neuralgia sciatic chronic;
- Sterilisation of either sex, unless medically necessary;
- Cosmetic or plastic surgery except when necessary for repair or alleviation of damage to the insured person caused by accidental bodily injury;
- Eyesight examinations and treatments;
- Dental care except for repair or alleviation of damage to the insured person caused by accidental bodily injury;
- Implants, artificial limbs, and physical aids and devices (including hearing aids, spectacles, contact lenses, crutches, walking sticks, and prosthesis);
- Medical care required in case of work-related injuries or diseases (covered already under NSSF);
- Vaccinations.

Provider Payment

The payment of providers under HIP is mainly through case-based lump-sum amounts agreed upon with the contracted providers individually. For outpatient care, most providers apply a flat rate charge ranging from 3,000 to 6,600 KHR per visit for health centres and referral hospitals, and US$3.90 per visit for national hospitals.[53] For inpatient services, payment is mostly case-based for health centres and referral hospitals (US$13 – 40) and flat-rate for national hospitals at US$61 per admission. Provider payment provisions under HIP are summarised below:

Table A.1. HIP provider payment arrangements, 2010

Type of contracted provider	OPD (US$ per visit)	IPD (US$ per admission)
Health centres & referral hospitals (CPA1 & CPA2)	0.75 - 1.65(3)	13 - 46(4)
National hospitals(1)	3.90	61

Notes:
(1) Only applies for Khermo-Soviet Hosp.; Kossamak charges on a fee-for-service basis.
(2) Flat-rate fee per OPD visit; amount depending on provider; applies to all OPD visits excluding day-care abortions.
(3) Case-based or fee-for service payment depending on type of admission and provider.
Source: HIP/GRET

Scheme Data (summary)

HIP operations during the year 2010 are summarised below:

Table A.2. Summary of HIP operations, 2010

	Female	Male	Total
Factories where operating (Dec 2010)	n.a.	n.a.	12
Insured members (Dec 2010)			4,818
Contributors (annual average)	2,843	428	3,272
of which:			
Voluntary contributors	1,261	277	1,538
Mandatory contributors	1,582	152	1,734
Contribution income (US$)			62,480
Benefit expenditure			46,172
Medical benefits (OPD & IPD)			33,495
Drugs & supplies			12,577
Transport cost			100
Contacts/admissions	5,616	602	6,218
Outpatient care (visits)	5,295	577	5,872
Inpatient care (admissions)	321	25	346

Source: HIP/GRET

Family Composition

Upon enrolment of insured members, HIP records their bio data (age, sex, etc.) and information on family members. Based on the latter the dependency ratios by age group have been estimated:

Utilisation Rates

The average service utilisation rates experienced by HIP during for the year 2010 have been calculated from the data provided. Since the scheme comprises both voluntary and mandatory coverage, contact rates have been estimated for the two distinct populations and disaggregated by sex.

Table A.3. Dependency ratio by age and sex, HIP members, 2010

Age group (Insured person)	Spouse dependency ratio(1)		Child dependency ratio(2)	
	Male	Female	Male	Female
15 – 19	0	0.10	0	0.02
20 – 24	0.22	0.21	0.11	0.13
25 – 29	0.51	0.54	0.48	0.59
30 – 34	0.81	0.67	1.19	1.02
34 – 39	0.85	0.80	1.29	1.69
40 +	0.92	0.83	2.13	2.09
Average(3)	0.49	0.43	0.58	0.54

(1) Probability that a member in the respective age group is married.
(2) Average number of children per member of the respective age group.
(3) Weighted average for HIP-insured population.
Source: HIP/GRET

Table A.4. Utilisation rates by type of insured and sex, HIP, 2010

Type of care	Voluntary		Mandatory		All insured	
	Female	Male	Female	Male	Female	Male
Outpatient care (OPD)(1)	2.55	1.54	1.34	1.00	1.88	1.35
Inpatient care (IPD) (2)	0.109	0.051	0.084	0.073	0.095	0.058
Deliveries	0.052	n.a.	0.027	n.a.	0.038	n.a.
Other IPD	0.057	0.051	0.058	0.073	0.057	0.058

(1) Contacts per person per year.
(2) Admissions per person per year.
Source: HIP/GRET

Endnotes:

52 MPA refers to 'minimum package of activities' as defined by MoH for health centres. CPA refers to 'complementary package of activities' available at referral hospitals and comprises 3 levels: CPA1, CPA2, and CPA3. The CPA guidelines as adopted by MoH define other targets in addition to medical services such as minimum equipment, staff numbers and required administrative functions (see MoH, CPA Guidelines).

53 For Health Centres and Referral Hospitals the flat-rate fee does not apply to day-care abortions that are reimbursed at a higher rate (US$ 13 - 18 per case).

ANNEX B

Assumptions on Sickness

Table B.1. Sickness incidence rates –international reference data and assumptions

Country/Scheme	Reference Year	Incidence rate (spells/year)	Days per spell (average)	Morbidity rate (days/year)
Cyprus	2002	0.13	20.46	2.7
India	2000-2001	0.19	10.28	2.0
ILO staff scheme	1999	0.87	10.10	8.8
Luxembourg	2002	1.64	10.43	17.1
Finland	2000-2002	2.41	6.14	14.8
Cambodia*	2010	0.5	10.00	5.0

*Assumed based on the reference data displayed.

Table B.2. Sickness days per spell – assumed distribution

Days/spell	Frequency (sample data(1))	Frequency (model(2))
1 – 7	67.9%	67.8%
8 – 14	18.1%	18.3%
15 – 21	6.0%	5.9%
22+	8.0%	8.0%
15+	14.0%	13.9%

(1) Data from ILO staff health insurance scheme.
(2) Using a model of 2 aggregated negative binomial distributions.

Table B.3. Duration of sickness (days per spell)

By type of case	Average #days(1)
All cases	10.0
Cases > 15 days	34.8

(1) Expected value from model distribution (see table B.2).

ANNEX C

Table C.1. Present Value Multipliers (M/F)

Age	PVM(1)
0	12,222
1	12,305
2	12,364
3	12,398
4	12,408
5	12,398
6	12,369
7	12,324
8	12,263
9	12,189
10	12,104
11	12,010
12	11,910
13	11,806
14	11,700
15	11,593
16	11,485
17	11,376
18	11,266
19	11,156
20	11,045
21	10,932
22	10,818
23	10,704
24	10,587
25	10,470
26	10,351
27	10,230
28	10,108
29	9,983
30	9,857
31	9,728
32	9,596
33	9,462
34	9,326
35	9,188
36	9,048
37	8,906
38	8,762
39	8,616
40	8,468
41	8,317
42	8,164
43	8,009
44	7,852
45	7,692
46	7,530
47	7,366
48	7,200
49	7,032
50	6,862
51	6,690
52	6,516
53	6,341
54	6,164
55	5,986
56	5,807
57	5,627
58	5,447
59	5,265
60	5,083
61	4,900
62	4,717
63	4,534
64	4,350
65	4,169
66	3,990

Age	PVM(1)
67	3,817
68	3,648
69	3,481
70	3,316
71	3,153
72	2,996
73	2,842
74	2,693
75	2,547
76	2,406
77	2,270
78	2,138
79	2,011
80	1,888
81	1,771
82	1,658
83	1,550
84	1,447
85	1,348
86	1,255
87	1,166
88	1,081
89	1,001
90	926
91	854
92	787
93	723
94	664
95	608
96	555
97	505
98	459
99	415
100	374

Age	PVM(1)
101	333
102	293
103	246
104	174
105	0

Notes:
(1) Present value of an indexed unit life-time benefit paid daily as of the given age; established on the basis of a mixed (m/f) life table (see ILO, 2005) and the assumptions of CPI-indexed benefits with a constant discount rate of 2 per cent per annum.
Source: NSSF (see Prakas No. 109 BK/BrK, Annex 3)

ANNEX D

Income Statement, National Social Security Fund, 2009 - 2010

(Cambodian Riels)	2009	2010
INCOME	**16,847,673,398**	**20,698,683,251**
Contributions	11,104,038,877	19,903,217,951
Employer contributions	8,018,063,939	14,371,822,351
Government subsidy (contributions)(2)	3,085,974,938	5,531,395,600
Investment income	139,763,400	237,796,300
Other government subsidies (in-kind)	5,603,871,121	557,669,000
EXPENDITURE	**2,924,062,336**	**5,626,165,407**
Benefits	1,076,071,600	2,423,602,911
Short-term benefits	1,072,748,600	2,385,796,311
Medical benefits	915,358,900	1,937,747,211
Nursing allowance	438,300	18,073,400
Cash-benefits (temp. disability)	132,545,300	356,235,100
Funeral benefit (death grant)	15,000,000	37,000,000
Lump sums for permanent disability	9,406,100	36,740,600
Long-term benefits	3,323,000	37,806,600
Permanent disability pensions	656,200	8,853,900
Survivor pensions	2,666,800	28,952,700
Administration cost	1,368,218,536	2,475,348,146
Salaries	878,756,950	1,253,416,700
Mission cost	84,809,552	129,703,500
Recurrent administration cost	404,652,034	1,092,227,946
Investment cost (Depreciation)	479,772,200	727,214,350
ANNUAL BALANCE	**13,923,611,062**	**15,072,517,844**
ASSETS & RESERVE (END-OF-YEAR)	**16,285,427,954**	**31,357,945,798**
Fixed assets	5,388,828,303	956,617,553
Inventory		5,619,873,260
Accounts receivable(3)	3,188,289,259	8,773,150,059
Reserve (cash & bank deposits)	7,708,310,392	17,540,512,326

Notes:
1. Modified cash accounting.
2. Government subsidies for contributions (0.3%) of garment and footwear industries; accrual basis.
3. Subsidies from national budget not yet transferred on 28.02.10.
Source: Accounting Division, National Social Security Fund for Civil Servants.

ANNEX E

Social Security Benefits for Civil Servants and Family Dependents, 2007 - 2010

(in million Riels)	2007	2008	2009	2010 (p) (1)
BENEFICIARIES				
Maternity grants	**557**	**656**	**812**	**1000**
Death benefits				
Retirement benefits				
1. Pensions	22,521	25,456	27,972	35,000
2. Lump-sum benefit	2,440	2,871	3,235	4,200
3. Retirement grant	137	162	141	300
4. Severance pay	46	54	217	300
5. Pension adjustment	1,535	1,806	2,125	2,500
6. Cost of living allowance	21,637	25,456	27,972	35,000
Survivor benefits				
Widow pensions	19,222	21,151	23,031	28,000
Widows of CS or age pensioner	15,942	17,974	19,725	25,000
Widows of invalidity pensioner	3,280	3,177	3,306	3,000
Orphans pensions	14,869	12,008	11,279	19,500
Orphans of CS or age pensioner	12,253	10,457	9,998	18,000
Orphans of invalidity pensioner	2,616	1,551	1,281	1,500
Invalidity benefits				
Invalidity pensions	5,228	5,108	5,224	4,700
Invalidity grant	138	163	121	360
Pension adjustment	29	35	42	50
Cost of living allowance	5,228	5,108	5,224	4,700
Work injury benefits	521	613	722	850

(1) NSSFC projections.
Source: National Social Security Fund for Civil Servants (NSSFC).

(in million Riels)	2007	2008	2009	2010 (p) (1)
EXPENDITURE				
Maternity grants	**334.20**	**393.60**	**487.20**	**600.00**
Death benefits	**3,769.84**	**4,626.64**	**6,259.52**	**6,389.00**
Retirement benefits	**55,675.90**	**63,759.12**	**70,943.88**	**89,460.00**
1. Pensions	37,835.28	42,766.08	46,992.96	58,800.00
2. Lump-sum benefit	6,832.00	8,038.80	9,058.00	11,760.00
3. Retirement grant	479.50	567.00	493.50	1,050.00
4. Severance pay	161.00	189.00	759.50	1,050.00
5. Pension adjustments	2,578.80	3,034.08	3,570.00	4,200.00
6. Cost of living allowance	7,789.32	9,164.16	10,069.92	12,600.00
Survivor benefits	**2,276.12**	**2,243.35**	**2,334.97**	**3,186.00**
Widow pensions	1,383.98	1,522.87	1,658.23	2,016.00
Widows of CS or age pensioner	1,147.82	1,294.13	1,420.20	1,800.00
Widows of invalidity pensioner	236.16	228.74	238.03	216.00
Orphans pensions	892.14	720.48	676.74	1,170.00
Orphans of CS or age pensioner	735.18	627.42	599.88	1,080.00
Orphans of invalidity pensioner	156.96	93.06	76.86	90.00
Invalidity benefits	**10,107.42**	**9,954.83**	**10,078.61**	**9,702.00**
Invalidity pensions	8,155.68	7,968.48	8,149.44	7,332.00
Invalidity grant	338.10	399.35	296.45	882.00
Pension adjustments	45.24	54.60	65.52	78.00
Cost of living allowance	1,568.40	1,532.40	1,567.20	1,410.00
Work injury benefits	**521.00**	**613.00**	**722.00**	**850.00**
(Lump-sum benefit)				
TOTAL	**72,684.49**	**81,590.54**	**90,826.18**	**110,187.00**

ANNEX F

Sub-Decree on Social Health Insurance for Civil Servants

DRAFT 2

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CHAPTER 1 – General Provisions and Terminology

Article 1: Purpose

The purpose of the Sub-Decree on SHI for Civil Servants is to create a social health care benefit in conformity with the Royal Kret on the Social Security Scheme for Civil Servants and the AnuKret 14 on the establishment of the NSSFC.

Article 2: Goal/ Objective

The vision of the Sub-Decree is to create and implement a sustainable, compulsory social health insurance scheme which positively influences the delivery of comprehensive health care services to its target population. Thus positively influences the health and well-being of its beneficiaries and contributes generally to the development of a universal health care system for Cambodia.

Article 3: Beneficiaries

This Sub-Decree aims to cover all Civil Servants, Retirees, Invalids and their Dependants as defined by AnuKret 14 on the establishment of NSSFC.

Article 4: Terminology

CHAPTER 2 – SHI Administration

Article 5: Charge

The SHI scheme shall be established as an entity under the National Social Security Fund for Civil Servants (NSSFC), with its central office within the NSSFC in Phnom Penh.

Article 6: Establishment of the SHI organisational unit

The SHI scheme shall be created as a unit under NSSFC with own administrative and financial processes. The SHI scheme shall have its own sub-account to ensure earmarked funds in conformity to AnuKret 14.

The SHI unit will have its separate administrative sub-d1ivisions. The unit's concrete functions and responsibilitie s are to be further defined by Prakas.

Article 7: Functions of the SHI unit

The powers and functions of the SHI unit will be delegated by the NSSFC. The SHI unit will:

- administer SHI provisions for its beneficiaries
- formulate and propose policies relating to SHI
- implement SHI policies and functions
- negotiate and enter into contract with service providers and staff
- will partner with health care providers to ensure quality of health care services to beneficiaries.
- be responsible for Monitoring and Evaluation of the SHI scheme, reporting and record keeping.

CHAPTER 3 – Registration

Article 8: Registration

All Beneficiaries shall be compulsory registered in the SHI scheme. The registration guidelines, procedures and processes shall be defined by Prakas.

CHAPTER 4 – Health Care Benefits

Article 9: Benefit Package

The SHI shall provide a comprehensive benefit package to its beneficiaries designed in line with national health priorities and in accordance with existing national policies and guidelines.

The SHI shall cover prescribed medicines in accordance to a pre-established and MoH approved essential drug list.

Certain exclusions will apply to the benefit package.

The provisions of the benefit package and any exclusion will be developed in detail under consideration of ethical, equity and cost-effectiveness criteria and defined by joint Prakas with the MoH.

Article 10: Referral Mechanisms

A referral system shall apply to the transition from each level of care to the next higher level, requiring referral letters by each referring level of care.
In the case of emergency direct admission to any level of care will be granted without specific referral letter. NSSFC will have to be informed of such emergencies within 24 hours of occurrence.

CHAPTER 5 – Health Care Providers

Article 11: Health Facilities Providing for the Insured Beneficiaries

Public and private health facilities throughout Cambodia shall provide health care benefits to SHI scheme beneficiaries. Only health care facilities formally contracted by SHI scheme will be recognised as eligible providers of benefits.

Prakas shall define the exact contracting process between SHI and health facility.

Article 12

Some health facilities outside Cambodia might also be recognised as eligible service providers by the SHI scheme. This will be subject to definition by Prakas.

Article 13: Provider Payment Mechanisms

A mixed system of provider payments shall be applied by the SHI. There may be adequate financing ceilings introduced and the possibility of co-payments for higher cost care can be considered as deemed necessary by the SHI scheme and after careful financial assessment.

In Prakas the payment mechanisms at the respective levels of care shall be defined in detail, cases will have to be defined as well as pricing schedules in line with national fee policies.

Article 14: Quality Assurance

Contracted health care providers shall be responsible to ensure quality health care services.

A relevant unit within the SHI scheme will conduct claims reviews, audits on health service provision policy development and define acceptable quality standards for the providers contracted by the SHI.

A committee with relevant expertise shall be established to resolve issues pertaining to quality health care and relating to medical claims, reimbursements, beneficiary complaints, health care provider concerns and any other medical service related issues relating the provisions of the SHI scheme.

Available national quality assessment tools shall be recognised and referred to by the SHI for quality assessment purposes.

Contracts with the individual health facilities shall require a minimum outlined expectation of quality.

The same processes for internal and external monitoring as well as Audits of the SHI scheme shall apply as stipulated in AnuKret 14.

An independent auditor recognised by MoEF and MoSVY and commissioned annually by the NSSFC Board shall conduct the external monitoring activity in form of independent audits.

CHAPTER 6 - Financial Management

Article 15: Contribution Schedule

SHI Contributions shall be deducted monthly from Civil Servant's payroll/ basic salary, retiree's or invalid's pension (in accordance with the Royal Decree on Social Security Article 9) before any allowances or incentives.

The detailed contribution rate will be defined by Prakas.

Article 16: Contribution Share

The Contribution shall be shared by the employer (the government) and the employee (civil servant / retiree/ invalid), whereby the employer (government) assumes responsibility of covering not less than 50% of the contributory share.

The exact share will be determined by Prakas.

Article 17:Contribution Rate

Contribution rate shall be determined by Praka and changes should be subject to review and as deemed necessary by the NSSFC Board.

Changes to the contribution rate should not take place more frequently than every two years.

The frequency of contribution rate review and change

shall be determined in detail by Prakas.

CHAPTER 7 - Provisions

Article 18: Other provisions

Legal provisions shall be in line with the Cambodian Criminal Code Provisions, as regards appeals, sanctions and penal provisions.

CHAPTER 8 - Transitional Provisions

Article 19

The government shall subsidise the contributory share of the employee during the initial start-up phase of the SHI in consideration of the low salary rates of civil servants. This subsidy will be gradually phased out until the agreed percentage share is reached

The duration of the full subsidy of employee/ retiree/ invalid contribution share shall be determined by Prakas as well as the phasing-out schedule of the subsidy.

The SHI scheme will be introduced to the country gradually, phasing in its introduction geographically.

The Benefit Package of the SHI will be subject to continuous development according to the financial abilities of the SHI scheme. It may start by offering an initially basic benefit package, which shall expand in line with the scheme's financial and technical capacities.

CHAPTER 9 - Final Provisions

Article 20

Any provisions contrary to this Sub-decree shall be null and void.

Article 21

The Minister of the office of Council of Ministers, Minister of the MoSVY, Minister of the MoEF, Minister of the Ministry of Health, Ministers, secretary of state of all ministries and relevant institutions have the duty to implement this sub-decree from the day of signature.

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