July 2007

Steven Tanner
tancho@pacific.net.id

Labor Law No. 13/2003 – Indonesia
Estimated Funding Costs

For Benefits Under

Articles 162 (1), 166, 167, and 172

Contents

- Executive Summary
- Labor Law No. 13/2003
- Assumptions
- Aggregate Results

SECTION 1

Executive Summary

SECTION 1

Executive Summary

Estimated costs of Labor Law No. 13/2003

- The estimated **aggregate contribution** to fund the **future service** (**as a percentage of monthly wages**), for the benefits under **Articles 162 (1), 166, 167,** and **172** of **Labor Law No. 13/2003** or only **Article 167**, using a particular funding method and a set of actuarial assumptions as well as the assumption of age distribution and potential total services completed at normal retirement age are
  - **Lowest 5.3%** and **highest 10.2%** of **monthly wages**
- The complete results are summarized in the following tables
- The detailed assumptions and results are provided under **Section 3** and **Section 4** respectively

Executive Summary

Summary of contributions: future service

Estimated Contributions (% of Wages): Article 167 Only									
Spread	Total Services = 30 Years				Total Services = 30 Years				Spread
	Withdrawal Rates				Withdrawal Rates				
	0.0*Wx	1.0*Wx	1.5*Wx	2.0*Wx	0.0*Wx	1.0*Wx	1.5*Wx	2.0*Wx	
2.0%	6.8%	6.1%	5.6%	**5.3%**	7.9%	7.1%	6.7%	6.2%	2.0%
1.0%	7.7%	6.9%	6.4%	6.0%	8.7%	7.8%	7.4%	6.9%	1.0%
0.0%	8.3%	7.6%	7.0%	6.6%	**9.6%**	8.7%	8.1%	7.7%	0.0%

Estimated Contributions (% of Wages): Articles 162 (1), 166, 167, and 172									
Spread	Total Services = 30 Years				Total Services = 30 Years				Spread
	Withdrawal Rates				Withdrawal Rates				
	0.0*Wx	1.0*Wx	1.5*Wx	2.0*Wx	0.0*Wx	1.0*Wx	1.5*Wx	2.0*Wx	
2.0%	7.3%	6.7%	6.4%	**6.0%**	8.4%	7.7%	7.3%	7.0%	2.0%
1.0%	8.1%	7.5%	7.0%	6.7%	9.3%	8.7%	8.1%	7.8%	1.0%
0.0%	9.0%	8.2%	7.9%	7.4%	**10.2%**	9.3%	9.0%	8.5%	0.0%

Spread: The difference between discount rate and rate of wage increase

Wx: Withdrawal rates; Article 162 (1) assumed = 15% x (SVR + SVC)

SECTION 2

Labor Law No. 13/2003

SECTION 2

Labor Law No. 13/2003

Types of termination

- Provisions governing the benefits payable on terminations are set out under **Chapter XII Articles 150-172**

- Provisions related to **post-employment benefits** are set out under
  - **Article 162**: **Voluntary resignation**
  - **Article 166**: **Death**
  - **Article 167**: **Attaining retirement age**
  - **Article 172**: **Disability or prolong illness**

Labor Law No. 13/2003

Labor Law: benefit scales

Years of Service (YoS)	Severance Pay (SVR)[1)]
YoS < 1	1
1 =< YoS < 2	2
2 =< YoS < 3	3
3 =< YoS < 4	4
4 =< YoS < 5	5
5 =< YoS < 6	6
6 =< YoS < 7	7
7 =< YoS < 8	8
YoS >= 9	9

Years of Service (YoS)	Service Pay (SVC)[1)]
YoS < 3	0
3 =< YoS < 6	2
6 =< YoS < 9	3
9 =< YoS < 12	4
12 =< YoS < 15	5
15 =< YoS < 18	6
18 =< YoS < 21	7
21 =< YoS < 24	8
YoS >= 24	10

Compensation Pay = 15% x (SVR + SVC)

[1)] **Multiple of monthly wages: basic salary + fixed allowances**

Labor Law No. 13/2003

Labor Law: amount of benefits

Articles	Benefits	Formula
162	Voluntary resignation	**Separation Pay** and it varies by companies – from **nil** to some specified formula or nominal amount
166	On death	(2 x **SVR** + 1 x **SVC**) x 1.15
167	Normal retirement age	(2 x **SVR** + 1 x **SVC**) x 1.15
172	Disability or prolong illness	(2 x **SVR** + 2 x **SVC**) x 1.15

On death and at normal retirement, for 24+ years of service, maximum benefits 32.2 x Wages
At disability, for 24+ years of service, maximum benefits is 43.7 x Wages

SECTION 3

Assumptions

SECTION 3

Assumptions

General(1)

- The main objective of funding is to provide sufficient funds to meet the liabilities on the benefits promised, by way of collecting funds periodically and systematically
- The real cost of a **defined benefit** plan may not be known accurately (precisely) until the last person in the plan passes away – **fluctuate**
- **Funding method** is merely a mathematical tool or technique used to estimate the costs in terms of **timing**
  - Funding method determines the amount of **normal contribution** for a certain period and the amount of **past service liability**

Assumptions

General(2)

- Results are not determined only by **funding method** used, but also influenced by the **actuarial assumptions**
- **Actuarial assumptions** are **economic assumptions** (**discount rate** and **wage increases** – the difference is termed ***spread***) and **demographic assumptions** (**mortality**, **disability** and **resignation rate**)
- Results must be reviewed periodically because expectation (assumptions used) may deviate from actual experience

Assumptions

Benefits under articles 162 (1), 166, 167, and 172

- **Article 167: Attaining normal retirement age 55 years**
  - **(2 x SVR + 1 x SVC) x 1.15**
- **Article 166: Death**
  - **(2 x SVR + 1 x SVC) x 1.15**
- **Article 172: Disability**
  - **(2 x SVR + 2 x SVC) x 1.15**
- **Article 162 (1): Voluntary resignation**
  - **Assume = (2 x SVR + 1 x SVC) x 0.15**

Assumptions

Funding method and economic assumptions

- **Funding cost method** used is ***projected unit credit actuarial cost method***
  - Total benefits at retirement age is divided into units of benefit allocated into each year of service, taking into account the discount rate and wage increases rate
  - The present value of one unit of benefit, particularly the portion allocated into service immediately after the calculation date is termed as **normal contribution** or **service cost**
  - The present value of units allocated to services prior the valuation date is termed as **past service liability**

- **Economic assumptions** are expressed as the difference between the discount rate and the rate of wage increases, or ***spread***
  - **2%**, **1%** and **0%**

Assumptions

Demographic assumptions(1)

- Those who attain normal retirement age (**55 years**), ***Rx***, are assumed to retire immediately
- Mortality rate, ***Dx***, assumed to follow **Indonesian table of Mortality II (male) 1999** (**TMI2-99M**) – mortality table of a group of insured population
- Disability rate, ***Zx***, assumed to be **10%** of mortality rate
- Withdrawal rate, ***Wx***, assumed to be at **10%** up to age **25** and decreasing linearly by **0.5%** down to **0%** at age **45** and thereafter
  - **0.0 * Wx = 0%**; **1.0 * Wx = 100% * Wx**; **1.5 * Wx = 150% * Wx**; **2.0 * Wx = 200% * Wx**

Assumptions

Demographic assumptions[2]

Demographic Assumptions	Multiple of 5-Year Age Band						
	25	30	35	40	45	50	55
Rx	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.00000
Dx	0.00137	0.00137	0.00164	0.00227	0.00338	0.00609	0.00908
Zx	0.00014	0.00014	0.00016	0.00023	0.00034	0.00061	0.00091
0.0*Wx	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.0*Wx	0.10000	0.07500	0.05000	0.02500	0.00000	0.00000	0.00000
1.5*Wx	0.15000	0.11250	0.07500	0.03750	0.00000	0.00000	0.00000
2.0*Wx	0.30000	0.22500	0.15000	0.07500	0.00000	0.00000	0.00000

Assumptions

Composition of age distribution

- The composition of age distribution of employees in any particular companies also an influence factor on the results
  - Companies with different age distribution composition will produce different results

- The simulations are based on the total employees of **70 000** from **70** companies which produces age distribution starting from age **25** in a multiple of 5-year band, **25 years** (**28.2%**), **30 years** (**24.0%**), **35 years** (**20.6%**), **40 years** (**11.0%**), **45 years** (**9.7%**) and **50 years** (**6.5%**)
  - The potential length of services in a company up to retirement age (55 years) are assumed to be 25 and 30 years – benefits under Labor Law No. 13/2003 indicate that shorter total services tend to have higher benefits compared to longer total services

SECTION 4

Aggregate Results

SECTION 4

Aggregate Results

Total service of 30 years[(1)]

S2W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	6.2%	0.5%	0.1%	0.0%	6.8%	28.2%	1.9%	1.7%
30	6.6%	0.4%	0.1%	0.0%	7.1%	24.0%	1.7%	1.6%
35	7.0%	0.4%	0.1%	0.0%	7.5%	20.6%	1.5%	1.4%
40	7.4%	0.3%	0.0%	0.0%	7.7%	11.0%	0.8%	0.8%
45	7.8%	0.3%	0.0%	0.0%	8.1%	9.7%	0.8%	0.8%
50	8.4%	0.1%	0.0%	0.0%	8.5%	6.5%	0.6%	0.5%
Total/Aggregate						100.0%	7.3%	6.8%

S2W0.0: Spread **2%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[2]

S1W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	7.2%	0.5%	0.1%	0.0%	7.8%	28.2%	2.2%	2.0%
30	7.4%	0.5%	0.1%	0.0%	8.0%	24.0%	1.9%	1.8%
35	7.7%	0.4%	0.1%	0.0%	8.2%	20.6%	1.7%	1.6%
40	7.9%	0.4%	0.0%	0.0%	8.3%	11.0%	0.9%	0.9%
45	8.2%	0.3%	0.0%	0.0%	8.5%	9.7%	0.8%	0.8%
50	8.6%	0.1%	0.0%	0.0%	8.7%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	8.1%	7.7%

S1W0.0: Spread **1%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[3]

S0W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	8.3%	0.5%	0.1%	0.0%	8.9%	28.2%	2.5%	2.3%
30	8.4%	0.5%	0.1%	0.0%	9.0%	24.0%	2.2%	2.0%
35	8.4%	0.4%	0.1%	0.0%	8.9%	20.6%	1.8%	1.7%
40	8.5%	0.4%	0.0%	0.0%	8.9%	11.0%	1.0%	0.9%
45	8.6%	0.3%	0.0%	0.0%	8.9%	9.7%	0.9%	0.8%
50	8.8%	0.1%	0.0%	0.0%	8.9%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	9.0%	8.3%

S0W0.0: Spread **0%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[4]

S2W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.5%	0.4%	0.0%	0.5%	5.4%	28.2%	1.5%	1.3%
30	5.6%	0.4%	0.1%	0.3%	6.4%	24.0%	1.5%	1.3%
35	6.6%	0.4%	0.1%	0.1%	7.2%	20.6%	1.5%	1.4%
40	7.3%	0.3%	0.0%	0.0%	7.6%	11.0%	0.8%	0.8%
45	7.8%	0.3%	0.0%	0.0%	8.1%	9.7%	0.8%	0.8%
50	8.4%	0.1%	0.0%	0.0%	8.5%	6.5%	0.6%	0.5%
Total/Aggregate						100.0%	6.7%	6.1%

S2W1.0: Spread **2%** and withdrawal assumption = **1.0 * Wx**
R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)
Distr: Age distribution from 70 companies with a total of 70 000 employees
Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[5]

S1W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	5.3%	0.4%	0.1%	0.5%	6.3%	28.2%	1.8%	1.5%
30	6.5%	0.4%	0.1%	0.3%	7.3%	24.0%	1.8%	1.6%
35	7.3%	0.4%	0.1%	0.1%	7.9%	20.6%	1.6%	1.5%
40	7.9%	0.4%	0.0%	0.0%	8.3%	11.0%	0.9%	0.9%
45	8.2%	0.3%	0.0%	0.0%	8.5%	9.7%	0.8%	0.8%
50	8.6%	0.1%	0.0%	0.0%	8.7%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	7.5%	6.9%

S1W1.0: Spread **1%** and withdrawal assumption = **1.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[6]

S0W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	6.3%	0.4%	0.1%	0.4%	7.2%	28.2%	2.0%	1.8%
30	7.3%	0.4%	0.1%	0.2%	8.0%	24.0%	1.9%	1.8%
35	8.1%	0.4%	0.1%	0.1%	8.7%	20.6%	1.8%	1.7%
40	8.5%	0.4%	0.0%	0.0%	8.9%	11.0%	1.0%	0.9%
45	8.6%	0.3%	0.0%	0.0%	8.9%	9.7%	0.9%	0.8%
50	8.8%	0.1%	0.0%	0.0%	8.9%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	8.2%	7.6%

S0W1.0: Spread **0%** and withdrawal assumption = **1.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[7]

S2W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	3.6%	0.3%	0.0%	0.7%	4.6%	28.2%	1.3%	1.0%
30	5.1%	0.4%	0.0%	0.4%	5.9%	24.0%	1.4%	1.2%
35	6.4%	0.4%	0.1%	0.2%	7.1%	20.6%	1.5%	1.3%
40	7.3%	0.3%	0.0%	0.0%	7.6%	11.0%	0.8%	0.8%
45	7.8%	0.3%	0.0%	0.0%	8.1%	9.7%	0.8%	0.8%
50	8.4%	0.1%	0.0%	0.0%	8.5%	6.5%	0.6%	0.5%
Total/Aggregate						100.0%	6.4%	5.6%

S2W1.5: Spread **2%** and withdrawal assumption = **1.5 * Wx**
R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)
Distr: Age distribution from 70 companies with a total of 70 000 employees
Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[8]

S1W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.3%	0.3%	0.0%	0.7%	5.3%	28.2%	1.5%	1.2%
30	5.9%	0.4%	0.1%	0.4%	6.8%	24.0%	1.6%	1.4%
35	7.1%	0.4%	0.1%	0.2%	7.8%	20.6%	1.6%	1.5%
40	7.9%	0.4%	0.0%	0.0%	8.3%	11.0%	0.9%	0.9%
45	8.2%	0.3%	0.0%	0.0%	8.5%	9.7%	0.8%	0.8%
50	8.6%	0.1%	0.0%	0.0%	8.7%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	7.0%	6.4%

S1W1.5: Spread **1%** and withdrawal assumption = **1.5 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[9]

S0W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	5.2%	0.4%	0.1%	0.7%	6.4%	28.2%	1.8%	1.5%
30	6.8%	0.4%	0.1%	0.4%	7.7%	24.0%	1.8%	1.6%
35	7.9%	0.4%	0.1%	0.1%	8.5%	20.6%	1.8%	1.6%
40	8.4%	0.4%	0.0%	0.0%	8.8%	11.0%	1.0%	0.9%
45	8.6%	0.3%	0.0%	0.0%	8.9%	9.7%	0.9%	0.8%
50	8.8%	0.1%	0.0%	0.0%	8.9%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	7.9%	7.0%

S0W1.5: Spread **0%** and withdrawal assumption = **1.5 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[10]

S2W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	2.7%	0.2%	0.0%	1.0%	3.9%	28.2%	1.1%	0.8%
30	4.6%	0.3%	0.0%	0.6%	5.5%	24.0%	1.3%	1.1%
35	6.2%	0.4%	0.0%	0.2%	6.8%	20.6%	1.4%	1.3%
40	7.3%	0.3%	0.0%	0.0%	7.6%	11.0%	0.8%	0.8%
45	7.8%	0.3%	0.0%	0.0%	8.1%	9.7%	0.8%	0.8%
50	8.4%	0.1%	0.0%	0.0%	8.5%	6.5%	0.6%	0.5%
Total/Aggregate						100.0%	6.0%	5.3%

S2W2.0: Spread **2%** and withdrawal assumption = **2.0 * Wx**
R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)
Distr: Age distribution from 70 companies with a total of 70 000 employees
Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[11]

S1W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	3.4%	0.3%	0.0%	1.0%	4.7%	28.2%	1.3%	1.0%
30	5.4%	0.4%	0.0%	0.5%	6.3%	24.0%	1.5%	1.3%
35	6.9%	0.4%	0.1%	0.2%	7.6%	20.6%	1.6%	1.4%
40	7.8%	0.4%	0.0%	0.0%	8.2%	11.0%	0.9%	0.9%
45	8.2%	0.3%	0.0%	0.0%	8.5%	9.7%	0.8%	0.8%
50	8.6%	0.1%	0.0%	0.0%	8.7%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	6.7%	6.0%

S1W2.0: Spread **1%** and withdrawal assumption = **2.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 30 years[12]

S0W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.1%	0.3%	0.0%	1.0%	5.4%	28.2%	1.5%	1.2%
30	6.2%	0.4%	0.1%	0.5%	7.2%	24.0%	1.7%	1.5%
35	7.7%	0.4%	0.1%	0.2%	8.4%	20.6%	1.7%	1.6%
40	8.4%	0.4%	0.0%	0.0%	8.8%	11.0%	1.0%	0.9%
45	8.6%	0.3%	0.0%	0.0%	8.9%	9.7%	0.9%	0.8%
50	8.8%	0.1%	0.0%	0.0%	8.9%	6.5%	0.6%	0.6%
Total/Aggregate						100.0%	7.4%	6.6%

S0W2.0: Spread **0%** and withdrawal assumption = **2.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 25 years old

Aggregate Results

Total service of 25 years[(1)]

S2W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	6.2%	0.5%	0.1%	0.0%	6.8%	28.2%	1.9%	1.7%
30	7.9%	0.5%	0.1%	0.0%	8.5%	24.0%	2.0%	1.9%
35	8.4%	0.5%	0.1%	0.0%	9.0%	20.6%	1.9%	1.7%
40	8.9%	0.4%	0.1%	0.0%	9.4%	11.0%	1.0%	1.0%
45	9.4%	0.3%	0.0%	0.0%	9.7%	9.7%	0.9%	0.9%
50	10.0%	0.2%	0.0%	0.0%	10.2%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	8.4%	7.9%

S2W0.0: Spread **2%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[2]

S1W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	7.2%	0.5%	0.1%	0.0%	7.8%	28.2%	2.2%	2.0%
30	8.9%	0.6%	0.1%	0.0%	9.6%	24.0%	2.3%	2.1%
35	9.2%	0.5%	0.1%	0.0%	9.8%	20.6%	2.0%	1.9%
40	9.5%	0.4%	0.1%	0.0%	10.0%	11.0%	1.1%	1.0%
45	9.9%	0.3%	0.0%	0.0%	10.2%	9.7%	1.0%	1.0%
50	10.3%	0.2%	0.0%	0.0%	10.5%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	9.3%	8.7%

S1W0.0: Spread **1%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[3]

S0W0.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	8.3%	0.5%	0.1%	0.0%	8.9%	28.2%	2.5%	2.3%
30	10.1%	0.6%	0.1%	0.0%	10.8%	24.0%	2.6%	2.4%
35	10.1%	0.5%	0.1%	0.0%	10.7%	20.6%	2.2%	2.1%
40	10.2%	0.4%	0.1%	0.0%	10.7%	11.0%	1.2%	1.1%
45	10.4%	0.3%	0.0%	0.0%	10.7%	9.7%	1.0%	1.0%
50	10.5%	0.2%	0.0%	0.0%	10.7%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	10.2%	9.6%

S0W0.0: Spread **0%** and withdrawal assumption = **0.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[4]

S2W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.5%	0.4%	0.0%	0.5%	5.4%	28.2%	1.5%	1.3%
30	6.8%	0.5%	0.1%	0.3%	7.7%	24.0%	1.8%	1.6%
35	7.9%	0.5%	0.1%	0.1%	8.6%	20.6%	1.8%	1.6%
40	8.8%	0.4%	0.1%	0.0%	9.3%	11.0%	1.0%	1.0%
45	9.4%	0.3%	0.0%	0.0%	9.7%	9.7%	0.9%	0.9%
50	10.0%	0.2%	0.0%	0.0%	10.2%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	7.7%	7.1%

S2W1.0: Spread **2%** and withdrawal assumption = **1.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[5]

S1W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	5.3%	0.4%	0.1%	0.5%	6.3%	28.2%	1.8%	1.5%
30	7.7%	0.5%	0.1%	0.3%	8.6%	24.0%	2.1%	1.8%
35	8.8%	0.5%	0.1%	0.1%	9.5%	20.6%	2.0%	1.8%
40	9.5%	0.4%	0.1%	0.0%	10.0%	11.0%	1.1%	1.0%
45	9.9%	0.3%	0.0%	0.0%	10.2%	9.7%	1.0%	1.0%
50	10.3%	0.2%	0.0%	0.0%	10.5%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	8.7%	7.8%

S1W1.0: Spread **1%** and withdrawal assumption = **1.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[6]

S0W1.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	6.3%	0.4%	0.1%	0.4%	7.2%	28.2%	2.0%	1.8%
30	8.8%	0.5%	0.1%	0.2%	9.6%	24.0%	2.3%	2.1%
35	9.7%	0.5%	0.1%	0.1%	10.4%	20.6%	2.1%	2.0%
40	10.2%	0.4%	0.1%	0.0%	10.7%	11.0%	1.2%	1.1%
45	10.4%	0.3%	0.0%	0.0%	10.7%	9.7%	1.0%	1.0%
50	10.5%	0.2%	0.0%	0.0%	10.7%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	9.3%	8.7%

S0W1.0: Spread **0%** and withdrawal assumption = **1.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[7]

S2W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	3.6%	0.3%	0.0%	0.7%	4.6%	28.2%	1.3%	1.0%
30	6.2%	0.4%	0.1%	0.4%	7.1%	24.0%	1.7%	1.5%
35	7.7%	0.4%	0.1%	0.2%	8.4%	20.6%	1.7%	1.6%
40	8.8%	0.4%	0.1%	0.0%	9.3%	11.0%	1.0%	1.0%
45	9.4%	0.3%	0.0%	0.0%	9.7%	9.7%	0.9%	0.9%
50	10.0%	0.2%	0.0%	0.0%	10.2%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	7.3%	6.7%

S2W1.5: Spread **2%** and withdrawal assumption = **1.5 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[8]

S1W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.3%	0.3%	0.0%	0.7%	5.3%	28.2%	1.5%	1.2%
30	7.1%	0.5%	0.1%	0.4%	8.1%	24.0%	1.9%	1.7%
35	8.5%	0.5%	0.1%	0.2%	9.3%	20.6%	1.9%	1.8%
40	9.4%	0.4%	0.1%	0.0%	9.9%	11.0%	1.1%	1.0%
45	9.9%	0.3%	0.0%	0.0%	10.2%	9.7%	1.0%	1.0%
50	10.3%	0.2%	0.0%	0.0%	10.5%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	8.1%	7.4%

S1W1.5: Spread **1%** and withdrawal assumption = **1.5 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[9]

S0W1.5								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	5.2%	0.4%	0.1%	0.7%	6.4%	28.2%	1.8%	1.5%
30	8.1%	0.5%	0.1%	0.4%	9.1%	24.0%	2.2%	1.9%
35	9.4%	0.5%	0.1%	0.1%	10.1%	20.6%	2.1%	1.9%
40	10.1%	0.4%	0.1%	0.0%	10.6%	11.0%	1.2%	1.1%
45	10.4%	0.3%	0.0%	0.0%	10.7%	9.7%	1.0%	1.0%
50	10.5%	0.2%	0.0%	0.0%	10.7%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	9.0%	8.1%

S0W1.5: Spread **0%** and withdrawal assumption = **1.5 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[10]

S2W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	2.7%	0.2%	0.0%	1.0%	3.9%	28.2%	1.1%	0.8%
30	5.6%	0.4%	0.1%	0.6%	6.7%	24.0%	1.6%	1.3%
35	7.5%	0.4%	0.1%	0.2%	8.2%	20.6%	1.7%	1.5%
40	8.7%	0.4%	0.1%	0.0%	9.2%	11.0%	1.0%	1.0%
45	9.4%	0.3%	0.0%	0.0%	9.7%	9.7%	0.9%	0.9%
50	10.0%	0.2%	0.0%	0.0%	10.2%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	7.0%	6.2%

S2W2.0: Spread **2%** and withdrawal assumption = **2.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[11]

S1W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	3.4%	0.3%	0.0%	1.0%	4.7%	28.2%	1.3%	1.0%
30	6.4%	0.4%	0.1%	0.5%	7.4%	24.0%	1.8%	1.5%
35	8.3%	0.5%	0.1%	0.2%	9.1%	20.6%	1.9%	1.7%
40	9.4%	0.4%	0.1%	0.0%	9.9%	11.0%	1.1%	1.0%
45	9.9%	0.3%	0.0%	0.0%	10.2%	9.7%	1.0%	1.0%
50	10.3%	0.2%	0.0%	0.0%	10.5%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	7.8%	6.9%

S1W2.0: Spread **1%** and withdrawal assumption = **2.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years

Aggregate Results

Total service of 25 years[12]

S0W2.0								
Age	R%	D%	Z%	W%	Total	Distr	All	R%
25	4.1%	0.3%	0.0%	1.0%	5.4%	28.2%	1.5%	1.2%
30	7.4%	0.5%	0.1%	0.5%	8.5%	24.0%	2.0%	1.8%
35	9.2%	0.5%	0.1%	0.2%	10.0%	20.6%	2.1%	1.9%
40	10.1%	0.4%	0.1%	0.0%	10.6%	11.0%	1.2%	1.1%
45	10.4%	0.3%	0.0%	0.0%	10.7%	9.7%	1.0%	1.0%
50	10.5%	0.2%	0.0%	0.0%	10.7%	6.5%	0.7%	0.7%
Total/Aggregate						100.0%	8.5%	7.7%

S0W2.0: Spread **0%** and withdrawal assumption = **2.0 * Wx**

R% (retirement contribution), **D%** (death contribution), **Z%** (disability contribution), and **W%** (withdrawal contribution)

Distr: Age distribution from 70 companies with a total of 70 000 employees

Age: Current age with entry age of 30 years old, except the 25 years age group, the entry age is 30 years