LAMPIRAN

Lampiran 1 Contoh Lembar Penghitungan dan Tanda Terima

PT.TASPEN (PERSERO) 06/10/2015 9:09:58
KCU/KC. YOGYAKARTA *> LEMBAR PERHITUNGAN DAN TANDA TERIMA <*

PESERTA PENSIUN

NOTAS	: **13049415200**	TYPE VOUCHER	: 322
NIP/NPP	: 130494152	NO. VOUCHER	: 2015005779
NAMA PST	: [redacted]	KODE JIWA	: 1000
TGL.LAHIR	: 05-10-1955	PANGKAT	: 4B
GAPOK AWAL	: 642.300	P.1	: 642.300
		P.2	: 4.963.400
GAPOK AKHIR	: 4.963.400	P.B	: 0
NAMA YMK	: [redacted]	TGL.LAHIR	: **05-10-1955**

INSTANSI	: [redacted]	DIKNAS
		DIKNAS
LOKASI	: D.I. YOGYAKARTA	KAB. SLEMAN
	KAB. SLEMAN	KAB. SLEMAN

KODE KDD	: 403	RENC. BAYAR	: 02-11-2015	US.MASUK	: 20 - 2
KODE KEJ	: B110	TMT KERJA	: 01-12-1975	US.HENTI	: 60 - 1
B U P	: 60 TAHUN	TGL. KEJADIAN	: 31-10-2015	MI 1	: 39 - 11
Kd CEKPOS	:	TGL. P M K	: 01-11-2015	MI 2	: 14 - 10
NO. CEKPOS	:	TGL. HITUNG	: 06-10-2015	Y 1	: 0 - 0
NO.VOC TEDIB	:	UZUR	: TIDAK	Y 2	: 0 - 0
TANGGAL	:	USIA.THN.2001	: 0 - 0	MI.B/Y.B	: 0 - 0
		THT DI BAGI	: 1 / 1	FAKTOR 1	: 0,0000
		ASKEM DI BAGI	: 0	FAKTOR 2	: 0,0000

URAIAN PERHITUNGAN :	**KD.AKUN**	**(Rp)**
KLIM THT PNS DWIGUNA - PENSIUN THN BERJLN	611010101	53.840.875 D
SISA ASURANSI		53.840.875 D
PEMBULATAN	611010101	25 D

JUMLAH DIBAYARKAN ....: **53.840.900**

TERBILANG : *LIMA PULUH TIGA JUTA DELAPAN RATUS EMPAT PULUH RIBU SEMBILAN RATUS RUPIAH*

PENERIMA : [redacted]
ALAMAT : [redacted]
DESA/KEL : [redacted]
KEC : [redacted]
KAB/KOTA : [redacted]
KTR BYR : [redacted]
NO. REK : [redacted]
KTP/SIM/PASPOR :
[redacted]

PENETAPAN	OTORISATOR
[redacted]	[redacted]

PENGESAH	KASIR	PENERIMA
[redacted]		

	TANGGAL	JAM	PETUGAS
C.S :	06-10-2015	08:02:23	[redacted]
HIT :	06-10-2015	08:05:44	[redacted]

TTL : 0 HR. 0 JAM 3 MENIT

SUMBER SPP : KLIM OTOMATIS

NOTAS TUNJUK SILANG :

Lampiran 2 Data Sekunder PT Taspen (Persero)

NO	NOTAS	GAJI SEBELUM 2001 (P_1)	GAJI SETELAH 2001 (P_2)	MANFAAT PENSIUN	LHR PNS	GOL	TMT KRJ	TGL HTUNG	US MK	MASA IURAN PENUH (M_1)	MASA IURAN SEJAK 2001 (M_2)
1	13049415200	642.300	4.963.400	53.840.900	5/10/1955	4B	1/12/1975	6/10/2015	20-2	39-11	14-10
2	13055828200	642.300	4.963.400	59.474.500	5/10/1955	4B	1/11/1977	28/10/2015	22-1	38-0	14-10
3	13060731400	642.300	4.963.400	58.695.100	6/10/1955	4B	1/1/1977	5/10/2015	21-5	38-8	14-10
4	13068103000	642.300	4.963.400	60.390.100	10/10/1955	4B	1/3/1978	7/10/2015	22-5	37-8	14-10
5	13069815800	672.870	5.293.090	55.990.400	5/10/1955	4B	1/1/1979	9/10/2015	23-3	36-10	14-10
6	13079804500	794.750	6.182.330	65.434.000	10/10/1955	4E	1/3/1979	19/10/2015	23-5	36-8	14-10
7	13086580600	664.164	5.318.100	55.201.400	13/10/1955	4B	1/4/1981	22/10/2015	25-6	34-7	14-10
8	13091618900	706.530	5.459.740	56.999.400	8/10/1955	4B	1/3/1981	22/10/2015	25-5	34-8	14-10
9	13092783500	664.164	5.318.100	55.234.600	8/10/1955	4B	1/3/1981	20/10/2015	25-5	34-8	14-10
10	13136794900	640.860	5.131.500	52.143.000	25/10/1955	4B	1/3/1984	20/10/2015	28-4	31-8	14-10
11	13147256100	640.860	5.131.500	51.758.500	11/10/1955	4B	1/3/1985	26/10/2015	29-5	30-8	14-10
12	49001978100	778.064	6.039.264	63.475.200	9/10/1955	4D	1/3/1980	9/10/2015	24-5	35-8	14-10
13	13047794600	642.300	4.963.400	53.840.900	10/10/1955	4B	1/12/1975	6/10/2015	20-2	39-11	14-10
14	13048944000	617.600	4.762.000	51.676.700	5/10/1955	4B	1/12/1975	5/10/2015	20-2	39-11	14-10
15	13049393400	642.300	4.963.400	53.840.900	27/10/1955	4B	1/12/1975	19/10/2015	20-1	39-11	14-10
16	13049430900	642.300	4.963.400	53.840.900	18/10/1955	4B	1/12/1975	6/10/2015	20-1	39-11	14-10
17	13053701900	642.300	4.963.400	53.744.500	6/10/1955	4B	1/3/1976	26/10/2015	20-5	39-8	14-10
18	13056689100	642.300	4.963.400	53.423.400	24/10/1955	4B	1/1/1977	29/10/2015	21-2	38-10	14-10
19	13056696300	642.300	4.963.400	53.423.400	10/10/1955	4B	1/1/1977	12/10/2015	21-3	38-10	14-10
20	13057674200	642.300	4.963.400	58.765.700	28/10/1955	4B	1/1/1977	27/10/2015	21-2	38-10	14-10
21	13064541400	642.300	4.963.400	58.271.100	14/10/1955	4B	1/3/1978	28/10/2015	22-4	37-8	14-10
22	13068433500	642.300	4.963.400	52.973.800	8/10/1955	4B	1/3/1978	8/10/2015	22-5	37-8	14-10
23	13078878200	706.530	5.459.740	57.847.200	20/10/1955	4B	1/3/1979	19/10/2015	23-4	36-8	14-10

NO	NOTAS	GAJI SEBELUM 2001 (P_1)	GAJI SETELAH 2001 (P_2)	MANFAAT PENSIUN	LHR PNS	GOL	TMT KRJ	TGL HTUNG	US MK	MASA IURAN PENUH (M_1)	MASA IURAN SEJAK 2001 (M_2)
24	13079520800	706.530	5.459.740	57.847.200	20/10/1955	4B	1/3/1979	6/10/2015	23-4	36-8	14-10
25	13093715500	694.700	5.392.200	56.257.500	15/10/1955	4D	1/3/1981	20/10/2015	25-4	34-8	14-10
26	13107997000	647.020	5.078.260	52.540.200	10/10/1955	4B	1/2/1982	5/10/2015	26-4	33-9	14-10
27	13108002300	583.600	4.665.000	48.131.000	12/10/1955	4B	1/2/1982	22/10/2015	26-4	33-9	14-10
28	13112714200	611.700	4.811.900	49.738.100	16/10/1955	4B	1/3/1982	19/10/2015	26-4	33-8	14-10
29	13112858600	611.700	4.811.900	49.493.400	19/10/1955	4B	1/11/1982	9/10/2015	27-0	33-0	14-10
30	13123915300	554.800	4.522.500	46.158.900	22/10/1955	4B	1/4/1983	9/10/2015	27-5	32-7	14-10
31	13136775600	610.280	4.974.750	50.439.100	27/10/1955	4B	1/3/1984	20/10/2015	28-4	31-8	14-10
32	13165603300	503.200	4.250.600	42.032.100	7/10/1955	4B	1/2/1987	9/10/2015	31-4	28-9	14-10
33	13191065300	546.402	4.697.712	45.361.200	18/10/1955	4B	1/3/1990	22/10/2015	34-4	25-8	14-10

Lampiran 3 Tabel Mortalita Indonesia II (1999)
(*dengan modifikasi bunga: 10%*)

LAKI-LAKI				PEREMPUAN		
x	N_x	D_x		x	N_x	D_x
0	10.868.496,12	1.000.000		**0**	10.895.931,67	1.000.000
1	9.868.496,124	906.172,7273		**1**	9.895.931,672	906.909,0909
2	8.962.323,396	823.118,1818		**2**	8.989.022,581	823.869,4215
3	8.139.205,215	747.720,5109		**3**	8.165.153,16	748.470,3231
4	7.391.484,704	679.235,7079		**4**	7.416.682,837	679.984,9737
5	6.712.248,996	617.036,2183		**5**	6.736.697,863	617.772,631
6	6.095.212,777	560.555,352		**6**	6.118.925,232	561.257,5576
7	5.534.657,425	509.259,1428		**7**	5.557.667,675	509.923,1695
8	5.025.398,283	462.675,9551		**8**	5.047.744,505	463.288,4793
9	4.562.722,327	420.370,6485		**9**	4.584.456,026	420.927,0646
10	4.142.351,679	381.937,303		**10**	4.163.528,961	382.442,7503
11	3.760.414,376	347.021,2059		**11**	3.781.086,211	347.480,3529
12	3.413.393,17	315.287,7432		**12**	3.433.605,858	315.711,2035
13	3.098.105,427	286.438,9669		**13**	3.117.894,654	286.838,1244
14	2.811.666,46	260.201,0357		**14**	2.831.056,53	260.600,2459
15	2.551.465,424	236.338,3644		**15**	2.570.456,284	236.752,9914
16	2.315.127,06	214.633,906		**16**	2.333.703,293	215.079,1752
17	2.100.493,154	194.895,3984		**17**	2.118.624,118	195.379,92
18	1.905.597,755	176.950,833		**18**	1.923.244,198	177.477,8192
19	1.728.646,922	160.643,9849		**19**	1.745.766,378	161.212,8292
20	1.568.002,938	145.831,1419		**20**	1.584.553,549	145.432,5541
21	1.422.171,796	132.380,1233		**21**	1.438.120,995	133.004,6968
22	1.289.791,672	120.168,6684		**22**	1.305.116,298	120.805,7476
23	1.169.623,004	109.085,8844		**23**	1.184.310,551	109.724,5718
24	1.060.537,12	99.027,15455		**24**	1.074.585,979	99.657,83157
25	961.509,965	89.899,53258		**25**	974.928,1473	90.510,99357
26	871.610,4324	81.614,91793		**26**	884.417,1537	82.200,49409
27	789.995,5145	74.094,46456		**27**	802.216,6596	74.651,44421
28	715.901,0499	67.267,69501		**28**	727.565,2154	67.794,4271
29	648.633,3559	61.069,23799		**29**	659.770,7883	61.567,18628
30	587.564,1169	55.441,44063		**30**	598.203,602	55.911,94386
31	532.122,6763	50.332,27891		**31**	542.291,6582	50.776,15971
32	481.790,3973	45.693,00943		**32**	491.515,4985	46.111,21979
33	436.097,3879	41.480,11172		**33**	445.404,2787	41.873,60749
34	394.617,2762	37.653,76667		**34**	403.530,6712	38.024,2897
35	356.963,5095	34.177,64108		**35**	365.506,3815	34.527,78865
36	322.785,8684	31.019,63283		**36**	330.978,5929	31.351,21197
37	291.766,2356	28.150,319		**37**	299.627,3809	28.465,48828
38	263.615,9166	25.543,07634		**38**	271.161,8926	25.843,81681
39	238.072,8403	23.174,314		**39**	245.318,0758	23.461,71378
40	214.898,5263	21.022,46243		**40**	221.856,362	21.296,6384

LAKI-LAKI				PEREMPUAN		
x	N_x	D_x		x	N_x	D_x
41	193.876,0638	19.067,94308		**41**	200.597,236	19.328,82392
42	174.808,1208	17.292,54987		**42**	181.230,8997	17.540,03132
43	157.515,5709	15.679,77947		**43**	163.690,8684	15.914,22476
44	141.835,7914	14.214,42893		**44**	147.776,6436	14.436,66096
45	127.621,3625	12.882,80654		**45**	133.339,9827	13.094,17844
46	114.738,5559	11.672,05615		**46**	120.245,8042	11.874,63902
47	103.066,4998	10.570,74357		**47**	108.371,1652	10.766,73555
48	92.495,75623	9.568,537092		**48**	97.604,42965	9.760,049458
49	82.927,21913	8.656,484514		**49**	87.844,38019	8.844,99835
50	74.270,73462	7.826,563803		**50**	78.999,38184	8.013,247855
51	66.444,17082	7.071,729554		**51**	70.986,13399	7.257,162927
52	59.372,44126	6.385,639801		**52**	63.728,97106	6.569,577148
53	52.986,80146	5.762,75194		**53**	57.159,39391	5.944,150361
54	47.224,04952	5.197,788307		**54**	51.215,24355	5.375,403097
55	42.026,26122	4.685,523209		**55**	45.839,84045	4.858,537852
56	37.340,73801	4.220,891788		**56**	40.981,3026	4.389,198909
57	33.119,84622	3.799,069175		**57**	36.592,10369	3.963,288196
58	29.320,77704	3.415,708125		**58**	32.628,8155	3.576,868384
59	25.905,06892	3.067,028283		**59**	29.051,94711	3.226,138697
60	22.838,04064	2.750,03774		**60**	25.825,80841	2.907,515216

Sumber: *Dewan Asuransi Indonesia*, *1999.*

Keterangan:

N_x : banyaknya penduduk saat usia x

D_x : banyaknya penduduk yang meninggal saat usia x

Lampiran 4 *Service Table*

x	$l_x^{(T)}$	$d_x^{(m)}$	$d_x^{(t)}$	$d_x^{(d)}$	$d_x^{(r)}$	$d_x^{(T)}$	$D_x^{(T)}$
20	1.000.000	442	243.002	263	0	243.708	148.643,63
21	756.292	350	169.718	201	0	170.270	102.198,17
22	586.023	286	121.314	158	0	121.757	71.990,57
23	464.265	238	88.543	126	0	88.907	51.848,26
24	375.358	202	65.921	103	0	66.226	38.108,45
25	309.132	176	49.933	85	0	50.194	28.531,65
26	258.938	156	38.460	72	0	38.668	21.726,31
27	220.251	140	30.049	62	0	30.251	16.800,24
28	189.999	129	23.814	53	0	23.996	13.175,17
29	166.004	119	19.113	47	0	19.280	10.464,79
30	146.724	112	15.529	56	0	15.697	8.408,54
31	131.027	107	12.754	50	0	12.911	6.826,33
32	118.116	103	10.576	45	0	10.725	5.594,26
33	107.392	101	8.875	41	0	9.017	4.623,95
34	98.375	99	7.510	38	0	7.547	3.850,64
35	90.727	98	6.419	35	0	6.522	3.228,44
36	84.176	98	5.534	41	0	5.673	2.723,02
37	78.503	99	4.816	46	0	4.960	2.308,64
38	73.543	100	4.224	50	0	4.374	1.966,16
39	69.169	102	3.738	54	0	3.893	1.681,11
40	65.276	104	3.338	57	0	3.499	1.442,27
41	61.777	108	3.004	60	0	3.172	1.240,87
42	58.605	114	2.727	69	0	2.910	1.070,14
43	55.695	123	2.491	76	0	2.690	924,55
44	53.006	133	2.290	83	0	2.506	799,92
45	50.499	144	2.121	89	0	2.354	692,81
46	48.145	156	1.969	94	0	2.219	600,46
47	45.926	169	1.841	99	0	2.108	520,72
48	43.818	181	1.721	107	0	2.009	451,65
49	41.808	194	1.616	115	0	1.925	391,76
50	39.884	206	1.517	121	0	1.845	339,75
51	38.039	219	1.474	127	0	1.769	294,58
52	36.270	230	1.335	135	0	1.700	255,35
53	34.570	241	1.244	142	0	1.628	221,25
54	32.942	252	1.159	148	0	1.559	191,67
55	31.383	267	0	156	0	423	166,00
56	30.960	286	0	166	0	452	148,87
57	30.508	305	0	182	0	487	133,36
58	30.020	326	0	203	0	529	119,30
59	29.491	350	0	235	0	586	106,54
60	28.907	377	0	281	0	659	94,94
61	28.248	405	0	348	0	753	84,34
62	27.495	433	0	436	0	869	74,63

x	$l_x^{(T)}$	$d_x^{(m)}$	$d_x^{(t)}$	$d_x^{(d)}$	$d_x^{(r)}$	$d_x^{(T)}$	$D_x^{(T)}$
63	26.626	459	0	549	0	1.008	65,70
64	25.618	485	0	685	0	1.170	57,47
65	24.448	0	0	0	24.448	24.448	49,86

Sumber: *Pension Mathematics with Numerical Illustration. 1993.*

Keterangan:

x : usia peserta program pensiun pada saat ini (tanggal penghitungan aktuaria)

$l_x^{(T)}$: banyaknya orang yang bekerja pada tahun ke *x*

$d_x^{(m)}$: banyaknya peserta yang masih aktif bekerja yang meninggal diantara usia *x* dan *x* + 1

$d_x^{(t)}$: banyaknya peserta yang keluar diantara usia *x* dan *x* + 1

$d_x^{(d)}$: banyaknya peserta yang masih aktif bekerja yang menjadi cacat diantara usia *x* dan *x* + 1

$d_x^{(r)}$: banyaknya peserta yang pensiun diantara usia *x* dan *x* + 1

$d_x^{(T)}$: banyaknya peserta yang mengalami penyusutan diantara usia *x* dan *x* + 1 karena meninggal dunia, berhenti bekerja, cacat, dan pensiun normal

$D_x^{(T)}$: simbol komutasi dari *service table*.

Lampiran 5 Tabel Penghitungan

x	v^x	v^{r-x}	$(1+i)^{r-x}$	$p_x^{(T)}$	${}_{r-x}p_x^{(T)}$	$N_x^{(T)}$
20	0,148643628	0,02209493	45,25925557	0,756292	0,028907	554.905,10
21	0,135130571	0,02430442	41,14477779	0,774863413	0,038222009	406.261,47
22	0,122845974	0,02673486	37,40434344	0,792229998	0,049327415	304.063,30
23	0,111678158	0,02940835	34,00394859	0,808499456	0,062264009	232.072,73
24	0,101525598	0,03234918	30,91268053	0,823565769	0,077011813	180.224,47
25	0,092295998	0,0355841	28,10243685	0,837629233	0,093510216	142.116,03
26	0,083905453	0,03914251	25,54766986	0,850593578	0,111636762	113.584,38
27	0,076277684	0,04305676	23,22515442	0,862647616	0,131245715	91.858,07
28	0,069343349	0,04736244	21,11377675	0,873709862	0,152142906	75.057,83
29	0,063039409	0,05209868	19,1943425	0,88385822	0,174134358	61.882,67
30	0,057308553	0,05730855	17,44940227	0,893016821	0,197016166	51.417,87
31	0,052098685	0,06303941	15,86309297	0,901463057	0,220618651	43.009,33
32	0,047362441	0,06934335	14,42099361	0,909207897	0,24473399	36.183,00
33	0,043056764	0,07627768	13,10999419	0,916036576	0,26917275	30.588,74
34	0,039142513	0,08390545	11,91817654	0,922256671	0,293844981	25.964,78
35	0,035584103	0,092296	10,83470594	0,927794372	0,318615186	22.114,14
36	0,032349184	0,1015256	9,849732676	0,932605493	0,343411424	18.885,70
37	0,029408349	0,11167816	8,954302433	0,936817701	0,368227966	16.162,68
38	0,026734863	0,12284597	8,140274939	0,940524591	0,393062562	13.854,03
39	0,024304421	0,13513057	7,400249944	0,943717561	0,417918432	11.887,87
40	0,022094928	0,14864363	6,727499949	0,946396838	0,442842699	10.206,76
41	0,020086298	0,16350799	6,115909045	0,94865403	0,467924956	8.764,49
42	0,018260271	0,17985879	5,559917313	0,950345534	0,493251429	7.523,62
43	0,016600247	0,19784467	5,054470285	0,951719185	0,519023252	6.453,47
44	0,015091133	0,21762914	4,594972986	0,952703468	0,545353356	5.528,92
45	0,013719212	0,23939205	4,177248169	0,953385216	0,572427177	4.729,00
46	0,012472011	0,26333125	3,797498336	0,953910063	0,600415412	4.036,20
47	0,011338192	0,28966438	3,452271214	0,954100074	0,629425598	3.435,73
48	0,010307447	0,31863082	3,138428377	0,95412844	0,659706057	2.915,01
49	0,009370406	0,3504939	2,853116706	0,9539801	0,691422694	2.463,36
50	0,008518551	0,38554329	2,59374246	0,953740848	0,724776853	2.071,60
51	0,007744138	0,42409762	2,357947691	0,953495097	0,759930598	1.731,85
52	0,007040125	0,46650738	2,14358881	0,953129308	0,796994762	1.437,27
53	0,006400114	0,51315812	1,9487171	0,952907145	0,836187446	1.181,93
54	0,005818285	0,56447393	1,771561	0,952674397	0,877511991	960,67
55	0,00528935	0,62092132	1,61051	0,986521365	0,921103782	769,01

x	v^x	v^{r-x}	$(1+i)^{r-x}$	$p_x^{(T)}$	${}_{r-x}p_x^{(T)}$	$N_x^{(T)}$
56	0,0048085	0,68301346	1,4641	0,985400517	0,93368863	603,01
57	0,004371364	0,7513148	1,331	0,984004196	0,947521961	454,14
58	0,003973967	0,82644628	1,21	0,982378414	0,962924717	320,78
59	0,003612697	0,90909091	1,1	0,980197348	0,980197348	201,48
60	0,00328427	1	1	0,977202754	1	94,94

Lampiran 6 Hasil Penghitungan Iuran, Manfaat Pensiun, dan Kewajiban Aktuaria Masing-masing Metode

NO	GAJI AWAL	PUC						ILP		
		CONSTANT DOLLAR			CONSTANT PERCENT					
		IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN	IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN	IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN
1	642.300	85.188.597	420.373.169	67.036.914	143.538.896	419.497.391	55.191.699	102.905.017	373.574.197	54.133.835
2	642.300	82.017.441	384.572.031	60.510.918	134.465.687	384.572.031	56.273.927	88.200.470	345.210.790	57.827.321
3	642.300	85.726.890	412.490.258	65.352.673	137.299.491	408.964.700	61.124.671	93.795.151	367.106.851	61.495.132
4	642.300	81.267.043	381.053.486	59.957.288	127.604.568	377.710.911	56.273.927	86.626.893	339.051.912	56.795.629
5	672.870	82.010.963	374.490.527	58.495.912	128.042.109	369.218.063	54.264.589	85.501.029	334.646.897	56.057.820
6	794.750	96.133.273	438.977.895	77.140.040	147.165.467	432.026.717	64.093.781	99.770.826	390.498.189	65.413.656
7	664.164	74.335.282	321.284.886	55.563.661	105.504.765	307.303.170	45.404.641	72.807.037	284.967.787	47.736.169
8	706.530	78.960.928	341.277.416	59.021.210	113.808.486	328.479.301	48.300.933	77.523.940	303.429.817	50.828.822
9	664.164	74.274.911	321.023.957	55.518.536	106.984.132	308.782.538	45.404.641	72.923.202	285.422.463	47.812.333
10	640.860	65.341.821	258.685.802	43.502.396	84.217.221	235.865.306	34.120.819	58.706.344	229.790.268	38.493.883
11	640.860	65.351.627	250.890.477	41.746.241	78.893.870	218.196.407	31.343.070	56.916.052	222.790.015	37.321.642
12	778.064	90.116.698	400.483.953	69.832.632	134134990	390.849.805	57.760.834	90.998.340	356.165.466	59.662.603
13	642.300	85.188.589	420.373.210	67.036.924	143.538.877	419.497.433	55.191.711	102.905.010	373.574.234	54.133.844
14	617.600	81.912.614	404.207.527	64.458.982	138.019.010	403.365.428	53.069.283	98.947.741	359.208.231	52.052.098
15	642.300	85.188.589	420.373.210	67.036.924	143.538.877	419.497.433	55.191.711	102.905.010	373.574.234	54.133.844
16	642.300	85.188.589	420.373.210	67.036.924	143.538.877	419.497.433	55.191.711	102.905.010	373.574.234	54.133.844
17	642.300	84.588.504	417.412.020	66.564.703	137.975.030	413.933.586	55.191.711	101.540.168	368.619.473	53.415.860
18	642.300	80.547.186	387.567.186	61.404.000	131.917.603	385.910.916	50.798.662	94.665.857	343.664.498	49.799.728
19	642.300	80.547.186	387.567.186	61.404.000	131.917.603	385.910.916	50.798.662	94.665.857	343.664.498	49.799.728
20	642.300	86.151.355	414.532.648	65.676.258	141.095.932	412.761.141	61.124.671	94.665.857	370.514.723	62.065.994
21	642.300	81.267.043	381.053.486	59.957.288	127.604.568	377.710.911	56.273.927	86.626.893	339.051.912	56.795.629
22	642.300	81.267.043	381.053.486	59.957.288	127.604.568	377.710.911	50.021.268	86.626.893	339.051.912	50.485.003

NO	GAJI AWAL	PUC						ILP		
		CONSTANT DOLLAR			CONSTANT PERCENT					
		IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN	IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN	IURAN PENSIUN	KEWAJIBAN AKTUARIA	MANFAAT PENSIUN
23	706.530	85.577.888	390.778.342	68.670.102	130.829.591	384.070.257	56.979.150	88.816.039	347.621.683	58.231.270
24	706.530	85.577.888	390.778.342	68.670.102	130.829.591	384.070.257	56.979.150	88.816.039	347.621.683	58.231.270
25	694.700	77.418.021	334.608.809	57.867.927	111.902.898	322.979.307	47.492.191	76.009.112	297.500.758	49.835.620
26	647.020	69.750.381	292.990.188	50.228.956	98.487.876	279.337.804	40.691.234	66.700.102	261.068.577	43.732.907
27	583.600	63.316.611	265.964.793	45.595.840	88.834.231	251.957.501	36.702.735	60.547.688	236.987.629	39.698.986
28	611.700	66.085.196	277.594.380	47.589.566	91.876.216	262.853.776	38.469.951	63.039.162	246.739.419	41.332.557
29	611.700	62.150.507	253.541.692	43.063.016	87.734.745	242.628.267	34.851.042	58.146.035	227.591.507	38.125.231
30	554.800	58.018.379	236.684.764	40.199.936	76.891.379	219.560.175	32.100.479	53.594.793	209.777.323	35.141.069
31	610.280	61.346.563	242.868.723	40.842.486	80.198.617	224.610.490	32.492.671	55.116.804	215.739.977	36.140.214
32	503.200	48.150.446	173.418.407	28.185.291	55.237.401	147.498.529	20.758.754	39.421.780	154.326.927	25.853.658
33	546.402	39.219.418	127.554.080	19.875.299	48.988.112	125.918.771	17.309.398	28.864.085	113.030.888	18.937.531

Lampiran 7 Penghitungan Persentase Kesalahan Manfaat Pensiun Masing-masing Metode

NO	Gaji awal	Manfaat Taspen	Manfaat PUC *constant dollar*	$\frac{\lvert Y_t - \widehat{Y}_t \rvert}{Y_t} \times 100\%$	Manfaat PUC *constant percent*	$\frac{\lvert Y_t - \widehat{Y}_t \rvert}{Y_t} \times 100\%$	Manfaat *individual level premium*	$\frac{\lvert Y_t - \widehat{Y}_t \rvert}{Y_t} \times 100\%$
1	642.300	53.840.900	67.036.914	24,51%	55.191.699	2,51%	54.133.835	0,54%
2	642.300	59.474.500	60.510.918	1,74%	56.273.927	5,38%	57.827.321	2,76%
3	642.300	58.695.100	65.352.673	11,34%	61.124.671	4,14%	61.495.132	4,77%
4	642.300	60.390.100	59.957.288	0,72%	56.273.927	6,82%	56.795.629	5,95%
5	672.870	55.990.400	58.495.912	4,47%	54.264.589	3,08%	56.057.820	0,12%
6	794.750	65.434.000	77.140.040	17,88%	64.093.781	2,04%	65.413.656	0,03%
7	664.164	55.201.400	55.563.661	0,65%	45.404.641	17,74%	47.736.169	13,52%
8	706.530	56.999.400	59.021.210	3,54%	48.300.933	15,26%	50.828.822	10,82%
9	664.164	55.234.600	55.518.536	0,51%	45.404.641	17,79%	47.812.333	13,43%
10	640.860	52.143.000	43.502.396	16,57%	34.120.819	34,56%	38.493.883	26,17%
11	640.860	51.758.500	41.746.241	19,34%	31.343.070	39,44%	37.321.642	27,89%
12	778.064	63.475.200	69.832.632	10,02%	57.760.834	9,00%	59.662.603	6,01%
13	642.300	53.840.900	67.036.924	24,51%	55.191.711	2,51%	54.133.844	0,54%
14	617.600	51.676.700	64.458.982	24,73%	53.069.283	2,69%	52.052.098	0,72%
15	642.300	53.840.900	67.036.924	24,51%	55.191.711	2,51%	54.133.844	0,54%
16	642.300	53.840.900	67.036.924	24,51%	55.191.711	2,51%	54.133.844	0,54%
17	642.300	53.744.500	66.564.703	23,85%	55.191.711	2,69%	53.415.860	0,61%
18	642.300	53.423.400	61.404.000	14,94%	50.798.662	4,91%	49.799.728	6,78%
19	642.300	53.423.400	61.404.000	14,94%	50.798.662	4,91%	49.799.728	6,78%
20	642.300	58.765.700	65.676.258	11,76%	61.124.671	4,01%	62.065.994	5,62%
21	642.300	58.271.100	59.957.288	2,89%	56.273.927	3,43%	56.795.629	2,53%
22	642.300	52.973.800	59.957.288	13,18%	50.021.268	5,57%	50.485.003	4,70%
23	706.530	57.847.200	68.670.102	18,71%	56.979.150	1,50%	58.231.270	0,66%
24	706.530	57.847.200	68.670.102	18,71%	56.979.150	1,50%	58.231.270	0,66%
25	694.700	56.257.500	57.867.927	2,86%	47.492.191	15,58%	49.835.620	11,41%
26	647.020	52.540.200	50.228.956	4,39%	40.691.234	22,55%	43.732.907	16,76%
27	583.600	48.131.000	45.595.840	5,27%	36.702.735	23,74%	39.698.986	17,52%
28	611.700	49.738.100	47.589.566	4,31%	38.469.951	22,65%	41.332.557	16,90%
29	611.700	49.493.400	43.063.016	12,99%	34.851.042	29,58%	38.125.231	22,97%
30	554.800	46.158.900	40.199.936	12,91%	32.100.479	30,46%	35.141.069	23,87%
31	610.280	50.439.100	40.842.486	19,02%	32.492.671	35,58%	36.140.214	28,35%
32	503.200	42.032.100	28.185.291	32,94%	20.758.754	50,61%	25.853.658	38,49%
33	546.402	45.361.200	19.875.299	56,18%	17.309.398	61,84%	18.937.531	58,25%
$MAPE = \frac{1}{n}\sum_{t=1}^{n} \frac{\lvert Y_t - \widehat{Y}_t \rvert}{Y_t} \times 100\%$				14,52%		14,82%		11,43%

Lampiran 8 Penghitungan Persentase Kesalahan Iuran Pensiun Masing-masing Metode

NO	Gaji awal	Iuran Taspen	Iuran PUC *constant dollar*	$\frac{\|Y_t - \hat{Y}_t\|}{Y_t} \times 100\%$	Iuran PUC *constant percent*	$\frac{\|Y_t - \hat{Y}_t\|}{Y_t} \times 100\%$	Iuran *individual level premium*	$\frac{\|Y_t - \hat{Y}_t\|}{Y_t} \times 100\%$
1	642.300	95.473.889	85.188.597	10,77%	143.538.896	64,32%	102.905.017	7,78%
2	642.300	81.831.641	82.017.441	0,23%	134.465.687	57,78%	88.200.470	7,78%
3	642.300	87.022.066	85.726.890	1,49%	137.299.491	58,77%	93.795.151	7,78%
4	642.300	80.371.689	81.267.043	1,11%	127.604.568	61,41%	86.626.893	7,78%
5	672.870	72.115.903	82.010.963	3,38%	128.042.109	59,02%	85.501.029	7,78%
6	794.750	84.131.429	96.133.273	3,85%	147.165.467	56,00%	99.770.826	7,78%
7	664.164	59.324.326	74.335.282	10,04%	105.504.765	58,38%	72.807.037	7,78%
8	706.530	65.323.863	78.960.928	9,78%	113.808.486	57,96%	77.523.940	7,78%
9	664.164	59.412.268	74.274.911	9,78%	106.984.132	54,61%	72.923.202	7,78%
10	640.860	49.519.456	65.341.821	19,96%	84.217.221	49,71%	58.706.344	7,77%
11	640.860	47.907.296	65.351.627	23,74%	78.893.870	58,59%	56.916.052	7,77%
12	778.064	75.517.629	90.116.698	6,74%	134134990	50,34%	90.998.340	7,78%
13	642.300	95.473.889	85.188.589	10,77%	143.538.877	50,34%	102.905.010	7,78%
14	617.600	91.802.388	81.912.614	10,77%	138.019.010	50,34%	98.947.741	7,78%
15	642.300	95.473.889	85.188.589	10,77%	143.538.877	50,34%	102.905.010	7,78%
16	642.300	95.473.889	85.188.589	10,77%	143.538.877	46,46%	102.905.010	7,78%
17	642.300	94.207.607	84.588.504	10,21%	137.975.030	50,20%	101.540.168	7,78%
18	642.300	87.829.896	80.547.186	8,29%	131.917.603	50,20%	94.665.857	7,78%
19	642.300	87.829.896	80.547.186	8,29%	131.917.603	60,65%	94.665.857	7,78%
20	642.300	87.829.896	86.151.355	1,91%	141.095.932	58,77%	94.665.857	7,78%
21	642.300	80.371.689	81.267.043	1,11%	127.604.568	58,77%	86.626.893	7,78%
22	642.300	80.371.689	81.267.043	1,11%	127.604.568	58,77%	86.626.893	7,78%
23	706.530	74.911.945	85.577.888	3,85%	130.829.591	58,66%	88.816.039	7,78%
24	706.530	74.962.249	85.577.888	3,85%	130.829.591	58,68%	88.816.039	7,78%
25	694.700	70.522.058	77.418.021	9,78%	111.902.898	58,52%	76.009.112	7,78%
26	647.020	56.482.302	69.750.381	12,71%	98.487.876	58,13%	66.700.102	7,78%
27	583.600	56.177.522	63.316.611	12,71%	88.834.231	57,08%	60.547.688	7,78%
28	611.700	58.489.167	66.085.196	12,99%	91.876.216	62,62%	63.039.162	7,78%
29	611.700	53.950.186	62.150.507	15,20%	87.734.745	54,63%	58.146.035	7,78%
30	554.800	49.727.364	58.018.379	16,67%	76.891.379	55,80%	53.594.793	7,78%
31	610.280	46.795.889	61.346.563	19,96%	80.198.617	50,99%	55.116.804	7,77%
32	503.200	36.582.940	48.150.446	31,62%	55.237.401	82,83%	39.421.780	7,76%
33	546.402	23.503.318	39.219.418	46,38%	48.988.112	64,32%	28.864.085	7,73%
$MAPE = \frac{1}{n}\sum_{t=1}^{n} \frac{\|Y_t - \hat{Y}_t\|}{Y_t} \times 100\%$				10,93%		56,67%		7,78%