

# Monthly Payments: Proposed Simple Design Features

## Workshop Repositioning Pemasaran & Edukasi DPLK



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# Summary of provisions<sup>(1)</sup>

- ◆ Financial institution pension funds (DPLK) are now allowed to administer monthly payments
  - The members elect to annuitize through the purchase of life annuity from life insurance company or periodic payments made by DPLK
  - Payment periods: minimum 10 years and maximum 25 years
  - The use of conversion table to derive amount of payments
  - Set aside reserve based on actuarial assumptions before making payments for future annuity purchase
    - ◆ If the accumulated reserve at the end of the payment period is less than Rp500m, then 100% may be paid in the form of lump sum
  - Assets and liabilities matching
    - ◆ Assets must be placed in time deposits and government securities
  - Maintain liquidity
  - Perform actuarial valuation at least once every 3 years

# Summary of provisions<sup>(2)</sup>

- ◆ For complete information, please refer to
  - Articles 51, 52, 53 and 57 of POJK 5/2017
- ◆ Do you have any plans to provide monthly payments?
  - Why not?

# Basic principles to note<sup>(1)</sup>

- ◆ DPLK does not bear financial and mortality risks
  - Simply administering the payments
  - Beneficiaries continue to receive the same amount of payments for the remaining periods
  
- ◆ Amount of payments derived using conversion table will require initial interest assumption
  - Interest assumption used by providers may differ from one another
  - Affecting the amount of payments, thus creating unfair competition

# Basic principles to note<sup>(2)</sup>

- ◆ Subsequent periods will require new interests assumption to construct new conversion tables
  - Annuity factors thus differ from time to time
  - Difficult to communicate and create uncertainties
  
- ◆ May need to interpret the definition of conversion table differently for simplification
  - Actuarial valuation will be simpler and uniform between actuaries
    - ◆ Simply provide opinions on administration process, governance, assets on hand are sufficient to last until the end of payment period
      - Only need data on individual balances, amounts paid and remaining periods
  - Standard of practice for actuaries on this is being prepared by the Society of Actuaries of Indonesia

# Basic principles to note<sup>(3)</sup>

- ◆ The philosophy
  - Next period payments should not be less than previous period payments
- ◆ The design of the product must be
  - Simple for ease of understanding and explaining
  - Uniform between providers, thus the industry
- ◆ This way, confusion and complexity can be avoided

# Proposed simple design features<sup>(1)</sup>

- ◆ No need to declare interests, thus no need for constructing conversion tables
- ◆ Offer limited payment periods, such as 10, 15, 20 and 25 years
  - For example, no need to offer 12, 16 or 23 years
- ◆ Payments are made at the beginning of periods



# Proposed simple design features<sup>(2)</sup>

- ◆ Initial annual amount is simply equal to
  - $(1 / [\text{length of period selected}])$  times (initial balance)
- ◆ Subsequent annual amounts are simply equal to
  - $(1 / [\text{remaining periods}])$  times (respective beginning balances)
- ◆ Monthly amount is simply equal to the annual amount divided by 12 and should remain constant throughout a 12-month period

# Proposed simple design features<sup>(3)</sup>

## How it works

- ◆ Selected period = **15 years**
  - **1<sup>st</sup>** year annual amount = **1/15** times **1<sup>st</sup>** year beginning balance
    - ◆ Monthly amount = **1<sup>st</sup>** year annual amount divided by 12
  - **2<sup>nd</sup>** year annual amount = **1/14** times **2<sup>nd</sup>** year beginning balance
    - ◆ Monthly amount = **2<sup>nd</sup>** year annual amount divided by 12
  - **3<sup>rd</sup>** year annual amount = **1/13** times **3<sup>rd</sup>** year beginning balance
    - ◆ Monthly amount = **3<sup>rd</sup>** year annual amount divided by 12
  - ... etc
  
- ◆ Another way to explain it
  - Next periods amounts equal to previous periods amounts increased by the net investment returns of previous periods

# Monthly payments

## Illustration<sup>(1)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	$C = 1 / B$	D	$E = C \times D$	F	$G = (D - E) \times F$	H	$I = D - E + G - H$
1	15							
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(2)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%						
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(3)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000					
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(4)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000				
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(5)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%			
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(6)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047		
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							



# Monthly payments Illustration<sup>(7)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14							
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(8)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%						
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(9)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047					
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(10)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218				
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(11)</sup>

Or,  $E = 50,000,000 \times (1 + 4.100435\%) = 52,050,218$

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218				
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments

## Illustration<sup>(12)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218	5.60%	37,913,991	0	714,566,821
3	13							
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments

## Illustration<sup>(13)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218	5.60%	37,913,991	0	714,566,821
3	13	7.69%	714,566,821	54,966,679				
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(14)</sup>

Or,  $E = 52,050,218 \times (1 + 5.602015\%) = 54,966,679$

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218	5.60%	37,913,991	0	714,566,821
3	13	7.69%	714,566,821	54,966,679				
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							



# Monthly payments

## Illustration<sup>(15)</sup>

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218	5.60%	37,913,991	0	714,566,821
3	13	7.69%	714,566,821	54,966,679	5.08%	33,506,050	0	693,106,192
4	12							
5	11							
6	10							
7	9							
8	8							
9	7							
10	6							
11	5							
12	4							
13	3							
14	2							
15	1							

# Monthly payments Illustration<sup>(16)</sup>

Or,  $E = 50,000,000 \times (1 + 4.100435\%) = 52,050,218$

Or,  $E = 52,050,218 \times (1 + 5.602015\%) = 54,966,679$

Year 15	Years Remain	Withdrawal % at Begin of Period Balance	Fund at Start <i>Net of Reserve</i>	Annual Payment Begin of Period	Annual Interest Rate	Investment Returns	Asset Fee	Fund at End
A	B	C = 1 / B	D	E = C x D	F	G = (D - E) x F	H	I = D - E + G - H
1	15	6.67%	750,000,000	50,000,000	4.10%	28,703,047	0	728,703,047
2	14	7.14%	728,703,047	52,050,218	5.60%	37,913,991	0	714,566,821
3	13	7.69%	714,566,821	54,966,679	5.08%	33,506,050	0	693,106,192
4	12	8.33%	693,106,192	57,758,849	5.45%	34,631,791	0	669,979,134
5	11	9.09%	669,979,134	60,907,194	4.28%	26,046,082	0	635,118,022
6	10	10.00%	635,118,022	63,511,802	4.95%	28,287,189	0	599,893,409
7	9	11.11%	599,893,409	66,654,823	4.02%	21,432,042	0	554,670,627
8	8	12.50%	554,670,627	69,333,828	5.66%	27,486,784	0	512,823,583
9	7	14.29%	512,823,583	73,260,512	4.95%	21,776,759	0	461,339,831
10	6	16.67%	461,339,831	76,889,972	5.27%	20,269,171	0	404,719,030
11	5	20.00%	404,719,030	80,943,806	4.85%	15,692,569	0	339,467,793
12	4	25.00%	339,467,793	84,866,948	5.79%	14,753,292	0	269,354,136
13	3	33.33%	269,354,136	89,784,712	5.09%	9,146,002	0	188,715,426
14	2	50.00%	188,715,426	94,357,713	4.50%	4,244,708	0	98,602,421
15	1	100.00%	98,602,421	98,602,421	0.00%	0	0	0