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## Will Your CPF Savings Be Enough?

*Our research desk examines the impact of the recent CPF changes and why you may need your savings to work harder.*

by Wong Sui Jau

### CPF CHANGES

#### HOW DO THEY AFFECT US?

The recent Central Provident Fund (CPF) changes will affect the majority of Singaporeans. What is the extent of these changes and what do they mean to the individual?

Below are the most significant changes at a glance:

- **Lowering of the CPF contribution rate from 36% to 33%. (Employer's portion down by 3%)**
- **CPF salary ceiling to fall from \$6,000 to \$4,500 by 2006.**
- **Minimum sum increased to \$120,000 by 2013 (half of this can be property).**

We looked at how the changes would affect almost all salaried Singaporeans across a large income range. We find the impact to the individual increases over the long term. The changes mean that Singaporeans need to save more than before, and invest those savings in investments that can offer a good return.

The table below shows the changes to the annual CPF contribution.

Table 1 (Changes to annual CPF contribution and annual total income)

Gross income per month	Total annual income	THE SITUATION BY 2006, TAKING INTO ACCOUNT CPF CHANGES							
		Employer's annual CPF contribution	Reduction	Your annual CPF contribution	Reduction	Annual take home pay	Increase	Total annual income (all in)	Change in annual income
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
1,000	13,920	1,560	-360	2,400	0	9,600	0	13,560	-360
1,500	20,880	2,340	-540	3,600	0	14,400	0	20,340	-540
2,000	27,840	3,120	-720	4,800	0	19,200	0	27,120	-720
2,500	34,800	3,900	-900	6,000	0	24,000	0	33,900	-900
3,000	41,760	4,680	-1,080	7,200	0	28,800	0	40,680	-1,080
3,500	48,720	5,460	-1,260	8,400	0	33,600	0	47,460	-1,260
4,000	55,680	6,240	-1,440	9,600	0	38,400	0	54,240	-1,440

4,500	62,640	7,020	-1,620	10,800	0	43,200	0	61,020	-1,620
5,000	69,600	7,020	-2,580	10,800	-1,200	49,200	1,200	67,020	-2,580
5,500	76,560	7,020	-3,540	10,800	-2,400	55,200	2,400	73,020	-3,540
6,000	83,520	7,020	-4,500	10,800	-3,600	61,200	3,600	79,020	-4,500
10,000	131,520	7,020	-4,500	10,800	-3,600	109,200	3,600	127,020	-4,500

Assumptions and notes:

**Annual income is derived by multiplying gross income by 12 and including employer's contributions.**

$$\text{Total annual income (I)} = \text{(C)} + \text{(E)} + \text{(G)}$$

$$\text{Change in annual income (J)} = \text{(B)} - \text{(I)}$$

As table 1 above shows, everyone contributing to the CPF would be affected. However some are affected more than others. Those earning more than \$4,500 actually see their take home pay increase, but their annual income decrease, because of the reduction in both the employer's contribution and the CPF salary ceiling. For example, those earning gross \$6,000 per month will see their total income decrease by 5.4%, whereas individuals earning below \$4,500 will only see their total annual income decrease by 2.59% as a result of the changes. The impact of the CPF changes peak for those earning \$6,000 per month, and is proportionately lower for those earning more than that.

On the surface, the impact of these CPF changes may not seem large. However, when the long term effect of compounding is taken into account (allowing the CPF monies to compound based on the current CPF return rate), it makes a big difference to an individual's CPF savings. This point is illustrated in the table below.

For this table, it would have been too confusing to look at all the age groups, and assess the how much they'd have in their CPF accounts when they finally hit 55. Instead, we calculated how much they would have in their various accounts after 10, 20 and 30 years, assuming contributions and income do not change. The actual figure may be higher or lower as salaries may change and the CPF contribution rates get lowered even further as individuals get older.

Table 2 (The accumulated effects of the CPF changes over a long period of time)

Gross Income per month (\$)	Old OA contribution per year before changes (\$)	THE SITUATION BY 2006, TAKING INTO ACCOUNT CPF CHANGES						
		New OA contribution per year (\$)	OA account after 10 years (\$)	Difference (\$)	OA account after 20 years (\$)	Difference (\$)	OA account after 30 year (\$)	Difference (\$)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
1,000	3,120	2,640	29,577	-5,378	67,438	-12,261	115,903	-21,073
1,500	4,680	3,960	44,365	-8,066	101,157	-18,392	173,855	-31,610

2,000	6,240	5,280	59,154	-10,755	134,876	-24,523	231,806	-42,147
2,500	7,800	6,600	73,942	-13,444	168,595	-30,654	289,758	-52,683
3,000	9,360	7,920	88,731	-16,133	202,314	-36,784	347,709	-63,220
3,500	10,920	9,240	103,519	-18,822	236,033	-42,915	405,661	-73,757
4,000	12,480	10,560	118,308	-21,510	269,752	-49,046	463,613	-84,293
4,500	14,040	11,880	133,096	-24,199	303,471	-55,176	521,564	-94,830
5,000	15,600	11,880	133,096	-41,677	303,471	-95,026	521,564	-163,318
5,500	17,160	11,880	133,096	-59,154	303,471	-134,876	521,564	-231,806
6,000	18,720	11,880	133,096	-76,631	303,471	-174,725	521,564	-300,294
10,000	18,720	11,880	133,096	-76,631	303,471	-174,725	521,564	-300,294

Assumptions and notes:

1. **Annual income is derived by multiplying gross income by 12 and including employer's contributions.**
2. **CPF OA contribution include both employers' and employees' contributions.**
3. **Income stays constant over the years.**
4. **Lower CPF contributions due to age not taken into account.**
5. **The new CPF ordinary account (OA) contribution rates remain constant (no further changes).**
6. **The interest on CPF OA stays at the current 2.5% per year.**

As table 2 shows, when the compounding effect of the CPF rate of 2.5% is taken into account the impact on an individual due to the changes is increasingly significant as the time period is extended.

When we take into account the minimum sum remaining has to be increased to \$120,000, the new CPF changes mean that financing a dream home as well as one's retirement, would require increased savings. It would be difficult for an individual can do both just based on his CPF savings alone, as CPF OA only offers a 2.5% return a year. This is why Singaporeans should think about how to increase the returns they get from their CPF contributions.

We have established there is a difference that the CPF changes would make to an individual's retirement savings. We now try and establish how much extra an individual would have to save and invest in order to make up for that difference. Since cash can be invested into all sorts of financial instruments including fixed deposits, unit trusts, and stocks, we assume different rates of returns on the invested cash and show the extra amount that needs to be invested each year.

Table 3 (The extra amount of cash that needs to be invested each year to make up the difference)

Gross Income per month	Annual take home pay	THE SITUATION BY 2006 TAKING INTO ACCOUNT CPF CHANGES						
		CPF OA difference due to CPF changes after 30 years	To obtain a similar amount as shown in column (C), the extra amount as shown below must be invested each year for 30 years					Increase in annual take home pay due to CPF changes
			Return of 0.5% per year	Return of 4% per year	Return of 6% per year	Return of 8% per year	Return of 10% per year	
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
1,000	9,600	-21,073	653	376	267	186	128	0
1,500	14,400	-31,610	979	564	400	279	192	0
2,000	19,200	-42,147	1,306	751	533	372	256	0
2,500	24,000	-52,683	1,632	939	666	465	320	0
3,000	28,800	-63,220	1,958	1,127	800	558	384	0
3,500	33,600	-73,757	2,285	1,315	933	651	448	0
4,000	38,400	-84,293	2,611	1,503	1,066	744	512	0
4,500	43,200	-94,830	2,938	1,691	1,199	837	576	0
5,000	49,200	-163,318	5,059	2,912	2,066	1,442	993	1,200
5,500	55,200	-231,806	7,181	4,133	2,932	2,046	1,409	2,400
6,000	61,200	-300,294	9,303	5,354	3,798	2,651	1,826	3,600
10,000	109,200	-300,294	9,303	5,354	3,798	2,651	1,826	3,600

Assumptions and notes:

- All assumptions to obtain the figures shown in column B are the same ones used in table 2.**
- Annual take home pay does not include 13 month bonuses or any additional bonuses.**
- The fixed deposits return on average 0.5% per year, as shown under column (D).**

We note that many people would fall under column (D) because they place their money into mainly savings and fixed deposits. In such a situation, the extra monies they would need to set aside from their take home pay would be quite hefty. A person who earns a monthly gross salary of \$6,000 would have to set aside an extra 9.3% of his take home pay each year just to make up the difference if he only puts it into fixed deposits (this is taking into account even his increased take home pay as a result of the changes). This 9.3% works out to around \$500 per month.

However, an individual who invests the money properly would be able to reduce the impact on the CPF changes with a lot less effort. For example, the same person earning \$6,000 gross who invests \$1,800 per year into investments returning on average 10% per year over the long term would be able to make up the shortfall caused to his ordinary account. This works out to just \$150 per month.

Please note that the additional amounts shown above only represent what may have to be set aside in addition from cash just to make up the difference caused by the CPF changes. Table 3 above does not show whether a person would be able to retire comfortably or achieve his dream home. Nevertheless, we hope this article does highlight the impact that CPF changes will have on a person, and that planning ahead and investing your hard earned savings is now more important than ever. The alternative is that you would now have to save much more than before.

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