

Annex C: Universal Old Age Pension Scheme (2012-2060)

34.50% 35.30%

	A		B	C	D	E	F	G	H	I	J	K	L	M	N
						=A*D*12				=F+G+H		=(H+J)/L	=I+J	=L-E	
Year	Elderly 65+ Years	% of yearly change	Total Population (15-64 Years)	Employed Persons (15-64 Years)	Suggested Monthly Pension Rate	Annual Pension Payment	Pension subscription on Employees (2.5%)	Pension subscription on Employers (2.5%)	Pension subscription on Government	Total Pension Subscription	CSSA and OALA to Elders 65+	Total Gov't Contribution as % of Total Contribution	Total Tripartite Contribution	Yearly Surplus/Deficit	Accumulative Surplus
	(,000)		(,000)	(,000)	(\$)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)		(\$ billions)	(\$ billions)	(\$ billions)
2010	918.3		4,982.8	3,185.1											
2011	941.1	2.5%	5,052.6	3,229.9											
2012	979.9	4.1%	5,053.6	3,322.5											
2013	1,026.8	4.8%	5,048.9	3,382.9											
2014	1,063.3	3.6%	5,055.3	3,364.9											
2015	1,115.1	4.9%	5,048.0	3,383.1											
2016	1,164.5	4.4%	5,047.6	3,402.2											
2017	1,214.4	4.3%	5,036.0	3,365.3	4,000.0	58.3	24.0	24.2	50.0	98.2	28.3	61.9%	126.5	68.2	68.2
2018	1,265.2	4.2%	5,024.1	3,355.2	4,124.0	62.6	24.8	25.1	0.0	50.0	30.6	38.0%	80.6	18.0	89.6
2019	1,323.1	4.6%	5,000.9	3,339.9	4,251.8	67.5	25.6	25.9	0.0	51.5	32.7	38.8%	84.2	16.7	110.6
2020	1,384.1	4.6%	4,975.1	3,320.0	4,383.7	72.8	26.3	26.6	0.0	52.9	35.3	40.0%	88.2	15.4	131.4
2021	1,450.5	4.8%	4,949.1	3,293.9	4,519.5	78.7	27.0	27.3	0.0	54.3	38.0	41.2%	92.4	13.7	151.5
2022	1,520.3	4.8%	4,921.0	3,263.9	4,659.7	85.0	28.7	29.0	29.1	86.8	41.2	55.0%	128.0	43.0	202.0
2023	1,594.1	4.9%	4,895.7	3,230.9	4,841.4	92.6	29.5	29.8	0.0	59.3	44.7	43.0%	104.0	11.4	223.3
2024	1,667.9	4.6%	4,872.0	3,198.5	5,030.2	100.7	30.5	30.8	0.0	61.3	48.9	44.4%	110.1	9.4	243.7
2025	1,742.9	4.5%	4,851.0	3,167.1	5,226.4	109.3	31.4	31.7	0.0	63.1	52.8	45.6%	115.9	6.6	262.2
2026	1,815.9	4.2%	4,836.6	3,138.5	5,430.2	118.3	32.5	32.7	0.0	65.2	57.3	46.8%	122.5	4.1	279.2
2027	1,884.1	3.8%	4,830.7	3,114.4	5,642.0	127.6	34.8	35.1	35.3	105.2	61.6	58.1%	166.8	39.2	332.1
2028	1,964.4	4.3%	4,800.2	3,089.3	5,884.6	138.7	35.9	36.4	0.0	72.3	67.1	48.1%	139.4	0.7	349.1
2029	2,036.7	3.7%	4,768.2	3,068.8	6,137.6	150.0	37.2	37.7	0.0	74.9	72.7	49.3%	147.6	-2.4	363.8
2030	2,102.2	3.2%	4,742.2	3,053.6	6,401.5	161.5	38.5	39.0	0.0	77.5	78.2	50.2%	155.7	-5.8	375.9
2031	2,159.4	2.7%	4,724.3	3,043.8	6,676.8	173.0	40.1	40.4	0.0	80.6	84.0	51.0%	164.5	-8.5	385.8
2032	2,208.5	2.3%	4,714.3	3,040.5	6,963.9	184.6	43.5	44.0	43.5	130.9	89.3	60.3%	220.2	35.7	440.4
2033	2,258.6	2.3%	4,702.4	3,036.5	7,207.6	195.4	45.1	45.6	0.0	90.7	94.9	51.1%	185.6	-9.8	452.2
2034	2,307.9	2.2%	4,690.6	3,031.2	7,459.9	206.6	46.6	47.2	0.0	93.8	100.2	51.7%	194.0	-12.6	461.7
2035	2,354.6	2.0%	4,681.1	3,027.1	7,721.0	218.2	48.1	48.7	0.0	96.8	105.6	52.2%	202.4	-15.8	468.6
2036	2,400.1	1.9%	4,672.0	3,024.8	7,991.2	230.2	50.0	50.3	0.0	100.3	111.2	52.6%	211.6	-18.6	473.0
2037	2,438.3	1.6%	4,668.7	3,025.6	8,270.9	242.0	53.6	54.3	51.7	159.6	117.2	61.0%	276.8	34.8	531.0
2038	2,477.4	1.6%	4,661.4	3,023.8	8,560.4	254.5	55.6	56.2	0.0	111.8	123.3	52.4%	235.1	-19.4	537.6
2039	2,510.8	1.3%	4,657.7	3,020.6	8,860.0	266.9	57.6	58.3	0.0	115.8	129.5	52.8%	245.3	-21.6	542.3
2040	2,539.3	1.1%	4,656.2	3,019.0	9,170.1	279.4	59.5	60.3	0.0	119.8	135.4	53.1%	255.2	-24.2	544.7
2041	2,557.6	0.7%	4,662.4	3,020.4	9,491.1	291.3	62.0	62.4	0.0	124.4	141.0	53.1%	265.5	-25.8	545.5
2042	2,574.8	0.7%	4,664.6	3,018.9	9,823.3	303.5	66.4	67.1	61.4	194.9	147.4	61.0%	342.3	38.8	611.1
2043	2,589.0	0.6%	4,666.1	3,016.8	10,167.1	315.9	68.8	69.6	0.0	138.4	152.4	52.4%	290.8	-25.0	616.0
2044	2,602.9	0.5%	4,664.9	3,013.9	10,522.9	328.7	71.4	72.2	0.0	143.6	158.0	52.4%	301.5	-27.1	619.0
2045	2,616.9	0.5%	4,659.8	3,009.7	10,891.2	342.0	73.8	74.7	0.0	148.6	163.7	52.4%	312.2	-29.8	619.6
2046	2,629.7	0.5%	4,653.0	3,005.2	11,272.4	355.7	76.8	77.3	0.0	154.2	169.6	52.4%	323.8	-31.9	618.0
2047	2,640.6	0.4%	4,645.7	3,000.9	11,667.0	369.7	82.2	83.2	0.0	165.4	175.8	51.5%	341.2	-28.5	619.8
2048	2,652.1	0.4%	4,634.3	2,995.6	12,075.3	384.3	85.3	86.3	0.0	171.6	182.2	51.5%	353.8	-30.5	619.6
2049	2,658.7	0.2%	4,623.8	2,989.7	12,497.9	398.7	88.5	89.6	0.0	178.1	188.6	51.4%	366.7	-32.0	618.0
2050	2,664.9	0.2%	4,610.1	2,982.3	12,935.4	413.7	91.6	92.7	0.0	184.3	195.4	51.5%	379.7	-34.0	614.3

Annex C: Universal Old Age Pension Scheme (2012-2060)

34.50% 35.30%

	A		B	C	D	E	F	G	H	I	J	K	L	M	N
						=A*D*12				=F+G+H		=(H+J)/L	=I+J	=L-E	
Year	Elderly 65+ Years	% of yearly change	Total Population (15-64 Years)	Employed Persons (15-64 Years)	Suggested Monthly Pension Rate	Annual Pension Payment	Pension subscription on Employees (2.5%)	Pension subscription on Employers (2.5%)	Pension subscription on Government	Total Pension Subscription	CSSA and OALA to Elders 65+	Total Gov't Contribution as % of Total Contribution	Total Tripartite Contribution	Yearly Surplus/Deficit	Accumulative Surplus
	(,000)		(,000)	(,000)	(\$)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)		(\$ billions)	(\$ billions)	(\$ billions)
2051	2,669.1	0.2%	4,595.1	2,973.9	13,388.1	428.8	95.2	95.9	0.0	191.1	202.1	51.4%	393.2	-35.6	608.8
2052	2,669.1	0.0%	4,581.6	2,965.5	13,856.7	443.8	101.9	103.0	0.0	204.9	209.1	50.5%	414.0	-29.8	608.8
2053	2,671.5	0.1%	4,564.4	2,955.1	14,341.7	459.8	105.6	106.8	0.0	212.4	216.4	50.5%	428.8	-31.0	607.7
2054	2,676.6	0.2%	4,543.6	2,943.5	14,843.6	476.8	109.4	110.7	0.0	220.1	223.9	50.4%	444.0	-32.7	604.7
2055	2,679.1	0.1%	4,524.9	2,932.3	15,363.2	493.9	113.1	114.5	0.0	227.6	231.9	50.5%	459.5	-34.4	599.9
2056	2,681.1	0.1%	4,506.7	2,921.2	15,900.9	511.6	117.5	118.3	0.0	235.8	240.3	50.5%	476.0	-35.5	593.8
2057	2,681.7	0.0%	4,490.4	2,911.0	16,457.4	529.6	125.7	127.1	0.0	252.7	248.5	49.6%	501.3	-28.3	594.6
2058	2,682.2	0.0%	4,474.3	2,901.4	17,033.4	548.2	130.2	131.7	0.0	261.9	257.2	49.6%	519.1	-29.1	594.6
2059	2,681.4	0.0%	4,459.4	2,892.4	17,629.6	567.3	134.9	136.5	0.0	271.4	266.1	49.5%	537.5	-29.7	593.9
2060	2,681.8	0.0%	4,443.6	2,883.7	18,246.6	587.2	139.4	141.0	0.0	280.5	275.4	49.5%	555.9	-31.3	591.8
							2,866.3	2,897.2	271.0						

Remarks Excluding foreign domestic helpers

A, B	The population figures from 2012 to 2041 are based on the "Hong Kong Population Projection 2012-2041" by Census and Statistics Department with adjustment made by Dr Liou F.K. Ng of the University of Hong Kong. The figures from 2042 to 2060 are also derived from Dr. Ng's population projection.
C	The projected percentage of employed persons (with number of unemployed persons being excluded from the working population) to total population of 15-64 years is assumed unchanged at 2011 level. The employment rates from 2012 to 2016 are based on the forecast of the Economic Research Analysis Ltd (ERA) but deducted by 1% while the rates from 2017 to 2060 are deducted by 0.5%.
D	Suggested pension rate in 2017: \$4,000. Rate adjusted every year according to the pervious year's Comp CPI Inflation rate e.g. Suggested pension rate in 2018 is \$4,124 = \$4,000 X 103.1% (2017 forecasted Comp CPI inflation rate is 3.1%)
F, G	Projection of pension subscription in 2017 is based on the monthly employment earnings of individual employees with \$6,500 and \$80,000 as lower and upper threshold respectively. From 2012 to 2060, projections adjusted according to number of employed persons and Comp CPI inflation rates. Meanwhile, real wages assumed an increase of 1% per annum.
H	The Government is required to inject \$50 billion in 2017 and then \$25 billion at 2012 constant price every five years, i.e.\$29.1 billion in 2022. It will be appropriate for the Government to stop the lum sum injection starting from 2047 as the accumulative surplus is enough to cover the projected deficit in the coming 20 years.
J	Proportion of CSSA receivers to all elders remains unchanged at 2010 level, i.e. 18.06%, which served as the basis for projection to government subsidy to the elderly in the coming 50 years. The Government also assumed that the proportion of OALA receivers would remain unchanged too. CSSA and OALA rate will be adjusted according to Comp CPI Inflation rate.
N	The projected return rate of investment is 4.9% per annum between 2012 and 2060. According to the annual return rate of the Exchange Fund from 2004 to 2010 (Ref: HKMA Annual report: Reserve Management).

Annex C: Universal Old Age Pension Scheme (2012-2060)

34.50% 35.30%

	A		B		C	D	E		F	G	H	I	J	K	L	M	N
							=A*D*12					=F+G+H		=(H+J)/L	=I+J	=L-E	
Year	Elderly 65+ Years	% of yearly change	Total Population (15-64 Years)	Employed Persons (15-64 Years)	Suggested Monthly Pension Rate	Annual Pension Payment	Pension subscription on Employees (2.5%)	Pension subscription on Employers (2.5%)	Pension subscription on Government	Total Pension Subscription	CSSA and OALA to Elders 65+	Total Gov't Contribution as % of Total Contribution	Total Tripartite Contribution	Yearly Surplus/Deficit	Accumulative Surplus		
	(,000)		(,000)	(,000)	(\$)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)	(\$ billions)		(\$ billions)	(\$ billions)	(\$ billions)		

Actual / Provisional (excluding Foreign Domestic Helpers)

	65+:	Unemploy%:	Labor Force:		CPI(%):
2010	918.3	4.6%	4,982.8	3,364.8	2.4%
2011	941.1	3.7%	5,052.6	3,407.4	5.3%
2012	979.9	3.5%	5,053.6	3,453.8	4.1%
2013		5.1%			4.3%
2014		4.6%			4.0%
2015		4.1%			4.6%
2016		3.6%			4.2%
2017 - 21		4.5%			3.1%
2022 - 26		4.5%			3.9%
2027 - 31		4.5%			4.3%
2032+		4.5%			3.5%

Ref. Women&Men in HK, Table 1.1A, 4.24A Table 4.30A Table 1.1A HK Statistics Table 052
 GHS 2010Q2 Tables 1.1, 5.1 & A1.1 Fin. Sec. Forecast
 2012-2016: ERA forecasts - 1% ERA forecasts
 2017+: ERA forecasts - 0.5%

Up to 2036	43,864.2		131,976.3	86,473.8		2,631.4	700.1	707.6	157.9	1,565.6	1,274.6		2,840.2
Up to 2060	106,790.8		242,289.0	157,896.4		12,224.8	2,866.3	2,897.2	271.0	6,034.4	5,825.2		11,859.7

2012 65 15 64 3,000.0 2.5% 2.5% 50.00 65 4.9%
 Based on 20111026_OAP_Annex_C_D_eng_2

附錄D：長者綜援及生果金的預計開支

Annex D : CSSA and OAA (Estimation)

Year	Elderly 65+ Years	CSSA rate	Total allowance (Inflation adjusted)	Old Age Living Allowance rate	Total allowance (Inflation adjusted)	Total Government Expenditure (D + F)
			18.06%		48 to 49%	
			Elderly 65+		Elderly 65+	
	(,000)	(\$)	(\$ billions)	(\$/\$ billions)	(\$ billions)	(\$ billions)
2011						
2012						
2013	1,026.8	2,935	6.5	12.9	13.4	20.0
2014	1,063.3	3,055	7.0	13.5	14.7	21.7
2015	1,115.1	3,177	7.7	14.3	16.1	23.8
2016	1,164.5	3,323	8.4	14.8	17.5	25.9
2017	1,214.4	3,463	9.1	15.6	19.2	28.3
2018	1,265.2	3,570	9.8	16.4	20.8	30.6
2019	1,323.1	3,681	10.6	16.9	22.1	32.7
2020	1,384.1	3,795	11.4	17.7	23.9	35.3
2021	1,450.5	3,913	12.3	18.5	25.7	38.0
2022	1,520.3	4,034	13.3	19.5	28.0	41.2
2023	1,594.1	4,191	14.5	20.3	30.2	44.7
2024	1,667.9	4,355	15.7	21.4	33.1	48.9
2025	1,742.9	4,525	17.1	22.2	35.7	52.8
2026	1,815.9	4,701	18.5	23.2	38.8	57.3
2027	1,884.1	4,884	19.9	24.0	41.7	61.6
2028	1,964.4	5,094	21.7	25.1	45.4	67.1
2029	2,036.7	5,314	23.5	26.1	49.3	72.7
2030	2,102.2	5,542	25.2	26.9	53.0	78.2
2031	2,159.4	5,780	27.1	27.7	56.9	84.0
2032	2,208.5	6,029	28.9	28.2	60.4	89.3
2033	2,258.6	6,240	30.5	29.0	64.3	94.9
2034	2,307.9	6,458	32.3	29.6	67.9	100.2
2035	2,354.6	6,684	34.1	30.1	71.5	105.6
2036	2,400.1	6,918	36.0	30.6	75.2	111.2
2037	2,438.3	7,160	37.8	31.2	79.4	117.2
2038	2,477.4	7,411	39.8	31.7	83.5	123.3
2039	2,510.8	7,670	41.7	32.2	87.8	129.5
2040	2,539.3	7,939	43.7	32.5	91.7	135.4
2041	2,557.6	8,217	45.5	32.7	95.5	141.0
2042	2,574.8	8,504	47.5		100.0	147.4
2043	2,589.0	8,802	49.4		103.0	152.4

附錄D：長者綜援及生果金的預計開支

Annex D : CSSA and OAA (Estimation)

Year	Elderly 65+ Years	CSSA rate	Total allowance (Inflation adjusted)	Old Age Living Allowance rate	Total allowance (Inflation adjusted)	Total Government Expenditure (D + F)
			18.06%		48 to 49%	
			Elderly 65+		Elderly 65+	
	(,000)	(\$)	(\$ billions)	(\$/\$ billions)	(\$ billions)	(\$ billions)
2044	2,602.9	9,110	51.4		106.6	158.0
2045	2,616.9	9,429	53.5		110.2	163.7
2046	2,629.7	9,759	55.6		114.0	169.6
2047	2,640.6	10,100	57.8		118.0	175.8
2048	2,652.1	10,454	60.1		122.1	182.2
2049	2,658.7	10,820	62.3		126.3	188.6
2050	2,664.9	11,199	64.7		130.7	195.4
2051	2,669.1	11,591	67.0		135.0	202.1
2052	2,669.1	11,996	69.4		139.7	209.1
2053	2,671.5	12,416	71.9		144.5	216.4
2054	2,676.6	12,851	74.5		149.3	223.9
2055	2,679.1	13,300	77.2		154.7	231.9
2056	2,681.1	13,766	80.0		160.3	240.3
2057	2,681.7	14,248	82.8		165.7	248.5
2058	2,682.2	14,746	85.7		171.5	257.2
2059	2,681.4	15,263	88.7		177.4	266.1
2060	2,681.8	15,797	91.8		183.6	275.4

Remarks

- Proportion of the total number of elderly receiving CSSA at age 65 or above (2009-2010):
= $(88\% * 187,128) / 911,690 = 18.06\%$
- Proportion of the total number of elderly receiving Old Age Living Allowance (OALA) is anticipated to be similar to the current portion of OAA recipients (ordinary rate), OAA recipients (higher rate; a portion only) and Normal Disability Allowance (a portion only) out of the total elderly population, i.e. around 48 to 49% from 2013 to 2041.
- Rate of CSSA in 2015 and after: adjusted every year according to the previous year's Comp CPI Inflation rate
- Total expenditure of OALA from 2013 to 2041 are based on official figures mentioned in "Supplementary information on the responses of the questions raised by some Members of the Legislative Council for the Old Age Living Allowance" [FC47/12-13(01), para.28; Chinese only]; adjusted every year according to the previous year's Comp CPI Inflation rate. Number of OALA recipients are adjusted according to changes of elderly population aged 65+ on a yearly basis

Sources

<http://www.info.gov.hk/gia/general/200907/08/P200907080142.htm>
http://gia.info.gov.hk/general/200907/08/P200907080142_0142_54340.doc