# China

#### China: pension system in 2008

China has a two-tier pension system, consisting of a basic pension and a mandatory employee contribution to a second-tier plan. This system, which was introduced in 1998, was significantly revised in 2006. It covers urban workers and many of the parameters depend on province-wide (rather than national) average earnings.

#### **Key indicators**

		China	OECD
Average earnings	CNY	28 900	282 100
	USD	4 200	40 600
Public pension spending	% of GDP		7.0
Life expectancy	At birth	73.0	78.9
	At age 65	80.7	83.1
Population over age 65	% of working-age population	11.4	23.6

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## **Qualifying conditions**

Normal pension age is 60 for men, 50 for women blue collar, and 55 for women white collar.

#### **Benefit calculation**

#### Basic

The basic pension pays 1% of the average of the indexed individual wage and the province-wide average earnings for each year of coverage, subject to a minimum of 15 years of contributions. The pension in payment is indexed to a mix of wages and prices, which may be between 40 and 60% of average earnings growth. The modelling assumes 50% indexation to wages.

#### Defined contribution (funded or notional accounts)

The second-tier system comprises individual accounts. In addition to the north-eastern provinces (Liaoning, Jilin and Heilongjiang), a further eight have funded individual account systems. In other cases, the accounts are largely notional and are credited with a notional interest rate.

Employees pay 8% of wages to the individual account system. The accumulated balance in the fund or the notional account is converted into a stream of pension payments at the time of retirement by dividing the balance by a government-determined annuity factor, depending on individual retirement age and average national life expectancy. In all provinces, these annuity factors for both males and females (for monthly benefits) are:

Age	40	45	50	55	60	65	70
Factor	233	216	195	170	139	101	56

Pensions in payment are indexed to a mix of wages and prices (see the description of the basic pension above).

#### **Variant careers**

#### Early retirement

It is possible to claim pensions at 55 for men and 50 for women if the individual is engaged in physical work. If the individual is totally disabled, pensions will commence at 50 for men and 45 for women subject to 15 years of contributions.

#### Late retirement

It is possible to defer pension payments until after normal pension age, but the pension benefit is not valorised.

## Personal income tax and social security contributions

There is a standard income-tax allowance of CNY 1 600 per month. Employees are allowed to deduct 20% of earnings for work-related expenses. If earnings are less than CNY 4 000, then the worker is allowed to deduct a flat rate of CNY 800. The income-tax schedule is

CNY, per annum	0	500	2 000	5 000	20 000	40 000	60 000	80 000	100 000
Rate (%)	5	10	15	20	25	30	35	40	45

The social security contributions to individual accounts are exempt from income taxes. On the other hand, pension benefits are taxed according to the personal income tax rate.

Under the revised system, employers contribute about 20 of earnings to cover the basic pension. The second-tier pension is financed by an 8% contribution from employees. These contributions are capped at an earnings level of three times the local average wage.

0.5

# Pension modelling results: China





# ■ Net — Gross 2.5 Net and gross relative pension levels 2.0 1.5 1.0

0.50

0.75

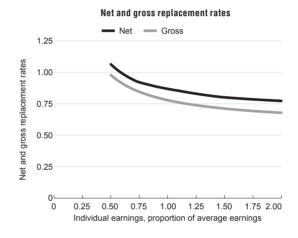
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Individual earnings, proportion of average earnings

1.25

1.50

Net and gross relative pension levels



Men	Madian assuss	Individual earnings, multiple of average					
Women (where different)	Median earner	0.5	0.75	1	1.5	2	
Gross relative pension level	66.9	48.9	63.4	77.9	106.8	135.7	
(% average gross earnings)	52.7	39.2	50.1	61.0	82.7	104.5	
Net relative pension level	75.8	55.5	71.9	86.8	113.4	139.6	
(% net average earnings)	59.8	44.5	56.8	69.2	91.5	111.3	
Gross replacement rate	82.5	97.9	84.5	77.9	71.2	67.9	
(% individual gross earnings)	65.1	78.5	66.8	61.0	55.2	52.2	
Net replacement rate	90.6	106.4	92.1	86.8	80.1	77.3	
(% individual net earnings)	71.5	85.3	72.8	69.2	64.7	61.6	
Gross pension wealth	15.8	18.7	16.1	14.9	13.6	13.0	
(multiple of individual gross earnings)	16.6	20.0	17.0	15.5	14.0	13.3	
Net pension wealth	15.8	18.7	16.1	14.6	12.7	11.8	
(multiple of individual gross earnings)	16.6	20.0	17.0	15.5	13.7	12.5	

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# Alternative economic and career length assumptions

40 year career under OECD economic assumptions

Men	Median earner	Individual earnings, multiple of average					
Women (where different)	Median earner	0.5	0.75	1	1.5	2	
Gross relative pension level	66.9	48.9	63.4	77.9	106.8	135.7	
(% average gross earnings)	61.3	45.5	58.2	71.0	96.4	121.9	
Net relative pension level	75.8	55.5	71.9	86.8	113.4	139.6	
(% net average earnings)	69.5	51.6	66.0	80.0	104.0	127.1	
Gross replacement rate	82.5	97.9	84.5	77.9	71.2	67.9	
(% individual gross earnings)	75.6	91.0	77.6	71.0	64.3	61.0	
Net replacement rate	90.6	106.4	92.1	86.8	80.1	77.3	
(% individual net earnings)	83.1	98.9	84.6	80.0	73.5	70.3	
Gross pension wealth	15.8	18.7	16.1	14.9	13.6	13.0	
(multiple of individual gross earnings)	19.2	23.1	19.8	18.1	16.4	15.5	
Net pension wealth	15.8	18.7	16.1	14.6	12.7	11.8	
(multiple of individual gross earnings)	19.2	23.1	19.8	18.0	15.6	14.3	

### 30 year career under OECD economic assumptions

Men	Madian course	Individual earnings, multiple of average					
Women (where different)	Median earner	0.5	0.75	1	1.5	2	
Gross relative pension level	48.3	35.6	45.9	56.2	76.8	97.3	
(% average gross earnings)	44.5	33.2	42.3	51.4	69.6	87.8	
Net relative pension level	54.8	40.4	52.0	63.7	85.8	104.8	
(% net average earnings)	50.4	37.6	48.0	58.3	78.7	96.2	
Gross replacement rate	59.7	71.2	61.2	56.2	51.2	48.7	
(% individual gross earnings)	54.9	66.4	56.4	51.4	46.4	43.9	
Net replacement rate	65.6	77.4	66.6	63.7	60.6	58.0	
(% individual net earnings)	60.3	72.2	61.5	58.3	55.5	53.2	
Gross pension wealth	11.4	13.6	11.7	10.7	9.8	9.3	
(multiple of individual gross earnings)	14.0	16.9	14.4	13.1	11.8	11.2	
Net pension wealth	11.4	13.6	11.7	10.7	9.6	8.8	
(multiple of individual gross earnings)	14.0	16.9	14.4	13.1	11.8	10.8	

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## **Economy specific assumptions**

40 year career under economy specific assumptions

Men	Madian	Individual earnings, multiple of average					
Women (where different)	Median earner	0.5	0.75	1	1.5	2	
Gross relative pension level	58.6	43.8	55.7	67.6	91.4	115.3	
(% average gross earnings)	54.5	41.3	51.9	62.6	83.9	105.2	
Net relative pension level	66.4	49.7	63.2	76.6	99.5	121.1	
(% net average earnings)	61.8	46.8	58.9	71.0	92.6	112.0	
Gross replacement rate	72.3	87.6	74.3	67.6	61.0	57.6	
(% individual gross earnings)	67.3	82.6	69.3	62.6	55.9	52.6	
Net replacement rate	79.4	95.2	81.0	76.6	70.3	67.0	
(% individual net earnings)	73.9	89.8	75.5	71.0	65.4	61.9	
Gross pension wealth	19.9	24.1	20.5	18.6	16.8	15.9	
(multiple of individual gross earnings)	27.7	34.0	28.5	25.8	23.0	21.7	
Net pension wealth	19.9	24.1	20.5	18.6	16.1	14.7	
(multiple of individual gross earnings)	27.7	34.0	28.5	25.8	22.4	20.3	

#### 30 year career under economy specific assumptions

Men	Median earner	Individual earnings, multiple of average					
Women (where different)	Median earner	0.5	0.75	1	1.5	2	
Gross relative pension level	43.9	32.9	41.8	50.7	68.6	86.4	
(% average gross earnings)	40.9	31.0	39.0	46.9	62.9	78.9	
Net relative pension level	49.8	37.3	47.4	57.5	77.6	95.0	
(% net average earnings)	46.3	35.1	44.2	53.2	71.3	87.8	
Gross replacement rate	54.2	65.7	55.7	50.7	45.7	43.2	
(% individual gross earnings)	50.5	61.9	51.9	46.9	41.9	39.4	
Net replacement rate	59.6	71.4	60.7	57.5	54.8	52.5	
(% individual net earnings)	55.4	67.3	56.6	53.2	50.4	48.6	
Gross pension wealth	14.9	18.1	15.3	14.0	12.6	11.9	
(multiple of individual gross earnings)	20.8	25.5	21.4	19.3	17.3	16.3	
Net pension wealth	14.9	18.1	15.3	14.0	12.6	11.5	
(multiple of individual gross earnings)	20.8	25.5	21.4	19.3	17.3	16.0	

Real earnings: 12% per year converging steadily to 2%, giving an average of 7%.

Price inflation: 5% per year converging steadily to 2.5%, giving an average of 3.75%.

Real rate of return: 10.5% per year converging steadily to 3.5%, giving an average of 7%.

Discount rate (for actuarial calculations): 2% per year.

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