BGL Pension Report

Situating Nigeria in the Global Pension Industry

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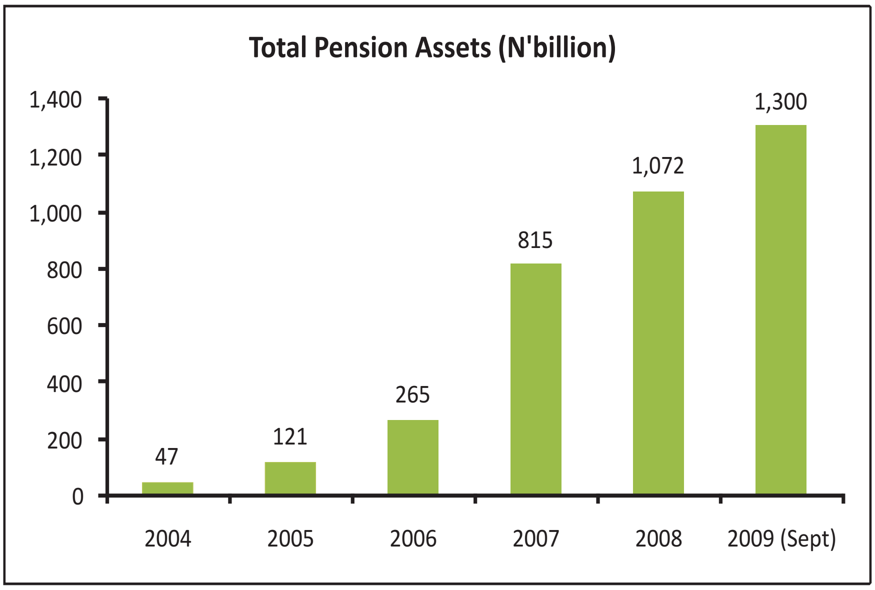
Executive Summary

Background

The pension system in Nigeria has experienced some modest growth since the introduction of the Defined Contributory (DC) scheme to replace the pre-reform Defined Benefit (DB) scheme. Pension assets have grown from ₦265 billion ($1.77 billion) in 2006, when the scheme became generally effective to ₦1.3 trillion ($8.67 billion) in September 2009. Registered contributors also increased from 932,435 in 2006 to 3,888,491 in September 2009.

Fig 1: Total Pension Assets



Source: PENCOM

Global development in pension management

Globally, pension managers continue to experience mixed fortunes due to the economic recession. While managers in most developed economies suffered huge losses in 2008 as equities market crashed worldwide, managers in emerging markets where regulatory restrictions limit investments to predominantly domestic government bonds experienced growth in value. The losses experienced in most countries have expanded the funding gap of the pension schemes as liabilities continue to grow despite the loss in asset value. This is making the shift to DC pension scheme from the traditional DB scheme a global phenomenon. The increase in dependency ratio also makes this shift very necessary.

Another general challenge experienced in many countries, especially the developing countries is the need to make pension fund management a competitive business by lowering entry barriers and restrictions on investible assets. Low coverage of the pension scheme is being experienced in several countries as most private sector workers are captured in the informal sector and the low-income earners cannot afford appropriate retirement savings.

By restricting foreign investments, the Nigerian pension sector is losing out on potential huge return on investment in other emerging markets development projects.

Nigerian pension managers also face similar challenges

Low coverage of pension contributors to the working population suggests that the social statistics data that gives more proportion of the working population might be misleading. Lack of trust in the country's financial system might also be preventing the informal sector from joining the scheme.

Regulatory restriction of asset allocation and investing limits continue to inhibit industry competitiveness. While the restriction has protected the industry from losses as equity market crashed, it also prevented the industry from benefiting from a potential huge return during the 2007 equity market boom. In addition, by restricting foreign investments, the Nigerian pension sector is losing out on potential huge return on investment in other emerging markets developmental projects and a possibility of reprisal investment in Nigeria's infrastructural projects.

There are attractive opportunities for investors

With less than 10% of the working population signed on to the pension scheme, Nigeria's pension industry portents great opportunity for impressive growth. At only $8.6billion and only about 5% of the country's GDP, Nigeria's pension assets has the potential of growing to about $47.32 billion in the next six years. However, industry competitiveness will be a pre-requisite for the industry to realise its potential. To compete more favourably, pension managers will need to acquire appropriate technical and technological competence and maintain a lean structure for cost reduction purposes. Opportunities in the sector include capitalisation of the already existing pension managers for better operation and merger sand acquisitions among industry players for economies of scale and technology sharing.

Investment opportunities for industry players continue to be government debts, bank deposits, equities and foreign assets. Interested operators might consider granting loans to plan members as much as the regulator would allow. However in giving loans to plan members, rules, including selection procedures, should be transparent and no implicit or explicit subsidies should be involved. Going forward, pension funds would help in economic development by providing the much needed long term capital for infrastructure projects.

At only $8.6billion and only about 5% of the country's GDP, Nigeria's pension assets has the potential of growing to about $47.32 billion by 2015.

Based on available information as published in the 2008 audited reports of RSA funds in Nigeria, the top pension managers in Nigeria are Stanbic IBTC Pensions Limited, ARM Pension Managers, Crusader Sterling Pensions Limited, Sigma Pensions Limited and Leadway Pensure Limited. Financial information about several of the pension managers is not available, however, it is anticipated that when available, there will not be any significant change in the ranking of the top pension managers.

Table I: Top Pension Managers in Nigeria

Pension Managers	Total Contributions (N million)	Total Contributors' Fund (N million)	Total Investments (N million)	Fund's Unit Price (N)
Stanbic IBTC Pension*	63,214.24	73,562.63	73,650.99	1.50
Crusader Sterling Pension	12,698.87	12,211.68	14,135.26	1.54
ARM Pensions	18,471.98	19,957.46	20,701.03	1.57
Sigma Vaugh Pensions	31,003.46	32,332.02	31,893.50	1.46
Leadway Pensure Pensions	19,889.18	21,219.02	20,866.87	1.31

*Source: Published RSA Funds Accounts * 2007 Published Figures*

The Global Pension Market

The greatest challenge for pension managers globally is to continue to maintain an appropriate level of investments and pay retirements as at when due. This is more difficult as the economic recession has affected pension schemes across the world in several ways. In addition, the increasing pressure from regulations, investment strategies and governance makes the management of pension funds more difficult.

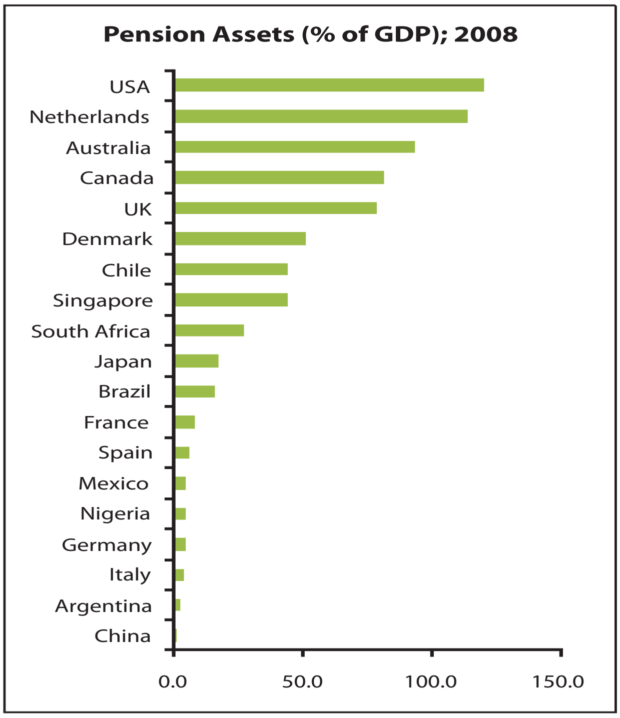
Global developments in relation to pension schemes are:

- Decline of defined benefit pension and the popularity of the defined contribution schemes
- Increasing governance responsibilities for pension managers and stricter regulatory oversight
- Increasing need for efficient risk management framework in investment strategies
- Exposure to equities that contributed to negative returns in most countries.
- Diversification into alternative asset class that turned out to have much higher correlation to equities in a market sell-off than anticipated
- Assets in jurisdiction which have required large weightings in domestic government bonds (the only safe haven asset during the year) were best protected
- The 18% fall to $25trillion in the value of global pension assets between end-2007 and end-2008, the largest annual decline for many years
- Increased focus on investment in emerging market funds where economic growths have been projected to be strong.

Fig 2: Global Pension Assets

Source: OECD, IFSL

Fig 3: Pension Asset to GDP

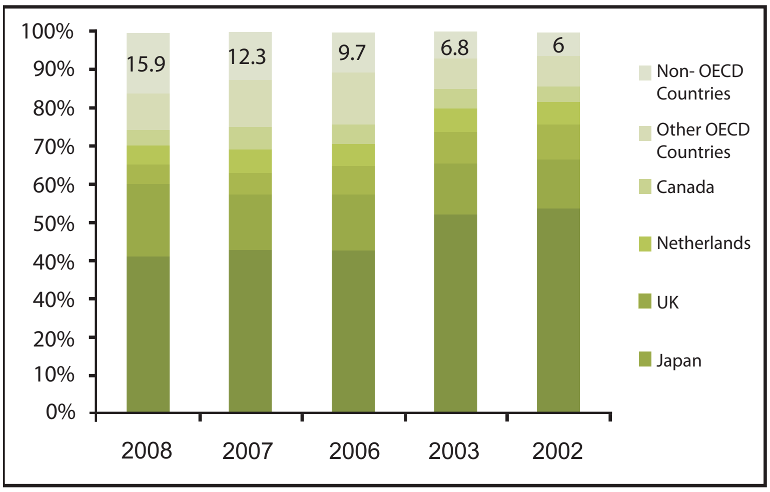


Source: OECD, BGL Research

Global Market Share

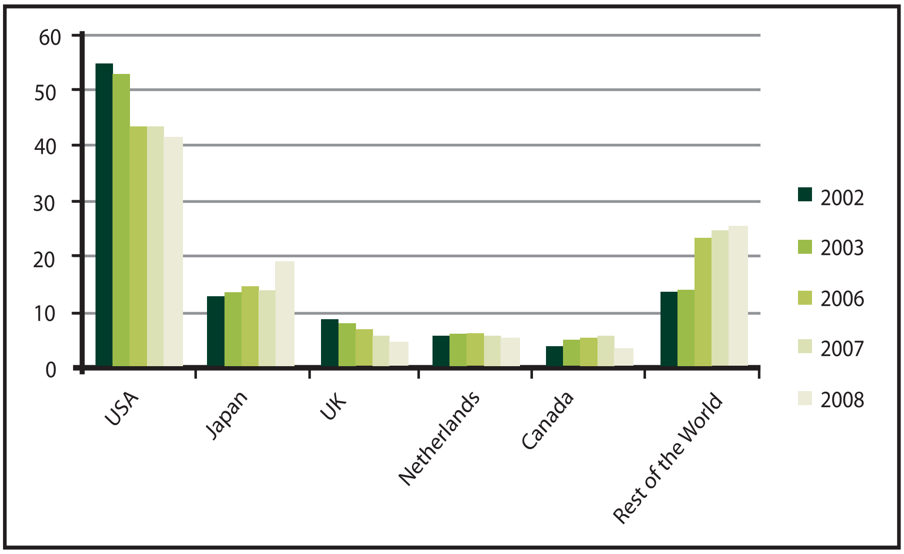
The global pension market has been dominated by five OECD countries USA, UK, Netherlands, Japan and Canada; accounting for about 75% of the world's pension assets. USA continues to lead the pack with slightly over 41% (a drop from about 56% in 2002), while Japan holds the second place with 19.3%, having grown from 13% in 2002. UK (4.7%) relinquished the third position to Netherlands (5.5%) after taking a serious hit by the recession. The rest of the OECD countries also suffer from loss of market share as their market share fell significantly from 13.8% in 2007 to 9.7% in 2008 while non-OECD countries continue to gain market share climbing to 15.9% in 2008 from 9.7% in 2007. The improved market share of non-OECD countries is believed to be a result of the pension reform in these countries and their adoption of the defined contribution scheme faster than most of the OECD countries.

Fig 4: Global Pension Market Share (%)



Source: Pensions & Investments

Fig 5: Trends in Global Market Share (%)



Source: Pension and Investments

Expansion Due to Reforms

Steady growth in pension assets between 2001 and 2007 was believed to be due to increased funding assisted by pension reforms around the world and the recovery in equity markets. However, this impressive run was reversed in 2008 due to the impact of the financial meltdown on the value of both equities and bonds. Pension reforms or reform adjustments introduced in several countries including Nigeria (2004), Chile (2008) and the UK (2008) has spurred the growth of the industry.

Returns on Investments

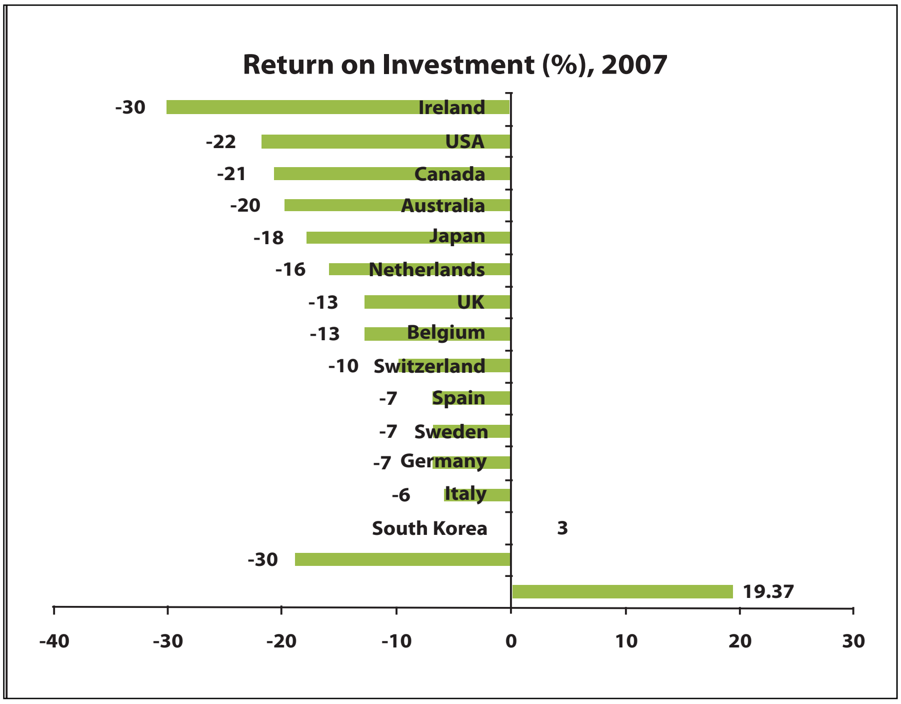
Returns have suffered a major setback in 2008 with most countries experiencing a negative nominal rate of returns in the year. Ireland, the US, Canada and Australia suffered largest falls with nominal returns dropping by at least 20% in each of these countries. However, South Korea recorded a positive return of 3% while several non-OECD countries also returned attractive rate of returns. Nigeria returned 19.37% on investment(Fig 6)

Nearly all countries recorded negative nominal rates of return in 2008, with an average of -19% reported across the OECD. The UK return of -10% was less negative due to declining exposures to equities and the falling value of sterling which lifted the value of income on overseas investments.

Assets Allocation

The argument that regulatory restriction on assets allocation in developing countries is paying off has led several money managers to seek investments in the emerging markets where growth projections have been strong. While the detrimental impact of holding equities has been very acute, the asset class has not lost its attraction to pension managers. Based on the expectation that the global economy will recover at some stage, managers are willing to ride out the storm. In addition, investors more than ever before now appreciate the risks associated with equities and therefore more willing to invest now that the market is at its low and implement a staged reduction in the asset class as normalcy returns to the market.

Fig 6: Return on Investment 2008



Source: OECD, BGL Research

Although, investors' confidence in active management has been shaken as they question the ability of pension managers to add value in such market turmoil, most pension managers are focusing on asset classes that are expected on the way out of a recession. Consequently, they are focusing their portfolio on equities and corporate bonds, as well showing greater interest in structured loans, commodities and diversified growth funds.

Trend in asset allocation globally has been mixed. The top five countries in pension assets are reacting to the financial meltdown in terms of asset allocation in differing ways. While UK's share of equities of pension fund assets fell from about 67% in 2003 to 56% in 2008; equities' share was relatively stable in the USA, Australia and the Netherlands, Japan's equities share increased from 44% to 51%.

Among the five countries, US pension assets has a total of 64% allocated to equities, equities derivatives and equities-linked assets, while the Netherlands has the lowest of 41%. Interestingly, while managers in the UK and the Netherlands are increasing their share of fixed income instruments (especially international bonds); Japan's share of bonds fell from 45% to 32% while bonds allocation remained stable in Australia. Bonds allocation in the US also fell slightly to 30% from about 34%.

Table 2: Pension Fund Portfolio Allocation (%)

	Government Securities	Corporate bonds	Financial institution deposits	Equities	Investment funds	Foreign securities	Other Invest.	Total
DEVELOPING COUNTRIES*								
Nigeria	34.34	0.03	19.63	30.04	0.55	3.57	11.84	100
Botswana	6	0	4	20	0	64	6	100
Argentina	50	3	21	18	7	0	1	100
Brazil	7	4	10	19	33	0	27	100
Chile	40	4	32	15	3	6	0	100
Mexico	82.49	0	0.021	11.24	0	0	6.25	100
India	85	10	0	5	0	0	0	100
DEVELOPED COUNTRIES**								
USA	22.91	1.05	1.18	37.11	17	0	20.75	100
UK	30	0	7	56	0	0	7	100
Japan	32	0	6	51	0	0	11	100
Netherlands	37.54	3.73	4.78	37.28	0	0	16.67	100
Canada	26.72	0.47	3.17	25.16	33.5	0	10.98	100
Australia	0	4.4	10.7	23.26	54.84	0	6.8	100

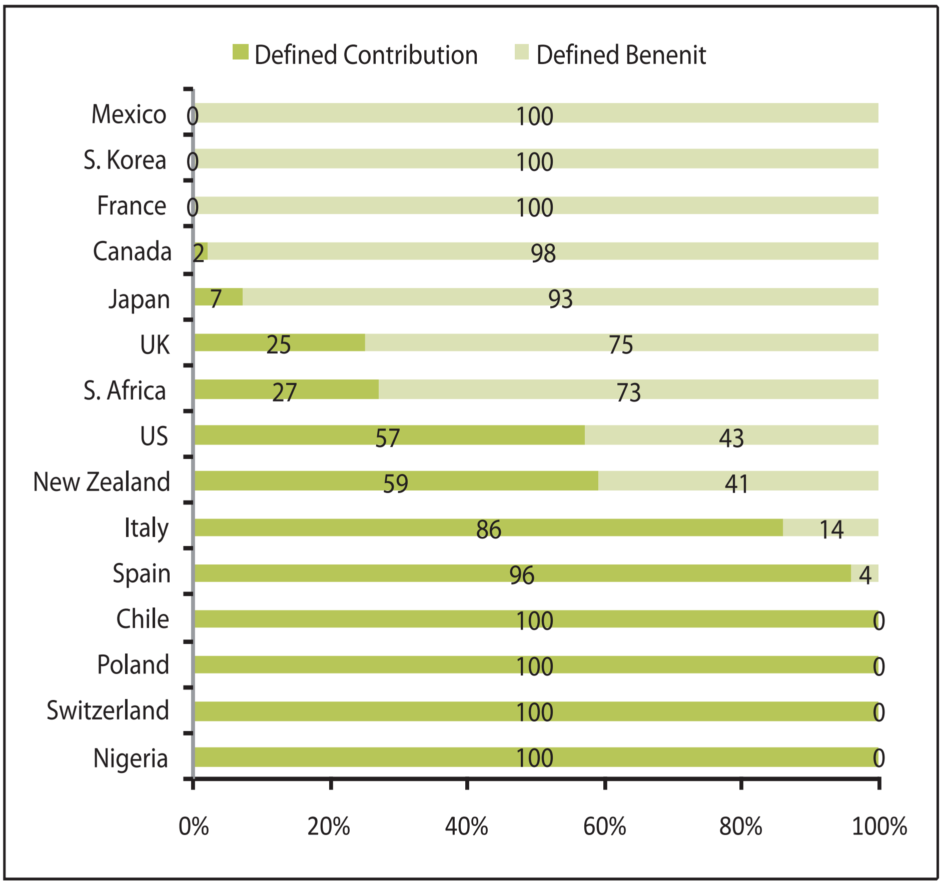
*Source: Nigeria Pension Commission, OECD * Figures for 2007 * * Figures for 2008*

Continuous Reform Globally

Without necessarily waiting for crisis to occur, several countries worldwide continue to review their pension schemes through reforms or reform adjustment to remain efficient. Several reasons have been adduced to these continuous reforms including the declining benefits of the defined benefit scheme, the trend in demography, costs and inadequacies of the government-run pension scheme, governance issues and responses to international policies.

Defined Benefit (DB) pension schemes are giving way to the Defined Contribution (DC) scheme as several countries face long-term deficits on the DB schemes. The gap between assets and liabilities becomes more highlighted by the convergence of international accounting standards which makes pension funds mark their unfunded pension liabilities to the market; resulting in a more transparent balance sheet for the pension managers. In the UK, there has been increased interest from companies in the insurance buyout market as a means of partial or full exit from their pension liabilities. The aggregate deficit for FTSE 100 companies was £40bn at end of June 2008. However, the pension Act 2008 contains a number of measures aimed at encouraging greater private pension savings, particularly among those where pension provision is limited. While there have been some reforms to the public sector scheme, a substantial unfunded deficit remains.

Fig 7: Adoption of Defined Contribution by Selected Countries



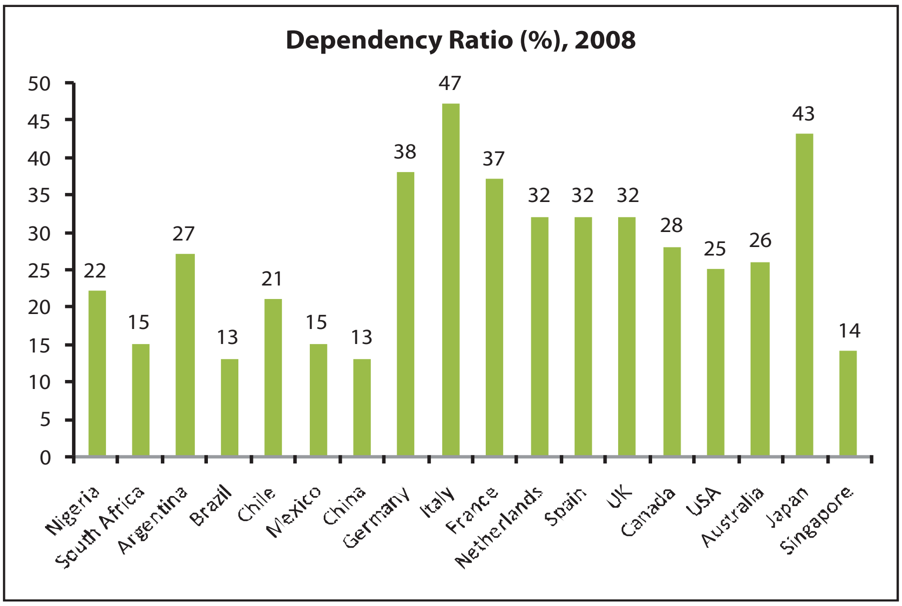
Source: OECD, BGL Research

Increased longevity, reducing birth rates and early retirements are causing a rise in dependency ratios of many developed countries especially in Europe and Asia. This will mean higher future benefit payouts; hence a need for review of the countries pension scheme. Government-run pension systems are largely funded on Pay As You Go (PAYG) basis. The impact of ageing populations and increased dependency has drawn attention to the rising cost of financing generous government pension systems on a PAYG basis. In many developing countries economic growth and rising living standards have highlighted the inadequacies of state pension systems and their failure to meet the increasing aspiration of individuals for a bigger income in retirement. As a result of the financial crisis, pension managers are facing burgeoning governance responsibilities. Regulators worldwide are paying closer attention to the risk management framework of the pension managers, the operation of the funds; making funding requirements more stringent. This has led many firms to seek advice on how best to implement a global governance framework including a proactive oversight committee which allows them to understand and manage risks and thus protect funds' beneficiaries.

Pension Managers to invest in emerging market funds

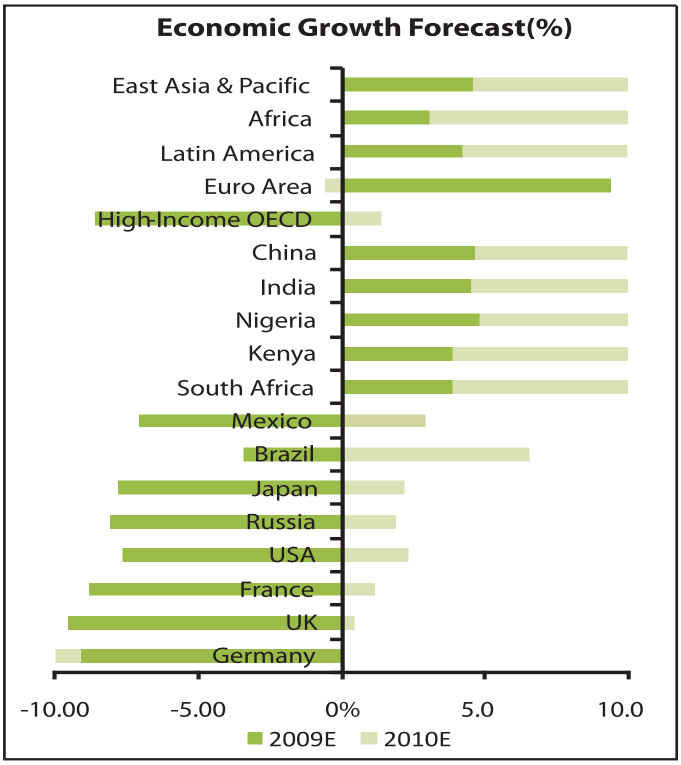
After suffering huge losses in most of the domestic investments, pension managers in developed countries are adding more arrows to their emerging markets quiver as they anticipate institutional investors' demand for such strategies to escalate over time. They wager on the strong economic prospects of these economies and the experience of local pension managers in these countries where investment in domestic assets paid off. Most developed countries are expected to have a slow growth for the next two years.

Fig 8



Source: OECD, BGL Research

Fig 9: Economics Forecast - Selected Countries



Source: OECD, BGL Research

Situating Nigeria's Pension Industry

In terms of history, Nigeria's pension industry has a similar evolution to most countries in the world. Every country in the world started with the defined benefit scheme but later changed either completely to the defined contributory scheme (Switzerland, Poland, Chile) or a combination of the two (Spain, USA, UK). Some that still retain the defined benefit scheme (France, Norway, and Mexico) are already looking towards reforming the pension system to consider the benefit of the DC scheme.

The challenges are obvious; statistical figures released implying a larger portion of the working society are in the formal sector have been questionable and the ability to design products for the informal population have been constrained due to lack of trust on both sides.

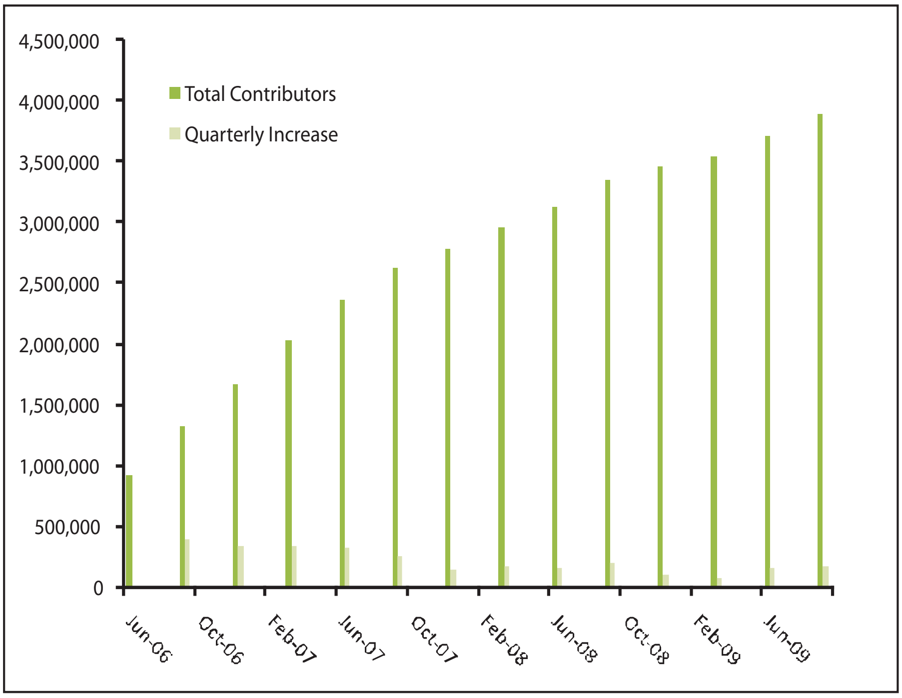
By the pension model adopted, (asset allocation, GDP size and dependency ratio) Chile is the appropriate system to review; however based on some pension statistics and indicators like the percentage of pension assets to GDP and the pension contributors to working population, Brazil, Germany, Italy, Spain and Mexico are Nigeria's peers. A review of the pension systems in other parts of the world is included in the appendix as global practises in pension fund management.

Nigeria Pension System

The Pension Reform Act of 2004 which adopted the Chilean Pension Model, gave birth to 26 Pension Fund Administrators (PFA), 7 Closed Pension Fund Administrators (CPFA) and 5 Pension Fund Custodians (PFC) with an expectation of capturing a potential 50 million contributors which would make the pension industry by far the most powerful buy-side investor in the country. However, the reality is very different. By September 2009, total assets under management by all the registered operators were estimated at ₦1.3trillion, total registered contributors were 3,888,491 of which the public sector accounted for more than half. This represents an increase of 317% from the 932,435 contributors as at June 2006; only 7.8% of the estimated 50.1 million working population.

The challenges are obvious; statistical figures released implying a larger portion of the working society are in the formal sector have been questionable and the ability to design products for the informal population have been constrained due to lack of trust on both sides. In addition, there are challenges of non-compliance to the Pension Act 2004, especially by the private sector contributors, lack of investible assets in which the PFAs can invest resulting in a huge amount of unused cash. There is the problem of overly stringent requirements for investing which has been observed to prevent beneficial competition among sector players and the capacity and competence challenges. While the non-adoption of the new pension scheme by the States could be a hindrance to having many contributors on the scheme, the expectation from the States is not significant enough to be an industry challenge.

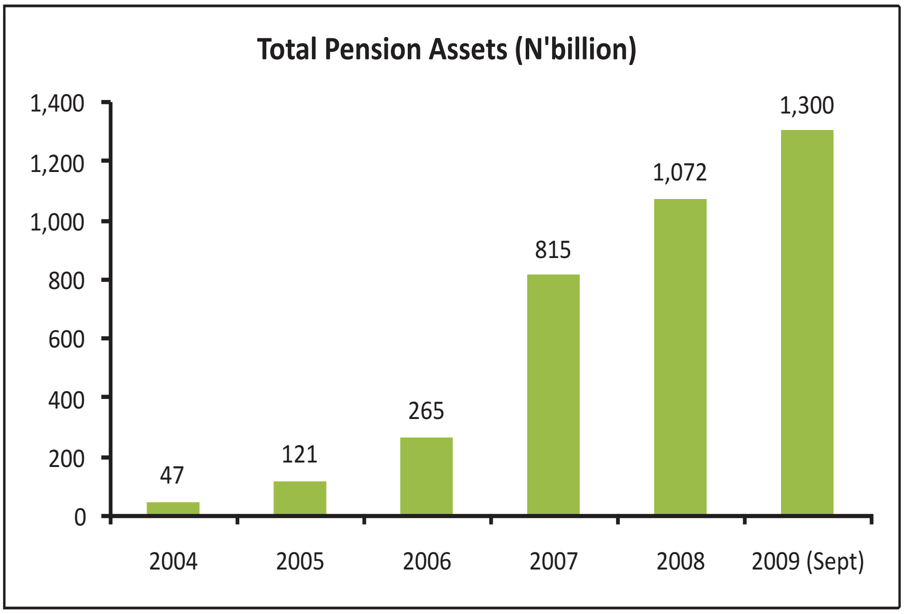
Fig 10: Contribution to Pension Scheme



Source: National Pension Commission (PENCOM)

Despite the identified challenges, significant progress has been recorded in the pension sector since introduction. In addition to increase in funds under management and number of contributors, there have been increased volume and value in investing activities as well as an increased awareness in the need for more exotic assets creation. Fixed income securities like government treasuries and bonds (both national and sub-national) have become more popular as a result of increased demand from the PFAs.

Fig 11: Total Pension Assets (N'billion)



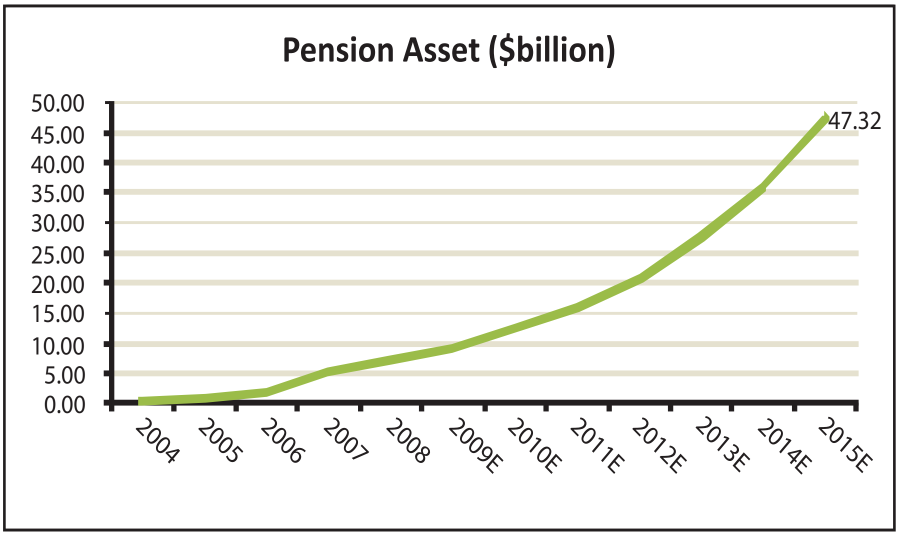
Source: PENCOM

Although regulatory requirements currently restrict several investment opportunities by PFAs, future opportunities will include direct investment in companies (quoted and unquoted), government and corporate debts, banks' deposits, foreign assets and possibly, granting loans to contributors on the scheme. There are also investment opportunities for interested investors in the PFAs. Having observed that the official estimate of pension prospects may be faulty, operators in the industry are now entering into alliances, merger and acquisition for more efficient operation through economies of scale and infrastructure/technology sharing. Furthermore, capacity challenge mentioned above is pushing some operators to seek additional capital for better operation. While most industry analysts condemn the stringent regulations on asset allocation, the regulators are feeling vindicated that their stance on low exposure to the risky assets such as equities and equities-linked derivatives has paid off significantly. This was further justified by the International Financial Services London (IFSL)'s Pension Market Report for 2009 which stated that "Economic conditions have resulted in the largest annual decline in global pension fund assets "for many years", as the total value of pension pots fell 18% in 2008 to $25trillion from $30.4trillion the previous year". According to the report, exposure to equities had contributed to the negative returns in most countries, although it also highlighted the impact of "diversification into alternative asset classes that turned out to have much higher correlation to equities in a market sell-off than anticipated".

According to industry analysts, pension fund managers should be allowed some flexibility on asset allocation so that they can create optimum portfolio mix and get rewarded for intelligent risk-taking. They argue that restrictive asset allocation can only be advantageous in the short term; in the longer term, flexibility will be required.

The report further stated pension fund returns in most countries turned negative over the year as most asset types fell in value, with an average return of -19% across OECD-member countries in the first 10 months of 2008. However, it noted pension assets in jurisdictions that required large weightings in domestic government bonds were the best protected. Nigeria easily qualified as one of the latter jurisdictions where exposure to equities was restricted while investments in domestic government bonds were encouraged. Despite loss in equity value of 32% in 2008, Nigerian pension assets grew 31.5% from ₦815billion in 2007 ($5.43billion) to ₦1.072trillion ($7.15billion) in 2008 with a potential to grow to about ₦7.1trillion ($47.32) by 2015.

Fig 12: Growth in Pension Assets



Source: BGL Research Estimates

Regulation restricts pension fund exposure to equities at 25% of the total asset while investment in federal government bond is allowed at 100%; however, the RSA funds only invested a total of 15.59% in equities in 2007 while industry total was 29.5% equities (due to the impact of the Already Existing Schemes). By 2008, the figure is estimated at below 10%. This is in contrast with the top five countries which has over 50% of their assets in equities; USA (52%), UK (56%), Japan (51%), Netherlands (52%), and Australia (52%). Belgium, Czech Republic and Italy has equities portfolio of less than 10%.

Table 3: Pension Fund Portfolio Allocation (%)

	Government Securities	Corporate Bonds	Financial Institution Deposits	Equities	Investment Funds	Foreign Securities	Other Invest.	Total
DEVELOPING COUNTRIES*								
Nigeria	34.34	0.03	19.63	30.04	0.55	3.57	11.84	100
Botswana	6	0	4	20	0	64	6	100
Argentina	50	3	21	18	7	0	1	100
Brazil	7	4	10	19	33	0	27	100
Chile	40	4	32	15	3	6	0	100
Mexico	82.49	0	0.021	11.24	0	0	6.25	100
India	85	10	0	5	0	0	0	100
DEVELOPED COUNTRIES**								
USA	22.91	1.05	1.18	37.11	17	0	20.75	100
UK	30	0	7	56	0	0	7	100
Japan	32	0	6	51	0	0	11	100
Netherlands	37.54	3.73	4.78	37.28	0	0	16.67	100
Canada	26.72	0.47	3.17	25.16	33.5	0	10.98	100
Australia	0	4.4	10.7	23.26	54.84	0	6.8	100

Source: Nigeria Pension Commission, OECD
** Figures for 2007*
*** Figures for 2008*

However good as the regulatory restriction on asset allocation might have been, it has the tendency of inhibiting growth as it prevents creativity and innovative thinking on the part of the fund managers. According to industry analysts, pension fund managers should be allowed some flexibility on asset allocation so that they can create optimum portfolio mix and get rewarded for intelligent risk-taking. They argue that restrictive asset allocation can only be advantageous in the short term; in the longer term, flexibility will be required. Taking a cue from the developed countries, the flexibility of asset allocation, although led to some losses in 2008 has made some pension managers to re-adjust portfolio mix to take opportunities in the now "cheap" equities market and investments in emerging markets that have been projected to have strong growth prospects. A further proof of the attractiveness of the emerging markets is their increasing share of the global pension market share.

When compared to other developing countries, especially those that have just adopted a new pension scheme, Nigeria has not done very badly. While Chile's Pension Assets, whose pension model Nigeria has adopted accounted for about 44% of GDP (has been up to 60% of GDP in early 2000s) after 27 years, Nigeria's 4% of GDP after 4 years of operation may not be too bad, see table 4. However, Nigeria has the opportunity of growing its pension fund more quickly than the other countries by learning from their mistakes and thus making the learning curve less steep. Learning should also come from the developed countries especially the top five countries which accounted for almost 75% of the global pension market.

Table 4: Comparison with other countries

Countries	Population (Millions)	Working Population (Millions)	Pension Contributors (Millions)	Pension Contributors (% of working Population	Unemployment Rate (%)	Population Under 15 (%)	Population Over 65 (%)	Population Growth (%)	Dependency Ratio (%)	GDP Per Capital (US$)	GDP PPP (US$ Billions)	Pension Fund Assets ($US Billions)	Pension Assets (% of GDP)	Pension Assets per capita ($)	Pension Assets per Employee ($)	Pension Assets per Contributors ($)
	DEVELOPING COUNTRIES															
Nigeria	149.1	51.0	3.89	7.62	12.8	39.16	7.62	3.20	22.28	1,176	175.4	8.7	4.9	58.1	170.0	2,229.66
South Africa	49.0	18.2	11.84	65.05	21.7	28.90	5.40	0.3	14.54	9,994	489.7	174.4	35.6	3,558.4	9,580.2	14,726.35
Argentina	40.9	16.2	9.76	60.25	7.8	25.60	10.80	1.05	27.27	14,073	575.6	13.9	2.4	338.9	855.6	1,420.08
Brazil	198.7	100.9	8.07	8.00	8.0	26.70	6.40	1.2	12.60	10,015	1,990.0	313.0	15.7	1,575.4	3,102.4	38,789.34
Chile	16.6	7.3	4.76	65.21	7.5	23.20	9.10	0.88	20.69	10,187	169.1	74.3	43.9	4,475.9	10,178.1	15,609.24
Mexico	111.2	45.5	17.29	38.00	4.1	29.10	6.20	1.1	15.15	14,020	1,559.0	66.0	4.2	593.5	1,450.5	3,817.24
China	1338.6	807.7	161.54	20.00	4.0	19.80	8.10	0.65	13.42	5,827	7,800.0	80.0	1.0	59.8	99.0	495.23
	DEVELOPED COUNTRIES															
Germany	82.3	43.6	15.92	36.51	7.9	13.70	20.30	-0.05	38.32	44,629	3,673.0	146.2	4.0	1,776.4	3,353.2	9,183.42
Italy	58.1	25.0	3.26	13.04	6.8	13.50	20.20	-0.04	46.94	39,828	2,314.0	78.7	3.4	1,354.6	3,148.0	24,141.10
France	64.0	28.5	4.28	15.02	7.4	18.60	16.40	0.5	36.83	44,797	2,867.0	229.4	8.0	3,584.4	8,049.1	53,598.13
Netherlands	16.7	7.7	3.68	47.79	4.5	17.40	14.90	0.41	32.32	52,515	877.0	997.0	113.7	59,700.6	129,480.5	270,923.91
Spain	40.5	23.1	1.85	8.01	13.9	14.50	18.10	0.1	31.73	39,556	1,602.0	96.0	6.0	2,370.4	4,155.8	51,891.89
UK	61.1	31.2	9.05	29.01	5.5	16.70	16.20	0.27	31.73	43,863	2,680.0	2110.0	78.7	34,533.6	67,628.2	233,149.17
Canada	33.4	18.2	5.45	29.98	6.1	16.10	15.20	0.8	27.93	44,880	1,499.0	1225.0	81.7	36,676.6	67,381.7	224,770.64
USA	307.2	155.2	46.56	30.00	7.2	20.20	12.80	0.97	25.34	47,008	14,441.0	17400.0	120.5	56,640.6	112,113.4	373,711.34
Australia	21.2	11.2	4.71	42.05	4.5	18.60	13.50	1.2	25.55	37,759	800.5	750.0	93.7	35,377.4	66,964.3	159,235.67
Japan	127.0	66.1	29.77	45.04	4.2	13.50	22.20	-0.19	42.66	34,236	4,348.0	750.0	17.2	5,905.5	11,346.4	25,193.15
Singapore	4.6	2.9	1.41	48.62	2.3	14.40	8.90	1.0	14.12	52,174	240.0	105.3	43.9	22,891.3	36,310.3	74,680.85

Source: CIA World Factbook, BGL Research

Developments in the Pension Sector

To be able to compete more favourably, some of the pension managers have either began or concluded merger talks to benefit from economies of scale and technology sharing.

Having identified the unreliability of the social data on the expected number of subscribers to the scheme, Nigerian pension managers are faced with how to make their operations profitable.

According to Niyi Falade of Crusader Sterling Pension Managers, the most obvious strategy will be to operate a lean structure and focus on cost reduction as much as possible. He noted that to be able to compete more favourably, some of the pension managers have either began or concluded merger talks as a way of benefiting from economies of scale and technical competence. The merger between ARM Pension Managers and First Alliance Pension has been concluded while that between APT Pension Managers and PENMAN Pension Managers is being finalised. The merger of Legacy Pension, Premium Pension and Sigma Pension Managers is also nearing conclusion.

But for the regulatory restriction of investible assets, the Nigerian pension managers would have been able to partake in the global drive for emerging market funds with attractive return projection and by extension cause a renewed interest in Nigeria's assets by international fund managers. Industry watchers believe that by limiting pension managers' investments to local assets, Nigeria is loosing out from potential huge returns from foreign investments (especially in other emerging economies with strong growth projections) and from attracting foreign investments into the country's developmental projects.

Barbara James, a promoter of the African Pensions Association (APA) warns of complacency concerning the long-term health and bite of the nation's pensions assets regarding such things as portfolio diversification and Return-On-Investments (ROI). The fear is that PenCom - already lauded by some analysts for its ultra-conservatism in light of the burst of Nigeria's capital market bubble – will ignore the need for further reform of the investment space for administrators of pension funds. She argues indeed that some parts of the pension's make-up are already under-funded with meagre ROI's of 1%.

The fear is that PenCom - already lauded by some analysts for its ultra-conservatism in light of the burst of Nigeria's capital market bubble – will ignore the need for further reform of the investment space for administrators of pension funds.

She estimates that Nigerian pension funds need to sustain a rate-of-return in the range of 7-8% annually to be viable over the long-term (to be measured in decades, not merely years). In this regard, the need to build involvement of viable equity investments, infrastructure bonds and corporate bonds remains urgent. Beyond that, Ms. James's looks forward to a situation where flagship infrastructure across sub-Sahara Africa will attract pension's investment across borders. In order for Nigeria (which would arguably attract the lion's share of investments because of potential market-size) to take a leadership position in this exciting vista, the regulations regarding investment of Nigerian assets abroad themselves have to be carefully crafted with regard and sensitivity for risks, opportunity and long-term viability. She gives the example of South African investment framework, which increased the foreign-investments window to 20% of total portfolio from a base of 15% earlier this year.

Finally, the restriction results in the lack of competitiveness and creativity on the part of the pension managers who would have attracted additional capital and technical expertise from foreign fund managers.

Challenges for Nigerian Pension System

Most of the challenges are either being experienced globally or have been experienced at some time in the past by some older pension systems. Like all pension systems in the world, the Nigerian pension system also suffers several challenges. However, most of the challenges are either being experienced globally or have been experienced at some time in the past by some pension systems. Nigeria therefore has an opportunity to shorten the learning curve by preventing or avoiding some of the pitfalls of the older pension systems. It would also be possible to shorten the evolution trend by accommodating most of the later reforms (like the multi fund structure adopted by Chile in 2002 and the minimum pension guarantee in 2008) earlier in Nigeria's pension system. While some of the challenges of the system are being tackled by the regulators, operators are taking reactive measures to the challenges from their own end. Some of the gaps in the Nigerian pension system are as follows:

Unreliable social statistical data has resulted in a technical neglect of the informal sector by the pension managers while the formal sector is not contributing as anticipated.

Unreliable Statistical Data

Statistical figures released implying that a larger portion of the working society were in the formal sector have become questionable. For example, Nigeria's working population is estimated at 50.1 million out of which at least 15 million are unemployed in the formal sector.

These 15 million people of which nine million work for governments and six million work for private Sector, are bound by law to maintain a Retirement Savings Account (RSA) with a registered Pension Fund Administration (PFA).

However, there were only about four million subscriber by end of 2009, five years after the scheme took effect.

Even for the informal Sector, which has most of the country's working population. The ability to design products for the informal population have been constrained due to lack of trust on both sides. For one, the operators believes informal sector contributions would not be regular and on the other hand the subscriber thinks he could manage his funds better. This has resulted in a technical neglect of the informal sector by the pension managers while the formal sector is not contributing as much as anticipated.

While the adoption of the Minimum Pension Guarantee might help compliance, the fear of possible prosecution would improve compliance significantly.

Compliance with Regulation

Another challenge confronting the pension managers is the average compliance rate within the working population. The working population is dominated mostly by sole-proprietors and small & medium scale enterprises that dismiss regulatory demands and refuse participation in the scheme. Improved compliance rate – toward full compliance would result in significant increase in subscribers and liquidity in the system. The regulator's public education and moral suasion seem not to be doing the magic; hence a more confrontational approach like using legal process to ensure compliance might be needed. While the adoption of the Minimum Pension Guarantee might help compliance, the fear of possible prosecution would improve compliance significantly.

While the restriction on equities prevented loss from equity crash in 2008, it also prevented the industry from benefiting from an earlier boom (74% equity return in 2007) and a potential growth of the equity market from its current low level.

Limited Investible Assets

A more pressing issue and one that needs a bit of immediate attention is the high amount of unused cash within the system due to lack of investible assets. About 37% of the total pension assets are believed to be held in money market instruments by September 2009. Like other developing countries, restriction on asset allocation is only beneficial to the industry in the short term. While the restriction on equities prevented the industry from a loss of value in the current equity crash, it also prevented the industry from benefiting from an earlier boom (74% equity return in 2007) and a potential growth of the equity market from its present low level. Inability to invest offshore, limits on amount investible in any particular asset and the lull in the equity market are to be putting a demand pressure on the various sub-national bonds on offer albeit with a restrictions of a maximum of 5% on any bond issue allowable. Concern for sub-national securities are (i) a potential political risk in an event where succeeding governments decline to honour past administration commitments, (ii) a lack of proper project implementation and also (iii) an economic risk whereby federal allocations to state governments decline due to lower national income from crude oil prices. There is need for gradual removal of the restriction on foreign investments (as already done in South Africa recently and proposed in Chile) so that Nigeria can benefit from potential huge returns from foreign investments (especially in other emerging economies with strong growth projections) and from attracting foreign investments into the country's developmental projects. Where some asset classes are permitted, the assets are either not available locally or the qualifying conditions make them non-investible for the managers. For example, the regulation permits investment in Real-estate instruments such as mortgage-backed securities and REITS and would have been an attractive vehicle for the issuers due to the presence of off-takers; however, this classes of asset are not available due to very stringent requirements of the number of years the securities should have been in operation and an "A" or Triple "B" (BBB) credit rating before pension managers could invest in them. It will be beneficial if the rating requirement is that on the issuer so as to clear the ambiguity of the rating.

Stringent Regulatory Requirements Affect Competitiveness

Limitations on investment per issue of any securities affect competition and pricing. The 5% limit on any bond issue or 3% limit on equity issue prevent competeveness that could bring down the issue cost and the creativity that could spur quicker development of the sector. As noticed in Chile, there is need to improve competition by lowering investment barriers and encouraging new subscribers to the scheme

Table 5: Portfolio Allocation of Selected Pension Managers

	Government Securities	Other Fixed Income	Money Market	Equities	Mutual funds	Cash	Other Invest.	Total
Stanbic IBTC	37.37	15.26	32.17	15.20	0.00	0.00	0.00	100
ARM Pension	42.05	0.00	35.38	22.10	0.47	0.00	0.00	100
Crusader Sterling	53.15	0.00	34.44	11.49	0.00	0.34	0.58	100
Leadway Pensure	40.75	0.00	33.91	22.15	0.53	2.66	0.00	100
Pension Allinace	50.20	0.00	34.99	14.81	0.00	0.00	0.00	100
Premium Pensions	51.00	0.00	34.00	11.00	0.00	1.00	3.00	100
First Alliance	44.60	9.45	32.27	11.91	1.77	0.00	0.00	100

Source: Individual Pension Manager's Report to choose PFAs with the lowest investment management cost. And like Chile, there is a "herd effect" in portfolio allocation as shown in the table 5 below

Inadequate Capacity and Competence

The identified problem of capacity building and technical competence is being tackled by the industry regulator, PENCOM. In order to promote skill acquisition and enhance competence in the operators, PENCOM requires pension managers to recommend a good number of staff for training in industry technicalities and developments. The trainings are usually organised by the regulator and facilitated by industry veterans both local and foreign.

Sensitization and mobilisation of state staff are conducted regularly; however several pension managers do not expect any significant impact on the total number of contributors.

Adoption of the New Pension Scheme by States

States are not required by law to participate in the scheme but have shown interests and it's a matter of time before they join the scheme. Sensitization and mobilization of state staff are conducted regularly; however several pension managers do not expect any significant impact on the total number of contributors. If each of the 36 states contributes an average of 50,000 members to this scheme, it would also amount to about 1.8 million increase in total contributors of about 4million; a far cry from the 50 million assumption.

Other Challenges

Based on a recent comprehensive review of international best practices for pension management which identifies the core principles for good governance, accountability, and investment policies, the Nigerian pension reforms will need to be bench-marked against these principles.

Good governance provisions for pension schemes should aim to establish good business practices, and avoid corruption, mismanagement and abuses by the government itself. There should be a clear mandate of the governing body; no interference – politically or otherwise in the selection of the governing body and the pension management agencies; management agencies should be required by law to establish internal governance structures and processes to minimise corruption mismanagement and fraud; and appropriate supervision of all processes.

In the context of accountability, two basic elements need to be considered – transparency and reward structures. Regarding transparency, the objective is to fully disclose information (for example, the financial situation of the scheme, the composition of the portfolio, investment decisions, and performance). Regarding reward structures, the goal is to ensure that those making decisions are held accountable. Good judgment and good performance should be rewarded, while poor judgment and bad results should be penalized.

Based on the level of development of the Nigerian financial sector and the poorly developed stock markets, the main source of potential investments will remain government debts, equities, banks' deposits and foreign assets.

For investment policy, three main components need to be considered: setting long term performance, defining an acceptable level of risk tolerance, and setting parameters for short-term asset allocation. These need to be set out clearly in an investment policy statement since the primary focus of investment policies for private investment funds is to balance market risks and returns.

Investment Opportunities for Pension Managers

An interesting initiative in the area of foreign investment comes from Botswana, where a significant component of pension assets is allowed to be invested abroad.

In Nigeria, because of the level of development of the financial sector, especially, the poorly developed stock market, the main sources of potential investments will continue to be (a) direct investments in companies, (b) loans to plan members, (c) government debt, (d) bank deposits, (e) real estate, and (f) foreign assets. However, each of them has its inherent risks that need to be avoided.

Government Debt: Government debt continues to be an important component of the portfolio of most pension funds. In most countries, the supply of treasury bills and tradable public bonds is low relative to the size of the total explicit government debt, and governments are encouraged to review the structure and maturity of this debt. For countries without a core of sound banks, explicit government debt is likely to be the most promising source of investment over the short and medium terms. In any case, government debt should not be imposed on pension funds. The demand for this asset class should respond to the objectives set in the statement of investment policies.

Bank Deposits: In Nigeria with an arguable core of sound banks, public debt can play a less prominent role, while long-term bank deposits capture the largest share of the non-equity portfolio. This situation justifies the allocation of about 37% of the Nigerian total pension assets in money market instruments (BA/CP's)by mid 2009. However, the recent purge of the banking sector has the tendency of making the banks over-exposed to government debts; thus making Investment in Bankers Acceptance and Commercial Papers an unattractive substitute.

Investments in Real Estate: Real estate investments are likely to remain important for most countries despite the current mortgage crisis. These should not involve the management of hotels or office buildings but rather should focus on actual real estate. Because investing in illiquid assets create opportunities for corruption, clear procedures for purchasing and disposing of these assets should be approved by the board. By the same token, independent assessors should value these assets regular to determine their fair value.

Foreign Assets: To improve risk diversification, pension funds should be allowed to invest part of their portfolio abroad (for example, in treasury bills or indexes). An interesting initiative in this area comes from the Botswana, where a significant component of pension assets is allowed to be invested abroad. Another attraction to this vehicle is that it portends an opportunity to open the country up for foreign investments as the country opens up to cross-boarder investments.

Direct Investments in Companies' Equities: Direct investments can be risky, particularly when the funds have majority ownership and are involved directly in management. Pension managers are encouraged to minimize this type of investment and certainly not to interfere with corporate governance: management of companies is not a function of pension funds. However, investment in the equities of listed companies should be encouraged without restriction. This will allow the pension managers to apply expertise and competence in portfolio management to determine the optimum mix and maximise returns.

When considering giving loans to plan members, rules, including selection procedures, should be transparent, and no implicit or explicit subsidies should be involved.

Loans to Plan Members: While most pension funds face strong pressure to offer loans to plan members (for instance, loans for housing), such loans entail high administrative costs and excessive risks to the system. Moreover, if public pension funds are to provide adequate income replacement for retirement, they should be exposed to a set of risks that are as different as possible from those that members face during their working life. Therefore, this type of investment should be carefully considered before venturing into. When considering the investment, rules, including selection procedures, should be transparent, and no implicit or explicit subsidies should be involved.

Investments in Infrastructure: Pension managers are expected to boost economic growth through investments in infrastructure development. Since they are able to mobilise long term savings, a proper match of investment for these funds would be in long term infrastructure projects. While several analysts continue to wager on whether the economy is ready for private sector participation in infrastructure projects, we believe that the current actions of the government reflect a gradual withdrawal of the public sector from infrastructure provision. Pension managers are expected to channel the savings mobilised into infrastructure projects to cover for the shortfall created by government's continued neglect and potential withdrawal from infrastructure development.

Corporate Bonds: Although permited by the pension regulation as an investment vehicle, corporate bonds still account for a small percentage of the assets of Nigeria's Pension Managers. This is believed to be as a result of non-availability of corporate bonds to invest in or the investment grade restriction placed on the bonds in order for them to be an investible asset class for pension managers.

The non-availability of corporate bonds is being blamed on the tax treatment of investment income which is more favourable to Government bonds; hence the quick resolution of issues would encourage more issuance of bonds by credible corporations and therefore lead to more investment avenues for pension managers.

Structured Alternative Assets: For as much as regulation would allow, Pension Managers could invest in Structured alternative assets to hedge against losses from traditional investment classes. Investments in commodities like Gold and other defensive assets could help to hedge against inflation and unfavourable capital market situations. Although, the Nigerian alternative assets market is not very developed, renewed interest from pension operators would expand the market and boost liquidity.

The Nigerian Pension Reform

Despite low percentage of the employed population, most workers did not have guaranteed retirement benefits under the former defined benefit scheme; thus necessitating a reform.

Of the 150 million Nigerians, 50.1 million (34.79%) are employed. 56.4million (39.16%) are below 15 years, 11million (7.62%) are what while the rest are unemployed. Only about 15million (30%) of the employed population are in the formal sector. Of the regular employees in the formal sector, 9.02million (60%) are employed in the public sector while the balance of 6.01million (40%) are employed in private business. Despite the low percentage of the formal employed population, especially in the formal sector, most workers did not have guaranteed retirement benefits under the former system of the Defined Benefit Scheme. The system became burdened with a lot of problems including poor performance and mismanagement; thus necessitating a reform. The 2004 pension reform in Nigeria was therefore a paradigm shift in social policy from the social model of the pre-2004 era contributory model which has a major flaw of uncritically following the dictates of supra-national institutions without accounting for important endogenous factors that undermined the nation's social security model.

Pre-Reform Era

The Defined Benefit Pension Scheme, other wise known as the Pay-As-You-Go (PAYG) was introduced in Nigeria through the Pension Ordinance of 1951 (with retroactive effect from January 1,1946) and provided public sector employees with both pension and gratuity. The law was later complemented by the Pensions Decree 102 and 103 of 1979 and several other government circulars and regulations that altered the provisions and implementations of the existing laws. For instance in 1992, the qualifying period for public sector gratuity and pensions were reduced from 10 years to 5 years and from 15 years to 10 years respectively and also in 1997, parastatals were allowed to have individual pension arrangements for their staff and appoint Board of Trustees to administer their pension plans as specified in a Standard Trust Deed and Rules prepared by the office of the Head of Service of the Federation. In addition, each Board of Trustees was free to decide on whether to maintain an insured scheme or self-administered arrangement.

For the private sector pension scheme, since the Pension Ordinance of 1951 did not cover the employees of private companies, the first scheme in Nigeria was set up for the employees of the Nigerian Breweries Limited in 1954; followed by United African Company (UAC) in 1957. However, the first formal private pension scheme in Nigeria, the National Provident Fund (NPF) was established in 1961 for the non-pensionable private sector employees. The scheme provided for only one-off lump sum benefits and was largely a saving scheme, contributed monthly by both employees and employers. The entire assets of the NPF were later taken over by the Nigeria Social Insurance Trust Fund (NSITF), established by Decree No. 73 of 1993 and all registered members of the NPF became automatic members of the NSITF. In addition, all private sector employers and employees were mandated to register as members as soon as they commenced operations and assumed duty respectively. As stated earlier, the benefits of the pension scheme was on PAYG basis, resulting in huge pension and gratuity arrears. In the public sector, the Federal Government pension and gratuity were significantly unfunded estimated to be over ₦250 billion. The system therefore did not deliver financial security in retirement. For the private sector, the funded Provident Funds were based on basic salary while responsibility was placed on the NSITF to ensure structured gratuity arrangements. The obvious set-backs of the PAYG scheme necessitated the pension reform to the new Contributory Pension Scheme.

The key objectives of the new scheme are to ensure that all workers receive benefits at retirement and stem the growth of outstanding pension liabilities.

Pension Reform 2004

The new pension scheme as provided for by the Pension Reform Act 2004 is highly regulated and compulsory for employees of the Federal Government, Federal Capital Territory (FCT) and the private sector organisations with five or more employees. State government employees are also encouraged to join the scheme subject to the adoption of the new pension scheme by the respective state governments. The scheme is contributory, fully funded, and based on individual accounts that are privately managed by Pension Fund Administrators while pension assets are held by Pension Fund Custodians. The key objectives of the scheme are: to ensure that all employees of the Federal Government, FCT and private sector receive their retirement benefits as and when due; to assist improvident individuals by ensuring that they save in order to cater for livelihood during old age; to establish a uniform set of rules, regulations and standard for the administration and payments of retirement benefits of all persons under the scheme; and to stem the growth of outstanding pension liabilities.

The contributory system in the Act provides that the employees contribute a minimum of 7.5% of basic salary, housing and transport allowance while the employers contribute a minimum of 7.5% to the scheme for both the public and private sectors but with the exception of the military where employees contribute 2.5% while the Federal Government contributes 12.5%. However, an employer may elect to contribute the entire 15% on behalf of the employees.

In order to mitigate the funding problem associated with the PAYG pension scheme, the new scheme is fully funded. Rather than just doing the accounting paperwork without any movement of fund, contributions are deducted immediately salaries are paid and transferred to the relevant retirement savings account. An employer is obliged to deduct and remit contributions to a Pension Fund Custodian within seven days of salary payment while the Pension Fund Custodian will notify the Pension Fund Administrators within 24 hours of the receipt of the contribution. The pension funds thus exist from the onset and payments will be made when due.

Under the old pension scheme, funds were usually managed by the various employers thus allowing for the funds to be used for other purposes and leaving the pension scheme unfunded. The new scheme provided for the pension funds to be privately managed by professionals licenced as Pension Fund Administrators (PFAs) and Pension Fund Custodians (PFCs). The PFAs are licenced to open retirement savings account for employees, invest and manage the pension funds in investible instruments as prescribed by the regulatory authority from time to time, maintain books of accounts on all transactions relating to the pension funds managed by it, provide regular information on investment strategy to the beneficiaries and pay retirement benefits in accordance with the provisions of the Act. The PFCs

The new Pension Act provides for a minimum contribution of 15% of basic salary, housing and transport allowance. This 15% can be shared equally by employers and employees or an employer may elect to contribute the entire 15%.

Like the Chilean pension system, the Nigerian scheme provided for the pension funds to be privately managed by professionals licensed as PFAs and PFCs. Some large organisations may choose to operate through a licensed CPFA.

on the other hand are responsible for the warehousing of the pension fund assets. The Act does not allow PFAs to hold the pension fund assets; the PFCs received the contributions directly and notify the PFAs of the receipt of the contribution while the PFAs subsequently credit the retirement savings account of the employee. The PFCs execute transactions and undertake activities relating to the administration of pension fund investments upon instructions by the PFAs. Some large organisations may choose to operate through a licenced Closed Pension Fund Administrators (CPFA) which is usually run within the organisations. In the same manner, the Act recognises organisations that may choose to continue to manage their pension payments in the order of the old scheme under the Approved Existing Scheme (AES). However, these CPFAs must be fully funded while the AESs will have to give a letter of undertaking to meet pensions as they fall due, thus guaranteeing improved financial security – post employment.

Rather than having a pooled fund account as is the usual practise under the PAYG pension scheme, the Act provides for employees to open individual accounts to be known as "Retirement Savings Account" with a PFA of their choice. The individual account belongs to and remains with the employee through life. While he/she may change employers or pension fund administrators, the account remains the same.

Withdrawal from the retirement account can only be at the age of 50 or upon retirement thereafter. The withdrawal can take the form of: (i) a programmed monthly or quarterly withdrawal; (ii) a purchase of annuity for life through a licensed life insurance company with monthly or quarterly payments; an (iii) a lump sum from the balance standing to the credit of the retirement savings account: provided the balance after the lump sum withdrawal shall be sufficient to procure an annuity or fund a programmed withdrawal that will produce an amount not less than 50% of monthly remuneration at the date of retirement.

Expected Outcome of the Reform

The Pension reform is expected to improve workers' standard of living during retirement, increase liquidity and savings rate and deepen the activities of the capital market.

The expectation of the reform is that the new pension management model would improve the standard of living of workers during retirement, correcting the deficiency of the previous PAYG pension scheme. In addition, significant increase in liquidity as well as rate of savings would cause a drop in interest rates and financial institutions would be more willing to consider longer term investments; informing better infrastructure development and a boost in the real sector of the economy.

Another expectation is that the implemented reforms would deepen and increase the activities of the capital market with the stock market recording higher valuations in the short term, more companies accessing the market both for equities and debt to raise cheap funds in the medium term, and the rebirth of the entrepreneur with innovative products due to wider availability of risk capital in the long term.

Management Practices of Pension Funds in Other Jurisdictions

After an evaluation of the Nigerian defined contribution pension reform since it's implementations after the bill was passed in 2004, a review of other countries in Latin (South) America, Africa, North America and Europe would be appropriate for further learning.

Management Practices of Pension Funds in America and Europe

This region arguably has the most developed pension management framework in the public and private sector due to their aging population who would outnumber the children in about a decade. The size of pension funds differ markedly between the countries, with Denmark, Netherlands, Sweden and Switzerland standing out in Continental Europe, and the UK and Ireland also having major pension fund sectors, see table 6.

In the EU, pension funds accounted for around 30% of GDP, while insurance company assets are over 50% of GDP and investment funds 40%. The total value of institutional assets in Europe is around 11 trillion Euros, which implies annual revenue of around 40 billion Euros. Institutional funds under management in Europe are dominated by the United Kingdom, which accounts for around 30%. Note however that in some countries, retirement assets are also accumulated in the form of life insurance and investment fund assets.

Table 6: Statistics of Pension Fund Management in America and Europe

Country	Population (1)	Working Population (2)	GDP Size ($billions) (3)	GDP Per Capital ($)	Pension Fund Assets and Portfolio Allocation ($billions) (4)	Pension Fund Assets (% of GDP)	Pension Assets per Capita ($)	Pension Assets per Working Population ($)
Canada	33,827,000	18,180,000	1,499	45,085	1,225	81.72	36,214	67,382
USA	307,862,000	155,200,000	14,441	47,440	17,400	120.49	56,519	112,113
Belgium	10,665,867	4,990,000	506	47,289	25	5.00	2,372	5,070
Denmark	5,519,441	2,860,000	340	62,097	97	28.50	17,558	33,885
Greece	11,257,285	4,960,000	358	32,105	-	-	-	-
Germany	82,060,000	43,620,000	3,673	44,728	147	4.00	1,790	3,368
Spain	46,661,950	23,100,000	1,602	35,116	96	6.00	2,060	4,161
France	65,073,482	28,500,000	2,867	46,037	229	8.00	3,525	8,048
Ireland	4,460,000	2,270,000	268	60,509	54	20.00	11,999	23,575
Italy	60,157,214	25,090,000	2,314	38,996	79	3.40	1,308	3,136
Luxembourg	493,500	207,100	55	113,044	1	1.10	1,226	2,921
Netherlands	16,558,674	7,750,000	877	52,499	997	113.70	60,217	128,659
Austria	8,356,707	3,493,000	415	50,039	17	4.10	2,035	4,870
Portugal	10,707,924	5,640,000	245	23,041	30	12.20	2,788	5,293
Finland	5,348,357	2,530,000	191	36,320	113	59.00	21,115	44,636
Sweden	9,263,872	4,900,000	479	52,180	42	8.70	4,498	8,504
UK	61,113,205	31,200,000	2,680	43,733	2,110	78.73	34,526	67,628

[1] 2009 estimates

[2] Labour Force Estimates as at 2008 from The World Fact Book

[3] Source: 2008 list by the International Monetary Fund

[4] Source: OECD - Key Pension Funds Indicator: 2009 Update

Pension Fund Characteristics in Selected Developed Countries

United States of America

Traditionally, US pension funds have a high exposure to equities with approximately two-thirds of assets allocated to the asset class.

The United States is the largest pension market globally. Tax-favoured private pensions have a long history dating back to the beginning of the 20th century making the US pension market one the most mature in the world. In 2008 retirement assets amounted to about $16trillion. Traditionally, US pension funds have a high exposure to equities with approximately two-thirds of assets allocated to that asset class. Americans use a variety of tax-advantaged investment vehicles with the bulk of assets, approximately 65%, allocated to employer-sponsored retirement plans. Another quarter of overall retirement assets are invested in Individual Retirement Accounts (IRAs) in which assets were partly originated in employer-sponsored plans and subsequently transferred to an IRA.

Defined contribution plans and Individual Retirement Accounts have experienced rapid growth compared to traditional defined benefit and annuity contracts. Their share of all retirement assets amounted to 52% in 2007. The importance of private defined benefit plans, as measured by total retirement assets, is decreasing, despite the fact that total DB assets slightly increased over the past years.

The American state pension system (official name: OASDI – Old-Age, Survivors, and Disability Insurance program) operates on a pay-as-you-go basis and is financed through social security taxes paid by employers and employees (accounting for 84%), tax revenues paid by upper-income social security beneficiaries (2%) and interest earned on accumulated trust funds reserves (14%). The social security tax is shared equally between employer and employee, and amounts to 12.4% of earnings with a contribution assessment limit of USD 102,000 in 2008.

Even in the US, defined contribution pension scheme is experiencing rapid growth compared to traditional defined benefit scheme; now accounting for over 50% of the schemes.

In the context of occupational pensions, 20% of the private sector workforce participates in employer-based defined benefit schemes in accordance with the Employee Retirement Income Security Act of 1974 (ERISA), which is the federal law that sets minimum standards for most voluntarily established pension plans in the private industry to provide supplementary old-age protection. Upon termination of employment or change of employment, employees are entitled to transfer their accumulated pension assets into Individual Retirement Accounts. To avoid penalties, the transfer must take place within 60 days; otherwise, an early-distribution tax of 10% applies in addition to the taxation of the entire amount, which accrued from pre-tax contributions.

In the 1980s the American government recognised the extent of the future financial burden on social security that would result from the retiring baby boomer generation. In 1983 the social security tax was increased and surpluses have been accumulating in the Social Security Trust Fund since then to meet future expenditures. In 2004 the surplus amounted to USD 2.2 trillion. It is expected that in 2018 surpluses from revenues will not exceed expenditures anymore. The Social Security

Trust Fund is expected to be exhausted in 2042, resulting from a sharp decrease of the worker-beneficiary ratio when the baby boomer cohorts retire.

Being strongly dependent on the market volatility, defined benefit plans have shown serious underfunding. As at 2005, underfunded DB plans reported a total underfunding of USD 450 billion due to inadequate funding rules. According to the Pension Protection Act 2006, new regulations for defined benefit plans are being phased-in since the beginning of 2008. These measure pension liability closer to the market and introduce shorter amortisation periods for making up pension shortfalls.

The most significant changes concerning pension plans since 1974 were made as part of the Pension Protection Act 2006 (PPA). The key regulations mainly relate to changes in the funding of defined benefit pension plans and have a significant impact on the design and operation of defined contribution plans.

United Kingdom

The UK pension system is designed with a public PAYG tier that is composed of an earnings-related basic pension and an earnings-related element, as well as voluntary occupational and voluntary personal pension components. The UK has by far the largest and most challenging pension market in Europe and belongs to the most developed funded pension systems. We expect the market to grow at an annual rate of 5.2% to EUR 5986bn until 2020.

UK pension funds historically hold a large share of their assets in equities. Therefore they are strongly exposed to capital market volatility. Hence, the funding issue for defined benefit schemes and the ongoing shift from defined benefit to defined contribution schemes remain the main challenges. The Pension Protection Fund (PPF) reports the aggregate funding position for 7,800 defined benefits schemes on a monthly basis. In March 2008, the scheme funding was worse than it was in March 2007. The most recent data reported a deficit of GBP 23.6bn (EUR 30bn).

In the context of public pensions, the UK State Pension system is composed of the Basic State Pension, the State Second Pension (S2P) and the Pension Credit. The Basic State Pension is a flat-rate payment that requires a contribution record of 44 years to receive full benefits.
The UK operates a voluntary occupational pension system. Pension schemes can be either defined benefit or defined contribution schemes.

Traditionally, pension plans were defined benefit schemes. This has changed: defined benefit schemes have been rapidly falling out of favour and have increasingly been replaced with defined contribution arrangements. About 75% of assets are defined benefits (DB) and 25% in defined contribution (DC).

For investment of pension assets, the prudent-man principle applies; hence majority of assets in UK pension are invested in equities, though their share has dropped from 73% in 1997 to 56% in 2007. Further contributory factors to reduced equities holding include: accounting changes stemming from FRS17 and the requirement to 'mark to market'; regulatory changes associated with the Pension Protected Fund (PPF); and the pursuit of Liability Driven Investment (LDI).

The value of a UK pension funds is calculated on a going concern basis so schemes may require additional injection of funds for a variety of reasons such as a decline in the value of scheme assets, an increase in life expectancy and lower yields on long term government bonds.

The main challenge of the UK pension system is the financing of the different schemes. For the DB schemes, the increasing cost of operating DB schemes in the private sector has resulted in closure of many such schemes to new members. Consequently, membership in open private sector dropped from a peak of 6.5m in the early 1990s to 3.6m in 2007. For all private sectors DB, whether open or closed, the sponsor of the pension fund has to match assets and liabilities over the long term. The value of a UK pension funds is calculated on a going concern basis so schemes may require additional injection of funds for a variety of reasons such as a decline in the value of scheme assets, an increase in life expectancy and lower yields on long term government bonds. Insurance buyout market represents an option for full or partial exit from managing their pension liabilities. Until recently the main recourse to this market was for businesses that were insolvent or in serious difficulty. The buyout market provides a means of securitizing pension liabilities with an insurance company with the eventual aim of winding up the scheme. Volatility of credit markets in the closing months of 2008 led many trustee boards to defer the decision to buyout until market outlook becomes more predictable. Finally, the substantial shift to DC in the private sector is not reflected in the public sector where employees are largely financed through DB schemes.

For the DC schemes, the rising cost of DB schemes has led companies and other organisation to switch funding of pension schemes to defined contributions (DC), particularly for new employees. Average investment into DC schemes is substantially less than DB schemes they have replaced. There are concerns that retirement income generated from these schemes will prove to be inadequate because funding is on average only half that of a DB scheme. Expected payouts on annuities financed by DC schemes have fallen as expectations of lower inflation over the long term have reduced the yield on long term government securities.

In order to address the rising pension gap resulting mainly from a low state pension replacement rate and decreasing occupational pension coverage, the British government has taken several actions since 1997. The Pension Credit, the State Second Pension and the Winter Fuel Payment were established, and the value of the Basic State Pension increased in real terms, which mainly tackled pensioner poverty. In 2002 the independent Pension Commission chaired by Lord Adair Turner was appointed to review the long-term challenges the pension system faces. The Commission finally published two reports. The first report delivered a detailed description of current conditions and the second contained a detailed blueprint for a major reform of the UK's pension system. Improvements to the security for occupational pension scheme members were integral part of the Pensions Act 2004. Furthermore, the Finance Act 2004 basically changed the taxation of occupational and private pension savings by removing the complexity of many separate taxation regimes.

Pension Protected Fund (PPF) was established in 2005 to compensate members of eligible defined benefits pension schemes in the event of their employer becoming insolvent and where there are insufficient assets in the pension scheme to cover pension protection fund levels of compensation. PPF is funded by levies on all eligible pension funds. The government followed the Pension Commissions proposals in large parts and published a White Paper in May 2006, setting out the path for future reforms. The Pensions Act 2008 put the reforms to the state pension system set out in the White Paper into law. It represents the first step of pension reform.

The Pension Act 2008 is aimed at encouraging greater private pension saving. From 2012, all eligible workers who are not in a good quality workplace will be automatically enrolled into either their employer's pension scheme or a new savings vehicle which is currently known as a personal account scheme. Some reforms were put in place to address growing liabilities. This includes averaging salary instead of final salary: a move to sharing costs above a certain level between employees and employers and a move to higher pension ages for new entrants. Also:

Canada does not place its public fund under the jurisdiction of any of its private sector financial regulators, but it has imposed a similar set of standards for governance and investments as those required of the private sector.

- Employers will automatically enrol eligible worker' between ages of 22 and State Pension Age who are not in a qualifying scheme.
- Minimum employer contribution for all first time employers. 3% (on a band of earnings) to an eligible employee's workplace pension scheme.
- The personal accounts scheme from 2012, is planned to introduce a new low cost saving vehicle (the personal account scheme) aimed at employees who don't have access to a good quality work based pension scheme.

Canada

Canada's pension system is a mix of public and private pension schemes. Half of all Canadians rely solely on the public pension system, which consists of a flat-rate pension from the Old Age Security program (non-contributory and financed on a pay-as-you-go basis funded from the general federal government revenues –considered the Teir-1) and an earnings-related pension from the mandatory Canada Pension Plan (CPP) (contribution rate of 9.9% of payroll is shared equally between the employer and the employee; the self-employed pay both parts based on their net business income. Employees with an income of less than $3,500 per annum are exempt from contributing. In addition, a maximum level applies, which is subject to annual adjustment) and its counterpart – the Quebec Pension Plan (QPP). The gross pension level from these two tiers amounts to 42.5% of average earnings.

Based the Canadian pension reforms carried out between 1995 and 1998, under the Canadian Pension Plan (CPP) Investment Board Act of 1998, the board has a clear fiduciary duty to manage CPP funds in the best interests of contributors and beneficiaries, invest its assets to achieve the maximum rate of return, without incurring undue risks and while taking into account the factors that may affect the funding and ability of the CPP to meet its financial obligations.

In the context of corporate governance, the Canadian finance minister, in consultation with provincial governments, appoints 12 members of the CPP board. The appointment process involves a nominating committee that recommends qualified candidates to the federal and provincial governments. The board and the appointment process are subjected to close public scrutiny, and candidates for the board, in addition to having suitable qualifications, must meet demanding skill and character requirements. Also, Canada does not placed its public fund under the jurisdiction of any of its private sector financial regulators, but it has imposed a similar set of standards for governance and investments as those required of the private sector.

Russia

The Russian pension system has undergone major structural changes in the past years, developing from a single, publicly managed distributive system into a multi-pillar pension system. Since 1999, several laws have been adopted that have re-shaped the current system, which was implemented in its current form in 2002. The implemented changes induced a shift from a solely pay-as-you-go-financed defined benefit system to a mixed system that consists of both pay-as-you-go and funded elements combined with defined contribution elements. The pension fund market in Russia is at an early stage of development with total assets accounting for around 1.5% of GDP in 2006.

The state pension covers all public and private sector employees, as well as civil servants. Employers have to pay a uniform social security tax that amounts to 26% of payroll. This rate is split between the different parts of the system. The marginal contribution rate decreases with higher incomes resulting in a decrease in average contribution rates. The rate scale is regressive with a contribution assessment limit of RUB 600,000 (EUR 16,600).

The first pillar consists of two parts:

1. Basic pension

This part of the state pension is pay-as-you-go financed with a strong redistributive element towards low-income earners as it provides a flat-rate benefit. 6% of the uniform social security tax is split into the basic pension. The basic pension is indexed to inflation.

2. Insurance part

When the insurance part was introduced, it was the first time that a defined contribution element had been implemented in the Russian pension system. Contributions are recorded in notional accounts, which mean that the insurance part is financed on a pay-as-you-go basis, but benefits are earnings-related and based on the virtual contribution record. Contribution rates differ depending on the age of the employee. Those born in 1966 and earlier contribute 14% from the uniform social security tax to the insurance part. Those who are younger contribute only 7% because another 7% is paid into the mandatory second pillar. Employees born in 1966 and earlier are excluded from the mandatory second pillar. Their contributions are concentrated in the insurance part, which is indexed to inflation and reflects the developments of average wages.

In the course of the 2002 pension reform a mandatory second pillar, the so-called funded part, was implemented in Russia, which complements the basic and the insurance part as the third element of the mandatory pension system. For employees who are born in 1967 and later up to 7% of the uniform social security tax is redirected to the funded part. For those born in 1966 and earlier no funded pension is build up. Every employee has the right to choose if contributions will be allocated to a non-state pension fund (NPF) or the Pension Fund of the Russian Federation (PFR). Non-state pension funds have been allowed to take part in the mandatory system as separate legal entities since 2004. Previously they could only participate in the voluntary system. The PFR plays a central role in collecting pension money and investing accumulated capital before distributing contributions to the personal account of the employee. Employees who choose the PFR have to select an asset manager with an investment option, otherwise the default option applies, which means transferring the money to the state-owned asset manager Vnesheconombank.

Asset management companies wanting to participate in the mandatory system require an appropriate licence to provide services for and manage assets from both the PFR and the NPFs. The PFR selection process of investment managers is organised via tender, while NPFs may choose among asset management companies that comply with legal requirements set for investment for the PFR. Foreign-owned asset management companies need a special license to participate in this market.

Besides the mandatory pension system, voluntary occupational pensions are available to public and private corporations and individuals. Providers of voluntary occupational pensions are non-state pension funds and insurance companies. The schemes offered can be in the form of defined benefit or defined contribution, although DC schemes are prevalent. The regulation of NPFs activities is rather loose – in some areas it is up to the NPF itself to set requirements for contract conclusion. For example, no minimum funding requirements are specified by law – the NPF is able to demand additional contributions from the sponsoring entity or to decrease the level of payment to the pensioner.

Russia has not been spared from the trend of an aging population. As with most industrialised countries, the working-age population of Russia is set to decrease considerably over the next decades. Decreasing fertility and a longer life expectancy (at least amongst some sectors of the population) are contributing factors. The public pension system will also suffer from the retiring baby boomer cohort, which will lead to a considerable pension deficit in the decades ahead. This will not be cushioned by the oil revenues that are currently suffering from historical low levels.

Austria

The Austrian pension system is predominantly based on the public pension pillar. The gross replacement rate amounts to approximately 80%, which is among the highest in Western Europe. Besides the prevailing state pension, employees can save through voluntary occupational and private pension plans.

In the context of public pensions, the Austrian state pension system is a pay-as-you go scheme, which is financed by contributions from both the employer and the employee totalling 22.8% of the employees' salary. Benefit calculation is reliant upon a formula that is based on earnings of the best 18 income years (gradually extended to the best 40 years in 2028), the length of insurance contributions and the retirement age. Upon contributing for at least 45 years benefits, will amount to 80% of personable salary up to a predefined cap. Although the legal retirement age is 65 for men and 60 for women, early retirement is possible at the age of 62, but a discount is made for each year of retirement before the age of 65.

In the context of occupational pensions, Employers who want to provide supplementary pension coverage to their employees choose among five pension plan types. Until 1990 occupational pensions were almost financed internally through

In the context of occupational pensions, contribution rates are usually laid down in the plan rules. Most plans are predominantly employer financed with contribution rates usually ranging from 0.5% to 1% for employees with income below the social security ceiling and 4% to 5% for incomes above that ceiling.

company book reserves. This changed with the introduction of Pensionskassen, the Austrian pension fund, in 1990, which now cover about 13% of the Austrian workforce. Other funding vehicles include occupational collective insurance plan (Betriebliche Kollektivversicherung), internal book reserve accruals, support funds (Unterstützungskasse), direct insurance contracts.

Belgium

The pension system in Belgium consists of three pillars - A pay-as-you-go financed public pension system, voluntary occupational and private pension schemes. Belgium has a relatively small pension market dominated by insurance products. The market is expected to grow at an average annual rate of 6.2% to 409 billion Euros assets under management.

In the context of public pensions, wage earners, self-employed and civil servants are compulsorily insured under the statutory pension scheme. Contributions amount to 7.5% for employees and 8.86% pays the employer. Benefits are income-related, although the Belgian state grants a minimum income for elderly people.

In the context of occupational pensions, contribution rates are usually laid down in the plan rules. Most plans are predominantly employer financed with contribution rates usually ranging from 0.5% to 1% for employees with income below the social security ceiling and 4% to 5% for incomes above that ceiling. Benefits can be paid out as annuities or as lump sum payments. The legal framework is implemented by the "Vandenbroucke Law" relies on the concept of industry-wide pension schemes, which is a result of collective bargaining between employer associations and the trade unions – creating a highly competitive and professional pensions market.

Denmark

The Danish pension system is composed of a tax-financed and means-tested public pension pillar, two statutory occupational schemes, and voluntary occupational and voluntary private pension savings. Voluntary occupational pension plans are in fact mandatory, given collective agreements between social partners. In 2006 approximately 73% of the workforce participated in any kind of supplementary occupational pension plan.

With both compulsory and voluntary occupational pension schemes in operation, Denmark already has a very strong second pillar market. The market is highly insurance-dominated and further growth, estimated at an average rate of 5.4% annually, will result mainly from performance and regular contributions rather than from new reforms. Pension assets are expected to grow to EUR 437 billion by 2020.

Greece

The pension system in Greece is predominantly based on a public pension pillar that provides comparably high statutory replacement rates. Voluntary occupational and private pension plans exist, but are of minor importance. High replacement ratios and generous rules for early retirement, especially for women, put heavy pressure on the pension system and consequently on public finances. The huge Greek budget deficit, which is the second highest in the EU, is mainly driven by its pension system. Pension reform is urgently required; experts predict the system to collapse within the next 15 years if nothing is done.

Indeed, in November 2007 the government issued a proposal for a social security reform that passed the parliament in March 2008. The measures drafted in the bill foresee an increase in the statutory retirement age and harmonisation of that age for men and women, an increase in the early retirement age to strengthen the incentives to work longer reduce complexity and administrative costs of the public pension pillar.

The first pillar covers employees in the private sector and certain self-employed. The pension is financed on a pay-as-you-go basis and the contribution rate is unequally shared between the employee and the employer; the actual rate depends on the profession of the employee. It usually amounts to 6.67%, but increases to 8.87% for employees in arduous occupations. The corresponding employer rate is 13.33% or 17.73% increased. For the supplementary pension an additional contributions rate has to be paid.

The German first pillar pension is a pay-as-you-go system financed by employees, employers and governmental subsidies. The contribution rate of currently 19.9% is equally shared between the employee and the employer with a contribution assess

Germany

Germany's pension system is based on a strong public pension pillar. In the past individuals relied predominantly on pension benefits provided by the statutory pension insurance. With the demographic challenges ahead this pattern is beginning to change and funded elements are gaining foothold. Projections indicate that the overall retirement market, which currently counts assets of EUR 1.07 trillion, will grow at a CAGR of 4.6% until 2020.

The German first pillar pension is a pay-as-you-go system financed by employees, employers and governmental subsidies. The contribution rate of currently 19.9% is equally shared between the employee and the employer with a contribution assessment limit of EUR 63,600 per annum (newly-formed German States: EUR 54,000 p.a.). For the second pillar, employers can choose between as many as five different funding vehicles. The five funding vehicles are:

1. Direct pension promise
2. Direct insurance
3. "Pensionskasse"
4. Pension fund
5. Support fund ("Unterstützungskasse)

Spain

Spain operates a three-pillar pension system composed of a generous and dominating state pension system, voluntary occupational and private pension arrangements. Despite the urgent need for more far-reaching reforms, reform measures to gradually lower the still generous pension level of 85% granted by the first pillar and to strengthen the second and third pillar have not yet been taken. On the contrary, effective January 2007 Spain reduced the tax incentives for voluntary occupational pension provision. With an expected old-age dependency ratio of 67% by 2050, Spain will face an immense demographic problem, and, although pension reforms are inevitable in the medium term.

Spain has a relatively small pension market, which is dominated by third pillar insurance products, we expect pension assets grow at an annual rate of 7.7% to EUR 565 billion until 2020

To give an incentive to postpone retirement, everyone who decides to keep on working after having reached the statutory retirement age, and having paid contributions for 40 years, is granted an additional 0.75% for every additional quarter (max. 3% per annum).

France

The pension system in France consists of a pubic pillar financed on a pay-as-you-go basis, a mandatory occupational system and voluntary occupational and personal arrangements. Traditionally, pensions in France have been state-centred, with a dominating role for public pension provision. According to projections, the French pension market, currently amounting to EUR 1.2 trillion inclusive of reserves, will grow at a CAGR of 6.1% until 2020. Asset accumulation will continue until 2020, after which assets will be used to contribute to the long-term survival of mandatory old age insurance plans. The capital stock increased form EUR 7.1 billion in 2001 to EUR 17 billion in 2003, and reached EUR 34.5 billion at year-end 2007. 64.5% of these assets are allocated to equities and 33.5% are invested in bonds. The investment of the funds assets follows a strategic asset allocation (SAA), which was revised at the end of 2006. For diversification purposes and to achieve an improved risk and return objective ten per cent of the fund's assets can be invested into alternative asset classes such as private equity and hedge funds.

In the context of public pensions, the statutory pension insurance scheme is a compulsory basic social security system, which provides earnings-related benefits for employees in the private sector. To give an incentive to postpone retirement, everyone who decides to keep on working after having reached the statutory retirement age, and having paid contributions for 40 years, is granted an additional 0.75% for every additional quarter (max. 3% per annum).

In the context of occupational pensions, Private retirement income in France is almost entirely based on compulsory systems. In addition to the basic social system all employees are members of compulsory supplementary plans. Because of the importance of these compulsory occupational schemes (AGIRC (for executives) and ARRCO (for non-executives)), voluntary occupational pension schemes are still only a small part of the market.

Ireland

Ireland's pension system consists of a pay-as-you-go financed public pension pillar supplemented by a voluntary 2nd pillar scheme and private pension plans. However, there is a substantial group of people without adequate supplementary pension coverage; just about 50% of the population only receives the state pension. This is one reason why there is an ongoing discussion to reform Ireland's pension system. In October 2007, the government issued a green paper and made several reform proposals discussing the 'big picture' options for the system while addressing topics such as:

- The demographic challenge
- How to ensure the sustainability of the pension system
- Reform Options for the Social Welfare Pension
- Possible approaches to pensions development
- Funding standards for defined benefit schemes
- The role of regulation

The public pension pillar comprises both a contributory and a non-contributory element. The latter is a means-tested pension, which is paid to individuals without adequate means at the age of 66. This old-age contributory pension system is financed on a pay-as-you basis and provides flat-rate benefits depending on the contribution period. All employees in the private and public sector as well as the self-employed are insured under the system.

Occupational pension plans can be defined benefit or defined contribution in nature. According to the Pensions Board's annual report for 2006, there were round about 542,000 members in defined benefit schemes and approximately 235,000 members in defined contribution schemes. Compared to 2005, the number of people in defined benefit pension plans has increased by circa 5% whereas the membership in DC schemes has been constant.

Although Italy's invested pension market is still small, the outlook for this sector has brightened with the passing of a new bill that was signed in October 2006. The bill encouraged the transfer of indemnity payments (severance pay, which is compulsory in Italy) to the private pension market.

Italy

Italy's pension system consists of a PAYG public pension pillar as well as voluntary occupational and private pension plans. With a total of approximately EUR 350 billion pension assets under management in 2004, Italy is one of the larger European pension markets. Its life insurance market ranks fourth out of all the European markets and is set to continue outpacing the European average growth rate. Although Italy's invested pension market is still small, the outlook for this sector has brightened with the passing of a new bill that was signed in October 2006. The bill encouraged the transfer of indemnity payments (severance pay, which is compulsory in Italy) to the private pension market. We expect new pension funds to grow at a compound annual growth rate of around 30% until 2015, making Italy one of the most exciting European markets. Total pension assets in the market are expected to grow at an annual rate of 5.9% to EUR 914 billion in 2020.

The first pillar consists of a compulsory pay-as-you-go insurance comprising various branches. The most important are pension insurance for employees and for the self-employed and retirement pensions for civil servants. Additional occupational pension schemes are not widespread in Italy. At the end of 2005 the entire supplementary pensions sector only had three million contributors which, corresponds to a coverage ratio of 13%. There are two types of occupational pension funds:

Closed or contractual pension funds which are implemented either as company pension funds by a single company or as industry-wide pension funds set up by the employers' association and the trade unions for a specific group of participants; Open pension funds that are offered by banks, insurance companies or investment management companies for a generic group of participants, i.e. the self-employed.

Netherlands

The Dutch pension system is designed with a public pay-as-you-go tier, as well as quasi-mandatory occupational and voluntary private pension arrangements. In addition to the PAYG element, the public pension is also partially funded by a reserve fund, the AOW Savings Fund, designed to cope with future demographic challenges. It is financed through tax revenues and expected to grow to EUR 135 billion in 2020 when assets are needed to finance increased public pension expenditures. The Dutch pension market is the second largest in the EU with funds under management expected to grow at annual rate of 4.5% to EUR 1, 640 billion by 2020. As the Dutch pension market is one of the most mature markets in Europe, growth is mainly driven by performance.

The Dutch 2nd pillar is one the best developed occupational pension systems in Europe with a coverage of not less than 90% of the working population. The value of pension fund assets is well over 100% of GDP.

The first pillar is a compulsory insurance plan financed on a pay-as-you-go basis that provides a flat-rate old age pension at the age of 65. The system does not only cover employees in the private sector, but also civil servants and the self-employed. Contributions are paid on income between EUR 13,160 and EUR 29,543 at a rate of 17.9%, which is solely employee-financed. A full old-age pension of EUR 932 is paid to those who have resided for 50 years in the Netherlands between the age 15 and 65. Benefits are adjusted according to changes in the minimum wage and are subject to income tax.

The Dutch 2nd pillar is one the best developed occupational pension systems in Europe with a coverage of not less than 90% of the working population. The value of pension fund assets is well over 100% of GDP. Although occupational pension provision is generally not mandatory, sector-wide pension plans often stipulate compulsory membership that can be approved by the Ministry of Social Affairs and Employment upon request. 80% of all occupational plan members are covered by mandatory sector-wide pension plans. Hence, the system could be described as quasi-mandatory. Opting-out of sector-wide pension plans is possible in case the employer establishes a company pension plan that provides benefits of at least an equivalent level.

Portugal

The pension system in Portugal consists of a dominating public pension pillar complemented by voluntary occupational pension plans and personal pension saving arrangements. The supplementary pension market is one of the smallest in Europe with an estimated growth potential of 6.9% annually to more than EUR 150 billion by 2020. Future growth will mainly be the result of a lowering of state pension benefits.

In the context of occupational pensions, company benefit plans are not widespread, with only about 3.7% of Portugal's 4million workforce being included in occupational pension schemes. Especially large employers, formerly state-owned companies (electricity, telecommunication) and banks with a large staff provide voluntary occupational pension coverage. Only 1% of all Portuguese companies have a pension plan in operation.

In general, supplementary pension plans are provided on a voluntary basis. However, in several industries they were traditionally mandated by collective labour agreements, but this is no longer allowed in Portugal. State companies with public sector plans continued their schemes on a funded basis after privatisation. Therefore, the level of coverage may differ considerably between industries. The vast majority of employees with a pension promise receive their benefits under a pension fund arrangement. Insured schemes are less important and are mainly used by small and medium-sized companies.

Finland

The pension system in Finland is predominantly based on two complementary pension schemes. The National Pension is a tax-financed and means-tested public pension providing subsistence level benefits. The backbone of the Finnish pension system is a compulsory occupational pension scheme. Income from this earnings-related scheme, which is partly funded and partly pay-as-you-go financed, reduces the amount from the National Pension. Voluntary occupational schemes and private pension savings are not well developed due to the dominance of the existing compulsory scheme.

The public pension system in Finland is based on the National Pension, which is intended to secure a minimum income for retirees whose earnings-related pension is small.

The public pension system in Finland is based on the National Pension, which is intended to secure a minimum income for retirees whose earnings-related pension is small. The National Pension provides a flat-rate benefit of up to 20% of average wages in Finland, with minimum guaranteed income that is reduced by the amount of the earnings-related pension. The statutory earnings-related occupational pension insurance is the backbone of the Finnish pension system, which is partially pay-as-you-go-financed but also consists of a funded part. The administration the compulsory scheme is decentralised to pension providers such as insurance companies, company pension funds and industry-wide pension funds that are independently acting as private sector financial institutions. The Ministry of Social Affairs and Health as well as the Insurance Supervisory Authority supervise them. In 2009 the supervisory authorities will merge and a new supervisory structure for the financial and insurance sector will be established.

Sweden

The Swedish pension system consists of a public pension pillar that is unique in Western Europe. Part of the social security contribution is paid into individual investment accounts and a funded pension is build up with independent fund management companies responsible for the asset management.

In addition, mandatory occupational pension schemes are in place for employees working in industries covered by nationwide collective bargaining agreements. Employers who are not part of collective agreements may offer plans on a voluntary basis. Voluntary individual pension savings complement the pension landscape in Sweden.

In the context of public pensions, there are three elements:

The income-based pension

This is the major component of the state pension system. It is financed on a pay-as-you-go basis, the contribution rate amounts to 16%, which is recorded in notional accounts. At the time of retirement the virtual account balance is basis for the calculation of pension benefits. An annuitisation factor that is predominantly based on the statistically remaining average life expectancy divides the pension account balance into annual pension benefits. A balancing mechanism assures that the balance in the notional accounts is adjusted to reflect changes in average wages. The income pension is paid for life. The retirement age is flexible and retirement benefits can be claimed from the age of 61 at the earliest.

The premium pension

The premium pension system is administered by the state Premium Pension Authority (PPM). 2.5% of pensionable income is paid to the funded pension scheme, which is compulsory. The money is deposited in individual investment accounts with individual choice. Employees can choose to have their premiums invested in up to five funds out of more than 700 mutual funds offered by independent fund managers. In addition, the government has set up a special investment fund for

In addition to the income-based and premium pension, the guaranteed pension, a means-tested benefit, provides a minimum pension for persons older than 65 with low or no income and at least 40 years of residency in Sweden.

individuals who do not want to make their own investment decisions; their contributions are automatically invested with the Premium Savings Fund, which is managed by the Seventh National Swedish Pension Fund (AP7). The individual is free to change the chosen fund at any time and free of charge. The premium pension can be drawn at the age of 61 at the earliest, but it is also possible to postpone withdrawals from the pension account, which requires that the assets are invested in security funds.

The guaranteed pension

In addition to the income-based and premium pension, the guaranteed pension, a means-tested benefit, provides a minimum pension for persons older than 65 with low or no income and at least 40 years of residency in Sweden. It is financed by the government's budget. Second pillar pension benefits for almost all blue-collar and white-collar employees are determined by nationwide collective bargaining agreements. Permanent employees automatically belong to an occupational pension scheme. These schemes are known as ITP for white-collar employees and SAF-LO for blue-collar employees.

Management Practices of Pension Funds in Latin America

Following the reform of the Chilean pension system in 1981, its benefits began to attract the interest of many other countries in the region. These benefits may be summarised as the fall in the cost of pensions for employees; the sound returns on investments and the system's ability to deliver improved pensions; and its positive impact on the reform of the nation's economy.

Presently the entire region has adopted, with varying degrees of fidelity, systems based on the Chilean model: that is to say, privately managed individual capitalisation regimes. It is estimated that in 2015 pension funds will represent on average 30 per cent of these countries' GDP. Table 7 illustrates the situation in those countries in the region, which conform to the model.

Presently the entire region has adopted, with varying degrees of fidelity, systems based on the Chilean model: that is to say, privately managed individual capitalisation regimes. It is estimated that in 2015 pension funds will represent on average 30 per cent of these countries' GDP.

Table 7: Pension Statistics of Latin American Countries

Country	Start of reform	Type	Number of Affiliates	Population	Working Population	GDP Size ($billions)	Pension Assets ($billions)	Pension Assets (% of GDP)	Pension Assets per capita ($)	Pension Assets per employee ($)	Pension Assets per contributor ($)	Pension Contributors (% of working population)
Chile	1981	Mandatory	4,758,000	16,987,000	7,320,000	169.46	33.25	19.62	1,957	4,542	6,987	65.00
Peru	1993	Optional	2,106,496	29,132,013	10,200,000	127.46	2.08	1.63	71	204	986	20.65
Argentina	1994	Optional	9,762,000	40,134,425	16,270,000	324.77	13.86	4.27	345	852	1,420	60.00
Colombia	1994	Optional	2,908,633	45,164 000	21,300,000	240.83	2.11	0.88	47	99	725	13.66
Uruguay	1996	Optional	506,517	3,361,000	1,641,000	32.26	0.37	1.16	111	228	738	30.87
Bolivia	1997	Mandatory	461,214	9,879,000	4,457,000	17.41	0.33	1.91	34	75	722	10.35
Mexico	1997	Mandatory	17,290,000	107,550,697	45,500,000	1,088.13	8.41	0.77	78	185	486	38.00
El Salvador	1998	Mandatory	569,972	6,163,000	2,958,000	22.12	0.06	0.26	9	19	100	19.27
Brazil	1988	Optional	8,072,000	191,241,714	100,900,000	1,572.84	313.03	19.90	1,637	3,102	38,780	8.00

Source: CIA World factbook, OECD

The resources of Latin American pension funds are characterised by the following:

Concentration in domestic markets

Investment of pension funds is significantly concentrated in the region's domestic markets. Eighty-five per cent of funds in Chile are, effectively, invested in instruments issued by Chilean enterprises (in both the private and state sectors), while 98% of funds in Argentina are held in Argentinean investments. Funds in Mexico and Peru are invested only in the respective national markets.

Development of domestic markets

The development of the domestic capital markets in which the funds are invested would need to be fast-tracked especially due to the current financial crisis. In Chile, for example, there are various restraints on the movement of foreign capital and the lack of technological updating of instruments in general. In some other countries in the region, long-term financial instruments have not been sufficiently developed, and in others, the only instruments available are securities issued by the respective governments.

Regulation and control

In Chile, the pension fund managers are obliged to maintain a special "reserve" fund with their own resources, and to guarantee a minimum rate of profitability based on that shown by the pension funds on a yearly average. These requirements have resulted in the so-called "efecto manada" (herd effect); that is to say, the funds have maintained very similar investment portfolios in order to avoid falling below the minimum rate of profitability and finding themselves having to use their own resources to cover the shortfall. At the same time, the pension fund managers generally have to comply with a series of strict rules requiring information on their investment portfolios to be made available on a daily basis, and to remain within rather rigid investment limits; all of these increase the cost of managing the funds, which must ultimately be borne by affiliates in the form of the commission paid to fund managers.

In Argentina, private pension system was finally nationalised in 2008 in order to lug the holes in the government finances.

The Chilean pension system suffers from low coverage of low-income workers, lack of competition among operators and overly restrictive asset allocation and investible assets.

Volatility of results

The Chilean system has been capable of generating an average rate of profitability of more than 11% per annum in real terms, but performance has been very mixed over the years.

Pension Fund Characteristics in Selected Latin American Countries

Chile

Like Nigeria, the Chilean pension system evolved from the old Pay-As-You-Go (PAYG) system of defined benefit pension system. Since the system was reformed in 1981, Pension funds can now be managed only by specialised companies known in Chile as Administradoras de Fondos de Pensiones (AFP). Each AFP must constitute a reserve equivalent to 1% of asset under management. Each fund has a minimum return requirement based on industry average over 36 months. Any fund underperformance will be covered by the AFP using its reserve. Funds can only be invested in instruments explicitly authorised by Pension Fund Law and cleared by an autonomous Risk Classification Committee. The regulator monitors fund financial statements daily and the operators, monthly. Excessive regulation costs have an impact of up to 5% tax on wealth of contributors.

In 2002, the Chilean pension regulator expanded the number of investment offerings into "multi fund" structure where assets are invested in different funds with different asset allocation. Fund A to Fund E were introduced with varying minimum and maximum limits for equity investments. The creation of the multi funds also come with the creation of more conservative accounts for retirees and near retirees (within ten years of legal retirement age).

Challenges faced by the Chilean Pension system include poor coverage of the low-income workers who can only afford very little savings, lack of competition among AFPs leading to high cost of asset management and overly restrictive asset allocation and investment vehicles. There are various restrictions on the movement of foreign capital and the lack of technological updating of instruments in general while the issue of minimum return requirements resulted in the so-called "efecto manada" (herd effect); where the funds have maintained very similar investment portfolios in order to avoid falling below the minimum rate of profitability and finding themselves having to use their own resources to cover the shortfall.

To combat these challenges, a Presidential Commission proposed some reforms to the system as follows:

- A basic universal pension where the State will provide low-income workers with subsidies to their pension; supplementing their self-funded DC.
- Increase in competition within the AFP industry including measures to lower entry barriers, assigning new contributors to AFPs with lowest commission and removal of minimum return requirements
- Flexibility in investment regulation including gradual removal of foreign investment limit and the creation of an Advisory Committee to review changes in AFP investment guidelines rather than the present situation where every change has to be approved in Congress.

Like Nigeria, only about 8% of the working population in Brazil are covered by the pension schemes.

By 2008, some of the recommendations were being included in the scheme especially the introduction of a solidarity pension where people of 65 years and over are entitled to a minimum pension regardless of contribution history.

Brazil

In Brazil, following the end of the military rule in 1988, the new democratic government implemented legislation that made the pension system arguably the most generous and expensive among developing countries. This has informed the series of on-going reforms that are being undertaken in the country. Public pensions consist of two schemes. The Regime Geral de Previdência Social (RGPS), the general regime of social security which is a pay-as-you-go financed single-pillar scheme, covers the private-sector workforce. It is financed through payroll taxes (shared by the employer and the employee), revenues from sales taxes and federal transfers that cover shortfalls of the system. The Regimes Próprios de Previdência Social (RPPS) - a pool of multiple special pension regimes at different governmental levels, covers public sector employees. In this case, employees pay a percentage of their salaries on a pay-as-you-go basis while municipal, federal and state entities manage their own schemes for their employees. It is coordinated by the Ministry of Pensions and Social Assistance.

There also exist voluntary pension plans, under the Regime de Previdência Complementar (RPC), for both occupational and personal pensions, conveyed under two vehicles: Closed private pension entities that are non-profit organisations and can be established on a single-employer or multi-employer basis and by labour unions; open pension entities, not necessarily linked to employment and are mostly chosen by small and medium sized employers.

Investment restrictions also apply to pension assets in Brazil with the highest limit given to low credit risk bonds and the least to real estate investment. Foreign investment is not restricted but is also not encouraged.

Investment restrictions also apply in Brazil but more are flexible than in Chile and Nigeria.

Nevertheless, the overall coverage rate of complementary pension provision remains very low. In terms of assets under management, publicly owned company pension funds remain the largest shareholders with pension provision mainly of the defined benefit type. This is a result of several deficiencies observed in the system. On one hand the system either exempts from or takes at a reduced rate, contributions from low-wage earners in certain sectors while on the other hand, compared to the private sector scheme, public sector employees receive higher pensions for lower contribution rates. These deficiencies weaken the contribution basis, which is counterproductive to achieving long-term financial sustainability of the system.

In response, Brazil in 1998 made amendments to the benefit formula, established minimum pension ages and introduced a vesting period for employees switching to a public-sector scheme from the RPGS system. In 2001, a new legislation was passed focusing on making supplemental pensions more attractive while in 2005, the special taxation regime on private sector pension scheme was terminated.
Further reforms expected to the Brazilian pension system include:

- The abolition of the strong link between minimum pensions and minimum wages;
- Special exemptions and grants for employees in certain sectors should be abolished;
- The number of years required to qualify for a full pension should be increased and minimum retirement age should be introduced.

Management Practices of Pension Funds in the Middle East and North Africa

Research reveals that most of the public pension schemes in the Middle East and North Africa region have accumulated reserves – except for Morocco. This reserve ranges from 4.2% of GDP in Djibouti to 52.5% of GDP in Bahrain. At the aggregate level, the reserves of mandatory – defined pension systems account for 14.4% of this region's GDP – among the highest levels in the world second only to South Asia.

Research shows that most of the public pension schemes in the Middle East and North Africa region have accumulated reserves – except for Morocco. This reserves range from 4.2% of GDP in Djibouti to 52.5% of GDP in Bahrain.

There is large variation across countries in size, level of income, productive structure, and political organization: from the Arab Republic of Egypt, with more than 60 million inhabitants, to Djibouti, with only 450,000 inhabitants; from the Republic of Yemen, with income per capita of $450, to oil-rich countries in the gulf, where per capita income surpasses $10,000; from oil-poor countries such as Jordan, Lebanon,

Table 8: Pension Statistics of Middle East and North Africa Countries

Country	Population[1]	Working Population (2)	GDP Size[3] ($billions)	GDP Per Capital ($)	Pension Fund Assets [4] ($billions)	Pension Fund Assets (% of GDP)	Pension Assets per Capita ($)	Pension Assets per Working Population ($)
Algeria	34,895,000	9,440,000	159.67	4,576	4.79	3.00	137	507
Bahrain	791,000	463,000	21.24	26,852	11.07	52.12	13,995	23,909
Djibouti	864,000	282,000	0.98	1,137	0.04	4.07	46	142
Egypt	77,420,000	24,720,000	162.62	2,100	78.22	48.10	1,010	3,164
Iran	74,196,000	24,350,000	335.23	4,518	15.12	4.51	204	621
Iraq	31,234,000	7,740,000	91.45	2,928	146.92	160.66	4,704	18,982
Jordan	6,316,000	1,615,000	20.03	3,171	5.03	25.11	796	3,115
Lebanon	4,224,000	1,100,000	28.94	6,851	2.63	9.09	623	2,391
Libya	6,420,000	1,916,000	89.92	14,006	4.06	4.52	632	2,119
Morroco	31,633,000	11,500,000	88.88	2,810	10.75	12.09	340	935
Tunisia	10,327,800	3,676,000	40.35	3,907	0.61	1.50	59	2,921
Yemen	23,580,000	6,494,000	27.15	1,151	8.99	33.11	381	1,384

1. 2009 Estimates
2. Labour Force Estimates as at 2008 from The Word Fact Book
3. Source: 2008 list by the International Monetary Fund

and Morocco, where incentives to embrace market reforms are relatively strong, to oil-rich countries such as the Islamic Republic of Iran and Libya, which continue to be dominated by the public sector; from monarchies such as Saudi Arabia to nascent democracies such as Algeria and Lebanon.

Pension systems in the Middle East and North Africa target, on average, a pension for full-career workers of nearly 80% of earnings before retirement on a PAYG basis. Figure 2 below shows the estimated growth rate of working and dependant population. This is much higher than the pension promise in 24 high-income Organisation for Economic Co-operation and Development (OECD) countries, in 10 countries in Eastern Europe and Central Asia, and 9 countries in Latin America and the Caribbean, where pension replacement rates average 57%.

Middle East and North African countries rarely impose a cap on the level of earnings eligible for pensions (or these ceilings are very high). For higher-income workers, earning double the average, the target replacement rate averages more than 75% in the Middle East and North Africa region, compared with less than 50% in 43 countries in other regions. Although the pension schemes in this region have cash flow surpluses, meaning that contribution revenues exceed benefit expenditures, the future flow of pensions already promised (that is, the implicit pension debt) adds up to, on average, 80–90% of gross domestic product (GDP) - larger than conventional government debt. Thus, even where there are pension reserves, these probably will be depleted in 10 years or so.

Arguably, there is a need for reforms to take place with the following guiding principles:

- The pension system should provide benefits that are adequate and affordable to all workers.
- The pension system should be financially self-sustainable, thus guaranteeing that pension promises can be kept.
- If redistribution takes place, it should be transparent and progressive (that is, from high- to low-income workers).
- The pension system should not distort incentives, and this requires a closer link between contributions and benefits.

Also, the current defined benefit schemes, which are likely to remain an important part of the mandatory pension system in the region, would require an integrated reform strategy with the following interventions:

- Improving financial sustainability, incentives, and equity of current earnings-related schemes.
- Mitigating the impacts of the reforms on women and review policies that discriminate against them.
- Identifying mechanisms to finance the current implicit pension debt in a transparent manner while making future liabilities explicit.
- Improving governance and administration.
- Expanding coverage - efforts are needed to explore ways of extending the formal pension system to vulnerable groups. However, this policy should follow reforms that put the pension system on a financially sustainable footing.
- Diversifying the retirement-income provision. Countries with a core of sound banks and insurance companies and a clear agenda to support financial sector development (for example, Jordan, Lebanon, and Morocco) should consider higher levels of funding in the mandatory scheme. It is also desirable to promote the development of voluntary private pensions, which implies having in place the appropriate regulatory and supervisory framework.

Management Practices of Pension Funds in Sub-Saharan Africa

The urgent issue for pension reform in Africa is not only the need to introduce social protection systems, to help alleviate demographic pressures, poverty amongst the elderly and provide support for households headed by grandparents following the HIV AIDS pandemic and regional conflicts but the need to reform the existing pension systems in the region, the cost of which is often crowding out spending on other key areas (such as health and education).

Most sub-Saharan African countries do not have meaningful publicly managed pension and social security systems, though some form of pension coverage is available in a limited number of countries.

Most sub-Saharan African countries do not have meaningful publicly managed pension and social security systems, though some form of pension coverage is available in a limited number of countries. Where benefits are offered to formal sector workers, they are provided either by pubic service pension schemes (the public sector being by far the largest employer in most countries in the region), national (usually mandatory) schemes covering private sector workers (which may also cover the public sector), occupational schemes managed by employers other than the government and individual/personal pension schemes (usually offered by insurance companies on a voluntary basis).

Table 9: Pension Statistics of Countries in Sub-Sahara Africa

Country	Population[1]	Working Population (2)	No of Pension Contributors	GDP Size[3] ($billions)	GDP Per Capital ($)	Pension fund assets [4] ($billions)	Pension Fund Assets (% of GDP)	Pension Assets per Capita ($)	Pension Assets per Working Population ($)	Pension Assets per contributors ($)	Pension Contributors (% of working population)
Botswana	1,950,000	790,000	85,956	13.46	6,903	2.34	17.38	1,200	2,962	27,223.23	10.88
Ghana	23,837,000	11,520,000	875,861	16.12	676	1.09	6.76	46	95	1,244.49	7.60
Kenya	39,802,000	9,450,000	1,984,500	30.24	760	6.95	22.98	175	735	3,502.14	21.00
Nigeria	149,100,000	51,040,000	3,888,491	175.40	1,176	8.66	4.94	58	170	2,227.09	7.62
Rwanda	9,998,000	4,600,000	220,000	4.46	446	0.05	1.21	5	12	245.45	4.78
Seychelles	84,000	39,560	N/A	0.83	9,929	0.86	102.64	10,190	21,638	N/A	N/A
South Africa	49,320,000	18,220,000	9,200,000	276.76	5,612	174.36	63.00	3,535	9,570	18,952.17	50.49
Swaziland	1,185,000	300,000	N/A	2.84	2,397	1.17	41.20	987	3,900	N/A	N/A
Tanzania	43,739,000	20,380,000	1,100,520	20.72	474	2.69	13.00	62	132.19	2,447.93	5.40
Zambia	12,935,000	5,093,000	526,199	14.32	1,107	0.21	1.45	16	41	395.29	10.33
Zimbabwe	12,523,000	4,039,000	N/A	3.42	273	0.07	1.99	5	17	N/A	N/A
Congo DR	66,020,000	15,000,000	N/A	11.59	176	N/A (4)	N/A	N/A	N/A	N/A	N/A
Ethiopia	79,221,000	27,270,000	N/A	25.66	324	N/A	N/A	N/A	N/A	N/A	N/A
Gabon	1,475,000	592,000	N/A	14.52	9,844	N/A	N/A	N/A	N/A	N/A	N/A
Gambia	1,705,000	400,000	N/A	0.81	475	N/A	N/A	N/A	N/A	N/A	N/A
Guinea	10,069,000	3,700,000	N/A	5	450.89	N/A	N/A	N/A	N/A	N/A	N/A
Uganda	32,710,000	14,480,000	N/A	14.53	444	N/A	N/A	N/A	N/A	N/A	N/A

[1] 2009 estimates
[2] Labour Force Estimates as at 2008 from The World Fact Book
[3] Source: 2008 list by the International Monetary Fund
(4) N/A = Not Available

Pension Fund Characteristics in Selected Sub-Saharan African Countries

South Africa

In South Africa, the public pension provides a non-contributory, means-tested old age pension. The system is financed by general revenues. The pension is payable to women at 60 and men at 65 who are resident citizens of South Africa.

Although the main source of income for over 75% of individuals over the retirement age in South Africa is a means-tested social grant (the SOAG), the country does also have a well developed occupational pension and private retirement savings system, albeit with a limited coverage of the working population.

The public pension provides a non-contributory, means-tested old age pension. The system is financed by general revenues. The pension is payable to women at 60 and men at 65 who are resident citizens of South Africa. Benefits amount is up to R940 (US$126) a month for a single pensioner. Married couples may receive double the amount. The pension is reduced to 25% of the full amount for pensioners who are resident for more than 3 months in a private care institution. A means test is currently applied, which lowers the benefit by 50 cents for every R1 of other income, to a level of zero when other income exceeds R1,880 (US$250) per month. This is the main source of income for 75% of retirees, most of whom receive the full amount. Special grants are paid to war veterans; up to R838 (US$112) per month and pensioners who need full-time attendance of another person as the result of a mental or physical condition receive R180 (US$24). The benefit level is informally linked to wages (following inflation erosion in the 1990s), and relative to average formal sector wages, provides a reasonable replacement rate to lower income workers who reach retirement age as well as acting an important source of poverty relief for those who are unemployed through most of their working lives. Originally, in the Apartheid era it was introduced to cover small numbers of low-income, white workers, but was gradually extended to all South Africans, with parity payments for all ethnic groups achieved in the 1990s.

The private and funded pension system consists of an occupational and personal tier. There are also occupational pension funds for civil servants, as well as for workers of state companies. Many middle to upper income workers belong to an occupational fund as well as make supplementary retirement provision through the use of individual retirement funds (called ˉretirement annuities) which are similar in character to 401(k) plans in the United States. Occupational pension provision is provided through pension funds (which must pay out a least 2/3 in annuities with employee contributions tax exempt), or provident funds (which are permitted to pay 100% of the member's benefit in the form of a lump-sum).

In terms of voluntary occupational pensions, employers decide whether to set up a fund, what type and categories of employees eligible, after which all workers in a category must join. For this reason, the system though legally voluntary can be thought of as quasi-mandatory. In some instances, employers are free to decide contribution levels and there are no minimum or maximum contribution limits, unless so provided for in the rules of the fund. In other cases, the rates of contribution are an outcome of negotiation between labour representatives and employers (this is the case in many so called ¯ bargaining council and industry funds which effectively act as multi-employer funds). Additional voluntary contributions are allowed, if the rules of the fund concerned permit. The tax deductible contribution for employees is equal to the greater of 7.5% of remuneration or R1,750 (US$235). The tax deductible contribution for employers is a minimum of 10% of approved remuneration. In practice, the South African Revenue Services (SARS) allows up to 20% tax deductible contributions towards pension and provident funds. Investment returns are not taxed and benefits are taxed as earned income, with a certain tax-free lump sum permitted.

Pension schemes can be pure defined benefit or defined contribution, or some hybrid of the two. Pension funds must pay out a least 2/3 in annuities (maximum 1/3 as a lump sum); provident funds may pay out 100% lump sums.

Pension schemes can be pure defined benefit or defined contribution, or some hybrid of the two. Pension funds must pay out a least 2/3 in annuities (maximum 1/3 as a lump sum); provident funds may pay out 100% lump sums. Generally the employer is free to decide the benefit structure and the age at which they become available when setting up an occupational scheme. The majority of employees in the formally employed private sector in South Africa belong to defined contribution schemes, while public sector funds are still largely defined benefit arrangements. The South African environment has also seen considerable growth of multi-employer or ¯umbrella funds, which are defined contribution in nature. Most of the large trade unions have established national defined contribution funds and have negotiated an option for their members to belong to such funds, as opposed to membership of an employer-sponsored fund. In effect therefore, such funds are multi-employer funds, but along industry lines. Umbrella funds, covering multiple employers, are also allowed and have increased in number over time. Estimates by the National Treasury places coverage at approximately 60% of workers in the formal sector; however, no statistics exist for pension provisioning in the informal sector.

Botswana

Botswana operates a universal, Old Age Pension System, which covers citizens over 65 years of age residing in Botswana in a 2 pillar system that incorporates public pension funds and occupational pension funds. The costs are born by the government. In the context pensions, the fund's public sector employees scheme – the Botswana Public Officers Pensions Fund (BPOPF) - was reformed in 2001, moving from a Defined Benefit Scheme to a Defined Contribution arrangement. The fund is currently experiencing strong growth as most public servants exercised their option to join the fund.

Occupational pensions are also growing, with assets having reached the current market value of around US$5.6billion. Of Botswana's 790,000 labour force, around 300,000 are in private, formal employment. Yet 84% of these workers do not have any occupational pension coverage, with around 33% of public sector workers also not covered, and there is little evidence of supplementary saving in individual products to close this gap.

A gratuity/severance scheme also exists in Botswana, with employers required to make a cash payment on the 5th anniversary of an employee's term of employment, and similar payments, at double the rate, at the end of every 5 years thereafter, with eligibility for pro-rata cash benefits on termination of employment. However, employers are not required to pre-fund these obligations, they often do not comply and the payments are not generally used to fund retirement income.

The government in Botswana is looking to reform the system, to increase administrative efficiency and sustainability. A Non-Bank Financial Authority has been created which oversees the pension fund industry.

Ghana

Given the perceived inadequacies of these pension schemes, the Ghanaian Government, through the Presidential Commission on Pensions recommended for a contributory three-pillar pension structure comprising two mandatory schemes and a voluntary one

There are currently two mandatory pension schemes in Ghana: the partially funded PAYG Social Security and National Insurance Trust (SSNIT), which is the main system and covers employees in the private sector, civil and public servants, professionals, traders, artisans, farmers and self-employed; and a small scheme, which is currently phasing-out, and only covers military, police, and a few civil servants, but used to cover all civil servants in the past. In the aggregate both systems cover less than 10% of the labour force in Ghana, and cost already around 1.5% of GDP. These schemes have elements of defined benefit, and defined contribution. Pensioners have the right to obtain 25% of their pensions as lump-sum payments at the moment of retirement, and almost 30% of members that reach retirement age and are covered by the system, do not qualify for the defined benefit component of the pension program (they receive instead lump-sum payments, as refunds of their past contributions with a determined interest).

The system's revenues largely consists of contributions from workers (5% of earnings), and employers on behalf of workers (12.5% of their payroll), however a fund for short-term benefits (health fund) takes 2.5% of the salary (out of this 17.5%, leaving only 15% for the pension fund).

Given the perceived inadequacies of these pension schemes, the Ghanaian Government, through the Presidential Commission on Pensions recommended for a contributory three-pillar pension structure comprising two mandatory schemes and a voluntary one:

First pillar: A mandatory basic state social security scheme to be administered by a restructured SSNIT, which will pay only periodic monthly and other pension benefits (such as survivors and invalidity benefits). It will be a defined benefit scheme, benefiting from a portion of contributions paid to SSNIT by both the employee (5%), and the employer (12.5%).

Second pillar: A mandatory, privately-managed occupational pension scheme. It will be a defined contribution pension scheme, paying mainly lump-sum benefits with a flexibility that allows the contributor to purchase additional annuities to enhance monthly pension benefits. The contribution rate will be 5%, out of this, 4% will be hived off SSNIT, while the remaining 1% will be contributed by the employer and the employee in equal proportions.

Third pillar: A voluntary private pension scheme, offering attractive tax incentives.

Kenya

The retirement benefits sector in Kenya is composed of the civil service scheme, the National Social Security Fund (NSSF), occupational schemes and individual pension schemes, with a coverage rate of around 15% of the workforce (10% or 800,000 members of the NSSF, 3% in the civil service scheme in 1.5% occupational schemes and 0.5% covered by individual retirement benefit schemes).

The NSSF is a public provident fund that covers employed persons, traders, the self-employed and, since 2004, some workers in the informal sector. It is mandatory for all employers with at least 5 employees to enrol their members, but open to all other individuals mentioned above. Members of the scheme contribute 5% of monthly earnings up to a maximum of KShs.200 (US$2.80) a month, which is the contribution rate for those earning more than KShs.4,000 (US$56.00). Employers pay 5% of payroll; subject to a maximum of KShs.400 (US$5.60). Self-employed persons contribute 5% of their monthly earnings, with no minimum or maximum earning limits for contribution purposes. With effect from June 2007, members of NSSF can top up their savings at any point in time with any amount that is less than or equal to KShs.1,000 (US14.00). Old-age pension benefits are available to those aged 55 who have retired from insured employment. They are available at age 50 if the person is not in insured employment. New and existing retirees can receive their benefits as a lump sum.

The Civil Service Pension Scheme covers all members of the Civil Service, and is established under an Act of Parliament as a PAYG system. It is currently non-contributory, although plans are underway to make it a contributory system.

Voluntary, occupational pension plans can be administered through pension funds or provident funds, and through Defined Benefit or Defined Contribution arrangements. An employer or a group of employers may, on a voluntary basis, establish a complementary occupational pension plan for their employees. Most plans are established by one single employer. Membership to an occupational pension or provident plan is often compulsory for covered employees. Once an employee decides to become a member, however, withdrawal from membership while being employed by the same employer is not allowed. Employees who are within five years of the plan retirement age when they commence work with the employer or when a new plan is established are not eligible for membership in the case of DB plans. In 2007, there were around 1357 active occupational pension schemes, of which approximately 10% were Defined Benefit schemes. The majority of schemes are pension schemes as opposed to provident funds. As of 2006, pension fund assets amounted to around $3.5billion. Investment restrictions include up to 70% in domestic and regional shares, 15% offshore and 30% in real estate.

In terms of personal pension arrangements, 14 individual, Defined Contribution-type pension schemes exist, which cover less than 1% of the population. They are mostly offered by insurance companies and are available to anyone. They are attractive to those workers whose employers do not offer a pension plan and to the self-employed. In May 2007, the Zimele Personal Pension Plan, a voluntary retirement savings arrangement for all public and private sector workers, was introduced. It will be managed by the private firm Zimele Asset Management Company. The plan operates on the basis of pooled funds. Contributions and investment income are exempt from tax. Amana Personal Pension Plan is the only other individual retirement benefits scheme that is similarly structured to the Zimele Personal Pension Plan.

Mauritius

In Mauritius, Basic Retirement Income is a universal, non-contributory pension funded by government taxation. It provides a minimum income guarantee for the elderly, covering all persons over 60, resident in Mauritius. Benefits are index linked, with a 5-year adjustment to prices.

The pension system in Mauritius consists of a universal, non-contributory Basic Retirement Pension, two mandatory, income-related pension schemes for the private sector (National Pension Fund and National Savings Fund) – which are administered by the public sector – and a number of voluntary schemes providing supplementary pension income.

The Basic Retirement Income is a universal, non-contributory pension funded by government taxation. It provides a minimum income guarantee for the elderly, covering all persons over 60, resident in Mauritius. Benefits are index linked, with a 5-year adjustment to prices. Payments increase for the very old (85s, 90s, and 100s). Around 150,000 beneficiaries are covered (around ¾ receiving old age benefits, the remainder widows, invalids and orphan benefits). Public sector employees (civil servants and parastatal employees) are covered by a separate scheme, which has been criticized as being overly generous by the private sector schemes, providing 66.7% of final salary for 33.3 years of employment.

In terms of occupational pensions, membership of the National Pension Fund Scheme (NPF) and National Savings Fund (NSF) is mandatory for all private sector employees with one month lifetime employment. The NPF is a partially funded scheme requiring 9% contribution (13.5% for the sugar sector), whilst the NSF is a fully funded scheme requiring 2.5% contributions. Benefits are paid from age 60 and are points-based. The government also guarantees a minimum pension obligation of Rs218 2000 (US$7,807) to those who have made a one-time/one month contribution to the fund. The NPF - aims at 33.3% replacement rate of average lifetime earnings for 40 years of employment – but is said to not be meeting these expectations and is likely to deliver only a 15% replacement rate. The average payout from the fund in 2000 was Rs522 per month (218 minimum pension + 423 NPF average). The NSF is a DC scheme paying lump sum benefits only. The NPF and NSF are administered by the public sector, with assets amounting to around 19% of GDP, 17% in the NPF and 2% in the NSF (World Bank 2004). Around 220,000 employees are covered by the schemes (from 15,000 employers) with around 36,000 beneficiaries receiving payments. Around 1000 voluntary, occupational pension schemes are also in operation. Most of the estimated 25,000 members are highly paid workers (coverage estimated at around 10%), either in schemes insured and/ or administered by insurance companies of self-administered superannuation funds. Contributions to the schemes are made by employers only – usually at a rate between 12-19% of earnings. The schemes are predominantly DB based, with benefits paid out as pensions or lump sum (insured funds only). Of the 25,000 members 13,500 are in insured funds and 11,500 in registered superannuation funds. Funds are said to be low cost (possibly as sponsoring companies absorb some of the costs of larger funds).

Namibia

In Namibia, the government also launched the Namibia Agricultural Retirement fund to cover agriculture related workers. This Defined Contribution scheme is funded with 10% contribution, evenly split between employees and employers (who also pay an additional 1% for administrative fees).

The Namibian pension system consists of a universal pension scheme the (National Pension Scheme), and voluntary contributory private pensions. The National Pension Scheme (NPS), known as the Universal Pension Scheme, is a social pension, which provides a flat-rate benefit, is non-contributory and non-taxable and payable regardless of other income. As of 2005, N$300 (US$42) in monthly benefits was provided to around 100,000 pensioners. The pension is payable to all resident Namibian citizens (who are not outside the country for more than 6 months) above the age of 60. The pension is funded from government taxation. Most pensioners (85%) receive their money at a designated cash pay point, with the rest via a post office or bank. The overhead costs of the NPS are said to be relatively high.

The government also launched the Namibia Agricultural Retirement fund to cover agriculture related workers. This Defined Contribution scheme is funded with 10% contribution, evenly split between employees and employers (who also pay an additional 1% for administrative fees). The Government Institutions Pension Fund (GPIF) covers civil servants. This is a fully funded, Defined Benefit scheme and is the largest pension fund in the country with assets of N$15.1billion (US$2.11billion in 2004 – or 73% of total pension assets in the country.

Around 15,000 workers are covered by taxable, contributory schemes (frequently on generous terms). Around 500 private pension funds currently operate in the country, with total pension assets in 2004 amounting to N$25billion (US$3.5billion), or 68% of GDP. Most funds are small and are administered by external fund administrators that provide basic recordkeeping as well as more specialized legal and actuarial services (the largest pension fund administrator has a 60 % market share). There are also a small number of pension funds that are administered and insured by life insurance companies. These funds have total assets of N$2.4billion (US$335m) that are included with insurance company assets in published statistics. The remaining N$5.6billion (US$781m) was held by various smaller funds, the bulk of which are based on defined contribution plans. The average size of private pension funds is less than N$12m (US$1.67m), implying that pension fund operations may be suffering from small scale diseconomies. However, several plans belong to umbrella funds in an attempt to lower operating costs and enhance investment performance.

Pension Fund Characteristics in Selected Asian Countries

One common feature across all flagship funds in Asia is that they have been learning from practices across the world and using the experience to develop their funds. They all have built teams looking at global best practices, developing strategies to target better returns and a better understanding of the importance of diversification. Today, Japan has the largest market share in pension assets after the US, while the Japanese GIP Fund is the largest single pension fund in the world.Table 10 below shows Pension statistics in selected Asian Countries

Table 10: Pension Statistics of Selected Asian Countries

Countries	Population (Millions)	Working (Millions)	Pension (Millions)	GDP PPP (US$ Billions)	GDP Per Capital (US$)	Pension Contributors (% of Working Population)	Assets ($US Billions)	(% of GDP)	Assets per capital ($)	Assets per Employee ($)
China	1,339	808	161.54	7,800	5,826.98	20.00	80	1.03	60	99.05
Japan	127	66	29.77	4,348	34,236.22	45.04	750	17.25	5,906	11,346.44
Singapore	5	3	1.41	240	52,173.91	48.62	105	43.88	22,891	36,310.34

Japan

The National Pension System (in Japan) was introduced in 1959 and is mandatory for all residents between 20 and 59 years of age. Contributions to the National Pension System are deducted from contributions for the employment-related portion of the public pension.

In recent years, the Japanese pension system has undergone various reforms in the public and occupational pension pillars. The current system consists of the flat-rate National Pension System and employment-related pensions for public and private sector employees. These two elements combined, form the public pension pillar. Employers can establish Employee Pension Funds that operate as occupational pensions, but that substitute benefits from the earnings-related part of public pensions and can provide additional benefits. Moreover, employees whose employers do not provide occupational pensions and the self-employed can set up defined contribution accounts at the National Pension Fund Association.

Defined benefit and defined contribution corporate pension plans were introduced in 2001. Voluntary private pension plans can take a variety of forms in Japan. In 2004, public pensions were the subject of major reform. Automatic adjustment of benefit levels was introduced to allow the pension system to adapt flexibly to demographic and economic change. In the realm of occupational pensions, new corporate plans of the defined benefit or defined contribution type were introduced earlier. Nevertheless, it is expected that corporate pension assets will grow only 1% per year until 2015, starting from a basis of EUR 548.9 billion.

National Pension System

The National Pension System was introduced in 1959 and is mandatory for all residents between 20 and 59 years of age. Contributions to the National Pension System are deducted from contributions for the employment-related portion of the public pension. For the self-employed, the contribution amounts to EUR 88 (JPY 13,860) a month. Monthly pension benefits after 40 years of working life and from age 65 onwards, the official retirement age for the National Pension System, amount to EUR 420 (JPY 66,000). Shorter contribution periods result in lower benefits. The system receives substantial subsidies of currently one-third of payments from the Japanese government, a share that will be raised to 50% by 2009.

Employee Pension Insurance

The second part of public pension provision is earnings-related. Private sector employees are covered by Employee Pension Insurance, which was introduced in1944. The contribution rate to Employee Pension Insurance is 14.64% of wages, which is equally split between employers and employees. A part of this contribution is deducted for the National Pension System. Employees aged 60 and over with 25 years of contributions are entitled to benefits from the Employee Pension Insurance scheme. Retirement age will rise to 65 for men by 2025 and by 2030 for women.

In Japan, voluntary occupational pensions come in a variety of forms. Traditionally, the occupational pension system comprised two schemes: Employee Pension Funds and Tax-Qualified Pension Plans.

Government Pension Investment Fund

While both the Employee Pension Insurance and the National Pension System operate on a pay-as-you-go basis, they have accumulated large reserves. Until 2000, these reserves were managed and invested by the Pension Welfare Corporation, which was established in 1961. In 2006, the Government Pension Investment Fund became an independent administrative institution to achieve a higher level of independence from the government, also in terms of its governance structure. Current statistics show this fund – the largest in Japan and even in the world, lost a record 9.667 trillion yen in stock and bond markets in fiscal 2008, the second consecutive year it has come out a loser in its investments. The rate of return for its investments using reserve funds from the employee and national pension programs was minus 10.03%, the worst on record. The GPIF invested 117.6286 trillion yen in fiscal 2008, 92.5397 trillion yen of which went into financial instruments. About 80% of that money was invested in Japanese and overseas bonds and 20% in domestic and foreign stocks. Japanese bonds were the only investment that produced a positive yield, at 1.35%. The rate of investment return for foreign stocks was minus 43.21%.

Occupational Pensions

In Japan, voluntary occupational pensions come in a variety of forms. Traditionally, the occupational pension system comprised two schemes: Employee Pension Funds and Tax-Qualified Pension Plans. As these two were considered neither sustainable nor sufficient for retirement income security, defined contribution and defined benefit plans were introduced in 2001 and 2002. There is also the National Pension Fund Association, which is open to the self-employed and to employees whose employers do not operate a company pension scheme. Besides these schemes, employers also use book reserve arrangements. In addition, the government has created Smaller Enterprise Retirement Allowance Mutual Aid plans specifically for small businesses.

Employee Pension Funds

Employee Pension Funds were introduced in 1944 and cover firms with over 500 employees. The plans, which are defined benefit schemes, have two components. The first part substitutes Employee Pension Insurance. This means that firms may opt out of the public scheme on the condition that Employee Pension Funds provide 50% higher benefits than Employee Pension Insurance (10% for existing

Employer and employee contributions are tax-deductible without limits. Investment income is taxed in principle, but only under rare conditions. However, the tax was frozen until 2009. A portion of benefits is taxed as income; the amount depends on total pension income

Employee Pension Funds). The rebate on the contribution to the Employee Pension Insurance scheme varies. The Ministry of Health, Labour and Welfare determines the exact rebate separately for each plan. The second component offers complementary pension benefits.

Employer and employee contributions are tax-deductible without limits. Investment income is taxed in principle, but only under rare conditions. However, the tax is frozen until 2009. A portion of benefits is taxed as income; the amount depends on total pension income.

Tax-Qualified Pension Plan Scheme

The Tax-Qualified Pension Plan Scheme was established in 1965 and targets smaller companies with 15 or more employees. The plans are funded by employers, and voluntary employee contributions are possible, but rare. Benefits can be paid as an annuity or as a lump sum. The Tax-Qualified Pension Plan Scheme was underfunded and lacked protection of plan participants. Moreover, the rights and responsibilities of employers and plan members were not clearly defined. For these reasons, pension legislation in 2000 determined that no new Tax-Qualified Pension Plan Scheme could be established and that existing ones either had to be converted into the new defined benefit or defined contribution schemes or wound up by 2012. They can be also converted into the Smaller Enterprise Retirement Allowance Mutual Aid scheme. The new corporate schemes were also introduced due to the demand for "pure" company pension schemes that were not related to the public scheme like Employee Pension Funds are.

New Corporate Pension Schemes – Defined Benefit and Defined Contribution

The introduction of the defined contribution scheme in 2001 and the defined benefit scheme in 2002 was the result of the lacking sustainability of existing corporate schemes. Employers were allowed to return the portion of Employee Pension Funds that substituted Employee Pension Insurance and transfer the complementary component to the new corporate schemes. As mentioned, the Tax Qualified Pension Plan Schemes can be converted into the new schemes. The new plans are not mutually exclusive; employers can operate defined benefit and defined contribution plans simultaneously. Similar to all Japanese pension funds, the prudent person principle applies.

Outlook

The challenges of ageing in Japan are considerable. It already has one of the oldest populations in the world, if not the oldest. For this reason, pension reforms aim to achieve greater system sustainability. The automatic balancing mechanism for public pensions was inspired by reforms in Sweden, but adjusted to the Japanese environment. It provides a flexible and self-controlling mechanism to adjust to demographic changes. Similarly, the termination of the Tax- Qualified Pension Plan Schemes within the next five years and the introduction of new corporate DB and DC schemes will lead to higher retirement income security, as these measures are a means of coping with under-funding problems. Over the next decade alone, Japanese pension assets will conservatively grow from US$1,700bn to US$4,100bn, making Japan one of the most significant pools of funded pension assets in the world. Japan's pension markets hold around US$2,000bn in funded assets, making it the second largest market in the world and the biggest pool of assets in Asia. Given current projections for the ageing of the population (current old-age dependency ratio stands at 30 and will worsen to 74 in 2050. During the same period, Japan's population will decrease from 128 million to 102 million. The fertility rate of 1.26 children per woman lies considerably below the rate of 2.1 that is needed to maintain the population. At the same time, Japan's life expectancy is among the highest in the world, the market is set to grow at an unprecedented rate over the next decade, presenting enormous opportunities for investment managers, insurers, bankers and securities companies.

Singapore

Singapore's pension system is one of the oldest and most developed national schemes in Asia. The system rests predominantly on one pillar: the Central Provident Fund (CPF), which provides for most social security functions. Social risk pooling and redistribution does not take place, a comprehensive social security system does not exist and individuals rely exclusively on defined contribution funds accumulating in the individual accounts of the Central Provident Fund. In addition, a non-contributory pay-as-you-go pension scheme, otherwise known as the Government Pension Scheme, exists for some categories of civil servants. There is also a Savings and Employees scheme for certain categories of armed forces personnel. The Supplementary Retirement Scheme, a voluntary private pension scheme without employer involvement that enjoys tax advantages, completes Singapore's pension landscape.

Given a low fertility rate and increasing life expectancy, Singapore belongs to the group of Asian countries hardest hit by demographic change. Singapore is set to become one of the oldest countries in the world, meaning that it faces major demographic challenges in the years ahead.

Given a low fertility rate and increasing life expectancy, Singapore belongs to the group of Asian countries hardest hit by demographic change. Singapore is set to become one of the oldest countries in the world, meaning that it faces major demographic challenges in the years ahead. The old-age dependency ratio will worsen from 12% in 2006 to 59% in 2050. The median age will also soar from 37.5 to 53.7 years by 2050. Given high net immigration rates, the non-resident population in 2006 grew at a rate of 9.7%. Singapore's population is set to continue growing until it peaks in 2035.

Public Pensions: The Central Provident Fund

The Central Provident Fund (CPF) is the statutory authority that administers Singapore's public pension system. Established in 1955 by the British colonial administration, the CPF was intended to provide retirement income security for private-sector employees. With continuous amendments over the past five decades, it has developed into a multi-purpose fund consisting of a variety of different schemes. The major schemes under the CPF other than for retirement purposes include healthcare, home ownership and insurance schemes for family protection. It also comprises an asset enhancement scheme that allocates a portion of accumulated assets to products offered by external financial institutions.

In recent decades, total membership in the fund has nearly tripled. At the end of 2006, it had over 3.1million members with assets amounting to SGD 125.8 billion (US$90.44billion). In relative terms, CPF assets account for 60% of GDP. The balance of the CPF has shown a steady growth rate of 20.6% p.a. since its inception in 1955, which can partially be attributed to increasing contribution rates. The CPF is managed by a tripartite board of government, employee, employer and industry representatives that is appointed by ministers. The CPF is responsible for the custody of funds and for administering the programme. However, it does not have any investment responsibilities. The scheme operates on a fully funded basis and is financed by employer and employee contributions that are credited to three accounts. Employees with monthly earnings above SGD500(US$360) are obliged to contribute to their CPF accounts. A lower limit applies to employers, who must pay CPF contributions for employees whose monthly wages exceed SGD50 (US$36). Monthly contributions are capped at a salary ceiling of SGD4,500 (US$3,235)..

From the age of 55 onwards, CPF members have an additional Retirement Account, which is used to set aside a statutory Minimum Sum. This must be held for the exclusive purpose of retirement.

The Singapore Government Investment Corporation (GIC) is the body responsible for investing the scheme's assets. The vast majority of capital in Ordinary and Special Accounts is held in CPF guaranteed accounts, which must be invested in non-marketable government floating rate bonds, issued primarily to the CPF. At the end of 2006, SGD108billion (US$77.64billion) were invested in the specially issued Singapore Government securities. Assets outside the guaranteed accounts are invested through the CPF Investment Scheme.

CPF Investment Scheme

Members who wish to manage and enhance their CPF savings and returns can do so through the CPF Investment Scheme (CPFIS), which provides CPF members with more choices in investing their savings. All members who are at least 21 years of age are eligible to participate. The CPF Investment Scheme comprises the CPFIS – Ordinary Account and the CPFIS – Special Account, into which members may invest the full balance of their Ordinary and Special Accounts. From April 2008, restrictions applies to the CPF investment scheme; the first SGD 20,000 (US$14,378) from the Ordinary and Special Accounts combined will no longer to be used for the CPF Investment Scheme. However, money already invested will not be affected. This measure will reduce assets available for investment in externally managed products to approximately SGD 42 billion (US$30billion).

Investment Regulations

Under the two schemes, a broad range of financial instruments is available for investments. Full account balances can be invested in fixed deposits, government bonds, annuities and endowment insurance policies, investment-linked insurance products as well as unit trust and Exchange Traded Funds, among others. Some restrictions apply to assets from the Special Account; only selected investment-linked products, unit trusts and ETFs are available for investment.

The asset management of the CPF Investment Scheme is outsourced to external service providers. Since its introduction in 1997, SGD31.6billion (US$22.7billion), or 24.5% of total CPF assets, have been transferred to the CPF Investment Scheme. Of this amount, SGD25.9billion (US$18.62billion) has been invested in the CPF Investment Scheme - Ordinary Account and the remaining SGD5.7billion (US$4.1billion) in the CPF Investment Scheme - Special Account. The bulk of assets lie with insurance policies.

Outlook

With its exclusive reliance on fully funded accounts in the Central Provident Fund, complemented by voluntary retirement savings, Singapore's pension system is quite unique in Asia. It is a mature system that is "demography-safe" because it is fully funded. Given Singapore's likely demographic development, this is very important. The absence of a social security system means that individual responsibility plays a major role.

The main challenge for pension policy is to make sure that not too much capital is withdrawn before retirement, which is often the case. Recent reforms that have increased the minimum amount to be left in the accounts are a step in the right direction, while the plans for a National Longevity Insurance Scheme intend to prevent retirees from running out of money. These reforms have the potential to remedy the weaknesses arising from the multi-purpose character of the Central Provident Fund, which is an otherwise consistent system.

China's pension system has seen far-reaching structural reforms in recent years. At least in urban areas, the system currently in place has three pillars. The public pillar is divided between a pay-as-you-go scheme and funded individual accounts.

China

China's pension system has seen far-reaching structural reforms in recent years. At least in urban areas, the system currently in place has three pillars. The public pillar is divided between a pay-as-you-go scheme and funded individual accounts. Voluntary occupational pensions in the form of Enterprise Annuities form the second pillar, and the third pillar consists of voluntary private savings.

The economic reforms in China that started in the late 1970s had a strong impact on the system that existed at the time, in which state-owned enterprises directly provided pensions to their employees, supported by fiscal subsidies. The pension system was part of the "iron rice bowl", an all-encompassing social security system for employees of state-owned enterprises. In 1997, the Chinese government decided to introduce the basic parameters of a multi-pillar system. Furthermore, the National Social Security Fund (NSSF) was established in 2000 and is meant to cushion the financial impact of demographic developments on the pension system. In 2004, the Enterprise Annuity system was created, which is a voluntary occupational pension system. Recent reforms and reform debates included the decision to fill up the funded accounts in the first pillar, which were often emptied in favour of the pay-as-you-go pillar. Reforms also include outsourcing occupational funds created before the Enterprise Annuities to private companies, extending pension system coverage and initiating several pilot projects.

China is not exempt from negative demographic developments. While the old-age dependency ratio is currently 11, it will reach 39 by 2050. According to the IMF, the working population as a proportion of the total population will peak in 2010 and fall steadily afterwards. The median age is forecasted to rise from 32.5 years in 2005 to 48 years in 2050. Clearly, China's population is ageing quickly, which will have a strong impact within one generation. Pension assets in funded individual accounts currently amount to EUR 53.4 billion. For this part of the pension system, we expect that the annual growth rate will lie between 23.4% and 25.6%. The Enterprise Annuity system, the assets of which currently stand at EUR 8.9 billion, is expected to grow at a rate of 21.2% p.a. until 2015.

The public pension system in China comprises an urban and a rural system. The latter was specifically designed for rural areas and differs considerably from the system in place in urban areas. Pension participation is voluntary and operational matters are left to local governments. Benefits are far less generous compared with the urban pension system, and participation in the rural system is very limited. According to 2003 estimates, 54 million people participated, which accounts for 9% of the total rural population. In 2006, a pilot project was launched in rural Beijing to include more people. It aims to include greater Beijing's rural population of over three million people in the formal pension system.

Following pilot projects in Shanghai and Guangzhou, the urban pension system was officially launched in 1997 with the announcement of a revised pension policy. While pensions were provided by state-owned enterprises in the previous system, a social insurance system took over. The reform started at the provincial level with a view to expanding it to the national level.

This public pension system consists of pillar 1A, a pay-as-you-go portion, and pillar 1B, a funded portion consisting of individual accounts. Pillar 1A is financed exclusively by employer contributions of 20% of wages, whereas pillar 1B is financed by employee contributions of 8%. The pay-as-you-go portion is intended to provide a replacement rate of 35% of the employee's final salary, and the funded portion aims to replace 24%. Contribution rates were changed in 2006. Until then, pillar 1A was financed by a 17% employer contribution. Pillar 1B was financed by employee contributions amounting to 3% of their salaries, and by employers, who made an 8% contribution. The urban pension system has a coverage rate of 50%. Although it is fully funded in principle, pillar 1B has suffered because local governments took capital from these accounts to cover pension deficits in the pay-as-you-go pillar and to pay out benefits. This led to the problem of "empty accounts". To remedy the situation, the Chinese authorities have taken steps to "refill" pillar 1B through fiscal transfers from the local and central government. This measure is part of a pilot pension reform project in the Liaoning province that started in 2001. The project aims to fill empty accounts with funds equivalent to 5% of salaries. 3.75% is financed by the central government, and the remaining 1.25% is financed by the local government. Once the accounts have been filled, the balance increases by 1% of salaries each year until 8% is reached.

Rural migrant workers in urban areas, of which there are approximately 150 million, are not generally covered by the urban pension system. Participation is allowed, but not compulsory. Both employers and rural migrant workers are reluctant to join, because joining entails higher labour costs for employers and migrant workers are more interested in immediate wages than in pensions. What's more, their high mobility across regions impedes participation. In order to encourage employers and employees to participate, local governments have started experimenting in their regions. For example, in some cities the contribution rate to pillars 1A and 1B has been reduced from 28% to 14%, with sole contribution from employers. In others, contribution rates are 8% for employers and 5% for migrant workers.

Enterprise Annuities were established in 2004. Besides the newly established Enterprise Annuity funds, there are also legacy funds, company funds that were established before the Enterprise Annuity legislation was introduced. These legacy funds have assets of EUR 7.3 billion (RMB 75 billion) under management. They are currently managed by local social security agencies, but the government intends to hand the management over to private companies. To make this process easier, the Ministry of Labour and Social Security introduced a temporary guideline in April 2007 on how legacy funds can be transferred to the private sector. Two of the largest local administration centres were reformed; one was turned into an independent insurance company, while the occupational pension business of the second centre was handed over to two Chinese financial institutions. Group pension insurance contracts are another means with which employers can provide their employees with old-age pension funds.

Enterprise Annuities are voluntary occupational plans that are fully-funded defined contribution accounts. They are established as a trust that can take the form of either an internal or external trustee model. The internal trustee, which is known as the pension council in China, is similar to the trust system in the UK.

Enterprise Annuities are voluntary occupational plans that are fully-funded defined contribution accounts. They are established as a trust that can take the form of either an internal or external trustee model. The internal trustee, which is known as the pension council in China, is similar to the trust system in the UK. Financial institutions serve as external trustee, which is referred to as the professional trustee in China. In the case of the pension council model, at least one-third of trustee members should be employee representatives. There is no such requirement for the professional trustee model.

Employer contributions are limited to a twelfth of employee salaries, and the combined employer/employee contribution should not exceed a sixth of total wages. To provide Enterprise Annuities to their employees, enterprises must have participated in the urban pension system, be financially sound and have collective bargaining mechanisms in place. Until now, Enterprise Annuity schemes have primarily been adopted by large, profitable, mostly state-owned enterprises. Total assets amount to EUR 8.9 billion (RMB 91 billion). However, 82% are held in legacy funds. As of mid-2006, 263 enterprises in China had introduced new Enterprise Annuity schemes that covered 940,000 participants. Only licensed financial institutions are allowed to manage and administer EA assets. By the end of 2005, 37 financial institutions had been granted a license after they fulfilled several preconditions. Among these 37 institutions, there were 5 trustees, 11 account administrators, 6 custodian banks and 15 asset managers. The Chinese authorities are expected to grant more licences in late 2007. Regulations stipulate that custodians must be independent from other service providers. In the internal trustee model, the trustee should outsource administration, asset management and custody services to other institutions that are licensed to operate these businesses. In the external trustee model, the trustee can also provide administrative and asset management services, but not custody. In some provinces, local governments have put regulations in place that require asset managers to provide a certain level of returns.

Investment Regulations

Enterprise Annuity regulations foresee quantitative restrictions on investment policy. The most important regulations currently in place stipulate the following:

- At least 20% of assets must be invested in high liquidity money market instruments such as deposits, central bank notes and short-term bond repos

China's pension reforms are ambitious, but necessary given that the preceding system was completely different, but inadequate for the new economic environment. Given the size of the country and the regional differences within it, implementing the new system is a considerable challenge.

- A maximum of 50% of assets can be invested in term deposits, contractual deposits, government bonds, corporate bonds, convertible bonds and securities. At least 20% should be invested in government bonds

- A maximum of 30% of assets can be invested in stocks, investment-linked insurance products and equity funds. Investment in equities should not exceed 20%

With financial market development and more regulatory experience, investment restrictions are likely to be eased in the future. Other regulations affect pension service providers' fees. Fees are capped and differ according to the type of service:

- **Trustees:** Up to 0.2% of the net value of the pension fund
- **Administrator:** Up to EUR 0.5 (RMB 5) per month, to be paid by the plan sponsor
- **Custodian:** Up to 0.2% of the net value of the pension fund
- **Investment manager:** Up to 1.2% of the invested net value of the pension fund

China's pension reforms are ambitious, but necessary given that the preceding system was completely different, but inadequate for the new economic environment. Given the size of the country and the regional differences within it, implementing the new system is a considerable challenge. This may be the main reason why the government has focused on developing a formal pension system in urban areas. With its very low coverage, the rural pension system has not seen far-reaching reforms.

While the system for the urban areas has been legislated, implementation is ongoing. Reforms tackled two of the main issues, namely the refilling of empty accounts in pillar 1B and the introduction of occupational pensions through the Enterprise Annuity system. It should be noted that even between urban areas, there are considerable differences that hinder the implementation of Enterprise Annuities. Regional disparities in tax rules for Enterprise Annuities and the uncertainty regarding their future development are among the biggest obstacles to the system's acceptance and diffusion. At present, large enterprises are the main participants in the system. At this point, small- und medium-sized enterprises seem to be reserved. To realize the goals of the reforms, the basis of the new system needs to be developed, and much of its success will depend on future regulations.

Required Disclosure

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