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MOVING TOWARDS A UNIVERSAL AND SUSTAINABLE PENSION REFORMS IN THE BRICS.

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Abstract: Pension reform has started way back in nineteen eighty one when the first such reform started in Chile. The reasons for such reforms were due to the heightened burden on the government exchequer due to the liability of paying pensions to the ageing population across the globe. This paper highlights the major contributions of pension reforms, its statistical facts about why countries went for reforms with specific reference to BRIC countries and finally comparing as to where India stands and what are the loopholes in the old system in these countries due to which there was bound to be pension sector reforms.

Key Words: Awareness, New pension scheme, Pension, Return, Social security, Satisfaction.

1 INTRODUCTION

Since the 1990s, there has been widespread reform of pension systems throughout the world. This has mainly been prompted by two factors: first, the rapid ageing of populations due to rising life expectancies and declining fertility rates, and secondly the high costs and financial sustainability of public pension systems (Blake [1]). Pension reforms have been a central policy issue in both developed and developing countries quite recently. However, it is challenging and controversial because it involves long-term planning by governments faced with numerous short-term pressures. One development is that defined contribution plans have become very popular, sometimes at the expense of defined benefit pensions. Globally, pension reforms have been seen as the need of the hour. At macro level it has become necessary due to the global demographic pressures. It is assumed that the population of senior citizens (aged 65 and above) would grow disproportionately high with Japan having 28percent, Britain 15percent, USA 12percent and India 13percent of senior citizens by 2025. Indian population in

a span of 25 years (1991-2016) would grow by 49percent whereas population of senior citizens during the same period would grow by 109percent. At micro level it is the incompatible systems (fiscally unstable and misaligned labour markets); future unfunded commitments, fiscal imbalances and burden on exchequer that is projected to become insolvent by mid 21st Century are the main reasons for pension reforms. Typically, a pay as you go (PAYG) scheme cannot cope with aging in adequate manner and therefore the cost of current systems cannot be sustained by future generations. Alternative solutions to such problems can be an increase in the retirement age by 10 years and more as many countries including US and Germany have done in the past to differ pension. Many countries have even doubled the already high contribution rate (currently in the range of 15 to 30 percent) while few nations have made a cut in the replacement rate of 50percent and more. The main objective of this paper is to highlight on the pension scenario of various BRICS countries emphasizing on the existing state of pension and its new state of pension (after reforms) looking into various dimensions as to why and what were the reasons that led to the reforms . BRICS were covered under the sample and the reason of choosing these nations were because of the mere fact that pension burden was rising numerously for these countries. The second reason was the declining fertility and rising life expectancy for which the region will have a much older population in the coming years. Faced with a rapidly aging population, developing BRICS must address two critical challenges: maintaining growth and providing adequate, affordable, sustainable income support for the elderly. The methodology used here is basically secondary data analysis and world bank reports and several journals. This paper basically deals with the pension scenario of various parts of the world with special emphasis on BRICS countries. The first part of the paper deals with the introduction to the pension system emphasizing on the types of reforms and regional breakdown of countries relating to types of reforms. The second part deals with literature overview. A detailed analysis of BRICS countries pension scenario is discussed in the third section. The fourth section deals with the fact sheet of reform initiatives which include the data collation of several countries based on certain survey agencies and section 5 deals with conclusion and discussions.

2. EXISTING STUDIES: AN OVERVIEW

The current global demographic change towards population aging is becoming more apparent. This long term trend of population ageing across both developed and developing countries is largely caused by rising life expectancy and declining fertility rate (Asher [2]). Mainly due to rising longevity and declining fertility rate as well as the unfunded nature of PAYG systems, most governments in both OECD countries and emerging market

economies (EMEs) are facing financial difficulties. Public pension systems' generosity also contributes to the current rising public pension liability, i.e. excessive pension benefits have been granted to retirees presents a projection of public pension liabilities across a range of OECD countries. For some countries, e.g. the US where the population is relatively young, public pension payments as percentage of GDP is projected to increase from 4.1 per cent in 1995 to 6.6 per cent in 2030. But on the other side of the spectrum, e.g. Italy this figure was 10.6 in 1995 and 20.3 in 2030. In addition, a recent EU report reveals that public pension expenditure in EU-15 on average amounted to 10.4percent of GDP as of 2001 but will peak in 2040 at the level of 13.6 per cent (Bhatnagar [3]). Regarding EMEs, except for several Central and Eastern countries the magnitude of public pension liabilities is generally less due to younger population and smaller pension coverage. It is shown that across 35 low and middle income countries, pension spending was at the range of 1 – 5 per cent of GDP for most countries as of 2000 with Uruguay having the highest ratio of 14 per cent (Bodie [4]). The long term demographic transition in EMEs, however, indicates the existence of financial difficulties of unfunded PAYG systems as well. And in some cases, it even leads to the bankruptcy of existing PAYG systems following financial crisis (Davis [5]) e.g. Argentina in 1994. Therefore, financial sustainability of PAYG systems combined with the prospective ageing population across the world, has led many countries, including both OECD countries and EMEs, to re-think their pension systems. Typically, they switch partially or wholly from unfunded systems, e.g. PAYG to funded systems. Pension reform given its complexity, however, can have potential impact on various aspects of the economy. Pension reforms which introduce element of funding can have a positive impact on financial market development because following such pension reforms, the functions of financial markets are improved. The relationship between pension reform and economic development also is well documented. (Edey [6]) finds a contribution of pension reform to Chilean economic growth as well as financial markets but pension reforms contribute to the saving rate is analysed by many researchers. But the results are mixed. Concerning pension reform's impact on other aspects of the economy, e.g. labour supply, there is also hot debate with mixed findings. Regarding pension funds' direct economic implications, e.g. via corporate governance, however, the current literature is relatively sparse, although Davis looks at pension funds plus other institutional investors and economic performance across 17 OECD countries and finds a positive correlation between pension funds' share of equity and several economic variables. One main weakness related to current literature is that most current empirical work focuses on either emerging markets, notably Chile, or developed, e.g. OECD countries.

Developed and developing countries are in their different development stages, therefore pension funds growth might entail differential impacts. As (Field[7]) points out, though the contribution of funding to financial sector growth is not an argument for OECD countries, it is potentially relevant in transition and developing countries. The US social security is run on a PAYG basis, Malaysia offers the provident fund method, i.e. EPF (Employees Provident Fund) where there exists only one single fund , and Chile is the pioneer in running a privatised pension system .One main augment favouring the World Bank model is that pension reform leads to capital markets development. Pension funds and capital markets, especially in EU countries; have been studied extensively by (Gordon [8]).

Pension systems around the world have undergone reforms depending on the urgency to reform and on the countries own financial position to be able to afford for the reform. Various countries have undergone reforms in different years looking into the above factors. The details of the year of reform, pension model and type of reforms are shown in the table below:

Table 1: Pension reforms across Latin America, OECD, Africa, Asian and European countries

Latin America				**OECD**			
	Year of reform	**Pension model**	**Systemic/ Parametric**		**Year of reform**	**Pension model**	**Systemic/ Parametric**
Argentina	1994	WBM	Systemic	Australia	1992	WBM	Systemic
Bolivia	1997	WBM	Systemic	Austria		PAYG	Parametric
Brazil		PAYG	Parametric	Belgium		PAYG	Parametric
Chile	1981	WBM	Systematic	Canada	1997	WBM	Systemic
Colombia	1994	WBM	Systematic	Denmark	1991	WBM	Systemic
Costa Rica	2001	WBM	Systematic	Finland		PAYG	Parametric
Dominican Republic	2003	WBM	Systematic	France		PAYG	Parametric
EI Savaldor	1998	WBM	Systematic	Germany		PAYG	Parametric
Ecuador		PAYG	N.A.	Greece		PAYG	Parametric
Honduras		PAYG	Parametric	Iceland		PAYG	Parametric
Mexico	1995	WBM	Systemic	Ireland		PAYG	Parametric
Panama		PAYG	N.A.	Italy	1995	NDC	Systematic
Paraguay		PAYG	Parametric	Japan		PAYG	Parametric
Peru	1993	WBM	Systemic	Luxembourg		PAYG	N.A.
Uruguay	1996	WBM	Systemic	Netherlands	1960	WBM	Systematic
Venezuela		PAYG	N.A.	New Zealand		PAYG	Parametric
Africa				Norway		PAYG	Parametric
				Portugal		PAYG	N.A.
Algeria		PAYG	N.A.	Spain	1997	WBM	Systematic
Egypt		PAYG	Parametric	Sweden	1998	NDC	Systematic
Morocco		PAYG	N.A.	Switzerland	1985	WBM	Systematic
Nigeria		PAYG	N.A.	UK	1988	WBM	Systematic
South Africa		PAYG	Parametric	US	1981	WBM	Systematic
Tunisia		PAYG	N.A.				
Asia/Pacific				**Central/**			

				Eastern Europe			
16	**Year of reform**	**Pension model**	**Systemic/Parametric**	**11**	**Year of reform**	**Pension model**	**Systemic/Parametric**
China	1997	WBM	Systemic	Bulgaria	2000	WBM	Systemic
Fiji	1966	PPF	N.A.	Czech Republic	1994	WBM	Systemic
Hong Kong	2000	WBM	Systemic	Croatia	2002	WBM	Systemic
India	1952	PPF	Parametric	Hungary	1997	WBM	Systemic
Indonesia	1992	PPF	Parametric	Latvia	1996	NDC	Systemic
Iseral	1995	WBM	Systemic	Poland	1999	NDC	Systemic
Jordon		PAYG	Parametric	Romania	2001	WBM	Systemic
Kazajstan	1998	WBM	Systemic	Russian Federation		PAYG	Parametric
Malaysia	1951	PPF	Parametric	Slovak Republic		PAYG	N.A.
Pakistan	1976	PPF	N.A.	Turkey		PAYG	Parametric
Philippines	1957	PPF	Parametric	Ukraine		PAYG	N.A.
Singapore	1955	PPF	Parametric				
South Korea		PAYG	Parametric				
Sri Lanka	1958	PPF	N.A.				
Thailand	1990	PPF	Parametric				
Vietnam		PAYG	Parametric				

Source: Holzman [9]

Source: Regional survey papers from Vols. 54, 55 and 56, World Bank paper from Schwarz and Demirguc-Kunt (1999). The blank spaces indicates non availability of data.

Note: 1. PAYG, Pay as you go pension systems. PPF, Provident pension fund systems, WBM, World Bank model. Countries are defined as Reform countries towards World Bank model (WBM) if they introduced a new pension system with significant funding element, but not necessarily the specific three pillar model recommended by the World Bank

The various reforms that have taken place to civil service pension plans in OECD countries are sighted below in the table depending on various parameters of reform like increase in pension age, restrictions on early retirement etc.

Table 2: Recent reforms to civil-service pension schemes in OECD countries

Reform	**Countries**
Increase in pension age	Finland, Sweden
Restrictions on early retirement	Germany, Italy, Sweden
Reduced pension generosity or increased	Austria, France, Germany, Greece, Finland,
service requirement	Portugal
Change in updating procedure	Italy, Sweden

Integration of civil-service with general state scheme	Austria, Greece, Spain			
Increase in contribution rates	Austria,	Finland,	Greece,	Italy,
	Netherlands, Portugal, Sweden.			
Introduction of some form of pre-funding	Belgium, Denmark, Finland, Italy, Sweden.			

Source: Accumulated from various research papers.

There has been both systemic and parametric reforms in many countries around the globe. Chile being one of the first countries to have initiated this pension reform, other countries have also joined hands to include the important features for pension for the benefit of its employees.

Table 3: Pension Plans of Countries – A snapshot

Countries	Details of Pension Plans
Austria	A defined-benefit public scheme with an income-tested top-up for low-income pensioners
Belgium	An earnings-related public scheme with a minimum pension and a means-tested safety net.
Canada	A universal, flat-rate pension, known as old-age security, can be topped up with an income-tested benefit, known as the guaranteed income supplement.
Denmark	There is a public basic scheme with an income-tested supplement for low-income pensioners.
Finland	The two-tier pension system consists of a basic state pension, which is pension-income tested, and a range of statutory earnings-related schemes. The schemes for private-sector employees are partially pre- funded while the public-sector schemes are pay-as-you-go financed (with buffer funds to even out future increases in pension contributions).
France	A two-tier system, with an earnings-related public pension and mandatory occupational schemes, based on a points system. The public scheme also has a minimum pension.
Germany	The public pension system has a single tier. It is based on pension points. There is a social-assistance safety net for low-income pensioners.
Greece	An earnings-related public scheme with two components plus a series of minimum pensions/social safety nets.
Iceland	The public pension has three components, including a basic and two income-tested schemes. There are also mandatory occupational pensions with a hybrid (albeit mainly defined-benefit) formula.
Ireland	The public pension is a basic scheme paying a flat rate to all who meet the contribution conditions. There is also a means-tested pension to provide a safety net for the low-income elderly. Voluntary occupational pension schemes have broad coverage: around half of employees.
Italy	The new Italian pension system is based on notional accounts. This is a variant of a traditional pay-as-you-go, public pension system.
Luxembourg	The public pension scheme has two components: a flat-rate part depending on years of coverage and an earnings-related part. There is also a minimum pension.
Netherlands	The Dutch pension system has two main tiers, consisting of a flat-rate public scheme and earnings-related occupational plans.
New Zealand	The public pension is flat rate based on a residency test. Occupational schemes are also common.
Norway	The public pension system in Norway consists of a flat-rate, basic pension and a supplementary, earnings-related pension. The benefits of people with little or no small earnings-related pension are topped up with an income-tested supplement.
Poland	The new public scheme is based on a system of notional accounts.
Portugal	An earnings-related public pension scheme with a means-tested safety net.
Solvak	The earnings-related, public scheme has recently been transformed from a standard defined-benefit
Republic	formula to a point system. There is a minimum annual pension accrual related to the minimum wage.

Spain	The Spanish public pension system consists of a single, earnings-related benefit. There is also a means-tested minimum pension, which replaces the previous special social assistance scheme.
Switzerland	The Swiss pension system has three main parts. The public scheme is earnings-related, but has a progressive formula. There is also a system of mandatory occupational pensions and an income-tested progressive formula. There is also a system of mandatory occupational pensions and an income-tested progressive formula. There is also a system of mandatory occupational pensions and an income-tested
Turkey	An earnings-related public scheme with an income-tested safety net and a flat-rate supplementary pension.
United	It has a blend of defined-benefit and defined contribution formulae and public and private provision.
Kingdom	The public scheme has two tiers (a flat-rate basic pension and an earnings-related additional pension), which are complemented by a large voluntary private pension sector. Most employee contributors .contract out. of the state second tier into private pensions of different sorts. A new income-related benefit (pension credit) has recently been introduced to target extra spending on the poorest pensioners.
United States	The publicly provided pension benefit, known as social security, has a progressive benefit formula. There is also a means-tested top-up payment available for low-income pensioners.

Source: (Hustead [10]) (International Model of Pension Reforms [11])

Pension Panorama, .Retirement Income system in 53 countries., Edward whitehouse, The World Bank, Washington, D.C

3. PENSION SYSTEM OF BRICS – A COMPARATIVE ANALYSIS

Although pension reforms is taking place worldwide and India is a part of this reforms process as well but it should be well kept in mind that when we are trying to put a comparison of pension plans between countries there need to be certain common ground to group the countries like countries based on GDP growth or OECD countries or countries coming under similar year and types of pension plans etc. This decision to do grouping of countries was based under our sample to include the BRICS countries since they fall under the same concept of Emerging Market Economies (EMEs). The details of the pension system of the BRICS countries are detailed below.

Table 4 Comparative analysis of pension systems of BRICS.

	Basic Information	Scheme Information
BRAZIL	• Population over 60 in 2010: 19,840,394 (10percent) • Projected population over 60 in 2050: 78,158,407 (34percent) • Poverty rate of total population: 5percent • Social pension? Yes	Rural Pension • Year introduced: 1963 • Monthly pension benefit: 678 Reais (300 US$), 31.50 percent of average income, 893 percent of international poverty line • Age of eligibility: 60 (men) and 55 (women) • Targeting: Tested on eligibility to pension and individual having worked in agricultural or subsistence production. • percent of population over 60 covered:

		28percent • Total cost: 0.98percent of GDP Continuous Cash Benefit • Year introduced: 1996 • Monthly pension benefit: 678 Reais (300 US$), 33.35 percent of average income, 893 percent of international poverty line • Age of eligiblity: 65 • Targeting: Means-tested • percent of population over 60 covered: 8percent • Total cost: 0.26percent of GDP
RUSSIA	• Population over 60 in 2010: 25,378,125 (18percent) • Projected population over 60 in 2050: 43,828,433 (36percent) • Poverty rate of total population: 2percent • Social pension? Yes	
INDIA	• Population over 60 in 2010: 91,651,857 (8percent) • Projected population over 60 in 2050: 358,219,652 (22percent) • Poverty rate of total population: 42percent • Social pension? Yes	Old age benefit limited to defined benefit and it was restricted to 50% of the basic + DA. the last drawn salary is limited to 50% of the basic.
CHINA	• Population over 60 in 2010: 166,493,384 (12percent) • Projected population over 60 in 2050: 541,792,700 (36percent) • Poverty rate of total population: 16percent • Social pension? Yes	Rural social pension • Year introduced: 2009 • Monthly pension benefit: 55 Yuan (9 US$), 1.27 percent of average income, 34 percent of international poverty line • Age of eligiblity: 60 • percent of population over 60 covered: 48percent • Total cost: 0.11percent of GDP
SOUTH AFRICA	• Population over 60 in 2010: 3,694,968 (7percent) • Projected population over 60 in 2050: 9,286,054 (16percent) • Poverty rate of total population:	Older Persons Grant • Year introduced: 1927/8 first scheme introduced for whites, 1944 scheme extended to whole population, 1996 full parit

	26percent • Social pension? Yes	• Monthly pension benefit: 1350 Rand (125 US$), 22.61 percent of average income, 652 percent of international poverty line • Age of eligibility: 60 • Targeting: Means-tested • percent of population over 60 covered: 65percent • Total cost: 1.15percent of GDP

Source: Pension Reform Primer [23]

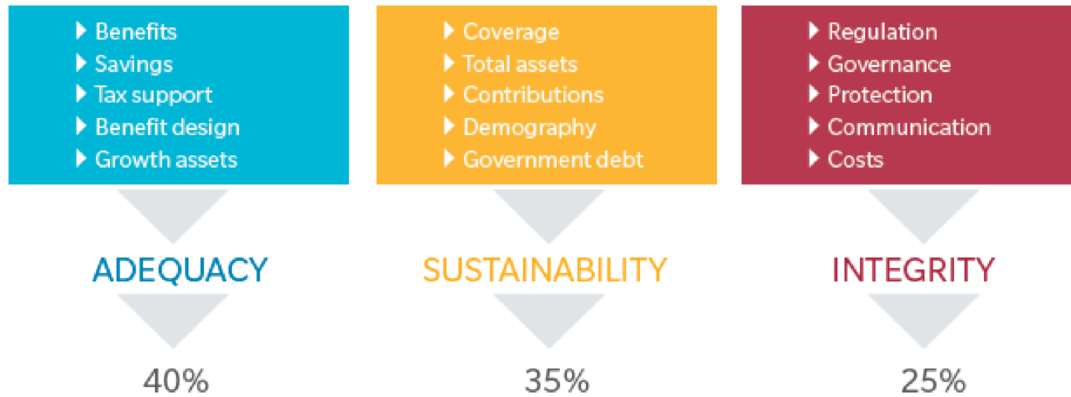
4. RANKING OF COUNTRIES AS PER BEST REFORM OPTIONS – A STUDY UNDERTAKEN BY VARIOUS RATING AGENCIES

In light of ageing populations, low investment returns and increasing government debt in many countries, retirement income systems are coming under greater scrutiny than ever before. Notwithstanding the great diversity of policies towards pensions around the world, it is important that comparisons are made and lessons are learned from the range of approaches adopted.

A. Mercer Consulting Group

Furthermore, any comparison of systems is likely to be controversial as each system has evolved from that country's particular economic, social, cultural, political and historical circumstances. There is no perfect system that can be applied universally around the world. With these characteristics in mind, various parameters of analysis of pension system has been put forward in this section. Depending on the grouping of companies as per their geographical distribution, depending on the economic conditions of the country or may be as per the ranking of companies as per the various rating agencies or dimensions taken into consideration. In light of these opinions the Melbourne Mercer Global Pension Index uses three sub-indices – adequacy, sustainability and integrity – to measure each country's retirement income system against more than 40 indicators. (Robert [24])

Fig 1



The table below shows the ranking of retirement income as per mercer consulting group for 18 countries taken into consideration as per their best pension system. The index value more than 80 shows Denmark to be ranked No.1 in terms of its pension plan.

Table 5: Ranking of countries as per Mercer Consulting Group

Grade	Value	Co	Description
A	>80	Denmark	A first class and robust retirement income system that delivers good benefits is sustainable and has a high level of integrity.
B+	75–80	Netherlands Australia	A system that has a sound structure, with many good features, but has some areas for improvement that differentiates it from an A-grade system.
B	65–75	Sweden, Switzerland Canada	
C+	60–65	UK, Chile	A system that has some good features, but also has major risks and/or shortcomings that should be addressed. Without these improvements, its efficacy and/or long-term sustainability can be questioned.
C	50–60	USA, Poland, Brazil Germany, Singapore France	
D	35–50	China, Korea (South) Japan, India	A system that has some desirable features, but also has major weaknesses and/or omissions that need to be addressed. Without these improvements, its efficacy and sustainability are in doubt.
E	<35	Nil	A poor system that may be in the early stages of development or a non-existent system.

Source: Vittas [25]

This study of retirement income systems in 18 countries has confirmed that there is great diversity between the systems around the world with scores ranging from 42.4 for India to 82.9 for Denmark, with Denmark achieving the first A-grade result in the history of this research.

The following table shows the overall index value for each country, together with the index value for each of the three sub-indices: adequacy, sustainability and integrity. Each index value represents a score between zero and 100

Table 6 Index Values of countries

COUNTRY	Overall index value	Sub-Index Values		
		Adequacy 40percent	Sustainability 35percent	Integrity 25percent
Australia	75.7	73.5	73.0	83.2
Brazil	56.7	71.5	26.9	74.8
Canada	69.2	74.2	56.3	79.3
Chile	63.3	50.1	67.7	78.4
China	45.4	55.7	30.5	49.7
Denmark	82.9	78.1	86.0	86.4
France	54.7	74.3	32.0	55.2
Germany	55.3	65.2	35.9	66.7
India	42.4	37.4	40.7	52.8
Japan	44.4	46.1	28.9	63.3
Korea (South)	44.7	45.1	42.3	47.5
Netherlands	78.9	77.0	73.0	90.3
Poland	58.2	63.6	43.4	70.1
Singapore	54.8	42.0	54.2	76.2
Sweden	73.4	68.0	73.3	82.5
Switzerland	73.3	71.3	67.9	84.1
UK	64.8	68.1	46.5	85.0
USA	59.0	58.3	58.4	61.1
Average	**61.0**	**62.2**	**52.1**	**71.5**

Source: Vittas [26]

A D-grade classification may also occur in the relatively early stages of the development of a particular country's retirement income system, such as in China, Korea and India. As the OECD (2012a) concludes: "there is room for improvement in all countries' retirement- income provision." [2] The challenges that are common to many countries include the need to:

- Increase the state pension age and/or retirement age to reflect increasing life expectancy, both now and into the future, and thereby reduce the level of costs of the publicly financed pension benefits
- Promote higher labour force participation at older ages, which will increase the savings available for retirement and reduce the length of retirement
- Encourage or require higher levels of private saving, both within and beyond the pension system, to reduce the future dependence on the public pension
- Increase the coverage of employees and/or the self-employed in the private pension system, recognising that many individuals will not save for the future without an element of compulsion or automatic enrolment
- Reduce the leakage from the retirement savings system prior to retirement thereby ensuring that the funds saved, often with associated taxation support, are used for the provision of retirement income.

B.Allianz global investors index (2011)

The Pension Sustainability Index* produced by Allianz Global Investors (AllianzGI), one of the world's largest asset management companies, measures and illustrates the pressure on governments across the globe to reform their pension system.

Key findings of this year's Index include:

Greece, India, China and Thailand show the greatest need for pension reform, though for different reasons Australia, in contrast, is ranked as the best prepared followed by Sweden, Denmark, New Zealand and the Netherlands Increased levels of sovereign debt following the financial crisis have exacerbated the need for reform in many countries. According to a new study that charts the relative sustainability of national pension systems in 44 countries around the world, Greece is under the most pressure to reform. Despite pension reforms initiated as a condition of the austerity packages from the International Monetary Fund (IMF) and European Central Bank (ECB), the retirement age in Greece is still low and public replacement rates (the percentage of a worker's pre-retirement income paid out by the pension system upon retirement) are too high. However, the greatest challenge facing the Greek pension system is that its old age dependency ratio – the ratio of elderly people to people of working age – is well above the European average. In this current study, Greece, India, China and Thailand show the greatest need for pension reform, although not due to a common cause. At the heart of Greece's deteriorating ranking are acute sovereign debt, a quite serious aging problem and a pension system which remains generous despite recent reforms. In contrast, in India and China, the issue is that pension coverage remains extremely low and adequate measures have not yet been implemented to improve this. Thailand takes the fourth ranking as it has sporadic pension coverage and an extremely low retirement age (55 years of age)." "At the other end of the table is Australia which has a two-tier system of lean public pensions and highly developed

funded pensions which means it is best prepared with respect to potential burden for public finances, thus, it is under the least pressure to reform. Also in a strong position are Sweden, Denmark, New Zealand and the Netherlands. As with Australia, these three western European countries have comprehensive pension systems based on strong, funded pension provisions."

5. CONCLUSION AND DISCUSSION

The world is aging rapidly. It is anticipated that by 2050, one in four people will be aged above 65 at the world level. Mainly due to rising longevity and declining fertility rate as well as the unfunded nature of Pay-as-you-go (PAYG) systems, most governments in both OECD countries and Emerging market economies (EMEs) are facing financial difficulties, which has led many countries to re-think their pension systems. Typically, they switch partially or wholly from unfunded systems, e.g. PAYG to funded systems, e.g. the three-pillar World Bank model (1994). Given that EMEs are normally younger and social security coverage is not as wide as that in OECD countries, the sooner governments start implementing pension reform fully or partially towards funded systems, the less the transition debt incurred and the earlier the benefits of transition will be realised. In addition, pre-conditions are argued to be needed for the development of financial markets following pension reform (Vittas 2000; Blake 2003). Regarding OECD countries, the fiscal burden of transition is quite heavy compared with that in EMEs. Many OECD governments, e.g. Germany and France, are reluctant to implement structural pension reform towards fully funded systems. Parametric reform or Notional defined contribution (NDC) reform might be acceptable politically in the short run. It is, however, not financially sustainable in the long run, and has the risk of accumulating pension debts in a intolerable level in decades. Therefore, OECD countries should start pension reform at least towards a partially funded system immediately. In other words, a less radical reform, and not necessarily the reform like Chile in 1980s, might be politically reasonable and practically feasible. For example, a basic pillar could be maintained as a public pension scheme, while at least one private and funded pillar should be established. The problem as of the relative size of private/public pillar within the whole multi-pillar systems, however, is a country-by-country issue and should not and could not have a one-fit-all model. The paramount task of reforms has already taken its path and each country which is in urgent need of pension reforms have already been in the process and looking into the economy and financial sustainability of the country the reform model would be in inexistence in the near future for the global economy as a whole.

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