EGYPT'S NEW PENSIONS SYSTEM

Omneia Helmy

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Abstract

The Egyptian government has recently outlined its vision for a new pension system and highlighted its proposed features. The purpose of this paper is to analyze the proposed system and give an ex ante assessment of its expected results in light of international experience. The paper finds out that the *gradual* implementation of the system would help reduce the burden on the treasury, achieve fiscal sustainability, maintain the role of the state in income distribution, enhance economic efficiency, and develop the capital market. However, the paper argues that the proposed system would also transfer the burden of risk management from the government to individuals, although the former is more capable of managing such risks.

To ensure maximum benefits from implementing the proposed system, the paper underscores the importance of aligning the maximum monthly contribution with the average monthly wage in the economy, linking the rate of return on pension funds with the wage growth rate, and putting in place an automatic mechanism to preserve the real value of pensions. As for reducing the risks to individuals, the paper stresses the role of the state in establishing the appropriate rules and regulations governing the investment of funds in the capital market, taking measures to reduce the accompanying administrative costs, and finally ensuring more equitable income distribution.

ملخص

طرحت الحكومة المصرية في الآونة الأخيرة رؤيتها لنظام جديد للمعاشات وحددت الملامح الأساسية له. وتهدف هذه الورقة إلى التعرف على طبيعة هذا النظام المقترح والإطار المؤسسي له ودراسة وتحليل الآثار المتوقعة لتطبيقه وطرح مجموعة من المقترحات التي يمكن أن تساعد على تعظيم الاستفادة منه استنادا إلى الخبرة الدولية. وقد أوضحت الدراسة أن تطبيق نظام المعاشات المقترح "تدريجيا" سوف يساعد على تخفيض الأعباء المالية على الخزانة العامة في الأجل القصير، وتعزيز الاستدامة المالية للنظام في الأجل الطويل، والمحافظة على دور الدولة في إعادة توزيع الدخل، ورفع الكفاءة الاقتصادية، وتطوير سوق رأس المال. وبالرغم من هذه المزايا، إلا أنه ينقل عبء إدارة المخاطر من الحكومة للأفراد في حين أنها أكثر قدرة منهم نسبيا على تحمل أعباء تلك المخاطر.

وطرحت الورقة مجموعة من المقترحات التي من شأنها تعظيم الاستفادة من النظام المقترح ومنها، أهمية تحقيق التناسب بين الحد الأقصى لأجر الاشتراك الشهري ومتوسط الأجر الشهري السائد في الاقتصاد القومي، وربط معدل العائد على أموال المعاشات التي تستثمرها الحكومة بمعدل النمو في الأجور، ووضع آلية تلقائية للمحافظة على القيمة الحقيقية للمعاشات. وللحد من المخاطر التي قد يتحملها الأفراد، أكدت الورقة على أهمية دور الدولة في وضع وتطوير القواعد التنظيمية والرقابية لرفع كفاءة إدارة مخاطر استثمار أموال المعاشات بالأسواق المالية، واتخاذ الإجراءات اللازمة لتخفيض التكلفة الإدارية المرتبطة بها، وتحقيق قدر أكبر من العدالة في توزيع الدخل.

The Egyptian government has been recently engaged in developing a new pension system based on a unified law. The new system aims to provide a decent pension for the elderly; achieve social solidarity for individuals with no pension; and stimulate participant employees to target the pension they would like to get, by changing the methods of defining individual pensions; funding accrued pensions; and managing pension funds.

This new government orientation is due to the current pension system's inability to achieve long-term fiscal sustainability in spite of its advantages. Current system liabilities are estimated at approximately 141 percent of GDP as opposed to 48 percent in reserves. Moreover, the current system can achieve neither economic efficiency nor equitable income distribution (National Democratic Party 2003 and 2006, Al-Gibaly 2006, Central Auditing Organization 2006, Institute of National Planning 2006, Cabinet's Information and Decision Support Center (IDSC) 2005, Helmy 2004, World Bank 2006a.)

However, the notion of introducing a new pension system in Egypt raised concerns for the rights of current system participants as well as protection of pensioners and their eligible survivors. Accordingly, this study aims to look into the new pension system and its institutional framework; study and analyze potential impacts of its implementation; and offer a set of proposals that would help ensure honoring worker rights. It also aims to protect pensioners and their eligible survivors and achieve the interest of the overall national economy in light of relevant international experience as deemed appropriate to the status of the Egyptian economy.

The study comprises three main sections in addition to the conclusion. Section 2 highlights different aspects of the current pension system and identifies deficiencies compromising its performance, which urge the shift to a new pension system. Based on the Egyptian government's vision for the pension system, section 3 outlines the new system's main features and institutional framework, and studies and analyzes the potential impacts of its implementation. Finally, section 4 proposes a set of measures that would help achieve the interest of workers, pensioners and their eligible survivors, as well as the overall national economy.

1. Importance of Shifting to a New Pension System in Egypt

It is useful to highlight different aspects of the current pension system before identifying its performance defects that urge the shift to a new system.

Current System

The current Egyptian pension system is distinguished by wide coverage; being based on four laws (see table 1) that address government employees, public and private business sector workers, private sector employers and the self-employed, casual workers, Sadat eligible pensioners, and Egyptians working abroad. In 2004/05, the system covered a large percentage of the employed (93 percent) as compared to merely 30 percent in the Middle East and North Africa countries, and approximately 7.5 million pensioners and their eligible survivors. Additionally, the current system provides protection against several risks that prevent workers from continuing to work, most importantly: old age, disability, and death (World Bank 2006a and b.)

Table 1. Egypt's social insurance laws: Scope of coverage and covered risks

Law (degree of enforcement)	Scope of coverage	Covered risks
79/1975 (Mandatory)	Government employees and public and private business sector workers	Old-age, disability, death, work injury, and maternity
108/1976 (Mandatory)	Private sector employers and the self-employed	Old-age, disability and death
112/1980 (and Sadat Pension) (Mandatory)	Casual workers*	Old-age, disability, and death
50/1978 (Optional)	Egyptians working abroad	Old-age, disability, and death

*Note*s: (*) Casual labor includes any worker working for others and does not meet the requirements of becoming subject to the Social Insurance Law 79/1975.

Source: Ministry of Social Insurance 2003/2004; 2003a; and 2000/2001.

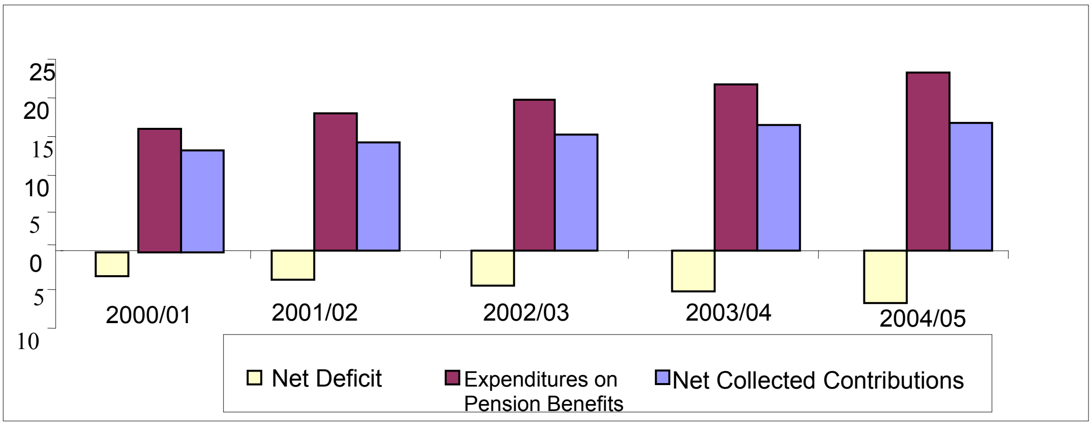
Due to Egypt's relatively young population structure, the current pension system's balance of reserves reached 48 percent of GDP in 2004/2005 (National Democratic Party 2006.) Next to savings with the banking system, pension funds became second most important long-term funding source in the country in 2005. According to the Central Bank of

Egypt's 2004/05 annual report, pension funds represented more than 30 percent of total available saving funds in the Egyptian economy in 2005; compared to savings with the banking system, which amounted to approximately 56 percent of total saving funds.

Current System Performance Defects

Despite its advantages, the current Egyptian pension system has become unable to achieve long-term fiscal sustainability. The deficit of collected contributions to cover expenditures on pension benefits rose from LE 2.8 billion to approximately LE 6.6 billion during (2000/01 – 2004/05,) as illustrated by figure 1. Based on available actuarial studies, this deficit is expected to rise to LE 40 billion in 2020, LE 327 billion in 2050, and LE 2 trillion in 2075[1]. Moreover, the current system's liabilities are estimated at approximately 141 percent of GDP as opposed to 48 percent in reserves (National Democratic Party 2006, Institute of National Planning 2006, Al-Gibaly 2006.)

Figure 1. Deficit of net collected contributions to cover expenditures on pension benefits (2000/01 – 2004/05) (LE billion)



Sources: Ministry of Finance 2006, Al-Gibaly 2006, People's Assembly 2006a,b and c, 2005a and b, 2004, and 2003a and b.

In addition to its inability to achieve long-term fiscal sustainability, the current system lacks economic efficiency and equitable income distribution. As explained below, there are four main factors responsible for the current system's poor performance: high dependency ratios, applied rules, method of funding pension benefits, and the means of managing pension funds.

[1] Under article 8 of Law 79/1975, when current collected contributions are not sufficient to cover accrued pension benefits, the government bears a financial burden to cover such deficit.

First: High Dependency Ratios

Despite Egypt's young population structure, the ratio of pensioners to contributing workers in the pension system is high (39 percent,)[2] compared to ratios prevailing in the Middle East and North Africa (MENA) countries (27 percent,) Latin America (25 percent,) and Asia (11 percent.) The current system's high dependency ratio is attributed to several factors, most importantly: the improvement in life expectancy at retirement, drop in birth rates, [3] increase in unemployment to 10 percent particularly among the 15-40 age group, and the expansion of the informal business sector. Hence, the number of new entrants to the system is dropping, and many workers start their career lives at a late age thus becoming eligible for pension after a few years of service. Accordingly, the proceeds of contributions drop while expenditures on an increasing number of pensioners rise (Ministry of State for Economic Development 2006, Galal 2005, IDSC 2005, International Labor Office 2006; World Bank 2002a; Palacios and Pallares- Miralles 2000; Lindbeck and Persson 2000; Sinn 2000.)

Second: Applied Rules

Certain rules of the current system—such as high contribution rate, low ceiling on monthly covered wage, setting individual pension based on the defined benefit technique, [4] and lenient pension eligibility terms for early retirement—weaken its long-term fiscal sustainability, economic efficiency, as well as its ability to achieve equitable income distribution.

- High contribution rate

Table 2 shows that the contribution rate for government employees and public and private business sector workers is high; i.e. up to 40 percent and 35 percent of a worker's basic and variable salaries respectively.

Although this high contribution rate aims to cover accrued pensions, healthcare, and other risks the individual may face—such as work injuries—it is much higher than that

[2] This means that approximately every three Egyptian workers bear the burden of supporting one retiree.

[3] The population of people over sixty years old represents 9 percent of total Egyptian population. This percentage is expected to rise to 18 percent in 2035. Average life expectancy at birth for the Egyptian citizen rose from 69 years in 2000/01 to 72 years in 2005/06. The growth of birth rates declined from 21.1 (per thousand) in 2000/01 to 19.1 (per thousand) in 2005/06 (Ministry of State for Economic Development 2006.)

[4] According to the defined benefit formula, an individual's pension represents a certain ratio of his/ her average monthly earnings during a certain number of years of service. Pension rises with the increase in the number of years of service (Barents Group 1999; World Bank 1994.)

prevailing in the MENA countries such as Algeria, Libya, Tunisia, Morocco, and Jordan where it ranges from merely 8 to 14 percent.

As high contribution rate discourages compliance, many system participants evade paying their due contributions either for themselves or for their employees; or contribute at much less than their real incomes (Helmy 2004, Ministry of Social Insurance 2003b, National Democratic Party 2003, Abdel Rahman Mohamed 2002.) As a result, outstanding contribution proceeds for the "Social Insurance Fund for Workers at Public and Private Business Sectors" dropped by 17 percent in 2001, compared to the percentage in the previous year. Additionally, total indebtedness of contributors in this "Fund" rose from LE 2.6 billion in June 2001 to over LE 5 billion in June 2005 (Public and Private Business Sector Employees Fund, annual report and closing accounts, different issues, Central Auditing Organization 2001, Ministry of Social Insurance 2000/01.)

Table 2. Contribution shares as a percentage of covered wage

Wage components	**Government employees**		**Public business sector workers**		**Private business sector workers**	
	Basic	Variable	Basic	Variable	Basic	Variable
Employer (E)/ Worker (W)	E/W	E/W	E/W	E/W	E/W	E/W
Old age and disability	15/10	15/10	15/10	15/10	15/10	15/10
Severance compensation	2/3	-	2/3	-	2/3	-
Unemployment insurance	-	-	2/0	2/0	2/0	2/0
Health insurance	3/1	3/1	3/1	3/1	4/1	4/1
Work injuries	1/0	1/0	2/0	2/0	3/0	3/0
Total	21/14	19/11	24/14	22/11	26/14	24/11
Overall total	35	30	38	33	40	35

Sources: National Democratic Party 2006; World Bank 2006a

The drop in collected contributions negatively affects the system's ability to fulfill its financial commitments towards pensioners and their eligible survivors. Furthermore, contributing at much underreported real wages reduces individual pension, and may cause individual standard of living to deteriorate (Gillion 2000.) [5]

- Low ceiling on monthly covered wage

The ceiling on monthly covered wage for a government employee or a public and private business sector worker (Law 79/1975) amounts to LE1,200 (LE700 and LE500 for basic and variable salaries respectively,) which is implicitly considered a regressive tax. This means that a low-wage worker pays a contribution reflecting his/ her full earnings, while a high-wage worker, whose wage is even higher than the ceiling on monthly covered wage, pays a contribution for only one ratio of his/ her income. Thus, the current system imposes higher burdens on low-wage workers, inducing many of these workers to pay contributions for underreported real wages; and fails to collect contributions for a large ratio of higher wages (Helmy 2004, Nagib 2002, James 1997.)

- Setting individual pension based on the defined benefit principle

The pension of a government employee or a public or private business worker is determined based on the defined-benefit principle, through a formula that takes into consideration the number of the worker's years of service (maximum 36 years, and minimum 10 years for basic salary and 20 years for variable salary,) and a certain accrual ratio (1/45) of the worker's average monthly salary throughout the last two years of his/ her service, at a maximum replacement rate of 80 percent (Ministry of Social Insurance 2002, 2000/01, Chemonics International Inc. 1999; Barents Group 1999; International Labor Office 1999.)

Linking individual pension to his/ her average monthly salary during only the last two years preceding retirement causes weak link between individual contributions throughout his/ her entire years of service and the pension he/ she actually gets. It also leads to redistribution in favor of individuals whose salaries increase as their retirement approaches. This may stimulate some individuals to pay contributions for much underreported real wages during most of their years of service, while deliberately exaggerating contributions during the few

[5] It is worth noting that 52 percent of government employees and public and private business sector workers (subject to Law 79/1975) get less than LE100 in monthly pension (Al-Gibaly 2006.)

years preceding retirement in order to get higher pensions that do not match what they actually paid throughout their entire years of service (Helmy 2004.)

- Lenient early retirement provisions

The current pension system entitles 20-years-of-contribution individuals to opt for early retirement voluntarily prior to the normal retirement age (60 years,) while reducing the pension for such individuals dependent on the retiree's age; i.e. the younger the retiree is, the more reduced the pension is. Furthermore, table 3 shows that under the current system, the "legal" reduction percentages for early retirement are much lower than the "actuarial" reduction rates that should be taken into consideration to balance between revenues and expenses of the pension system. Lenient provisions for early pension eligibility stimulate many individuals to opt for early retirement, [6] thus increasing the financial burden of funding accrued pension benefits for early retirees while reducing the number of participant workers. This causes contribution proceeds to fall (Hamd Allah Fahim 2002a, Ministry of Insurance 2000/01, and 2000.)

Table 3. Applied "legal" early retirement reduction rates compared to "actuarial" rates

Age at retirement	**Pension reduction rates**	
	Applied "legal" retirement rates	**"Actuarial" rates**
Less than 45	15	55
45 to less than 50	10	48
50 to less than 55	5	37
55 to less than 59	No reduction	23
59		5

Source: Ministry of Insurance 2000.

[6] The number of early retirement cases increased from 384,000 at the end of June 2004 to 403,000 at the end of June 2005, representing approximately 40 percent of total retirement cases during the same year (Al-Gibaly 2006.)

Third: Method of Funding Pension Benefits

Although the current pension system was originally based on the full funding method, [7] it became "partially" funded;[8] due to its increasing dependence on the government's financial support to pay accrued pension benefits. This is attributed to several reasons, most importantly: lack of an "automatic" mechanism to protect the real value of pension from erosion over time; and the weak link between individual contributions and actual individual pension.

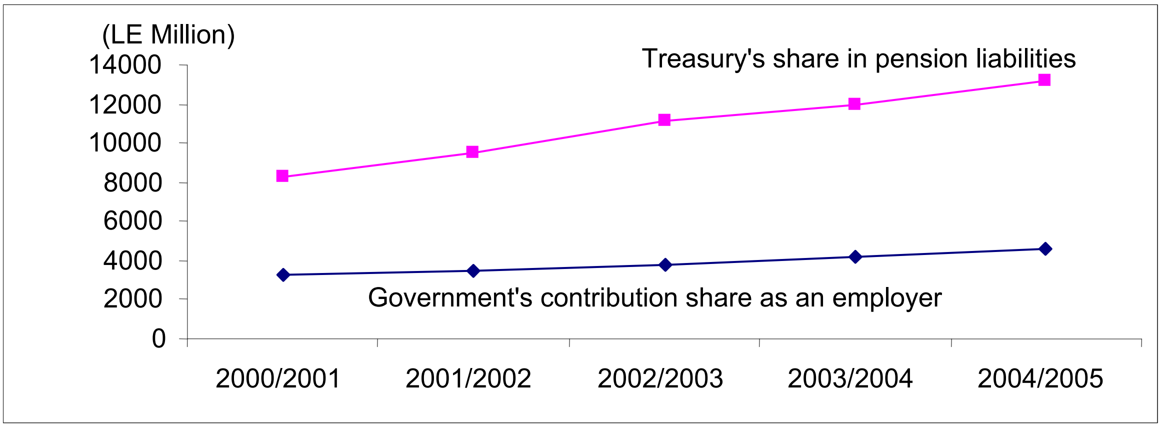
To mitigate the burdens of high cost of living and maintain the real value of pension, the public treasury has been funding annual increments determined by the state since 1987 to 2003/04 (article 148 of Law 79/1975) from public revenues,[9] in addition to the government's contribution share as an employer (21 percent of basic salaries and 19 percent of variable salaries of government employees.) The public treasury's contribution in pension liabilities amounted to approximately LE 13 billion in 2004/05 (8.2 percent of public expenditures.) Figure 2 indicates that government's contribution share as an employer amounted to approximately LE 4.6 billion.

[7] Under the full funding method, accrued pension benefits are funded using contributions saved in the pension fund by workers who are covered by the system over a period of years and had been invested in diversified assets to achieve a real rate of return. Under this system, the current value of saved contributions equals that of accrued pension benefits, in a way that ensures the system's long-term fiscal sustainability without a need for financial support from the government (Helmy 2004, Barr 2002, 2001 and 2000.)

[8] "Partially" funded pension system increasingly depends on government financial support to pay accrued pension benefits. Under this system, the current value of accrued pensions is higher than the current value of saved contributions, which leads to implicit liabilities by the government to system participants.

[9] The government has been passing annual increments for pensioners since 1987 under specific laws. Such increments were funded from public revenues as follows: 20 percent in 1987, 15 percent annually 1988-1991, 20 percent in 1992, 10 percent annually 1993-2005, and 7.5 percent in 2006. Since July 2001, the increase has been at maximum LE60 and minimum LE10.

Figure 2. Development of paid pension liabilities (2000/01 – 2004/05) (LE million)



Sources: Ministry of Finance 2006, 2005, and 2003; People's Assembly 2005b.

It is worth noting that over the past ten years, the public treasury was unable to pay in full the financial support to the pension system in order to cover the annual increments granted to face the cost of living burdens. Accordingly, the public treasury's indebtedness to the pension system inflated, amounting to over LE 35 billion in 2004/05 (Central Auditing Organization 2006.)[10] Hence, the public treasury refrained from funding annual increments to pensioners effective 2004/05, and the pension system is now bearing this burden.

Regarding the weak link between individual contributions and actual individual pension, the contribution of a casual worker (casual workers represent approximately 27 percent of total participants in the current system,) for instance, amounts to only LE 1 monthly, while this worker gets LE 80 in monthly pension. Thus, while contributions collected from six million insured individuals amount to only LE 4 million, their actual pension benefits cost the public treasury LE 1 billion annually (Al-Gibaly 2006, Hamd Allah Fahim 2002b.)

Under this "partially" funded system, saved pension funds (48 percent of GDP in 2004/05) cover merely a ratio of government implicit pension liabilities (141 percent of GDP in the same year.) This "hidden" public debt implies intra-generational as well as intergenerational redistribution (Kane and Palacios 1996.)

[10] Funds owed to the pensions system by the public treasury generate no investment returns as a result of not transferring these funds to the National Investment Bank. Lost returns affect the financial status of the pensions system (Al-Wazeery 2005.)

Fourth: Pension Funds Management

Under the current pension system, the government is responsible for managing pension funds through two insurance funds: the social insurance fund of government employees and the social insurance fund for public and private business sector workers. Articles 5 and 6 of Law 119/1980 stipulate that both funds transfer available pension surplus to the National Investment Bank; and forbid investment of such surplus in any form without the prior consent of the bank's board of directors.

This legal commitment restricts efficient investment of pension funds. As shown in table 4, the investment portfolio of pension funds is not sufficiently diversified. The majority of pension funds (92 percent,) amounting to LE 239.4 billion in 2004/05, is invested with the National Investment Bank (LE 219 billion.) Furthermore, a ratio of pension funds is used in funding budget deficit by purchasing government securities (treasury bills, bonds, debentures.)

Table 4. Key forms of investing pension funds in Egypt and average rate of return thereon, compared to the average rate of return on low-risk investments (2004/05)

Key forms of investing pension Funds	(%) Relative importance	Average rate of return on pension funds (%)
With the National Investment Bank	92	10
Bank deposits	6	8.25-9
Debentures with the public treasury	0.9	5.5
Financial securities	0.9	4-16
Government bonds	0.1	8.75-11
Treasury bills	0.1	9.7-11

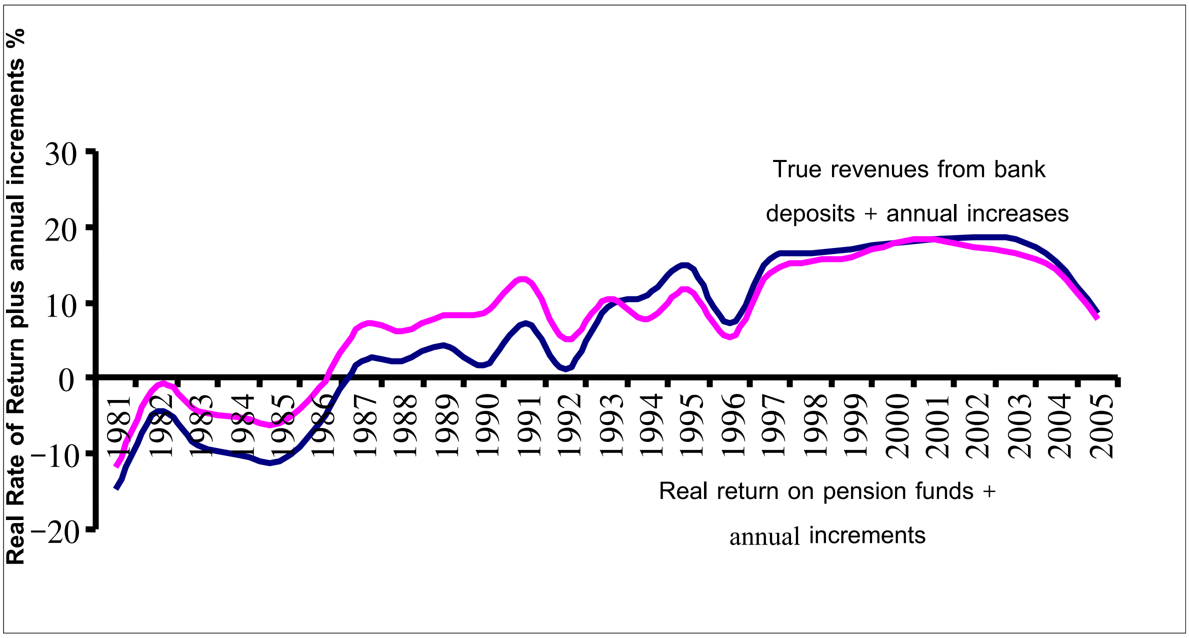
Sources: Based on the Central Auditing Organization data 2006, Central Bank of Egypt annual reports and economic reviews, various issues.

The "real" rate of return on pension funds has been positive and increasing since 1987/88 to present in addition to the government's annual increments for pensioners since

1987. It has also been exceeding the "real" rate of return on bank deposits (including the annual increments for pensioners) since 1992/93, as shown in figure 3. Additionally, the average investment return on pension funds deposited with the National Investment Bank (10 percent) in 2004/05 became close to the average returns on other low-risk investments such as investment certificates and postal saving accounts (10.5 percent) during the same year (Central Auditing Organization 2006; and IDSC 2005.)

However, the pensions system does not get the actually achieved rates of return because the National Investment Bank adds the latter to the stock of pension funds deposited with it for reinvestment. This may not necessarily be for the interest of pensioners, who may prefer to use such returns in increasing their pension. Additionally, these rates of return could substitute for the annual increments funded by the public treasury in order to mitigate the cost of living burdens on pensioners.

Figure 3. "Real" rate of return on pensions in addition to annual increment rates, compared to that on bank deposits (1980/81 – 2004/05)



Sources: Author's calculations based on the Central Bank of Egypt, annual reports, various issues, Al-Gibaly 2006, World Bank 2006a

Pension funds represent approximately 70 percent of financial resources available to the National Investment Bank. The bank lends the public treasury to fund approximately 86 percent of public investments at a 12 percent annual rate of return (People's Assembly 2006a and 2006c.) The public treasury's indebtedness to the National Investment Bank amounted to LE 143.7 billion in 2004/05 (approximately 41 percent of the government's public net domestic debt, which amounted to LE 349.2 billion,) and the relevant debt service amounted to LE 21.7 billion (approximately 52 percent of total government public domestic debt service, which amounted to LE 41.8 billion.) Future generations are expected to bear the heaviest burden of paying such indebtednesses (Central Bank of Egypt, annual reports; various issues, People's Assembly 2005a and 2005b, Ministry of Finance [MOF] 2005, and 2006.

To conclude, in spite of its advantages, the current pension system has become unable to achieve long-term fiscal sustainability, economic efficiency, or equitable income distribution. This emphasizes the importance of shifting to a new pension system in Egypt.

2. New Pensions System and Its potential Impacts

Country experience in different regions of the world stresses the futility of reforming a partially-funded defined-benefit system, such as the current Egyptian system, to achieve long-term fiscal sustainability, economic efficiency, or equitable income distribution. Country experience also emphasizes the necessity of introducing and enforcing a new fully-funded pension system based on defined contributions[11] to achieve the said goals (World Bank 1997; Loewe 2000; Vittas 1997.)

Several countries, including Sweden (1994,) Italy (1995,) Latvia (1996,) Poland (1999,) Kyrgyzstan[12] (1997,) and Mongolia (2000) realized the difficulty involved in the "direct" enforcement of a new system. This is because current worker contributions would be saved to fund current worker pensions. Thus, the government would bear the high cost of

[11] Under the defined contributions scheme, an individual pension depends on the contributions he/ she actually paid regularly throughout his/ her entire years of service. Such contributions plus the compounded annual investment returns thereon would be saved in an account in the individual's name. This scheme ties pension benefits closely to contributions, which stimulates individuals to comply; continue to work for the longest period possible; exert an effort searching for the most efficient technique for investing the contribution funds saved with the pension system.

[12] A country located in Mid Asia next to China. Its capital is Bishkek. Kyrgyzstan obtained independence from the Soviet Union late 1991.

providing the financial resources needed to pay accrued pensions to a large number of current retirees[13]. Therefore, the shift to the new system in these countries occurred gradually.

The strategy of enforcing the system gradually is based on two main pillars: Firstly, maintain the current system for current pensioners and their eligible survivors, as well as current participants with the exception of individuals below a certain cut-off age who wish to "optionally" convert to the new system, and the government is to issue bonds to guarantee their rights upon converting (as in Poland and Latvia.) For new entrants to the labor market, contribution in the new pension system would be "mandatory" (Fox and Palmer 2001; Keller and Heller 2001; Holzmann 2000; Mitchell 1998a,b; Schwarz and Demirguc-Kunt 1999; De Mesa and Bertranou 1997.)

Secondly, combining between pay-as-you-go[14] and fully funded financing of pension benefits, and public and private management through two types of accounts: "Notional" accounts based on publicly managed pay-as-you-go defined contributions, and "funded" accounts based on fully-funded defined contributions managed by private companies under regulations and supervision rules established by the government. Table 5 shows that the majority of contributions is to be recorded in "notional" accounts; while a less ratio is to be credited to "funded" accounts when starting to enforce the new system. The ratio of contributions allocated to "notional" accounts is to be reduced gradually; while increasing that transferred to "funded" accounts.

[13] The financial cost of "direct" enforcement of a defined-contributions fully-funded system exceeded 90 percent of GDP in Chile, 87 percent in Colombia, and 80 percent in Mexico (Mitchell 1998a, b.) These countries provided for this high cost by increasing tax rates, reducing pension value, or using a large ratio of public companies' privatization proceeds.

[14] Under pay-as-you-go financing, the government uses current worker contributions in funding pensions of current retirees; i.e. "notional" accounts are virtual accounts that represent individual rights owed to individuals by the public treasury in the future, without having an actual fund to save pensions therein.

Table 5. Size of "notional" and "funded" accounts measured by contribution rates in countries applying the new system (percent)

Country	Contribution rate			"Notional" account contribution rate	"funded" account contribution rate
	Total	Employer's share	Employee's share		
Sweden	18.5	9.25	9.25	16	2.5
Poland	19.52	N/A	N/A	12.22	7.3
Italy	32.8	23.91	8.89	32.8	0
Latvia*	33	N/A	N/A	20	2
Kyrgyzstan	29	24	5	29	0
Mongolia	19	13.5	5.5	19	0

Notes: N/A = Not Available. * = In Latvia, although the contribution rate is up to 33 percent, only 22 percent of which is currently credited to "notional" and "funded" accounts. The remaining balance is used to pay pension obligations to current retirees. By 2010, the contribution rate in the "funded" account will rise from 2 percent to 20 percent, and that in the "notional" account will drop from 20 percent to merely 10 percent.

Sources: Williamson 2004; Williamson and Williams 2003; Palme 2003; Palmer 2001and 1999; Chlon-Dominczak 2002; Rutkowski 2002; Bender and MacArthur 2000; Fox and Palmer 1999; Brugiavini and Fornero 1998

In light of international experience, the Egyptian government has recently introduced its vision of the new pension system, outlining its main features (National Democratic Party 2006, World Bank 2006a.) The below discussion addresses key dimensions of the new system and its institutional framework. It also represents a study and analysis of the system's potential impacts.

The New System

Contribution in the new pension system will be mandatory for new entrants to the labor market. The current system will be maintained for current pensioners and their eligible survivors, as well as current participants with the exception of individuals under the age of thirty who wish to shift voluntarily to the new system. Defining the new pension system structure and institutional framework can introduce its key dimensions.

New System Structure

The new system comprises a basic pension and two types of personal accounts for each participant individual: a "notional" account and a "funded" account, in addition to developing an optional complementary pension system, as indicated in table 6.

Table 6. Comparing new pension system structure to current system structure

Used method in:	Current system	New system			
		Non-participants	Participants		
		"Basic" pension	"Notional" account	" Funded" account	"Complementary" pension
Calculating individual pension	Defined benefits	15 percent of economy-wide average wage	Defined contributions		
Funding pensions	Partially funded	Public revenues	Pay-as-you-go	Fully funded	
Managing pension funds	Government	Government	Government	Private	

Source: Suggested by the author.

As for the basic pension, for social solidarity purposes, the new system provides a minimum pension for every 65 year-old resident citizen in Egypt that does not receive a pension from the state. The basic pension will be funded from public revenues and perquisite no contribution requirement. It is proposed to be set at 15 percent of economy-wide average wage, [15] and casual labor will be integrated (Law 112/1980.)

As for the two personal accounts, both basic and variable salary contributions will be combined under one gross salary that will become a reference system contribution. Ceiling on monthly covered wage will be increased from LE 1,200 to LE 2,000, and the contribution rate will amount to 17 percent of the gross salary; of which 12 percent will be recorded in the

[15] It is worth noting that the average monthly salary for government employees, public business and public sector employees amounts to approximately LE624 (Central Agency for Organization and Administration 2005.)

"notional" account, while 5 percent will be recorded in the "funded" account. It is worth noting that the contribution shares of both employer and employee as well as the nature of risks against which the new system provides protection are not clear yet, and these are significant elements in evaluating the system.

The individual pension will be defined based on total individual contributions that are to be paid periodically to the "notional" and funded" accounts throughout the individual's entire life of service in addition to an annual accumulated rate of return set by the government for notional accounts and the market rate of return for the cash stocks invested in diversified financial assets during the years of contribution divided by life expectancy.

In preparation for establishing pay-as-you-go "notional" accounts under the new system, the Ministry of Finance (MOF) announced that the government's debt with the National Investment Bank and the latter's obligations towards the current pension system will be settled and removed from the bank's budget. A government bond on the public treasury will be issued for all pension system accruals with the National Investment Bank and the MOF. The relevant rate of return will be directly paid to the system. The pension system's accrued interest on the public treasury amounted to LE 15.7 billion in 2004/05. The MOF is to pay such interest in cash to the system in FY2006/07, which will help achieve approximately LE 8 billion in cash surplus.[16]

Additionally, the new pension system encourages willing citizens to shift voluntarily to the complementary pension funds at the contribution rate deemed appropriate by the individual with regards to his/ her saving capacity, in order to target the pension he/ she would like to get. These funds will be subject to monitoring and supervision by the Egyptian Insurance Supervisory Authority, which is affiliated to the Ministry of Investment.[17] A tax exemption for a specified limit of contributions is expected in order to stimulate individuals to participate in the optional complementary pension system.

[16] Statement by the Minister of Finance to Al-Ahram newspaper on May 6, 2006.

[17] The number of funds registered with the Egyptian Insurance Supervisory Authority increased from 199 funds in 1980 to 615 funds in 2001. The annual financial resources for these funds rose from LE 30 million to LE 3,600 million during the same period.

New System Institutional Framework

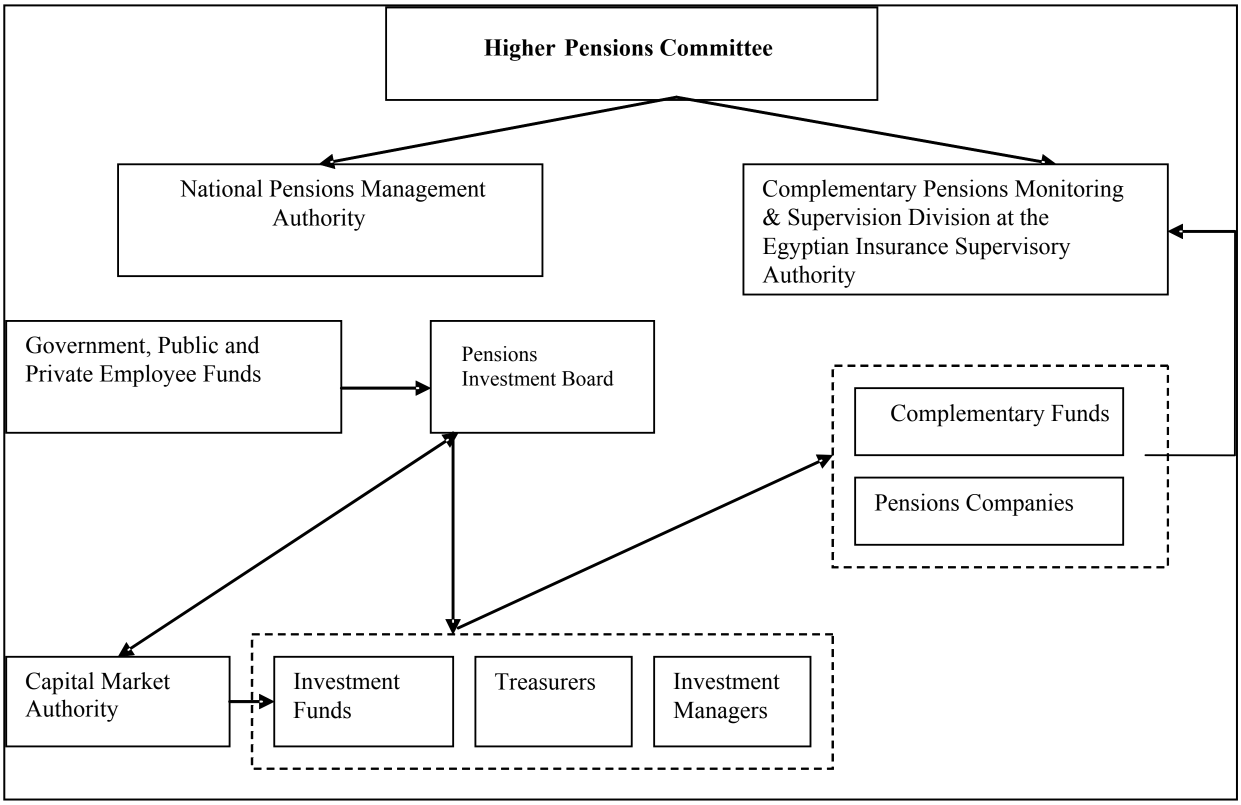
Presidential decree no. 422/2005 assigned the Minister of Finance as the minister with policy jurisdiction of enforcing social insurance legislations. Under this decree, the Minister of Finance chairs the National Social Insurance Authority; and substitutes the Minister of Social Insurance wherever referred to in other laws and legislations. Furthermore, the new pension system's proposed institutional framework includes forming a higher pension committee; renaming the National Social Insurance Authority to the National Pension Management Authority; upgrading the information technology (IT) systems; forming a pensions investment board; and establishing a complementary pensions monitoring and supervision division at the Egyptian Insurance Supervisory Authority.

The *higher pension committee*'s board of directors will comprise the Ministers of Finance, Investment, Social Solidarity, and Labor. It will also include the chairpersons of the Capital Market Authority and the Egyptian Insurance Supervisory Authority. This higher committee will be responsible for promulgating legislations and executive directives; and following on the performance of monitoring authorities for both the public and complementary pension systems.

The National Social Insurance Authority (subject to law 207/1994, amending law 79/1975) will be renamed to the *National Pensions Management Authority;* and will be responsible for managing the new system and the two accounts thereof as well as supervising the performance of the insurance funds of government employees and public and private business sector employees. Furthermore, a new *center will be established for quality assurance of data processing and supervision of data flow*. Both the current and new systems will be linked.

A *pensions investment board* will be formed and assigned the responsibility of developing policies and frameworks through which the new "funded" account investment managers will work. Board members will comprise professionals with expertise in investment management. Finally, an independent division named *"complementary pensions monitoring and supervision division*" will be established at the Ministry of Investment's Egyptian Insurance Supervisory Authority. This division will develop work criteria for the complementary pension funds; monitor compliance by these funds with such criteria to protect the interest of participants against any actuarial deficit. Figure 4 shows the new pension system's institutional framework.

Figure 4. New Pension System's Institutional Framework



Source: National Democratic Party 2006.

Potential Impacts of the New System

Enforcing the new pension system "gradually" will help reduce the financial burdens incurred by the public treasury in the short run; enhance the system's long-term fiscal sustainability; maintain the role of the State in income redistribution; improve economic efficiency; and develop the capital market. However, it transfers the burden of risk management from the government to individuals; as detailed below.

Reduce financial burdens on the public treasury in the short-run

The cost of gradual enforcement through directing the higher ratio of contributions (12 percent) to "notional" accounts, and the smaller/ lower ratio (5 percent) to "funded" accounts, while making participation in the new system mandatory for new job entrants and optional for current system participants below thirty who wish to shift to the new system, is less than that of "direct" enforcement.

The reason is that in case of direct enforcement, current contributions will be saved in current employees' "funded" accounts to fund their pensions. Thus, the government will incur a pretty high cost of paying pension benefits to a large number of current retirees, estimated at approximately 93 percent of GDP; since the current system's financial liabilities amount up to 141 percent of GDP as opposed to 48 percent in reserves.

Upon enforcement of the new system, current collected contributions recorded in "notional" accounts will be transferred to the public treasury in order to pay pension benefits to current pensioners and other related administrative fees. The public treasury is no longer expected to contribute in funding annual pension increments or to bear the cost of borrowing from the National Investment Bank.[18] Thus, the new pension system is expected to help reduce the public treasury's financial burdens by over LE 29.6 billion, compared to FY2003/04, as indicated in table 7.

Table 7. New system's potential financial burdens compared to those of the current system (LE million)

Current system's financial burdens (2003/04)		**New system's potential financial burdens***	
Government's share as an employer	4,141.2	Net pension contributions (excluding government's share as an employer)	11,271.1
Plus		**Minus**	
Public treasury's contribution in funding annual increments for "paid" pensions	12,001.9	Paid pensions	6,197.7
Treasury's debt service to the National Investment Bank	18,147.0	Wages and related expenditures	387.3
Total financial burdens	34,290.1	**Total financial burdens**	4,686.1

Note: Latest available data for 2003/04 is used in the calculations.

Source: Author's calculations based on People's Assembly data 2006a and 2006b.

[18] The 2006/07 budget does not include any contribution by the public treasury in funding annual pension increments or borrowing from the National Bank of Investment. The "interests with the National Bank of Investment" item was removed from the balance sheet while a new item "interests on loans to fund public investments" has been added.

Enhance the system's long-term fiscal sustainability

Fully "funded" accounts enhance the new system's long-term fiscal sustainability. This is because funding accrued pension benefits based on these accounts will be through employees' saved contributions throughout several years that are invested in diversified assets to achieve a real rate of return thereon; hence, the current value of saved contributions becomes exactly equal to that of the current pension benefits.

Furthermore, reducing the contribution rate (from 40 percent of basic salary and 35 percent of variable salary to merely 17 percent of gross salary) helps mitigate the financial burden on new system participants, thus promoting compliance to pay due contributions for real wages; as well as increasing labor demand by the formal sector. This enhances the system's capacity to honor its financial obligations towards pensioners.

Additionally, defining pension benefits by taking into consideration a coefficient reflecting improvement in life expectancy helps limit expenditures on pensions when a longer life for retirees is expected without a need for legislative amendment to calculate individual pension benefits.

Maintain the role of the state in income redistribution

The new system explicitly separates income redistribution programs for social solidarity purposes from the contribution-based pensions. The state maintains a leading role in redistribution where it provides a minimum pension guarantee for individuals with no pension; includes casual labor under the basic pension system; and funds both from public revenues.

It is worth noting that limiting expenditures on the basic pension system requires more accurate targeting of needy pensioners; e.g. it is necessary to exclude certain ineligible categories such as owners of agrarian lands whose property is less than ten feddans, who are classified as casual labor under the current pension system.

Improve economic efficiency

Defining pension benefits based on the defined contributions method establishes a closer link between individual lifetime contributions (throughout his/ her years of service,) and individual pension benefits. Thus, participants will be stimulated to work and save more (Aiyer 1997.) When an individual regards his/ her contributions as savings to get in the future in addition to the market rate of return on funded accounts or that set by the government on "notional" accounts, rather than a tax, such individual will be induced to pay the due contributions based on his/ her real salary; continue to work for the longest period possible in order to get a higher pension; and search for the most efficient means of investing such savings (Barents Group 1999; World Bank 1994.)

Taking life expectancy into account when calculating individual pension means that if an individual opts for early retirement, his/ her pension will be divided over a larger number of years reflecting increased life expectancy after retirement. Hence, pension benefits will be reduced, discouraging the individual from going on early retirement. (World Bank 2002b; Gillion 2000; Heller 1998; James 1997.)

Develop the capital market

Fully "funded" accounts that are based on defined contributions under private management encourage development of the capital market with the long-term savings they provide; and the demand they generate for new financial institutions and instruments, positively affecting the economic development (Barr, 2002, 2001, and 2000; Palacios and Pallares-Miralles, 2000; Sinn, 2000.)

Many studies have proven that, under regulatory and supervisory rules established by the state, private companies are more capable of investing pension savings in "funded" accounts in more diversified assets, thus, maximizing the real rate of return on such savings with the least possible risks. This achieves the interest of participants, pensioners and the overall national economy (Carmichael and Palacios 2003; De Ferranti, Leipziger and Srinivas 2002; Palacios 2002; Iglesias and Palacios 2001.)

"Notional" accounts funded on a pay-as-you-go basis are virtual accounts for bookkeeping purposes rather than capital assets; therefore, they do not directly assist in increasing the national saving rate or developing financial markets and institutions. However, "notional" accounts may help increase savings "indirectly" by reducing public expenditures on pensions and lowering the budget deficit.

Transfer the burden of risk management from the government to individuals

Pension systems around the globe face several risks, most importantly: macroeconomic shocks (such as changes in inflation, unemployment, and productivity,) which impact output and prices; demographic risks (such as increased average life expectancy and higher dependency ratios,) which impact pension liabilities; investment-related risks (fluctuations in the financial securities market and the correlation between the rate of return and the performance of shares and bonds;) administrative risks (fraud and high administrative fees;) and the risks of unstable policies (such as the government's decision to alter the methods used in maintaining the real value of pensions.)

In spite of its foreseen positive impacts, the new pension system transfers the burden of managing the above risks from the government to individuals, although the former is relatively more capable of bearing such burdens. For example, when unemployment rises or wages deteriorate, taxpayers bear the primary burden of funding basic pensions through public revenues. Furthermore, increased average life expectancy "automatically" reduces individual pension benefits. It is difficult to accurately define the burdens to be incurred by individuals because the shares of both employer and employee under the new pension system and the nature of risks that the new system will provide protection against are not clear yet.

As for "funded" accounts, individuals face a major problem of high administrative cost (Zaidi 2006.) In many countries, administrative costs (start-up fees, investment cost, bookkeeping and communication costs, and cost of marketing to attract individuals, via advertising for instance) consume a high ratio of returns on invested pension funds in these funded accounts (Stanko 2003; Sunden 2004 and 2000; Weaver 2005.)

In Chile, for example, in spite of the high average gross real return on pension funds invested in funded accounts (10.29 percent per annum,) the entailed administrative cost and commissions consumed approximately 54 percent of this return from 1982 to1997. Thus, an individual who contributed in 1982 by 10 percent of his/ her income in a "funded" account and retired after the lapse of 23 years in 2005 discovered that the administrative cost consumed over one fifth of his accumulated balance, although his/ her contributions were increasing at a real rate of return of 10.29 percent per annum (Keran and Cheng 2002.)

3. PROPOSALS FOR ENFORCING THE NEW PENSION SYSTEM IN EGYPT

Having identified key potential impacts of the new pension system, a set of proposals are offered in order to ensure employee rights; protect pensioners and their eligible survivors; and achieve the interest of the overall national economy in light of relevant international experience and taking into account Egypt's economic status.

In order to offer appropriate proposals, it is especially important to have a clear vision of the new pension system dimensions, particularly the shares of both employer and employee in the contribution rate and the nature of risks against which the new system provides protection.

Enhancing Citizens' Trust in Government's Ability to Fulfill Long-term Commitments

The government's long-term commitments towards the holders of pay-as-you-go "notional" accounts will be explicitly determined, and therefore, difficult to reduce in the future. However, all relevant information should be accessible to enhance citizens' trust (public trust) in the government's ability to honor such commitments at their retirement, not using pension funds in financing budget deficit by limiting investment in government bonds; and that the rate of return added to their accounts ensures maintaining the real value of pension benefits needed to grant them a decent life.

Legislative Amendments

Some of the existing legislations should be reconsidered and combined in a unified law before enforcing the new pension system. For example, to improve the efficiency of using pension funds requires amendment of law 119/1980, which establishes the National Investment Bank, in order to avoid the overlapping between the Bank and the two insurance funds. It also requires allowing the National Pensions Management Authority and the Investments Management Board to develop and implement an optimum investment policy for pension funds; and achieve the highest possible rate of return, while taking into account the elements of guarantee and liquidity. Furthermore, article 5 of the Comprehensive Insurance Law (El-Sadat Pension) should be cancelled because the number of Sadat pension beneficiaries is increasing annually, although the law targets individuals who had no pension before 1980 and their age was 65 at that year; i.e. ineligible categories are benefiting from the said pension.[19]

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[19] The number of insured individuals under the Social Comprehensive Insurance Law rose from 4.9 million in 1990/91 to approximately 5.2 million in 2004/05.

Prorating the Ceiling on Monthly Covered Wage to the Average Economy-Wide Monthly Wage

Under the new system, the ceiling on monthly covered wage will be increased from LE1,200 to LE2,000. Country experience shows that increasing this ceiling by four as much the average economy-wide monthly wage helps increase collected contributions; particularly from employees with relatively high wages (World Bank 2006a and b.)

Linking the Rate of Return on Contributions Registered in "Notional" Accounts to the Growth Rate of Wages

The government may up-rate "notional" account contributions by the nominal growth of GDP (as in Italy;) growth in wages (as in Sweden, Poland, and Latvia;) or interest rate for short-term government bonds (as in China.) This is to strengthen "notional" accounts' long-term fiscal sustainability; and provide an appropriate real rate of return for individuals, (Inter-American Conference on Social Security 2005.)

Establishing "Automatic" Mechanism to Maintain the Real Value of Pensions

Indexing pension benefits for the arithmetic mean of changes in prices and real wages instead of the annual increments granted by the government under specific laws can maintain the real value of pensions, and allow pensioners to participate in the national economy's increase in productivity (Keran and Cheng 2002; Disney 1998; Hassler and Lindbeck 1998.) For example, pension benefits increase annually in Sweden based on the following formula:

Pension increment rate = inflation rate – ("norm" growth rate of real wages[20] – "actual" growth rate of such wages.)

In Poland, the inflation rate added to a 20 percent increase in real wage rate is taken into account (Chlon-Dominczak, A. 2002.) Thus, individual pension depends on the growth rate of wages "*prior*" to retirement, and on the economic growth rate "*after*" retirement (Fultz and Ruck 2001; Chlon and Rutkowski 1999.)

Developing Regulatory and Supervisory Rules to Manage Investment Risks

Investing pension funds saved in "funded" accounts requires highly advanced infrastructure relevant to capital markets and related institutions; [21] accurate and constantly updated records

[20] Sweden sets the real wage growth rate "norm" at 1.6 percent.

for all employees and pensioners and their eligible survivors; intensive IT usage; and individual financial culture.

Moreover, maximizing the rate of return on pension investments with the least possible risks in favor of employees requires emphasizing the role of the State in establishing a regulatory and legal framework that would ensure efficiency and competitiveness among the private firms, which will perform this task. It also requires defining the entity to be responsible for monitoring and supervising these firms in compliance with the "prudential" regulations. These regulations aim to ensure avoiding excessive risk-taking, reducing conflict of interest and limiting concentration of market power. Monitoring and supervision may also be under "draconian" regulations regarding the structure of pension funds and their areas of investment as well as performance and profitability criteria. Finally, it requires providing mechanisms for speedy and equitable settlement of potential disputes (Carmichael and Palacios, 2003; Palacios, 2002; Iglesias and Palacios, 2001.)

While there is a consensus on the need for developing and complying with "prudential" regulations, there are concerns regarding the cost of enforcing "draconian" regulations. This is because requiring the profitability of pension funds to stay within a band such as the industry average may limit competition and reduce the incentive for risk taking. Furthermore, commitment to confine investment to government securities only achieves low rates of return in most cases and deprives the national economy of a major impetus for capital market development.

Reducing the Administrative Cost of "Funded" Accounts

It is important to reduce the administrative fees so as not to consume a large ratio of the returns on funds invested in "funded" accounts. "Gradually" increasing the ratio of employee contributions devoted for funded accounts can raise the available balances in these accounts, and the administrative fees can be reduced as a result of the economies of scale, thus, benefiting pensioners (World Bank 2001; Norman and Mitchell 2000.) It is worth noting that Chile was able to gradually reduce the administrative fee per unit of assets from 9.4 percent in 1982 to 1.4 percent in 1998 through a set of measures such as contracting to open "funded" accounts with large groups or institutions rather than individual contracting; switching from

[21] Such as companies for evaluation and classification of financial securities; accountancy and law firms; and institutional investors

active investment (such as selecting certain financial stocks and fixed-income assets) to passive investment (such as indexed pension funds) in order to reduce the investment cost; shifting the responsibility for record keeping and communication with individuals from pensions fund managers to the contracted institutions (Soto 2005.)

Bolivia chose to confine the management of pensions to only two funds for five years. Other funds are allowed to enter the market after the lapse of this period. Both funds were selected via international bidding, and their investment activities are subject to a set of regulations and supervision by the entity responsible for monitoring the financial sector. Individuals are to participate in one of these two funds for at least two years and a half, after which they may switch to the other fund if they wish to. The two companies managed to keep the administrative fees on assets below 3 percent, compared to Mexico (9.2 percent,) and Argentina (7.7 percent.)

Achieving More Equitable Income Distribution

In many countries, basic pension represents more than 30 percent of the economy-wide average wage.[22] As for Egypt, the possibility of increasing the basic pension by more than what the new pension system proposes (only 15 percent of the economy-wide average wage) needs to be reconsidered; particularly that salary levels are relatively low.

Individuals forced by certain circumstances to withdraw from the labor market for a certain period (such as unemployment, childcare, or military service,) should earn pension rights financed by the State to their "notional" accounts during that period. Table 8 identifies contributions that the Sate incurs on behalf of individuals under certain circumstances and for limited periods in some selected countries.

[22] It is worth mentioning that in Sweden the basic pension for a 65- year old individual residing in the country for not less than 40 years represents approximately 33 percent of the economy-wide average wage.

Table 8. Contributions incurred by the State on behalf of individuals under certain circumstances and for limited periods in selected countries

Country	Unemployment	Childcare	Disability	Others
Sweden	√	√	√	Pension rights earned during military service and higher education
Poland	√	√	√	X
Kyrgyzstan	X	√	X	X
Latvia	√	√	√	Pension rights earned during military service; and for diplomats' wives
Mongolia	√	X	X	X

Sources: Jorgensen and Van Domelen 1999; Disney, 1999; De Mesa and Bertranou 1997.

4. CONCLUSION

This study argues that despite the current pension system's advantages, it is unable to achieve long-term fiscal sustainability, economic efficiency or equitable income distribution. This urges the shift to a new pension system in Egypt. The study attributes the inefficiency of the current system's performance to four main factors: high dependency ratios, the applied rules, method of funding accrued pension benefits, and the way of managing pensions.

The study attempts to identify the new system's basic features, institutional framework, and potential impacts, in light of international experience and the Egyptian government's recently outlined vision for the pensions system.

Additionally, the study shows that gradually implementing the new pensions system will help reduce the financial burdens incurred by the public treasury in the short run; enhance the system's long-term fiscal sustainability; maintain the role of the State in income redistribution; improve economic efficiency; and develop the capital market. However, the new system transfers the burden of risk management from the government to individuals. Furthermore, the study offers a set of proposals that would help ensure worker rights; protect pensioners and their eligible survivors; and achieve the interest of the overall national economy in light of relevant international experience and taking into Egypt's economic conditions.

The study stresses the necessity of providing accessible information in order to strengthen public trust in the government's ability to honor its long-term commitments at retirement and not to excessively use pensions in funding budget deficit; and that the rate of return added to the savings of individuals maintains the real value of pension benefits to ensure them a decent life.

It proposes legislative amendments to enhance the new system's long-term fiscal sustainability; and improve the efficiency of managing pension funds to achieve the highest possible rate of return, taking into consideration warranty and liquidity elements. Also, the ceiling on monthly covered wage should be prorated to the average economy-wide monthly wage. The rate of return on pension funds invested by the government should be indexed to the growth rate of wages. In addition, an automatic mechanism to maintain the real value of pension benefits needs to be established

For successful enforcement of the new system, the study emphasizes the importance of the role of the state in establishing and developing regulations and supervisory rules to improve the efficiency of risk management for the pension funds invested in the financial markets; taking necessary actions to reduce relevant administrative cost; and achieving highest possible equitable income distribution.

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