KEY ISSUES IN PENSION SYSTEM REFORM IN UKRAINE
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### Glossary of Key Terms

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<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Accumulated pension assets (pension capital)</td>
<td>The total value of assets accumulated in a pension fund.</td>
</tr>
<tr>
<td>Actuarial assumptions</td>
<td>The various estimates (including assumptions related to changes in longevity, wage, inflation, returns on assets) that the actuary makes in formulating the actuarial valuation.</td>
</tr>
<tr>
<td>Annuity</td>
<td>A periodic pension benefit (monthly, quarterly, yearly) paid by a life insurance company based on the signed agreement (contract).</td>
</tr>
<tr>
<td>Asset management</td>
<td>The act of investing the pension fund’s assets following its investment strategy.</td>
</tr>
<tr>
<td>Defined benefit (DB) plan</td>
<td>A type of pension plan in which an employer/sponsor promises a specified pension payment, lump-sum (or combination thereof) on retirement that is predetermined by a formula based on the employee’s earnings history, tenure of service and age, rather than depending directly on individual investment returns.</td>
</tr>
<tr>
<td>Defined contribution (DC) plan</td>
<td>A type of retirement plan in which the employer, employee or both (and sometimes also the government) make contributions on a regular basis. Individual accounts are set up for participants and benefits are based on the amounts credited to these accounts plus any investment earnings on the money in the account.</td>
</tr>
<tr>
<td>Dependency ratio (pension system dependency ratio)</td>
<td>The ratio of those receiving pension benefits to those paying pension insurance contributions. It is used to measure the burden on people employed officially.</td>
</tr>
<tr>
<td>Mandatory individual pension (retirement) plans (savings, accounts)</td>
<td>Personal plans that individuals must join or which are eligible to receive mandatory pension contributions. Individuals may be required to make pension contributions to a pension plan of their choice — normally within a certain range of choices — or to a specific pension plan or pension fund.</td>
</tr>
<tr>
<td>Non-state Pension Fund (NPF)</td>
<td>A legal entity established in accordance with the Law of Ukraine On Non-State Pensions, which has the status of a non-profit organization, operates and carries out activities solely for the purpose of accumulating pension contributions, managing pension assets and paying pension benefits.</td>
</tr>
<tr>
<td>Notional Defined Contribution (NDC) Plans</td>
<td>Notional defined-contribution (NDC) accounts are designed to mimic a real defined contribution plan, where the pension depends on contributions and investment returns. Pension contributions are tracked in NDC accounts which earn a <em>notional rate of return</em>, set by the government (usually set to equal <em>earnings</em> or <em>GDP growth</em>, not the product of investment returns in the markets).</td>
</tr>
<tr>
<td>Occupational pension funds (plans)</td>
<td>Funds (plans) that are established by employers or industry, professional or labor associations (trade unions) (), jointly or separately. They can be mandatory or voluntary for employers. Access to such plans is linked to an employment or professional relationship between the plan member and the entity that establishes the fund or plan (the plan sponsor).</td>
</tr>
<tr>
<td>Pay-as-you-go (PAYG) pension schemes</td>
<td>The state solidarity distribution system provides pension benefits funded by social insurance contributions and other tax revenues collected today (current disbursement method). Sometimes, this is referred to as a ‘contract between the generations’, with today’s tax payers (contributors) paying for today’s pensions on the understanding that when they retire, their pensions will be paid for by the taxpayers of the future.</td>
</tr>
<tr>
<td>Pension assets</td>
<td>All forms of investment whose value is associated with a pension fund or plan.</td>
</tr>
<tr>
<td>Pension fund capital</td>
<td>Total value of assets accumulated in a pension fund (plan).</td>
</tr>
<tr>
<td>Pension fund administrator</td>
<td>A legal entity whose exclusive activity is the administration of pension funds.</td>
</tr>
<tr>
<td>Pension plan</td>
<td>A legally binding contract having an explicit retirement income objective.</td>
</tr>
<tr>
<td>Pillar 0&lt;sup&gt;2&lt;/sup&gt;</td>
<td>A non-contributory universal basic pension from public finances or a means-tested social pension.</td>
</tr>
<tr>
<td>Pillar 1&lt;sup&gt;2&lt;/sup&gt;</td>
<td>A mandated public pension plan (usually on PAYG method) that is publicly managed with contributions linked to earnings.</td>
</tr>
<tr>
<td>Pillar 2&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Mandatory privately managed DB occupational or DC individual retirement savings with accumulated financial assets.</td>
</tr>
</tbody>
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| **Pillar 3** | Voluntary and fully funded DB occupational or DC individual pension plans with financial assets. |
| **Pillar 4** | Additional sources of income (both financial and nonfinancial) outside the formal pension system with support such as family, health care, housing, etc. |
| **Replacement rate** | The ratio of an individual’s pension to his or her pre-retirement earnings, or the ratio of the average pension in the country to average earnings in the economy in a given time period. The *gross replacement rate* shows the level of pensions in retirement relative to earnings when working and is defined as gross pension entitlement divided by gross pre-retirement earnings. The *net replacement rate* is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners. Net replacement rates are usually higher than the gross replacement rates which reflects the higher taxes and contributions that people paid on their earnings when working than they pay on their pensions in retirement. |
| **Retirement projection** | Estimate of future retirement savings and the income they could buy. |
| **Unisex mortality table** | Mortality table where the rate of death is equal for males and females. |
| **Valorization of earnings** | A method to *revalue past earnings* by factors such as average wage growth, price inflation, or economic growth so as to take into account changes in costs and standards of living (consumer costs) between the time that the pension entitlement was earned and when it is drawn. Valorization policy has important implications both for adequacy and sustainability of the pension system. Financial sustainability is improved by a move to a less generous valorization procedure. |
In 1998, USAID began providing technical assistance and support to improve Ukraine’s pension system under its Social Sector Reform Program. USAID’s first activities were to help the Pension Fund of Ukraine (PFU) develop and implement an IT-based system with personified records of pension contributions, insured workers and pensioners. USAID also promoted professional discussions of pension reform options among Ukrainian decision makers and experts.

In 2001, USAID launched the Pension Reform Implementation project. Its objectives included assistance in drafting the new pension legislation (e.g. the Law of Ukraine “On Compulsory State Pension Insurance” No. 1058-IV and the Law of Ukraine “On Non-State Pensions No. 1057-IV, both dated July 9, 2003) and support for institutional and human capacity development for the implementation of a multi-pillar pension system. In 2005, pension reform activities were included as an important component of the Capital Markets Project, with a specific focus on the importance of financial markets development to the success for Pillar 2 and Pillar 3 implementation in Ukraine. Pension reform was also included in two subsequent USAID financial markets reform projects, FINREP I and II (2009 – 2014).

Pension reform is now a component of the USAID Financial Sector Transformation Project (2016 to 2020). The goal is to support the development of a fair, balanced and sustainable pension system. The core activities include developing a concept document to guide efforts to achieve a sustainable pension system, providing policy and legal advice based on international experience and sound analysis of Ukrainian realities, and support for more efficient, responsive interaction with citizens through modernization of the ICT systems of the PFU.

This publication brings together key elements of the research and analysis that USAID Financial Sector Transformation Project experts have carried out since project inception in November 2016. The report discusses the relationship of pension reform to economic growth, labor markets, and the development of capital markets. It highlights the basic principles and considerations that should inform discussions of pension reform in Ukraine. It touches upon several important issues in designing a fair and balanced pension system (replacement rates, contributions, benefits adjustment mechanisms, gender) and discusses fiscal sustainability.

The report takes into consideration the context and realities of Ukraine’s pension environment. Among the key issues it addresses are:

- Ukraine’s unfavorable demographic trends and projections
- Continued politicization of the pension issue and the deleterious impact this has on system credibility
- The large “informal” sector and its negative consequences for pension contributions
- Pension benefits, replacement rates, contributions and financial sustainability
- Ukrainian attitudes towards savings, retirement, and financial institutions
- Ukraine’s experience with private pensions
- Issues in implementing a proposed mandatory accumulation system (Pillar 2)

For those who are interested in exploring these issues in more detail, we recommend that you consult the following USAID Financial Sector Transformation Project publications:


Both of these publications are available on the Project’s Facebook page.

Robert Bond
USAID Financial Sector Transformation Project
INTRODUCTION

The pension reform process in Ukraine has always been highly politicized, leading to inconsistent policies and poor long-term results. The goal of providing a decent standard of living for the elderly at an affordable cost has eluded successive Ukrainian governments. The soaring Pension Fund deficit – the gap between pension obligations to pensioners and revenues -- continues to threaten economic stability and to crowd out necessary investments in health, education, infrastructure, and defense.

The state solidarity pension system collapsed in 1993-94 when hyperinflation reduced the real value of pension benefits by 70 percent. The elderly and people with disabilities quickly became the new poor. Their financial hardship was exacerbated because hyperinflation wiped out most of the value of their savings. The need to reform fundamentally the pension system in order to deal with rising costs and reduced income of retirees had become of vital importance for the government.

Thus, reform of the solidarity public pension system (PAYG) in Ukraine started almost a quarter century ago. It was born out of the recognition that the public pension system is inadequate and unsustainable. Numerous Ukrainian and international donor analytical reports over the last 20 years have come to the same conclusion.

On March 19, 1997, the Cabinet of Ministers established its first Interagency Working Group on Reforming the Pension System that included Government officials, Verkhovna Rada Deputies and Ukrainian experts. On April 13, 1998, the President of Ukraine enacted a decree on the 'Main Directions of Pension Reform in Ukraine' that specified core pension reform objectives, including the implementation of a multi-pillar pension system. On May 4, 1998, another Presidential decree was enacted requiring the Government to implement the personified record-keeping within mandatory state pension insurance (PAYG or Pillar 1) system.

After numerous discussions, consultations, conferences, workshops and international study tours to a dozen countries, the Working Group drafted pension reform legislation. On July 9, 2003, the Verkhovna Rada of Ukraine adopted two major pension reform bills: (1) the Law on Compulsory State Pension Insurance (No. 1058-IV), and (2) the Law on Non-State Pensions (No. 1057-IV).

Since then there have been many major and minor changes to both laws. Benefits were increased on an ad hoc basis on several occasions in the solidarity pension system, and contribution rates were adjusted. The most important parametric changes to the solidarity system were made in July 2011:

- increased retirement age for women from 55 to 60 years (by 6 months each year during 2011-2021);
- tightened eligibility criteria for civil servants (including retirement age increase for men to 62 years);
- increased required insurance service for a full old-age benefit from 25 to 35 years for men and from 20 to 30 years for women; and
- established a retirement benefit cap at 10 minimum subsistence levels for incapacitated citizens.

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4 http://zakon3.rada.gov.ua/laws/show/248-97-%D0%BF.
7 The Law of Ukraine On Measures on Legislative Support of the Pension System Reform, No. 3668-VI.
The primary causes of Ukraine’s pension system crisis is a failure to adapt to long-run trends:

- declining fertility rates,
- increasing life expectancy,
- earlier retirement,
- increased labor mobility.

Additional challenges arise from:

- sluggish economy,
- large informal sector, and
- lack of developed financial markets.

In 2015 legislation was enacted that sharply reduced the unified mandatory social insurance contribution rate from 40% to only 22% (including from 35.2% to 17.3% in 2016 for pension insurance). The idea was that a reduction in the cost of pension insurance to employers would incentivize businesses to leave the shadow economy, improve their compliance with tax laws, and increase contributions to the Pension Fund of Ukraine (PFU). This did not happen. PFU revenues fell dramatically, and as a result, transfers from the state budget reached a staggering ₴143 billion hryvnia in 2016 (6.1% of GDP) and ₴133 billion hryvnia in 2017 (4.5% of GDP).

The main source of retirement income for almost 12 million Ukrainian pensioners is the state solidarity pension system (a.k.a. Pillar 1), financed on a pay-as-you-go (PAYG) basis and administered by the Pension Fund of Ukraine (PFU). Participation in the state pension system is mandatory for all citizens, enterprises (public or private), foreigners, and stateless persons employed under labor agreements or agreements in civil law as well as self-employed persons.

Voluntary defined contribution (DC) non-state pension funds (NPFs) or Pillar 3 were introduced in Ukraine in 2005 to provide supplementary retirement benefits through open, corporate and professional NPFs. As of April 1, 2018, there were 62 NPFs and 22 pension fund administrators registered in Ukraine. The voluntary Pillar 3 system accounted for 843,200 participants with the total accumulated pension capital of ₴2,485 billion hryvnia, or an insignificant average amount per NPF member of ₴2,947 hryvnia ($110).

A mandatory DC individual retirement savings system (a.k.a. Pillar 2) was legislated in 2003 but not introduced. The idea of adding a mandatory retirement savings system to Ukraine’s pension system resurfaced in 2016-17, and a draft law (#6677) was introduced to the Rada. The National Securities and Stock Market Commission (NSSMC) has also developed a concept for Pillar 2 implementation which provides for centralized administration of pension accounts.

In June 2018, the NSSMC drafted a Law of Ukraine "On Mandatory Accumulative Pension System". Currently, the Commission is reviewing proposals and comments to the draft bill from representatives of the market and expert organizations and associations.

In July 2018, more than half (55%) of all pensioners in Ukraine received benefits in an amount less than 2,000 hryvnia, which is barely above the subsistence level, creating significant social and political pressure. A major political challenge is therefore how to balance the financial sustainability of the public pension system with provision of adequate retirement incomes, even at relatively low levels of benefits for the elderly.

The primary causes of Ukraine’s pension system crisis (as well as in many other countries) is a failure to adapt to long-run trends:

- declining fertility rates,
- increasing life expectancy,
- earlier retirement,

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9 As of July 1, 2018, the average pension benefit was 2,562 hryvnia ($93) and the minimum subsistence level for the elderly – 1,435 hryvnia ($52).

10 Male life expectancy at birth increased from 61.2 years in 1995 to 66.7 years in 2016; female life expectancy at birth increased from 72.5 years in 1995 to 76.5 years in 2016 (total/average life expectancy at birth increased from 66.8 years to 71.7 years respectively).
increased labor mobility.

In the case of Ukraine, **additional challenges** to pension system stability arise from:

- a sluggish economy,
- a large informal sector and corresponding lack of pension contributions,
- lack of well-developed financial markets to provide safe and trusted investments for retirement savings, and
- a general attitude that only the state is responsible for providing a secure retirement.

The design and operation of the pension system offers few incentives to contribute. Until the enactment of Law "On Amendments to Certain Legislative Acts of Ukraine on Pensions Increase" in October, 2017 there was practically no linkage between social contributions paid and the size of pensions that workers ultimately received when they retired. Of an estimated 16.1 million employed workers in 2017, according to the Labor Force Survey, only about 10.2 million were making regular social insurance contributions, reflecting the high level of informality\(^\text{11}\) in the labor market. Therefore, **Ukraine's pension system dependency ratio of 91% is among the worst in the world (almost one worker supports one pensioner).**

There are two additional and important socio-economic reasons why the dependency ratio of Ukraine’s solidarity pension system will remain high and vulnerable:

- The spread of unstable, informal, precarious, short-term, and therefore **insecure employment.** A sizeable and growing number of people (especially young workers) either have no job or work without a contract;
- **International labor migration** - Ukrainians massively go to temporary or permanent employment abroad, seeking better opportunities.\(^\text{12}\)

In responding to long-run trends, any improvement to the finances of Ukraine’s pension system must involve one or more of the following:

- **higher contribution rates,**
- **later retirement** with the same benefit,
- **lower benefits** (unlikely to happen),
- policies, such as **increased savings** for retirement.

Ukraine needs a diversified, multi-pillar retirement system that encourages continued work, incentivizes individual savings, and provides credibility that pension promises can and will be honored upon retirement.

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\(^{11}\) According to official Labor Force Survey (LFS), the number of informal sector workers in Ukraine was estimated at 4.5 million in 2017.

\(^{12}\) According to the National Bank of Ukraine, remittances from labor migrants amounted $9.3 billion in 2017, including $3.8 billion from Poland. In Poland alone the estimated number of Ukrainian labor migrants is 1.3-1.5 million, and according to Polish politicians and government officials this number can be up to 2 million. The National Bank of Poland predicts that by the end of 2020, 200-300 thousand Ukrainians will come to the Polish labor market annually. Cheap Ukrainian labor has helped contain inflation and boost economic growth in Poland. Polish GDP growth in 2017 was 4.6 percent and without foreign workers such a high figure would not be possible. See more in: Poland fears economic hit as EU opens door to Ukrainians, DW, 30.01.2018 [http://www.dw.com/en/poland-feares-economic-hit-as-eu-opens-door-to-ukrainians/a-42367764]; [http://www.eurointegration.com.ua/news/2018/03/13/7078715/]; [http://www.bbc.com/ukrainian/news-38717996].
PRINCIPLES AND FACTORS FOR PENSION REFORM CONSIDERATION

Social security schemes need to be reviewed regularly and adjusted to changing demographic and economic conditions. Generally, to maintain trust and credibility in the system, changes should be gradual and on the margin. These adjustments are generally of a non-structural or parametric nature, i.e. modifications to the overall system to make them less burdensome and more financially sound in the long term. Examples include raising retirement age, increasing the number of years of contribution for benefit entitlement, lowering pension benefits replacement rates, modifying the adjustment of benefit formulae, etc.

Pension reforms are difficult and unpopular, but they should be based on underlying principles. The underlying architecture of pension systems may be considered in relation to several fundamental issues. These include:

- The basic form of the benefit promise - whether the systems is defined benefit (DB), defined contribution (DC) or a hybrid arrangement such as notional defined contribution (NDC) systems;
- How benefits are financed – whether this is done on a full or partial pay-as-you-go (PAYG) basis or if they are fully funded (or capitalized) in advance;
- Whether the system is managed by public (government) or private institutions.

Regardless of the design of the system, pension benefits are effectively claims against future economic output. Ukraine’s economy has not grown at all over the last decade, and by an annual average of just 2% over the last two decades. Employment has declined further in recent years, including due to the migration of younger and skilled workers. In addition to underlying structural political and macroeconomic problems, the military conflict in Eastern Ukraine since 2014 and the banking crisis of 2014-2016 resulted in sharp economic contractions (GDP dropped by 9.8% in 2015 and 6.5% in 2014).

Annex 4 provides a comparative analysis of major demographic and macroeconomic data in Ukraine and Poland. This convincingly demonstrates the relationship between economic growth and wages and pensions in the two countries. Poland averaged +3.7% GDP growth per year, while Ukraine declined by an average 1.8% per year during 1991-2017.

It is, therefore, essential that the pension system benefit from and contribute to economic development to be able to provide the promised benefits. To achieve this, a reform should support labor and capital market efficiency, reinforce measures to improve savings mobilization and facilitate financial market development.

2.1. THE ILO POSITION ON SOCIAL SECURITY PENSION SYSTEMS

The International Labor Organization (ILO) has played a major role in developing international social security and other labor standards. Social security has been a core element of the ILO’s mandate, virtually since its creation in 1919 (Preamble to the ILO Constitution). This approach was

confirmed and strengthened by the ILO Declaration of Philadelphia (1944) and the United Nations Universal Declaration of Human Rights (1948). Basic social security principles were included progressively in major ILO Conventions and Recommendations adopted before and after 1944, and simultaneously in the European Code of Social Security adopted by the Council of Europe in 1964, including its Protocol, as revised on November 6, 1990.

The importance of security for all workers was the central theme of the 2000 World Labour Report.\(^{15}\) It stressed the importance of: (1) the adequacy of benefit levels to provide income security in old age; (2) the extension of coverage with the objective of making it universal; and (3) the role of good governance for the proper functioning of all pension systems. In 2000, the ILO also presented its well-articulated position on multi-tiered pension systems\(^{16}\).

### ILO International Labor Standards Relevant for Pensions

- C102 - Social Security (Minimum Standards) Convention, 1952 (No. 102), 55 ratifications\(^{17}\)
- C118 - Equality of Treatment (Social Security) Convention, 1962 (No. 118), 38 ratifications
- C128 - Invalidity, Old-age and Survivors' Benefits Convention, 1967 (No. 128), 16 ratifications; and its associated Recommendation 131
- C157 - Maintenance of Social Security Rights Convention, 1982 (No. 157), 4 ratifications; and its associated Recommendation 167
- R202 - Social Protection Floors Recommendation, 2012 (No. 202)
- R204 - Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204)

In June 2012, over 150 countries endorsed a new Social Protection Floors Recommendation No. 202 (R202) at the International Labour Conference in Geneva. R202 became the first international instrument to offer guidance to countries to close social security gaps and progressively achieve universal protection through:

(a) the establishment and maintenance of social protection floors\(^{18}\) as a fundamental element of their national social security systems; and

(b) the implementation of comprehensive social security systems that progressively ensure higher levels of social security to as many people as possible.

The following are the key principles of the ILO, which embody the good governance and design of a social security pensions:

(a) **universal coverage** (ideally pension schemes should cover the whole population);

(b) **compulsory affiliation** (to ensure the widest possible coverage and pooling of risk and to support disadvantaged and those on low incomes, the burden must be equitably spread over a large population of better-off);

(c) social **solidarity** (solidarity between generations, between the healthy and the sick, between those with well-paying jobs or high incomes and those without employment or with very low incomes, between men and women applies first and foremost to financing techniques; collective financing across all members of society is indispensable to ensure that funds are available to support the incomes of the most vulnerable);

(d) **adequacy** of benefits (protection against poverty and consumption smoothing for earnings-related pension benefits);

(e) **individual equity** (a clear link should be maintained between pension amounts and contributions paid throughout the employment history);

(f) **indexation** (adjustment of retirement income to take account of inflation and, at least to some extent, of the general rise in living standards);

(g) **equality of treatment** (prohibition of discrimination of any kind) and responsiveness to special needs;


\(^{17}\) Ukraine ratified ILO Convention No. 102 on June 6, 2016 (entered into force on June 6, 2017).

\(^{18}\) R202 defines social protection floor as a system that guarantees income security and access to basic services across the life course aimed at preventing or alleviating poverty, vulnerability and social exclusion.
(h) **gender equality** (pension schemes should be designed not just to guarantee equality of treatment between men and women, but also to take into account different gender roles in society);
(i) **diversity** of methods and approaches, including of financing mechanisms (public or private, funded or unfunded, DB or DC, contributory or non-contributory schemes);
(j) financial (actuarial) **sustainability** with due regard to social justice and equity (pension schemes mature very slowly, over many decades);
(k) social **dialogue and democratic management** as a direct consequence of financing through social contributions; and
(l) **state responsibility and supervision** (governments have a responsibility not only to ensure that workers are covered by a solid, compulsory pension system and the delivery of benefits are fulfilled, but also to provide an enabling environment for the development of additional voluntary retirement provision).

### 2.2. THE WORLD BANK APPROACH TO PENSION REFORM

According to the World Bank\(^\text{19}\), the primary criteria for ‘successful pension reform’ are the ability to maintain **adequacy, affordability, sustainability, equity, predictability and robustness** while achieving welfare-improving outcomes in a manner appropriate to the current and expected environment of the individual country:

- **An adequate** system is one that provides benefits sufficient to prevent old-age poverty to the full breadth of the population in addition to providing a reliable means to smooth lifetime consumption for the vast majority of the population;
- **An affordable** system is one that is within the financing capacity of individuals and the society and does not unduly displace other social or economic imperatives or have untenable fiscal consequences;
- **A sustainable** system is one that is financially sound and can be maintained over a foreseeable horizon under a broad set of reasonable assumptions;
- **An equitable** system is one that provides the income redistribution from the lifetime rich to the lifetime poor consistent with the societal preferences in a way that does not tax the rest of society external to the system; and one that provides the same benefit for the same contribution.
- **A predictable** benefit is provided by a system where: (i) the benefit formula is specified by law and not subject to the discretion of policymakers or administrators, (ii) the defined benefit formula is designed to insulate the individual from inflation and wage adjustments prior to retirement or the defined contribution investment policy can insulate the beneficiary from material effects on benefits from asset price adjustments prior to retirement; and (iii) the benefit is automatically indexed during retirement so as to shield the worker from effects of price adjustments; and
- **A robust** system is one that has the capacity to withstand major shocks, including those coming from economic, demographic and political volatility.

### 2.3. PENSION SYSTEMS TAXONOMY

Traditionally, such international organizations as the ILO and the EU use pension classification that is based on the ‘three-pillar’ system and reflects the **role of different players** in retirement income provision:

1. **Public Pillar 1**: Compulsory publicly managed pension schemes that seek to replace some portion of income and protect against old-age poverty. Pillar 1 contains a strong redistributive element and can be universal, means-tested or contributory based (PAYG).
2. **Occupational Pillar 2**: Mandatory DB or DC occupational retirement schemes that seek to provide consumption smoothing.
3. **Personal Pillar 3**: Voluntary and fully funded individual retirement savings with financial assets. Pillar 3 makes possible some individualization of the replacement rates.

Within each pillar there are many types of pensions, sometimes referred to as ‘tiers’, but the three categories exhaust all possibilities with respect to providers of pensions. There are only three sources of pensions: government schemes, employer-sponsored occupational schemes, and individual retirement savings and annuities.

In the World Bank seminal report *Averting the Old Age Crisis* 20 (1994), an alternative classification of a three-pillar pension system was proposed from the perspective of income sources at retirement rather than from the perspective of pension providers described above:

<table>
<thead>
<tr>
<th>Pillar 1</th>
<th>Non-contributory, publicly managed (tax-financed) <em>basic</em> public pension.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillar 2</td>
<td>Contributory, <em>mandatory</em> privately managed individual retirement savings.</td>
</tr>
<tr>
<td>Pillar 3</td>
<td>Contributory, <em>voluntary</em> privately managed fully funded personal savings.</td>
</tr>
</tbody>
</table>

Subsequently, another World Bank ‘milestone’ publication, “Old-Age Income Support in the 21st Century” 14 (2005) extended this three-pillar system to the following five-pillar approach:

<table>
<thead>
<tr>
<th>Pillar 0</th>
<th>Public non-contributory basic (<em>social</em>) pension from public finances that may be universal or means-tested, aimed to provide a minimal level of protection.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillar 1</td>
<td>Compulsory pension scheme that is publicly managed with contributions linked to earnings that seeks to replace some portion of income.</td>
</tr>
<tr>
<td>Pillar 2</td>
<td>Mandatory and fully funded individual retirement savings system.</td>
</tr>
<tr>
<td>Pillar 3</td>
<td>Voluntary and fully funded retirement savings that can take many forms (individual, employer sponsored, defined benefit, defined contribution) but are essentially flexible and discretionary in nature.</td>
</tr>
<tr>
<td>Pillar 4</td>
<td>Additional sources of income (both financial and nonfinancial) outside the formal pension system with support such as family, health care, housing, etc.</td>
</tr>
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</table>

In effect, the original Pillar 1 was split into a “zero pillar” and a mandatory “first pillar”. A new “fourth pillar” was added and includes access to informal support and formal social programs. The addition of the new Pillar 4 recognizes the important role that these non-pension assets play in providing financial support to individuals or households during retirement.

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20 *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth, World Bank, 1994.*
As well as being fiscally sustainable, pension systems also have to be socially and politically sustainable. In light of demographic and financial changes that have occurred in the last few decades, the issue of retirement benefit adequacy has never been more important. Policymakers and researchers are concerned about the well-being of future retirees and the strains that an aging population will place on social safety net programs.

When assessing income adequacy, consideration is given typically to average replacement rates for average earnings, defined as the ratio of the amount of pension to pre-retirement earnings. The adequacy of a benefit for an individual will depend on that person’s own situation – their income level, other resources, work history and contribution record as well as family situation.

It is commonly said that 60-70% (from all pillars/tiers), or roughly two-thirds, of one’s final salary income is assumed as enough or adequate as a pension replacement rate. This, however, may be an incorrect measure. An absolute amount or percentage replacement rate does not cover the full scope of needs different retirees may have, and to use it as a measurement for adequacy therefore becomes problematic. Replacement rates can only be treated in terms of adequacy if they are understood in relative terms.

In a presentation by the Government of Ukraine on the three pillars of the pension system at the meeting of the National Council for Reforms on June 16, 2017, the expected or planned replacement rate of earnings was 45%, including:

- 30% - from the solidarity pension system (Pillar 1);
- 10% - from the mandatory accumulation pension system (Pillar 2, not implemented yet);
- 5% - from the voluntary non-state pension funds (Pillar 3).

In 2017, the average gross pension replacement rate in Ukraine was 32% of the insured wage (according to PFU records), and only 28% of the average wage in the economy (according to State Statistics Committee data). The average net replacement rates were 40% and 35% accordingly (see Annex 1).

In comparison, in 2015 in 35 OECD countries the replacement rate in compulsory pension schemes (1st and 2nd pillars) was 62.9% for men and 62.2% for women, and in 28 EU countries - 70.6% and 70.4% respectively (Table 6, Annex 2). For low-paid workers with earnings (income) at 50% of the average wage, the replacement rate was 73.2% for men and 72.7% for women in the OECD countries, and 79.7% and 79.6% accordingly in 28 EU countries. For all 35 OECD countries, the average net pension replacement rate from mandatory (public and private) and voluntary pension schemes was 69.1% in 2015. Overall, net replacement rates are on average 10 percentage-points higher than the corresponding gross replacement rate figures.

With Ukraine’s current dependency ratio of the solidarity system at 0.91 (11.711 million pensioners per 12.871 million insured workers and self-employed in 2017), and the amount of insurance
premium paid to the PFU at 18.84% (85.6215% of 22% of the unified social contribution - USC), the average replacement rate barely exceeds 20% (18.84% / 0.91 = 20.7%), which is obviously very small. In 2015, when the pension contribution to the Pension Fund of Ukraine (PFU) was 35.2%, the deficit-free replacement rate was 37.0%.

Under this scenario, and assuming that an actuarially justified USC increase is politically unlikely, future Ukrainian pensioners will have no alternative but to work longer, spend less and save more.
coverage challenge in today’s labor market

Labor market distortions, low social contribution density in the solidarity pension system and irregular contributions payment in the accumulation system have the same negative effect on the future retirement benefits in both systems.

Labor market distortions can be minimized if contributions bear a full actuarial relationship to benefits, which is the case with individual retirement accounts schemes. It is also the case with the solidarity system which pays benefits that are strictly proportional to a person’s contributions record. A strong relation between contributions and benefits can have particular benefits in countries with a large gray economy, where incentives might substitute for enforcement in assisting compliance. In contrast, badly-designed schemes, whether private or public, can cause labor-market distortions.

According to the PFU \(^{21}\), less than half of new Ukrainian pensioners in 2016 had an insurance record of 35 years, which is now a requirement for a full old-age benefit for men (30 years for women). The distribution of the length of service among new pensioners in 2016 was the following:

- 24% - from 15 to 25 years;
- 34% - from 26 to 35 years;
- 42% - over 35 years of experience.

Across different countries, the pattern for non-contributing is strikingly similar. Social security programs are least attractive for the average worker in the following categories:

- informal sector workers (an important part of the Ukrainian labor force)
- young and unskilled workers
- workers with low wages and from rural areas (the latter are primarily informal sector workers)
- part-time workers earning wages below the minimum wage
- some workers employed in small firms
- married women
- workers living in large households with many active members
- workers without other members of the household contributing to social security scheme(s)

For many Ukrainian workers, no social security contributions are being paid by their employers, or contributions are paid only at the minimal level (based on the minimum wage), even if workers are paid more. **USC reduction from 40% to 22% in 2016 did not result in a significant legalization of employment or a reduction in contribution arrears to the Pension Fund of Ukraine.**

According to the State Statistics Service of Ukraine, more than 4 million people, or one in every four workers, have informal jobs in the shadow economy.

In addition, Ukrainians massively migrate abroad for temporary or permanent work because they do not see prospects at home. In Poland alone the estimated number of Ukrainian labor migrants was 1.3-1.5 million in 2016-17, and according to Polish politicians and government officials this number can be up to 2 million. The National Bank of Poland predicts that by the end of 2020, 200-300 thousand Ukrainians will come to the Polish labor market annually.

\(^{21}\) http://reforms.in.ua/sites/default/files/prezentaciya_pensiyny_fond.pdf
There are several areas where application of the same pension rules to men and women results in different outcomes. Women remain in a disadvantaged position as long as pension benefits are tied to formal labor market employment, where pervasive gender inequalities persist.

Gender equality in pensions is a complex matter, which involves two types of discrimination:
- **direct** (e.g., gender stereotypes in family relationships; differences in treatment between economically active married women and men; differences in benefits in systems of individual savings accounts can be based on actuarial calculations made separately for men and women, taking into account different life expectancy, which indicates a lack of solidarity or no pooling of risk), and
- **indirect** (because of the nature of women’s occupational activity, marital status or family situation).

Formal pension schemes usually require long qualifying periods (with paid contributions), and do not cover categories outside paid formal employment (such as homeworkers and domestic workers), part-time, occasional and precarious jobs, in which women are heavily represented. Workers in the informal economy — where so many women spend much of their working life — are also unprotected. Interrupted careers, shorter contribution records and lower pay (e.g. in such sectors as agriculture, education or healthcare) adversely affect women’s entitlements under employment-related pension schemes.

Women suffer from a **pay gap** in that their average earnings from work are below those of men. They also suffer from a **pension gap**. While women live longer than men, this gap arises in part because women earn less, fewer women participate in paid work and they work fewer hours per week or fewer years in their career. Breaks women may take in a career (e.g. for childcare) can also have a disproportionate effect on pension rights if minimum age for scheme membership is high and vesting or waiting period is long.

According to numerous sources (State Statistics Service of Ukraine, employment surveys, public polling data), the pay gap between men and women in Ukraine varies from 25% to 40% for the same positions. The **pay gap is especially distinct on higher level positions, where women earn substantially less than men**. In general, according to the State Statistics Service data, in 2017, the average monthly salary of women in the economy was 79% of that of men (UAH6,321 and UAH8021, respectively).

In many systems, the retirement age for men is higher than that for women, allowing the former to accrue superior benefits. Indeed a move to equalize retirement ages in Ukraine in 2021 (i.e. increasing female retirement age to 60) will lead to an improvement in benefit levels for women (with the proviso that female employees continue in employment and contribute).

Unpaid domestic and caring work often prevents women from taking up or remaining in full-time employment. It affects the type of work they can undertake and the number of years they spend in employment covered by pension and other mandatory social security programs.

**Universal schemes** — national health services, child benefits, universal old-age benefits — can greatly enhance gender equality by providing women the same rights as men, regardless of employment and earnings history.
PENSION BENEFITS ADJUSTMENT MECHANISMS

Ad hoc modifications of the benefits side are generally detrimental to the scheme's public credibility, which is in effect its most important asset. Politicians often react by taking 'consolidation measures' which entail such measures as cutting benefit levels implicitly (simply by not indexing benefits regularly/annually) or explicitly by tightening eligibility conditions. In order to avoid such manipulations as much as possible, schemes need three regulatory provisions:

1. A clear definition of the actuarial equilibrium combined with a rule on when the contribution has to be increased, if necessary.
2. An actuarially justified benefit formula that can be maintained at the stationary state for a long-term period.
3. A set of demographic and financial stabilizers stipulating clearly how the financial consequences of adverse demographic and financial developments are to be allocated between contributors and beneficiaries.

Concerns over sustainability have led many developed OECD countries to introduce a variety of mechanisms that try to stabilize automatically expenditures of public pension systems. These focus typically on the automatic adjustment of pension benefits, retirement age and – more rarely – contribution rates with demographic variables or some measures of the pension system's financial wealth. However, the situation with the cuts in benefits (imposed by automatic adjustment mechanisms) may lead to substantial erosion of pension benefits as long as the population ages. Similarly, there are limits to increases in contribution rates and pension ages.

Any automatic adjustment mechanism might in fact pose problems in terms of adequacy of future benefits and the capacity of systems to protect the living standards of pensioners. What will be the destiny of systems based on such rules? There is no doubt that there will be pressure to intervene to correct the systemic failures of such system and even remove automatic stabilizers if they are perceived to be functioning badly.

Nevertheless, automatic adjustment mechanisms that are designed and implemented for changes to occur gradually, that are transparent and that share the possible burden fairly across generations might help individuals to act pro-actively by adapting their savings and labor supply behaviors.

Under the amended Law of Ukraine “On Compulsory State Pension Insurance” No. 1058-IV (Article 42), to ensure regular indexation of pensions, an annual recalculation of previously accrued benefits will be made through the valorization of past wage (income) base in Ukraine from which insurance contributions were paid and taken into account for the calculation of pensions. The average wage (income) base will be annually valorized by:

- 50% of the consumer price index for the previous year, and
- 50% of the increase of the average salary for the previous 3 years, preceding the year in which the increase (indexation) is made.

In the absence of the PFU deficit for funding pensions in the solidarity pension system, the annual increase of the average contributory wage in Ukraine used for benefits calculation may be raised, but should not exceed 100% of the average contributory wage (income) growth for three calendar years that preceded the year in which the increase (recalculation) is made.

However, proposed implicit pension benefits indexation (through recalculation of a wage base) will not become automatic and transparent, but determined “within the Pension Fund budget at the discretion of the Cabinet of Ministers of Ukraine”.

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Pension systems involve long-term social and financial commitments: promises to pay benefits during retirement to today’s workers that span many decades. The capacity to meet these promises is one of the most important issues in the design of pension systems.

Financial sustainability is an important issue for most types of pension arrangements. This is most obvious in cases where benefits are financed on a pay-as-you-go (PAYG) basis, where current social insurance contributions pay for current benefits. In a solidarity pension system, the financial problems are reflected in *solvency* difficulties:

\[
\text{USCR} \, (\%) = D_R \times R_R \, (\%)
\]

where:

- \( \text{USCR} \) – unified (social) contribution rate as a percentage of insured payroll;
- \( D_R \) – demographic ratio or pension system dependency ratio (ratio of pensioners to insured contributors);
- \( R_R \) – pension benefit replacement rate (average pension as a percentage of average insured wage).

By contrast, with pure fully-funded DC individual retirement accounts schemes – where benefits depend solely on the value of contributions and on the investment return earned – *financial sustainability is not an issue*, although adequacy may be. *At any point in time, the value of future pension liabilities is exactly the same as the value of the accumulated assets in the funds.*

In December 2017, the USAID Financial Sector Transformation Project updated its actuarial projections of the solidarity Pillar 1 pension system based on the Ukrainian pension system model developed by experts from the Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine, with assistance from World Bank experts. The key modelling results presented comparative data on two solidarity pension systems – before and after Pillar 1 amendments in October 2017 (Annex 3).

Without the parametric reform in October 2017, Ukraine’s pension system would have remained fiscally unsustainable (with the PFU deficit reaching -2.1% of GDP by 2050) while simultaneously providing inadequate benefits (with projected gross pension benefit replacement rate at about 20% of the average wage).

The reform of 2017 will provide a stable pension replacement rate of 23-25% (on average for all pensioners), while keeping pension expenditures at approximately 11-13% of GDP. However, the USC revenues will amount to only 8-8.4% of GDP and the rest of pension expenditures (3-5% of GDP) will need to be funded from the state budget. Proposed Government measures and tightened eligibility criteria are important steps towards financial sustainability and social justice, but they do not solve the fundamental pension system problems in the medium- and the long-term.

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23 In March 2017, the USAID Financial Sector Transformation Project provided initial actuarial projections of the solidarity Pillar 1 pension system for various pension reform scenarios to achieve a balanced and sustainable pension system that will provide adequate benefits in the future.
The most logical approach to financial sustainability involves some form of long-term (actuarial) equilibrium. This means that the pension system is in balance over time: the stream of expected future contributions and other revenues over a suitably long horizon (50-75 years) is enough to pay for projected benefits over that period.

The question is therefore about the instruments that can be used to correct situations of ‘actuarial’ disequilibrium. The following four types of instruments might be employed:

- adjustments in contribution rates which increases the revenues of the scheme;
- adjustments in the benefit level (or the value) benefits levels through:
  - lowering benefits (reducing real/purchasing and the relative value of pensions, including by non-indexing);
  - changing the accrual rate (the most direct way of affecting benefits);
  - valorization of past earnings;
  - indexation of pensions in payment.
- adjustments in pension eligibility ages which cut spending by reducing the duration over which pensions are paid (or reducing the influx of new pensioners); or
- drawing on a reserve fund (does not exist in Ukraine).

There are some variations on these themes. For example, contribution revenues might be increased by extending the base (raising the ceiling, levying contributions on unearned income, etc.) rather than increasing the rate explicitly. Benefit levels can be cut in different ways: across-the-board (proportionally for all) or in a targeted way (with smaller cuts for low-wage workers than for high-wage workers). Effective benefit cuts can be imposed on existing retirees by changing the policy for indexing pensions in payment (or by ‘freezing’ indexation). Benefit cuts on current workers can be restricted only to new pension accruals or applied to the accrued rights.

Three of the adjustments listed above (contribution rates, benefits and retirement ages) can be introduced on an ad-hoc, discretionary basis or they can be part of an automatic adjustment mechanism. For example, to have a fiscally balanced solidarity system today, the actuarially justified pension insurance contribution rate to PFU should be no less than 30% of wages.

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24 Governments could use other means to finance the deficit between pension liabilities and contributions (e.g. by shifting the costs onto future generations, or by other government revenues such as direct or indirect taxes). But these are not properly speaking “automatic stabilizers” of public pension system.
THE GOVERNMENT PENSION SYSTEM MODERNIZATION - 2017

On May 17, 2017, the Prime Minister of Ukraine Volodymyr Groysman at a Government meeting presented the main provisions of the draft law of Ukraine “On Amendments to Certain Legislative Acts of Ukraine on Pensions Increase” that, after numerous public debates, was adopted by the Verkhovna Rada on October 3, 2017. A total of 288 lawmakers voted for the adoption of draft bill No. 2148-VIII, with at least 226 votes required to make the decision. The modified solidarity Pillar 1 pension system provides for the retention of statutory retirement age and the establishment of “fair payments”, depending on the length of insured service, the abolition of taxation of pensions and the “gradual elimination of the Pension Fund deficit in the medium term”.

The following are major changes adopted by the Verkhovna Rada in October 2017:

1. From October 1, 2017, benefits were increased for 5.6 million pensioners due to the modernization of the salary base. Overall, the pension increase affected 9 million beneficiaries due to the increase of the minimum subsistence level and the corresponding increase of the minimum pension. Under the new rules, pension benefits are related to:
   - *individual salary* of the insured person;
   - *average salary in the economy* for the previous 3 years;
   - duration of *covered employment* (with pension insurance contributions paid);
   - *accrual rate (the cost of one year of covered employment)*, which decreases from 2018 from 1.35% to 1% in the old-age benefit formula.

2. To reduce the demographic burden on the solidarity Pillar 1 system, a flexible retirement age ‘corridor’ of 60/63/65 years was implemented alongside a gradual increase in the minimum eligibility period for receipt of pension by 10 years:
   - Retirement age 60 years will remain for persons with 25 years of covered employment in 2018, which will be increased annually by 12 months up to 35 years in 2028;
   - Retirement age 63 years for persons who will have 15 - 25 years of covered employment in 2018, which will be increased annually by 12 months to reach 25 - 35 years in 2028;
   - Retirement age 65 years for those who will have 15 years of covered employment, but will not have 16 years of insured period (requirement to retire at age 63) in 2019, and accordingly, in 2028, they will have between 15 and 25 years of covered employment.
   - Persons with less than 15 years of covered employment will be eligible only for the state social assistance benefit after 65 years.

The new retirement age ‘corridor’ will result in a reduction of the number of pensioners by 400,000 to 800,000, and an increase in the number of contributors by 500,000-600,000.

3. From 2021, regular implicit annual indexation of pension benefits will be introduced by *valorization of the average salary base* from which insurance premiums were paid (taking into account 50% growth of the average salary for the previous 3 years and 50% of the consumer price index for the previous year). Ad hoc modifications of the benefits side (all too common in Ukraine) are generally detrimental to the scheme’s *public credibility*.

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26 Of the total 346 People’s Deputies (PDs) present at the session on 03.10.2017, 288 PDs voted for the bill, 8 – against, 23 – abstained, and 27 did not vote.
27 The following rules will apply for the transition period in 2017-2019: the use in 2017 of the average wage for 2014-2016 in the amount of 3,764.4 hryvnia and the accrual rate for one year of service at 1.35%; the use in 2018 of the average wage for 2016-2017 and the accrual rate for one year of service at 1%.
4. The amount of the minimum old-age pension benefit is set:
   - at the level of the subsistence minimum for persons who have a pension insurance record of 30 years (women) and 35 years (men);
   - at the level of 40% of the minimum wage, but not less than the subsistence minimum, starting from January 1, 2018, for persons who have a 30/35 years of insurance record after reaching 65 years.
   - In the absence of full length of insured service, the pension benefit will be reduced in proportion to the actual length of service.

5. From January 1, 2018, privileged pension regimes for specific categories of employees, mainly civil servants (except for armed forces/military personnel) are terminated.

6. The eligibility age to receive state social assistance for persons who are not entitled to an old-age benefit was gradually increased up to 65 years (i.e., if the minimum social insurance eligibility period is less than 15 years).

7. The cap on the amount of pensions for working pensioners was canceled (85% of the pension, but not less than 150% of the subsistence minimum for the disabled).

8. The maximum amount of the salary base for the calculation of USC for social insurance will be 15 times the minimum wage starting from 2018 (15 x ₴3,723 = ₴55,845), instead of 25 subsistence minimum for non-able-bodied persons (25 x ₴1,684 = ₴42,100 in May-November and 25 x ₴1,762 = ₴44,050 in December 2017).

9. The introduction of a mandatory Pillar 2 accumulation pension system is scheduled for January 2019. However, there is little chance that this system will be introduced as scheduled since no implementing legislation has been adopted.

In summary, the October 2017 **parametric pension reform** provided a more transparent and fairer pension calculation formula that more closely ties pension benefits to pension contributions and improves the adequacy of pensions. It established a flexible retirement age, linked to the length of the formal career of an individual and incentivized participation in the system. The parametric changes will also generate some fiscal savings for the Pension Fund and Ukraine's overall state budget. Thus, Pillar 1 parametric changes made in October 2017 were important but not sufficient steps in terms of financial sustainability and social justice. There are still too few contributors (workers) in Ukraine to fully cover the cost of pensions with USC standing at 22% of payroll, which leads to significant permanent deficit in the solidarity system.
A mandatory individual retirement savings system (Pillar 2) can help solve long-term demographic problems and improve retirement income adequacy, if properly designed, managed and regulated. However, it is important to note that such systems expose participants to significant financial market risks.

Under favorable conditions, private pension systems can stimulate national savings, investment, and promote economic growth. The main factors affecting benefit amount in the accumulation system are:

1. Wage (income) level, from which contributions are being paid during worker’s participation in Pillar 2 system, and its growth rates during the accumulation stage.
2. Contribution rate (as a percentage of earnings).
3. Contribution density (regularity) during economically active life (from 20 to 65 years). For adequate pension savings from the accumulation system, the duration of participation should be at least 30 years for workers with a level of earnings below the national average, and at least 20-25 years for workers with a level of earnings above the average.
4. Pension funds investment return during the periods of accumulation and decumulation (that is, about 50 to 60 years).
5. The amount of fees and charges for administration and investment management of pension funds (payable as a percentage of pension assets or contributions).
6. Inflation during accumulation and decumulation periods.
7. Life expectancy after reaching retirement age (affects the cost of a lifetime annuity).

International experience shows that the planning of an individual retirement accounts system raises several fundamental questions regarding its design and implementation:

- Who should administer the collection of contributions: government (pension insurance institution) or non-state pension funds (NPFs)?
- Is it necessary to create a single centralized National Accumulation Fund, or should NPFs play a leading role in the mandatory (decentralized) accumulation system?
- What is Ukraine’s experience with NPFs in terms of investment returns, costs, fees, contribution rates and payment density, investment strategies and regulation?
- What is the best way to control and limit administrative costs and investment management fees?
- What limits on investment strategies should exist for pension fund assets?
- What should be the policy regarding passive participants who hesitate to make an individual choice of an NPF or an investment strategy?
- What financial investments are appropriate for investing pension assets, and, in particular, should there be limits set for overseas investment of pension assets?
- Is it reasonable to have an investment return guarantee for pension funds?
- Is it necessary to guarantee a minimal pension benefit (annuity) from the mandatory accumulation system?

According to international practice, defined contribution (DC) Pillar 2 systems can exhibit a wide set of design options including active or passive investment management, choice parameters for selecting investments and investment managers, and options for the withdrawal phase. DC plans

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establish a clear linkage between contributions, investment performance and benefits; support enforceable property rights; and may be supportive of financial market development.

However, when compared to defined benefit (DB) PAYG plans they can subject participants to financial and agency risks as a result of private asset management, the risk of high transaction and administrative costs, and longevity risks unless they require mandatory annuitisation. These factors, taken together, result in the state playing an important role in old age pensions. Thus, it is important to remember that:

1. Not all pension risks are tradable

Macroeconomic risks, such as business cycles, inflation, and major crises, and other systemic risks, such as increasing life expectancy and standards of living, are not fully tradable risks. In the absence of suitable instruments to hedge these contingencies, individuals may be exposed to more risk than desirable.

2. Individual choices are often imperfect

An extensive literature reports behavioral anomalies with regard to provisions for old age. People do not voluntarily save enough for old age and their risks are insufficiently insured. People diversify savings and investments incorrectly. They follow “herd behavior” or do what their employer recommends – even if this is often not optimal.

Individuals can shift consumption forward over time (into retirement age) by contributing to a pension scheme, but societies as a whole cannot. The goods and services that will be consumed by the next generation of pensioners cannot be stockpiled – they have to be produced by the next generation of workers. Thus, mandatory pension schemes – both government PAYG and fully or partially funded – are only tools that define how future consumption is shared between active and inactive groups in a society. The relative size of these generations will always influence their share in total national consumption. All financing systems are thus vulnerable to economic and demographic trends.

The most important justification to have a mandatory accumulation system is if projected investment return will exceed the wage growth throughout the working life or accumulation stage (e.g. during 30-40 years). This is exactly what happened in Chile where the impressive real investment return, which amounted to an average of 8% per year during 1981 – 2016, significantly exceeded the real hourly wage growth of only 2.1% per year for 36 years. During this period the real GDP grew by an average of 4.1% annually.

Figure 1. Ukraine: Real Wage, Hypothetical Investment Return and GDP Growth in 2005-2017
The opposite is true if workers’ earnings increase more rapidly than investment returns. The result will be DC benefits that are low or inadequate relative to their earnings just before retirement. Figure 1 shows what could have happened if a mandatory accumulation system had been introduced and implemented in Ukraine in 2005, i.e. after the passage of the Law on Mandatory State Pension Insurance (No. 1058-IV), dated 07.09.2003, which defines key parameters and prerequisites for Pillar 2 implementation.

This simulation of Pillar 2 real investment returns assumes that 50% of pension assets were invested in Government securities (the average annual real return was -2.5% in 2005-2017) and 50% in bank deposits (the average annual real return was +1.9% in 2005-2017). These are the upper limits for pension assets investment in Government securities and bank deposits, according to Article 88 ‘Restrictions on Investment Activity with Pension Assets’ of the Law No. 1058-IV.

From the 1990s, following the Chilean pensions privatization in 1981 to the onset of the 2008 global financial crisis, individual retirement savings accounts were spreading around the world. But, since 2008, there has been a global U-turn. Reliance on private pension systems, especially Pillar 2 schemes, is now in retreat and public pension systems are being reassessed. Even in Chile, which has long been regarded as an example to follow and was copied by more than 30 countries across Latin America, Southeast Asia and Eastern Europe, the mood has turned against Pillar 2 systems (see Annex 5).

The major reason why benefits from individual retirement accounts in Chile have fallen behind expectations is insufficient savings, not any failures of the country-specific accumulation pension system as such. The accumulation pension system offers decent pensions with adequate pre-retirement income replacement rates but only to those who makes regular contributions to their accounts.

The draft Law on “Amendments to Certain Legislative Acts of Ukraine on the Introduction of a Cumulative System of Mandatory State Pension Insurance” (No. 6677 dated 10.07.2017) assumed that a mandatory accumulation system could be introduced in July 2018. The following are key Pillar 2 parameters proposed in the draft Law No.6677:

- Fully decentralized administration of individual retirement accounts based on the current institutional set-up of the voluntary NPFs;
- Mandatory cut-off age: under 35 years as of 1 July 2018;
- Contribution rate: starting with 2% followed by annual 1% increase up to 7% (to be paid by employees);
- 3.5% limit for fees to be charged for pension assets administration and investment management (% of AUM);
- Limited investment opportunities initially (investment limits for Pillar 2 assets):
  - 60% in government inflation protected securities
  - 50% in deposits and CDs
  - 50% in securities of the State Investment Fund (to be determined)
  - 10% in bonds issued by local governments
  - 10% in Ukrainian corporate securities

The estimated number of initial Pillar 2 participants under 35 could be 2.3 – 2.5 million people.

The authors of the draft Law No. 6677 do not acknowledge the reality that voluntary Pillar 3 pension funds (NPFs) are still in a very early development stage. Involving the current Pillar 3 entities in an administrative and management roles, without a prior comprehensive independent assessment of the NPFs would be a significant and unjustified risk. Equally important, there are very high risks for Pillar 2 participants if the implementation begins in a hasty manner, according to the proposed timeframe and design, and without further amendments incorporating best international practice and experience29.

Draft Law No. 6677 does not meet important international standards, such as EU Directive 2016/2341 on the Activities and Supervision of Institutions for Occupational Retirement Provision (IOPR II Directive). Thus, it is important to highlight the major prerequisites for effective introduction of individual retirement accounts system:

1. Public Sector Prerequisites
   - **Political sustainability** to carry through the reform process.
   - The capacity to maintain macroeconomic stability is necessary to foster economic growth, and is of fundamental importance for private pensions, which are sensitive to unanticipated inflation, economic downturns and financial sector instability.
   - **Administrative capacity** to collect taxes and enforce contributions.
   - **Effective regulation** of financial markets that is vital to protect consumers in areas too complex for them to protect themselves. This requires tightly drawn up regulatory procedures and a human capacity and will to enforce those procedures.

2. Private Sector Prerequisites
   - **Adequate public understanding of and trust in** private financial institutions and instruments. Private pensions require that both government and citizens are well-informed about the operation of financial markets.
   - **Financial assets and financial markets.** Private schemes require financial instruments for pension funds to hold and financial markets for channeling savings into their most productive use. The root of private financial assets is progress in the private real economy, competitive markets, effective corporate governance, effective regulation, and the like.
   - **Adequate private sector capacity** and economies of scale are essential, given the heavy administrative demands of private pensions. A lack of capacity runs the risk that excessive administrative costs will erode the investment return to pensioners. Since there is a fixed cost to running an individual account, the issue is of particular concern for small Ukrainian pensions. At worst, deficient administrative capacity puts at risk the viability of private funds.
   - Finally, even if private-sector capacity is adequate, its deployment in administering mandatory accumulation system may not be most welfare-enhancing for future pensioners.

As mentioned above, the draft Law on Amendments to Certain Legislative Acts of Ukraine on the Introduction of a Cumulative System of Mandatory State Pension Insurance (No. 6677) proposes a very high upper limit for Pillar 2 pension asset management fees at 3.5% of net asset value. Over a period of 30 years pension management and administrative expense fees would result in total cumulative losses in the amount of 43%-51% of a participant’s assets, even if the investment return was 3%-10% per year.

### Table 1. Erosion of retirement income due to operating costs (fees paid from pension assets)

<table>
<thead>
<tr>
<th>Contribution period</th>
<th>Average annual investment return, %</th>
<th>Loss of pension savings depending on the amount of fees for managing pension assets (as a percentage of assets)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0% of assets</td>
</tr>
<tr>
<td>3%</td>
<td></td>
<td>289,356</td>
</tr>
<tr>
<td>effect of fees</td>
<td>UAH</td>
<td>-23,483</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>-8.1%</td>
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<tr>
<td>5%</td>
<td></td>
<td>407,688</td>
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<tr>
<td>effect of fees</td>
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<tr>
<td></td>
<td>%</td>
<td>-8.7%</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>1,031,422</td>
</tr>
<tr>
<td>effect of fees</td>
<td>UAH</td>
<td>-102,791</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>-10.0%</td>
</tr>
</tbody>
</table>

Table 1 demonstrates the effect of pension funds fees on the final value of retirement savings. Simulations were made using the managed funds calculator from the Australian Securities and Investment Commission (ASIC) website.\textsuperscript{31} The following main assumptions were used: (1) monthly contributions in the amount of 500 hryvnia during 30 years (180 000 UAH in total); (2) average annual nominal investment return of 3%, 5% and 10%; and (3) pension investment management fees at rates 0%; 0.5%; 1% and 3.5% of the total value of retirement assets.

Table 2 provides hypothetical replacement rates for a hypothetical DC pension plan. It illustrates the impact of different factors on future retirement benefits. The following are the main hypothetical assumptions:

1) Contributions density - 30 years (contributions payment without breaks in economic activity);
2) Annual average real wage growth (RWG) rate is 5% for the first 10 years, 4% for the next 10 years, and 3% for the last 10 years;
3) Contribution rates to Pillar 2 pension system - 7% and 10% (linear);
4) Average real investment return - 2%, 3%, 5% and 8% (as average 8% real investment return in Chile in 1981-2016);
5) Pillar 2 operating expenses (fees/charges for administration and investment management of individual retirement savings) – 0.5%; 1.0%; 2.0% and 3.5% of pension assets under management;
6) Inflation - 0% (in calculations, all hypothetical figures for wages, contributions and accumulated retirement capital are in constant/real prices);
7) Retirement age 60 and 65 years;
8) Unisex annuity factors used (unisex annuity conversion rates for men and women);
9) Indexation by inflation (100% CPI) of hypothetical life-time pension benefits.

<table>
<thead>
<tr>
<th>Retirement age</th>
<th>Operating expenses (fees)</th>
<th>Hypothetical contribution rates to funded DC individual retirement accounts (IRA), %</th>
<th>Real investment return</th>
<th>Real investment return</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Contribution rate 7%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>60 years</td>
<td>0.5%</td>
<td>10%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>1.0%</td>
<td>9%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>3.5%</td>
<td>7%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>65 years</td>
<td>0.5%</td>
<td>12%</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>1.0%</td>
<td>11%</td>
<td>13%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>3.5%</td>
<td>8%</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>

In principle, Pillar 2 mandatory accumulation system can represent a sustainable pension policy, provided the design and delivery features are optimal in relation to the overall pension system. These features include:\textsuperscript{32}

1. Ensure that the design of mandatory individual retirement accounts is internally coherent between the accumulation and payout phases and with the overall pension system, including a robust investment governance framework that addresses key risks and the uncertainty inherent in saving for retirement;
2. Encourage high participation rates and adequate contributions (relative to the required outcome) paid over the long-term;
3. Promote low-cost retirement savings instruments;


4. Establish appropriate *default* investment strategies (for passive investors), but also provide individuals with a choice of funds (portfolios) with different risk profiles and investment horizons;

5. Use *life-cycle strategies* as default option to protect people close to retirement against negative outcomes;

6. Encourage *annuitisation* as a protection against longevity risk;

7. Develop appropriate information and *risk-hedging* instruments to facilitate dealing with longevity risk;

8. Ensure *effective communication* and to address financial illiteracy and lack of awareness.

Behavioral economics research suggests that most people are unable to make informed decisions regarding the choice of NPFs, an investment strategy, or how to receive a pension (life annuity, or payout for a specified period). Given the inability or unwillingness of most people to make their own choices, pension policy makers should propose carefully designed options for passive “default” choices, both during the accumulation of savings and at the payout stage after retirement.

Ukrainian policy makers should learn from different and sometimes contradictory international experience in implementing accumulation pension systems. International experience demonstrates that the most efficient and least costly way to organize a mandatory accumulation pension system is to implement a system of *centralized administration* of individual pension accounts with a *limited investment choice*.

What are the results or who has the best Pillar 2 pension?

- **Men:** men's wages on average 25%-30% higher than women's wages
- Managers and skilled professionals (mostly men)
- Employees who have uninterrupted formal employment throughout career and high contribution density (mostly men) *at the same time*

….women make up 2/3 of the total number of pensioners...

……after 40-50 years it's harder for them to find a job……

(Hungary and Argentina) or to diminish contributions to them temporarily, in whole or in part (Estonia, Latvia, Lithuania, Poland, Romania, and Slovakia) is a *cautionary tale* (see Annexes 4 and 5).

As the World Bank highlighted in its recent *Ukraine Special Focus Note*[^33], the proposed timeline of introducing the funded pillar by January 2019 is unrealistic, and “*any introduction of the funded pillar should be done in a way that does not undermine revenues and incentives to contribute to the PAYGO system*.”

Current conditions suggest that a minimum of three to five years of serious regulatory reform and capital markets development are required before Pillar 2 would have a chance to succeed in Ukraine. Premature implementation would put at risk the supplemental pension savings of workers/retirees, as well as erode public confidence.

It is difficult to see how a Pillar 2 investment portfolio containing government bonds and bank deposits, and paying high expense ratios, could achieve the required investment returns to make the system effective for pensioners under conditions of an unstable economy and high inflation.

10 IMPROVING VOLUNTARY PRIVATE PENSION SAVINGS (PILLAR 3) SYSTEM

Private pensions were introduced in Ukraine in 2005 under the Law of Ukraine “On Non-State Pensions” (adopted by the Parliament on July 9, 2003). The Law allows establishment of three types of voluntary non-state pension funds (NPF) – open, corporate and professional.

Open pension funds may be established by legal entities. Corporate pension funds may be established by employers, and occupational pension funds may be established by employers, trade unions, or persons with the same or similar professional activity.

Non-state pension funds are organized as separate legal entities with a status of non-profit institutions, registered by the National Commission for State Regulation of Financial Services Markets (FSR).

Licensed specialized entities or asset management companies can be administrators. Fund assets may be managed by a licensed asset management company or a commercial bank. Pension fund assets are to be kept in authorized custodian banks with which NPFs conclude an agreement. NPFs operate exclusively on a defined contribution basis.

The Ukrainian Pillar 3 non-state pension system is still in its rudimentary stage even after 12 years of operation. The predominate type of NPF, by the number of participants and accumulated assets, is the corporate fund. As of March 31, 2018, 62 NPFs and 22 NPF administrators were registered in the State Register of Financial Institutions (including 44 NPFs or 71% registered in Kyiv). They had 843,200 participants (58% were male and 42% female) or about 5.4% of the total number of employed in both formal and informal sectors (15.5 million of working age 16-60). The low coverage ratio could be because of low financial awareness and general distrust in financial institutions, lack of reliable financial instruments for NPFs, insufficient disposable income or just the lack of information.

The total accumulated assets in Ukrainian NPFs amounted to $94 million USD by the end of the 1st quarter of 2018 ($2,485 billion) or a meager amount per participant ($2,947 hryvnia or just about $110). Since Pillar 3 inception (2005), 79,400 beneficiaries received payments in the total amount of $27 million USD cumulatively ($723.2 million).

In general, there was no impact of voluntary Pillar 3 on Ukraine’s capital market development. In the 1st quarter of 2018, NPF portfolios remained heavily invested in government securities (47%) and bank deposits (36%). Ukrainian corporate bonds made up only 10% and real estate – 2% of NPF investment portfolios. A high percentage of government bonds and bank deposits in NPF portfolios defeats the purpose of risk diversification of retirement income and raises even more questions about the validity of very high fees charged for NPF administration. In general, the lack of portfolio diversification after 13 years of existence of the NPF system also raises questions about the legitimacy of funded pensions. In fact, Ukraine’s Pillar 3 is a system with multiple NPFs that have similar investment portfolio structures.

There is a need for significant improvement of the existing legal framework for Pillar 3 voluntary NPFs. As the World Bank experts highlighted34, Ukraine’s Pillar 3 pension system has a very vague concept of fiduciary duty, and conflicts of interest are poorly regulated. NPFs can be freely incorporated without substantial responsibility or liability. The liability of the Asset Management Company is limited to its own assets. The decisions of the members of NPF Board of Directors are

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not always mandatory and, consequently, the Board members are not legally bound to their decisions. Any (qualified) person may be a member of several NPF boards. Finally, the Pillar 3 NPF system does not comply with relevant international standards, such as the EU Directive 2016/234135 (IOPR II Directive).

NPF administration, management, and custodial fees are subject to statutory regulatory requirements. The Financial Services Regulator has established the annual maximum amount of fees that can be charged directly to an NPF member’s retirement account: 7.0 percent of the net value of pension fund assets. This is an extremely high cap that should be reduced.

It is no surprise that the result of this high legal “cap” on administrative and management fees is that NPFs charge very high actual fees (on average 4.93% of net pension assets). This erodes significantly pension capital over a long-term period. Such high fees over a 30-year period would result in cumulative losses of NPF member’s retirement of 60% to 70% and over a 40-year period – over 70%.

Costs paid from pension assets of NPF members usually cover various fees for the following services:

- Administration of individual pension accounts;
- Management of NPF pension assets (investments);
- Safekeeping of assets (by a custodial bank);
- Performance of scheduled NPF audits;
- Securities trading;
- Appraisal of investees, real estate items and other services.

As John ‘Jack’ Bogle, a legendary American investor and founder of Vanguard funds wittily noted in The Little Book of Common Sense Investment, “the wonderful magic of compounding returns… are overwhelmed by the powerful tyranny of compounding the costs of investing.”36

This is best explained by a simple example (Figure 2). Imagine that a person has decided to invest 10,000 UAH for 40 years. If the average annual rate of return is 10%, then 10,000 UAH will increase to 67,275 UAH in 20 years and up to 452,593 UAH in 40 years. Now let’s consider two options for the cost of financial intermediaries: 0.5% and 3.5% of the value of retirement assets per year. The outcome: the net average annual return will be 9.5% at a 0.5% expense cost, compared to only 6.5% at a 3.5% expense ratio.

Figure 2. The effect of compounding returns and destructive power of compounding costs: growth of 10,000 UAH over 40 years

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In the first 10 years, the curve showing returns at a rate of 6.5% is not much different from the other two (0 and 0.5%). But at the end of a long period (40 years), the accumulated value will amount to UAH 377,194 UAH, at an expense of 0.5% of the value of assets per year, and only UAH 124,161 with a service cost of 3.5% per year. By the end of the investment period, a 3.5% expense ratio will consume 67% of the potential accumulation available (assuming they did not exceed 0.5%).

International experience shows that pension fund fees and charges are often opaque, hidden and incomprehensible to ordinary investors. Importantly, they can significantly reduce retirement savings and future benefit/annuity (see also Table 1, Section 9). Many investors do not understand how much of their pension is disappearing in charges. For example, the 2016 Transparency Task Force study in the UK showed that pension funds may have more than 100 different types of charges and fees that are regularly applied to pensions and investments, many of which are hidden from consumers.

**High administrative fees** charged by NPFs and **double-digit inflation** significantly erode pension assets of NPF participants, especially if invested in a conservative portfolio predominantly comprised of government securities and bank deposits. Figure 3 demonstrates what would have happened with ₴1,000 hryvnia invested at the beginning of 2014 in (1) $USD (equivalent of $125 on January 1, 2014), (2) individual investment portfolio consisting of 50% government securities and 50% bank deposits (0% fees/charges), and (3) Pillar 3 NPFs as of 31.12.2017. The accumulated real net losses for Pillar 3 NPF participant would be -36.3% over a 48-month period (or -10.6% average annual). For a hypothetical individual investor in government securities (50%) and bank deposits (another 50%) real net accumulated losses would be -26.3% (or -7.3% average annual), and investment in $USD could have provided real cumulative return of 50.5% or 10.8% annualized real return during the same period.

**Figure 3.** Growth of hypothetical ₴1,000UAH invested in $USD, 50% government securities + 50% bank deposits, and Pillar 3 NPFs on 01.01.2014 (48-month period).

Because of weak regulation and supervision (enforcement), fraud has negatively impacted Pillar 3 retirement savers at NPFs as well. In 2015, former ‘investment managers’ of the corporate pension fund of the National Bank of Ukraine (NBU), whose assets exceeds 50% of the total NPF market, resulted in the loss of more than 900 million hryvnia of pension assets owned by more than 12

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38 Latest data available on the website of the National Commission on State Regulation of Financial Services Markets (Financial Services Regulator - FSR) during the time of preparation of the White Paper in March 2018.
thousand NBU employees. The NBU NPF assets were invested in bank deposits of institutions that failed, and in corporate bonds of companies that also went bankrupt. The NBU NPF management does not expect to recover even half of these funds.\(^{39}\)

The following are major challenges for the development of voluntary retirement savings in Ukraine:

- Recurrent economic crises in Ukraine over the last 25 years;
- Low disposable (real) income of workers;
- High and unjustified NPFs administration and assets investment management costs (on average 5% of pension assets in 2017);
- Voluntary pension savings are not always affordable for younger people with lower disposable income and more needs;
- Lack of trust in the financial institutions and pension system;
- Overall weak banking and non-banking financial sectors, and underdeveloped stock market (including lack of reliable investment instruments);
- Weak supervisory and regulatory control over the financial/private pension sector (\textit{reform is long overdue and pending}):
  - there is no single regulator in the sector (functions are split between three agencies);
  - weak licensing of providers (full of formalities but lacking substantive evaluation process);
  - weak audit requirements for NPFs and other services providers;
  - overall lack of effective instruments\(^{40}\) for proactive compliance monitoring and enforcement among multiple regulators.
- Finally, retirement saving is not a perfect substitute for other forms of saving.

For further development of Pillar 3 voluntary individual retirement savings, the Government should promote well-designed incentives to save for retirement \textit{provided} that the above deficiencies are eliminated, and major prerequisites (same as for Pillar 2 system introduction described above) are addressed and implemented.


\(^{40}\) For example, the NSSMC does not have sufficient regulatory powers (independence, access to NPFs information, ability to exchange information with foreign regulators, sufficient financial resources, etc.) in line with the standards of the International Organization of Securities Commissions (IOSCO) and the International Organization of Pension Supervisors (IOPS).
In June 2017, the USAID Financial Sector Transformation Project commissioned a national Public Opinion Survey (POS) of 2,000 adults aged 18+ about attitudes toward the Ukrainian pension system, pension issues, savings and retirement, and options for reform.

The survey’s underlying objective was to collect relevant information representing the opinions of the Ukrainian population, and to inform the public and policy debate about key pension reform challenges facing Ukraine. The POS was conducted by the GFK Ukraine market research company (incorporated into the GFK Group), in all regions of Ukraine with the exception of the Crimea and the occupied territories of Donetsk and Luhansk oblasts, according to a representative sample of the adult population of Ukraine.

The Pension public opinion survey had the following goals:
- Evaluate public attitudes toward key issues in retirement and pension reform;
- Evaluate overall knowledge about retirement and pension reform issues by Ukrainians;
- Evaluate Ukrainians’ behavior in regard to personal savings;
- Determine the key information sources and communication channels to inform more effectively Ukrainian households about pension issues.

The overall portrait that emerges from this survey about the knowledge, attitudes and behavior of the average Ukrainian is troubling. The results show that most Ukrainians:
- Believe that the state is mainly responsible for providing a decent living in retirement;
- Do not believe that they will have adequate income in retirement;
- Are adamantly opposed to increasing the retirement age;
- Do not know a great deal about pension system specifics, including information about average pension benefits, contributions, or voluntary and mandatory retirement savings programs (Pillars 2 and 3);
- Cannot (due to low disposable wages/income) or do not save for retirement;
- Do not have much confidence in pension institutions or in related financial institutions.

Awareness of the pension system and income at retirement

Most respondents were aware of the requirements to retire, and were generally aware of the amounts of pension benefits. Overall, 74% of respondents stated the correct legal retirement age of 60 years for men. About 54% of male respondents and 51% of female respondents mentioned the 60-year retirement age set for women (from 2021).

Seventy (70) percent of respondents were unable to specify the required years of contributory employment. About 32% stated that one needed 25 years of contributory service as a condition of the eligibility for the old-age pension; 20% said 30 years of contributory service were necessary, and 19% were unable to answer this question.

About half of respondents had never heard of the mandatory accumulation savings system (Pillar 2). Only 6.3% of respondents claimed to be aware of it, and 37% claimed some awareness. Merely 6% of respondents considered themselves to be well aware of Pillar 3 (voluntary non-state pension provision system), while 34% of respondents were somewhat aware of it. Most respondents (53%) hardly knew anything about Pillar 3 of the pension system.
Attitude of respondents to the pension system

Respondents were negative about any proposed increase in the retirement age. Overall, 71% of respondents would never agree to an increase in the retirement age. A small percentage (11%) of respondents would support an increase in the retirement age subject to an increase in the pension benefit. Most respondents (68%) were not supportive of restricting pension benefits paid to working pensioners. The majority of respondents from all age categories shared this opinion. A pension system based on receiving benefits in relation to the amount of contributions was deemed to be fair by 45% of respondents; 41% believe that pension benefits should be paid to everyone regardless of their payment contributions.

Perceptions and expectations of respondents from the pension system

Most Ukrainians have low expectations about their income in retirement: 68% of respondents believe that they will not have an income sufficient to maintain a decent quality of life in retirement, and only 19% of respondents think they will have sufficient income in retirement.

The overwhelming majority of respondents (67%) believe that it is up to the state to provide for a decent quality of life in retirement. Overall, about 77% of respondents considered the state-provided pension to be the major source of retirement income. Other sources of retirement income included: earnings (25%); savings (24%); subsidiary farming (23%); and assistance from children (22%). Reliance on the state as the main source of retirement income is consistent across all age groups of respondents.

Respondents were divided on how to solve the problem of the deficit of the Pension Fund of Ukraine for the payment of pension benefits. 21% of all respondents favored increasing the contribution rate by employers; 17% of respondents favored a reduction in public expenses in other areas (education, healthcare, etc.), while 14% supported the idea of unified social contributions by employees. Only 4% of respondents suggested an increase in the retirement age as a way to overcome PFU deficit.

Behavioral aspects

Half of respondents (47%) who were not retired in 2017 have thought about their income in retirement. However, only about 22% of younger respondents (aged 18–29 years) have given any consideration to saving for retirement or pensions. Understandably, the closer a respondent is to the retirement, the more he/she worries about future pension benefits.

Fifty-nine (59) percent of respondents who were pensioners reported thinking about their future pensions while employed. The major reasons given for not thinking about pensions were that retirement was a distant event (49% of respondents) and that they would not be able to influence the outcome (39% of respondents).

Generally, respondents were skeptical about non-state pension funds as a vehicle for retirement savings. More than half (54% of all respondents) do not wish to be a member of a NPF. Only 8% of respondents (including 11% of respondents aged 30–39 years) would agree to pay contributions to a NPF, subject to being provided a tax preference on contributions. At the same time, 18% of respondents would agree to membership in an NPF if their employers were to make contributions to their benefit.

Employment and wages

The survey confirmed that a large percentage of Ukraine’s labor market is still unofficial. Only 67% of respondents reported that their entire salaries were paid in accordance with the current legislation, including payment of the unified social contribution. Fifteen (15) percent of respondents received a portion of their earnings officially and another portion “under the table,” while another 15 percent were paid in cash.

Sixty-nine (69) percent of workers who responded believed that employers paid pension insurance contributions on their behalf, while 20% were unaware whether any such payments were made. The majority (64%) of employees believed that only employers should pay the mandatory pension insurance contributions; 36% of respondents considered it both possible and appropriate that such contributions be paid by employees as well.
CONCLUSION

In Ukraine, the challenge for pension policy is to put in place a system that is financially sustainable and achieves the basic purpose of any retirement system: namely, to deliver adequate retirement incomes and to allow older people to enjoy decent living standards and economic independence.

The sustainability and adequacy of the pension system depends on the degree to which it is underpinned by contributions, taxes and savings from employers and workers. Financing arrangements, eligibility conditions and labor market conditions must be calibrated such that a balanced relation between contributions and entitlements, and between the number of actively employed contributors and the number of retired beneficiaries, can be achieved.

Ukraine’s pension system is still "under-reformed," remains fiscally unsustainable, and does not protect the elderly from living in poverty. Moreover, it is highly vulnerable to adverse demographic trends. Ukraine’s pension system dependency ratio is almost 1 to 1, which is one of the lowest ratios in the world. For many workers and the self-employed, no social security contributions are paid, or contributions are paid only based on the minimum wage, even if actual earnings are significantly higher.

A low statutory retirement age and the availability of early retirement options for many workers have been prominent features of the Ukraine’s pension system. Ukrainians on average retire much earlier than workers in other countries in the region: the average retirement age for men is around 58.5 years, and for women it is just under 56 years (compared to an EU average of 63.6 years for men and 62.6 years for women)\(^43\). As a result, Ukraine has almost 12 million pensioners, which is close to 30% of the population, while the share of the population over 60 is 22%, and the share of the population over 65 is 16%.

In December 2015, the Law of Ukraine on the Collection and Recording of the Unified Contribution for General Mandatory State Social Insurance\(^44\) was amended to sharply reduce the mandatory social insurance contribution rate from 40% to only 22% (including from 35.2% to 18.8% for pension insurance in 2018). The idea was that a reduction in the cost of pension insurance to employers would incentivize businesses to leave the shadow economy, improve their compliance with tax laws, and increase contributions to the Pension Fund. However, compliance did not improve. Instead the revenues of the PFU fell dramatically (₴98 billion compared to 2015), and, as a result, transfers from the state budget grew from ₴55 billion (2.8% of GDP) in 2015 to a staggering ₴143 billion in 2016 (6.1% of GDP) and ₴133 billion in 2017 (4.5% of GDP). It is expected that in 2018 transfers from the state budget to PFU will reach ₴139 billion, or 4.3% of GDP.

There is no doubt that in responding to long-run trends, any improvement to the finances of solidarity Pillar 1 pension system can theoretically involve one or more of the following:

- Higher contribution rates;
- Later retirement at the same benefit (or adjust pension eligibility ages to reduce the influx of new pensioners, including by linking the retirement age with increases in life expectancy and restricting access to early retirement schemes);
- Adjustments of benefits levels through:
  - lowering benefits (unlikely for political reasons),

\(^43\) Ron van Rooden, Ukraine urgently needs to reform its pension system. IMF, 18 April 2017 (https://www.epravda.com.ua/publications/2017/04/18/623950/).
\(^44\) http://zakon3.rada.gov.ua/laws/show/909-19/paran802#n802.

Future Ukrainian pensioners will have no alternative but to work longer, spend less and save more.
- changing the accrual rate (the most direct way of affecting benefits),
- valorization of past earnings,
- indexation of pensions in payment.

To ensure adequate and sustainable pensions, the pension reform in Ukraine should also:

- Support longer working lives by providing better access to life-long learning, adapting work places to a more diverse workforce, developing employment opportunities for older workers and supporting active and healthy ageing;
- Equalize the pensionable age between men and women (will be achieved by 2021); and
- Support the development of complementary retirement savings to enhance retirement incomes.

The success of reforms aimed at increasing pension eligibility ages (including phasing out early retirement schemes and introducing the retirement age 'corridor') depends on better opportunities for older women and men to stay in the labor market. This includes the adaptation of work places and work organization, the promotion of lifelong learning, cost-effective policies aiming at reconciling work, private and family life, measures to support healthy ageing and combating gender inequalities and age discrimination.

The political acceptance of such reforms will depend on whether they are perceived as fair. This requires taking into account the fact that the ability to work – and to find employment – differs widely among individuals, and that life expectancy and health status at age 60 or age 65 tends to be lower for manual workers who started working at a young age. Thus, Ukraine’s rapid demographic transition with declining numbers of workers and an ageing population means that social protection and health systems are becoming more important in economic terms for the elderly.

Retirement is one of the biggest public policy challenges of the 21st century. The shift from social security DB schemes to funded DC pensions reduces government and employer liabilities. It may deliver good outcomes for some individuals, but they carry the investment risk.

The implementation of a reliable mandatory accumulation system in Ukraine would be a step in the right direction provided that the following major issues are addressed:

- The Government and the Verkhovna Rada have to create a stable political, economic and regulatory environment;
- The Government must ensure macroeconomic stability (economic growth, controlled inflation, stable currency, low unemployment) and strengthen supervisory and regulatory control over the financial/private pensions sector;
- Ensure a robust investment governance framework that addresses key risks and the uncertainty inherent in saving for retirement;
- Focus on reducing the impact on retirement income of severe market shocks;
- Encourage high participation rates and adequate contributions density;
- Full disclosure of fees and charges that can have a substantial impact on future retirement benefits;
- Promote efficient and low-cost retirement savings instruments (with centralized administration of individual pension accounts and default allocation to low-cost providers);
- Establish appropriate default investment strategies, but also provide individuals with a choice of investment strategies or funds (e.g., index investment funds and life-cycle funds);

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45 **Valorization of earnings**: a method to revalue past earnings by factors such as average wage growth, price inflation, or economic growth so as to take into account of changes in costs and standards of living between the time that the pension entitlement was earned and when it is drawn.
• Ensure effective communication to beneficiaries, improve public awareness, increase financial literacy and create rational expectations of participants.

Current conditions suggest that a minimum of three to five years of serious regulatory reform and capital markets development are required before Pillar 2 would have a chance to succeed in Ukraine.

Financial markets currently are not able to provide financial instruments to facilitate diversified allocation of Pillar 2 assets. Ukraine’s capital market is essentially a government bond market (98%) and trading in other securities is miniscule. It is difficult to see how a Pillar 2 investment portfolio containing government bonds and bank deposits, and paying high expense ratios, could achieve the required investment returns to make it successful for pensioners.

Finally, pension reform should not be viewed as an ad-hoc or a one-time event, but rather as an on-going process, that must be economically, socially and politically sustainable to mitigate the likelihood of pension policy reversals over time.
ANNEXES

ANNEX 1: UKRAINE PENSION SYSTEM AT A GLANCE

UKRAINE DEMOGRAPHICS AND MACROECONOMICS (2017)

| Population (est. average total) | 42.485 million |
| Population 0-15 | 6.887 million (16.2%) |
| Population 16-59 | 25.982 million (61.2%) |
| Population over 60 | 9.546 million (22.5%) |
| Population over 65 | 6.868 million (16.2%) |
| Total fertility rate | 1.374 birth per woman |
| Life expectancy at birth | men - 67.0; women – 76.8 |
| Life expectancy at 60 | men - 15.5; women – 20.8 |
| Life expectancy at 65 | men - 12.7; women – 16.8 |
| Statutory retirement age: | men 60; women 58.5 (60 from 2021) |
| Nominal GDP | 2,982.9 billion UAH ($112.2 billion) |
| Nominal GDP per capita | 70,327 UAH ($2,640) or 5,860 UAH/month |
| Average monthly insured wage (PFU data) | 6,274 UAH ($236) |
| Average monthly wage (Statistics Service data) | 7,104 UAH ($267) |
| Minimum wage | 3,200 UAH ($120) |
| Average annualized pension benefit | 2,021 UAH ($76) |
| Gross/net Pillar 1 pension replacement rate\(^{(1)}\) | 32% / 40% (\(^1\)PFU insured wage data) |
| Gross/net Pillar 1 pension replacement rate\(^{(2)}\) | 28% / 35% (\(^2\)Statistics Committee wage data) |
| Total public pension expenditures | 291.5 billion UAH ($10.8 billion) |
| • as a percentage of GDP | 9.7% |
| • as a percentage of consolidated state budget | 27.6% |
| Transfers from the state budget (incl. PFU deficit) | 133.5 billion UAH (4.5% of GDP) |

STRUCTURE OF THE UKRAINE PENSION SYSTEM

SOCIAL SECURITY PUBLIC PENSIONS (PILLAR I)

- Mandatory state pension insurance system for persons employed under labor agreements and self-employed
- Privileged pension regimes exists for specific categories of employees

MANDATORY PRIVATE PENSION SAVINGS (PILLAR II)

- Mandatory fully funded, defined contribution (DC) private pension has been legislated in 2003, but is not yet functioning

VOLUNTARY PRIVATE PENSION SAVINGS: OCCUPATIONAL/PERSOANAL (PILLAR III)

- Defined contribution occupational and personal private pension plans

\^46\ As of 01.01.2018, average pension benefit was 2,480 hryvnia.
Labor Market in 2017

Economically active population of working age (men and women aged 16–59) – 17,193 thousand (66.2% of the population of corresponding age group), including:
- Employed – 15,496 thousand (59.6% of the population of corresponding age group)
- Unemployed – 1,697 thousand (9.9% of economically active population)

Covered employment: 12,871 thousand of insured persons registered by the PFU (75% of economically active population aged 16–59), including 10,160 thousand employees and 1,958 thousand self-employed. In addition, the government paid USC for 753 thousand of insured persons (e.g. military, women on maternity leave, etc.).

Pension system dependency ratio – 0.91 (the ratio of the number of pensioners to the number of insured persons). In fact, today in Ukraine one pensioner is supported by only one USC payer.

Source of Funds:

<table>
<thead>
<tr>
<th>Insured person</th>
<th>None.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer</td>
<td>22% of payroll, including pension insurance contribution rate 18.84% of insured payroll (or 85.6215% out of 22% USC rate).</td>
</tr>
<tr>
<td>Government</td>
<td>contributes as an employer; subsidies as needed from central and local governments; the cost of state social assistance benefits for the elderly.</td>
</tr>
<tr>
<td>Maximum insured wage/income</td>
<td>15 minimum wages (55,845 UAH in 2018).</td>
</tr>
</tbody>
</table>

Table 3. Pension beneficiaries (by types of benefits) as of 01.01.2018

<table>
<thead>
<tr>
<th>Types of Benefits</th>
<th>Beneficiaries persons</th>
<th>%</th>
<th>Average monthly benefit, UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old-age</td>
<td>8,915,643</td>
<td>76.1</td>
<td>2,558</td>
</tr>
<tr>
<td>Disability</td>
<td>1,359,577</td>
<td>11.6</td>
<td>1,950</td>
</tr>
<tr>
<td>Military</td>
<td>555,048</td>
<td>4.7</td>
<td>2,898</td>
</tr>
<tr>
<td>Survivors</td>
<td>549,496</td>
<td>4.7</td>
<td>2,225</td>
</tr>
<tr>
<td>Years of service (special employment categories)</td>
<td>239,363</td>
<td>2.0</td>
<td>2,331</td>
</tr>
<tr>
<td>Social assistance benefits</td>
<td>89,064</td>
<td>0.8</td>
<td>1,450</td>
</tr>
<tr>
<td>Benefits for retired judges</td>
<td>3,108</td>
<td>0.03</td>
<td>24,711</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,711,299</strong></td>
<td><strong>100.0</strong></td>
<td><strong>2,480</strong></td>
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</table>

Table 4. Distribution of pension benefits by amount as of 01.01.2018

<table>
<thead>
<tr>
<th>Pension benefit amount</th>
<th>Beneficiaries persons</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1,300 hryvnia</td>
<td>77,685</td>
<td>0.7</td>
</tr>
<tr>
<td>1,301 – 1,500 hryvnia</td>
<td>2,608,533</td>
<td>22.3</td>
</tr>
<tr>
<td>1,501 – 2,000 hryvnia</td>
<td>3,945,130</td>
<td>33.7</td>
</tr>
<tr>
<td>2,001 – 3,000 hryvnia</td>
<td>2,630,809</td>
<td>22.5</td>
</tr>
<tr>
<td>3,001 – 5,000 hryvnia</td>
<td>1,675,789</td>
<td>14.3</td>
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<tr>
<td>5,001 – 10,000 hryvnia</td>
<td>654,972</td>
<td>5.5</td>
</tr>
<tr>
<td>over 10,000 hryvnia</td>
<td>118,381</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,711,299</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Female pensioners – 7,345,500 people (63%), male pensioners – 4,365,800 people (37%).

Source: State Statistics Service of Ukraine and Pension Fund of Ukraine
ANNEX 2: OECD DATA ON PENSIONS

Table 5. Net pension replacement rates\(^{47}\) by earnings in OECD countries in 2015
(from mandatory public and private pension systems)

<table>
<thead>
<tr>
<th>Country</th>
<th>Retirement age</th>
<th>Individual earnings, multiple of mean for men and women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50% men</td>
</tr>
<tr>
<td>Australia</td>
<td>67</td>
<td>95.0</td>
</tr>
<tr>
<td>Austria</td>
<td>65/60</td>
<td>92.2</td>
</tr>
<tr>
<td>Belgium</td>
<td>65</td>
<td>62.6</td>
</tr>
<tr>
<td>Canada</td>
<td>65</td>
<td>62.2</td>
</tr>
<tr>
<td>Chile</td>
<td>65</td>
<td>48.3</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>65</td>
<td>88.3</td>
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<tr>
<td>Denmark</td>
<td>65</td>
<td>103.3</td>
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<tr>
<td>Estonia</td>
<td>65</td>
<td>73.7</td>
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<tr>
<td>Finland</td>
<td>65</td>
<td>66.9</td>
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<tr>
<td>France</td>
<td>64</td>
<td>70.4</td>
</tr>
<tr>
<td>Germany</td>
<td>65.4</td>
<td>54.7</td>
</tr>
<tr>
<td>Greece</td>
<td>67/62</td>
<td>60.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>64</td>
<td>89.6</td>
</tr>
<tr>
<td>Iceland</td>
<td>67</td>
<td>85.5</td>
</tr>
<tr>
<td>Ireland</td>
<td>66</td>
<td>70.0</td>
</tr>
<tr>
<td>Israel</td>
<td>67/64</td>
<td>100.4</td>
</tr>
<tr>
<td>Italy</td>
<td>67/66</td>
<td>93.0</td>
</tr>
<tr>
<td>Japan</td>
<td>65</td>
<td>52.6</td>
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<tr>
<td>Korea</td>
<td>65</td>
<td>63.8</td>
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<tr>
<td>Latvia</td>
<td>63</td>
<td>55.7</td>
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<tr>
<td>Luxemburg</td>
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<td>Poland</td>
<td>65/60</td>
<td>37.2</td>
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<tr>
<td>Portugal</td>
<td>66</td>
<td>92.9</td>
</tr>
<tr>
<td>Slovak Republic</td>
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<td>85.0</td>
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<td>Slovenia</td>
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<td>Spain</td>
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<td>79.3</td>
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<tr>
<td>Sweden</td>
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<td>62.4</td>
</tr>
<tr>
<td>Switzerland</td>
<td>65/64</td>
<td>57.4</td>
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<tr>
<td>Turkey</td>
<td>61/59</td>
<td>99.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65/63</td>
<td>52.1</td>
</tr>
<tr>
<td>United States</td>
<td>67</td>
<td>59.9</td>
</tr>
<tr>
<td>OECD (35 countries)</td>
<td></td>
<td>73.2</td>
</tr>
<tr>
<td>EU (28 countries)</td>
<td></td>
<td>79.7</td>
</tr>
</tbody>
</table>


\(^{47}\) **Net pension replacement rate** defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukraine</td>
<td>14.3</td>
<td>17.7</td>
<td>16.2</td>
<td>16.6</td>
<td>17.4</td>
<td>15.5</td>
<td>13.5</td>
<td>10.6</td>
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<tr>
<td>EU (28 countries)</td>
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<td>12.6</td>
<td>12.9</td>
<td>13.0</td>
<td>13.0</td>
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<td>N.A.</td>
</tr>
<tr>
<td>Euro area (19 countries)</td>
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<td>13.1</td>
<td>13.4</td>
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<td>13.6</td>
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<td>14.5</td>
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<td>14.9</td>
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<td>12.3</td>
<td>12.4</td>
<td>12.7</td>
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</table>


**Short description:** ‘Expenditure on pensions’ comprises part of periodic cash benefits under the disability, old-age, survivors and unemployment functions. It is defined as the sum of the following social benefits: disability pension, early-retirement due to reduced capacity to work, old-age pension, anticipated old-age pension, partial pension, survivors’ pension, and early-retirement benefit for labor market reasons.
Comparative analysis of actuarial projections for Ukraine’s Pillar 1 pension system

Actuarial projections were made by the USAID Financial Sector Transformation Project, and are based on the Ukrainian pension system model developed by experts from the Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine, with assistance from the World Bank.

Table 7 provides the key modelling results of two pension system possibilities: (1) baseline Scenario 0 (or status quo scenario), assuming no parametric changes in 2017, and (2) Scenario 1 that considers Pillar 1 parametric changes adopted in October 2017 (for details see Chapter 8 on p. 20-22). It is important to note that neither of these proposals produces optimal results in terms of pension benefits and financial stability of Pillar 1 pension system.

### Table 7: Comparative Analysis of Actuarial Projections for Ukraine’s Pension System

<table>
<thead>
<tr>
<th></th>
<th>Scenario 0</th>
<th>2017</th>
<th>2020</th>
<th>2025</th>
<th>2035</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFU Deficit /Surplus, as % of GDP</td>
<td>Scenario 0</td>
<td>-1.6%</td>
<td>-0.1%</td>
<td>0.1%</td>
<td>-0.1%</td>
<td>-2.1%</td>
</tr>
<tr>
<td></td>
<td>Scenario 1</td>
<td>-2.2%</td>
<td>-1.9%</td>
<td>-1.4%</td>
<td>-1.4%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Average gross replacement rate</td>
<td>Scenario 0</td>
<td>27%</td>
<td>22%</td>
<td>20%</td>
<td>19%</td>
<td>19%</td>
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<tr>
<td></td>
<td>Scenario 1</td>
<td>28%</td>
<td>27%</td>
<td>24%</td>
<td>23%</td>
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</tr>
<tr>
<td>Dependency ratio</td>
<td>Scenario 0</td>
<td>93%</td>
<td>94%</td>
<td>99%</td>
<td>104%</td>
<td>123%</td>
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<tr>
<td></td>
<td>Scenario 1</td>
<td>91%</td>
<td>92%</td>
<td>95%</td>
<td>97%</td>
<td>114%</td>
</tr>
<tr>
<td>Pension contribution rate required to balance the PFU budget (0% deficit at the given replacement rate)</td>
<td>Scenario 0</td>
<td>18.9%</td>
<td>14.0%</td>
<td>12.8%</td>
<td>14.6%</td>
<td>20.4%</td>
</tr>
<tr>
<td></td>
<td>Scenario 1</td>
<td>21.3%</td>
<td>20.3%</td>
<td>19.0%</td>
<td>18.8%</td>
<td>23.8%</td>
</tr>
</tbody>
</table>

### Scenario 0: Does NOT provide for any parametric changes after 2017.

Continued population ageing leads to the worsening of the pension system dependency ratio (to more citizens receiving pension benefits than those accruing pension rights). The following are major assumptions under the status quo scenario 0:

- Gradual increase of retirement age for women under 60 years in 2021 continues;
- Pension benefits indexation is linked to the changes in the minimum subsistence for persons who have lost their ability to work;
- Minimum subsistence increases with 50% inflation (CPI) and 50% increase in average nominal wages;
- For persons with less than required length of insured service, the minimum pension is determined in proportion to the minimum subsistence;
- The minimum wage increases in line with the average nominal wage growth.

If the current social insurance contribution rate remains the same (18.84% of wages for pensions in 2017), the public pension system could provide revenues of no more than 6% of GDP, whereas projected expenditures will reach 9-11% of GDP (depending on various macroeconomic scenarios). Without parametric reform-2017, Ukraine’s pension system would remain fiscally unsustainable (with PFU deficit reaching -2.1% of GDP by 2050) and inadequate (with projected gross pension benefit replacement rate at about 20% of the average wage), i.e. would not be able to provide adequate benefits at an affordable cost.

### Scenario 1:

Provides for the main parametric changes after 2017 according to the Law ‘On Amendments to Certain Legislative Acts of Ukraine on Pensions Increase’ (No. 2148-VIII dated October 3, 2017):

- Starting from October 2017, Pension benefits are upgraded (valorized) on a new salary base of UAH3,764 with an accrual rate of 1.0%.

---

48 The ratio of annualized average pension benefit to gross average wage in a given time period (year).
Starting from 2021, the principal amount of pensions granted is expected to be indexed based on 50% of the consumer price growth for the previous year and 50% of the average contributory wage growth for the previous three years. In 2019-2020, indexation will be based on 50% of the consumer price growth and 50% of the contributory wage growth for the previous year.

In 2018, new pensions will be based on the average contributory wage for 2016 and 2017, with an accrual rate of 1.0%. Starting from 2019, new pensions will be based on the contributory salary for the last three years, with an accrual rate of 1.0%.

All the granted and recalculated pensions are set at the level of no less than the subsistence level for people who lost their ability to work.

Starting from 2018, all the supplemental pension payments to achieve the subsistence level will be financed from the State budget.

Starting from 2018, an additional guarantee of a minimum pension at 40% of the minimum salary is set for retirees with the length of contributory service of at least 30/35 years after reaching 65 years of age.

Starting from 2018, a retirement age ‘corridor’ of 60/63/65 years is set, with a gradual increase in the required length of contributory service by 10 years.

Changes in the pension calculation and indexation rules will allow for the redistribution of pension expenditures in favor of old pensioners at the expense of reduction in new pensions. However, there is a high risk of Government ‘discretionary incoherence’ with the indexation rules because of the lack of funds. The reform-2017 will provide a stable pension replacement rate of approximately 23%-25% of the average wage (on average for all pensioners), while keeping pension expenditures at not more than 11%-13% of GDP.

However, the USC revenues will amount to only 8-8.4% of GDP and the rest of public pension expenditures (3-5% of GDP) should be funded from the state budget. Proposed Government measures and tightened eligibility criteria are important steps towards financial sustainability and social justice, but they do not solve the fundamental pension system problems in the medium- and the long-term.

Thus, in responding to long-run trends, any attempt to balance the finances of solidarity Pillar 1 pension system must involve one or more of:

- Higher contribution rates;
- Later retirement at the same benefit (or adjust pension eligibility ages to reduce the influx of new pensioners, including by linking the retirement age with increases in life expectancy and restricting access to early retirement schemes);
- Adjustments of benefits levels through:
  - lowering benefits (unlikely for political reasons),
  - changing the accrual rate (the most direct way of affecting benefits),
  - valorization of past earnings,
  - indexation of pensions in payment.
UKRAINE AND POLAND PROFILES: DEMOGRAPHICS AND MACROECONOMICS (2016)

*Pension systems are not independent of the context in which they operate*

<table>
<thead>
<tr>
<th></th>
<th>UKRAINE</th>
<th>POLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, thousand</td>
<td>42,585</td>
<td>38,433</td>
</tr>
<tr>
<td>Labor force, thousand (aged 15+)</td>
<td>17,955</td>
<td>17,260</td>
</tr>
<tr>
<td>Employed, thousand (av. annual)</td>
<td>16,277</td>
<td>16,197</td>
</tr>
<tr>
<td>Unemployed, thousand (av. annual)</td>
<td>1,678</td>
<td>1,063</td>
</tr>
<tr>
<td>Unemployment rate (average annual), %</td>
<td>9.3%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Total number of pensioners, thousand</td>
<td>11,956</td>
<td>8,909</td>
</tr>
<tr>
<td>Statutory retirement age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>men</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>women</td>
<td>57.5 (60 from 2021)</td>
<td>60</td>
</tr>
<tr>
<td>Population over 60, %</td>
<td>22.1%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Population over 65, %</td>
<td>15.9%</td>
<td>16.4%</td>
</tr>
<tr>
<td>Total fertility rate, birth per woman</td>
<td>1.506</td>
<td>1.357</td>
</tr>
<tr>
<td>Life expectancy at birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>men</td>
<td>66.7</td>
<td>73.9</td>
</tr>
<tr>
<td>women</td>
<td>76.5</td>
<td>81.9</td>
</tr>
<tr>
<td>Life expectancy at 65:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>men</td>
<td>12.4</td>
<td>15.7</td>
</tr>
<tr>
<td>women</td>
<td>16.6</td>
<td>20.1</td>
</tr>
<tr>
<td>Average monthly wage, $ (exchange rate)</td>
<td>$260</td>
<td>$1,025</td>
</tr>
<tr>
<td>Average monthly pension benefit, $</td>
<td>$72</td>
<td>$498</td>
</tr>
<tr>
<td>GDP, $ billion (nominal / PPP(^{49}))</td>
<td>$93.3 / $327.2</td>
<td>$469.5 / $986.8</td>
</tr>
<tr>
<td>GDP per capita, $ (nominal)</td>
<td>$2,194(^{50})</td>
<td>$12,215(^{51})</td>
</tr>
<tr>
<td>GDP per capita, $ (PPP)</td>
<td>$8,272</td>
<td>$27,764</td>
</tr>
<tr>
<td><strong>Average annual real GDP growth in 1991-2016</strong></td>
<td>-1.91%</td>
<td>+3.62%</td>
</tr>
<tr>
<td>Average annual GDP per capita growth in 1991-2016</td>
<td>-1.44%</td>
<td>+3.63%</td>
</tr>
<tr>
<td>Total public pension expenditures, $ billion</td>
<td>$10.0</td>
<td>$53.3</td>
</tr>
<tr>
<td>• as a percentage of GDP, %</td>
<td>10.7%</td>
<td>11.3%</td>
</tr>
</tbody>
</table>


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\(^{49}\) In 1991, GDP PPP (at current international $) in Ukraine was $497.3 billion, and in Poland - $364.2 billion (World Bank, http://data.worldbank.org/indicator).

\(^{50}\) 22% of the world’s average ($10,164); No.135 in the world by GDP (nominal) and No.123 in the world by GDP (PPP) among 192 countries (IMF and World Bank data).

\(^{51}\) 120% of the world’s average; No.60 in the world by GDP (nominal) and No.55 in the world by GDP (PPP) among 192 countries (IMF and World Bank data).
The new multi-pillar pension system was launched in Poland in 1999 and covered all individuals born from 1949 onwards. Those born before 1949 remained in the old system. People under 30 at the time of reform (born in 1969 and after) were obliged to participate in two new pension systems.
(pillars): Pillar 1 pay-as-you-go notional defined contribution (NDC) scheme administered by the Social Insurance Institution (ZUS), and Pillar 2 fully-funded defined contribution (DC) individual retirement accounts scheme managed by independent ‘Universal Pension Societies’ (PTE - Powszechne Towarzystwo Emerytalne), private investment companies supervised by the State.

Individuals aged 30 to 50 at the time of reform (born between 1949 and 1968) were given the option of choosing between paying their entire contribution into the Pillar 1 NDC system or splitting it between the Pillar 1 and Pillar 2 accounts. Their decision was irreversible, and 53% of them chose to have two accounts. Those who made the transition to the new system (but not necessarily became the members of OPFs) were credited with “start-up capital” on their notional accounts in the ZUS based on an actuarial valuation of their social insurance contributions made before the transition date.

People who joined mandatory Pillar 2 pension system but did not select OPF were randomly allocated to a qualifying pension fund by the regulator. (In order to qualify, OPF funds had to have less than a 10% share of the asset-weighed market and a higher-than-average rate of return over the previous 36 months.)

In addition, there are special retirement schemes in Poland for farmers and some civil servants such as the military, police, judges and prosecutors.

In 1998, the Demographic Reserve Fund (DRF) was created to accumulate resources in order to finance future deficits of the pension system, and is formed from:

- a part of old-age pension contributions,
- revenues from the privatization of State Treasury assets and properties,
- income from investments,
- interest earned on deposit accounts run by ZUS, which are not the incomes of the Social Insurance Fund (Fundusz Ubezpieczeń Społecznych – FUS) and its administrator ZUS,
- other sources.

The statutory retirement age was 65 years for men and 60 years for women before 2013 and was scheduled for gradual increase from 1 January 2013 by a month in January, May and September until it reaches 67 years for both sexes (for women in 2040 and for men in 2020). By 2016, the retirement age reached 66 years for men and 61 years for women. However, in November 2016 the Polish parliament decided to reverse the previous increase in retirement age, so that the long-term retirement age is 65 for men and 60 for women.

In the new system, social security contributions made prior to the reform at the rate 19.52% of insured wage base were split so that two-thirds of them (12.22%) were transferred into Pillar 1 NDC scheme (FUS), while one-third (7.3%) was paid into fully-funded defined contribution (DC) individual retirement accounts (Pillar 2), managed by the Open Pension Funds (OPF - Otwarty Fundusz Emerytalny, OFE). Pension insurance contributions are financed by insured persons and employers in equal parts - 9.76% of the insured wage base.

Disappointing Pillar 2 returns until 2013 (Table 9) and unsustainably high OPF management fees as well as unforeseen demographic changes (including labor outmigration) created a large hole in Pillar 1 funding and a crisis of public faith in the pension reform. It forced Poland, and other CEE countries that had embarked on similar pension reforms, to borrow in order to fund the gap, contributing to worrying budget deficits and rising debt.\(^{52}\)

In February 2014, 51.5% of the net assets (€37bn) of privately managed pension funds invested in Government securities were transferred to ZUS. Since April 2014, the Pillar 1 NDC scheme is the default option and participation in the Pillar 2 OPFs has become voluntary.

\(^{52}\) Poland pension reform reversal highlights public disillusion, Financial Times, February 5, 2014 https://www.ft.com/content/8ddeb5bc-6293-11e3-bba5-00144feabdc0.
Thus, has not filed such a claim, starting July 1, 2014.

Inflation growth
Real wage growth

Table 9. Annual Pillar 2 real investment return, real GDP and real average wage growth in Poland in 2006-2016 (%)

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillar 2 OPF real return (excluding inflation only)</td>
<td>13.4%</td>
<td>1.5%</td>
<td>-17.3%</td>
<td>8.9%</td>
<td>7.2%</td>
<td>-9.1%</td>
<td>1.6%</td>
<td>2.7%</td>
<td>...</td>
<td>-6.1%</td>
<td>8.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>6.2%</td>
<td>7.0%</td>
<td>4.2%</td>
<td>2.8%</td>
<td>3.6%</td>
<td>5.0%</td>
<td>1.6%</td>
<td>1.4%</td>
<td>3.3%</td>
<td>3.8%</td>
<td>2.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Real wage growth</td>
<td>4.0%</td>
<td>5.5%</td>
<td>5.9%</td>
<td>2.0%</td>
<td>1.4%</td>
<td>1.4%</td>
<td>0.1%</td>
<td>2.8%</td>
<td>3.2%</td>
<td>4.5%</td>
<td>4.3%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.0%</td>
<td>2.5%</td>
<td>4.2%</td>
<td>3.5%</td>
<td>2.6%</td>
<td>4.3%</td>
<td>3.7%</td>
<td>0.9%</td>
<td>0.0%</td>
<td>-0.9%</td>
<td>-0.6%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>


POLAND: DISMANTLING THE SECOND PILLAR

Under the 2014 pension reform law, Polish 2nd pillar OPFs were barred from investing in sovereign bonds, including those issued by foreign entities. In February 2014, each OPF had to transfer 51.5% of the September 2013 market value of their portfolio to ZUS, with the bonds subsequently redeemed by the government. According to the National Bank of Poland, the value of transferred bonds totalled PLN130.2bn (€31.3bn) or 43.6% of January’s net asset value, while the subsequent redemption reduced the public debt-to-GDP ratio by 7.6 percentage points. The full Pillar 2 asset transfer totalled PLN153.2bn (€36.8bn).

Between April and July 2014, OPF members had to inform ZUS whether they wished to continue contributing to the Pillar 2 or have future contributions accumulated in sub-accounts at ZUS. The latter was the default option. Over this period, pension fund managers were barred from advertising. Only 18% of more than 14m eligible workers elected to remain in the Pillar 2 system in 2014. The next declaration window was opened in 2016, and every four years thereafter. (In 2017, the OPF system had 16.1m member accounts, of which only 3.3m or 20% continued actively contributing into the Pillar 2.)

Following the failure of the pensions industry and government to devise a Pillar 2 payout system, the new law introduced the ‘slider’, whereby those members with 10 or fewer years left to maturity would have their Pillar 2 assets incrementally transferred to the NDC Pillar 1. The slider took effect in November 2014.

The law also lifted the minimum return requirement and overhauled investment regulations. The equity limit was raised from a maximum 40% of net assets to a minimum 75% in 2014, thereafter falling 20% annually until 2018, when the restrictions will be lifted.

The maximum foreign investment limit was increased from 5% to 10% in 2014, rising to 20% in 2015 and to 30% from 2016.

The contribution rate was raised from 2.8% to 2.92%.

Source: Pensions In Central & Eastern Europe: A fresh start for pensions, IPE.com, January 2015
https://www.ipe.com/pensions/country-reports/cee/poland-dismantling-the-second-pillar/10016965.article

If the insured person was a member of the OPF and submitted a report on the payment of contributions to the OPF from April 1 to July 31, 2014, ZUS transfers part of the contribution to the OPF (selected by the insured) in the amount of 2.92% of insured earnings. If the insured person has not filed such a claim, starting July 1, 2014 his full 7.3% contribution goes to ZUS:

<table>
<thead>
<tr>
<th>Social Insurance Fund (FUS)</th>
<th>FUS subaccount</th>
<th>Pillar 2 OPF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>if contributions are transferred to OPF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.22%</td>
<td>4.38%</td>
<td>2.92%</td>
<td>19.52%</td>
</tr>
<tr>
<td>if contributions are NOT transferred to OPF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.22%</td>
<td>7.30%</td>
<td>0%</td>
<td>19.52%</td>
</tr>
</tbody>
</table>

Thus, since 2014 a contribution of 16.6% (12.22% + 4.38%) is credited to two individuals’ notional accounts. The indexation of 4.38% contributions to the new FUS sub-accounts is different from 12.22% contributions to already existed (before 2014) main accounts in the ZUS. The notional...
OPFs can charge three types of fees:

- **Distribution fees**, calculated as a predetermined percentage of contributions paid. It was initially capped at 7%, reduced to 3.5% by 2014 and to 1.75% thereafter.
- **Management fees**, which cover a fund’s administration costs. They comprise a fixed and a variable component. The fixed portion does not exceed 0.045% of monthly contributions (an annual cap of 0.54%). The fixed component is calculated on the basis of regressive ratio. For example, for the first PLN 8 billion assets, the monthly management fee amounts to 0.045% of assets, but for the assets above PLN 65 billion, the fee is only 0.015% a month. The variable component depends on investment returns generated by the fund, but may not exceed 0.005% of net assets per month. A management fee is charged proportionately to investment returns. A pension fund management company with the highest rate of return may charge the full variable portion of the fee, while a company whose fund generated the lowest rate of return may not even charge the variable component.
- **Transfer fees** are charged if an OPF member changes fund within 24 months. The fixed fee ranges from PLN 160 to PLN 80, depending on the length of the membership period.

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**Table 10. Average accumulated pension capital in Pillar 2 Open-ended Pension Funds (OPF), per participant by age group and gender (as of 31 December, 2017)**

<table>
<thead>
<tr>
<th>Age groups, years</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 25</td>
<td>536 zł ($154)</td>
<td>434 zł ($125)</td>
</tr>
<tr>
<td>26 – 30</td>
<td>2,364 zł ($679)</td>
<td>1,949 zł ($560)</td>
</tr>
<tr>
<td>31 – 35</td>
<td>6,100 zł ($1,752)</td>
<td>5,087 zł ($1,461)</td>
</tr>
<tr>
<td>36 – 40</td>
<td>11,893 zł ($3,416)</td>
<td>10,110 zł ($2,904)</td>
</tr>
<tr>
<td>41 – 45</td>
<td>17,676 zł ($5,078)</td>
<td>14,927 zł ($4,288)</td>
</tr>
<tr>
<td>46 – 50</td>
<td>19,951 zł ($5,731)</td>
<td>17,571 zł ($5,047)</td>
</tr>
<tr>
<td>51+</td>
<td>17,097 zł ($4,911)</td>
<td>14,577 zł ($4,187)</td>
</tr>
<tr>
<td><strong>Average wage in 2017</strong></td>
<td><strong>4,224 zł</strong> ($1,118 per average exchange rate)**</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** exchange rates for Polish złoty on 31.12.2017:
- 1 Euro (€) = 4.1709 zł
- 1 USD ($) = 3.4813 zł
- 1 Hryvnia (₴) = 1 zł = 8.0117 hryvnia

**Source:** Financial Supervision Commission (KNF - Komisja Nadzoru Finansowego); OPFs for the 4th quarter of 2017; [https://www.knf.gov.pl/publikacje_i_opracowania](https://www.knf.gov.pl/publikacje_i_opracowania).

Since 1 November 2014, the accumulated pension assets in the Pillar 2 OPF accounts have been transferred gradually, on a monthly basis, to ZUS and credited to the FUS subaccount within the framework of the so-called ‘security slide’ 10 years prior to reaching statutory retirement age. The introduction of the security slide was aimed to protect against the risk of a (so-called) “bad date”, that is a strong capital markets slump in a given retirement year, which would result in a reduction of the pension capital and, consequently, in a lower old-age pension. Upon reaching the statutory retirement age, all accumulated individual pension capital will be kept in the ZUS, which will pay out a pension for life. From the month in which the ‘security slide’ is launched, no additional contributions will be transferred to Pillar 2 OPF.

In Poland mandatory Pillar 2 supported the development of the financial market and created strong national institutional investors, which was a positive side-effect. Making the Polish system voluntary and introducing the slider mechanism means that there are de facto no new scaled inflows into the Warsaw Stock Exchange.

**Pillar 2 OPF Fees**

OPFs can charge three types of fees:

- **Distribution fees**, calculated as a predetermined percentage of contributions paid. It was initially capped at 7%, reduced to 3.5% by 2014 and to 1.75% thereafter.
- **Management fees**, which cover a fund’s administration costs. They comprise a fixed and a variable component. The fixed portion does not exceed 0.045% of monthly contributions (an annual cap of 0.54%). The fixed component is calculated on the basis of regressive ratio. For example, for the first PLN 8 billion assets, the monthly management fee amounts to 0.045% of assets, but for the assets above PLN 65 billion, the fee is only 0.015% a month. The variable component depends on investment returns generated by the fund, but may not exceed 0.005% of net assets per month. A management fee is charged proportionately to investment returns. A pension fund management company with the highest rate of return may charge the full variable portion of the fee, while a company whose fund generated the lowest rate of return may not even charge the variable component.
- **Transfer fees** are charged if an OPF member changes fund within 24 months. The fixed fee ranges from PLN 160 to PLN 80, depending on the length of the membership period.

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*interest rate of the main NDC account is the nominal growth rate of the insured wage bill* but no less than price inflation. This notional interest rate is applied retrospectively to accounts from the year 2000. Contributions to the newly created NDC sub-account are indexed according to the average growth rate of nominal GDP over the past 5 years.
Pension systems are not independent of the context in which they operate. The design of the new pension system in Poland in 1999 and the way it has been changing since 2014 was an outcome of a country-specific mix of economic, social and political factors. The EU accession in 2004 and the 2008 global financial and economic crisis triggered the second wave of pension system changes not only in Poland, but also in seven other CEE countries. Many countries decided to diverge from their initial pension privatization scenario, downscaling or fully reversing the development of their funded pension schemes and public PAYG pension systems are being reassessed.

Some Ukrainian politicians, financial sector professionals and experts biasedly and mistakenly describe Polish pension privatization as ‘the best example’ to follow in Ukraine. But most often they give only one argument in support - namely the positive effect of a mandatory Pillar 2 accumulation system on the development of the financial market and the creation of OPFs as strong national institutional investors. And it was positive ‘value added’ indeed. However, after 2014 the Polish Pillar 2 “pension success story” is over for the time being.

Table 11. Brief comparison between decentralized Pillar 2 pension system in Poland and centralized premium pension system in Sweden

<table>
<thead>
<tr>
<th>POLAND</th>
<th>SWEDEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>More expensive</td>
<td>Less expensive: fees negotiated with investment funds from the original</td>
</tr>
<tr>
<td>There is a risk related to the data-protection mechanisms, especially within financial groups managing open pension funds</td>
<td>“Blind” information provided to pension fund asset managers</td>
</tr>
<tr>
<td>No investment portfolio choice</td>
<td>Wide portfolio choice</td>
</tr>
<tr>
<td>No consolidated information about individual pension accounts statements</td>
<td>Consolidated information on the account statement</td>
</tr>
</tbody>
</table>

Source: Dr. Agnieszka Chłoń-Domińczak presentation for the Ukrainian Pillar 2 Pension Reform Working Group on November 20, 2017 at the World Bank Office in Ukraine.

55 See in details: Retreat from mandatory pension funds in countries of the Eastern and Central Europe in result of financial and fiscal crisis: Causes, effects and recommendations for fiscal rules, Warsaw, June 2015.
56 In Sweden, mandatory funded DC individual retirement savings (premium pension system – PPM) are included as an integral part of Pillar 1 pension system, along with its major PAYG NDC component (Incomst pension).
57 Dr. Agnieszka Chłoń-Domińczak is an Assistant Professor at Warsaw School of Economics and Educational Research Institute in Warsaw. In 2008-2009 she was a Deputy Minister of Labour and Social Policy. Previously she headed Department of Economic Analyses and Forecasting in the same Ministry. Her responsibilities included, among others the oversight of the social insurance system, family policy, extending working lives. In 2007-2009 She was the vice president of Social Protection Committee of the European Council and until mid-2009 member Employment, Labour and Social Policy Committee of the OECD, she also chaired the Working Party on Social Policy of that Committee. Ms. Chłoń-Domińczak has several years of experience on the core team in the Office of the Plenipotentiary for Social Security Reform that designed and implemented the new Polish pension system in 1999. In 2015, with Kamila Bielawska and Dariusz Stankiewicz she co-authored analytical paper on “Retreat from mandatory pension funds in countries of the Eastern and Central Europe in result of financial and fiscal crisis: Causes, effects and recommendations for fiscal rules”, (Warsaw, June 2015).
Poland’s plans for a dramatic overhaul of private pensions are moving ahead in 2018 – but only in part. The Capital Accumulation Program, unveiled in July 2016 by then finance and economic development Minister Mateusz Morawiecki (became Poland’s Prime Minister in December 2017), includes two radical changes: (1) the liquidation of Pillar 2 OPFs at the start of 2018 (not happened yet), and (2) the launch of a new voluntary occupational pension scheme, the Employee Capital Plan (PPK). The dismantling of the OPFs, with 75% of the assets moving to new individual pension accounts, and the remainder to the Demographic Reserve Fund, remains on the drawing board, and the transition may take one to two years. Proposed PPK auto-enrollment system will cover all workers aged between 19 and 55 years, allowing employees choose by themselves to opt out if they want. Older workers will be able to opt in and temporary suspension will also be possible.

On February 15, 2018, Poland’s government finally released its ambitious PPK program legislative draft for consultation. The PPK design has incorporated best practice from Germany, the UK, Canada, Scandinavian countries and New Zealand (not anymore Chile…), which has been broadly welcomed by the Polish pensions industry.

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Pension System Privatization Effect of Chile

On May 1st 1981, Chile moved away from a badly-designed set of diverse social security-type defined-benefit plans, and put in place a mandatory individual retirement savings accounts’ system in the formal sector, with a guaranteed minimum for participants with at least 20 years of contributions. Since the reform was designed and put in practice under military rule, it lacked legitimacy at the origin.


These reforms had distinct aspects and characteristics, but they all shared a common objective: to make their social protection systems viable, or in other words to ensure that they are funded in the medium and long term.

Figure 5. Chile: Pension assets in USD and as a percent of GDP, 1981-2017

As savings in the Chilean accumulation pension system gradually built up – today, they reach some US$211 billion or 76% of GDP as of December 31, 2017 (Figure 5) – they provided a new source of investment financing for Chilean companies, fueling the growth of the economy and the country’s capital markets and, in a virtuous circle, delivering high returns on the savings themselves. Moreover, by taking a large part of the burden of financing pensions off the government, the system also promised fiscal sustainability.

Chile’s private pension system is far from the only reason for the country’s healthy fiscal situation – a tradition of discipline enshrined in a fiscal rule that ties government spending to medium-term revenues is key – but it has helped.
When it was launched, the Chilean pension system promised a replacement rate of 70%. That promise was tied to a number of conditions, like the frequency of contributions, but what stuck in people’s minds was the magic ‘70%’ figure. However, according to OECD, the replacement rate in Chile for an average earner is currently just under 40%. That is not only far below Chileans’ expectations but also well below the OECD average of just over 60%.

But since the early 1980s, pressures on pension systems worldwide – whether of the public pay-as-you-go type or those based on personal savings accounts – have mounted sharply. The population has aged – men of 65 in Chile can now expect to live another 21 years, up from 13 years when the private pension system was created, while, for women of 60, the increase has been from 21 to almost 30 years.

After 25 years, the fragmentation, low coverage and high costs of administering the private system led to a comprehensive reform to address these problems in 2008. President Bachelet, in her first presidential term (2006-2010), appointed an Advisory Pension Commission (so called Marcel Commission), and 90 per cent of that commission’s recommendations were incorporated in the law enacted in 2008.

The pension reform-2008 was a big step forward, as it transformed the Chilean pension system partially into a mixed scheme, adding a first solidarity pillar (Pillar 1) to the accumulation Pillar 2 that already existed. It also managed to break the concentration trend in the AFPs market, promoting more competitive and efficient behavior and increased the coverage among self-employed. Thus, Chile similarly pioneered pension privatization “re-reform” in 2008 that achieved substantial improvements, but still left key shortcomings:

- **Inadequate pensions.** At the time of reform in 1981 people were led to expect a 70% replacement rate. Yet, in contrast with OECD member countries, whose average net replacement rates are 63% for men and 62% for women with histories of regular contributions, Chile is below that average by 18 percentage points for men and 28 percentage points for women. Widespread discontent about low pensions raised the central question of how to raise replacement rates. Since the solidarity pension improved poverty relief for the elderly, a particular concern was replacement rates above the poverty line.
- **Low coverage.** Many people do not contribute all the time, nor pay the full amount owed to their account; and many self-employed workers do not participate since they are not required.
- **Continued high charges.** Administrative charges continued to be a concern, despite improvements from the auction mechanism, because many people do not move to AFPs with lower charges.
- **Gender inequality.** Women in Chile face a quadruple disadvantage: (a) their average wages/income are lower than that of men; (b) on average, they pay contributions for a shorter period of time; (c) the retirement age for women is lower (60 years) than for men (65 years), and the life expectancy at retirement age is higher; (d) for the calculation of life-time pensions (annuities), the gender-differentiated tables are used. As a result, the replacement rates for women are systematically lower than for men.
- **Hostility towards the AFP system.** A high percentage of the population believe that only a complete change in the AFP system would help improve pensions (72%) and believe that most of the responsibility for low pensions lies with the AFPs (66%), though with lack of clarity whether the discontent is with the system itself (including its origin under a dictatorship) or the fact that pensions fall short of people’s expectations.
- **Low financial literacy.** Lack of financial literacy helps to explain at least in part why the AFP system is blamed for low pensions when for many people the underlying cause is an incomplete contributions record. It also helps to explain why people do not move to AFPs with lower charges.

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58 Barr Nicholas, Diamond Peter: Reforming Pensions in Chile, Polityka Społeczna, No. 1, 2016, pp. 4-9.
The individual retirement accounts system pays very small pensions to a large part of Chileans, mainly due to coverage gaps and irregularity of contributions payment (due to unemployment, informal employment, etc.). Women’s benefits are generally scarce and far lower than men’s annuities. This is despite the impressive real investment return from 1981 to 2017 that amounted to an average of 8% per year, while real GDP grew by an average of 4.2% annually, and a real hourly salary of only 2.2% per year for 35 years.

In 2016, the average pension benefit from the accumulation system in Chile was $315 USD, which is 18% less than the minimum wage ($384), and 40% of pension annuities were lower than the subsistence minimum.

Half of Chilean pensioners are currently receiving benefits from mandatory retirement accounts that do not exceed 34% of their average salary over the past ten years (Table 12). The replacement rate of the old-age benefits was significantly different for men and women in 2007-2014: the ‘average men’ received 48% (60% plus solidarity supplementary pensions) of his earnings for ten pre-retirement years, while this rate was twice lower for women - 24% (31% plus supplementary payment from the joint-stock system). Projections of private (self-financed) pensions for 2025-2035 are even more pessimistic.

| Table 12. Chile: Median replacement rates (RR) for 2007–2014 and projected 2025–2035 |
|---------------------------------------------|--------|--------|--------|
| Actual replacement rate in 2007-2014        | Total  | Men   | Women  |
| Self-financed pension (Pillar 2)            | 34%    | 48%   | 24%    |
| Self-financed pension + solidarity supplement (APS) | 45%    | 60%   | 31%    |
| Projected replacement rate for 2025-2035    |        |       |        |
| Self-financed pension (Pillar 2)            | 15%    | 24%   | 8%     |
| Self-financed pension + solidarity supplement (APS) | 37%    | 41%   | 34%    |


In 2014, a second Presidential Advisory Commission (so called Bravo Commission) was appointed by President Michelle Bachelet during her second term (2014-2018) to evaluate reform progress and address remaining problems in the pension system. President Bachelet said her government would seek a “national agreement” on pension reform, and had met with lawmakers, party leaders, business representatives, the pension funds and members of the protest movement, known as No+A.F.P. But a return to the old solidarity PAYG system seemed to be off the table.

Drawing on the recommendations of the second Advisory Commission report, former Chilean government announced in August 2016 plans to:

1) gradually increase contribution rates by 5 percentage points over a 10-year time span;
2) allocate the additional revenue in yet-to-be-determined shares to individual accounts and for solidarity system payments (which improve pensions of current retirees), and
3) reduce costs of the pension fund administration (although, it is still not clearly defined what measures will be adopted).

The Chilean government did not plan to change the retirement age during 2015-2017. The increase in contributions by 5 percentage points was estimated to increase replacement rates by up to 20 percentage points in the long-run, bringing them closer to OECD standards (60%-70%). Following months of mass demonstrations in 2016-2017 calling for better pensions and strong political and fiscal pressure to deal with this issue, President Bachelet’s administration sent a legislative package to Congress in August 2017 in an attempt to address this important topic during her last months in the office (until March 10, 2018).
The new President of Chile Sebastian Piñera (assumed the office on March 11, 2018) has also presented a formula for improving pensions that is very different from the previous government’s proposal. He called for increasing the individual contribution by 3% to 4%, to be paid by the employer. Sebastian Piñera also considers indexing the retirement age to life expectancy, incorporating more stimulus for delaying retirement, gradually setting the same retirement age for men and women, and increasing fiscal spending from the current 0.7% of GDP to more than 1% to improve the solidarity Pillar 1, among other measures.

Pension System Privatization in CEE countries and its reversal

Almost two decades after the nine Central Eastern European (CEE) countries (Bulgaria, Croatia, Estonia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia) reformed their pension systems, the EU accession of these countries initiated a new wave of socio-economic changes, characterized by an increasing role being played by European institutions. Experiences from the implementation of the reforms, including the performance of private pension funds, reopened national discussions on pension systems and their design. The 2008 global financial crisis triggered the second wave of radical pension systems changes. Many CEE countries decided to diverge from their initial reform scenario, downscaling or fully reversing the development of their mandatory individual retirement savings systems.

Transition towards funding has significant transition costs: if worker’s contributions are diverted to individual accounts, they cannot be used to finance current PAYG pension benefits, hence past promises have to be met from elsewhere in the government budget. Table 13 shows an additional burden on state budgets in 2001-2015 (as a percentage of GDP) due to partial pension privatization in eight CEE countries that introduced Pillar 2 systems. From 2001 (or the later year when mandatory funded pension systems were introduced) to 2015, the total level of transition cost differed significantly among CEE countries and ranged from 17.4% of GDP in Poland to 4.6% of GDP in Romania. The three major sources for covering transition costs were: (1) financing from general taxes (a burden for the working generation) and other budget revenues, including from privatization; (2) financing from savings in the existing PAYG systems, primarily by introducing less generous indexation of benefits, raising the retirement systems.

Table 13. Total cost of transition to mandatory accumulation systems in CEE in 2001-2015.

<table>
<thead>
<tr>
<th>Country</th>
<th>Period</th>
<th>Transition cost (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>2001-2015</td>
<td>17.4</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2002-2015</td>
<td>13.0</td>
</tr>
<tr>
<td>Estonia</td>
<td>2002-2015</td>
<td>11.2</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>2005-2015</td>
<td>10.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>2001-2010</td>
<td>9.9</td>
</tr>
<tr>
<td>Latvia</td>
<td>2001-2015</td>
<td>6.7</td>
</tr>
<tr>
<td>Lithuania</td>
<td>2004-2015</td>
<td>6.4</td>
</tr>
<tr>
<td>Romania</td>
<td>2008-2015</td>
<td>4.6</td>
</tr>
</tbody>
</table>


As budgetary and demographic pressures start to bite, what is the future for CEE pension systems?

- CEE countries continue to scale back Pillar 2 systems
- Governments blame the financial crisis, budget deficits and debt
- Critics blame initial design flaws and policy short-termism
- Shadow economies and labour migration are the key issues in CEE
- Lack of financial education and awareness are major concerns


60 This paper was presented at the 2018 annual meeting of the American Economic Association (AEA) in Philadelphia on January 6, 2018. It is an updated and shortened version of the previous report prepared by the same authors in 2015 (Retreat from Mandatory Pension Funds in Countries of the Eastern and Central Europe in Result of Financial and Fiscal Crisis: Causes, Effects and Recommendations for Fiscal Rules).
age, and limiting early retirement options (a burden for the retired generation); and (3) an increase of the government’s debt (a burden for future generations of taxpayers).

Furthermore, some of the CEE pension reform results did not meet initial expectations. As Nicholas Barr and Peter Diamond\(^1\) pointed out, the expected reform outcomes are contingent on beneficial effects on economic growth and on country-specific factors, including the institutional capacity: skills in allocating pension funds, skills in administering individual retirement accounts and the capacity to regulate financial markets.

Mindful of public opinion, some countries, notably Hungary and Poland, accused Pillar 2 industry providers of generating low growth rates\(^2\) compared to the unfunded Pillar 1, charging excessive fees and failing to provide adequate pensions on retirement. In CEE countries, Pillar 2 real investment returns net of pension funds fees/charges were lower than real GDP and wage growth.

Hungary completely terminated the mandatory individual retirement accounts, and transferred current contributions and almost all of the accumulated assets to the solidarity system (from 1 November 2010 to 31 December 2011). Pillar 2 participants had to decide by January 31, 2011, whether to remain in the accumulation system or to return to the solidarity system. Before its liquidation (end of 2010), there were 3.1 million participants (over 70% of the employed) in the Hungarian Pillar 2 accumulation system, and only 102 thousand persons (3%) expressed a desire to stay in it after 2011. After December 31, 2011, employees and employers pay all pension insurance contributions only to the solidarity Pillar 1 system.

For the same financial and budgetary reasons, Argentina also fully nationalized the mandatory individual retirement accounts system (Pillar 2) in 2008 in order "to protect retirees from falling stock and bond prices as the global financial crisis continues"\(^3\). Nationalized private pension assets accounted for almost $30 billion dollars.

Despite the budget constraints and the global financial crisis of 2008-2009, Estonia, Latvia, Lithuania, Poland and Romania have kept their Pillar 2 private pensions systems, but reduced or frozen the contribution rates to individual retirement accounts in order to increase the financing of solidarity pensions. For example, in Poland, the government reduced contributions to Pillar 2 from 7.3% to 2.92%, and increased contributions to the solidarity pension system accordingly. In Slovakia, contributions to Pillar 2 were reduced from 9 to 4%, in Latvia - from 8 to 2% (later increased to 4%), while in Romania, the contribution rate of 2% remained unchanged from 2008 to 2011 (instead of a planned increase) after which it has been increased up to 0.5% annually until reaching 5.1% in 2017.

Almost 10 years after Romania introduced a mandatory funded element to its state pension system, in early 2017 the government started to discuss options including closing the funded segment of the pension system completely or making it fully voluntary. In the end, in November 2017\(^4\) a significant cut in contributions was adopted as a preferred option.

Despite protests – including from international organizations – contributions to the mandatory funded pillar of the state pension system were reduced from 5.1% to 3.75% from the beginning of the 2018. The Romanian Pension Funds Association (APAPR) stated on its website that, the decision would shrink second-pillar pensions payouts for future beneficiaries by at least 20%, while lowering capital-market financing possibilities for Romanian businesses.

\(^4\)https://www.ipe.com/pensions/country-reports/cee/romania-analysis-of-a-miscalculation/10022466.article.
According to Agnieszka Chłoń-Domińczak, assistant professor at the Warsaw School of Economics’ Institute of Statistics and Demography and former Deputy Minister of Labor and Social Policy in Poland (and Pillar 2 participant), a combination of fiscally unaffordable contribution levels, high transition costs and excessive pension asset management charges eventually led to the demise of the Hungarian second pillar and the dramatic scaling back in Poland. She also highlighted the issue of trust in Poland’s Open Pension Funds (OPF) managers when they share personified record keeping data with other companies of their financial group. After nearly 20 years of pension privatization in Poland Ms. Chłoń-Domińczak is confident that Swedish approach with the non-profit public centralized administration of individual retirement accounts (PPM) and private investment management of pension assets has resulted in a more efficient and less costly system.

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KEY LEGISLATION


2003: Law of Ukraine “On Compulsory State Pension Insurance” (No. 1058-IV, dated July 9, 2003) stipulated payment of benefits depending on work period and earnings from which insurance contributions are paid according to personified records. The law also defined sources of financing of different pension programs separating budget of the Pension Fund of Ukraine and the state budget of Ukraine.


2001: Law of Ukraine “On Financial Services and State Regulation of Financial Service Markets” set the duty of state supervision and control over the activities and services provided by non-state pension funds.

1991: Law of Ukraine “On Pension Provision”, with subsequent amendments, is applied with respect to the determination of the right to preferential or length-of-service old-age pension.

KEY REGULATORY AND SUPERVISORY AUTHORITIES

The Government (Cabinet of Ministers) of Ukraine, (www.kmu.gov.ua)
Ministry of Social Policy of Ukraine (MSP), (www.mlp.gov.ua)
Pension Fund of Ukraine (PFU), (www.pfu.gov.ua)
National Bank of Ukraine (www.bank.gov.ua)
National Commission on Regulation of Financial Services Markets of Ukraine (https://nfp.gov.ua)
National Commission on Securities and Stock Market (https://www.nssmc.gov.ua/)
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31. Pension Fund of Ukraine Annual Report 2017
43. The 2017 Melbourne Mercer Global Pension Index, 2017.