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Outcome Based Assessments for Private Pensions

A Handbook

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Outcomes-Based Diagnosis and Assessments for Private Pensions: A Handbook

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Summary

This handbook explains the outcomes-based diagnosis and assessment (OBA) framework for private pensions. The framework focuses on the pension outcomes that will improve people's lives and how private pensions can help to improve these outcomes. The OBA is an integrated framework that addresses issues ranging from strategic vision and initial data requests to implementation and monitoring and evaluation. The diagnosis and assessment methodology combines theoretical insights with the practical work of a reviewer. Recommendations are tested against common implementation challenges to enhance deliverability. The Handbook provides a wide range of references to the literature that can be used to illustrate key issues with clients. It is intended as a first round diagnosis and assessment tool that identifies the most important areas on which to follow-up. So it helps to support a modular approach where priority areas are then addressed using more specialized tools.

The framework identifies five key outcomes of a pension system: efficiency, sustainability, coverage, adequacy, and security. It builds on and deepens existing thinking, leveraging insights from a wide range of pension practitioners and the experience of using the approach in multiple countries. For each outcome, a set of key features has been developed. For some of the features, international standards exist—for example, the governance of pension funds. For others, no standards exist—for example, the scale of bodies delivering pensions. The combined list of features to review should cover all the areas that are important to improving the contribution of private pensions to a pension system. As the evidence changes on what works features can be added or removed. For example, it is intended that future editions of the Handbook will include greater detail on expanding coverage to the informal sector – where practice is developing rapidly.

This guide and the associated reviewer tools have been used in many reviews already. Using the methodology helps to enhance transparency and comparability of reviews, whilst preserving the role for the judgment of the expert reviewer working within or alongside partners in the countries concerned. The aim is to help develop reforms that expand the coverage of good quality pensions – defined in terms of their outcomes in relation to efficiency, sustainability, adequacy and security – and increase the stock of assets that can safely fund long-run development. This requires a diversified mix of public and private provision – and this Handbook covers the contribution private pension reforms can make to the overall system.

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Acknowledgments

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Chapter One: Introduction and Outcomes

1.1 Overview

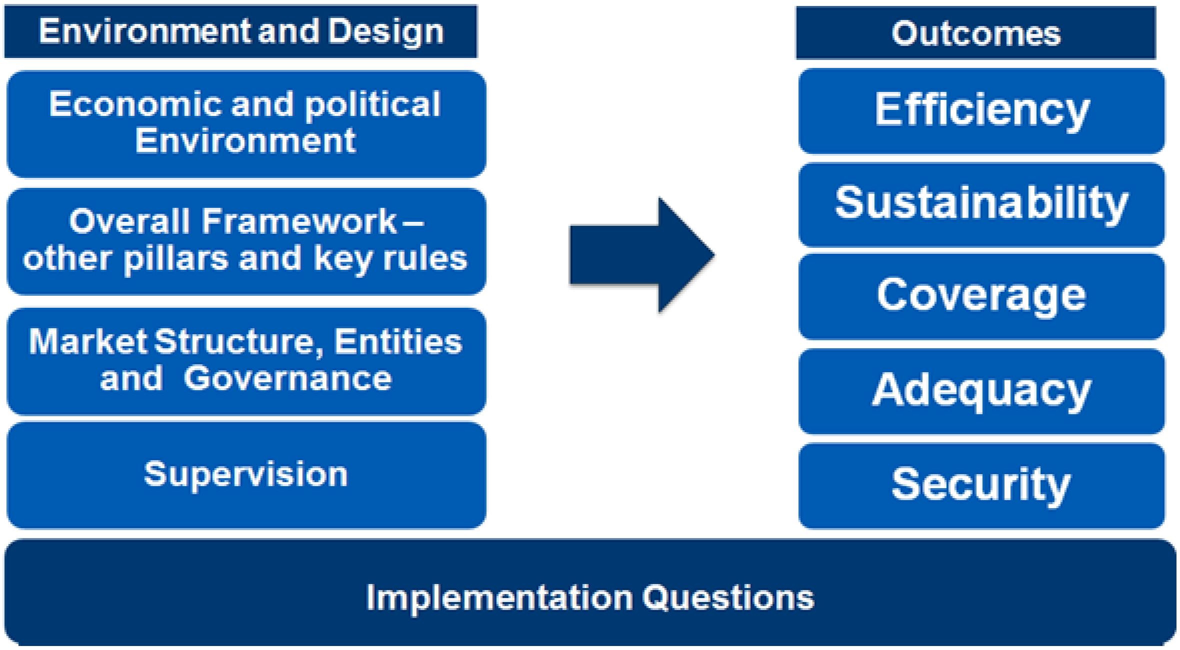
This Handbook sets out a new outcomes-based diagnosis and assessment (OBA) framework for private pensions. It puts the pension outcomes that will improve people's lives at the heart of an assessment methodology designed to identify how private pensions can contribute to improving those outcomes. The OBA for Private Pensions starts with outcomes and works back to the key features that explain the contribution of private pensions, and the data to support enable comprehensive assessment. The key features are reviewed in an assessment that produces a country specific diagnosis. Recommendations are tested against common implementation challenges to enhance deliverability. The outcomes-focus helps to link the definition of strategic vision with key indicators for monitoring and evaluation. The assessment methodology draws on international best practice. It has been used for broad reforms of private pensions or projects reviewing a specific outcome or concern.

The framework identifies five key outcomes of a pension system: efficiency, sustainability, coverage, adequacy, and security and looks at how private pensions can improve these outcomes. It builds on, and deepens, existing thinking, leveraging insights from a wide range of pension practitioners. For each outcome, a set of key features was developed. For some of the features, international standards exist—for example, the governance of pension funds. For others, no standards exist as yet—for example, the scale of bodies delivering pensions. Trade-offs between outcomes make reviewer judgment critical.

The framework shows how the contribution of private pensions can be reviewed within the wider economic and political context of an economy rather than simply focusing on legislation and regulation. The overall framework in its simplest form is shown in Figure 1.1**,** which links the key areas of an economy that affect (public and) private pensions. The approach aims to set up a modular format – where this initial diagnosis and assessment is used to identify the highest priority areas – and these are then explored in much greater detail. For example, an identification that costs are an issue could be followed by a detailed cost benchmarking exercise and a change to the market structure of the pension system to reduce the costs. Problems with unique identification could be followed by an identification (ID) module.

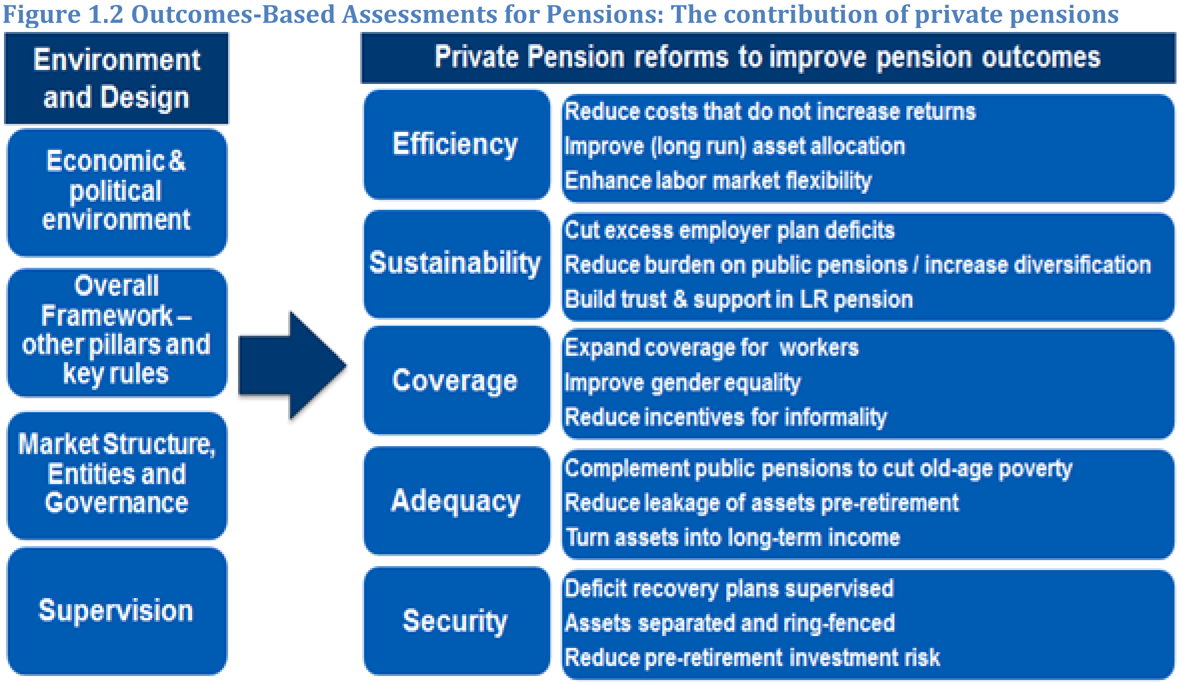
This modular approach has been used in the projects undertaken so far – where the initial diagnosis and assessment helps to provide a rigorous methodology to identify the areas on which to focus. For example, a case study referenced on Costa Rica saw the initial OBA followed by a 2-year project to develop and implement solutions in the priority areas that involved over 100 deliverables and 2,000 pages of inputs. But before embarking on this level of detail the OBA was critical in ensuring that the right areas had been prioritized – and crucially that the reviewers had covered all the potential risk areas to avoid problems with confirmation bias or reviewers gravitating to issues in which they have a particular interest without verifying that they were the most important for the client agency.

Figure 1.1 Outcomes-Based Assessments for Pensions: An Overview



The OBA focuses in particular on how private pension reforms can improve the overall pension outcomes. So the overall approach as set out in Figure 1.1 needs to be refined to highlight how private pension reforms can help to improve overall pension system outcomes. This shows a set of potential reforms that are highlighted in more detail below – but that that show the type of interventions that are often pursued. These can be introduced as part of a private-only reform program or one in which public and private pensions are reformed together. Whether specific or joint reforms are preferable will depend on the political context in a country at the time.

Figure 1.2 Outcomes-Based Assessments for Pensions: The contribution of private pensions



The OBA framework for private pensions can be used in a wide range of country diagnostic work. It has been used in Financial Sector Assessment Programs (FSAPs), in technical assistance, or projects such as those from the Financial Reform and Strengthening Trust Fund (FIRST) Initiative to strengthen financial sector outcomes. For pension FSAPs, the framework provides a link between the broad-based development assessment part of an FSAP led by the World Bank and the separate Report on Observance of Standards and Codes (ROSC), which follows the methodology of the standard setter.

This Handbook covers both the development of the framework and its final form, including the tools for reviewers to enable a review to both explain and use the methodology. The approach has been used in countries of different sizes and at different levels of development. It been used for broad strategic projects and those with more focused remits. Using the private pension OBA framework improves the rigor and comparability of analysis focusing on the long-run objectives of reforms. It enhances the clarity and consistency of monitoring and evaluation. The outcomes and their indicators are fully consistent with the World Bank strategy for eradicating poverty and boosting shared prosperity sustainably. They should be applicable to many countries seeking to achieve better pension outcomes. The particular contribution of the report is the creation of an assessment methodology unifying theoretical insights within a practical review tool, an accessible review of some of the key literature and a methodology to compare international standards in financial markets in a common outcome format.

The rest of this chapter sets out the scope of the outcomes-based assessment framework for private pensions, how it was designed, and the key elements within it. It explains why the five outcomes—efficiency, sustainability, coverage, adequacy, and security—were chosen. It introduces some key concepts that are developed further in subsequent chapters.

Chapter Two reviews the evidence to determine the key features that help to explain private pension outcomes. It gives the broader context to develop private pension reforms that can improve the overall pension system. It shows how this methodology can be augmented by emerging evidence - if it helps us better understand how to improve performance. Chapter Two also summarizes the analysis of the international standards relevant to pensions. This exercise was an important input to the key features. It included a unique comparison of insurance, securities and pension standards in a common outcome framework.

Chapter Three describes how the overall assessment framework was completed and the review tools that were developed. It highlights the importance of including the economic and political environment and the preconditions, as well as the importance of focusing on other pension pillars and legislation, market structure, and supervision. It also shows how the initial diagnosis and assessment can then flow into the development of Outcomes- and Risk-Based Supervision (O-RBS). This is a broad based approach to Risk Based Supervision. It is anchored towards achieving specific long-term outcomes and looks at the impact of systemic risk in an economy and pension market as well as entity specific risk assessment. It also advocates a focus on a broad toolkit of interventions from regulation, supervision, communication training and changing market structure as part of an on-going and dynamic discussion with market participants, members and government.

Private pension OBAs were initially developed to be performed by experienced and skilled reviewers of private pensions as part of a country-specific diagnostic and policy development process. However, from using and discussing the approach with many agencies contemplating reform it is clear it may also be useful as a self-assessment tool. It can help guide practitioners to the huge literature on pensions as well as on the links to different international standards, as well as to provide clarity on long-run outcomes that represent meaningful deliverables for citizens in a country. In addition, the list of key features help to identify the most important areas for scrutiny. . Whoever, uses the framework needs to be aware that trade-offs that exist between outcomes, so reviewer judgment is critical. The approach involves recording the findings and judgements and assigning a risk rating to their importance and the scale of the challenge to surface implicit comparisons and discussion of these judgements.

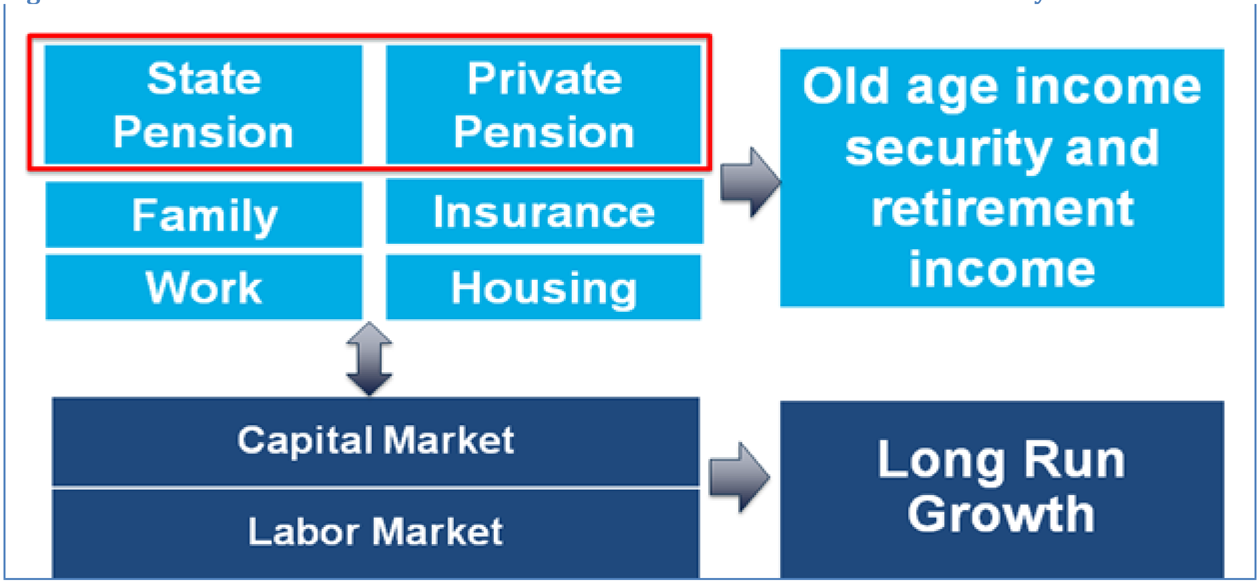
1.2 Context: Private Pensions as Part of a Diversified Pension System

Good pension and retirement income policy is impacted by long-run growth, macroeconomic strength, robust financial markets, and sound social policy. This creates a challenge for the policy maker and the reviewer seeking to improve private pensions to ensure that the process has a sufficiently broad and forward looking perspective, as well as focusing on complex, and technical design issues. It requires a framework that can bring global insights on what works, in a way that can be tailored to the specific requirements of a given country. This ensures that the contribution of private pensions to a pension system can be enhanced - to play its part in the battle to eradicate poverty, to ensure that people do not fall back into relative poverty in old age and to use pension assets safely and sustainably to finance long-run development—for this and future generations (Figure 1.3).

The framework was designed to help private pension reviewers to develop a coherent diagnosis and a set of policy recommendations that help improve an overall pension system. The approach complements that used to diagnose and improve public pensions centered on the World Bank's actuarial pension reform options simulation toolkit (PROST)[1]. It can be used in a complementary way when considering reforms of a pension system or as the primary methodology when only the private pension system is being reviewed. In the latter case the OBA methodology—by paying proper attention to the links between public and private pensions—can highlight when parts of the public pension environment need attention by public pension specialists. This was a key recommendation, for example, in the recent FSAP in Suriname. This is similar to how a review of the bond market must take account of the banking sector to develop robust bond market reforms but does not aim to cover reform of the entire banking system as part of its scope. It may, however, provide important insights than can be useful to banking sector specialists.

[1]PROST is a computer-based toolkit to simulate pension systems over a long timeframe. See Bogomolova (2014) for more details.

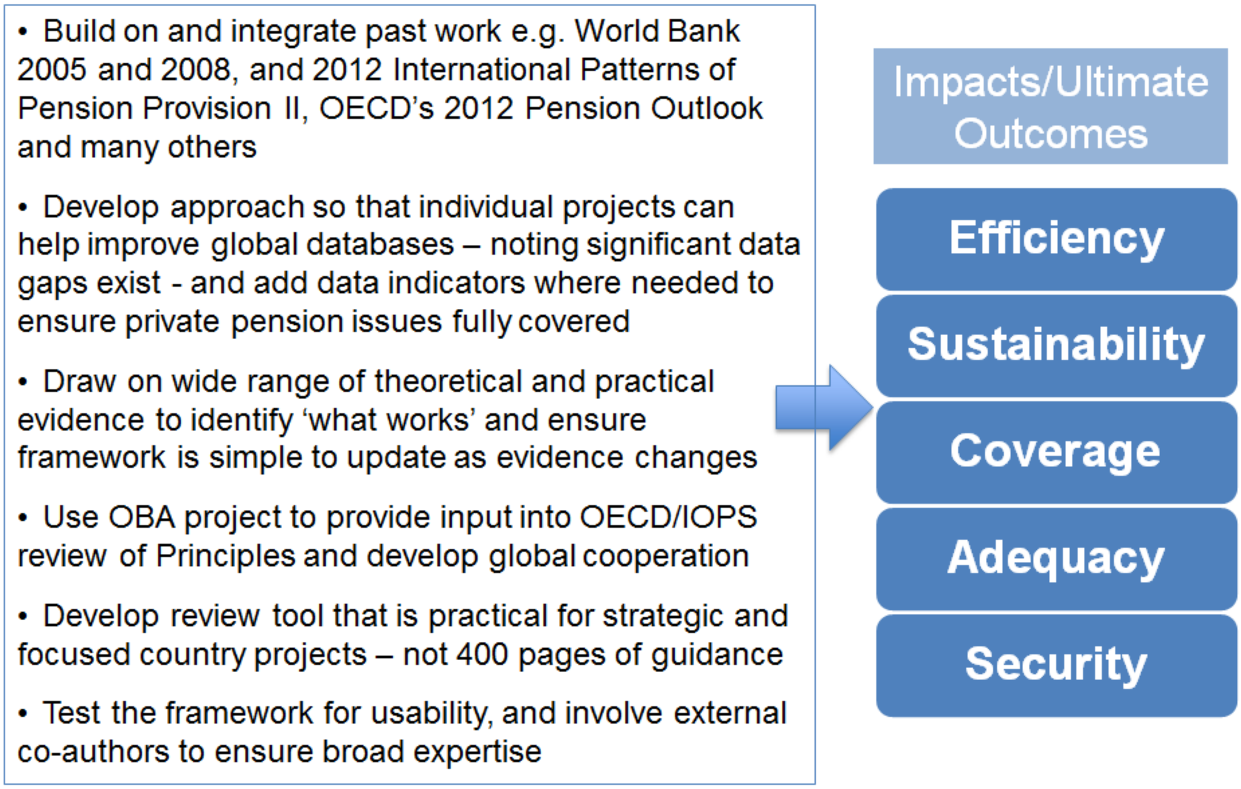
Figure 1.3: The Role of Private Pensions as Part of a Diversified Retirement Income System



Some issues are common to public and private pensions, whereas others are of particular importance to one part of the system or the other. Governance and investment have elements common to everything from funded social security plans to employer-sponsored occupational plans and individually purchased voluntary pension plans. However, the issue and emphasis may differ. Likewise, issues of data, identification, and information technology (IT) are common to all parts of a pension system. Other elements are more specific to private pensions—particularly the value chain from marketing, product development, distribution, and sales—as well as the role of pension supervisors; (even then some have a remit that covers parts of the public pension system as well as private pensions).

The framework was developed using a clear set of guiding principles and methodology to identify the long-run outcomes, identify indicators, determine the features driving outcomes, and then test and adapt the methodology before finalization.

Figure 1.4Design Principles for the Pension Outcomes-Based Assessment Framework



1.3 Developing the Five Outcomes

Five outcomes for pension system to which private pensions could contribute were identified. These are: efficiency, sustainability, coverage, adequacy, and security. They were derived by experimenting with a range of approaches and testing the outcomes against whether they provided a good guide to understanding and developing a private pension system. This section explains how these five outcomes were decided upon.

For consistency and ease of navigation, the outcomes are set out in the same order throughout this document and in the related toolkit for reviewers. But the reviewer can change the order of outcomes on which to focus. The precise order is not important—the key issue is that the outcomes are comprehensive (for example an additional outcome is not needed) and that trade-offs between them are explored—for example, between adequacy and sustainability or security and efficiency. The order chosen in this Handbook came from applying the methodology in a regulatory and supervisory context, but the user can easily change the order when conducting a review. For instance a review focused on expanding pension provision might use them in the order: coverage, adequacy, sustainability, efficiency and security.

The 2005 World Bank book *Old-Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform* set out four core outcomes: adequacy, affordability, sustainability, and robustness (Holzmann and Hinz 2005). Contributions to economic growth were considered as a secondary goal. Although not one of the four main outcomes, coverage of pensions was discussed in significant detail. Adequacy and sustainability are always central to public and private pension outcomes and must be part of any pension system framework. They continue to be used extensively both in World Bank work and in the work of a wide range of other organizations (Schwarz and Arias 2014). The adequacy-sustainability trade-off is one of the perennial issues in pensions and forms the center of the Global Aging Preparedness Index (Jackson and others 2010, 2013, Help Age 2014).

Sustainability relates to fiscal challenges for governments as well as the level of contributions required from employees and employers – particularly in Defined Benefit plans that are underfunded. This allows a simpler but more comprehensive use of the framework across countries—from employer burdens in a defined-benefit occupational system - to fiscal deficits in a defined contribution system, where the transitional deficit from diverting contributions to a funded private system has not been closed. Fiscal sustainability can be enhanced by reforming public pensions alone, or as part of a package of reforms to public and private pensions. In some countries reforms to expand private pensions are needed to make previous cuts in public pensions viable – since they may be politically unsustainable (and hence not create fiscal space) if other sources of retirement income are not developed. A sustainable system should be designed to deal with macroeconomic shocks from the outset because these will certainly occur over the life of a pension system. The World Bank's objectives of eradicating poverty and boosting shared prosperity explicitly aim to achieve this sustainably —in an environmental but also in an economic and political sense.

Coverage needs to be considered as a long-run outcome explicitly, rather than implicitly as a component of 'adequacy'. Improving coverage has become a central policy issue (Levy 2008; Bosch, Melguizo, and Pages2013; Rofman, Apella, and Vezza2013; OECD 2012a, among many others). The key question for a private pension review is the contribution that private pensions can make to coverage – noting the challenges contributory pensions of all forms have when labor markets are highly informal. That said, public non-contributory pensions may not exist in some countries, where initiatives to encourage informal private savings are especially important (Bhardwaj 2014). The trade-off between adequacy and sustainability is often a trade-off between coverage, adequacy, and sustainability, since costs can come from extending either coverage, benefits, or both.

For private pensions an explicit focus on system efficiency is also vital. That is, how well do the entities administering pension plans transform inputs into retirement income? This is clearly an issue for private pension systems, where the cost of investments and the rate of return on those investments are critical[2]. Pension systems can have substantial impacts on capital and labor market efficiency—both positive and negative. Hence efficiency not only enables improvements in other outcomes—for instance, better net investment returns that improve adequacy—but can also contribute to economic efficiency. Enhancing the contribution of pension assets to developing long run investment, including in infrastructure, as an additional source of finance for development is an area of growing focus (Inderst and Stewart 2014). In the labor market longer working lives can help to create retirement income, but, other things being equal, improved labor market participation should improve long-run growth. Extending working lives for the old should not be seen as a threat to youth employment given that strong labor markets tend to show better employment rates at both young and old ages (OECD 1994).

The 2012 World Bank report "International Patterns of Pension Provision II" created a particularly important foundation (Pallares-Mirralles, Romero, and Whitehouse 2012). It sets out an updated categorization focusing on the "performance indicators" of pensions, including not only coverage, adequacy, and sustainability but also economic and administrative efficiency. The OBA project experimented with including separate categories of efficiency in this way. In practice, it proved difficult to

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[2]It may also be relevant for public pension systems—both when investing assets and when determining the overall costs of the collection, recording, and payment systems (Sluchynskyy 2014).

draw the dividing lines between different elements of efficiency. This was true both in the data collection (where some elements overlapped) and in the key features driving the outcomes (where there was often a great deal of overlap), as in the role of governance in both costs and investment returns. Moreover, it was important to consider costs and investment returns within the same outcome to emphasize the importance of net-of-fee returns from invested assets rather than each element of costs or investment in isolation.

The Private Pension OBA framework follows the logical flow from inputs to outcomes with the associated focus on strategy and data collection and measurement. The OECD *Global Pension Statistics and Pension Markets in Focus* (OECD 2013a) also informed the development of performance measures. The data collection sheets developed for the framework use the definitions in Pallares-Mirralles, Romero, and Whitehouse (2012) and OECD (2013a) as much as possible, adding new data requirements where necessary. Data collection is challenging – and significant improvement is needed in most countries.

The project aimed to develop a clearer focus on <u>security</u> as an outcome. Security is distinct from sustainability and more clearly focused than robustness. Security is distinct from long-run sustainability issues because pension entities and supervisors focus on control to minimize avoidable losses within private pension systems. Also, security includes being protected from shocks such as the potential for government expropriation of private pension assets (which occurred in limited cases following the recent global financial crisis). These features are separate from those that determine whether a system can be technically sustainable. They include some elements that other authors have covered—for example, in the robustness category in Holzmann and Hinz (2005). The OBA framework integrates the 10 International Organization of Pension Supervisors (IOPS) Principles for Supervision (IOPS 2010a). Although these affect other outcomes, their primary focus is whether the assets are secure from issues such as fraud and maladministration. The OECD Principles of Occupational Pension Fund Provision (OECD 2009)[3] are much broader than the IOPS Principles on Supervision and therefore map to a wider range of outcomes (the methodology for the mapping is set out below and is compared with other standards).

Other approaches were reviewed to build on insights from leading practitioners in the field. For example, the Melbourne-Mercer Global Pension Index looks at sustainability, adequacy, and integrity (ACFS and Mercer 2013). Integrity includes elements of good regulation and supervision, which the OBA framework includes within security, but also includes costs, which fit more naturally into an assessment of efficiency. Similarly, the American Academy of Actuaries' AGES framework relates to alignment, governance, efficiency, and sustainability as four elements that can "provide a framework for well-functioning retirement plans that meet the needs of stakeholders in the retirement-income system" (Forward-Thinking Task Force 2014). So two of the outcomes are shared. The pension OBA framework sees governance and alignment as contributory factors rather than as outcomes in themselves; either way, they are a vital part of the story.

The OECD *Pension Outlook* (OECD 2012a) uses sustainability, adequacy, and coverage as well, but splits efficiency into administrative and investment efficiency and has a separate category for labor market. Testing in country reviews found it simpler and more powerful to bring efficiency into a single category and to integrate labor market impacts with efficiency and coverage. But the similarities are more important than the differences and represent a shared desire to focus on improving the long-run

[3]All references to OECD principles and standards are to the current principles as of 2015. New principles are expected to be agreed by the end of 2016. At this point the mapping from standards to outcomes and key features will be updated.

outcomes from pension systems. Finally, the International Social Security Association (ISSA) have a concept of 'dynamism' as one of their five principles of good governance (ISSA 2013). This is an attractive feature as it explicitly requires the government agency, regulator or supervisor to proactively address issues that are identified that are a threat to good outcomes. This principle is embedded in the overall ethos of the OBA – by having a broad overall diagnosis, setting out a clear long-run vision and then implementing the most effective solutions to tackle risks to the long-run objective.

Equity is a critical feature of a pension system that has been integrated with the five outcomes, rather than identified as an outcome in its own right. Other authors have taken a different approach—as in the International Monetary Fund's "Equitable and Sustainable Pensions" (Clements, Eich, and Gupta 2014)—by highlighting equity separately. As set out later in the section on data collection and the indicators for each of the long-run outcomes, the distribution of benefits is central to understanding the performance of a pension system. Coverage needs to focus on who is covered by age, gender, region, or some other relevant dimension. The key commonality is that equity is important, but should be a component of each of the five outcomes.

Increasing national savings can be seen as an additional objective – but is one that is not separately identified in the framework. In theory the development of private pensions can increase national savings. It can be used as a tool to reduce reliance on attracting foreign capital to fund investment and reduce the exposure of a country to external shocks (World Bank 2011). The driver for pension reforms can sometimes come from a focus on old age income and sometimes from a macroeconomic perspective (World Bank 2014e). But such an impact depends not only on a successful pension reform but also the impact of fiscal policy and corporate savings. A number of pension reforms in Eastern Europe diverted part of the social security / Pay As You Go contributions to privately funded savings, but never filled the gap in revenue to social security as intended – whether through additional taxes, the use of privatization revenues or reductions in costs through parametric reforms (Price and Rudolph 2013). Untangling the determinants of savings and the impact of different policies is econometrically challenging – and there are a range of results, with some showing a positive impact from pension reforms on national savings or other variables such as economic growth (Schmidt-Hebbel and Serven 1997, Loayza and others 2000, Davis and Hu 2008, Acuña and others 2013 and Bijlsma and others 2014, Grigoli and others 2014). A pension reform ultimately is justified by its impact on delivering income in retirement for people who would otherwise have no or limited resources. The wider macroeconomic impacts are relevant – but this shifting in consumption can be welfare improving even if there is no increase in net national savings. So this Handbook does not cover the broader macro-fiscal analysis and reform program that would be needed to have a concerted approach to raising national savings. Instead it focuses on best practice in private pension reforms that could be a part of such a wider macro-fiscal reform.

The framework keeps all five outcomes as a set rather than having some elements flow into others or be a subset of others. For example, thought was given to including efficiency and security as factors contributing to sustainability, adequacy, and coverage. But it was recognized that improving efficiency can be an economic benefit in itself. Moreover, there is a choice about the application of efficiency gains. They could improve adequacy, coverage, sustainability, or even security if, for example, gains are used to bail out funds in the event of fraud or default. Improved efficiency could allow a country to redirect capital and labor to other priorities, hence improving growth. So efficiency needs to be considered alongside other outcomes, not subsumed within them. Likewise, improving security does not just underpin coverage, sustainability, and adequacy directly but also affects the trust in a pension system. There is a similarity in that reducing crime, and the fear of crime, can each be seen as outcomes.

In conclusion, the five outcomes draw a clear line from earlier work, updating it, providing important new contributions particularly in relation to efficiency and security, and ensuring a strong link to efforts to improve data collection. In work with numerous countries, the aim is to develop or reform private pensions in order to expand the coverage of good quality pensions – to ensure the provision of income in retirement through pension systems that have broad coverage and are adequate, efficient, sustainable and secure; and to increase the supply of pension assets that can safely fund long-term investment (World Bank 2016b).

1.4 Defining the Five Outcomes

The development of the five key outcomes involved a process of refining their definitions and developing measures of success, including the data collection process. The key definitions are set out below. The associated reviewer toolkit starts with these definitions at the head of each section.

<u>Efficiency</u>: Maximizing net-of-fee returns by improving investment and cost performance subject to acceptable risks. Efficiency also relates to the efficiency of the labor and capital markets, as each interacts with the pension system through direct contributions to pensions (through longer working lives and contributions, lower costs of capital, or greater financial inclusion) as well as through indirect contributions to jobs and investment. For labor markets, this includes removing disincentives for work or formal work caused by excessive contributions or contributing to growth by increasing labor market participation at older ages. For capital markets, it relates to capital market depth through the development of non-bank financial capital to fund productive investment and maximize the benefits of wider capital market reforms—for example, in securities markets and infrastructure financing.

<u>Sustainability</u>: Ensuring that the promised retirement income will be delivered for this and future generations without placing burdens on government, employers, or workers for financing that will not be met. Sustainability is inherently improved by a diversified set of pillars or tiers so that one part of the system, public or private, does not have to bear all of the weight of long-run demographic trends. Sustainability also relates to political and individual support—with a technically viable reform having sustainability challenges if political consensus is weak, public expectations are not realistic, the system is not equitable, or intergenerational inequity is high.

<u>Coverage</u>: Maximizing the proportion of the working-age population that is accumulating retirement income entitlements and the proportion of retirees receiving such financial support in retirement. Coverage encompasses measures to include informal and other difficult-to-reach workers within retirement benefit accumulation. This includes building on innovations in ID and IT and having multiple channels into contributory pensions. It also includes a recognition that expanding targeted noncontributory "social" pensions will be necessary if full coverage of income in old-age is to be achieved – emphasizing there are limits to private pensions and hence the need to build diversified pension systems. The coverage outcome includes the impact of a wide range of policies, including broad eligibility rules, tax relief, educational support, and improved compliance and formality. This is a rapidly developing area in relation to the informal sector. Extensions to the OBA framework will be developed in the future – integrating insights from work developing coverage expansion strategies, pilots and implementation initiatives in a number of countries.

<u>Adequacy</u>: Ensuring people accumulate retirement benefit entitlements that protect them from poverty, allow them to share in increased prosperity, and that people are protected against a severe drop in living standards at retirement, taking account of other sources of financial support. In contributory systems, adequacy involves ensuring sufficient and equitable contributions during retirees' working careers in order to generate adequate retirement benefits. It can be measured in a range of ways, which include retirement income as a percentage of average wages, poverty levels, and own (career) earnings. It also relates to outcomes immediately after retirement and, as people age, to reflect the impact of inflation on retirement income over time. And it is essential to see who has inadequate pensions—for example, to include the distribution by gender, income, and other characteristics.

Security: Ensuring the security of assets to minimize the risk that funds that have been (or should have been) accumulated to provide retirement benefits are lost or misappropriated before the benefits are delivered. The importance of long-run growth in assets is central to the promise of pensions. But this is of no use if the assets are not there in 50 years when they are needed to generate income. So security covers a wide range of elements, including basic conditions, such as the enforceability of law; accounting, actuarial, and auditing capacity; data and payment systems; valuations and risk management; and control frameworks. It also covers the processes to ensure the recovery of any permitted shortfalls in assets (for example, in defined-benefit plans). Security relates to the performance of the supervisor as well as compensation mechanisms and protection of assets from government or employer expropriation.

In reality, of course, these outcomes overlap. For example, good governance may contribute directly to security and efficiency and indirectly to sustainability. Effective supervision may affect all of the outcomes. To avoid too much duplication, decisions were taken on which features should be linked to which outcomes, based generally on where the evidence of causality is strongest. Even so, a few features have been replicated—for instance, tax and financial incentives are included under both coverage and adequacy where the live-testing revealed that this worked better.

Furthermore, trade-offs between the outcomes are often important when framing the recommendations arising from pension system assessments. Expert judgment is essential in making the right trade-offs. These judgments are likely to be system specific and to take account of economic and political realities as well as the practicalities of implementation. Hence it would be difficult and perhaps misleading to construct an overall index with weights for each outcome in an effort to automate or quantify the trade-offs and to make decisions on priorities.

1.5 Measuring the Five Key Outcomes

An intended output of the pension OBA framework is improved clarity of and focus on data collection and evaluation. The framework includes a set of data collection sheets that document both the core data needed to understand each pension system and to evaluate system performance. Some elements are purely descriptive—for example, the number of providers. But when combined with other measures—like market size—they produce key information such as provider scale that helps to evaluate the efficiency of the system. This mirrors the approach in the *Global Financial Development Reports* for 2013 and 2014 (World Bank 2013a, 2014a).

Data collection should be a key part of any private pension review, but often there are significant gaps. Use of the framework is intended to identify, prioritize, and fill these gaps. The aim is progressive improvement in data reliability, even if starting from a low base[4]. The definitions should be sufficiently tight to enable a degree of comparability between countries, while recognizing that full comparability is often not possible. Figure 1.5provides examples of potential measures in each outcome.

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[4] The World Bank has partnered with themed and IOPS to improve global pension statistics to further this goal – see http://www.worldbank.org/en/news/press-release/2016/04/28/oecd-iops-and-wb-join-forces-to-improve-private-pension-statistics

Figure 1.5 Examples of Key Measures of the Outcomes from a Pension System

Efficiency	•World leading pensions cost under 0.5% or 50bps of assets under management a year, second tier 0.5% to 1%, third tier 1% to 2% and the most expensive systems cost over 2%. •Returns on average in the worst funds can be negative or zero, while the best give 4% real pa •By 2050 a 0.5% point difference in annual growth achieved through good policy would be worth $85bn a year.
Sustain ability	• Fiscal cost of pensions in terms of spending as % GDP • NPV of costs can be targeted by measure to reduce the combined total of explicit and implicit debt (e.g. implicit debt in key EU countries ranges from 163% to 293% of GDP). • Sustainability for employers and employee measured as contributions as % wages or profits
Coverage	•Country project-specific targets need to be linked to the type of intervention – e.g. if only a voluntary private pension introduced coverage target would modest – around an extra 10% point. Mandatory/auto-enrolment reforms can target much higher percentages – depending on degree of labor market informality – from 30% to 100% (only in some OECD economies at top of range).
Adequacy	• Poverty – increase in % of people with income above the poverty line to achieve poverty eradication target. • Shared prosperity – increase in incomes of bottom 40% of population with a replacement rate linked to average wages as well as own wage. • Targets need to be broken down by gender (and other groups e.g. region) to ensure equity.
Security	•Key outcome will be robust regulation and licensing of pension plans. Targets can be set in relation to fulfilment of international standards. • Strong supervision is a key measure to address in country specific projects and scored by pre and post project assessments. It is more difficult to use as a global benchmark. • 100% of assets should be ring-fenced and separated from employers

1.6 Adding Implementation to the Strategy Tool

The OBA framework integrates consideration of implementation from the start of a project. In many cases a wide range of changes will be recommended that could affect primary legislation, market structure, regulation, guidance, or supervisory organization or processes. Such broad scope necessitates a reform project, which is often challenging.

So the OBA includes a short checklist asking questions about the implementation process and reflecting the literature on challenges and risks to the delivery of complex projects. It was derived from guidance issued by the U.K. Office of Government Commerce and National Audit Office distilling the lessons of success and failure. A key aim was to ensure a clear implementation "module" or set of questions. A focus on the most important changes to affect the long-term outcomes, combined with a focus on whether a reform package can be implemented given scarce institutional capacity and competing priorities, is an important part of adding value when working with country authorities (Rodrik 2007). For some countries, the World Bank has a set of implementation ratings for pensions developed as part of its work on social protection (World Bank 2015).

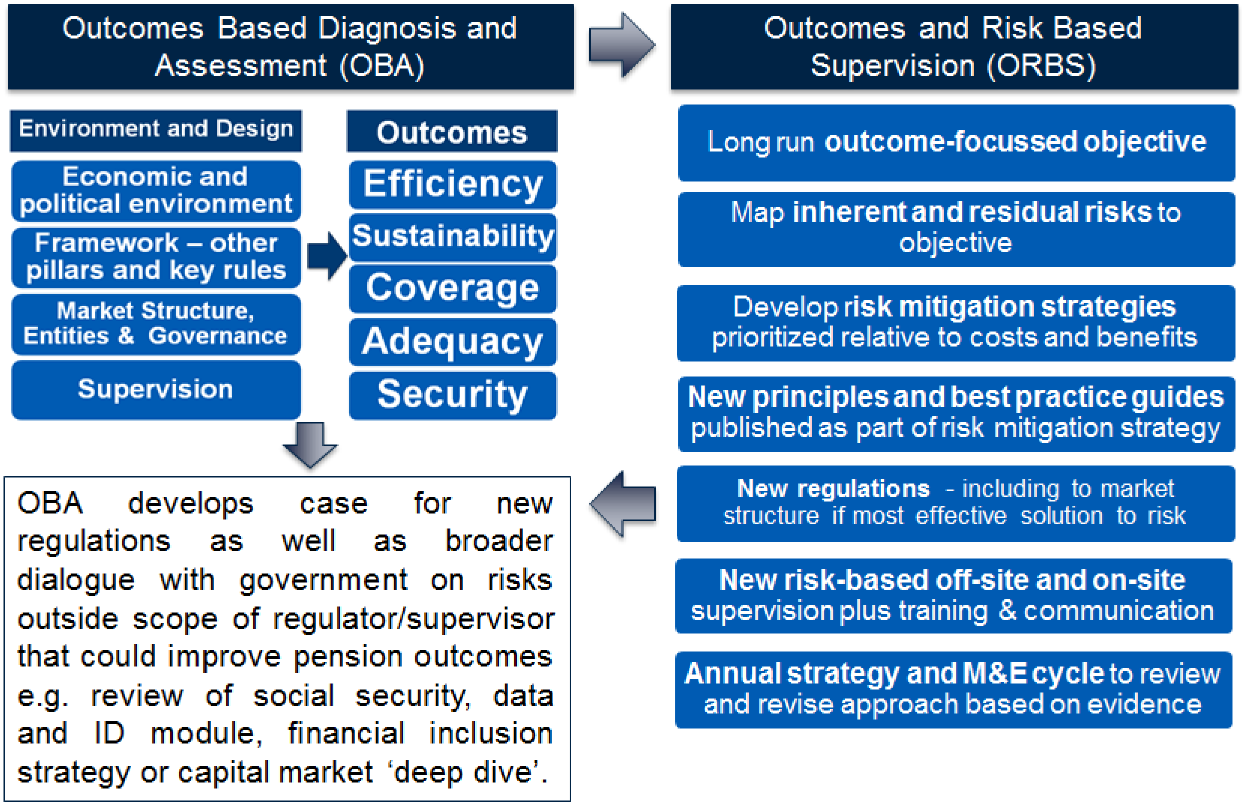
Figure 1.6 Questions on Implementation Capacity and Risks

Implementation/Risk Area	Detailed Question	Guidance /Standard
Project link to overall strategy (of Gov / org)	Are there clear links between the project and the organisation's key strategic priorities, including agreed measures of success?	OGC/NAO
Senior Ownership clear	Is there clear leadership and ownership from senior management and Ministers?	OGC/NAO
Stakeholder engagement	Is there effective engagement with stakeholders?	OGC/NAO
Project and risk management skills	Does the team/organization have the skills and proven approach to project management and risk management?	OGC/NAO
Project broken into Achievable steps	Has development and implementation of the project been broken down into manageable steps?	OGC/NAO
Long term value driving decisions not SR cost	Has evaluation of proposals driven by long run value for money rather than initial price/cost?	OGC/NAO
Understanding of suppliers	Is there deep understanding of, and contact with the supply industry at senior levels in the organisation purchasing the services?	OGC/NAO
Integrated project team	Is there effective project team integration between clients, the supplier team and the supply chain (where applicable)?	OGC/NAO

1.7Linking the OBA to Risk Based Supervision

One of the most important uses of the framework is as the starting point in the development of risk based supervision for pensions. The Risk Based Supervision approach has been enhanced to stress the importance of Outcomes- and Risk-Based Supervision – that is – one can only assess the right risks if you have a clear statement of the outcomes that you want to achieve. Moreover, these outcomes are best stated as something that is of real value to pension members. Figure 1.7 shows how the initial OBA exercise flows into a structure O-RBS process to identify the risks to the long-run outcomes, the best solutions to these risks and then to track implementation against clear success measures.

Figure 1.7Linking the OBA to Outcomes and Risk Based Supervision



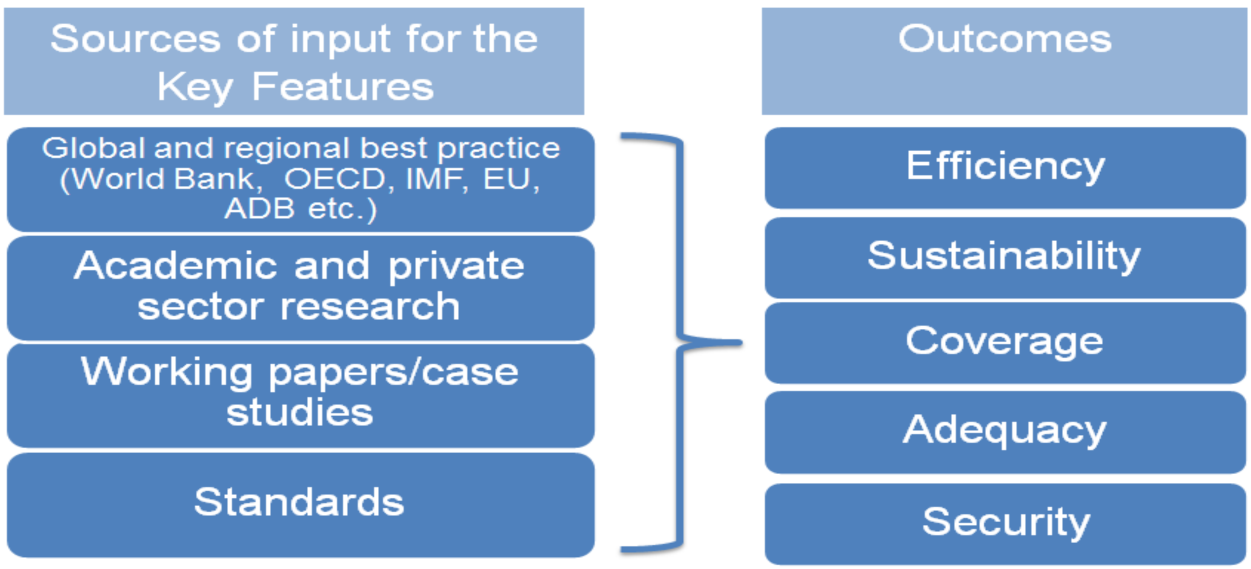
In conclusion the private pension OBA seeks to deliver an integrated strategic process with a clear flow from desired outcomes and impacts to a country-focused diagnosis offering recommendations for reform, implementation, and monitoring and evaluation. The ability to trace the effects from inputs to outputs to outcomes and impacts is important in demonstrating the value of projects and providing the type of robust framework for expected results (see, for example, FIRST 2014).

Chapter Two: Developing the Key Features That Drive Outcomes

2.1 Sources of Evidence for the OBA Key Features

Having defined the long-run pension outcomes, the next stage was to determine the key features that help to drive these outcomes—derived from a broad range of sources (Figure 2.1). The framework was designed to be flexible and simple-to-update when new evidence becomes available. For example, if a particular feature once thought to be important turns out to be less so, the feature can be taken out of the assessment framework or its reduced importance can be signaled in the detailed feature descriptions. Similarly, if new or additional evidence points to a new feature, it can be easily added into the framework.

Figure 2.1 Sources of Evidence for Key Features That Explain Outcomes



A balance is needed between a list of features that is comprehensive and one that is manageable to review and discuss in an initial diagnosis. The aim was not to issue 400 pages of guidance that must be followed when making an assessment. The piloting process helped to determine which areas needed their own focus and which could be grouped within one feature. So some features are supported by multiple sources of evidence. In particular, some features cover both accumulation and payout phases, which have distinct literature. Likewise, this Handbook aims to highlight the most compelling sources, rather than to offer a full literature review.

A full list of the key features is presented in Figure 2.2, which is split into the long-run outcomes. This provides the core of the assessment framework. It facilitates assessments that use a combination of desk research and interviews with a wide range of players in a country to review each key feature. A simple summary OBA background report is produced that covers each of the key features. This is a core input for the final report and recommendations. The final report should focus on those areas that are most important to a particular country or a particular review. These will vary widely between countries. But the preparation of the OBA background report provides a structured process for gathering evidence and identifying important issues. It allows judgments on relative importance of issues to be scrutinized and also provides a resource for future projects that can build on the original analysis – and may have a different focus and hence need to prioritize other reforms.

Figure 2.2 Full List of Key Features—Linked to Assessment Questions—in the Pension OBA Framework

The Key Features of the Outcomes Based Assessment Framework for Pensions

Efficiency

1) Impact of Scale
2) Member-focused governance
3 Expertise of governing body
4) Robust strategy process
5) Role of advisors and investment managers
6) Optimal long-term investment strategy and appropriate limits
7) Fair, efficient, deep and transparent capital markets
8) Competition, choice and transfers
9) Good communication and disclosure
10) Cost-effective distribution and intermediaries
11) Cost control, caps and transparency
12) Efficient transition to payout phase
13) Efficient operational, recordkeeping and data management
14) Reduce labor market distortions

Sustainability

1) Diversification among pillars/tiers
2) Intended outcomes are realistic
3) Understanding of intended outcomes and risks
4) Political support
5) Government costs sustainably funded
6) Affordable employer and employee costs
7) Effective and counter-cyclical adjustment mechanisms

Coverage

1) Eligibility for participation
2) Tax and financial incentives
3) Mandatory, behavioral or social stimulus to participate
4) Publicity and Education
5) Breadth of providers' target market
6) Enforcement
7) Reducing incentives for labor market informality
8) Building trust given economic and political history

Adequacy

1) Contribution levels and benefit accrual rates given income objective relative to other pillars
2) Years of vested participation
3) Controlling early access
4) Portability
5) Income provided until death
6) Appropriate guarantees on income and returns
7) Protection against pre- and post-retirement inflation
8) Fair treatment of spouses and dependents
9) Tax and financial incentives
10) Publicity and Education
11) Enforcing contributions

Security

1) Consistently enforced business law regime
2) Clear legal structures for pension entities
3) Standards and professionals in accounting, actuarial, auditing and legal
4) Data: economic, demographic and personal
5) Risk management and internal controls
6) Assets appropriately separated and ring-fenced
7) Protection from Government policy reversal
8) Independent reporting and whistleblowing
9) Valuation of assets and liabilities
10) Prudent funding of commitments, including provisions for risks
11) Recovery plans supervised
12) Investments are sufficiently secure, liquid and diverse
13) Matching assets to liabilities and member life-cycle
14) Fair and prudent use of surplus
15) Wind-up and alterations
16) Sponsor/provider guarantees and compensation funds
17) Objectives of supervisor (IOPS 1)
18) Independence of supervisor (IOPS 2)
19) Resources of supervisor (IOPS 3)
20) Powers of supervisor (IOPS 4)
21) Risk-based supervision (IOPS 5)
22) Supervisory proportionality & consistency (IOPS 6)
23) Supervisory consultation and co-operation (IOPS 7)
24) Confidentiality of supervisor (IOPS 8)
25) Transparency of supervisor (IOPS 9)
26) Governance of supervisor (IOPS 10)

Good Governance is a central feature across a number of the outcomes and many key features.
Some IOPS Standards will impact other outcomes but are grouped against their primary impact

2.2 The Role of International Standards

The key features that drive the outcomes have been mapped against international principles, standards, and implementing guidelines on pensions (from the Organisation for Economic Co-operation and Development/International Organisation of Pension Supervisors, OECD/IOPS), insurance (International Association of Insurance Supervisors, IAIS), and securities (International Organization of Securities Commissions, IOSCO). This is the first side-by-side comparison of international standards in a common outcomes-based evaluation.[5] It shows, naturally, that the OECD/IOPS standards have a broader coverage of factors affecting long-run pension outcomes, but that the IAIS and IOSCO standards have a deeper treatment of some issues, particularly relating to the security of the (pension) system—for example, IAIS and fair, efficient, transparent, and deep capital markets. A mapping tool was developed that links principles, standards, and guidance[6] to the outcomes and key features presented in the OBA framework. This allows a reviewer and country client to know if a particular area of focus is linked to a standard or not. This mapping can be updated easily as standards evolve[7].

There are good reasons why international standards will not cover all of the outcomes or key features relevant to delivering the best outcomes from a pension system. Some areas, like the importance of scale, are profoundly important for outcomes, but are difficult to codify in a standard. Moreover, standard setters are typically most focused on the security aspects, given their membership and remit. The OBA project has sought to provide an overall framework into which standards could be integrated, to draw together global best practice, and to foster continued positive cooperation between the World Bank and the standard setters. In the terminology of an FSAP, the World Bank focuses on the development assessment when reviewing a country and hence includes all features important for development, whereas a standard setter focuses on standards and codes.

2.3 Key Features of Efficiency

The efficiency outcome is supported by 14 features, including the impact of scale, the governance of pension funds, and the role of capital and labor markets. This section provides an overview of some of the most compelling evidence for each key feature, rather than a full review of the literature. A good general introduction to many of the investment-related issues is provided by "Evaluating the Financial Performance of Pension Funds" (Hinz and others 2010), along with the literature reviewed in its various chapters (e.g. Rudolph and others 2010), so this information is not repeated in detail here.

[5]A separate working paper will be published comparing international standards, so the full details are not presented here. The material used for the mapping includes IOPS (2010b), OECD (2010), IAIS (2011), and IOSCO (2010).

[6]The guidance currently mapped includes OECD (2012b), OECD/IOPS (2011a, 2011b), and IOPS (2008, 2009).

[7] The OECD is at an advanced stage of completing new Principles for Private Pension Regulation. Once these have been finalized, it will be simple to remap the links between standards and outcomes and to update the associated tools for reviewers, which highlight where a particular outcome or key feature is linked to a standard and where it is not.

Figure 2.3 Features Supporting the Efficiency Outcome

1. Impact of scale	8. Competition, choice, and transfers
2. Member-focused governance	9. Good communication and disclosure
3. Expertise of governing body	10. Cost-effective distribution and intermediaries
4. Robust strategy process	11. Cost control, caps, and transparency
5. Controls on advisers and investment managers	12. Efficient transition to payout phase
6. Optimal long-term investment strategy and appropriate limits	13. Efficient operational, recordkeeping, and data management
7. Fair, efficient, deep, and transparent capital markets	14. Fewer labor market distortions

Scale. The Cost-Effectiveness Benchmarking, Inc. (CEM) database[8] provides evidence showing that both gross and net returns correlate with size of pension fund(Ambachtsheer, Capelle, and Lum 2006; Dyck, Alexander, and Pomorski 2011; Cummings 2012, Bikker and others 2012 and Bikker 2013). This picture is confirmed by many studies and other benchmarking data, for example, from Hymans Robertson (2013), from reviews conducted as part of the Cooper Review in Australia (Deloitte Touche Tohmatsu 2009; Super System Review Committee 2010, from the Investment Company Institute (2011) for a wide range of defined-contribution plans in the United States, and from Lane Clark Peacock LLP (2013) for smaller occupational funds in the United Kingdom. These drivers are examined for Latin American markets in a publication that also highlights the overall importance of market structure, which is discussed in greater detail below (Impavido, Lasagabaster, and García-Huitrón 2010).The reasons why scale drives performance are various and include a heightened ability to benefit from greater investment in governance as well as economies of scale more generally. Good data on costs and size are often lacking, and having improved the data could be useful in many projects (see also the discussion of costs).

Member-focused governance. Ambachtsheer has used the CEM evidence to show that good governance is worth at least 1 percent a year in net investment returns (Ambachtsheer, Capelle and Lum 2006) and more recently re-stated the central role of governance in pension outcomes (Ambachtsheer 2016). The importance of governance is seen in the focus given to it by major funds around the world (ATP 2013).Research from the Australian Prudential Regulation Authority (APRA) has found persistence in returns over time, which suggests that good governance has an effect. Both CEM and APRA have shown that not-for-profit pension funds outperform commercial pension funds (Sy 2008) or mutual funds (Bauer, Cremers, and Frehen 2010), indicating that their greater member focus has a significant effect. Other research using Polish pension funds (Jackowicz and Kowalewski 2011) has shown that independent board members can improve the performance of commercial pension fund investment. APRA research shows a correlation between good governance and lower operational as well as investment costs, suggesting that governance is relevant to more than investment efficiency (Sy and Liu 2009).

Expertise of governing body. Expertise is a key attribute of high-performing governance as defined by Ambachtsheer and colleagues (1998, 2006, 2008) in their research correlating investment performance with governance and the work from Professor Gordon Clark, Roger Urwin, and others (Clark, Caerlewy-Smith, and Marshall 2006; Clark and Urwin 2008). Many of the features have been reviewed in previous World Bank studies (Holzmann and Hinz 2005; Holzmann, Hinz, and Dorfman 2008),including member-focused governance, robust strategy process, role of advisers and investment managers, competition, choice and transfers, cost-effective distribution and intermediaries, cost control, caps and transparency,

[8] CEM is an independent provider of benchmarking information with a database covering 370 pension funds worldwide with assets of about US$5.8trillion (2011) going back to 1990.

and efficient operations, recordkeeping, and data. Both publications emphasize the importance of avoiding (or at least reducing) labor market distortions if a system is to be economically efficient.

Robust strategy process. A robust strategy is another of the key attributes of governance identified by Ambachtsheer and colleagues and by Clark and Urwin, among many others. All of the elements of governance and strategy were reviewed in an important book on international experience regarding how to improve governance and investment strategy in public pension funds that invest assets (Rajkumar and Dorfman 2010). They have also been the subject of regulatory attention (APRA 2013). Many of its lessons are equally applicable to private sector or arm's-length not-for-profit funds, including those in occupational systems. Further experience from practitioners on investment management of a range of public pension assets and reserve funds has been gathered through a series of annual conferences arranged by the World Bank Treasury[9] as well as the Toronto Centre and Rotman International Centre for Pension Management.

Controls on advisers and investment managers are another key attribute of governance. CEM researchers and APRA have hypothesized that the ability to negotiate better deals helps large funds to reduce costs, while funds with in-house investment management, which can presumably be better controlled, outperform funds that outsource investment management (Dyck and others 2011). Controls are particularly important to ensure a clear understanding, because reliable added value is problematic to deliver (Tonks 2006, Bauer and Kicken 2008, Bauer and others 2010, Koedijk and others 2010).

Optimal long-term investment strategy and appropriate limits. Optimal strategy is another key attribute of governance, and there is considerable literature showing a correlation between investment style and returns (Koedijk, Slager, and Bauer 2010) and the potential benefits can be obtained from greater allocations to illiquid investments (Cummings and Ellis 2011). Strategic asset allocation is a key driver of long-run investment returns and their variability (Brinson, Hood, and Beebower 1986; Brinson, Singer, and Beebower 1991). It is important, however, to ensure these results are properly understood when drawing policy conclusions (Ibbotson and Kaplan 2000). OECD modeling and analysis (Antolín 2009) provides further evidence supporting the importance of this feature. This process covers the impact of different quantitative approaches to regulating investment risk on retirement income stemming from defined-contribution pension plans. It is important to get the regulations right to avoid unintended consequences (Srinivas and Yermo 1999). The potential role of benchmarks for long-run investment returns includes improving investment strategy, governance, and efficiency (Stewart 2014). World Bank analysis supports the regulation of optimal asset allocation in defined-contribution as well as defined-benefit pension funds (Castañeda and Rudolph 2011).It also covers the appropriateness of quantitative limits, the potentially suboptimal impact of competition and choice unless they are well regulated, and how the interests of members and fund managers can be aligned, avoiding conflicts of interest and contributing to **member-focused governance**. Other modeling based on analysis of available research has identified problems with participant investment choice and indicates why it is good practice to provide default portfolios (Viceira 2010).

Fair, efficient, deep, and transparent capital markets. The need for fair, efficient, deep, and transparent capital markets has been highlighted in a range of research, including research on the preconditions for successful private pension reforms (Rudolph and Rocha 2009), and is covered extensively in the IOSCO guidelines (IOSCO 2010). Evidence from many FSAPs and other pension system reviews indicates that

[9] See, for example, "Global Symposium on Pension and Sovereign Fund Investments," Cape Town, South Africa, November 18–20, 2013, arranged by the World Bank Treasury.

limited domestic capital market development is a major constraint on efficient pension fund investing in many less-developed countries, while pension funds can in some circumstances encourage market development (Chan-Lau 2004). The impact of weak capital markets is especially serious where limits on foreign investment are tight, as these have been shown to constrain optimal asset allocation through market diversification (Roldos 2004; Oxera Consulting 2007; Berstein and Chumacero 2003). Furthermore, where investment abroad is restricted, there may be asset bubbles and other detrimental effects on domestic financial markets. There is also evidence that investment by pension funds in good-quality infrastructure projects can spur economic development (Calderón and Servén 2014), but this requires a clear-sighted and well-structured asset allocation process (Inderst and Stewart 2014).

Cost control, caps, and transparency. Different countries use different approaches to address the issue of cost control. Cost vary very significant between countries and over time (Covera and others 2006, Tapia and Yermo 2008, Hernandez and Stewart 2008, Ionescu and Robles 2014). It is important not to take a naïve approach, because it is important to invest in some elements such as governance and expertise (Ambachtsheer 2005). Costs can be extremely difficult to identify fully as there can be many hidden layers of costs that make it difficult even for experts to understand the full picture (Pitt-Watson and others 2014). APRA research has pointed to the likelihood that investment costs are sometimes hidden, worsening cost control at less well-governed funds (Sy and Liu 2009). This echoes a finding from the Netherlands regarding the prevalence of hidden investment costs (AFA2011). There is no consensus on the right mix of policy responses to reduce costs and fees, but transparency alone does not appear to have a particularly strong track record. For example, even where there is very good transparency and excellent annual reporting from an independent body, as in Turkey (Pension Fund Monitoring Center 2013), the impact on outcomes is limited, and market structure and demand and supply conditions tend to dominate. In this case, fees have fallen in direct relation to the reductions in the fee caps set by the Turkish Treasury. The interest in caps as part of a broad set of tools has extended recently to areas not traditionally associated with such interventions, such as the United Kingdom and Hong Kong SAR, China.

Competition, choice and transfers, and cost-effective distribution and intermediaries have received renewed attention as part of the growing literature on participant inertia and the impact of switching. Research shows that in Latin American mandatory systems switching was correlated primarily with sales agent activity and in only a limited way, if any, with returns or fees (Berstein and Cabrita 2007; Calderón-Colin, Domínguez, and Schwartz 2008). Despite competition, charges to affiliates varied substantially, while sales agents' costs substantially increased the size needed for a pension fund to be considered efficient. Evidence from the Swedish pension system (Sunden 2014) shows that very low costs can be achieved where the system is designed to achieve economies of scale in administrative functions (operational efficiency) and where a strong supply side minimizes marketing and investment costs.

Auctions have been used to try to reduce the costs associated with distribution and sales agents in Chile and Peru (Canta 2014). In Chile the results of the auction do not automatically lead to lower fees for the whole market because companies that do not win the auction do not have to lower their fees to members. Even if they do win an auction, the winning bid only applies to new members. However, in Peru, bidders have to pass on their bid price to all current members. Even countries with mature systems are investigating auctions, as growing scale has not led to the reduction in fees expected (Price 2016a). Other countries have conducted specific campaigns to reduce the impact of sales agents and hence lower costs and fees (Rocha, Vittas, and Rudolph 2010; Ashcroft, Price, and Robles 2015).

The importance of reviewing market structure and the value chain to improve costs and fees is an important element for private pension reforms. In the United Kingdom, the Turner Commission reviewed international experience(Pensions Commission 2005), noting that, even where participation is mandatory, competition by itself is not guaranteed to achieve this objective, especially if, as in Australia,[10] marketing costs are high. The Swedish and Danish experiences illustrate that significantly lower costs can be achieved in national schemes for collection and account administration, with a well-governed and independent body delivering or purchasing fund management services in bulk. Subsequent U.K. experience has shown that auto-enrollment with its associated scale benefits and a state-sponsored not-for-profit pension fund with strong governance and a low-cost mandate (National Employment Savings Trust) can drive down charges. Competition by itself appears to be inadequate to drive lower costs if individual choice alone is involved. Lack of transparency is a big issue in determining costs (OFT 2013).

Regarding the efficiency of the transition to the payout phase, a review of the development of the annuity market in Chile has shown how policy developments have improved efficiency outcomes through regulation(Rocha and Thorburn 2007).This is also relevant to securing cost-effective distribution and intermediaries, with the Sistema de Consultas y Ofertas de Monto de Pensión (SCOMP)being a globally leading example of an intermediation system that reduces transition losses and influences developments elsewhere in the world. Further research on this subjecting five other countries supports these findings (Rocha, Vittas, and Rudolph 2011). In particular, the experience of annuity regulation in Switzerland demonstrates the value of strong regulation of annuity pricing as well as the challenges of implementing it in a manner that is flexible enough to avoid solvency problems. The existence of excessive costs at the payout phase has also been highlighted in the United Kingdom (Harrison 2012). Ashcroft and Stewart (2010) provide a good overview of a range of design issues in relation to Defined Contribution pensions. More recently the UK has removed the effective requirement for annuitization. This has inspired some innovative thinking about how to secure retirement income flows using a combination of phased withdrawals and later life deferred annuities (NEST 2015).

Efficient operational, record keeping, and data management are covered extensively in the international standards already referenced. However, the importance of data management is often overlooked as part of the design of new pension systems, with notable exceptions (Barr and Diamond 2009). The issue is discussed both in efficiency, which relates to how effectively a system is using its data, and in security, which relates to the impact of data loss or theft. For innovative ways to use modern IT to link fingerprint identification to existing national databases in India, see Bhardwaj (2014).

A contributory or Bismarckian system can be inadequate to extend coverage to the entire labor force, particularly in countries with high rates of informality and impacts on labor market participation need to be understood. Trying to mandate excessive contributions can adversely affect the level and structure of employment—for instance, by promoting informality and reducing participation rates (Frölich and others 2014). Interactions with means-tested benefits need to be handled carefully (Bosch and Manacorda 2012, Borsch-Supan and others 2013). Portability is a generally desirable feature in standards, although some evidence suggests that the benefits for labor market efficiency are overstated. Nevertheless, they may be valuable for other reasons (Forteza 2008). The capacity to minimize labor market distortions as a criterion for judging the ability of a pension system to contribute to output and growth is an important factor in related World Bank work (Rudolph and Rocha 2009). Some countries or companies have rules that do not allow someone to draw a pension and continue to work. This impacts labor market efficiency as well – and prevents working longer, perhaps part-time, from being a solution to the retirement income challenge.

[10]The issue of charges in Australia is being addressed by reforms based on the Cooper Report (Super System Review Committee 2010).

2.4 Key Features of Sustainability

Figure 2.4Features Supporting the Sustainability Outcome

1. Diversification among pillars or tiers 2. Intended outcomes are realistic 3. Understanding of intended outcomes and risks 4. Political support	5. Government costs sustainably funded 6. Affordable employer and employee costs 7. Effective and countercyclical adjustment mechanisms

Sustainability, coverage, and adequacy are clearly interrelated, and reforms attempting to achieve one outcome potentially affect the others. This highlights the importance of building diverse pension systems with both public and private elements. The Chilean pension reforms in 1981 have been much studied and praised for their impact on sustainability, but such an exclusively contributory, privately funded model was always going to struggle to ensure broad coverage. For this reason, major reforms were needed in 2008 to introduce a zero pillar to ensure near-universal coverage (of some retirement income) and complement the large funded defined-contribution system. The same journey was taken following the 1997 Mexican reforms, which replaced the public system with a fully private contributory system for new private sector workers entering the labor force, again for sustainability reasons.[11] But in a series of changes the Mexican government has begun to fill in the gaps in retirement income that were left under the post-1997 system, starting with the 70 y Mas Program and gradually extending the scope of 'social pensions'.

The International Monetary Fund (IMF) has set out a framework for understanding the drivers of long-run fiscal sustainability and for discussing potential high-level policy reforms to offset the impact of demographic trends (Clements, Eich, and Gupta 2014). This provides invaluable cross-country evidence on how different countries and regions are dealing with the rising fiscal burden caused by falling birth rates and rising longevity and how different policy measures have partly offset these trends, but so far proved insufficient. Related work by the IMF has suggested a sovereign asset-liability management (SALM) approach that aims to bring powerful actuarial techniques that are used in defined-benefit pension fund modeling to long-run public finance forecasting (IMF 2014). This helps to build on and complement other techniques for calculating implicit debt (Holzmann and others 2004). However, both types of exercise would not be possible within the scope of the original OBA diagnostic, but could be something recommended for deeper analysis – bringing in additional experts to conduct the analysis.

The importance of balance between the pillars is also supported by evidence that reducing second pillar contributions increases ultimate public debt and may be unsustainable (see Egert 2012 for one example). World Bank research across Europe and the former Soviet Union countries documents the negative effect that overly generous zero and first pillars can have when they try to fulfill all the tasks of a pension system (Schwarz and Arias 2014). This research highlights a common problem of policy makers or sponsors not recognizing the eventual costs of defined-benefit systems, whether public or private, once they mature. The European Union describes the importance of a range of these features in its 2012 Aging White Paper (European Commission 2012).

[11]The impact on sustainability was moderated by an extremely long transition period, as workers with one day of contributions in the old system could retire under the pre-1997 benefit formula rather than under the post-1997 system.

Fiscal reforms are an important part of ensuring sustainability when contributions previously directed to public pension pillars are partly redirected to funded privately-run pillars (Price and Rudolph 2013).There is also evidence on the risk that funded pensions will be perceived as taxes, which may weaken political support for them (Leszek, Laursen, and Skrok 2008). Positive lessons can be learned from a range of international pension commissions, including the U.K. experience of introducing automatic enrollment, arising from a rigorous government-commissioned but independent review that obtained cross-party support for its conclusions. Its recommendations focused on using automatic enrollment for employer-chosen pension funds to augment unfunded government pensions and deliver a sustainable and realistic overall replacement rate (Bouchal and Norris 2014).

Turning to effective and countercyclical adjustment mechanisms, research on the pro-cyclical and return-reducing impacts of funding and accounting rules (Severinson and Yermo 2012) **and guidelines[12]emphasizes the importance of making funding and solvency rules for defined-benefit plans countercyclical.** Research on the payout phase across five countries (Rocha, Vittas, and Rudolph 2011) supports the importance of retirement product risk sharing. In particular, it demonstrates how flexibility to cope with changing circumstances can be implemented through retirement product risk sharing. Another example of adjustment mechanisms is provided by the automatic link between annuity rates and longevity and interest rates that is built into the Swedish income and premium pension arrangements and has been effective in keeping this system financially stable (Sunden 2014), although this inevitably involves a trade-off with adequacy (Barr 2013). More generally, there are strong advantages to linking retirement ages to longevity (Schwan and Sail 2013).

Research and reform experience that started with the publication of *Averting the Old-Age Crisis* have emphasized the centrality of and reasons for adopting a multi-pillar approach to pension system design (World Bank 1994). Although much has changed in the interim, the central insight—that certain pillars or tiers have advantages in targeting particular outcomes—remains important, as does the importance of a long-term, credible commitment by the government.

2.5 Key Features of Coverage

Figure 2.5Features Supporting the Coverage Outcome

1. Eligibility for participation 2. Tax and financial incentives 3. Mandatory, behavioral, or social stimulus to participate 4. Publicity and education	5. Breadth of providers' target market 6. Enforcement 7. Reducing incentives for labor market informality 8. Building trust given economic and political history

Eligibility for participation is clearly a fundamental requirement for gaining access to pensions, particularly via employers. If a person is not eligible due to age, length of service, or other reasons, then clearly he or she will not be covered. The OECD guidelines relevant to this outcome focus on the need to provide wide nondiscriminatory access (equal treatment) to employer-sponsored pension plans, while noting that these are often provided voluntarily. Long vesting periods, in particular, act against good coverage for women, who tend to have more broken career paths than men.

Tax and financial incentives. This feature is closely related to incentives for improving adequacy, although the effectiveness of such incentives may vary between the two outcomes. Furthermore, the

[12] OECD Guidelines 3.16 and 3.17.

approach to encouraging someone to join a plan can be different from the approach to encouraging a person to continue participating. Evidence from across the European Union indicates that tax incentives can make a contribution to improving coverage but have their limitations (European Commission 2008). For instance, concerns have been raised about their redistributive effects. Reforms in Turkey in 2013 to replace tax relief in voluntary pensions with matching contributions appear to have had a significant impact on increasing enrollment (Pension Fund Monitoring Center 2013). Evidence from an innovative pilot in the United Kingdom has shown that higher match rates were more effective at encouraging people to join a saving plan, but had little impact on overall levels of saving, which were guided by maximum saving limits (Price 2013). This has similarities to the generous initial matches in the NPS (New Pension System) or Swavalambum plan in India (PFRDA 2014) and in the Kiwi Saver plans in New Zealand.

Mandatory, behavioral, or social stimulus to participate. A range of evidence shows that much higher coverage is achieved in mandatory or quasi-mandatory private pensions than is achieved in voluntary private pensions.(Antolín, Payet, and Yermo 2012; Munnell and Quinby 2009). In addition to systems made mandatory by law, this category can include systems, such as in the Netherlands, where participation is made mandatory by social partnership agreements. However, such agreements can be very difficult to replicate in countries with no tradition of such 'tripartite' bargaining.

These findings are similar to those from the work on incentives for participation and evidence from behavioral economics (Madrian 2012; Beshears and others 2006; Benartzi and Thaler 2013). In particular, there is evidence that providing workers with incentives to save through matched contributions can increase participation rates, but the effect is limited (Hinz and others 2013).More recently there may be more positive evidence from Turkey that they are successful in raising private pension coverage (Pension Fund Monitoring Center 2013). Other evidence similarly suggests that transferring a voluntary tax-incentivized pension saving model to less-developed countries may be even less effective, not least because most of the workers targeted pay no tax and because of administrative barriers (Palacios and Orzag 2012). By contrast, the effect of automatic enrollment on participation is substantial, with relatively few workers choosing to opt out—experience that was replicated in the United Kingdom (Pension Regulator 2014), where awareness-raising publicity was a significant element in the success of the program (Bouchal and Norris 2014).

Publicity and education. These are deliberately split between the more high-level publicity campaigns and more hands-on attempts to increase financial literacy. The financial education campaigns tend to have simpler, more action-oriented approaches to persuade someone to take a key decision—for example, to join a plan or not to opt-out (Atkinson 2012, IOPS 2011, Swedish Pension Agency 2011). Financial education, in contrast, can range from providing simple messages to giving people a detailed understanding to help them to make investment allocation decisions. There is a huge amount of literature with a range of results, including showing a positive impact on asset building to finding little positive impact (Mitchell and Lusardi 2014, Carpena and others 2011, Xu and Zia 2012).

Breadth of providers' target market. This feature in part draws upon the extensive literature on financial inclusion and the importance of access to a financial services provider (World Bank 2014d). It links to the obvious fact that having contributory private pension plan is difficult if there is no reliable way to transfer contributions to a pension account. However, the potential scope and delivery channels are changing rapidly. The issue of labor market informality was a key theme in the Sixth Global Pension and Saving Conference, which included case studies on improving coverage in informal sectors in India (Bhardwaj 2014) and Kenya (Odundo 2014). The case studies showed positive impacts from using modern IT and mobile telephone technology to broaden the market accessible to providers and facilitate participation. This is a rapidly developing area – on which there are a number of current projects, whose results will be developed into case studies in due course. The Seventh Global Pension and Saving Conference will show-case latest developments in the field.

Enforcement. Ensuring that pension payments are made (the 'missing pension' issue) or are made on time (the 'late payment' issues) has implications for both coverage and adequacy. The enforcement of contributions has not received as much attention as it should in the pension literature; it is more usually associated with attempts to improve tax compliance (Russell 2010). However, some exceptions provide interesting insights into the importance of incentives and compliance mechanisms in pensions (Kumler, Verhoogen and Frías 2013, Pension Regulator 2013b).

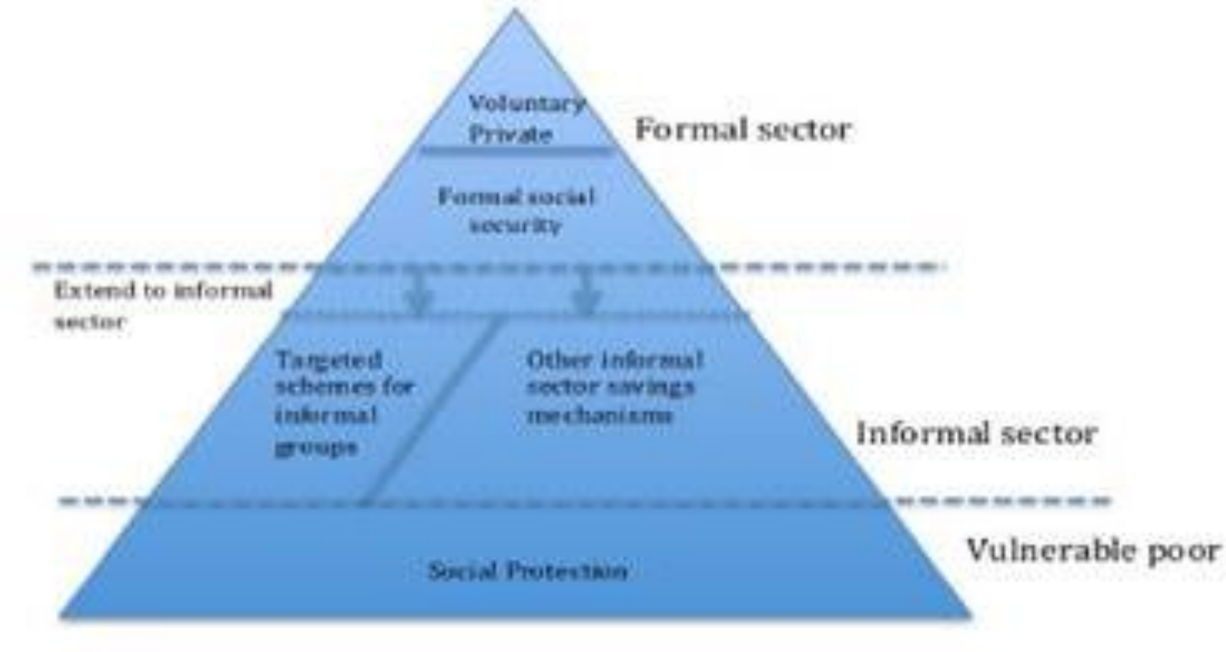
Reducing incentives for labor market informality. Although mandatory private defined-contribution systems can lead to good affiliation rates for the formal workforce, they have significant problems for the informal workforce (Rofman and Oliveri 2012). A series of studies has brought together international expertise on how to improve coverage using a range of mechanisms (Holzmann, Robalino, and Takayama 2009; Rofman, Apella, and Vezza 2013; Bosch, Melguizo, and Pages 2013), concluding that an approach with both noncontributory and contributory elements is needed. This demonstrates that pension system design is not an either-or activity, but one where a range of solutions is needed to tackle the biggest gaps. These gaps may include social noncontributory pensions or income transfers to the elderly as well as contributory pensions and savings.

Ensuring high coverage of the self-employed is particularly challenging. In Hong Kong SAR, China, self-employed workers are required to join the mandatory funded pension system, and the pension supervisor is required to enforce employer duties to enroll eligible employees. These requirements are associated with pension coverage of 79 percent of the labor force (OECD 2013b). This level is high for any economy, even one with a small public pension sector which would increase incentive to find other ways to build retirement income.

Informality is a challenging and important area in which more research and piloting are needed. It gives rise to the need to have a pension system with both public and private elements. Without public provision, there will never be enough retirement income coverage of the lifetime poor. At the same time, if privately funded pensions are not built at the appropriate point as countries develop, it will not be possible to deliver sustainable solutions that both eradicate poverty and share increasing prosperity across generations (World Bank 2014c).Development in Identification and Information Technology are creating potentially transformative opportunities to deliver services to citizens (World Bank 2016a). For private pensions they can offer the chance to remove the high costs of customer acquisition, sales and marketing that can prevent pension savings actually being in the financial interest of consumers compared to simple cash accounts. A World Bank project in India started in 2015 has an explicit focus on coverage that is using a six-pronged strategy to expand private pension coverage (Price 2016a). A key lesson is to build on improvements in Financial Inclusion that can enable new and efficient delivery channels for collection, investments and payments of benefits (Price, Rawlins and Stewart 2016).

A diversified pension system combines different parts across public and private provision and formal and informal sectors. This can be illustrated in the form of a pyramid highlighting how the different parts combine – as set out in Figure 2.6. The OBA focuses on those elements of private and funded savings and pensions rather than the core 'Social Protection' elements relating to public provision or transfers.

Figure 2.6 Delivering outcomes through diversified provision



Building trust given economic and political history. Using techniques such as pension commissions with cross-party and independent membership is gaining increasing attention as a way to improve the security of pension systems. This is due partly to an analysis of some of the private pension reversals in the Europe and Central Asia region (Price and Rudolph 2013). It is also due to analysis of some of the more successful pension reforms (Pensions Commission 2005). As with preconditions, this element is not 'pass or fail', as the need for reform continues. Some of the most respected pension systems have continued to use external pension commissions to take their pension systems to the next level, either proactively or in response to the exposure of previously underappreciated weaknesses (Super System Review Committee 2010, Marcel Commission 2006, Murray 2014). It is also apparent that bad experiences with failed pension systems or other products discourage participation—for instance, in Albania due to a failed pyramid selling scheme in the 1990s, although other issues were also relevant (Price 2014a).

2.6 Key Features of Adequacy

Figure 2.7Features Supporting the Adequacy Outcome

1. Contribution levels and benefit accrual rates given income objective relative to other pillars	6. Appropriate guarantees on income and returns
	7. Protection against pre- and post-retirement inflation
2. Years of vested participation	8. Fair treatment of spouses and dependents
3. Controlling early access	9. Tax and financial incentives
4. Portability	10. Publicity and education
5. Income provided until death	11. Enforcing contributions

Contribution levels are clearly a key determinant of adequacy. While mandatory or quasi-mandatory pension contributions improve private coverage, there is evidence on the importance of setting default contribution rates sufficiently high for pensions to be adequate (Antolín, Payet, and Yermo 2012). Where this is not the case, sustainability may also be affected. But the accumulation of adequate entitlements to benefits also depends on the years of vested participation, leakage from savings through early access, and portability)(Alonso, Hoyo and Tuesta 2015, Munnell and Webb 2015).

Research shows that the adequacy of mandatory defined-contribution systems (in Latin America at least) has been constrained by low persistence of contribution (Rofman and Oliveri 2012)**.** Research from Chile (Antolín and Fuentes 2012) shows that improvements in how pension projections are calculated and presented have increased voluntary contributions and led to the postponement of retirement, therefore improving years of vested participation as well as contribution levels. There has been extensive similar work by a range of reviewers (Blake 2011).

The OECD's defined-contribution roadmap is notably relevant to this outcome, underpinning adequacy features 1, 2, 3, 5, 6, 9, and 10 above, in particular, recommending that policy makers:

- Ensure that the design of defined-contribution pension plans is internally coherent between the accumulation and payout phases and with the overall pension system
- Encourage people to enroll, to contribute, and to contribute for long periods
- Improve the design of incentives to save for retirement, particularly where participation and contributions to defined-contribution pension plans are voluntary
- For the payout phase, encourage annuitization as a protection against longevity risk
- Ensure effective communication and address financial illiteracy and lack of awareness.

Securing the persistence of contributions is covered by OECD guidelines[13] to the extent that they recommend short vesting periods, restrictions on the reduction of accrued benefits, and the preservation of benefits. Provisions to enable and facilitate pension portability are prescribed in some detail within the guidelines[14] as a means of encouraging the continuing accrual of entitlements, and good communication in this regard is recommended. The extensive material on annual benefit statements within the guidelines[15] is also relevant to using communication tools to increase contributions.

Pensions are less likely to deliver adequate income throughout retirement without appropriate regulatory requirements (Rocha and Vittas 2010)**.** A review of the development of the annuity market in Chile (Rocha and Thorburn 2007) shows how policy developments have improved the delivery of such income. In particular, lump-sum distributions have been limited, while the use of fixed inflation-indexed annuities or life expectancy phased withdrawals has been mandated to protect pensioners from inflation risk. Joint-life annuities are mandated to protect spouses.

Many jurisdictions have used guarantees on income and returns to reduce the risk of pensions being inadequate due to low contributions or a decline in investment values. The issue is complex, and the cost of a guarantee depends heavily on its nature—from a yearly real return guarantee to a lifetime capital-only guarantee to a nominal guarantee (Antolin and others 2011). The appropriate response could be to value or cost the guarantee clearly and have an independent body collect premiums to ensure that the guarantees can be funded in case of need (Viceira and Rudolph 2012).

Fair treatment of spouses and dependents was identified as a key feature because it leads so directly to whether someone will receive a pension payment. It is included in the Melbourne-Mercer Global

[13] OECD Guidelines 5.05–5.08.See also material on vesting and portability below.
[14] OECD Guidelines 5.10–5.15 and 5.20.
[15] OECD Guideline 5.19.

Pension Index[16], along with evidence from other sources referenced in this chapter regarding the lower adequacy of pension entitlements typically accumulated by women in the workforce.

The evidence regarding the influence of contributions (and hence retirement income), tax and financial incentives, and publicity and education on adequacy tends to come from the same sources as evidence regarding their effect on coverage. Hence the evidence cited above[17] shows that employer matching incentives have some, but limited, impact on contributions—simplification of processes and related communication tools for increasing contributions can be more effective. Where automatic enrollment is used, the default contribution rate can be highly influential on adequacy. Incentives may be even less effective in developing countries. However, the relative success in Germany of Riester pensions in increasing contributions and hence adequacy, especially among lower-income groups, indicates that tax incentives may have value, at least in more-developed economies, but at a significant cost (Borsch-Supan, Coppola, and Riel-Held 2013).

Enforcement of timely payment of contributions has received relatively little research attention. Nonetheless, requirements to this effect are common in pension legislation, and there is support from the OECD guidelines. Guideline 5.04 refers to enforcing access to employer-sponsored plans to the extent mandated in plan rules or the law and enforcing nondiscrimination and related provisions. In addition, plan members should be given timely notification of nonpayment of contributions, but the guidelines stop short of specifying enforcement action.

2.7 Key Features of Security

The security outcome is supported by 26 features, more than any other outcome (Figure 2.7). This is mainly due to the broad range of features, including those relating to preconditions such as data through to those relating to the role of the supervisor. This reflects the many ways in which the security of pension assets can be compromised and hence the many approaches to keeping them secure. A well-designed pension system with the right market participants and environment might deliver the other four outcomes, but it carries a huge risk of insecurity.

Figure 2.8Features Supporting the Security Outcome

1. Consistently enforced business law regime	14. Fair and prudent use of surplus
2. Clear legal structures for pension entities	15. Wind-up and alterations
3. Standards and professionals in accounting, actuarial, auditing, and legal	16. Sponsor/provider guarantees and compensation funds
4. Data: economic, demographic, and personal	17. Objectives of supervisor (IOPS 1)
5. Risk management and internal controls	18. Independence of supervisor (IOPS 2)
6. Assets appropriately separated and ring-fenced	19. Resources of supervisor (IOPS 3)
7. Protection from government policy reversal	20. Powers of supervisor (IOPS 4)
8. Independent reporting and whistle-blowing	21. Risk-based supervision (IOPS 5)
9. Valuation of assets and liabilities	22. Supervisory proportionality and consistency (IOPS 6)
10. Prudent funding of commitments, including provisions for risks	23. Supervisory consultation and cooperation (IOPS 7)
11. Recovery plans supervised	24. Confidentiality of supervisor (IOPS 8)
12. Investments are sufficiently secure, liquid, and diverse	25. Transparency of supervisor (IOPS 9)
	26. Governance of supervisor (IOPS 10)

[16] See Chapter One

[17] For instance, see Madrian (2012) and Beshears and others (2006).

13. Matching assets to liabilities and member lifecycle	

OECD guidelines address the need for a legal system that allows the enforcement of financial contracts pertaining to occupational pensions (Guideline 1.04). In particular, there should be a body of ethical, professional, and trained lawyers and judges and a court system whose decisions are enforceable. Rudolph and Rocha (2009) make similar points. The OECD and IAIS standards relating to financial matters, such as valuation, investments, risk management, and funding, provide further indications of key features that drive security.

Clearly defined and separate ownership and control of pension assets have long been considered paramount in international standards. To take a recent example, a review of the development of private pensions in the Russian Federation (Rudolph and Holtzer 2010), as well as many of the features referred to already, demonstrates the problems that can occur when the ownership by participants of pension assets is unclear. More generally, the consequences of not placing assets held for third parties in a separate secure arrangement, such as with an independent custodian charged with reconciling what they hold against fund records, has been demonstrated by a long line of scandals and has led to a preference for hard-wiring custodian arrangements into private pension reforms in several recent cases.

The Maxwell case in the United Kingdom (along with several other contemporary fund failures such as the Madoff scandal, MF Global, Colonial Life Insurance Company, and Lehman Brothers) provides a graphic example of what can happen if some basic controls over security are missing. Subsequent reports supported the need for better segregation of assets, a prohibition of self-investment, funding standards, inflation protection for deferred members, member-nominated trustees, independent professional auditors and actuaries with whistle-blowing duties, clearer definition of what can happen to fund surpluses, independent supervision, and a fraud compensation scheme (Pension Law Review Committee 1993). Very many of these basic features are found in the OECD Principles of Occupational Pension Regulation, with recommendations relating to:

- Clear regulated and documented structuring of pension entities, including clearly structured and enforceable or appealable participant rights, secured in part by a licensing or registration regime.
- The prefunding and segregation of assets, especially from the sponsor and between plans, various protections from creditors, and strong restrictions on self-investment. Independent custodianship is covered, but not mandated.
- The requirements to apply appropriate accounting, auditing, and actuarial standards with independent professionals engaged for this purpose (on which the IAIS standards provide even more detail).These requirements also cover the quality of data used for actuarial purposes (while the OECD defined-contribution roadmap makes recommendations relating to the need for good longevity data).
- The use of appropriate risk management and internal controls (with risk management having a supporting working paper on best practices that covers internal controls).This is also an area with extensive IAIS standards.
- The placement of whistle-blowing requirements on pension entity professionals.

Economic, demographic, and personal data have been identified as critical to the efficient running of a pension system. It is essential to identify individuals entitled to benefits and ensure that they actually receive them (echoing the discussion above on coverage, ID and IT). This is one of the reasons why such data have been placed in the security category. This is particularly important given the timescale in pensions, which can lead to orphan accounts. It is also important with respect to fraud and ghost accounts. As an indication of the increasing importance placed on the issue, the World Bank hosted a flagship event at its annual meetings in 2014 entitled "Making Everyone Count: Identification for Development."

The experience of Nigeria illustrates some of the key features (Ubhenin 2012; National Pension Commission of Nigeria2016). In this country prior to the 2004 pension reform, underfunding of public and private pension funds, coupled with a lack of member-focused governance, inadequate supervision and low levels of coverage, resulted in too few citizens having pensions and too few persons with pensions receiving their due payments on time. The reform greatly strengthened regulation and supervision. The system of clearly structured pension fund companies, assets placed with independent custodians, and independent supervision has improved security of assets once they reach the system, although some problems remain.

Pension assets may also be vulnerable to sequestration by government. Key experiences and lessons that underpin "security—protection from government policy reversal" are set out in a World Bank review of the evidence on policy reversals following the financial crisis (Price and Rudolph 2013).

The lack of inflation protection, and often of benefit preservation, within defined-benefit pension funds can result in significant surpluses that have often reverted in part or in whole to sponsoring employers rather than to member benefits. Although literature on the subject is limited, there is supporting material relating to consequential regulatory reforms in South Africa (Andrew 2001). Likewise lack of inflation protection means that "good "defined-benefit schemes can end up providing very low benefits in real terms, a key issue in Suriname, for example, following the impact of near hyperinflation in the 1990s.

Prudent funding of pension promises is crucial to the security of many pension plans and is covered extensively in the OECD Principles of Occupational Pension Regulation. There are requirements relating to: asset and liability valuation; funding policies; regular independent valuations of the ongoing and discontinuance position; the choice of appropriate assumptions; the existence of sufficient capital to meet expected liabilities; taking account of risks to the plan and sponsor; and enforceable recovery plans. Further detail is provided in OECD/IOPS (2011a) on good practices for pension funds' risk management systems and related work on investment and defined-benefit plans (Franzen 2010) and funding.[18]

Guarantee or compensation funds for fund members affected by the liquidation of employers have mitigated substantial losses for affected members. This is shown in general by the experience of countries with such guarantee schemes (Stewart 2007) and more starkly by the experience of countries without guarantees—for example, in the Waterford Crystal case in Ireland (Financial Times 2013). Guarantees are however far from simple to run so need to be carefully planned and given the ability to vary premiums in relation to the risks covered (see for example the experience of the Pension Benefit Guaranty Corporation in the US compared to the UK's Pension Protection Fund).

Research on the payout phase has emphasized the importance of the prudent funding of the providers of retirement products and their use of asset-liability matching (Mitchell, Piggott, and Takayama 2011).Matching concepts are also important for defined-contribution funds—in particular, the use of

[18] Since U.K. pensions law was strengthened to comply with OECD guidelines in 2005, around £100 billion of deficit correction payments have been made into U.K. funds (by March 2013), supplemented by extensive commitment of contingent assets and specific hedging of liabilities (Pension Protection Fund 2013; Pension Regulator 2013a).

lifecycle portfolios. Modeling based on analysis of available research has shown the superiority of such portfolios (Viceira 2010; Antolín 2009).OECD Principle 3, in particular, includes material on diversification and other means of controlling investment risk relevant to all phases of the pension cycle.

Research on pension guarantees has enabled conclusions to be drawn on best practice in designing such arrangements in a way that enables them to improve security of participant entitlements(Castañeda and Rudolph 2010).It also adds to the literature on how to achieve prudent funding of liabilities and the use of asset-liability matching to facilitate such funding. Winding-up provisions are increasingly important as systems mature, but can often be underdeveloped or take many years to complete, as in Trinidad and Tobago, among other countries. OECD Guidelines 3.20–3.21 expand on protections that should be available at wind-up. There is some controversy as to the true cost of return guarantees – highlighting that they should be approached with care (Canon and Tonks 2014).

There has been useful general work on financial market security over more than a decade as well as many reports and enquiries in the aftermath of the global financial crisis on standards in general, but this work often relates to financial services other than pensions(FSB 2012; Conference of the Insurance Supervisory Services 2002;Vinals and Fiechter 2010; World Bank 2013a, 2014d).However, some case studies prepared for use by the Toronto Centre, among others,[19] and technical notes on pensions produced as part of FSAPs by the World Bank often cover supervisory issues, as do the accession reviews produced by the OECD against the OECD/IOPS standards.

The IOPS Principles of Private Pension Supervision have been used in full as the final 10 features supporting the security outcome. The IOPS has published guidance and case studies on risk-based supervision showing how these can benefit member security.[20]The toolkit embeds supervisory insights on how to mitigate risks and underpins the use of the IOPS standards as part of the framework. There is sometimes a challenge in drawing a direct link between some supervisory inputs to long-run outcomes, so this is an active area for ongoing evidence gathering, research, and case studies. The OBA framework will be updated as evidence evolves regarding what works. It also builds on related work (for example, in Brunner and others (2008) and Blake and others 2008).

2.8 Ensuring a Framework That Updates as the Evidence Updates

The strength of the evidence supporting the OBA framework varies, and in some cases more research is needed. Hence, in this first iteration of the framework, an inclusive approach was taken to ensure comprehensiveness. A regular process of review will be undertaken as more evidence becomes available. This will include progressively expanding the references to useful work and case studies. It will also involve updating links to international principles and standards as they evolve (for example, the OECD/IOPS principles on occupational pensions are due to be updated towards the end of 2016). Short case studies of real-life examples from client countries are particularly important because they often contain highly relevant material that will take a long time to reach the academic literature, working papers, or standards.

[19] See, for example, Toronto Centre (2013).

[20] See, in particular, the IOPS Toolkit for Risk-Based Supervision.

Chapter Three: Completing the Framework and Reviewer Tools

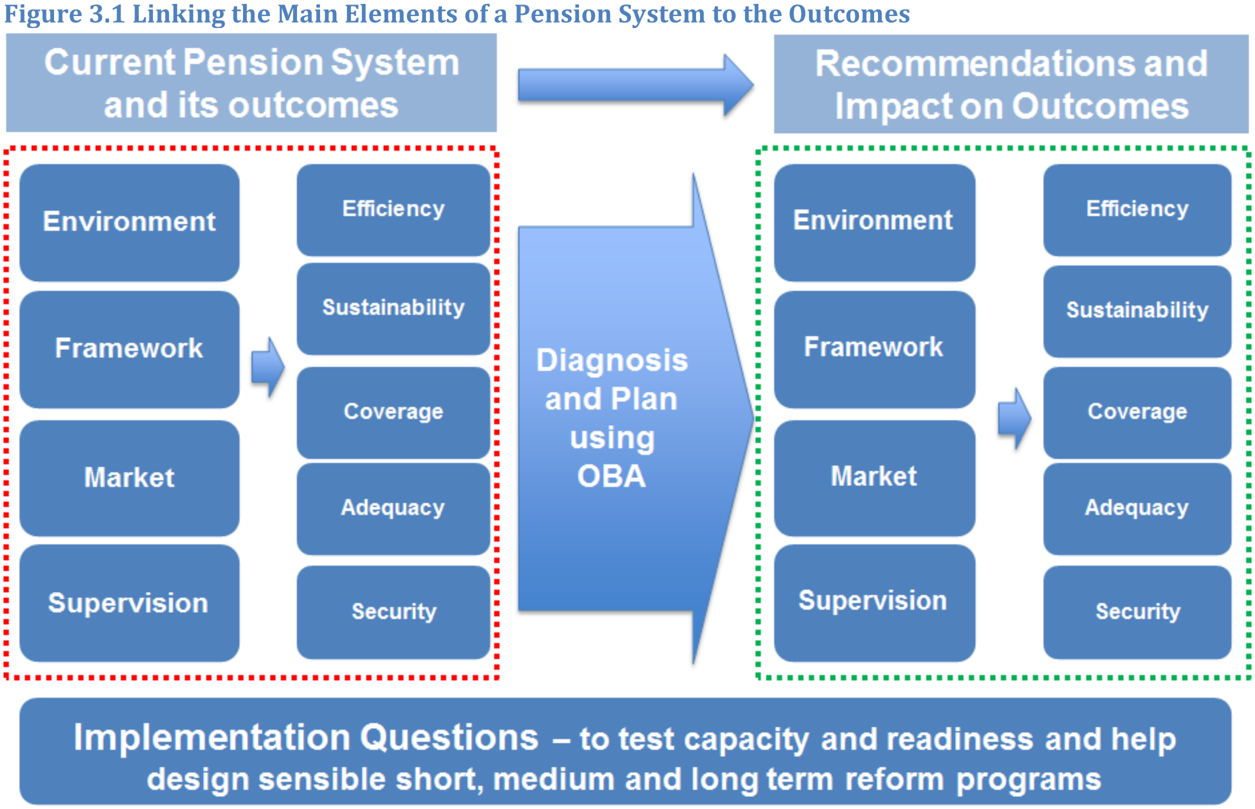
3.1 A Tool for Diagnosis and Reform

A critical issue when conducting a review is the breadth and depth of the review. As highlighted in Chapter One, private pensions not only are part of the wider pension system and hence social policy, but also intimately related to the macroeconomic environment, the capital and labor markets, and, through them, the long-run growth prospects for an economy. The review of the evidence presented shows how the key features span a wide range of factors—ensuring comprehensibility but posing potential challenges in completing a review in a limited time.

A more traditional narrative structure is useful not only when describing the country context but also in presenting which parts of an economy or pension system are creating the biggest problems. In piloting and testing it helped to explain to stakeholders the range of potential areas that would affect pension outcomes. In targeted reviews, it was useful to identify those elements that were within the scope, for example, of a supervisor and those elements that were important to outcomes but outside its scope. However, even where areas were outside the scope of one player, supervisors typically were engaged in an active dialogue with a Central Bank, Ministry of Finance, Ministry of Social Affairs, or Ministry of Labor through which to communicate the importance of broader reforms.

The headline picture that links outcomes with the different parts of a pension system is set out in Figure 3.1. The next section explains how this schematic was developed throughout the project and why each element plays an important role in the overall review framework.

Figure 3.1 Linking the Main Elements of a Pension System to the Outcomes



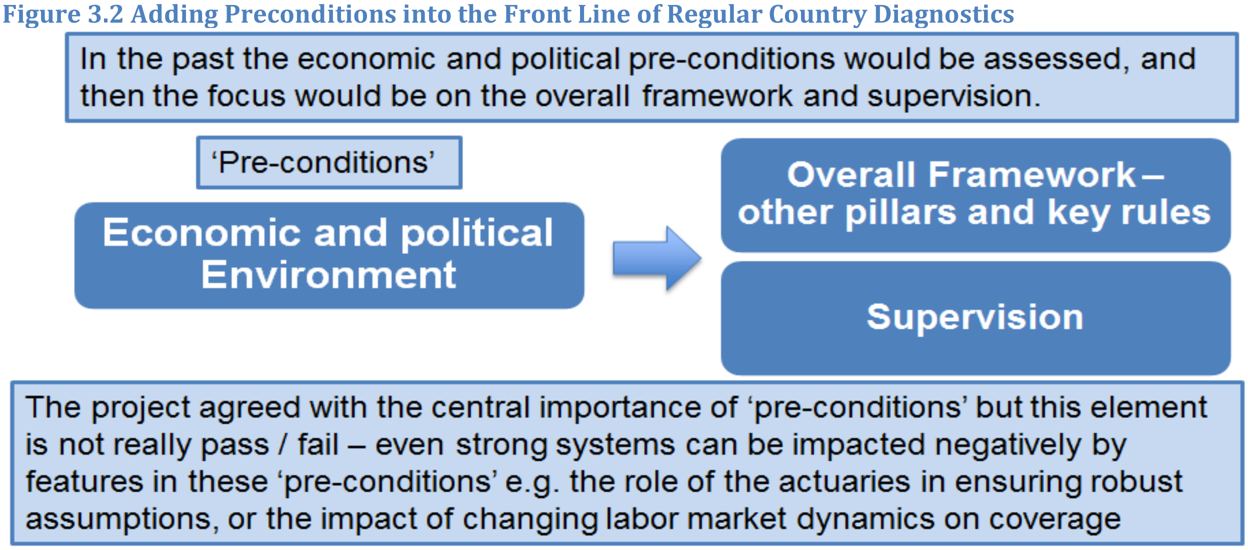
3.2 Pre-conditions and the Economic and Political Environment

Understanding the economic and political environment of a country and whether the preconditions for pension reform exist is an essential element of developing reforms tailored to the needs of a country. It is vital to consider the preconditions for a successful private pension system before launching major reforms (Holzmann and Hinz 2005; IEG 2006; Rocha and Rudolph 2008; Barr and Diamond 2009). These include economic factors such as the macroeconomic situation as well as the availability of legal, accounting, and actuarial professionals (highlighted under security). But our review found that these preconditions are always sensible areas to probe. In other words, if a country has previously demonstrated these pre-conditions, they should not subsequently be ignored.

A good example showing the on-going importance of the preconditions is the challenging macroeconomic environment for pensions caused by the global financial crisis and the monetary policy measures, such as quantitative easing, that followed. Another good example is provided by the scandal in the United Kingdom arising from actuarial deficiencies at Equitable Life, an insurance company (Penrose 2004). This scandal led to wholesale changes in the regulatory and supervisory structure for actuaries in the United Kingdom with the formation of the Board for Actuarial Standards. So even in a country with a well-established and well-respected actuarial profession, it is important to consider how actuaries are operating.

One critical precondition for successful reform is the development of a political consensus for those reforms (discussed in the section on key features). The focus on political consensus building and strategic alignment also comes through when looking at the causes of implementation failures discussed in Chapter One. Politics are always challenging, but successful reformers have often faced similar or worse problems than other countries but have found ways to build the case for change.

Figure 3.2 Adding Preconditions into the Front Line of Regular Country Diagnostics



3.3 Regulatory Framework and Other Pension Pillars

The pension OBA framework identifies the key features of the regulatory system and other pillars on which a reviewer should focus. There is a focus, for example, not only on the main intentions of legal arrangements for pensions but also on whether the system introduces any automatic adjustment mechanisms to ensure that the system can cope—for example, with rising life expectancy by automatically changing parameters such as retirement ages.

One of the most critical areas, most closely linked to the coverage and adequacy outcomes, is the combined impact of all the pension pillars. The right level of contributions to an expanded private pension pillar clearly depends on the sustainable future level of the state pension. In a broad strategic review of a pension system, the analysis of the private pension system is augmented by a full analysis of the combined impact of all sources of pension income. The World Bank uses its PROST model to review contributions, benefit entitlements, revenues, and expenditures to provide a quantitative picture of the long-run sustainability and adequacy of a pension system (Bogomolova 2013). The OECD produces *Pensions at Glance* based on a consistent modeling of future payouts from a pension system, combining the state pension and mandatory private pensions and, for some countries, voluntary pensions as well (OECD 2013b).

3.4 Market Structure, Entities, and Governance

An important lesson in recent years is recognition of the impact that market structure or "industrial organization" can have on pension outcomes, particularly on costs and investment returns (Impavido, Lasagabaster, and García-Huitrón 2010)**.**In designing the OBA it was clear that the issue of market structure and the entities potentially involved in private pensions and their delivery needed to receive sufficient attention. The importance of market structure has been recognized well beyond pensions in research on the role of competition authorities and in reviews of the causes of financial market outcomes (Kay 2012).

There is a very wide range of options regarding exactly how a pension system can have its private assets collected, managed, and paid out. Moreover, many of the issues of investment strategy and execution that are often discussed in wholly private pension systems are also applicable to anyone managing pension assets—from provident funds to funded or partially funded state pension funds (Rajkumar and Dorfman 2010; Price 2014b).

There is no one-size-fits-all design, but rather a need for a careful review of a wide range of key features from scale to capital market development to levels of governance and expertise. The overall design chosen to deliver private pensions will affect the demand and supply sides of the market. This includes distribution mechanisms—the mechanisms for channeling contributions and converting them into invested assets. In many systems this element has proved to be very costly. It can also have negative impacts if there is excessive churning of pension portfolios as a result of the use of sales agents.

3.5 Supervision

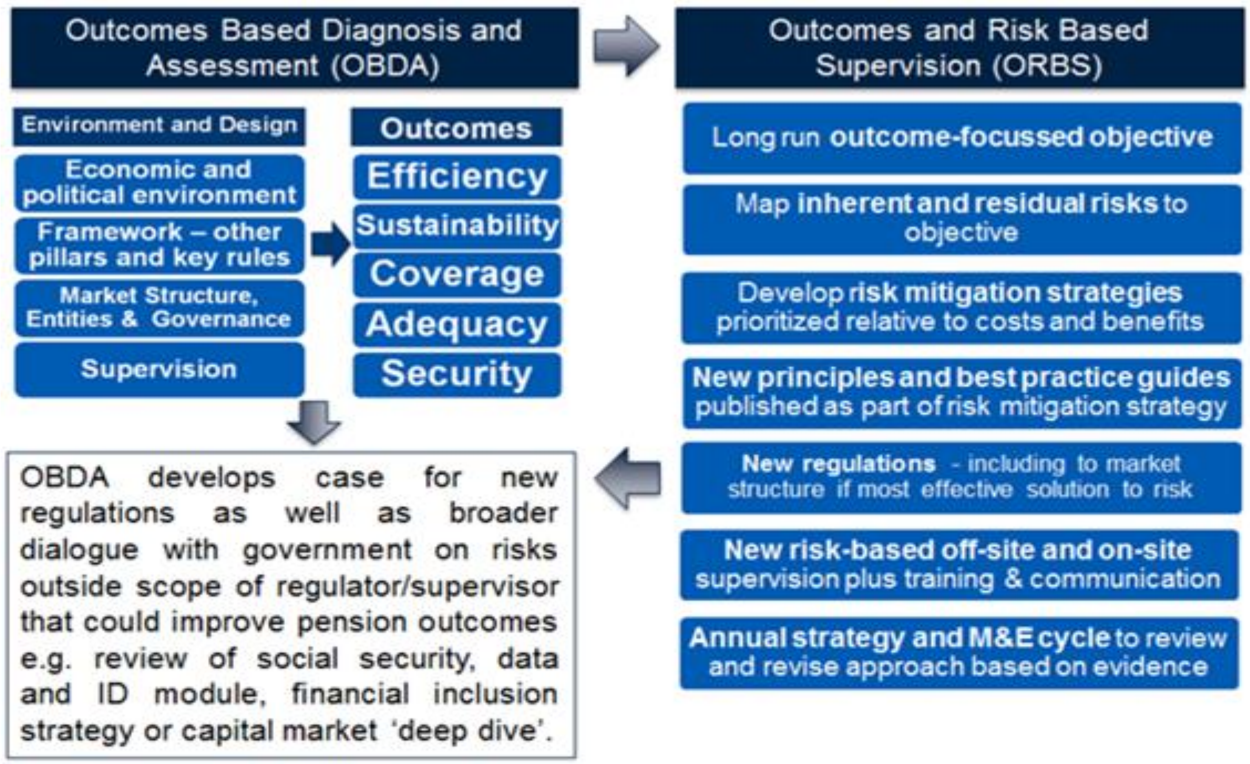
As with regulation, supervision has a fairly obvious role in driving pension system outcomes. Supervision is the area most closely associated with international standards, as discussed in Chapter Two. As these standards are updated, the OBA framework will be updated to ensure consistency. In some projects, the supervisor is the direct client. The framework can be used to review all of the factors affecting outcomes and then to focus specifically on those that are within the immediate control of the supervisor.

The framework also helps to generate a more proactive and long-term debate for supervisors on areas for change that are outside their immediate control but that would reduce the need for costly or ineffective measures. For example, supervisors may have to spend time investigating allegations of poor practice and complaints related to sales agents. A move to an auction system could remove the risks related to sales agents. Or a move to centralized administration with choices among fund managers and the provision of a default fund might reduce the need to have costly and ineffective education campaigns.

The recent 'Murray Review' from Australia shows that these issues are for developed and long-standing markets as well as for developing and new markets (Murray 2014, Price 2016b).

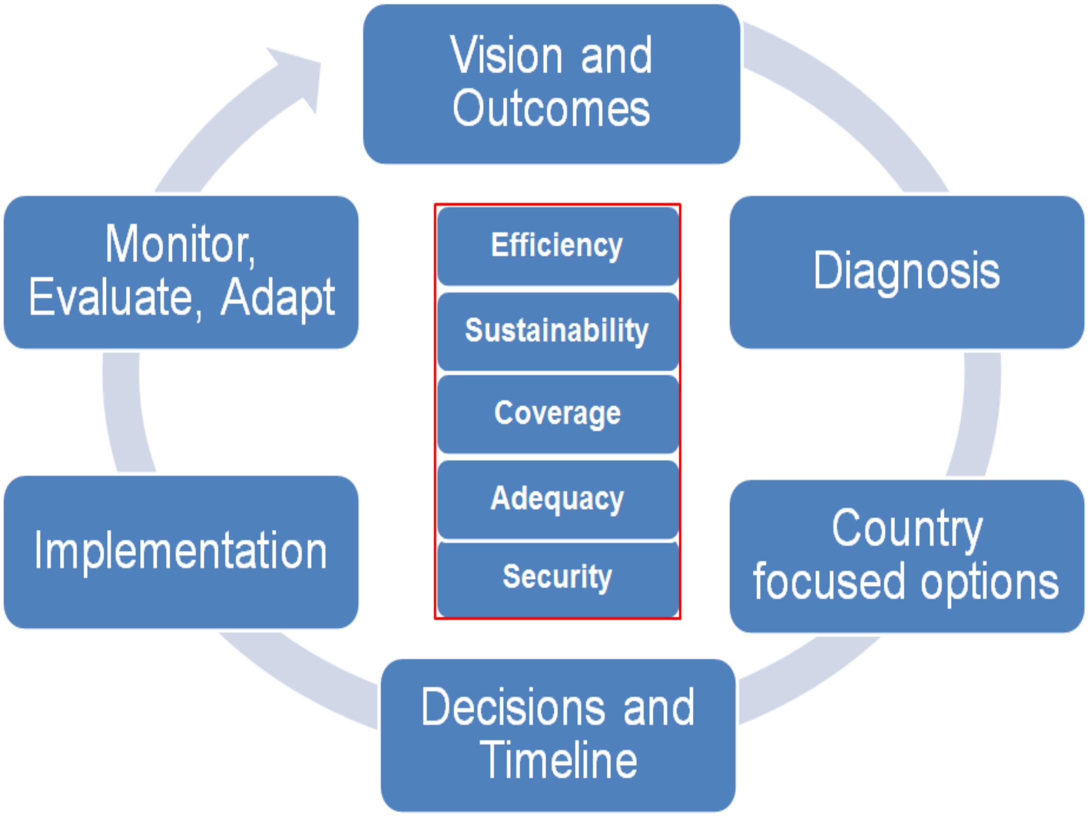
As highlighted in the introduction the OBA approach can be used as the starting point for developing a modern risk based supervision model for a supervisor. The links between the initial diagnosis and the process to develop Outcomes and Risk Based Supervision is set out below.

Figure 3.3Linking the OBA to Outcomes and Risk Based Supervision



This OBA process can be shown as a step-by-step approach but also as a traditional strategy cycle. This emphasizes that the process should lead to decision making and implementation but also to regular review against the evidence and adjustments as required. This is relevant both for a Ministry of Finance or Social Welfare undertaking significant reforms of pensions and for a regulator or supervision running a risk based supervision program.

Figure 3.4The strategy cycle



The integration of the narrative approach to reporting with the outcomes approach to analysis can be shown in a simple grid which can summarize which parts of the system should be reformed and how this will contribute to each outcome (Figure 3.5). This can help to make the case for broad-based changes, since maximizing the impact on each outcome will often require changes across the pension system – even though targeted interventions can still be justified by their own impact on results. Or it can highlight the limits to action by one part of the system—a supervisor, for example. This can be helpful during a targeted review to focus on those changes that are within the control of the supervisor to ensure that the expectations of what reform will achieve are realistic and tailored to the country context (Rodrik 2007).

Figure 3.5 How Different Parts of a Pension System Can Affect Outcomes

Matching different parts of a pension system to their impact on outcomes					
Ultimate Outcomes → System Feature ↓	Efficiency	Sustainability	Coverage	Adequacy	Security
Country and Financial System **Environment**	e.g. political direction of investment allocation	e.g. govt. contribution debt or tax financed	e.g. level and trends in labor market informality	e.g. wage & employment growth	e.g. political consensus for pension system
Framework and Regulation	e.g. controls on fees, default investment fund (inc rules on invest domestic v foreign)	e.g. auto adjusting retirement age	e.g. auto-enrolment to ' increase coverage, or mandatory	e.g. size of other pillars & level of contribution	e.g. rules for annuity v lump sum
Market Structure and Conduct	e.g. strength of demand side + scale providers	e.g. quality long term governance including disclosure	e.g. whether firms provide accounts to small/med customers	e.g. 'churning' of customers accounts	e.g. public disclosure and quality internal controls
Supervision	e.g. focus on investment governance	e.g. risk based controls on solvency	e.g. check employers enrol staff	e.g. checks on record keeping and payment of contributions	e.g. fit and proper and ultimate beneficiary checks

3.6Practical Tools for Reviewers

This Handbook includes practical tools for reviewers to use on projects. These are highlighted briefly below and then attached at the end of this Handbook.

- **A data request sheet** for countries, with various indicators mapped to outcomes. Completed sheets provide data, identify gaps to be filled, and link to future measurement of success.
- **A list of the key features** to review in a system, which provides the areas of focus for questions. These features are mapped to outcomes and selected when preparing country-specific pre-visit questionnaires and meeting agendas.
- **An OBA review sheet, including implementation assessment**, in which to record evidence, issues, and recommendations and prioritize them based on the size of the problem and the importance of the issue. Each outcome then has an overall summary and assessment, which can be used in the final report to summarize the current position and the important issues for reforms.
- **A key features background sheet** for reviewers, which provides a detailed description of the key features and definition of the outcomes and cross-references the international standards and guidance, if any, that have been mapped to the key features.

3.7Data and Indicators

Each outcome has detailed data and indicators to aid analysis or evaluation aligned with existing global pension databases where possible. These include the World Bank's "International Patterns of Pension Provision II" (Pallares-Mirralles, Romero, and Whitehouse 2012) and Global Financial Statistics Database and the OECD's data collection for *Pension Markets in Focus* and *Pensions at a Glance* (OECD 2012a and 2013a) which are accessible from the OECD's Global Pension Statistics Database. But additional elements have been added to ensure full coverage of all elements identified from the analysis of what drives outcomes. Some additional granularity has been added—for example, on costs to ensure more robust evidence collection. In addition, there are more distributional questions—for example, by income and gender.

Obtaining reliable and relevant data is perhaps the most challenging aspect of any review. The approach taken is not to compromise on the data request, but to be realistic about what can be supplied. Reviewers can use all or a subset of the indicators for requesting data from countries. If the review is to be targeted rather than comprehensive, the data requests can be tailored to the part of the system or the outcome on which the review will focus. In many countries, it is unlikely that the data needed for the complete set of indicators will be available. However, an important part of a review and reform process will be to identify gaps in the data and develop plans to fill them. This is part of a necessary push to progressively improve pension data (Payet 2012).

Over time, as more and more of the gaps are filled and more case studies are created, it will also be possible to develop increasingly useful country-specific benchmarks and to evaluate the effectiveness of reforms more objectively. This effort will also support the refinement of the OBA framework by contributing evidence of which key features have the greatest effects on the outcomes. To help improve global data on pensions the World Bank is partnering with the OECD and IOPS to expand their long-standing data gathering and dissemination efforts to a wider range of countries[21].

Efficiency indicators include those related to the size of the market and its distribution among providers. They also include investment returns and factors that affect them, such as investment fees, transaction costs, supervisory costs, and asset allocation. The labor supply can affect efficiency, so indicators include retirement ages and the wedge between gross and net wages.

Sustainability indicators measure total contributions, who makes them, and total government spending on pensions. Where they are available, sustainability indicators focus on stock and flow measures including projections, and where they are absent, a review is likely to recommend creating them, as in the recent FSAP in Suriname. They also show both the current and future balance between various pillars or tiers of the broader retirement income system. The existence of any mechanisms to adjust pension benefits automatically is sought as a qualitative indicator. Evidence on political or public support for the current system or reforms can be obtained formally through surveys or informally through interviews with market participants and reviews of different media.

Coverage indicators include the current number of contributors and pension recipients and their shares of the relevant segments of the workforce and population. The data sought also include projections of these indicators, which would show how coverage under the current system is expected to evolve over time. The gender breakdown is a critical element, particularly in contributory systems with vesting periods that may lead to gender-inequitable outcomes.

Adequacy indicators consider both the adequacy of input and the adequacy of the resulting pensions. Input indicators relate to the level and density of contributions made to and (by considering pre-retirement withdrawals) retained in the system, as well as the employment rate. Output indicators include replacement rates and the relative poverty of pensioners. Several adequacy indicators go beyond the private pension pillar to identify other potential sources of retirement income, such as homeownership,

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[21] The World Bank has partnered with the OECD and IOPS to improve global pension statistics to further this goal – see http://www.worldbank.org/en/news/press-release/2016/04/28/oecd-iops-and-wb-join-forces-to-improve-private-pension-statistics

savings, and other financial or insurance products. These can be difficult to find, but again are important in gaining a full understanding of what private pensions need to achieve.

Security indicators cover a wide variety of factors. They include the funding ratios of defined-benefit plans and others that provide guarantees, as well as the extent to which pension assets are held separately from other assets. Data on assets lost to insolvency, fraud, or theft are relevant, as are the potential losses that were avoided through coverage by compensation schemes. The existence of mortality data and the availability of projected improvements support the secure funding of pensions. The existence of large data gaps for any outcome sets a baseline for improvements.

3.8 Key Features

The list of key features can be used to create a pre-visit questionnaire. Responses to such a questionnaire, together with the various indicators, help the reviewer to gain an initial understanding of the pension system and to identify issues that might require special attention while in the country.

Even reviews that focus on a particular part of the system or a particular outcome need to cover a wide variety of issues. The challenge is even greater for reviews that are comprehensive in nature. It would be easy for even an experienced reviewer to overlook important issues in the course of a review. The key features can help to minimize this risk by serving as a high-level checklist for the reviewer—much as checklists for pilots and surgeons are used to ensure that important but routine matters are not overlooked. An extract from the key features background sheet is set out in figure 3.6.

Figure 3.6 Extract from the OBA Reviewer Sheet: Descriptions and Mapping

(This extract shows the efficiency outcome. In practice, much of the mapping of principles and standards focuses on the security outcome).

Key feature	Description of key feature to investigate	Principle, standard, or guidance
Efficiency		
Impact of scale	Do the demand- and supply-side entities have the scale to deliver the best outcomes given significant economies of scale in provision and problems with individuals having sufficient expertise or buying power to act as an effective demand side? Includes consideration of design of the pension system, for instance, through ensuring scale entity on demand side, centralization of administration, licensing or minimum capital requirements, enforcement of tough minimum standards on trustees so as to discourage small pension entities or more pension entities than would be consistent with sufficiency of scale; and promotion or facilitation of pension entity consolidation. Also includes measures to enable scale economies to be achieved across pension plans through common funds, for example. Linked to investment recommendations for small markets, such as ensuring much greater foreign investment. Relevant to decumulation, where size of the market and critical mass of business can be relevant, as well as accumulation. Note that scale may need to be built gradually in new systems.	Defined-contribution Map 4(no formal standards cover scale)
Member-focused governance	Covers the requirements placed by law (whether pensions, tax, company, or trust) or supervision on the governing bodies of pension entities to encourage governance that is effective and in the best long-term interests of plan participants. Will include focus on whether objectives are clearly member focused such as achieving adequate pensions through maximizing efficiency with good investment returns net of costs as well as ensuring sustainability, security, and good coverage. Includes board structures, fiduciary duties, accountability mechanisms, oversight arrangements (within pension entities), participant representation, appropriate legal liabilities and indemnities, board member codes of conduct, and controls over conflicts of interest. Also includes requirements to avoid inappropriate interference by outsiders, such as sponsoring employers and related companies. Interference by regulatory investment limits comes under Efficiency 6 or Security 12. Relevant to the governance of decumulation product provision as well.	OECD 4.01, 4.03, 4.06, 4.26, 5.32, 6.01–6.03, 6.11 IAIS7.03,7.08–7.09 ICP23 RM1.01–1.04, 2.08–2.09, 6.05,7.01–7.03, 8.01

3.9 The Role of the Reviewer

To obtain a high-quality review of a country's private pension system, the reviewer must be well-qualified. The OBA framework helps to structure a review and to guide the reviewer, but reviews are also qualitative and require the examination of a wide range of issues, which are often interrelated.

Reviewers should have broad expertise that enables them to cope with the diversity of issues commonly encountered during a review. Issues may well relate to laws and regulations, market structure, the economic and political situation, accounting and actuarial standards, and investments, among other things. Ideally, a comprehensive review of all elements of a pension system should be carried out by a team of at least two reviewers, with complementary areas of expertise—particularly on projects with long duration and multiple deliverables. Shorter-term or more tailored reviews need a reviewer with broad expertise and should use strong peer reviewers.

Reviewers need to consider not only the characteristics of the current pension system of a country but also how effective and efficient it is in terms of achieving desirable outcomes. The review should examine whether requirements are put into practice and, if so, whether they are working as intended. If problems are identified, the reviewer should be capable of formulating practical recommendations for dealing with them.

The necessary expertise and international experience must be combined with the capacity to achieve a clear understanding of the specific circumstances in the country being reviewed. Reviews should include in-depth consultations with individuals and organizations that have first-hand experience related to the pension system of the country. In addition to relevant authorities, those consulted will often include auditors, trustees, employers, actuaries, researchers, and industry associations.

The OBA framework is designed to guide reviewers in the preparation of comprehensive and comparable reviews of countries' private pension systems. However, there is still considerable scope for a reviewer to exercise discretion. Even in the preparatory phase of a review, discretion is left to the reviewer regarding which data and indicators will be most relevant to the review, what questions should be included in the pre-assessment questionnaire, which stakeholders should be consulted, and what will be on the meeting agendas. Judgment is particularly important when discussing trade-offs between outcomes. However, the reviewer recording sheets help to make these judgments transparent.

During the review, the reviewer will need to decide which key features are most relevant to the situation. Judgment will be needed in assigning ratings, particularly for key features that are outside the scope of the international standards. Discretion is left to the reviewer in determining the relative importance of the problems identified by the review and in crafting recommendations that are suitable for dealing with the problems in the context of the particular country. Some features may not be applicable to the situation being reviewed, but the process of determining that this is the case itself provides a good discipline.

This Handbook presents an outcomes-based diagnosis and assessment tool for private pensions as a new way in which to conduct a pension review in a comprehensive and structured way(see annex for the data and recording sheets). It is a resource used by reviewers in a range of projects. It aims to foster discussion on the key outcomes and their causes. As reviews are conducted, final reports will be published, where possible, to provide an increasing database of comparable reviews. The Handbook, tools and evidence base will be updated as new evidence and experience are gathered.

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Tool 1: Data Collection Sheets(note that the data collection is via an excel sheet)

Outcome and Indicator	Description
EFFICIENCY	
Market Size and Distribution	
Funded pension assets as % GDP(part of Capital market depth)	Total pension assets under management as % GDP (to add to insurance etc. for full capital market depth indicator in Global Financial Statistics)
Total number of pension providers	Number of providers licensed as plan providers to members or employers - note a single line used if integrated Pension Fund Management Company model used - or extra lines if system split into separate administrators, pension fund managers.
Distribution of members by provider	Members in largest 5 providers. Base data could allow calculation of Herfindahl index which may have more use than number of providers. But note that demand side critical in pension markets.
Distribution of assets by provider	Assets held by largest 5 providers (with annex on members for all providers if available to enable calculations of other indices/analysis)
Investment Returns and Costs	
Nominal Gross Investment returns: Local Currency (before costs)	Follow OECD practice in Pension Market in Focus: R = Investment Income/((Total Investment t-1+Total Investment t)/2) (including all sources of investment income but not new contributions) expressed as a percentage
Nominal Gross Investment Returns %: US$	As above but in US$ terms
Inflation rate	Measure of price inflation - as reported to IMF (please specify measure used)
Real Gross Investment returns %: Local Currency before costs	Indicator 5 - Indicator 7
Real Gross Investment returns %: US$ before costs	Indicator 6 - Indicator 7
Interest rate on bank deposits	Rate of interest paid on money in the bank - ideally a 1 year term deposit
Total fees on contributions	Please include all relevant fees (contribution charge, annual charge, entry and exit fees, additional fees for audit, custody, sales agents). Include any fees deducted by fund managers from fund assets directly for full comparability with other countries. Should cover all elements including sales, marketing, and administration.
Total fees on assets under management	Please include all fees levied each year including for administration, investment management, additional fees for audit, custody, sales agents. Include any fees deducted by fund managers from fund assets directly to aid comparability with countries where these fees are included in the annual management fee.
Total exit fees	Include all charges levied for withdrawing money from the fund. Set out total absolute amount of fees deducted under this charge in each year for all members - with note identifying relevant percentage or absolute charge rate for each withdrawal.
Nominal returns after direct fees local	Include the annually reported nominal returns after fees in local currency

Nominal returns after direct fees US$	Include the annually reported nominal returns after fees in US$
Real returns after direct fees local	Indicator 14 - Indicator 7
Real returns after direct fees US$	Indicator 15 - Indicator 7
Costs as % real returns (Capital Market Efficiency)	(Total fees charged each year expressed as a percentage of assets under management) / annual real returns each year to show what proportion of real returns goes in fees
Transactions costs - direct	Actual or estimated transaction costs for trading (broker fees/trading spreads and taxes)
Nominal return on bank deposits	Interest rate on 1 year term deposit (if available) to indicate return on simple savings.
Transactions costs - indirect	Estimates of costs of market timing or proxies such as portfolio turnover
Risk adjusted fee measures	Additional measures such as Sharpe Ratio included as an annex
Total costs for the supervisor	Total local currency amount to run pension supervision
Profitability of Private Pension Fund Providers	Return on equity of private pension funds (to help assess costs, fees and viability).
Asset Allocation	(Note this follows the OECD categories used in OECD Pension Market in Focus which will allow cross-referencing to other countries in their database). Please supply links/attachments with any more detailed figures.
% of total assets invested in/exposed to:	Shares
	Government and corporate bonds
	Cash and Deposits
	Other
% of total assets invested in own country	Total assets invested in own country as a percentage of total assets under management
Average duration of pension assets held	Measure of average length of government and corporate bonds held and average holding period of equities (if not known just average duration of bonds held).
Ability to hold investments in downturns (Cap mkt stability)	Length of any grace periods for breaches of investment or solvency limits during market downturns to avoid forced selling of assets or narrative on any evidence of forced selling
Labor supply	
Retirement age - legal	What is the legal retirement age
Retirement age - effective	What is the average effective retirement age (see OECD Pension Outlook for OECD)
Ratio of working years to expected retirement	Number of average working years divided by average expected years of retirement
Return to extra year of employment	Increase in pension income caused by one more year of work (and contributions) and one less year of retirement (calculated in OECD Pension at a Glance for some countries).
Total wedge between gross and net wages	Difference between wages before and after taxes (reported by OECD Pensions at a Glance model for selected countries) (see sustainability for breakdown of wedge by contributor/type of pension)

SUSTAINABILITY	
Total national pension contributions as a % of GDP(flow)	Total contributions by government, employers and employees into all pensions
Total contributions to private pensions as a % of GDP(flow)	Total contributions by government, employers and employees into private pensions
Government spending on all pensions as a % of GDP (flow)	Total government spending on all pensions as % GDP including cost of government workers
Government spending on private pensions as % GDP (flow)	Value of government direct contributions, tax relief and matching for private pensions only to identify balance between government spending on public v private pensions
Net present value of Government pension spending	Net present value of total government pension spending as % of GDP
Surplus or deficit in government budget for pensions	Total government spending on pensions minus total contributions paid to government
Government implicit pension debt % of GDP	Implicit debt calculated by Government or external agencies/researchers e.g. (calculated by World Bank PROST model or other source).
Multi-pillar/tier balance current generation	% of total retirement income of current pensioners coming from state pensions (World Bank Pillar 0 or 1 or OECD first tier)
Multi-pillar/tier balance future generation	% of total retirement income of next generation projected to come from private pensions - projection for 2030/40/50 please specify.
Existence of automatic adjustment mechanisms to economic or longevity shocks - narrative answer	For example – retirement age rises with rising longevity, conditional indexation if asset returns not high enough, increased employer or employee contributions if a shortfall exists, partial pension cut if sponsor bailout required, or adjustments in pension payout - temporary or permanent for risk sharing/risk adjustment.
Employer contributions as a % of wages	Measure of cost to employers
Employer contributions as a % of profits	Measure of cost relative to overall profits or turnover (please specify).
Political support for current pension system and parameters	Any quantitative (surveys/votes/polls) on support for reform. Any institutional bodies to bring together different stakeholders.
Political mechanism for cross party/independent commissions	Existence of independent or multi-party pension Commission YES/NO

COVERAGE	
Total number of private accounts	Total number of accounts (for separate individuals - not including multiple accounts)
Total number of contributors in past year	Total number of accounts for which payments made (with separate breakdown for number of payments if available)
Contributors as % of labor force	Total and any breakdown by age and gender (or other relevant categories in country context) as separate annex
Contributors as % of working age population (15 - 64)	Total and any breakdown by age and gender (or other relevant categories in country context) as separate annex
Total number of current pension recipients	Total number of people currently receiving a private pension (and any breakdown by age and gender (or other relevant categories in country context) as separate annex)
Total number of pension recipients in 2030	Total number of pension recipients forecast for 2030 (or other date - please specify - and any breakdown by age and gender (or other relevant categories in country context) as separate annex)
Current pension recipients as % of pensioners	Total and any breakdown by age and gender (or other relevant categories in country context) as separate annex
Future pension recipients as % of future pensioners	Forecast for future private pension coverage by 2030 (or other suitable date - please specify - and any breakdown by age and gender (or other relevant categories in country context) as separate annex)

ADEQUACY	
Employee contributions to private pensions	Employee contributions as % of salary (annual total value requested under sustainability - these measures to support modelling of likely replacement ratios)
Employer contributions to private pensions	Employer contribution as a % of salary
Government contribution to private pensions	Government contribution as a % of salary
Density of contributions (% average months contributions made)	Months on average in which contributions are made per year
% assets withdrawn pre-retirement	Percentage of contributions withdrawn before retirement
Core adequacy (pension income as a % of poverty line)	How much of the national poverty line is covered by the average pension income? Breakdown by gender and other relevant characteristic for country as annex if available.
Relative poverty of pensioners	Poverty rate of pensioner households (65+) to poverty rate in all other households
Income level of bottom 40% in country	To allow calculation of impact on World Bank global 'boosting shared prosperity' target.
Broad adequacy - Replacement rate as % of average wage	Replacement rate relative to average wage. Breakdown by gender and other relevant characteristic for country as annex if available
Broad adequacy - Replacement rate as % of own final wage	Replacement rate for top 10% of income earners (or complete income distribution if known).

Home ownership	Percentage of pensioners living in a home they own
Other savings - current pensioners	Average value of other savings for current pensioners to supplement pension
Other financial/insurance products - coverage (inclusion)	% coverage or ownership of other products such as life insurance or health insurance that would mitigate need for pension income
Employment rate of 60 - 64	% of age group employed
Employment rate of 65 - 70	% of age group employed
Pension wealth at retirement for:	Modeling of pension wealth if available (produced by Pension at a Glance model)
Male	Pension wealth at retirement for men
Female	For women
Income quintile 1	Bottom 20% of income earners
Income quintile 2	21% - 40% of income earners
Income quintile 3	41% - 60% of income earners
Income quintile 4	61% - 80% of income earners
Income quintile 5	Top 20% of income earners

SECURITY	
Funding ratio of DB schemes (or DC schemes with guarantees)	Funding ratio on all available measures e.g. on wind up or solvency basis, for on-going funding or regulatory purposes, for accounting standards (IAS19) and for any bailout funds for sponsor insolvency.
Extent to which pension assets are held separate and watertight from sponsors, fund managers and the Government	% assets with clear segregation.
Exposure of members near retirement to equity market volatility	% of assets in equity on average for members 5 years from retirement (or nearest age group e.g. 55-60 or 60-65.
Maximum permissible investment in a given company, corporate sponsor or security	Please supply main limits for investment in the corporate sponsor (if applicable), of related group companies, or particular companies. A narrative answer can be given/reference to regulatory code.
Pension assets lost to sponsor, provider insolvency, fraud, theft or government appropriation during the previous 5 years, % assets	Any information on assets lost due to problems with the sponsor or provider or government.
Payments made to participants by fraud protection or employer bankruptcy compensation schemes	If schemes exists how many members compensated and to what value.
Existence of mortality data	Does the country have published mortality tables for use by the industry? Yes/No
Mortality data includes projected rates of improvement	Does the industry use mortality tables with annual improvements included (dynamic or cohort mortality tables) or static tables? Yes/No
Compliance with IOPS Principles 1 - 10	Number of standards rated fully implemented if assessment has been made (please send any external assessments or self-assessments).

Tool 2: Outcomes Based Diagnosis and Assessment: List of Key Features to review

Efficiency

1. Impact of Scale
2. Member-focused governance
3. Expertise of governing body
4. Robust strategy process
5. Role of advisors and investment managers
6. Optimal long-term investment strategy and appropriate limits
7. Fair, efficient, deep and transparent capital markets
8. Competition, choice and transfers
9. Good communication and disclosure
10. Cost-effective distribution and intermediaries
11. Cost control, caps and transparency
12. Efficient transition to payout phase
13. Efficient operational, recordkeeping and data management
14. Reduce labor market distortions

Sustainability

1. Diversification among pillars/tiers
2. Intended outcomes are realistic
3. Understanding of intended outcomes and risks
4. Political support
5. Government costs sustainably funded
6. Affordable employer and employee costs
7. Effective and counter-cyclical adjustment mechanisms

Coverage

1. Eligibility for participation
2. Tax and financial incentives
3. Mandatory, behavioral or social stimulus to participate
4. Publicity and Education
5. Breadth of providers' target market
6. Enforcement
7. Reducing incentives for labor market informality
8. Building trust given economic and political history

Adequacy

1. Contribution levels and benefit accrual rates given income objective relative to other pillars
2. Years of vested participation
3. Controlling early access
4. Portability
5. Income provided until death
6. Appropriate guarantees on income and returns
7. Protection against pre- and post-retirement inflation
8. Fair treatment of spouses and dependents
9. Tax and financial incentives
10. Publicity and Education
11. Enforcing contributions

Security

1. Consistently enforced business law regime
2. Clear legal structures for pension entities
3. Standards and professionals in accounting, actuarial, auditing and legal
4. Data: economic, demographic and personal
5. Risk management and internal controls
6. Assets appropriately separated and ring-fenced
7. Protection from Government policy reversal
8. Independent reporting and whistleblowing
9. Valuation of assets and liabilities
10. Prudent funding of commitments, including provisions for risks
11. Recovery plans supervised
12. Investments are sufficiently secure, liquid and diverse
13. Matching assets to liabilities and member life-cycle
14. Fair and prudent use of surplus
15. Wind-up and alterations
16. Sponsor/provider guarantees and compensation funds
17. Objectives of supervisor (IOPS1)
18. Independence of supervisor (IOPS2)
19. Resources of supervisor (IOPS3)
20. Powers of supervisor (IOPS4)
21. Risk-based supervision (IOPS5)
22. Supervisory proportionality and consistency (IOPS 6)
23. Supervisory consultation and co-operation (IOPS 7)
24. Confidentiality of supervisor (IOPS 8)
25. Transparency of supervisor (IOPS 9)
26. Governance of supervisor (IOPS 10)

Implementation/Delivery Questions

Note that questions on external suppliers only relevant if external procurement is required

1. Are there clear links between the project and the organization's key strategic priorities, including agreed measures of success?
2. Is there clear leadership and ownership from senior management and Ministers?
3. Is there effective engagement with stakeholders?
4. Does the team/organization have the skills and proven approach to project management and risk management?
5. Has development and implementation of the project been broken down into manageable steps?
6. Has evaluation of proposals been driven by long term value for money rather than initial price/cost?
7. Is there deep understanding of, and contact with the supply industry at senior levels in the Organisation purchasing the services?
8. Is there effective project team integration between clients, the supplier team and the supply chain (where applicable)?

The questions ensure an enhanced level of focus on delivery and implementation risks as part of the Outcomes Based Assessment Framework. Not all questions will be relevant for every project. But the questions are based on assessments of the causes of project failures across a wide range of industries/government policy areas. These questions have been adapted from a review of common causes of project failures undertaken by the Office of Government Commerce in the UK. The questions are also linked to extensive guidance on how to ensure best practice delivery, with examples of guidance material and overall project management and appraisal material listed in the references).

Tool 3: OBA Review Sheet 1: Summary of Review

Note on Gap and Importance: If no standard then rate size of problem/gap on 4 point scale (small, medium, medium-large and large). If a standard exists use usual 4 point rating (fully met, largely met, partly met, not met and N/A). For importance use low/medium/medium-high/high. Visual display in risk matrix can be helpful. Note that no overall rating or single point estimate is required.

	Issues identified	**Recommendations (and to whom)**	**Gap and Importance**
EFFICIENCY	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Efficiency – Impact of Scale	Issues and evidence – focusing on the big picture	Recommendations to solve problems and to whom e.g. Finance Ministry, regulator, supervisor, industry etc. focusing on the key issues – and using the Implementation questions to design a practical series of steps in the short, medium and long term.	Importance (low, med, med-high, high) Gap (small to large) or rating on standard (fully to not met)
Efficiency - Member-focused governance			
Efficiency - Expertise of governing body			
Efficiency - Robust strategy process			

	Issues identified	**Recommendations (and to whom)**	**Gap and Importance**
Efficiency - Role of advisors and investment managers			
Efficiency - Optimal long-term investment strategy and appropriate limits			
Efficiency - Fair, efficient, deep and transparent capital markets			
Efficiency - Competition, choice and transfers			
Efficiency - Good communication and disclosure			
Efficiency - Cost-effective distribution and intermediaries			

	Issues identified	Recommendations (and to whom)	Gap and Importance
Efficiency - Cost control, caps and transparency			
Efficiency - Efficient transition to payout phase			
Efficiency - Efficient operational, recordkeeping and data management			
Efficiency - Reduce labor market distortions			
SUSTAINABILITY	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Sustainability - Diversification among pillars/tiers			
Sustainability - Intended outcomes are realistic			

	Issues identified	Recommendations (and to whom)	Gap and Importance
Sustainability - Understanding of intended outcomes and risks			
Sustainability - Political support			
Sustainability - Government costs sustainably funded			
Sustainability - Affordable employer and employee costs			
Sustainability - Effective and counter-cyclical adjustment mechanisms			
COVERAGE	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Coverage - Eligibility for participation			

	Issues identified	**Recommendations (and to whom)**	**Gap and Importance**
Coverage - Tax and financial incentives			
Coverage - Mandatory, behavioral or social stimulus to participate			
Coverage - Publicity and Education			
Coverage - Breadth of providers' target market			
Coverage - Enforcement			
Coverage - Reducing incentives for labor market informality			
Coverage - Building trust given economic and political history			

	Issues identified	Recommendations (and to whom)	Gap and Importance
ADEQUACY	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Adequacy - Contribution levels and benefit accrual rates given income objective relative to other pillars			
Adequacy - Years of vested participation			
Adequacy - Controlling early access			
Adequacy – Portability			
Adequacy - Income provided until death			
Adequacy - Appropriate guarantees on income and returns			
Adequacy - Protection against pre- and			

	Issues identified	Recommendations (and to whom)	Gap and Importance
post-retirement inflation			
Adequacy - Fair treatment of spouses and dependents			
Adequacy - Tax and financial incentives			
Adequacy - Publicity and education			
Adequacy - Enforcing contributions			
SECURITY	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Security - Consistently enforced business law regime			
Security - Clear legal structures for pension entities			

	Issues identified	Recommendations (and to whom)	Gap and Importance
Security - Standards and professionals in accounting, actuarial, auditing and legal			
Security - Data: economic, demographic and personal			
Security - Risk management and internal controls			
Security - Assets appropriately separated and ring-fenced			
Security - Protection from Government policy reversal			
Security - Independent reporting and whistleblowing			
Security - Valuation of			

	Issues identified	Recommendations (and to whom)	Gap and Importance
assets and liabilities			
Security - Prudent funding of commitments, including provisions for risks			
Security - Recovery plans supervised			
Security - Investments are sufficiently secure, liquid and diverse			
Security - Matching assets to liabilities and member life-cycle			
Security - Fair and prudent use of surplus			
Security - Wind-up and alterations			

	Issues identified	Recommendations (and to whom)	Gap and Importance
Security - Sponsor/provider guarantees and compensation funds			
Security -IOPS 1 Objectives of supervisor			
Security –IOPS2 Independence of supervisor			
Security -IOPS 3 Resources of supervisor			
Security – IOPS4Powers of supervisor			
Security -IOPS 5 Risk-based supervision			
Security- IOPS 6 Supervisory proportionality and consistency			
Security -IOPS 7 Supervisory consultation and co-operation			

	Issues identified	Recommendations (and to whom)	Gap and Importance
Security -IOPS 8 Confidentiality of supervisor			
Security -IOPS 9 Transparency of supervisor			
Security IOPS 10 Governance of supervisor			

IMPLEMENTATION/DELIVERY

	Issues identified	**Recommendations (and to whom)**	**Gap and Importance**
Implementation	**Insert overall summary that can be cut and pasted into final report**	**Insert overall summary that can be cut and pasted into final report**	
Project link to overall strategy			
Senior Ownership			
Stakeholder engagement			
Project and risk management skills			
Achievable steps			
Long term value			
Understanding of suppliers			
Integrated project team			

Tool 4: Pensions Outcomes Based Assessment Review Sheet 2

Detailed Description of Key Features to Investigate and Cross-Reference of Key Features to International Standards and Selected Best Practice Guidance

References are to the following documents:

- OECD Core Principles of Occupational Pension Regulation 2010 (OECD)
- International Organization of Pension Supervisors Principles of Private Pension Supervision 2010 (IOPS)
- International Association of Insurance Supervisors Insurance Core Principles 2012 (IAIS)
- International Organization of Securities Commission IOSCO Objectives and Principles of Securities Regulation 2010 (IOSCO)
- OECD/IOPS Good Practices for Pension Funds' Risk Management Systems 2011 (RM)
- IOPS Good Practices in the Risk Management of Alternative Investments by Pension Funds 2010 (AI)
- OECD roadmap for the good design of defined contribution pension plans 2012 (DC Map)

Note that a link to international principles or standards, or other guidance means that some of the elements in each key feature are covered in a standard. But the match is often partial. Also, in many cases where multiple standards are referenced there is significant overlap between them.

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
EFFICIENCY		
Efficiency - Impact of Scale	Do the demand and supply side entities have the scale to deliver the best outcomes given significant economies of scale in provision and problems with individuals' having sufficient expertise or buying power to act as an effective demand side? Includes consideration of design of the pension system, for instance through: ensuring scale entity on demand side; centralization of administration; licensing or minimum capital requirements; or enforcing tough minimum standards on trustees so as to discourage small pension entities or more pension entities than would be consistent with sufficiency of scale, and promoting or facilitating pension entity consolidation. Also includes measures to enable scale economies to be achieved across pension plans through common funds, etc. Linked to investment recommendations for small markets such as ensuring much greater foreign investment. Relevant to decumulation, where size of the market and critical mass of business can be relevant, as well as accumulation. Note scale may need to be built gradually in new systems.	Guidance: DC 4.00

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Member-focused governance	Covers the requirements placed by law (whether pensions, tax, company or trust) or supervision on the governing bodies of pension entities to encourage governance that is effective and in the best long-term interests of plan participants. Will include focus on whether objectives are clearly member-focused such as achieving adequate pensions through maximizing efficiency with good investment returns net of costs as well as ensuring sustainability, security and good coverage. Includes board structures, fiduciary duties, accountability mechanisms, oversight arrangements (within pension entities), participant representation, appropriate legal liabilities and indemnities, board member codes of conduct and controls over conflicts of interest. Also includes requirements to avoid inappropriate interference by outsiders, such as sponsoring employers and related companies. Interference by regulatory investment limits comes under Efficiency 6 or Security 12. Relevant to the governance of decumulation product provision as well.	OECD: 2.11, 4.01, 4.03, 4.06, 4.24, CP 6, 6, 6.01, 6.02, 6.03, 6.1, 6.11, IAIS: 7.01, ICP 23, ICP 7, 7, 7.03, 7.09, 7.08, Guidance: RM 1.01, RM 1.02, RM 1.03, RM 1.04, RM 2.08, RM 2.09, RM 6.05, RM 7.01, RM 7.02, RM 7.03, RM 8.01
Efficiency - Expertise of governing body	The governing body may have the right intentions and strategic process but it needs the right expertise to ensure it can turn theory into practice. Includes 'fit and proper' requirements placed on pension entity boards and the regulatory and supervisory actions taken to ensure that the board has the expertise to run the entity in general and its investments in particular, or to be able to understand and challenge expert advice obtained on investment. Includes actions taken to improve fiduciary understanding and competence and to remove unsuitable members of the board. Relevant to decumulation as well as accumulation.	OECD: 2.12, 4.02, 6.04, 6.05, IAIS: 5, 15.04, 7.04, ICP 5, 5.01, 5.02, 5.03, 5.04, 5.05, 5.06, 7.06, 7.07, 7.1, Guidance: AI 2.01

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Robust strategy process	If a governing body is clearly focused on the best interests of members it still must have a clear idea of how to ensure the entity it is governing will be able to develop a strategy to deliver the best outcomes for members. Includes the requirements of law and supervision for a statement of investment policy/strategy and associated processes to ensure that it is well-informed, approved by the board and implemented, so that there is shared mission clarity. Also covers the implementation of the prudent person principle in this context, along with the strategy processes of the pension entity more generally. And covers the actions taken to monitor how actual investment activity and performance compare with the plan, and the steps to be taken where there is a significant deviation. Relevant to decumulation as well as accumulation with typically far too little time given to decumulation phase, which should be explicitly reviewed. The strategy process should include an assessment of the risk appetite of the governing body –influenced by an appropriate understanding of the views of their members and the role of their pension relative to other sources of retirement income.	OECD: 2.08, 2.09, 2.14, CP 4, 4, 4.04, 4.05, 4.07, 4.1, 4.11, IAIS: 16.06, ICP 15, 15, 7.05, 15.01, 15.03, Guidance: RM 4.00, RM 4.02, RM 4.03, AI 0.00, AI 1.01, AI 2.00, AI 2.01, AI 2.02, AI 3.01
Efficiency - Role of advisors and investment managers	Covers whether the governing body has the ability, systems and processes to obtain good value when it is not directly executing its own strategy. So, covers ability to exercise control over the in-house investment management, or external investment managers or advisers. There are many different potential structures but ultimately the issue is whether the governing body can manage contracts, conflicts, etc. Includes the regulatory and supervisory measures in place to ensure that the competence and performance of pension entity advisors and investment managers is ensured through processes for their selection, contracting and monitoring. The definition of advisors is broad - includes legal and actuarial, but investment management a key focus. Excludes operational management, IT, etc., which is included in Efficiency: Efficient operational management, although the same provisions may apply. Relevant to decumulation as well as accumulation.	OECD: 4.1, 6.05, Guidance: RM 4.02, RM 5.02, RM 5.03, RM 5.05, RM 5.06, RM 7.01, RM 8.06, RM 8.08, RM 8.09, AI 1.06, AI 2.02, AI 3.00, AI 3.01, AI 3.02, AI 3.03

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Optimal long-term investment strategy and appropriate limits	Covers the content of the investment strategy, as opposed to the process. What has the governing body determined to be the best investment strategy to deliver pensions for the members? Ultimately, this is an aspect of overall governance, but the focus here is specifically on investment given its central importance in delivering good outcomes for members. Includes regulatory and supervisory actions and incentives to encourage appropriately long-term focus and discourage short-termism, as well as industry norms in that regard. Will include the use of internally generated or externally imposed default funds and benchmarks. Also includes the avoidance of regulations, such as quantitative investment limits or minima, risk limits or penalties, prohibition of hedging instruments, and guarantees, that prevent the design of an optimum long-term strategy by restricting the use of suitable instruments that would otherwise be available. Moreover, if the regulator or supervisor concludes that there is low capacity to make good decisions investment flexibility may be restricted and/or members placed in a central default fund. Also includes the ability to supervise the use of complex instruments to improve optimization and the use of benchmarks. Relevant to decumulation as well as accumulation.	OECD: 4.01, 4.06, 4.07, 4.12, 4.13, 4.14, 4.17, 4.19, IAIS: 15.02, 15.05, 15.06, Guidance: RM 4.02, RM 4.04, AI 1.00, AI 1.05, AI 5.00, AI 5.01, AI 5.02, AI 5.03, AI 5.04
Efficiency - Fair, efficient, deep and transparent capital markets	Applies IOSCO fair, efficient and transparent criteria. Also linked to the 'financial market depth' indicator from World Bank Global Development Finance Report. Between them these criteria enable an assessment of how domestic financial markets support or hinder the achievement of good risk-adjusted returns. Also includes capital market reforms, e.g., issuing indexed-linked Government bonds, and improving the functioning of debt and equity markets, which might need in practice to be nurtured.	OECD: CP 1, 1.06, IOSCO: I, 33, 34, 35, 36, 37, J, 38

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Competition, choice and transfers	Focuses on how to ensure demand and supply in the market are intended to result in robust, fair competition that benefits members in the short and long run. Covers the provision to participants of choice of portfolio or provider so as to enable them to choose a portfolio best suited to their needs, to adapt to changing circumstances such as job change, and to enable competitive pressures on provider costs and performance. Also encompasses requirement for there to be a member-focused default fund within providers, or a central default fund if members do not make a choice of provider. Also includes the regulation and supervision of the process for transferring between portfolios or providers without unduly constraining investment and operational efficiency (hence there may be limitations on frequency of transfer). Also includes use of auctions to deliver scale on demand side, or creation of entities acting on members' behalf in negotiating with suppliers (e.g., Provident Funds, large employer funds, Not For Profit providers). Relevant to accumulation and decumulation products.	OECD: 4.09, 5, 5.24, 5.26, IAIS: 19.06, Guidance: DC 4.00, DC 5.00, DC 8.00
Efficiency - Good communication and disclosure	Applies where participants are given a choice of pension provider or portfolio, where it includes information provided to help participants to make an informed choice and disclosure of the performance and costs of the pension plan to help participants assess these factors. Equally as relevant where most members are in a default fund seeking long-term best outcomes that will have higher short-term volatility that needs to be explained. Relevant to DB where communication is relevant to achieving efficiency. Also includes regulatory and supervisory actions to ensure that disclosure is accurate and readily understood. Covers general communications regarding decumulation products.	OECD: 5.16, 5.17, 5.19, 5.19, 5.21, 5.22, 5.23, 5.25, 5.27, 6.11, IAIS: 19.08, 19.05, 19.08, 20, 20.01, 7.08, ICP 20, 20.02, 20.03, 20.04, 20.05, 20.06, 20.07, 20.08, 20.09, 20.1, IOSCO: 26, Guidance: DC 10.00, RM 7.01, AI 4.00, AI 4.01, AI 4.02, AI 4.03

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Cost-effective distribution and intermediaries	Covers the processes governing how participants and sponsoring employers choose a pension or retirement product provider, and in particular the control of any intermediaries used to sell providers' products. Includes the steps taken to ensure that the distribution channels achieve their objective at minimum cost to the system including through automatic allocation to defaults, auctions and use of centralized provision without use of sales agents The cost of sales agents needs to be reviewed, and evidence for whether choice is focused on better outcomes. Mis-selling negates the benefits of competition (as well as reducing trust) hence use of sales agents may be eliminated. Relevant to accumulation and decumulation.	Guidance: DC 4.00
Efficiency - Cost control, caps and transparency	Covers the regulatory and supervisory measures that can be applied to reduce costs as an addition to or alternative to measures to increase competition in the market. Includes actions to cap fees, restrict the costs that pension providers can seek to recover through fees, reduce costs globally, for instance by establishing central clearing houses or new best practice pension providers, improving the transparency of how costs or fees are calculated and auctions of blocks of participants. Includes measures to ensure accurate transparency of all costs levied at point of sale and to allow on-going comparisons. In the decumulation context includes best-value default choices and fee caps, so long as they do not jeopardize security. Part of overall market structure alongside competition and distribution features.	IAIS: ICP 13, 13, 13.01, 13.02, 13.03, 13.04, 13.05, 13.06, 19.05

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Efficiency - Efficient transition to payout phase	While it is important to understand that other features relate to both accumulation and decumulation so far as is relevant, there are unique additional elements to consider in the transition to the payout phase. These include the scope for and proper processes for tax-efficient rolling over from accumulation to decumulation products, co-ordination between the supervisors of the different types of product, information provided to prospective retirees, and restrictions on payout withdrawals. The pay-out phase should be properly considered in relation to other features.	Guidance: DC 8.00
Efficiency - Efficient operational, recordkeeping and data management	Includes measures by pension entities, regulatory and supervisory bodies intended to ensure that the operations of pension providers are efficient while delivering adequate quality of service, notably the processes around the outsourcing of pension entity functions and any particular provisions relating to IT and service quality standards. In particular, covers measures taken by regulators, supervisors and pension entities to ensure that their records are accurate and stay accurate, and that data integrity and confidentiality are not compromised - data issues are often overlooked. Excludes controls over the security of operations.	OECD: 1.03, 6.1, IAIS: 7.09, 8.03, 8.07, Guidance: RM 5.02, RM 5.03, RM 5.05, RM 5.06, RM 8.06
Efficiency - Reduce labor market distortions	Covers both the avoidance of the private pension system distorting the labor market and the potential role of the system in reducing distortions. Therefore includes barriers that the system may place on labor mobility (because of non-vesting, for instance) and whether the system incentivizes early or late retirement. Influenced by the size of 'tax wedge' between gross wages and take-home pay caused by size of current or newly proposed pension contributions. Can therefore cover the scope for finding other sources of finance (such as sales tax or from natural resources) that avoid increasing the tax wedge and hence encourage formal employment.	OECD: 1
SUSTAINABILITY		

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Sustainability - Diversification among pillars/tiers	The extent to which retirement income is delivered with a diversified mix between the different pillars of the pension system to avoid too great a burden (current or prospective) being placed on the funders of any one pillar. Includes the extent to which the balance has been thought through. Picks up whether clear gaps exist in the overall pension system or over reliance on one pillar to do the job. In particular, can highlight a 'European' problem - too much reliance on zero/first pillar, or an 'Asian' problem - too much reliance on second pillars and not enough on zero/first.	Guidance: DC 1.00
Sustainability - Intended outcomes are realistic	Covers the conclusions drawn and publicized by policy makers, supervisors or pension providers as to the likely outcomes of pension accumulation or decumulation products and the realism of the underlying assumptions, taking account of the likely range of risks and uncertainties inherent in these assumptions. For instance, are public statements made that a certain level of retirement benefit is guaranteed when this is not the case in all possible scenarios? Have a range of plausible outcomes been modeled under different scenarios?	
Sustainability - Understanding of intended outcomes and risks	Covers the extent to which the public in general, and pension plan participants in particular, can and actually do understand from the information made available to them the likely level of retirement income that they will accrue and the risks to that level. Also includes the actions taken to improve this understanding, whether by Governments, supervisors or pension providers. So, this issue is linked to Adequacy: Publicity and Education, but in this case the focus is on avoiding the damage to public trust in, and hence public and political support for, the pension system that could arise from significant misunderstandings. Unrealistic expectations and lack of transparency on real costs make people unhappy and likely to attack or not protect the system. Risk appetite or tolerance is important and will vary from country-to-country and over time so is a complex issue.	OECD: 5.16, 5.17, 5.19, 5.21, 5.22, 5.23

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Sustainability - Political support	The extent to which the current or intended design of the pension system commands support across the political spectrum, and hence avoids frequent design changes arising from changes in Government which damage the system. Also includes the actions that policy makers and supervisors can take to win support and build cross-party consensus, or indeed make commitment to the system an important factor in winning votes.	
Sustainability - Government costs sustainably funded	Covers the impact on the Government budget, taxation levels and public debt of both the subsidies and tax breaks given to private pension funds and the funding of pillar 0/1, in the context of their proportionality to GDP. It is not just the level of funding that is relevant but the health of the public finances more generally and whether there is pressure to reduce public spending. Includes, therefore, the extent to which taxation levels or Government debt would need to rise to sustain the system, and actions taken to mitigate or prevent reduced financial support from Government or taxation seriously damaging the system, or trust therein. The funding of transition costs is particularly important and relying on debt financing not taxes raises significant risks.	IAIS: 17.14, 17.17
Sustainability - Affordable employer and employee costs	Covers the impact on employers of requirements placed on them to contribute to pension funds or make good deficits therein, and the reasonableness of such demands in the context of the strength and profitability of the private sector (or financing of governmental bodies) and the effect this may have on future support for the system where employer participation is voluntary.	

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Sustainability - Effective and counter-cyclical adjustment mechanisms	Covers whether the system will automatically or can be flexible enough to enable it to adjust to significant changes. There are a number of ways to build in risk sharing mechanisms, for example, retirement age increasing with longevity, benefits or payments being reduced due to under-funding or contributions increasing. Includes regulatory or supervisory actions intended to improve funding levels in good times and mitigate impacts on sponsoring employers in bad times, such as discretion or forbearance in setting discount rates and recovery periods and smoothing of valuations. Also includes design of regulation and supervision that avoids forced selling of assets when their value is depressed, with consequent negative feedback loops through the financial markets and financial demands on sponsors that are also issuers of equity and debt.	OECD: 3.17, 3.18, 4.22
COVERAGE		
Coverage - Eligibility for participation	Includes legal provisions intended to increase coverage, such as mandatory enrolment, requirements or legal inducements for auto-enrolment, and requirements that employees should be given access to a pension plan. Also includes legal provisions that prevent or enable the exclusions of certain categories of workers and non-discrimination between types of employee.	OECD: 2.03, CP 5, 5, 5.01, 5.02, 5.04, Guidance: DC 2.00
Coverage - Tax and financial incentives	Includes drivers of increased coverage arising from tax incentives to enroll or participate, and inducements given by employers or Government to participate, such as contribution matching.	Guidance: DC 3.00
Coverage - Mandatory, behavioral or social stimulus to participate	Includes the strength of the business case for employers to provide a pension plan (for instance, to improve recruitment and retention) and societal norms (such as social partnership arrangements) which place any expectations or requirements that employers should provide a plan or employees should join a plan. Such norms can lead to high coverage that is difficult to replicate in other countries with otherwise similar legal frameworks.	

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Coverage - Publicity and Education	Includes campaigns and communications by Governments, supervisors, employers and others intended to raise general awareness of the value of pension saving as well as more detailed financial education initiatives.	
Coverage - Breadth of providers' target market	Covers the penetration of the workforce by pension providers directly or via employers. Do providers reach all segments of the market and all regions or are only big cities and the middle and upper classes covered? Includes all activities by market participants to increase market share, such as marketing, promotion, and education. If costs of customer acquisition through marketing are too high, then certain segments of the market will not be covered and alternative mechanisms to boost coverage will be needed. Distinct from actions of regulators and supervisors, unless they seek to give providers incentives or to modify the market structure.	
Coverage - Enforcement	Covers how requirements for mandatory access, mandatory enrolment and auto-enrolment are enforced, whether by the supervisor, the tax authority or other means, dealing with abuses such as non-enrolment, hiding of staff, falsely claiming an employee's pay is below the entry threshold or coercing employees to opt out. Will include effectiveness of data sharing and co-operation among agencies (e.g., tax and pension authorities) and whether clear incentives exist to undertake or assist enforcement.	OECD: 5.04
Coverage - Reducing incentives for labor market informality	Covers the extent to which the working population is within the formal economy and the access to pension plans in practice for workers in the formal and informal sectors. It includes any market trends that might enhance or diminish participation, such as a move to short-term contracts which are not pensionable or the establishment of pension plans accessible to the informal sector.	

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Coverage - Building trust given economic and political history	Picks up impact of past macroeconomic volatility (so that people don't trust pensions to grow), political policy reversals (so that people don't trust money not to be stolen or are too worried to lock money away given risk of need for short term cash). Also includes actions taken to maintain or restore trust such as institutional change or reform programs.	
ADEQUACY		
Adequacy - Contribution levels and benefit accrual rates given income objective relative to other pillars	Includes legal provisions on minimum contribution levels and maximum tax-benefited levels, as well as any requirements on minimum or maximum benefit accrual (including conversion factors) in plans with guarantees. Also includes norms for contribution or benefit accrual rates that arise from common business practice and social partnership arrangements. Whether contribution levels are adequate depends on other forms of provision - for instance 8% is too low if you are expecting it to deliver a pension that replaces two-thirds of pre-retirement income by itself, but might be acceptable if 40% is being delivered by other pillars, although even then factors such as investment returns and costs will have a bearing. Hence, covers the interaction of intended or forecast absolute and relative private pension benefits with the retirement income available from other pillars, so as, in particular, to minimize poverty in retirement. For instance, whether benefits are calculated net of pillar 1 benefits and the extent to which other sources of income augment the income available from private pensions.	OECD: 5.03, Guidance: DC 0.00, DC 1.00, DC 2.00
Adequacy - Years of vested participation	Even if contributions are expected to deliver the adequacy objective across a full career, pensions may be inadequate if participants contribute for much less than 40 years. Therefore includes rules on maximum vesting periods (in law or common business practice) and the impact that changes in employment or years of employment or participation in the workforce have on the accumulation of benefit entitlements during working careers, rules on which age people can (or must) start making contributions and when they can (or must) stop.	OECD: 5.05, 5.06, 5.07, 5.08, Guidance: DC 2.00

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Adequacy - Controlling early access	Includes the legal provisions that enable or prevent access to pension accumulation until retirement age, or an age somewhat lower than retirement age, which may take the form of cashing out, payment of pension in event of disability/ill health or loans to participants. Also includes tax penalties for early access, and their effectiveness. Includes controlling any inducements that employers may give to encourage exit (to their benefit). Excludes exit upon change of employer, which is covered under portability.	
Adequacy - Portability	Covers what can happen to accumulated pension entitlements of participants when they change employment, such as restrictions on prevention of cashing out, the protection of benefits retained in the previous employer's pension plan and whether benefits can or must be transferred to a pension account sponsored by the new employer (and the fairness of any such transfer, especially if a DB to DC transition is involved). The importance of this factor depends in part on the labor market dynamics, as portability is key where there are more dynamic labor markets/shorter tenures/more informality. Also includes fair transfer of accrued vested benefits in other situations, and whether rules are enforced and whether pension providers or sponsors make it simple or hard.	OECD: 5.1, 5.11, 5.12, 5.13, 5.14, 5.15, 5.2

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Adequacy - Income provided until death	Includes legal provisions to mandate that some or all of pension accumulations be converted into life annuities or retirement income products, or use of education to promote such products. Is there clarity on the risk that other investment strategies have of leaving a member without income in later life? Also includes the availability of suitable products, and actions taken to improve their supply, and cultural attitudes to such products that may affect their take-up where they are voluntary. Such products may be offered by the accumulation-phase provider or other providers, such as insurers or via central bodies delivering risk sharing annuities. Note that taking a lump sum might be acceptable if other parts of system already give a guarantee of income until death, so the part of the pension system under focus is an 'extra' (which would be identified under Sustainability question on diversification among pension pillars/tiers).	Guidance: DC 7.00
Adequacy - Appropriate guarantees on income and returns	Covers legal requirements for, or common (or incentivized) practice in, providing guarantees on the level of benefits at retirement, minimum investment returns or minimum (annuity) conversion factors, and their impact on the level of retirement income and decisions to cease participation. Identifies who exactly provides the guarantee, how it is funded and whether this creates any perverse incentives or concerns about reliability of payment if the guarantee were called. The impact may be negative if the guarantees are inappropriate or distributionally regressive and the circumstances prove to be unfavorable.	OECD: 5
Adequacy - Protection against pre- and post-retirement inflation	Includes the use of indexation (mandatory or discretionary) or up-rating benefit formulae in DB, asset allocation or inflation targeting (or guarantees) in DC and inflation-linked retirement products or retirement products that enable asset growth during the decumulation phase.	Guidance: DC 7.00
Adequacy - Fair treatment of spouses and dependents	Covers the extent to which private pensions contribute to poverty reduction amongst spouses and dependents upon the death of a pension plan participant or upon divorce from one (pension sharing on divorce).	

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Adequacy - Tax and financial incentives	Includes tax incentives to increase contributions (or that may constrain increases in contributions above a certain level) and actions taken by employers to promote higher levels of contributions such as auto-escalation and matching of higher-than-standard contributions. Also includes requirements or common practice in making available or incentivizing plans for investing contributions additional to those required for the main or DB pension plan.	
Adequacy - Publicity and education	Includes actions taken by Governments, supervisors and pension plans to raise participant awareness of the level of contributions needed to achieve a desired level of retirement income. This will include generic financial education and pension forecasting products or more detailed targeted financial education campaigns. Each may be paper or web-based (and each must ensure that they add value and do not mislead).	OECD: 5.21, 5.22, 5.27, IAIS: 19.05, Guidance: DC 7.00, DC 10.00
Adequacy - Enforcing contributions	Covers the requirements and penalties of pensions, tax or contract law that can be used to enforce employer contributions and the paying-over of employee contributions. As well as this 'Ability to Act' it includes the 'Willingness to Act'- the nature and effectiveness of action taken in practice by pension entities, supervisors or others to enforce these provisions. Will include effectiveness of data sharing and co-operation among agencies (e.g., tax and pension authorities) and whether clear incentives exist to undertake enforcement. Also includes information provided to participants to enable them to check that contributions have been paid over, although this overlaps with efficiency: good communication, and reporting to participants when contributions are late. Includes any arrangements to compensate participants in the event of a sponsoring employer having a backlog of contributions at the time of insolvency.	OECD: 5.18, 5.19, Guidance: RM 3.04
SECURITY		

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Consistently enforced business law regime	Includes the ability of the courts and other relevant parts of the legal system to handle cases regarding financial services in a timely, understanding and consistent manner, taking account of recent experience. This is relevant to the supervisors' ability to enforce pension law, the enforceability of pension contracts and the risk of arbitrary court judgments affecting pension entities. Also includes any actions taken by regulators and supervisors to mitigate these risks, for instance through using specialist tribunals or judicial education.	OECD: 1.04
Security - Clear legal structures for pension entities	Refers to the legal structure, including accountability and objectives, of pension entities and the clarity with which these are defined in relevant law and contracts. Includes the requirements for registering or licensing pension entities. It also includes rights to and procedures by which members can make complaints and seek redress from pension funds. Also relates to the clarity of regulation and practice regarding the relationship between pension plans and administering entities, including pension plan and fund licensing and registration, although provisions on the content of pension plan rules is covered in other relevant features.	OECD: CP 1, 1, 1.01, 1.02, 1.07, CP 2, 2, 2.01, 2.02, 2.03, 5.02, 5.28, 5.29, 5.3, 6.01, IAIS: ICP 4, 4, 4.01, 4.02, 4.03, 4.04, 4.05, 4.06, 4.09, ICP 6, 6, 6.01, 6.02, 6.03, 6.04, 6.05, 6.06, 6.07, 6.08, 6.09, 6.1, IOSCO: G, 24, 25, 28, Guidance: RM 6.05
Security - Standards and professionals in accounting, actuarial, auditing and legal	Includes the extent to which there are professionals in these disciplines who can advise, certify or audit competently in relation to private pensions, and the extent to which relevant professional standards apply to them, and the relevance of the standards to the private pension system. Also includes the extent to which these professionals could be relied upon to act professionally regardless of their employer's preferences. This will condition what level of sophistication is feasible in a system.	OECD: 1.04, 1.05, 3.08, 3.09, 3.1, 3.11, 3.12, 6.06, 6.07, IAIS: 14.07, 14.08, 14.09, 14.1, 8.05, IOSCO: E, 16, 17, 18, F, 19, 20, 21, 22, 23

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Data: economic, demographic and personal	Includes data that is needed both for proper operation and risk management of pensions and for properly informed and targeted regulation and supervision. The nature of a pension system needs to be tailored to the data available. Includes the availability of reliable and timely data on macro-economic variables, such as inflation, household income and wealth, employment, as well as relevant data specific to the mortality and morbidity of the population and the finances and activities of pension entities and their sponsors. Includes availability of reliable credit ratings, so far as relevant.	Guidance: DC 9.00

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Risk management and internal controls	This feature focuses on structure, generic processes and operational risk management and control. It includes the pension entity having, as part of its overall corporate governance framework, effective systems of risk management and internal controls, including effective functions for risk management, compliance, actuarial matters and internal audit. Therefore includes regulatory and supervisory measures intended to ensure that this is the case, covering specific types of control such as segregation of duties. The specific risk management functions relating to the control of investments against strategy are also covered under Efficiency: investment strategy processes, while the control of investment-related risks might also fall within other Security features (depending on type of risk). Also covers regulatory or supervisory actions specifically aimed at reducing pension entity vulnerability to fraud, and schemes to compensate participants in the event of fraud.	OECD: 2.04, 2.13, 4.08, 6.09, 6.1, IAIS: 8, 7.02, 16.05, 8.01, 7.09, ICP 8, 8.02, 8.03, 8.04, 8.06, 8.07, ICP 16, 16, 16.01, 16.02, 16.03, 16.04, 16.07, 16.08, 16.09, 16.1, 16.11, 16.12, 16.13, 16.14, 16.15, 16.16, ICP 17, 17.01, 17.02, 17.03, 17.04, 17.05, 17.06, 17.07, 17.08, 17.09, 17.1, 17.11, 17.12, 17.13, 17.15, 17.16, 17.18, ICP 18, 18, 18.01, 18.02, 18.03, 18.04, 18.05, 18.06, 18.07, ICP 19, 19, 19.01, 19.02, 19.03, 19.04, 19.05, 19.06, 19.07, 19.08, 19.09, 19.1, 19.11, 19.12, 19.13, IOSCO: H, 29, 30, 31, 32, Guidance: RM 0.00, RM 1.00, RM 1.01, RM 1.02, RM 1.03, RM 1.04, RM 2.00, RM 2.01, RM 2.02, RM 2.03, RM 2.04, RM 2.05, RM 2.06, RM 2.07, RM 2.08, RM 2.09, RM 4.01, RM 4.04, RM 5.00, RM 5.01, RM 5.02, RM 5.03, RM 5.04, RM 5.05, RM 5.06, RM 6.00, RM 6.01, RM 6.02, RM 6.03, RM 6.04, RM 7.03, RM 7.04, RM 8.01, RM 8.02, RM 8.03, RM 8.04, RM 8.05, RM 8.06, RM 8.09, AI 1.01, AI 1.02, AI 1.03, AI 1.06, AI 2.03, AI 2.04, AI 3.01, AI 3.02, AI 3.03, AI 6.00, AI 6.02

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Assets appropriately separated and ring-fenced	Includes accounting and legal separation of pension plan assets from sponsoring employers and pension administrators, custodian arrangements generally, and the protection of assets from claims made on the sponsor or members, especially in the event of insolvency. Includes effective ring-fencing of assets between pension plans, or if appropriate, portfolios within plans. Also includes avoidance of investment in the sponsor or associated companies.	OECD: 2.05, 3.01, 3.02, 3.03, 3.04, 4.15, 5.09, 6.08, IAIS: ICP 23, IOSCO: 25, Guidance: RM 7.02
Security - Protection from Government policy reversal	Includes the vulnerability of the design of the system to loss of accrued assets to the Government, or other governmental interference, especially in a crisis, and measures taken to reduce this vulnerability. Cyclical variability in contributions by governments could be sensible if the long-term retirement income objective is met.	
Security - Independent reporting and whistleblowing	Includes arrangements for independent audit or certification, along with requirements on professionals employed by a pension entity to report on specific issues, or to quickly notify significant problems, to the supervisor. Excludes the confidence that can be placed in the work of these professions, which is covered under Security: Standards and professionals in accounting, etc.	OECD: 6.06, 6.07, IAIS: ICP 21, 21, 21.01, 21.02, 21.03, 21.04, 21.05, ICP 22, 22, A., 22.01, 22.02, 22.03, 22.04, 22.05, B., 22.06, 22.07, Guidance: RM 6.06, RM 7.00, RM 7.01, RM 7.02, RM 7.03
Security - Valuation of assets and liabilities	Includes regulatory, supervisory and professional requirements for the valuation of assets and liabilities for the calculation of benefits and funding requirements. Includes therefore actuarial valuation methods and assumptions, even though these may be in actuarial standards rather than regulation. Applies to DC because you have to properly value assets, which values are equal to or underlie the value of the liabilities, and because financial commitments may need to be valued for minimum capital requirements.	OECD: CP 3, 3, 3.06, 3.07, 3.08, 3.09, 3.1, 3.11, 3.12, 4.2, 4.21, 4.22, 4.23, 4.24, 6.07, IAIS: ICP 14, 14, 14.05, 14.06, 14.07, 14.08, 14.09, 14.1, 14.04, 14.02, 14.03, 14.11, 14.01, IOSCO: 27, Guidance: RM 3.03, AI 5.05

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Prudent funding of commitments, including provisions for risks	Includes the processes required by regulation or supervision for the determination of how pension fund liabilities should be funded, including board consideration and approval. Includes regulatory and supervisory funding standards. Also includes any requirements for funding levels or specific reserves to cover risks both to benefit promises and to the operational viability of the providers of DC plans, and minimum capital requirements for DC plan providers. Can take into account any guarantees from the sponsor employer, which may reduce reserving requirements, so long as there is a reasonable prospect that they can be enforced. (Their enforcement comes under Security: Sponsor/provider guarantees and compensation funds.)	OECD: 2.06, 2.07, 2.1, 3.13, 3.14, 3.15, 3.16, 3.18, 3.19, 4.22, IAIS: 17, Guidance: DC 9.00, RM 3.00, RM 3.01, RM 3.02, RM 3.03, RM 3.04, RM 3.05
Security - Recovery plans supervised	Includes regulatory and supervisory provisions intended to ensure that deficits against funding, reserving and minimum capital adequacy requirements are paid off sufficiently quickly. Can cover all types of pension plan which give guarantees.	OECD: 3.17
Security - Investments are sufficiently secure, liquid and diverse	Includes quantitative limits by issuer and type of instrument that are intended to reduce credit, market, and liquidity risks. Includes supervisory actions to enforce the prudent person requirements in these regards. Includes provisions relating to the use and control of derivatives and alternative investments. Finally, includes market practices that may promote or hinder diversification. Pension funds as long-term vehicles typically have lower liquidity needs than other financial institutions. But the issue still needs attention, as shown by issues highlighted during the 2008 Global Financial Crisis. APRA has produced guidance on dealing with liquidity in pension funds.	OECD: 4.12, 4.13, 4.14, 4.15, 4.16, 4.18, IAIS: 16.06, ICP 23, Guidance: DC 9.00, RM 4.04, AI 1.04, AI 1.05, AI 5.01, AI 5.03, AI 5.04
Security - Matching assets to liabilities and member life-cycle	Includes regulatory and supervisory measures to control the mismatch of asset duration to the duration of the liabilities, which in the case of DC plans is generally the expected date of retirement. Therefore includes the use of techniques such as asset-liability management (ALM), liability-driven investment, and the life-cycling of DC pension plans or smoothing of investment returns.	IOPS: 7.03, OECD: 4.13, IAIS: 15.03, 15.03, ICP 24, 24, 24.01, 24.02, 24.03, 24.04, 24.05, 24.06, 24.07, ICP 26, IOSCO: 6, Guidance: DC 5.00, DC 6.00, DC 9.00

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Fair and prudent use of surplus	Covers all eventualities where surplus may be distributed from ongoing, modified or wound-up plans, including through contribution holidays, and the regulatory and supervisory restrictions and controls on what is allowed. Fairness relates to the protection of participant interests, while prudence relates to the ongoing security of the benefits promised by the pension plan.	
Security - Wind-up and alterations	Covers the regulatory and supervisory provisions relating to the circumstances in which a pension fund can or must be wound up. Includes whether mechanisms exist to wind-up when data or key persons such as trustees are missing or compromised. Includes the treatment of any deficit and priority for allocating the assets (surpluses are covered under Security: Fair and prudent use of surplus). Also covers provisions relating to the alteration of plan benefits (for instance DB to DC), mergers and splitting-up of plans, and the protections for participants and choices available to them in these situations. May encompass non-pensions law or actuarial standards and practices in these respects.	OECD: 3.2, 3.21, IAIS: ICP 12, 12, 12.01, 12.02
Security - Sponsor/provider guarantees and compensation funds	Covers the nature and enforceability of guarantees given by employer sponsors or provider shareholders to the pension plans or entities they sponsor, including regulatory and legal requirements regarding their content and enforceability, and including where the sponsor changes. Also covers compensation funds established to make good some or all losses incurred by participants in the event of sponsor insolvency, and any measures taken to reduce calls on the fund.	OECD: 3.03, 3.05, 3.21
Security - Objectives of supervisor (IOPS 1)	Aligns with IOPS Principle 1: National laws should assign clear and explicit objectives to pension supervisory authorities.	IOPS: IOPS 1, 1, 1.01, 1.02, OECD: CP 7, 7, 7.01, 7.02, 7.03, IAIS: ICP 1, 1, 1.01, 1.02, 1.03, 1.04, IOSCO: A, 1, 7
Security - Independence of supervisor (IOPS 2)	Aligns with IOPS Principle 2: Pension supervisory authorities should have operational independence.	IOPS: IOPS 2, 2, 2.01, 2.02, 2.03, 2.04, OECD: 7.04, 7.05, 7.06, 7.07, 7.08, IAIS: ICP 2, 2, 2.03, 2.02, 2.04, IOSCO: 2, 8

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Resources of supervisor (IOPS 3)	Aligns with IOPS Principle 3: Pension supervisory authorities require adequate financial, human and other resources.	IOPS: IOPS 3, 3, 3.01, 3.02, 3.03, 3.04, 3.05, OECD: 7.09, 7.1, 7.11, 7.12, 7.13, 7.14, IAIS: 2.11, 2.11, 2.11, 2.11, 2.13, IOSCO: 3, Guidance: AI 6.04
Security - Powers of supervisor (IOPS 4)	Aligns with IOPS Principle 4: Pension supervisory authorities should be endowed with the necessary investigatory and enforcement powers to fulfil their functions and achieve their objectives.	IOPS: IOPS 4, 4, 4.01, 4.02, 4.03, 4.04, 4.05, 4.06, 4.07, 4.08, OECD: 2.15, 2.17, 2.18, 2.19, 2.2, 2.21, 2.22, 2.25, 2.26, 7.15, 7.16, 7.17, 7.18, 7.18, IAIS: 10.02, 4.07, ICP 10, 10, 9.01, 9.01, 10.01, 9.01, 10.03, 10.03, 11.08, 9.04, 9.05, 9.06, 9.07, 9.08, 9.09, ICP 11, 11, 11.01, 11.02, 11.03, 11.04, 11.05, 11.06, 11.07, 11.09, ICP 23, 23, 23.01, 23.02, 23.03, 23.04, 23.05, 23.06, 23.07, 23.08, 23.09, IOSCO: C, 10, 11, 12, 6, B, 9, Guidance: RM 8.00, RM 8.01, RM 8.02, RM 8.04, RM 8.06, RM 8.07, AI 6.01
Security - Risk-based supervision (IOPS 5)	Aligns with IOPS Principle 5: Pension supervisory authorities should adopt a risk-based approach. Note that this relates to risk-based structures and processes, not how individual risks are to be supervised, which is covered under other features.	IOPS: IOPS 5, 5, 5.01, 5.02, 5.03, 5.04, 5.05, 5.06, 5.07, 5.08, 5.09, OECD: 7.19, 7.2, 7.21, IAIS: ICP 9, 9, 9.02, 9.03, 9.03, Guidance: RM 8.03, RM 8.04, RM 8.05, AI 6.03
Security - Supervisory proportionality and consistency (IOPS 6)	Aligns with IOPS Principle 6: Pension supervisory authorities should ensure that investigatory and enforcement requirements are proportional to the risks being mitigated and that their actions are consistent.	IOPS: IOPS 6, 6, 6.01, 6.02, 6.03, 6.04, 6.05, 6.06, 6.07, OECD: 2.21, 2.24, 7.22, 7.23, 7.25, 7.26, 7.24, IAIS: 10.02, 10.04, 10.05, 10.06, 10.03, 10.04, 2.05, 11.1, Guidance: RM 8.03, RM 8.04

Outcome and Key Feature	Description of Key Feature	Principle/ Standard/ Guidance/ Other
Security - Supervisory consultation and co-operation (IOPS 7)	Aligns with IOPS Principle 7: Pension supervisory authorities should consult with the bodies they are overseeing and cooperate with other supervisory authorities.	IOPS: IOPS 7, 7, 7.01, 7.02, 7.03, OECD: 7.27, 7.28, 7.29, IAIS: ICP 3, 2.06, 3, ICP 26, 3.01, 3.02, 3.03, 3.04, 3.05, 3.06, 3.07, 3.08, 3.09, 3.1, 3.11, ICP 25, 25, 25.01, 25.02, 25.03, 25.04, 25.05, 25.06, 25.07, 25.08, 26, 26.01, 26.02, 26.03, 26.04, 26.05, 26.06, 26.07, 26.08, 26.09, 26.1, 26.11, 26.12, IOSCO: D, 13, 14, 15, Guidance: RM 8.07
Security - Confidentiality of supervisor (IOPS 8)	Aligns with IOPS Principle 8: Pension supervisory authorities should treat confidential information appropriately.	IOPS: IOPS 8, 8, 8.01, 8.02, 8.03, 8.04, 8.05, 8.06, 8.07, 8.08, OECD: 7.3, 7.31, 7.32, 7.33, 7.34, 7.35, 7.36, IAIS: 2.09, 19.13, 3.1, 3.1, 3.1, 2.13, IOSCO: 5
Security - Transparency of supervisor (IOPS 9)	Aligns with IOPS Principle 9: Pension supervisory authorities should conduct their operations in a transparent manner.	IOPS: IOPS 9, 9, 9.01, 9.02, 9.03, 9.04, 9.05, 9.06, OECD: 2.23, 7.37, 7.38, 7.39, 7.4, IAIS: 4.08, 2.05, 2.07, 2.05, 11.04, 19.13, 2.07, 2.06, IOSCO: 4, 2
Security - Governance of supervisor (IOPS 10)	Aligns with IOPS Principle 10: The supervisory authority should adhere to its own good governance practices – including governance codes, internal risk-management systems and performance measurement – and should be accountable. Note that this includes powers of appeal by supervised entities.	IOPS: IOPS 10, 10, 10.01, 10.02, 10.03, 10.04, 10.05, 10.06, 10.07, 10.08, 10.09, 10.1, OECD: 2.16, 2.27, 2.28, 7.41, 7.42, 7.43, 7.44, 7.45, 2.16, IAIS: 2.1, 2.1, ICP 2, 2, 2.01, 2.02, 2.12, 2.01, 2.01, 2.01, 2.07, 2.08, 2.13, IOSCO: 8

Implementation/ Delivery Risk Area	Detailed Question
1. Project link to overall strategy	Are there clear links between the project and the organization's key strategic priorities, including agreed measures of success?
2. Senior ownership	Is there clear leadership and ownership from senior management and Ministers?
3. Stakeholder engagement	Is there effective engagement with stakeholders?
4. Project and risk management skills	Does the team/organization have the skills and proven approach to project management and risk management?
5. Achievable steps	Has development and implementation of the project been broken down into manageable steps?
6. Long term value	Has evaluation of proposals been driven by long-term value for money rather than initial price/cost?
7. Understanding of suppliers	Is there deep understanding of, and contact with the supply industry at senior levels in the organization purchasing the services?
8. Integrated project team	Is there effective project team integration between clients, the supplier team and the supply chain (where applicable)?