

**“PRUDENT PERSON RULE” STANDARD FOR THE INVESTMENT OF PENSION FUND  
ASSETS**

**Russell Galer, OECD**

**November 2002**

## **Abstract: “Prudent Person Rule” Standard for the Investment of Pension Fund Assets**

In recent years, there has been remarkable growth in privately managed pension assets in many OECD and non-OECD countries. The manner in which these assets are invested and the way in which that investment is regulated and supervised are crucial to the success of privately funded pension programmes. The regulation and supervision of pension assets has two main goals: First, to assure the safety and security of those assets and second, to create an environment in which asset management can obtain the best returns at an acceptable level of risk. How best to achieve these goals has been the subject of intense debate in both OECD and non-OECD countries in recent years, especially those that have established or are in the process of establishing funded pension programmes and, in particular, those in which assets are managed by private sector institutions.

One key aspect of the policy debate has been whether pension asset management should be regulated by quantitative criteria – that is, by the establishment of express quantitative limits on the types of assets in which pension funds may be invested – or by the so-called prudent person rule, which is a behaviourally-oriented standard. The debate is a significant one, because its outcome determines who – the state or the pension fund’s governing body – will be responsible for establishing the initial asset allocation parameters for pension investment activity.

Notwithstanding this active debate about whether a quantitative limitations-based or prudent person-oriented approach to regulation (or a combination of the two) is the more appropriate, there is insufficient understanding of the precise parameters of the prudent person rule. Because of the behavioural orientation of the rule, it is not as readily understood as quantitative limitations. This paper contributes to the policy debate in two ways. First, we discuss the characteristics of the prudent person rule, focusing on its development and its specific application under UK and US law. Second, we review the methodological issues that arise when seeking to compare outcomes under the prudent person rule to those under quantitative limitations.

We find that the prudent person rule as applied within the United Kingdom and the United States is a complex, substantive rule of law that is composed of several basic duties and principles. These include a duty to act prudently and with due diligence with respect to the management of a pension fund and its assets; a duty of loyalty to the pension fund and its members; and a principle of diversification, which requires that a pension fund's investment portfolio be suitably diversified and that unwarranted risk be avoided. The rule can differ in its precise contours, and therefore governments (legislature, regulators and supervisors, and the judiciary) play a substantial role in shaping the rule's application to various aspects of pension asset management. Indeed, over time, the rule has shown itself to be adaptable to new investment management theories, practices, and products. Nonetheless, available studies suggest that the prudent person rule has a constraining effect on pension asset management and has created a culture of cautious behaviour among pension fund trustees, fiduciaries and other relevant parties.

## **“Prudent Person Rule” Standard for the Investment of Pension Fund Assets\***

In recent years, there has been remarkable growth in privately managed pension assets in many OECD and non-OECD countries. In some countries – such as Australia, Ireland, the United Kingdom, and United States – privately-funded pension programmes have been in place for sometime, although undergoing seemingly constant change in regulatory detail. In these countries, a number of incremental changes, including the introduction of sometimes substantial, new types of privately-funded retirement savings opportunities, have contributed to the growth trend. In other countries – for example, Hungary, Poland and Mexico – the growth of privately managed pension assets has been caused by the implementation of broader, wholesale reforms intended to reduce reliance on unfunded, government-sponsored social security and pension programmes. In light of the demographic and fiscal pressures facing many countries, we likely can anticipate continuation of governmental efforts to encourage the accumulation of privately managed pension assets.

The manner in which these assets are invested and the way in which that investment is regulated and supervised are crucial to the success of these privately funded pension programmes. The regulation and supervision of pension assets has two main goals: First, to assure the safety and security of those assets and second, to create an environment in which asset management can obtain the best returns at an acceptable level of risk. How best to achieve these goals has been the subject of intense debate in both OECD and non-OECD countries in recent years, especially those that have established or are in the process of establishing funded pension programmes and, in particular, those in which assets are managed by private sector institutions.

---

\* This article was prepared by Russell Galer, administrator in the Financial Affairs Division of the Directorate of Financial, Fiscal and Corporate Affairs. The article benefited from comments and inputs from the members of the Working Party on Private Pensions but the author remains responsible for its content.

One key aspect of the policy debate has been whether pension asset management should be regulated by quantitative criteria – that is, by the establishment of express quantitative limits on the types of assets in which pension funds may be invested – or by the so-called prudent person rule, which is a behaviourally-oriented standard. Although the debate frequently is expressed in terms of these polarised positions, in reality, the regulatory and supervisory environment in many countries is less clear. One can generally observe with some degree of accuracy that OECD countries with an Anglo-American legal tradition have tended to adopt a prudent person rule as their core regulatory mechanism, and other countries have tended to opt for a quantitative limits approach. These characterisations, however, are merely generalisations. Many countries with a prudent person rule in place also have elected to use quantitative limitations – if only to a limited extent. This is true in both the United Kingdom and the United States, which are both frequently characterised as wholly adopting a prudent person rule method of regulation. Furthermore, Canada is an example of a country that has more substantial quantitative limitations in addition to its prudent person rule, although those limitations have been modified in recent years. Similarly, there are countries that are less associated with Anglo-American law that have adopted a prudent person approach to regulation, such as the Netherlands, Japan and Italy. Finally, some countries in which quantitative limits serve as the core method of regulation also use the prudent person rule – or some similar form of behaviourally-oriented guidance – in addition to the quantitative limitations. Evidence of such a mixed approach can be found in certain OECD countries.<sup>1</sup> Brazil is one example of a non-OECD country that has been moving in recent years from a stringent quantitative limitations approach to regulation towards a greater reliance on a prudent person rule.

Despite the mixed approach to regulation taken by many countries, discussion of this issue has sometimes taken on an almost ideological tone. The debate has been most notably engaged in European Union discussions regarding the development of its directive on “institutions for occupational retirement provision”(IORPs).<sup>2</sup> The debate is a significant one, because its outcome determines who – the state or the pension fund’s governing body – will be responsible for establishing the initial asset allocation parameters for pension investment activity. Indeed, this is a particularly important aspect of the management of any portfolio of investments, and, in fact, there is widespread consensus among most economists that have reviewed the issue that the asset allocation decision – rather than specific stock selection – is the critical element in determining long-run investment performance.

Notwithstanding this active debate about whether a quantitative limitations-based or prudent person-oriented approach to regulation (or a combination of the two) is the more appropriate, there is insufficient understanding of the precise

parameters of the prudent person rule. Because of the behavioural orientation of the rule, it is not as readily understood as quantitative limitations. This paper hopes to contribute to the policy debate in two ways. First, we will discuss the characteristics of the prudent person rule, focusing on its development and its specific application under UK and US law. Second, we will review the methodological issues that arise when seeking to compare outcomes under the prudent person rule to those under quantitative limitations. Specifically, the discussion:

- Sets forth a definition of the “prudent-person rule”.
- Provides historical background on the rule’s development.
- Discusses the rule as applied to pensions in the United Kingdom, the United States and other select countries.
- Reviews research regarding the impact of the prudent person rule on investment manager behaviour.
- Identifies factors associated with successful implementation of the rule.
- Raises methodological considerations that arise in comparing the effects of the prudent person rule to those of quantitative regulation.

## I. Definition and key characteristics of the prudent person rule under UK and US law

**Statement of the rule.** The prudent person rule can generally be stated in terms of the following broad principle:

*A fiduciary must discharge his or her duties with the care, skill, prudence and diligence that a prudent person acting in a like capacity would use in the conduct of an enterprise of like character and aims.*

The prudent person rule may apply to all of the duties and obligations that a fiduciary or trustee may have with regard to a trust, pension plan or fund.<sup>3</sup> This paper specifically addresses the rule’s application to the investment management of pension assets.

**Origin in the law of trusts.** The prudent person rule has its roots in trust law. The “trust” is a concept of Anglo-Saxon law in which an identified group of assets is constituted and managed by trustees for the benefit of another party (the beneficiary). The members of a pension plan or fund are beneficiaries of the trust, which holds the assets of the pension plan or fund. The “prudent person rule” is the standard in accordance with which the persons managing the trust – the trustees or fiduciaries – must operate.

**Separation of assets.** The “trust” legally separates the assets of the pension plan or fund from other monies.<sup>4</sup> This segregation of the pension assets protects

them from being “confused” with those of the trustees, sponsoring employers or financial institutions involved with their custody and management. In this way, it becomes more apparent to the trustees and to other parties involved in asset management, that the pension assets are distinct and different from their own and from other assets that they may be responsible for managing. Perhaps just as significantly, legal separation of assets protects them from the creditors of the sponsoring employers, trustees and financial institutions involved with the pension plan or fund.

There is nothing inherently sacred, however, about the trust form. A prudent person rule could be established and applied under different legal forms in countries without a law of trusts. Thus, contract law, for instance, may be used as the basis for establishing and enforcing a prudent person rule for pension fund officials and investment managers.<sup>5</sup> Indeed, the broader concept of fiduciary obligation can be found outside the area of trusts, arising in a diverse range of relationships, such as agent-principal, director-corporation, guardian-ward, lawyer-client, partner-fellow partner, in addition to trustee-trust beneficiary relationships.

**Legal obligations and liability.** Generally, rules establishing fiduciary obligations seek to minimise potential divergences of interest in relationships where one party is particularly vulnerable to another. These issues of “agency conflict” are often addressed by reducing or prohibiting potential conflicts of interest or in some other way aligning the interests of the parties.<sup>6</sup> The precise scope of a fiduciary’s obligation necessarily varies with the context of the relationship. Thus, for instance, trustees are under more stringent restrictions in their dealings with trust property than are corporate directors in their personal transactions with the corporation. In all cases, however, a key element of the rule – in addition, of course, to the substantive standard of behaviour it sets forth – is the extent to which one is exposed to legal liability in the event the rule is violated. Legal liability and its effective enforcement through appropriate administrative and judicial measures are critical to the rule’s successful implementation.

**Common law basis of rule.** The precise parameters of the early form of the prudent person rule were developed in common law via judicial decisions made on a case-by-case basis. In its modern form, the rule is often expressed in terms of explicit statutory and regulatory language that either conforms to the common law or alters it to better accommodate the practices of contemporary pension funds and modern investment theory and practice. For example, the prudent person rule as applied to pensions in both the United Kingdom and the United States is based on common law, but adapted to the pension environment, primarily in the UK Pensions Act 1995 and the US Employee Retirement Income Security Act of 1974 (“ERISA”). In these instances, however, the judiciary continues to play an important role in defining, interpreting and applying the rule. The UK and US rules are discussed in more detail below at Section III.

Although the details of the prudent person rule will vary in expression from country to country, in broad outline it is quite similarly stated in the Anglo-Saxon countries employing it. This is generally a result of its common roots in British common law.

**Due diligence and process.** The prudent person rule is behaviourally-oriented rather than outcome-focused. Thus, the prudent person rule focuses on how diligently a trustee or fiduciary performs his or her obligations with respect to the pension plan, including how investment decisions are made. That is to say, fiduciaries are judged not by a retrospective assessment of whether their investment decisions were successful, but by whether they followed a reasonable process in reaching their decisions. As one US court succinctly stated, “The focus of the inquiry is how the fiduciary acted in his selection of the investment, and not whether his investments succeeded or failed”.<sup>7</sup> As one commentator has more fully explained:

“Prudence is to be found principally in the process by which investment strategies are developed, adopted, implemented, and monitored in light of the purposes for which funds are held, invested, and deployed. Prudence is demonstrated by the process through which risk is managed, rather than by the definition of specific risks that are imprudent. Under a modern paradigm, no investment is imprudent per se. The products and techniques of investment are essentially neutral. It is the way in which they are used, and how decisions as to their use are made, that should be examined to determine whether the prudence standard has been met. Even the most aggressive and unconventional investment should meet that standard if arrived at through a sound process, while the most conservative and traditional one may not measure up if a sound process is lacking.”<sup>8</sup>

**Care, skill, delegation.** The duty to act prudently imposes a standard of behaviour on trustees and other fiduciaries under which they must exercise such care and skill as persons of ordinary prudence would exercise in dealing with their own property. It thus requires that trustees and fiduciaries have the necessary level of “familiarity” with the trust, plan, or fund to appropriately carry out their responsibilities. Similarly, fiduciaries must have or acquire the care and skill sufficient to the tasks for which they are responsible.<sup>9</sup> Bluntly stated, “a pure heart and an empty head are not enough”.<sup>10</sup>

To obtain a sufficient level of skills satisfying the prudent person standard, fiduciaries frequently will obtain advice from relevant experts and delegate various activities to those with the requisite skill. When employing an expert, fiduciaries are responsible for assuring that the expert actually has the skills for which he or she is being retained and, therefore, are obligated to adequately investigate the expert’s qualifications. Second, fiduciaries also must ensure that retained experts

acquire sufficient familiarity with the specific nature and needs of the pension plan, fund or trust by providing them with complete, accurate and sufficient information so that they can appropriately formulate requested advice or carry out delegated tasks. Third, fiduciaries must ensure that the interests of those hired are sufficiently aligned with those of the pension fund by assessing whether the hired parties have any conflicts of interest that could provide inappropriate incentives to act contrary to the interests of the pension fund.<sup>11</sup>

**The duty to monitor.** Even when delegating responsibilities, fiduciaries remain responsible for monitoring and reviewing the activities delegated to assure that they have been appropriately and prudently carried out. This would include the monitoring and reviewing of investment managers based upon an established investment policy and review procedure.

**The duty of loyalty.** The rule of prudence does not stand alone. It is typically accompanied by additional rules, that some might argue are implicit in the standard of prudence itself. These include the duty of loyalty and the principle of diversification. The duty of loyalty requires trustees to administer the trust, pension plan or fund solely in the interest of the plan members, often expressed in terms of their “best”, “sole”, or “exclusive” interest. In the case of occupational plans, particularly defined benefit plans, because the employer is responsible for funding the plan, the duty may be somewhat modified. For instance, the law in the United Kingdom requires that pension fund trustees take employer interests into account and consult with the employer when formulating an investment policy for the pension fund. In the United States, the accommodation has been made on a case-by-case basis by the courts, which have recognised that pension fund fiduciaries usually are employed by the employer sponsoring the plan and thus “wear two hats”.

Prohibitions on self-dealing in the management of trust assets and on engaging in other conflict-of-interest transactions adverse to the interests of plan members are, in a sense, mere corollaries of the duty of loyalty. They are also an alternative way to express the affirmative obligations of the prudent person rule in terms of the negative, *i.e.*, in terms of prohibitive barriers. They, thus, similarly reflect the intent to assure that the interests of the trustees and fiduciaries are aligned with those of plan members. These prohibitions are often separately and explicitly stated in statutes or regulations, but also may be said to be included implicitly in the duty of loyalty.<sup>12</sup>

**The principle of diversification.** Another principle associated with the prudent person rule is the principle of diversification. This principle requires that the investment portfolio of a pension fund be suitably diversified. It requires both diversification among appropriate asset classes and within each asset classification in order to avoid the unwarranted concentration of investment

and the associated accumulation of risk in the portfolio. The principle of diversification is often stated as an explicit rule, but generally without specific quantitative limitations.<sup>13</sup> Indeed, quantitative limitations regulation, arguably, is nothing but the principle of diversification stated in an explicit, numerical form, rather than in the form of general principle.

As applied to the investment management of plan assets, the duties of prudence, loyalty and diversification are of extreme importance. Without them, there would be solely a broad grant of authority to a fiduciary or trustee to manage pension assets or other trust property with little restraint, guidelines or guideposts. If the principles explained above are understood, and are enforceable and enforced, they have a remarkable ability to corral investment activity into a framework of reasonable behaviour. Indeed, as discussed further below, the rules have significantly curtailed adventurous asset management.

## II. Historical background

Historically, the prudent person rule has placed significantly more explicit constraints on trustees and fiduciaries of trusts than the contemporary version of the rule. These antecedents are worth noting, because they are imbedded in the culture of the rule and, thus, continue to colour the interpretation and implementation of the rule today. For example, UK courts continue to look to the common law of trusts in addition to the statutory and regulatory rules specific to pensions.<sup>14</sup> Similarly, in the United States, courts adjudicating pension matters will often refer to the “federal common law” of trusts when interpreting the federal pension laws.

The old English rule, which was designed to protect beneficiaries from speculative investments, provided that the sole obligation of a trustee was the conservation of principal and, therefore, that the only safe (and thus only prudent) investment was in government-backed securities. In the seminal 1830 case *Harvard College v. Amory*, a US state court set forth a broad prudent person standard that departed from this narrow rule, which had also been adopted by the US courts, and permitted the investment of trust assets in the stock of private enterprises. The judge, observing that even government bonds carried risk, set forth a standard for trustees that is remarkably similar to the contemporary prudent person rule:

“All that can be required of a trustee to invest, is, that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested.”

The rule, like the modern day rule, embraced both a conduct or process-oriented approach and a duty of loyalty, rejected as inappropriate specific limitations on

specific types of investment, and recognised that return on capital (“income”) is a legitimate factor in addition to the preservation or safety of the capital. It also set forth a rudimentary concept of risk consistent with the contemporary understanding that all investment decisions come with risk, and therefore, that even a prudently made investment could turn out badly.<sup>15</sup>

The *Amory* decision, however, also emphasised the avoidance of “speculation”, and the need to give due consideration to expected “income” and the “safety” of the principal. Focusing on these elements of the *Amory* decision, US courts quickly retreated wholesale from the spirit of the *Amory* opinion. They moved away from its process-oriented approach, and returned to a more traditional approach in defining prudent investment management behaviour for trustees. This was reflected in several ways. First, specific types of investments were declared to be “speculative” *per se* and, thus, in violation of the prudent person rule. Second, the post-*Amory* courts focused on a trustee’s duty to preserve capital, even at the cost of failing to protect trust assets from the ravages of inflation. Third, the courts continued to review trust investments on an investment-by-investment basis, without regard to the trust’s overall portfolio. This post-*Amory* judicial interpretation of prudence was also reflected in legislation.<sup>16</sup>

As a result of the post-*Amory* retrenchment, the prudent person rule as applied in the United States was, in fact, quite restrictive until the passage of the ERISA legislation in 1974 – legislation applicable only to pension plans sponsored by private (non-governmental) employers. Since 1974, however, most United States public pension plans, that is those sponsored by state and local governments for their employees, also have adopted an ERISA-like prudent person standard.<sup>17</sup> The restrictive common law standard that applies to non-pension trusts prevailed in the United States well into the 1980s.<sup>18</sup> Under this traditional approach, trustees were thus discouraged from contemplating the use of newer investment strategies and products and from reviewing an investment opportunity in the context of an overall portfolio of investments. Indeed, there is a large body of commentary that reflects frustration with the rigidity of the common law version of the US prudent person rule. Many commentators have been quite critical of the inability of the US common law rule to accommodate newer investment products, methods and theories (the concepts of modern portfolio theory, hedging, securities lending practices, etc.).<sup>19</sup>

A similarly restrictive approach remained in effect for pension trusts in the United Kingdom well into the 20th century. In the United Kingdom, the pension laws limited the nature of investment under both 1925 and 1961 legislation. The 1925 legislation, for instance, limited investment to certain government or government-sponsored securities and to stocks of local authorities and certain railways and utilities. The 1961 legislation was somewhat more flexible; 1995 legislation essentially eliminated such *per se* limitations.

### III. The prudent person rule in practice

In this section we provide some detail about the UK and US rules as applied to pensions, a brief overview of some additional countries that apply a prudent person rule or approach, and some general remarks regarding the rule's adaptability and flexibility.

**UK application of the prudent person rule.** In the United Kingdom, the duties and powers of pension trustees derive from three sources: 1) the trust document and rules of the pension scheme; 2) the general law applicable to trustees, which is a mixture of legislation – such as the Trustees Act of 1925 – and case law; and 3) the law specific to trustees of occupational pension schemes, found largely in the Pensions Security Act 1993 and Pensions Act 1995.

Generally, in carrying out their powers and obligations, pension trustees in the United Kingdom are bound to exercise reasonable care and to show the prudence and diligence that an ordinary man of business would in the exercise of his own affairs. In the words of a 19th century court, the duty is to “take such care as an ordinary prudent man would take if he were minded to make an investment for the benefit of other people for whom he felt morally bound”.<sup>20</sup> In accordance with common law principles, pension trustees also have a general duty to invest the pension scheme's assets and not allow them to sit idle, unless immediately required for the payment of benefits or other purposes.

In addition to these common law obligations, the powers and duties of pension trustees with respect to asset management are further codified at Sections 33-36 of the Pensions Act 1995,<sup>21</sup> as follows:

1. Trustees and any person to whom the function has been delegated, have a duty of care to exercise skill in the performance of the investment function, exercising any special skills they may possess.
2. When choosing investments, the trustees must have regard for *a)* the need to diversify investments insofar as appropriate for the pension scheme; *b)* the suitability of the type of investment for the pension scheme and *c)* the suitability of the particular investment; the trustees also must *d)* obtain proper advice on their investments, and *e)* act in accordance with their statement of investment principles.
3. Trustees must prepare and maintain a written statement of investment principles that *a)* identify the kinds of investments to be held; *b)* identify the balance between different kinds of investment; *c)* address the nature and extent of risk anticipated in the investment portfolio; *d)* identify the expected return on investments; and *e)* set forth a policy for assuring compliance with the investment principles set forth in the statute.

4. Subject to these rules, the trustees' powers to invest are broad, and include the power "to make an investment of any kind as if they were absolutely entitled to the assets of the scheme".
5. Trustees may delegate investment functions to a fund manager legally authorised to undertake investment business in UK; the trustees, however, must assure the fund manager has appropriate knowledge and experience, and monitor the fund manager's performance.

The UK law also restricts employer-related investments ("self-investment") – using an explicit, quantitative limit to do so. Specifically, these investments are restricted to 5% of the pension scheme's assets. Loans to the employer are totally prohibited.

The UK law generally takes a "whole portfolio approach". Specifically, trustees and their investment managers are judged by the standards of portfolio management theory current at the relevant time, and the level of risk in the portfolio as a whole will be looked at, rather than on a per investment basis.<sup>22</sup>

**US application of the prudent person rule.** As previously noted, the US rule is set forth in the Employee Retirement Income Security Act of 1974 (ERISA). ERISA Section 404 sets forth the general standards of fiduciary conduct, requiring that plan trustees and other fiduciaries to the pension plan discharge their duties in the following manner:

1. "Solely in the interest of plan participants and beneficiaries."
2. "For the exclusive purpose of providing benefits" and "defraying reasonable expenses of administering the plan".
3. "With the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character with like aims."
4. "By diversifying investments... so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so."
5. In accordance with plan documents.

Unlike UK law, the US pension statute does not expressly require pension plan fiduciaries to establish an "investment policy". The US Department of Labor, however, has strongly encouraged their preparation and use.<sup>23</sup>

To the extent a plan fiduciary delegates investment responsibility to an investment manager, that manager is subject to the prudent person rule as expressed in Section 404.<sup>24</sup>

Although the ERISA prudent person rule essentially codifies the common law, US courts have in fact interpreted this codification of the law to be a more exacting standard. One often-quoted judicial opinion stated that the duties of an ERISA trustee are “the highest known to the law”.<sup>25</sup>

Similar to the UK law, the US law also supplements the general standard by explicitly addressing the issue of self-investment. It places significant quantitative limits (generally 10% of plan assets) on a pension plan’s acquisition and holding of employer securities and real property. It also expressly prohibits numerous specified transactions between a plan, plan fiduciaries and affiliated “parties in interest”.<sup>26</sup>

ERISA takes a “whole portfolio approach” to plan asset management. The US Department of Labor specifically clarified that the statutory standard should be interpreted to mean that the “prudence of a particular investment decision should not be judged without regard to the role that the proposed investment or investment course of action plays within the overall portfolio”.<sup>28</sup>

In interpreting the statute, both the US Department of Labor and the courts have stressed the importance of “process”. The Department’s regulatory pronouncements indicate that fiduciaries should give “appropriate consideration” to all relevant factors in assessing an investment; employ proper methods to investigate, evaluate, and structure investments; act in a manner in accordance with others who have a capacity and familiarity with such matters; and exercise independent judgement when making investment decisions.<sup>29</sup> The regulator has steadfastly refused to develop any list of investments or investment techniques that might be considered *per se* permissible or impermissible.<sup>30</sup>

***Additional countries that employ the prudent person rule.***<sup>31</sup> Most countries employing a version of the prudent person rule similar to that used in the United Kingdom and the United States have an Anglo-Saxon common law legal tradition. These would include among others Australia, Canada, and Ireland. Certain non-Anglo-Saxon countries also use a prudent person approach, including principles such as diversification and dispersion in their regulatory framework. These would include, for example, Italy, Japan and the Netherlands, among others. In some cases, the prudent person rule is accompanied by certain quantitative restrictions. However, some of those restrictions – such as those that require diversification or limit self-investment – are, in effect, an articulation of aspects of the prudent person rule.

As already noted, both the United Kingdom and the United States require that pension assets be invested on a diversified basis. In each case, however, this diversification requirement is stated as a general principle, rather than in terms of specific quantitative rules. Similarly, the Netherlands also includes a general diversification requirement in its laws. By contrast, Canada imposes certain quantitative limitations related to diversification, for example, by limiting real estate

investment to 5% of a pension fund's portfolio and limiting fund investment in foreign assets to 30%. Italy permits only up to 15% of a pension fund to be invested in one investment.

Countries that employ a prudent person rule also frequently employ explicit quantitative restrictions on self-investment. Examples include Australia (5%), Canada (10%), Netherlands (generally 5%) and, as already noted, the United Kingdom (5%); and the United States (generally 10%).<sup>32</sup> Ireland requires disclosure when the 5% threshold is crossed. The EU Directive applies a 5% limit to investment in the "sponsoring undertaking" and a 10% limit to investment in entities within the "same group" as the sponsoring undertaking. Non-Anglo-Saxon countries with a prudent person approach also sometimes include similar explicitly quantitative restrictions on self-investment.

Of course, the more explicit and numerous the restrictions placed upon the composition of a pension fund's portfolio, the less distinguishable the prudent person rule becomes from the quantitative limitation approach employed by many other countries. Indeed, countries employing a combination of the two approaches present a significant challenge in comparing investment outcomes under the two methods of investment regulation. (See discussion below at Part VI of this paper.)

***Prudent person rule can vary in application.*** It is important to observe, based on the discussion above, that in practice the prudent person rule is interpreted, calibrated and applied in a variety of ways. This can be demonstrated first by comparing the rule as historically applied to its contemporary form; second, by comparing the details of the contemporary rule in the United Kingdom with those in the United States; and third, by comparing the rule as applied to pensions with the rule as applied in non-pension trust contexts.

Historically, as identified above, the prudent person rule focused on the preservation of capital and an extreme aversion to risk-taking; the rule included *per se* prohibitions on investing in a number of asset categories; and courts applying the rule reviewed investment decisions on an investment-by-investment basis. By contrast, contemporary interpretations of the rule strike a wholly different balance between capital preservation and risk-taking, and emphasise the investment management process over the actual investments made. Today's courts, reviewing the prudence of any particular investment, do so in the context of a fiduciary's management of the entire trust portfolio.

Similarly, the details of the rule vary from jurisdiction to jurisdiction. For instance, the United States incorporates a "prudent expert" standard in its pension laws, whereas the United Kingdom uses an "ordinary man of business" standard. Likewise, some countries will more explicitly state various aspects of the

rule than others will. For example, the United Kingdom explicitly requires fiduciaries to develop a statement of investment policy to guide investment decision making. In the United States, however, there is no explicit rule on this point.

Even within a country, the precise parameters of the rule may vary with the context. As noted above, this is true of the nature of fiduciary obligations generally. For example, the fiduciary obligations of a corporate director to a corporation and its shareholders are different from the fiduciary obligations of a trustee to a trust and its beneficiaries. This is also true within the trust context itself. The precise rules applied to pension trusts – in both the United Kingdom and the United States – differ from those applied to non-pension trusts. Both the United Kingdom and the United States have developed prudent person rules specific to pensions or added rules that complement the basic rule. Within the United States, the common law rule as applied to bank trusts and other institutions has not developed in lock step with the pension rule. (Indeed, these differences are reflected in investment practices and investment outcomes. See below at Section IV.)

More generally, in designing a prudent person rule applicable to pension asset management, some jurisdictions rely more on a “purer” form of the rule, albeit often supplemented with rules providing additional specificity to the general standard (*e.g.*, the United Kingdom, the United States); other jurisdictions appear to use a combined approach that also relies, in part, on quantitative restrictions (*e.g.*, Canada, certain US public (state and local government) plans, EU directive.)

***Adaptability of the prudent person rule.*** Notwithstanding the differences, in its contemporary application in the United Kingdom and the United States, the prudent person rule has shown itself to be broadly applicable, flexible and resilient. This may be because the contemporary prudent person rule is set out as a set of principles intended to lead to prudential decision-making, rather than to dictate outcome. The adaptable nature of the rule in application is both its principal strength and weakness.

Adaptability is needed to accommodate the wide variety of objectives and circumstances that trustees and other fiduciaries may face. It is also important in light of the rapid pace of change in today’s financial marketplace. For example, our concept of risk and risk management techniques have changed dramatically over time and will continue to do so. Today’s trustees and fiduciaries must assess a constant stream of new developments in the financial markets, new investment products and advances in practice and theory employed by asset managers. The prudent person rule has provided fiduciaries the flexibility they need to make investment management decisions in this ever-changing environment.

This very virtue of the prudent person rule, however, is perhaps its greatest weakness. The rule’s appropriate application is not as readily assessed as a clear

quantitative limitation. While this is true of any rule of law that takes the form of a broad principle, it nonetheless presents challenges for pension trustees and fiduciaries, as well as for regulators and supervisors. Simply put, it may not be easy to determine when the rule is violated. As economic circumstances and a pension fund's demographic profile change and as new products, techniques and methods of investment become available, trustees and fiduciaries, under the prudent person rule, must consider whether their current investment practices and investment portfolio remain prudent and whether that which is newly available may be appropriately and prudently utilised in their particular pension fund. This process of on-going monitoring, review and assessment is, of course, the very heart of the prudent person rule. Similarly, pension regulators and supervisors themselves may need to decide whether certain of these new products, investment techniques and practices are more or less likely to be prudently used by plan trustees and offer guidance to the fiduciary community.

***Applicability to member-directed pension plans.*** The discussion thus far has focused on the application of the prudent person rule to the investment management of pension fund assets. The rule applies, however, much more broadly. For example, the rule continues to have a significant role to play in the management of defined contribution vehicles with member-directed accounts. Thus, under the rule in the United States, plan or fund trustees are required to select and review investment options available to plan members. In carrying out such responsibilities, trustees are expected to assure the availability of an appropriate array of investment choices for members, considering the composition of the membership and their needs, the costs associated with each available investment and whether or not the investment is being adequately managed. In doing so, trustees to whom the prudent person rule applies may establish an investment policy and benchmarks by which to measure and monitor the performance of each investment option, replacing them when appropriate.

#### **IV. Impact of prudent person rule on investment manager behaviour**

This section reviews available studies presenting empirical data regarding investment performance under the prudent person rule. This literature consistently suggests that, on the whole, trustees and fiduciaries subject to the prudent person rule invest cautiously. Following the review of the data, we present some possible explanations for the observed behaviour.

***A review of studies presenting empirical data regarding investment performance under the rule.*** Commentators reviewing pension funds and other funds subject to a prudent person rule generally observe that the rule has had a constraining effect on investment management behaviour. In reviewing the literature, however, one must

carefully distinguish between the various versions of the rule being reviewed. In the United States, for instance, much commentary has focused on the common law rule as applied to non-pension trusts. As noted above, the common law rule in the United States, which is applied for instance to bank trust funds, was late in accommodating modern portfolio theory and more recent financial instruments now frequently used in asset management, as compared to the rule applied to US pension plans. Similarly, conclusions from these studies must be placed in some international perspective. Although the studies discussed below all suggest that pension funds, whether in the United States or the United Kingdom, are invested cautiously, as the Myners' Report pointed out, US pension funds are much more likely to invest in the private equity and venture capital markets than UK funds.<sup>33</sup>

Moreover, comparing fund performance or asset allocation in the aggregate may be misleading, as many trusts or funds will have entirely different short- and long-term needs than others. Presumably, these differing needs are reflected in the asset allocation of their portfolios. For instance, there is no reason to expect that a pension fund should have a similar portfolio to either another pension fund or a mutual fund, or that all mutual funds will have similar portfolio preferences, given the wide variety of objectives and styles of fund management. Looking at average institutional investment behaviour, therefore, may provide very little information from which to draw significant conclusions. Notwithstanding these reservations, there appears to be some consistency in findings among studies.

One study, which reviewed US data, concluded that under the prudent person rule investment managers tended to tilt the composition of their portfolios over time toward stocks that courts might view as prudent.<sup>34</sup> Notably, this study found that bank trust managers acted more cautiously in this regard than pension fund managers; in turn, pension fund managers were more cautious than those managing mutual fund portfolios. This finding corresponds with the fact that common law trust standards in the United States historically have been more constraining than the statutory ERISA standards imposed on pension fund fiduciaries.

Another study, which reviewed the performance of the equity portfolios of UK pension funds from 1983-1997, made a similar finding to the US study. It found a similar pattern in the returns of most funds and the FT All Share index and concluded that with respect to their equity portfolios most pension funds were “closet trackers” of the index.<sup>35</sup>

The Myners' Report, which was issued in 2001, identified similar investment management practices in its review of UK pension funds and their investment management activities. Specifically, the report found that the pension trustee practice of reviewing investment manager performance by “benchmarking” provides incentives to “cling closely to stock market indices”. Further, incentives were

aligned such that there was little investment in new and different asset classes, such as private equity.

Finally, a 1985 survey of US managers of bank trust assets, college and university endowments, private foundations and corporate pension fund sponsors – although a bit dated – found that one-third of the managers that were surveyed stated that the version of the prudent person rule that applied to them constrained their investment activities. Bank trust departments, subject to the most rigid version of the prudent man rule, reported the most constraint, while pension fund sponsors subject to ERISA, the more liberal version of the standard, reported the least constraint. The survey also found that the use of many new or unconventional products and techniques were considered legally precluded or questionable by a significant number of fiduciaries. Although some “less conventional investments”, such as venture capital, real estate and foreign equities, had gained acceptance in portfolios, others, such as options, futures, and index funds were not typically employed at the time of the survey.<sup>36</sup>

**Explaining cautious investment behaviour under prudent person rule.** There seem to be a number of somewhat overlapping reasons for the investment management behaviour identified in the studies noted above. These include:

- The substantive antecedent common law.
- The nature of common law lawmaking.
- Benchmarking practices and related herding behaviour.
- The due diligence and process-orientation of the prudent person rule.
- The threat of liability.

Each is discussed in turn below.

**Substantive antecedent law.** As discussed above, the contemporary prudent person rule is historically rooted in prior versions of the rule that emphasised the preservation of capital rather than the achievement of investment gain, investment-by-investment review, and per se restrictions on certain investments. This history continues to colour the rule and its interpretation by trustees, fiduciaries, regulatory authorities and courts. Even where the prudent person rule has a statutory basis, as in both UK and US pension law, the common law antecedents continue to play a role in the interpretation of the rule's parameters. Moreover, courts may be ill-at-ease considering and reviewing complex portfolio management techniques, especially where payments to retirees are at stake, and thus, have some inclination to resort to a review of the performance of a particular asset rather than an entire portfolio.<sup>37</sup>

**Nature of common law.** Judicial lawmaking, particularly in common law jurisdictions, is characteristically a cautious and incremental process. First, courts

traditionally respect and adhere to legal precedent and standards established in previous cases. Second, courts must wait for appropriate cases or controversies to either promulgate new or reinforce old standards of law. Each of these elements slows the acceptance of contemporary theories, practices and products used in asset management.

Legislators and regulators may step into the breach where the courts do not accommodate changing practices. Even so, jurisdictions with longstanding prudent person traditions are cautious in adapting to expansive new laws or “liberalisations”. Moreover, trustees and fiduciaries often are reticent to quickly take advantage of the legislative or regulatory action intended to liberalise current practice under the rule. In the United States, for instance, it took not only the passage of federal law in 1974, but further regulatory action by the US Department of Labor to affirmatively clarify for US pension plan trustees that they could employ modern portfolio theory within the prudent person framework.

In the United Kingdom, the 1995 pension laws provided trustees the power to invest pension assets and select investments subject to a prudent person rule. As noted above, subject only to restrictions placed on them by the pension scheme and the fiduciary duty of prudent investment, the trustees under the 1995 law have the same power to make an investment of any kind as if they were absolutely entitled to the assets. This law, in effect, conferred a wide range of investment power – making prior legislation conferring less authority no longer applicable.<sup>38</sup> Notwithstanding the legislation, according to at least one commentator, there was some debate about the sufficiency of the statutory authority. Specifically, because the 1995 legislation did not define “investment”, doubt was expressed that the acquisition of assets likely to produce capital return rather than an income stream was permitted under the legislation. While this was likely an overly cautious view, it is apparently common – as a result of this concern – to include explicitly a number of powers in the trust document to assure that trustees can engage in some activities that may not strictly be regarded as “investments” under the statute itself. Two of the most common “activities” in this category are the power to purchase options and futures and the power to engage in securities lending.<sup>39</sup>

**Benchmarking practices and herding.** Benchmarking is one activity that fiduciaries engage in to satisfy the standard of care imposed upon them by the prudent person rule. First, the benchmarking activity is an on-going procedural activity that responds to the procedural component of the rule. Second, benchmarking helps to satisfy a substantive aspect of the rule. Under the prudent person rule, plan or fund trustees and other fiduciaries are required to act as an ordinary prudent person of business entrusted with the management of another’s money. To find out what ordinary prudent persons are doing, one might, quite naturally, look at a peer average or

relevant index as a benchmark.<sup>40</sup> Indeed, trustees are likely to find themselves in breach of their fiduciary obligations – and potentially legally liable – if their plan's investment performance (or the performance of any investment manager that they have engaged on behalf of the plan or fund) is consistently below average and they have taken no steps to address the situation.

The Myners' Report noted that the practice of “benchmarking” investment manager performance might lead to “herding” behaviour. “Herding” is characterised by an excessive adherence to the practices of one's peers. The Myners' Report observation is consistent with that of other researchers and commentators that were discussed above. Herding may be the unfortunate twin of caution, and may have some potentially undesirable side effects. First, if pension funds (and other similarly situated institutional investors) rely on the same indices and benchmarking tools, they will prefer similar, if not identical, investments. In theory, this alignment of investment preferences potentially could result in the overvaluation of the securities in the indices and produce exaggerated swings in their prices. Second, and more relevant to pension funds themselves, when fiduciaries have too strong an incentive to perform in accordance with their peers, it may also stifle innovation and appropriate risk-taking. As one US commentator observed, “[E]ven the liberality of ERISA's prudence standard has proved insufficient to overcome the craving for safety in numbers (and the attendant bias against innovation) that characterises fiduciaries subject to less sophisticated versions of the prudent man rule.”<sup>41</sup> One way to address this unwanted side effect of the rule, is to adopt a “prudent expert” standard, as opposed to a “ordinary person” standard. This might reduce the problem somewhat, although indications from US based studies suggest the effect of such a change may be small.

***Due diligence and process-orientation.*** As discussed above, the prudent person rule emphasises process rather than investment outcome. It places a premium on effective fund governance, deliberative decision-making and appropriate documentation, *i.e.* on procedural prudence. In practice trustees have implemented their due diligence obligations and monitoring processes by using such practices as the benchmarking of performance, as discussed above, and by employing the expertise of a consultant community to assist them in the process of reviewing plan asset management. The deliberative and transparent nature of the process of making and reviewing asset allocation and investment decisions inherently breeds more cautious management.

One result of the due diligence activity of pension fund fiduciaries may be the recognition that it is very difficult to assess and select investments and investment managers. The most obvious way in which trustees can monitor fund managers is by reviewing performance, selecting managers who have exhibited the highest returns in the past and firing fund managers who fail to perform. But

comparing manager performance may be difficult when managers adopt different levels of risk and different strategies or styles, or have differing mandates from the trustees. Moreover over the short term, market volatility makes the analysis even more difficult. Indeed, it is difficult to show empirically that past years of investment manager performance sufficiently predict future performance.<sup>42</sup> In addition to reviewing past performance, trustees may also review investment manager background and training, assess reputation and brand name of the firm, and use size of an investment management business or years of experience in the business as additional measures of investment management ability. Given the difficulties in selecting and assessing investment managers, the deliberative process itself may give rise to the conclusion that indexation (explicit or implicit) may be the most prudent route.<sup>43</sup>

There has been little empirical study of the pension fiduciary's decision making process, as distinguished from studies focusing on its outcomes. The Myners' Report findings focus on the practice of benchmarking. Another study, a survey of large US pension fund managers, finds a great deal of heterogeneity in the decision making processes employed by pension fiduciaries under the prudent person rule.<sup>44</sup> Because the establishment of appropriate processes is at the heart of the prudent person rule, it is an area that warrants future study.

***Threat of liability.*** Where the threat of supervisory review, sanctions, litigation or liability is real and credible, courts and regulators have substantial ability to shape the manner in which a rule is interpreted and applied by fiduciaries and investment managers. At bottom, the ultimate reason that other enumerated factors may have an effect on behaviour is because they are associated with a credible threat of liability or sanction.

As one commentator observed: “A collective savings institution is constrained by legal and actuarial requirements... While there are penalties for violating these risk thresholds, there are no obvious rewards for out-performing a minimum target return. This encourages a defensive attitude to asset management.”<sup>45</sup> Similarly, an observer of US fiduciary activity hypothesised that the exposure of ERISA fiduciaries to increased liability altered the incentive structure by which they operate. “Specifically, the incentives to maximise risk-adjusted return was severely curtailed” because the fiduciary's level of performance was to be evaluated in terms of prevailing professional or other standards applicable to pension asset management.<sup>46</sup>

## V. Factors for successful implementation of the prudent person rule

This section identifies some key factors for the successful implementation of the prudent person rule as applied to the investment management of pension assets. The

identified factors reflect the explanations for cautious behaviour under the rule, which were just identified above. Specifically we discuss the following factors:

- The pension fund's governance framework.
- The role of the regulatory authority in rule interpretation.
- Monitoring, reporting and disclosure.
- The role of the judiciary.
- The availability of adequate remedies.

***The pension fund's governance framework.*** Because the prudent person rule is a rule of process, it is vitally important that regulatory and supervisory authorities create incentives or rules that encourage or ensure that pension funds establish a robust, process-oriented decision-making framework within which investment management activities can be conducted. Suitability and competency requirements may be appropriate to assure that pension fund trustees and other fiduciaries are up to the task of managing the investment management process, as well as of carrying out other duties associated with pension fund administration.<sup>47</sup> Similarly, a statement of investment principles or an investment policy might be used to guide trustee decision-making. Third, in establishing an appropriate governance framework, regulators (or pension fund fiduciaries themselves) should consider the role that various service providers (auditors, custodians, and others with certain oversight responsibilities) might play in enhancing the governance process. Similarly, investment management consultants and unaffiliated investment managers engaged by a pension plan or fund have an important role to play in the governance process, as pointed out in the Myners' Report.<sup>48</sup>

***The role of the regulatory authority in rule interpretation.*** Regulatory pronouncements can have a significant effect on the manner in which the prudent person rule is implemented by plan fiduciaries and trustees and thus have an effect on how much the general rule restrains certain activity. The effectiveness of the regulator, however, will be directly correlated with the ability to sanction or impose penalties when its pronouncements are disregarded. Thus, regulators, supported by sufficient enforcement authority and activity, can chill or encourage various investment practices. This regulatory function can be quite important in slowing down or encouraging the adoption of new investment products and risk-management techniques. In a trust and fiduciary culture that appears to be quite cautious in application of the prudent person rule, regulators and supervisory bodies may have particularly significant leverage to shape and define behaviour under the rule.

One example, which was mentioned earlier, involves the US Department of Labor pronouncement regarding the role of modern portfolio theory under the prudent person rule, which clarified the appropriateness of its use to a rather skit-

tish trustee community. Similarly, the US Department of Labor clarified the role and management of derivatives in pension fund portfolios. The EU Directive deals similarly with the use of derivatives.<sup>49</sup> In this manner a regulator can massage the precise contours of the rule in application.

**Monitoring, reporting and disclosure.** Another key element in successful implementation of the prudent person rule is the ability of the supervisory authority and plan members to monitor plan investment management activity and all other related fiduciary activities. For effective monitoring to occur there must be adequate information available to the supervisory authority and plan members. This requires an effective reporting and disclosure regime.<sup>50</sup> Supervisory authorities and plan members should be able to initiate legal proceedings, whether judicial or administrative in nature, when improprieties are discovered. (The right to initiate such proceedings, of course, must be balanced against the costs of doing so; judicial or administrative intervention can be costly, time-consuming and distracting for the pension fund.) Third party service providers (auditors, custodians, etc.) may also serve an important monitoring role with respect to a variety of pension fund activities related to the investment management of assets – either as external monitors or as parties reporting to fund trustees and fiduciaries as part of the governance process.

**The role of the judiciary.** The judiciary has played and continues to play a very important role in the development, interpretation, application, and enforcement of the prudent person rule in the United Kingdom, the United States and other Anglo-Saxon common law jurisdictions. In the absence of bright-line, quantitative rules, which it can easily apply, the judiciary will tend to rely more heavily on expert testimony as to the appropriateness of a given fund's investment management practices and the process and rationale by which various investment decisions were made. Judicial reliance on experts may reinforce the tendency of plan fiduciaries to use consultants and benchmarks in their management of plan assets to assure that plan asset management corresponds to industry standards.

**The availability of adequate remedies.** The extent of available remedies for violations of the prudent person rule and resulting losses to pension funds will have a direct impact on the amount of litigation or number of administrative actions that will be instigated by members on behalf of their pension plan or fund. There are numerous ways to calibrate remedies. Anglo-Saxon jurisdictions do not necessarily calculate remedies similarly, and courts within each jurisdiction continue to refine the precise parameters and nature of remedies.<sup>51</sup>

If an appropriate balance is struck, the threat of litigation, supervisory action, liability and/or sanctions can have a tremendous prophylactic effect on inappropriate investment management activity. The benefit of the presence of an effec-

tive liability “threat” is that it reins in aberrant, unusual, and excessively risky investment management practices and leads to cautious – indeed, prudent – behaviour. The drawback is that substantial liability concerns in conjunction with the particularities of the prudent person rule’s substantive standards, can encourage an over-reliance on benchmarks and, correspondingly, result in excessive herding behaviour. Further, the presence of substantial liability concerns can significantly slow the introduction of innovative investment products and techniques that might be beneficial to a pension plan or fund and its members.

## **VI. Comparing the effect of prudent-person and quantitative approaches to regulation: methodological considerations**

Comparing the effects of the prudent person rule and quantitative restrictions on pension fund asset management is a difficult undertaking. Prior OECD work has sought to identify the differences in asset allocation in countries with and without quantitative restrictions and to compare investment returns in those countries. Based on the available data, the tentative findings suggested that, on average, quantitative asset restrictions (such as those on investment in real estate or foreign assets) constrained the asset allocation of the average pension fund and that where a prudent person rule, rather than quantitative restrictions, was applied, greater investment returns were generated. These findings, however, did not account for other influences on portfolios that may complement, interact with or override the effect of portfolio regulations. Therefore, the findings are suggestive, but not conclusive.<sup>52</sup> It is beyond the scope here to re-evaluate the preceding work in this area or to gather additional empirical data. Rather, we identify below some of the impediments to proceeding with additional empirical work on this topic and recommend ways to address certain of these issues. Specifically, we address the following items:

- Fundamental definitional matters.
- The use of aggregated data.
- The role of valuation, funding, accounting and actuarial rules, and tax treatment.
- The role of domestic investment.
- Transaction and other costs and fees.
- The role of pension fund governance practices.
- The importance of considering plan design.

**Fundamental definitional matters.** To proceed with further comparative work, one must first address at least two preliminary issues. First it is necessary to clearly define which countries are to be considered to employ a prudent person

rule and which a quantitative approach. Second, it is necessary to define what is meant by “constraint” in the context of both rules. Identifying which countries are prudent person rule jurisdictions and which quantitative is more difficult than it at first would appear. As we have discussed above, many countries embrace a combination of the two forms of regulation, including countries frequently considered to employ the prudent person rule. Some of these countries may only marginally use quantitative restrictions, most notably by placing quantitative limits on self-investment. As we noted above, the United Kingdom and the United States are such countries. On the other hand, some prudent person jurisdictions overlay a much more significant layer of quantitative limits. Canada is an example of this approach. Similarly, the issue arises from the other direction: a country with substantial quantitative restrictions may also employ a prudent person rule or set forth at least some of the elements of the rule in its regulations, even though it is not the primary aspect of its regulations. In these cases, it becomes difficult to identify a country as either a prudent person oriented or quantitatively oriented jurisdiction for purposes of legitimately comparing outcomes under the two regulatory approaches.

One way to address this definitional issue is for researchers to focus their attention solely on the “purer” countries – those that do not mix the prudent person and quantitative approaches to regulation at all. Although this would significantly limit the scope of study, it would yield clearer results. Researchers also could develop a taxonomy that recognises that many countries fit along a scale between the two extremes. By more accurately classifying countries that employ a hybrid approach to regulation, a more sophisticated range of results might be obtained. Such a taxonomy also could address the precise contours of the prudent person approach itself as applied in various countries. It may be the case that there are some distinct versions of the prudent person approach that are best distinguished for purposes of the comparison exercise.

The second preliminary matter regards the assessment of “rule constraint”. How can we determine when a quantitative limit actually “constrains” investment management behaviour – and to what extent? Presumably, pension funds are acting in accordance with applicable laws. Therefore, it (usually) will not be possible to identify pension fund portfolios that actually exceed or violate a particular quantitative limitation. Funds, however, will have assets allocated below the established limits to varying degrees. The difficulty is in determining which pension funds would have allocated assets differently in the absence of the legal limits. If a fund would have had a different asset allocation absent legal limits, the limits can be said to be constraining. One way to estimate which funds are so constrained is to identify those that are “close to” the legal limits. What remains is to establish how close to the limit is close enough to infer that the fund is in fact constrained by the limit? Although one ultimately must select a somewhat arbitrary mark or “collar”, it should be possible to identify a reasonable convention for such an exercise.

The task might be more difficult, however, with respect to the prudent person rule. To what extent does the prudent person rule “constrain” asset allocation? The information presented above suggests that the prudent person rule does tend to constrain fiduciaries and trustees; identifying to what extent, however, may be difficult to measure. To better define the constraints operative under the prudent person rule, one could conduct a qualitative survey of pension trustees, fiduciaries and investment managers subject to the rule, such as the 1985 survey referred to above. Such a survey also could help assess the extent to which the factors enumerated below have an impact upon investment management practices.

***The use of aggregated data.*** If data is analysed on an aggregated (countrywide) basis, conclusions must be drawn with care. Averaging asset allocation behaviour and investment returns across pension funds within a country can yield misleading data. Regardless of whether a pension fund is operating under a prudent person rule or quantitative limitations, the manner in which its assets are allocated should differ from fund to fund within each country. For example, one would expect a mature pension fund with numerous retirees to which it must make current benefit payments and a declining or older workforce to have a different asset allocation than a pension fund confronting the opposite demographic scenario. One also would expect that each of these funds would generate different investment returns on those differing portfolios. Averaging these pension funds together to compare them to another set of similarly aggregated funds will provide somewhat limited insights into how they fare under prudent person and quantitative regimes.

One might consider supplementing the analysis of aggregated data with a case study or sector-based analysis to mitigate this concern. The case study would review the investment management practices and investment returns of specifically selected pension funds of various countries that are of similar size and demographic circumstance. Alternatively, this exercise could take the form of a sector-based analysis where one would expect all pension funds across countries to be of generally similar demographic characteristics and maturity (*e.g.*, steel or coal industry plans, plans of newer technology companies, etc.).

***The role of valuation, funding, accounting and actuarial rules, and tax treatment.*** In many countries, there are a variety of fairly complex rules in addition to investment regulations that may have an impact on asset allocation and investment return. Although this may be especially true in jurisdictions with defined benefit plans, the issue is not confined to them. One needs to consider valuation, funding, accounting and actuarial rules, as well as the varying tax treatment of different asset classes, when comparing asset allocation across countries. Minimum funding rules in the United Kingdom, for instance, are said to directly influence the asset allocation decisions of pension funds. Similarly, in comparing the differences in equity/bond allocations in the United Kingdom and the Netherlands – neither of which has in place quantitative

restrictions – one commentator concluded that “[t]he evidence is overwhelming that actuarial and accounting standards have a profound effect on the split between equities and bonds.”<sup>53</sup>

**The role of domestic investment.** It is also necessary to take into account economic conditions in each country that may cause changes in portfolio composition. Presumably, pension funds have significant domestic investment allocations (regardless of whether or not foreign asset allocation limitations are in place). The extent and composition of those investments may be unrelated to either the prudent person rule or quantitative limitations.<sup>54</sup> In comparing the investment performance of pension funds in one country to the performance of those in another, one must make adjustments for this factor – especially for time periods during which the markets performed quite differently from country to country.

**Transaction and other costs and fees.** Similarly, one might need to consider the fact that trading and other transaction costs will differ from country to country, thus effecting how a pension fund portfolio is managed. Custodial and other fees will differ. Are returns reviewed net of these fees? Even if so, how do these cost structures effect asset allocation, portfolio turnover rates, and so forth? Portfolios, for instance, may be more inflexible to market conditions in the presence of higher trading costs. Could the effects of trading and other such costs on investment management behaviour be as significant as the difference between the rules we seek to compare?

**The role of pension fund governance practices.** The governance infrastructure of a pension fund may play a role in the fund’s investment performance. While the process-oriented nature of the prudent person rule puts a priority on good governance, pension plans operating in a quantitative environment also rely on the plan’s governing body to make investment decisions for the fund. The effects of robust or weak governance practices on returns must be accounted for in order to accurately assess the prudent person and quantitative regimes. By way of example, one study of public (state, local and municipal government) pension funds in the US found that the presence of retirees on the governing board of a fund appeared to reduce investment returns.<sup>55</sup> Similarly, the Myners’ Report places great emphasis on the role of governance in the asset allocation process.

**Plan design.** Pension plan design also may effect the way in which a pension fund’s portfolio is managed. For instance, in the presence of a minimum return guaranty provided by a pension plan to members, presumably different asset allocation decisions will be made – regardless of whether the plan is regulated under a prudent person rule or quantitative limitations.<sup>56</sup> Along these lines, one might need to differentiate between the performance of assets in defined benefit plans and defined contribution plans (even in the absence of member-directed accounts).

In brief, there are many methodological considerations to address when seeking to measure and compare the impact of prudent person rules and quantitative limitations on pension fund asset management – specifically on asset allocation practices and on investment performance. Investment performance, however, is not the only measure of successful regulation. Successful pension regulation also must ensure the security and safety of pension assets.

## **VII. Conclusion**

This paper has provided a general description of the prudent person rule, specifically focusing on the rule in the United Kingdom and the United States. The prudent person rule is a complex, substantive rule of law that is composed of several basic duties and principles. These include a duty to act prudently and with due diligence with respect to the management of a pension fund and its assets; a duty of loyalty to the pension fund and its members; and a principle of diversification, which requires that a pension fund's investment portfolio be suitably diversified and that unwarranted risk be avoided. The rule can differ in its precise contours, and therefore governments (legislature, regulators and supervisors, and the judiciary) play a substantial role in shaping the rule's application to various aspects of pension asset management. Indeed, over time, the rule has shown itself to be adaptable to new investment management theories, practices, and products. Nonetheless, available studies suggest that the prudent person rule has a constraining effect on pension asset management and has created a culture of cautious behaviour among pension fund trustees, fiduciaries and other relevant parties.

## Notes

1. For instance, the Polish law establishes prudent person like investment rules within the framework established by overall quantitative limits, based on Articles 29, 139 and 150 of the Law on Organisation and Operation of Pension Funds.
2. As approved at the Ministerial level in June 2002, the EU Directive takes a compromised, hybrid approach that enables countries to retain quantitative limitations for domestic pension funds within their borders, and provides a broad, prudent person rule for pan-European funds. Even while embracing the prudent person rule for cross-border activities, however, the directive includes some quantitative boundaries. European funds will be limited to investing no more than 5% of their portfolios in shares of the pension fund's sponsoring entity, 10% in the sponsoring entity and its affiliates, 30% in unregulated markets, and 30% in assets denominated in currencies other than those in which liabilities are expressed. *See* Article 18 of the “Proposal for a Directive of the European Parliament and of the Council on the activities of institutions for occupational retirement provision” (Document Number 9649/02, June 5, 2002), hereinafter referred to as “EU Directive”.
3. We use the terms “fiduciary” and “trustee” interchangeably throughout the discussion. We also assume for purposes of discussion that persons or entities with discretion in the management of pension plan assets are fiduciaries or trustees to whom the prudent person rule applies. In some jurisdictions, there may be debate about the extent to which certain parties – for instance, third party service providers – acquire fiduciary status in relationship to the activities they undertake on behalf of a trust, plan or fund. Discussion of that issue is beyond the scope of this paper.
4. Legal separation is one of the principles identified in the OECD Basic Principles of Regulation of Private Occupational Pension Schemes. *See* Principle No. 5; *see also* Article 8 of the EU Directive.
5. Even within the Anglo-Saxon tradition, pension law is a unique combination of trust and contract principles and trust law itself a specialised form of contract law. *See, e.g.*, Langbein, J.H. “The Secret Life of the Trust: The Trust as an Instrument of Commerce” in 107 *Yale Law Journal* at pp. 165-189 (1997) (“[T]he typical trust... embodies a contract-like relationship... about how the trustee will manage the trust assets and distribute them to the trust beneficiaries. The difference between a trust and a third-party beneficiary contract is largely a lawyer's conceptualism. When, therefore, we enforce a trust . . . we are already in the realm of contract-like behavior.”) and Gillese, E.E. “Pension Plans and The Law of Trusts” in 75 *Canadian Bar Review* 221 at p. 250 (1996) (“Pension law... is the intersection of competing systems of law: contract law and trust law.”) *Cf.* Millett, L. “Pension Schemes and The Law of Trusts: The Tail Wagging The Dog?” in *Trust Law International*, V. 14, No. 2 (2000) (reviewing United Kingdom law on this issue).

6. "The central preoccupation of fiduciary obligation [is] minimizing potential or incipient conflicts in parties' interests... Some commentators emphasize the characteristics of the fiduciary-beneficiary relationship that may in some situations invite abuse, emphasizing the vulnerability of the beneficiary and the ability of the fiduciary in such situations to indulge his own interest while injuring the beneficiary. This helps to explain the strong prophylactic nature of fiduciary rules, which often seem structured to deter the fiduciary from undertaking particular types of transactions." See DeMott, D. "Beyond Metaphor: An Analysis of Fiduciary Obligation", 1988 Duke Law Journal at pp. 881-924.
7. *Donovan v. Cunningham*, 716 F.2d 1455 (5th Cir. 1983).
8. Longstreth, B. "Modern Investment Management Theory and the Prudent Man Rule" (1986) at p. 7.
9. This aspect of the rule may be expressed in terms of an "ordinary man" or "prudent expert" standard. In the case of the US, the federal pension laws require a fiduciary discharge duties in the manner of a "prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims". ERISA Section 404(a)(1)(B). This is a "prudent expert" standard. By contrast, in the United Kingdom, a pension plan trustee is expected to show the skill and prudence of an "ordinary man of business". See "Institutional Investment in the United Kingdom: A Review", dated March 6, 2001, referred to throughout this paper as "the Myners' Report", which recommends adoption of a "prudent expert" standard.
10. *Springate v. Weighmasters Murphy, Inc. Money Purchase Pension Plan*, 2002 US Dist. LEXIS 16234 (C.D. Cal. 2002).
11. For example, if retaining an investment management consultant to assist the pension fund in developing an asset allocation strategy or to provide advice regarding the hiring and retention of investment managers, fiduciaries should investigate whether the consultant is receiving any fees or compensation from the investment managers that it recommends.
12. These concepts are consistent with OECD principles stating that self-investment should be limited, unless appropriate safeguards exist. See Principle No. 11, OECD Basic Principles of Regulation of Private Occupational Pension Schemes. See also Article 18(1)(f) of the EU Directive.
13. The principle of diversification also is included in the OECD principles. See Principle No. 11, OECD Basic Principles of Regulation of Private Occupational Pension Schemes. See also Article 18(1)(e) of the EU Directive.
14. As one commentator discussing UK pension law explained, "The law relating to pension trusts... involves no departure from established trust law. Rather an ever-adaptable trust law is developing on the foundation of established principle to meet the particular problems to which pension schemes give rise." Lacy S. and Topham, G. "The Powers and Duties of Pension Scheme Trustees" in Tolley's Pensions Law (1999) at E2.
15. The court more fully expressed this concept as follows: "It will not do to reject those stocks as unsafe which are in the management of directors whose well or ill directed measures may involve a total loss. Do what you will, the capital is at hazard. If the public funds are resorted to, what becomes of the capital when the credit of the government shall be so much impaired as it was at the close of the last war? Investments on mortgage of real estate are not always safe. Its value fluctuates more, perhaps, than the capital of insurance stock. Again, the title to real estate, after the most careful investigation, may... ultimately fail, and so the capital, which was originally supposed to be as firm as the earth itself, will be dissolved." *Harvard College v. Amory*, 26 Mass. 454 (1830).

16. Consider, for example, the law of New York state: In *King v. Talbot*, 40 N.Y. 76 (1869), New York courts limited permissible trust investments to government bonds and mortgages and declared investments in shares of stock imprudent. In 1889, the New York legislature limited trust investments to government bonds and mortgaged debt securities unless otherwise directed by the creator of the trust. This law remained in effect until 1950 when the list of permissible investments was expanded to permit investments up to 35% in corporate stocks and bonds.
17. Almost all state and local government pension systems in the United States, although not subject to the federal ERISA law, operate under the prudent person rule, having moved away from a quantitative limitations approach to regulation. Nonetheless, a minority of states (10 of 50 as of 1996), continue to use a combined approach to regulation by maintaining a “legal list” (*i.e.*, quantitative limits) in addition to the prudent person standard. This approach, however, is in decline. For instance in 1987, 26 states used this combined approach; by 1996 the number had declined to 10 states. Only three states continued to use the legal list approach alone. For those states using quantitative limitations the most common quantitative restrictions were on the percentage of investments in equities (averaging 53% maximum), real estate (averaging 26% maximum) and foreign investments (averaging 8% maximum). Additionally, a small number of these plans are sometimes subject to political pressures, resulting – albeit infrequently – in some very specific investment restrictions (*e.g.*, legislative encouragement of so-called “economically targeted investments”, restrictions on investing in tobacco stocks and so forth). Harris, J. “From Broad to Specific: The Evolution of Public Pension Investment Restrictions” Public Retirement Institute (July 1998); *see also*, Moore, C.L. “Protecting Retirees Money: Fiduciary Duties and Other Laws Applicable to State Retirement Systems,” 4th edition (August 2000).
18. The hornbook restatement of the US common law, which summarises the law generally applicable to non-pension trusts, did not embrace a broad portfolio-based approach to asset management until 1990. *See* Restatement Third of Trusts (US) revised in 1990 and Halbach, E. “Redefining The “Prudent Investor Rule’ For Trustees” in *Trusts and Estates*, December, 1990 at pp. 14-22.
19. *See, e.g.*, Johnson, S.P. “Trustee Investment: The Prudent Person Rule or Modern Portfolio Theory, You Make the Choice”, 44 *Syracuse Law Review* at pp. 1175-1195 (1993); Gordon, J.N., “The Puzzling Persistence of the Constrained Prudent Man Rule”, 62 *N.Y.U. L. Rev.* 52 (1987); and Longstreth, B. “Modern Investment Management Theory and the Prudent Man Rule” (1986).
20. *Re Whitely* (1886) 33 Ch D 347 as cited in Moore, N. “Trustees’ Duties in Relation to Money Purchase Pension Schemes” in *Tolley’s Trust Law International* Vol. 13, No. 1 (1999).
21. This summary is based on Lacey, S. and Topham, G. “The Powers and Duties of Pension Scheme Trustees” in *Tolley’s Pensions Law* (1999) at E2.
22. *See, e.g.*, *Nestle v. Westminster Bank* (1988); *see also*, *Tolley’s Pensions Law* (1999) at E2 and G1.
23. *See* 29 US Code of Federal Regulations (C.F.R.) Section 2509.94-2(2). ERISA Section 402(b) requires pension plans to have a procedure for establishing and carrying out a “funding policy” consistent with the objectives of the plan. It is unclear whether the statute requires the funding policy to be set forth in a written document, although it is generally strongly recommended that it be so formalised. The better interpretation of this provision is that it also implicitly requires the development of a statement of investment policy, although there has been no explicit interpretation by courts or the US regulator on this point.

24. ERISA Sections 402(c)(3) and 405(c).
25. *Donovan v. Bierwirth*, 716 F.2d 263 (2nd Cir. 1982), cert. denied, 459 US 1069 (1982).
26. ERISA Sections 406 and 407. It would be remiss to fail to acknowledge the recent debates in the US regarding the use of employer stock in 401(k) plans – most notably arising from the Enron scandal. Full analysis of the issue is beyond the scope of this paper. Historically, limitations on pension plan investment in employer stock have not applied to 401(k) plans, except in quite limited circumstances. See ERISA Section 407(b)(2). As a result, many employers fund their 401(k) plans by contributing company stock. They also frequently permit employees to voluntarily purchase additional shares with their own contributions (elective deferrals of salary) to the plan. Much attention has focused on the fact that the stock contributed by the employer often cannot be sold by the employee for a number of years. Less attention has been paid to the fact that many employees voluntarily purchase even more employer securities for their 401(k) account, rather than diversifying their own portfolios.
27. Arguably, employees in 401(k) plans are, in effect, acting as their own fiduciaries or investment managers and therefore should be similarly restricted from the temptation to “self-invest”, that is to invest in their employer’s shares, and similarly should be required to diversify their portfolios under an extension of the prudent person rule. The issue, however, is more complicated: For one thing, the prudent person rule interposes itself between two parties to resolve a problem of agency (see footnote 6) and is therefore arguably irrelevant to the 401(k) case. Second, there may be countervailing pension and labour policies to consider. For example, permitting contributions in the form of employer stock may be a necessary (or, at least, desirable) incentive to encourage employers to voluntarily offer and maintain pension plans, and providing employees with shares in the company may better align their interests with those of their employer.

Regardless of these issues, the prudent person rule itself, even in the absence of explicit prohibitions, may be applicable to Enron 401(k) plan fiduciaries that continued to accept Enron shares from the employer and continued to make them available for employee purchase. As discussed below, plan fiduciaries of member-directed plans, such as 401(k) plans, have particular legal obligations arising from the prudent person rule. These obligations may have been breached in this and similar cases now under consideration in the the United States.

28. US Code of Federal Regulations (C.F.R.) Section 2550.404a-1(b), first published in 1979.
29. US Code of Federal Regulations (C.F.R.) Section 2550.404a-1.
30. For instance, with respect to the use of derivatives, the US Department of Labor indicated that in determining the propriety of such an investment plan fiduciaries are required to engage in the same process and undertake the same type of analysis they would in making any other investment decision. This would include considering how the investment fit within the plan’s investment policy, what role the particular derivative plays in the plan’s portfolio, and the plan’s potential exposure to losses. The regulator also cautioned, however, that plan fiduciaries are responsible for securing sufficient information to understand the investment prior to making it. US DOL Information Letter, dated March 21, 1996.
31. The information in the following paragraphs is intended to offer some examples and is not intended to comprehensively include all OECD countries. This information generally draws upon material set forth in other OECD documents.

32. As noted above, the rule in the United States differs somewhat in its application to certain defined contribution plans. *See* footnote 26.
33. According to the Myners' Report overseas investors – particularly from the United States – provided over 70 per cent of the United Kingdom private equity industry's funding. Moreover, investment by overseas pension funds in the United Kingdom's private equity markets tripled during the same time period (1996-2000) that the level of annual investment by UK pension funds was falling. Myners' Report at p. 19.
34. Del Guercio, D. “The Distorting Effect of the Prudent-Man Laws on Institutional Equity Investments” in *Journal of Financial Economics* 40 (1996) at pp. 31-62. *See also*, Gompers, P.A. and Metrick A., “Institutional Investors and Equity Prices” NBER Working Paper 6723 (1998), which suggests that “large” institutional investors – asset managers with greater than \$100 million under discretionary control – prefer stocks that have greater market capitalizations because of fiduciary concerns, liquidity and transaction-cost motives, and historical return patterns for different types of stocks; and Johnson, S.B. and VanDerhei, J.L., “Fiduciary Decision Making and the Nature of Private Pension Fund Investment Behavior” 55(4) *Journal of Risk and Insurance* at pp. 692-700 (1988), hypothesising that the performance incentive of pension fund fiduciaries to maximise risk-adjusted return is curtailed by the fiduciary standard (in this case, as expressed in the US law).
35. Thomas A. and Tonks I. “Equity performance of segregated pension funds in the United Kingdom”, *Journal of Asset Management* v. 1, #4, at pp. 321-343 (2001). This study is limited to a review of the equity portion of the portfolios for funds reviewed. The authors estimate that about 57 per cent of assets in funds are in UK equities; the remaining portion of the portfolio is not analysed.
36. Longstreth, B. “Modern Investment Management and the Prudent Man Rule” (1986) at p. 6.
37. As one legal commentator observed: “[C]ontemporary economic theory dealing with investment is difficult for the lawyer to understand, and when understood is not always convincing.” Haskell, P.G., “The Prudent Person Rule For Trustee Investment and Modern Portfolio Theory” in 69 *North Carolina Law Review* at p. 87 (1990).
38. Under the 1925 Trustee Act, trustees had a fiduciary duty to protect the trust capital and to apply the capital and its income according to the trust deed; absent special provision in the trust deed, the act limited pension fund investments to British government or government-guaranteed securities and to the stocks of local authorities and certain railways and utilities. This was superseded by legislation in 1961 that considerably widened the scope of authorised investments to include company securities and unit trusts.
39. Marshall, J. “Pension Fund Investment and Safeguarding Fund Assets” in *Tolley's Pensions Law* (1999) at G1.15.
40. Benchmarking practices are of at least two kinds. First is the use of an appropriate market index or peer average that plan fiduciaries use as a baseline against which to measure the performance of the fund's investment managers. Second, the managers themselves may use a market index or benchmark around which to build a portfolio.
41. Longstreth, B. “Modern Investment Management and the Prudent Man Rule” at p. 36.
42. One recent study found evidence of significant persistence in the performance of fund managers over relatively short (one-year) time horizons. The study, however, did not account for the costs of investment management. Its author concluded that even assuming the statistical significance of the findings, it would be difficult for pension fund trustees to take advantage of them, because the findings suggest that investment

management mandates should be set up on a yearly basis. Changing managers at such frequent intervals, however, could impose substantial transaction costs, outweighing the benefits gained. Tonks, I. "Performance Persistence of Pension Fund Managers", February 2002.

43. See, e.g., Shah, A. and Fernandes, K. "The Relevance of Index Funds for Pension Investment in Equities" World Bank Policy Research Working Paper 2494, November 2000. See also, Avery, H. "Passive Management to take off in Europe" reported at [www.ipe-newsline.com](http://www.ipe-newsline.com) (September 10, 2002).
44. Worzala, E. and Bajtelsmit, V.L. "How Do Pension Fund Managers Really Make Asset Allocation Decisions?" *Benefits Quarterly*, 1999.
45. Hepp, S. "The investment behaviour of European Pension Funds: Implications for Europe's Capital Markets" in "The Future of Pensions in the European Community" ed. Mortensen, J. (1992).
46. Johnson, S.B. and VanDerhei, J.L., "Fiduciary Decision Making and the Nature of Private Pension Fund Investment Behavior" 55(4) *Journal of Risk and Insurance* at pp. 692-700 (1988).
47. The extent to which trustees and other fiduciaries have sufficient understanding of their legal obligations under the prudent person rule and the appropriate skills and training to carry out those obligations has received much attention recently. See, e.g., the Myrers' Report; see also various testimony before the US Department of Labor's ERISA Advisory Council, September 19, 2002 regarding the need for fiduciary education and training.
48. A useful overall guide to pension fund governance are the OECD's Guidelines for Pension Fund Governance, promulgated in 2002.
49. For the US Department of Labor's position on the use of derivatives, see footnote 29. Article 18(1)(d) of the EU Directive permits investment in derivative instruments "insofar as they contribute to a reduction of investment risks or facilitate efficient portfolio management" and are "valued on a prudent basis, taking into account the underlying asset". The Directive also requires the avoidance of "excessive risk exposure to a single counterparty and to other derivative operations".
50. One example of this type of robust reporting is found in the Netherlands. The Dutch supervisory authority requires pension funds to deliver information to the authority regarding such matters as diversification, solvency and buffers, risks, internal controls, and asset valuation.
51. See Ali, P. and Russell, T. "Investor Remedies against Fiduciaries in Rising and Falling Markets", 18 *Company and Securities Law Journal* at pp. 326-350 (2000) for a discussion in the broader context of fiduciary liability in managed funds, reviewing Australian, British and US law.
52. See OECD Working Party on Private Pensions paper.
53. Griffin, M.W. "A Global Perspective on Pension Fund Asset Allocation" in *Financial Analysts Journal* (March/April 1998). See also Gollier, J. "Private Pension Systems" in *Private Pension Systems and Policy Issues*, OECD Private Pension Series No. 1 (2000) (observing that the divergence in portfolio allocation among pension funds in Germany, Netherlands, Japan, US and UK may be attributable to differences in methods of valuing equities and bonds, especially where it is possible to value bonds at book rather than market value) and Hepp, S. "The Investment Behaviour of European Pension Funds: Implications for Europe's

Capital Markets” in “The Future of Pensions in the European Community” ed. Mortensen, J. (1992).

54. The economic literature has documented a strong investor preference for investing in domestic securities. Explanations focusing on barriers to international investment, such as government restrictions, foreign taxes, and high transaction costs may not fully explain the phenomenon. *See* Coval, J.D. and Moskowitz, T.J. “Home Bias at Home: Local Equity Preference in Domestic Portfolios”, 54 *The Journal of Finance* 2045 (1999).
55. Mitchell O.S. and Hsin, P.L. “Public Pension Governance and Performance” NBER Working Paper #4632 (1994).
56. *See* Jensen, B.A. and Sorenson, C. “Paying for Minimum Interest Rate Guarantees: Who Should Compensate Who?” in *European Financial Management*, Vol. 7, No. 2, 2001 at pp. 183-211.