Refining the choice architecture in the Swedish Premium Pension

Response to the consultation on *Ett bättre premiepensionssystem* SOU 2019:44

Nicholas Barr and Peter Diamond

London School of Economics and Massachusetts Institute of Technology

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The 2000 Swedish pension reform included small individual accounts, with many competing fund providers. A 2019 government report proposed (a) to add a choice mechanism between the default and the full fund marketplace and (b) to limit provider access through a procurement process. This paper responds to a call for comments on the report.

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Response to the consultation on *Ett bättre premiepensionssystem* SOU 2019:44 (henceforth Inquiry 2019)

Nicholas Barr[1] and Peter Diamond[2]

Summary

1. The Inquiry suggests a design with four elements (Figure 1):

- Element 1: A default;
- Element 2: The option of choosing different degrees of risk within AP7;
- Element 3: Choice from categories of funds;
- Element 4: A fund marketplace with procured funds.

2. OUR STARTING PLACE. Our analysis of that design and our recommended modifications are based on a twofold doubt, similar to the stance of the Inquiry:

- About the ability of many savers to make good choices in a fund marketplace, and the reluctance of many to try to do so – doubts that are shared by the Inquiry and amply documented by the findings of behavioural economics and experiences worldwide; and
- About the ability of even the best procurement process reliably to select a limited number of good funds and only good funds on a sustained basis, although procurement can improve overall outcomes.

3. Those doubts point to the benefit from giving savers a firm nudge (i.e. steer them) towards elements 1, 2 and 3 in the proposed choice architecture, as recognised by the Inquiry in the proposed 'Support and guidance' in Figure 1.

4. The 2000 reform encouraged workers to choose a portfolio from the marketplace, thereby discouraging simply accepting the default. Such encouragement is commonly referred to as a 'nudge.' We think that the 2000 nudge should be reversed, encouraging people to avoid those decisions that they are not likely to make well, while giving room for those who do want some degree of control. To accommodate a range of choices of varying degrees of complexity, we agree with the Inquiry's design with a default, a marketplace of AP7 offerings (including the default as a choice option), a marketplace of fund categories, and a wide marketplace. And we agree with the presence of 'Support and guidance' pointing to the difficulty of good decision making and the need for increased sophistication for each step further away from the default.

5. In terms of details, we suggest expanding the options offered by AP7 in element 2 and the use of index funds in the marketplace of categories. Moreover, we think the Pensions Agency should have the flexibility to consider allowing workers to combine the AP7 offerings with some offerings elsewhere, rather than being unable to use the AP7 offerings if they invest in one or both of the other two marketplaces.

6. We think that this four-part design, together with the nudges just outlined, achieves the objective of the Inquiry to benefit the three types of covered workers it identifies – those making

[1] Professor of Public Economics, European Institute, London School of Economics; N.Barr@lse.ac.uk

[2] Institute Professor Emeritus, Massachusetts Institute of Technology and Nobel Laureate; pdiamond@mit.edu

no decisions, those taking a limited role in designing their investing, and those making detailed decisions about their investments. Moreover, the analysis of the Inquiry, based on evidence on behaviour by investors and suppliers in Sweden, aligns strongly with wider international experience.

7. AREAS OF STRATEGIC AGREEMENT. Section 1 sets out our strategic agreements with the Inquiry's proposed direction of change, specifically that:

- The purpose of the Premium Pension is to generate retirement income;
- The model of choice and competition does not work well;
- The Premium Pension should accommodate multiple types of covered workers -- those making no decisions, those taking a limited role in designing their investing, and those making detailed decisions;
- Procuring funds should help the quality of investment by those choosing categories and those investing in the wide marketplace; and
- Introducing an element of flexibility into the design and management of the Premium Pension is desirable.

8. ANALYSIS AND PROPOSED MODIFICATIONS TO THE INQUIRY'S RECOMMENDATIONS. Section 2 shows a version of the same basic proposed design (Figure 2) along with reasons for supporting some minor modifications of the Inquiry's proposals.

- In element 2, we suggest extending AP7's offerings to increase available choices of risk level as outlined below.
- The Inquiry mentions index funds as a possible basis for the use of categories of different sorts of underlying assets, e.g. equities or fixed income, the idea being to give workers the option of choosing a type of fund without choosing a fund manager. That implies having only one fund per category. That is realistic for index funds and we suggest that element 3 should comprise a procured market of index funds.
- Element 4: We agree with the Inquiry's proposal to procure funds for the marketplace, the approach to procurement widely used in private sector defined-contribution plans (e.g. managers of occupational defined-contribution plans in Sweden, and elsewhere). We propose that categories (with multiple funds per category) be used to encourage wide diversification. But, we explain our reservations about the ability of the managers of the Premium Pension to choose best funds in each category. More generally, we sound a cautionary note that such an approach has a better record of weeding out some badly-designed funds than of selecting consistently high-performing funds. Central to the difficulty of trying to ensure good quality of funds is that quality assurance is an ongoing dynamic problem – spotting funds expected to do less well than possible alternatives and spotting better funds are both difficult and the quality of a fund can change over time. Thus we regard the attempt to select a limited number of only good funds as over-optimistic.

9. We agree with the Inquiry´s conclusion that, in the context of pensions, the model of choice and competition does not work well generally. Thus organising pension saving is a widespread problem internationally. We believe that enhancing the regulatory role of government in organizing the Premium Pension is an important step in the right direction, limiting some of the bad outcomes that follow from turning individual savers loose in the private market.

10. Our point in sounding a cautionary note about enhanced regulation is not that exercising such oversight is of no use, but that the design of the pension system as a whole should avoid

placing on such oversight more than it is realistic to expect it to deliver – a point that holds with particular force in a mandatory social insurance programme. Thus, to avoid the risk of over-reach, we suggest design and presentation of the system that starts from a presumption that good procurement in the fund marketplace will improve the system for savers, but that no system can be foolproof. That presumption may help to create realistic expectations and simultaneously encourage the development of ways in which procurement can be strengthened and refined.

11. Discussion in section 2.5 brings out an aspect of the Inquiry's choice architecture that we argue is unduly restrictive. In the Inquiry's design, initially a worker can choose one and only one of elements 2, 3 and 4. The Inquiry gives the pensions agency flexibility to allow combinations from 3 and 4, but does not give similar flexibility for combinations that include the AP7 offerings and those in element 2. We propose the same flexibility for the Agency in considering different combinations of all three elements, explaining why it may be good for workers to be allowed to choose funds from multiple elements, and urge review by the agency managing the Premium Pension based on research about possible outcomes.

12. We have not explored the data on the experience of how workers combine different funds in existing plans. We think the Pensions Agency should engage in extended research, including experiments, about the implications of allowing different combinations. In the absence of such research, we suggest that there may well be advantages from allowing a combination of elements 2 and 3 and a combination of 3 and 4, but perhaps not both.

13. IN SUM. Section 3 outlines our proposed design (Figure 2), which is based on that proposed by the Inquiry.

- *Element 1: The default*, as currently.
- *Element 2: Different choices from AP7*. In addition to offering different risk levels across the three balanced funds, as exists currently and is supported by the Inquiry, we suggest that a worker should also have access to the two underlying AP7 funds, and the option to specify a target date different from the earliest pension age, thereby adjusting the pattern of risk as he/she ages.
- *Element 3: Index funds*. We recommend that this element is made up of index funds, together with a lifecycle combination of different index funds, and the option, within that lifecycle design, to choose a target date different from earliest pension age.
- *Element 4: The fund marketplace*. This element should comprise a wide variety of different types of fund, organised by category (e.g. US equities, European equities, government bonds, corporate bonds, etc.). A saver should be allowed to choose as many funds as he/she wishes, including actively managed funds and index funds, with encouragement to diversify across fund types.
- *Combining elements*. A worker who wants to make no decisions is in the default. A worker who wants to make a limited decision about risk can choose between (a) different levels of risk within AP7, including a different target date for the lifecycle option in element 2, and/or (b) different mixes of types of funds in element 3. A worker who wants to make more detailed choices has the option to choose one or more of the wide variety of funds in element 4, and may choose to combine those choices with funds from element 3.

1. This submission, drawing on our earlier writing, is a response to the consultation on proposed reforms of accumulation in the Premium Pension. We strongly support what the Inquiry is trying to do.

2. In books (Barr and Diamond 2008, 2010), reports (Barr 2013*a*, Diamond 2009), newspaper articles (Barr 2013*b*, Barr, Diamond and Lundbergh 2018) and seminars (Barr 2017), we have argued that the pension system in Sweden is broadly in good shape, but would benefit from some adjustments, including altering the role of choice in the Premium Pension. The need for this adjustment is rooted in the shortcomings arising from the assumption of rational individual behaviour that underpins the 2000 design, which assumed that with suitable public information many workers would be able to make good choices of pension funds, and would do so. However, the findings of behavioural economics, supported by widespread international evidence point to a different conclusion.

3. Section 1 sets out our agreement with the Inquiry's direction of change. Section 2 suggests some modifications to the Inquiry's proposals and explains our reasons. Section 3 outlines the resulting design. Section 4 concludes.

1 Agreement with the Inquiry's proposed direction of change

4. AGREEMENT 1: THE PURPOSE OF THE PREMIUM PENSION IS TO GENERATE RETIREMENT INCOME.

> 'the premium pension is a form of social insurance for which the state must have a clearer responsibility' (Inquiry, p. 52).
>
> 'The interests of savers and pensioners must always come first' (p. 811).
>
> 'While other interests can be taken into account, this can only be done to the extent that doing so is not to the disadvantage of savers and pensioners. This means, for instance, that the premium pension system should not be designed to promote growth in the Swedish economy or to serve other economic policy objectives. Nor should it have the purpose of being a distribution or marketing channel for fund managers, acting as a product development platform for the fund market or serving as a channel for newly started or foreign fund managers wishing to establish a presence in the Swedish fund market' (p. 811).

5. AGREEMENT 2: THE MODEL OF CHOICE AND COMPETITION DOES NOT WORK WELL.

> 'The experience of the premium pension system in recent decades shows that savers seldom behave according to the ideal model for rational consumers. This means that the principle that well-functioning competition leads to price pressure and product development cannot simply form a starting point for the design of the premium pension system' (p. 811).
>
> 'Behavioural economics research shows that economic theories about individuals making rational choices in well-functioning markets do not stand up in practice in many industries. This applies to pension saving in particular since it involves complicated products and very long-time horizons for the individual. The demands made on the ability of individuals to compile an efficient and well-diversified investment portfolio also exceed most individuals' knowledge for *and interest* in this matter' (Inquiry, p. 846, emphasis added).

6. Behavioural economics has come a long way since the original design of the Premium Pension. Appendix 1 sets out some of the findings of widespread reluctance and difficulties people have in trying to invest well and Appendix 2 outlines some international experience of what we regard as better choice environments. The evidence points to two sets of implications:

- As financial choices are made in a complex environment, the usefulness of individual choice should not be overstated; choices are often avoided and often poorly made. Financial education and delegated choice are no more than partial solutions.
- Reliance on competition in the market for individual funds does not assure good quality outcomes.

7. The conclusion is that the model of choice and competition does not work well generally and, as a result, organising pension saving is a widespread problem internationally. Enhancing the regulatory role of government in organizing the Premium Pension is a large step in the right direction, limiting some of the bad outcomes that follow from turning individual savers loose in the private market.

8. AGREEMENT 3: THE PREMIUM PENSION SHOULD ACCOMMODATE MULTIPLE TYPES OF COVERED WORKERS. The Inquiry recognizes three types of covered workers in terms of their preferred roles in investment decision making – those making no decisions, those taking a limited role in designing their investing, and those making detailed decisions about their investments. We agree with paying concrete attention to all three types, and agree that the choice architecture in the Premium Pension should be redesigned to offer more choices located between the default and the fund marketplace and to provide more guidance to savers. Support and guidance has two goals – to direct workers to the appropriate elements and to encourage good choices from the available funds.

9. AGREEMENT 4: PROCURING FUNDS SHOULD HELP THE QUALITY OF INVESTMENT BY THOSE CHOOSING IN THE WIDE MARKETPLACE.

> 'The Inquiry is aware that always being able to select the best funds is an idealised picture, but a procurement professional is normally in a better position to examine and compare funds than most pension savers. But simply weeding out the funds that have the poorest prospects of offering a good saving product increases the possibility that the fund marketplace will contribute to achieving the objective of the premium pension system.' (p. 59).

10. Evidence shows that procurement is far from perfect in distinguishing between better and less good investment managers, but even limited success in removing funds unlikely to be above average is a helpful step.

11. AGREEMENT 5: INTRODUCING AN ELEMENT OF FLEXIBILITY. The Inquiry supports the role of the Pensions Group in continuing to protect the overall structure of the pension system but, within that framework, argues for some flexibility in design specifics.

> 'The various fund categories should be based on generally accepted categories in the light of the best industry standards at any particular time. The Inquiry considers that it ought to be the new agency, not the legislator, that sets these restrictions on the basis of the financial knowledge available at any particular time so as to provide sufficient flexibility. The various fund categories should therefore not be regulated by law' (pp. 824-5).

‘The number of categories and the number of funds in each category vary depending on factors including the demand from pension savers and the possibility of achieving the objective of the pension system and maintaining the principle of freedom of choice.’ (p. 65).[3]

2 Suggested modification of the Inquiry’s proposals

2.1 The Inquiry’s proposal and suggested amendments

12. The Inquiry summarises the proposed design in Figure 1.

‘The proposed choice architecture … consists of four parts …, presented to the saver in an online interface in the following order:

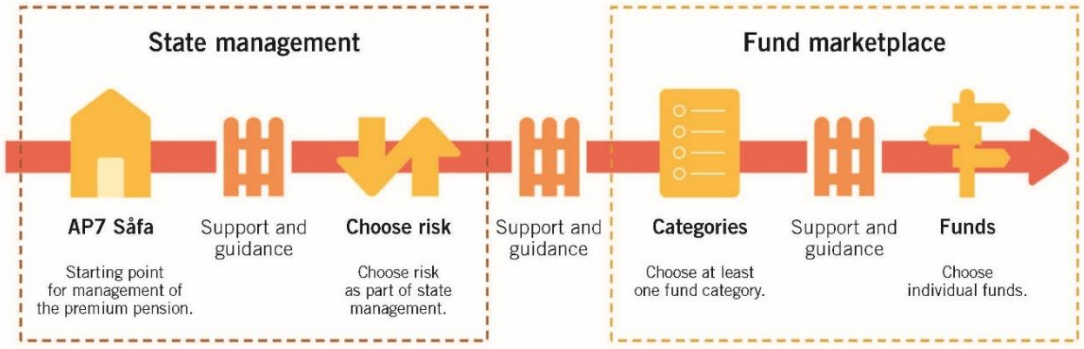
1. a default option,

2. a possibility of choosing risk as part of the default option, i.e. as part of state management,

3. a possibility of choosing category and

4. a fund marketplace containing procured funds’ (p. 848)

Figure 1: The Inquiry’s proposed choice architecture for the Premium Pension



13. Our proposed minor modification, shown in Figure 2, depicts the structure differently, while broadly following the Inquiry’s approach:

- Element 1: a default option.
- Element 2: alongside the option suggested by the Inquiry to choose risk as part of the default option should be an additional option of choosing a target date[4] different from that in the default.

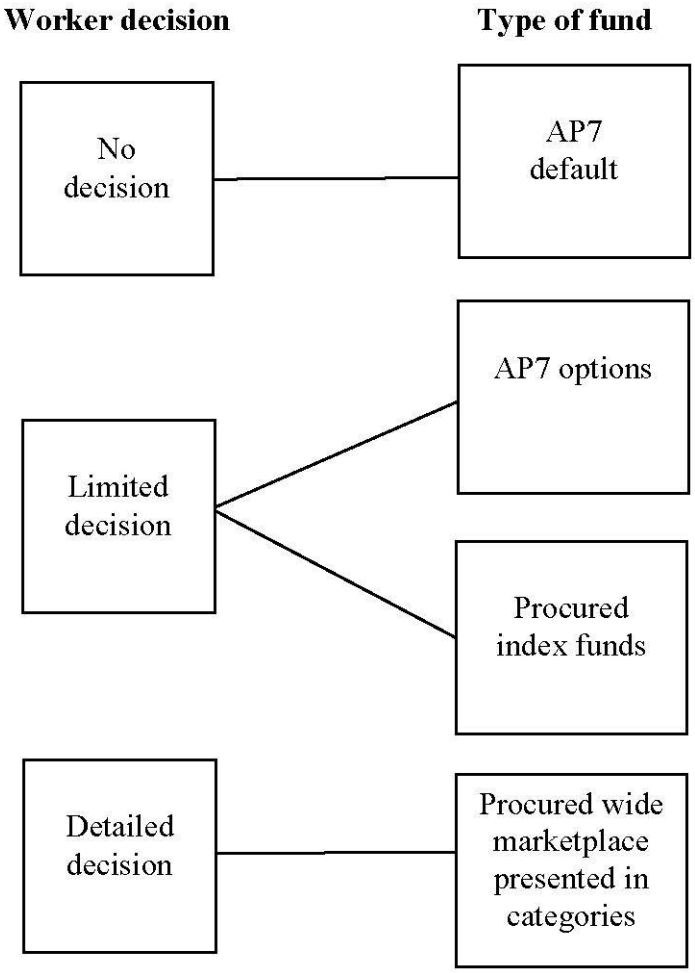
[3] The Inquiry notes:

‘A special payment product needs to be investigated. The Inquiry proposes that in order to achieve the objective of a premium pension with low volatility during the payment period, a separate investigation should be made of whether to supplement the premium pension system with a special product aimed at the payment phase. As part of such an investigation, proposals should be developed to handle the transition between the saving and the payment phase’ (p. 58). We endorse the potential value of such an investigation and note that good accumulation design depends on the design of the payment period, enhancing the value of flexibility.

[4] A target date fund, also known as a lifecycle, dynamic-risk or age-based fund or a retirement date fund, automatically adjusts the share of each type of asset in a portfolio to lower risk as the desired retirement date approaches.

- Element 3: a set of index funds, including a lifecycle combination of different index funds.
- Element 4: a fund marketplace, with cautionary notes about the ability of procurement reliably to restrict choice to good funds (as opposed to weeding out some bad ones).

Figure 2: Outline of our proposed choice architecture for the Premium Pension



14. The rest of this section explains the background to our view of the Inquiry's recommendations and our suggested amendments, which we set out succinctly in section 3.

2.2 Choice of risk level as part of the state managed offerings

15. AP7 has:

- A managed equities fund that includes private equity, factor investment and some leverage, and which takes an active ownership approach to corporate governance and sustainability; and
- A Swedish fixed income fund.

Under current arrangements it offers the following combinations of these two funds:

- Balanced, adjusting as asset prices change to keep to 50% equity, 50% fixed income;
- Aggressive: as above, but with a ratio of 75:25 equity/fixed income;
- Cautious: as above, with ratio 25:75;

- Lifecycle: a changing balance towards fixed income as the worker approaches pension age.

16. The Inquiry proposes that in addition to providing the default for those making no choice, AP7 should continue to allow a limited set of choices drawing on the two funds that it maintains for use in the default:

> 'It should be possible to choose a risk level as part of state management without having to enter the fund marketplace' (p. 65).

17. In addition to offering different risk levels in the three balanced funds as at present, we suggest two further options:

- Allowing savers access to the two underlying funds, specifically the option to be 100% in the AP7 equity fund or 100% in the fixed income fund; and
- Allowing different risk levels in the target-date fund. This can be done by allowing a worker to choose a target date for the proposed start of benefits different from that used for the default lifecycle weighting of the two funds.

Both the Inquiry's recommendation and our proposed expansion are part of accommodating some degree of engagement in making choices. As individual circumstances vary the single (age-related) default may readily be viewed by some as too risky or not risky enough given individual and family circumstances.

2.3 Choices of categories

18. The third step is a choice of category or categories.

> 'If the saver does not only want to choose risk level, there should be a possibility, in the first place, of choosing one or more fund categories that the saver can invest their assets in (p. 65).
>
> 'the categories are the step in the proposed choice architecture that does not exist in the present premium pension system. Category choice means that the saver decides which category or categories of funds they want to invest their assets in, but not which individual funds. The categories could be designed through procured index funds, for example' (p. 848).
>
> 'This third step satisfies wishes among savers who want to choose not only their risk level but also their investment approach. However, in this step the saver does not need to make a choice of fund manager' (p. 849).

19. As the quote from p. 848 makes clear, the Inquiry uses the term categories to refer to a design in which the saver chooses the type of investment but not the fund manager. Given the limitations of procurement and individual choice, we favour using categories twice, once in an index-fund marketplace in element 3 and again in the wide marketplace in element 4. As noted in para. 11, above, the Inquiry suggests that the details of the use of categories should be an element of flexibility for the future. We agree with the value of flexibility for both uses of categories.

20. We recognize the potential of presentation in terms of categories to assist better individual asset choice. Both because of the desirability of offering index funds and because of concerns about the feasibility of other options, we suggest a clearly-labelled separate

market for index funds as the third element, as in Figure 2, and including the wider use categories as part of the presentation of available funds for those choosing managers in the fourth option. We discuss below our reservations about the ability of the managers of the Premium Pension to choose a limited set of good funds and only good funds.

2.4 A procured fund marketplace

21. The Inquiry proposes that

> '… the funds in the fund marketplace should be procured and also be audited to a greater extent than they are at present. The selection entailed by procurement creates a possibility – that does not exist at present – to weed out funds that are judged to have a lower likelihood than others of generating good returns …' (pp. 57-58).

22. The Inquiry rightly identifies that the presumption underlying the 2000 design – that with sufficient information savers can do a good job – is not borne out by the evidence. Its proposed solution, beyond trying to limit fraud and abuse, is to regulate quality.

23. Thus, the Inquiry's proposal is to introduce into the fund marketplace the approach to procurement widely used in private sector defined-contribution plans (e.g. managers of occupational defined-contribution plans in Sweden, and elsewhere). This is clearly the right direction of travel, but with a cautionary note that such an approach has a better record of weeding out some badly-designed funds than of selecting consistently high-performing funds. Thus, for example, the UK Financial Conduct Authority sees its primary role as guarding against bad practice. Central to the difficulty of trying to ensure good quality of funds is that quality assurance is an ongoing dynamic problem – spotting funds expected to do less well than possible alternatives and spotting better funds are both difficult, and managed funds may evolve, for better or worse, as management or strategic plan changes.

24. While some success in quality selection can be expected, we have a concern that members of the public who consider making choices from the marketplace will need to be clearly alerted to the likelihood that not all funds in the marketplace will be good ones, and that the 'good' ones are not equally good. Not over-encouraging workers to make detailed decisions relative to their financial understanding is particularly relevant in a mandatory social insurance plan. Social insurance should be designed to ensure delivery on its implicit promises.

25. Emphasising the previous point, survey evidence suggests that individuals view the choice of funds as a one-off event like buying a car, whereas in practice it is a continuing process of reviewing and evaluating over the whole of working life. The same point applies to procurement.

26. A potential issue is the difference between procurement rules for managers in private and public plans.

> 'This means that the fundamental principles of procurement (the principles of non-discrimination, equal treatment, transparency, proportionality and mutual recognition) are applicable even though the procurement falls outside the scope of the EU's procurement directives. The regulatory framework for the procurement of funds for the fund marketplace should therefore be based on these principles.' (p. 74)

and

> ‘The Inquiry proposes that the procurement to be used in the selection should be reviewable by an administrative court. This will provide a check that the selection is performed within discretion.’ (p. 69)

If this requires the plan to have clear evidence that one fund included in the market is better than another that is excluded, that may make it impossible to restrict the number of funds to a level that does not complicate individual choice and incur excessive costs of monitoring.

27. EVIDENCE ON ASSESSING FUND QUALITY. While we have not explored in depth the literature on the degree of success in procurement for pension plans, we note that there is discussion of the difficulty of picking good funds generally and of the success of procurement. The following analyses are noteworthy.

- Net of fees, overall managed funds do not exceed their index. But this finding reflects differences in firm strategies, as shown in Del Guercio and Reuter, 2014, which indicates a role for procurement, but also indicates the sensitivity to firm strategy, which can change.

  > ‘To rationalize the well-known underperformance of the average actively managed mutual fund, we exploit the fact that retail funds in different market segments compete for different types of investors. Within the segment of funds marketed directly to retail investors, we show that flows chase risk-adjusted returns, and that funds respond by investing more in active management. Importantly, within this direct-sold segment, we find no evidence that actively managed funds underperform index funds. In contrast, we show that actively managed funds sold through brokers face a weaker incentive to generate alpha and significantly underperform index funds.' (Del Guercio and Reuter 2014, p. 1673)

- In the USA, Elton et al. (2013, p. 1) study attempts by employers to improve the performance of their 401(k) plans by adding and removing funds, and find that the difference in performance between added and dropped funds is not statistically significant. They also find that

  > ‘employers select mutual funds that perform better than comparable, randomly selected, funds but worse than passive index funds….’

- As another class of funds doing procurement, we note that in their study of the degree of success in university endowments in the USA, Barber and Wang 2013 (see also Lerner, Schoar and Wang 2008) report that:

  > ‘The authors analyzed the returns earned by U.S. educational endowments using style attribution models. For the average endowment, models with only public stock and bond benchmarks explain virtually all the time series variation in returns, yield no alpha, and generate sensible factor loadings. Elite institutions perform better than public stock and bond benchmarks because of large allocations to alternative investments. The authors found no evidence that manager selection, market timing, and tactical asset allocation generate alpha.’

- Australia: consistent with the Inquiry’s view on the limits of reliance on individual choice and competition, the Australia Productivity Commission found widespread poor-quality funds in mandatory superannuation. The Commission proposed providing a list of ‘best-in-show’ funds to encourage movement to better funds (see Recommendations 2 and 3 in Australian Government Productivity Commission 2018,

pp. 65-66). The long-run effects that might follow from taking this approach are under question, and it remains an untried solution. We agree with the sceptics.

- As endlessly repeated, 'Past success does not guarantee future performance.' A presentation in terms of quality assurance seems to reject the need for such a disclaimer.

28. Our point is not that exercising such oversight is of no use, but that the design of the pension system as a whole should avoid placing on such oversight more than it is realistic to expect it to deliver – a point that holds with particular force in a mandatory social insurance programme.

29. While not in any way seeking to discourage the Inquiry's approach, it is worth noting potential political tensions so that they can be anticipated in the way the reforms are designed and presented.

- If the government claims to select good funds, the political dynamic may push to compensate when some funds do badly.
- As with the default fund, when the manager in a defined-benefit plan, or a defined-contribution plan with limited choice like NEST or the US Thrift Savings Plan, changes part of the fund from one provider to another, plan members, though affected by any change in return, generally do not notice the change in provider, except for the tiny minority who read the plan's annual reports. In contrast, if a Premium Pension fund is removed from the platform, the people who have chosen that fund are reallocated to another fund and/or encouraged to rethink. The two processes are different in political terms, so thought is needed about the ex ante explanation of the process of adding and dropping funds, to avoid the impression that removal of a fund is evidence of failure of the system, calling for reform.
- Though the situations are not directly comparable, possible public concern about the investment quality delivered by the Premium Pension is suggested by a growing wave of lawsuits against fund managers in the USA.[5]

30. IN SUM. The proposed direction of change in the structure and management of the fund marketplace is highly desirable. To avoid the risk of over-reach, however, we suggest design and presentation of the system that starts from a presumption that good procurement in the fund marketplace will improve the system for savers, but that no system can be foolproof. That presumption may help to create realistic expectations and simultaneously encourage the development of ways in which procurement can be strengthened and refined.

2.5 Combinations of the different elements

31. Alongside the design of the four elements in Figures 1 and 2 is the separate but related question of the extent, if at all, to which a worker should be allowed to hold his/her pension savings in more than one element.

[5] For example, the latest ERISA trend involves lawsuits against universities alleging excessive fees were paid out of their sponsored retirement plans.'
https://www.americanbar.org/groups/real_property_trust_estate/publications/ereport/rpte-ereport-winter-2019/erisa--thou-shall-not-pay-excessive-fees-/

32. The Inquiry proposes that it should not be possible to combine element 2 (the AP7 options) with elements 3 and 4.

> 'Neither the default option nor the choice of risk level should be combinable with investment in funds in the fund marketplace of the premium pension' (p. 854)

Support for this position is stated as:

> 'As stated above, the purpose of the design of the choice architecture is to help savers to be positioned in the step that is most suitable for them. The savers who do not have the knowledge and interest to choose funds in the fund marketplace should not need to or be encouraged to so either. So it appears contradictory that savers in the default option should be able to choose funds in the fund marketplace. The Pension Agreement states that the choice of level of risk should be made as part of the default option; according to the Inquiry's discussion above, this should be interpreted as being as part of state management. It is therefore reasonable for the choice of level of risk to be covered by the same principle.' (p. 855)

For elements 3 and 4 the proposal is to leave decisions to the new agency:

> 'Whether the categories and the procured funds in the fund marketplace should be combinable with one another depends on the design of the categories and will be a matter for the new agency. When making decisions on this matter, the agency ought to take account of the possibility of achieving the objective of the premium pension system and of the right to freedom of choice' (p. 854).

33. Thus, in the terminology of Figure 2:

- No decision: the worker goes into the default fund;
- Limited decision: the worker should choose *either* one or more AP7 options from element 2 *or* one or more funds from element 3 or from the funds in both elements 2 and 3, if part of the Agency's design;
- Detailed decision: the worker should choose one or more funds from element 4 or from the funds in both elements 3 and 4, if part of the Agency's design.

In sum, whether a worker will be in one and only one element should be based on research and analysis.

34. ISSUES TO CONSIDER WHEN DECIDING ON ALLOWABLE COMBINATIONS. In considering flexible combinations of the different elements, three sets of issues arise:

- Allowing flexible combinations increases the possibilities of better portfolios. Depending on which combinations are allowed, this might benefit those making limited decisions (those not considering quality of management other than that of AP7) and/or those making detailed decisions.
- Considering diverse individual reactions, will allowing particular flexible combinations lead more savers to make decisions poorly because they consider wider combinations?
- Reflecting both aspects of flexible combinations, will allowing one or both of these combinations lead to a better overall outcome, given the range of the quality of decision making, the quality of fund offerings and the success of nudges shown by the 'Support and guidance' at three places in Figure 1?

Consideration of these questions brings out a tension:

- Restricting choice rules out combinations that a saver might sensibly want;
- But allowing savers more choice opens up the possibility that that choice will not be exercised well.

Thus the design issue is to try to avoid blocking savers from good options while seeking to discourage them from doing things they should not do. This issue is relevant for the agency design of whether or not to allow combination across elements 3 and 4 and for banning element 2 plans from all combinations.

35. We regard the inability of the Agency to allow combination of AP7 funds with other funds as unduly restrictive. For the reasons set out below, we argue that just as the Agency should have the power to decide on whether to allow combination of funds in both elements 3 and 4, it should have the power also to decide whether to allow combinations involving element 2. Thus we identify four different structures beyond the default option that the Agency should consider:

(a) No combinations are allowed;

(b) AP7 funds can be combined with index funds, but not with the wide marketplace;

(c) Index funds can be combined with the wide marketplace, but AP7 funds can not be used in combination; and

(d) Both (b) and (c) are options, but not all three at once.

We presume that there is no reason to consider the option of combining funds from the AP7 marketplace with wide marketplace funds, but not with index funds. There may or may not be good reasons for allowing use of the funds in all three elements, but, we think that allowing simultaneous combination in terms of all three marketplaces would be a nudge in the wrong direction. However, allowing AP7 funds to be listed within the wide marketplace does not have the same nudge effect, and may well prove to be worthwhile.

36. *Choices involving combinations of elements 2 and 3*. Ideally, savers wishing to make only limited decisions would choose 2 and/or 3, depending on the combinatorial rules. Insofar as these savers are doing a good job of limited decision making, allowing the combination of 2 and 3 enhances their abilities to have a good portfolio speaks to both 'the objective of the premium pension system and of the right to freedom of choice.' Similarly, those making good detailed decisions might find the combination of 2 and 3 better than what is available in 4; if not, they would stay in 4. There are two potential downsides in allowing this option – that some savers going into the combination should stay in the default, and would stay in the default if combination were not available. Of course it is also possible that the actual choices will not be better even though there is the opportunity to be better. While it seems plausible to us that this combination is worthwhile, the Agency should engage in initial and ongoing research on actual choices to rely on more than mere plausibility. Note that future research is likely to be more informative if combination were allowed initially than if not. In sum, with this combination, enhancing the potential quality of portfolios seems more important than whatever downside comes from having more people taking on more choice than they can handle, when the choices are narrowed to just elements 2 and 3.

37. *Choices involving combinations of elements 3 and 4*. The ability to combine elements 3 and 4 would enhance the potential quality of portfolios of those doing a good job of detailed decisionmaking. A concern is that those who are described as having ability only for

limited decisionmaking might do worse by expanding their target from 3 to both 3 and 4; although they might do better using both 3 and 4 if they would have chosen element 4 rather than 3 if combination were not allowed. Presumably there would not be a significant impact on those staying with AP7 offerings in element 2 if its combination is not involved.

38. To add some flesh to these considerations, the rest of this section discusses (a) examples of how flexible combinations can allow better portfolios and (b) brief discussion of the decision processes that underlie some of the exercise of choice.

39. BETTER PORTFOLIOS. The logic behind allowing combinations is to give workers the ability to conform with conventional financial advice. To illustrate:

- A worker might think that the AP7 equity fund, albeit excellent, underweights some types of assets relative to his/her views about risk-taking and/or his/her overall economic position. Such a worker might want to combine the AP7 equity fund or an AP7 target-date fund with an index fund covering the assets to which the worker would like more exposure.
- As the AP7 fixed-income fund is only in Swedish bonds, presumably Krona-denominated bonds, a Swede planning to retire to somewhere warmer in Southern Europe might want to combine the AP7 equity fund with, for example, a Euro bond index fund. The same might be true for an EU citizen with a long career in Sweden who plans to return home after retiring.
- Conversely, the available high-quality index funds do not include some of the types of assets in which AP7 invests. Moreover, it might be viewed as attractive to combine index funds which do not adjust holdings based on ongoing market expectations with a managed fund which does adjust to some degree, and which uses far more expertise than a single investor is likely to have, while avoiding the fees associated with seeking detailed financial investment advice.

40. Alongside these economic arguments is the political consideration that under current arrangements a worker can combine AP7 offerings with the fund marketplace – removing that option risks being questionable in political as well as economic terms.

41. THE QUALITY OF CHOICE. The quality of decision making will vary across workers, and we agree with the Inquiry's view that most workers are not well-equipped for detailed decisionmaking in this regard. The purpose of nudges is as far as possible to improve choices – thus the nudges built into the 'Support and guidance' elements in Figure 1 are of central importance, as are possible changes in the design of those nudges as the Agency monitors outcomes.

42. The literature on behavioural finance offers insights into the design of nudges. We illustrate with two: framing and rules of thumb. The decisions a saver makes will be influenced by framing, i.e. by the way that choices are presented, i.e. that different presentations create different nudges. Since choices have to be presented in one way or another, there is no such thing as a strictly neutral presentation.

43. A second set of findings is that decisions are often made on the basis of rules of thumb. As one example, documented by Benartzi and Thaler (2001), a significant fraction of investors spread their investment across procured presentations according to a 1/N rule, dividing the balance evenly across available funds. The ability to use two marketplaces at

once might induce some workers to divide their overall balance evenly between two available marketplaces, for example elements 2 and 3. While an allocation following the rational investment model might gain from some use of index funds, putting half of the balance in index funds might be too much, and possibly not really preferable to using only AP7 offerings. More generally, a gain from dividing the overall balance in appropriate proportions between 2 and 3 (or between 3 and 4), might not be a gain for an investor following a 1/N rule or some other inadequately evaluated rule of thumb. Insofar as the support and guidance dissuades investors with poor rules of thumb from combining marketplaces, this is less of a concern. Insofar as some investors gain and some do not, there is a standard problem in policy design.

44. While neither of us has done research on the issue of how workers behave in defined contribution plans, we note that there is considerable evidence which should help in balancing the needs of savers who have different degrees of attention to detail.

45. For example, Vanguard offers data based on the 5 million participants in the defined-contribution plans (401(k) plans) for which it does recordkeeping. The report highlights the large impact that has followed the spread of target-date and target-risk funds. Vanguard notes that 60 percent of participants hold a single fund, while 18 percent hold 5 or more funds (Vanguard, 2019, Figure 69, p. 67).

46. Among the findings is the calculation that of participants holding target date funds (as a default or a choice), 69% hold only a single target-date fund, while 31 percent hold other funds as well (Vanguard, 2019, Figure 82, p. 77). This is suggestive that allowing a combination of the AP7 target date fund with index funds in element 3 might be valuable.

47. The more successful is support and guidance in getting workers to respond to their own limitations in abilities or degree of attention, the more the gainers will tend to exceed the losers from allowing combination.

48. IN SUM. Flexible combinations open up the possibility of better portfolios but also the possibility of bad choices. In addressing this tension, our bottom line is twofold:

- We regard it as unduly restrictive to rule out by law the ability to combine AP7 funds with funds from the other elements.
- Details should be a matter for more detailed consideration under an arrangement that allows the agency managing the Premium Pension some flexibility to adjust design in the light of research and experience.

49. Flexibility has two sets of potential advantages.

- It allows better portfolios, illustrated by the examples above.
- It makes it possible to study and learn from the choices of people who diversify and compare outcomes with the experiences of those who do not. Of course this is not a randomized experiment, but could be a basis for examining some of the concerns we raise above. If diversification is not allowed, one can study the choices of those going to the wider market elements, but it would be hard to tell the extent to which those in AP7 would have done otherwise.

50. The fact that the quality of outcomes will depend on the diversity of behaviours by savers and on the effectiveness of nudges, adds further weight to the importance of allowing the agency managing the Premium Pension some flexibility. The agenda for the Agency should include work on design ex ante, for example financing some experiments in advance of deciding on the initial design details, and ex post adjustment in light of the choices that savers make, and the view of the Agency about the quality of those choices.

3 Proposed design

51. The considerations in the previous section suggest a design basically following that proposed by the Inquiry, shown by Figure 1, but with some modifications.

3.1 Element 1: The default

52. For a worker who makes no choice, the default should be a target-date fund, the target being earliest pension age.[6]

3.2 Element 2: Offerings from AP7

53. The AP7 Fixed Income and Equity Funds are designed as building blocks of the government's premium pension offerings. They are used in AP7 Såfa's target-date default and in three currently available balanced funds (AP7 Balanced, Aggressive, and Cautious).

54. In addition to offering different risk levels across the three balanced funds, it would be useful to add two further options:

- Allowing a saver to choose to be 100% in the equity fund or 100% in the fixed income fund. Though life-cycle adjustment is desirable in many circumstances it does not suit everyone; for example, someone with a good occupational pension might prefer to remain 100% in the equity fund.
- Allowing a saver to choose different risk levels offered in the target-date fund by allowing a worker to specify a target date different from the worker's anticipated earliest pension age. This would alter the extent of risk coming from the mix of the fixed income and equity funds. A worker might specify a later target date because of an intention to start benefits at a later age, or because he/she has a higher risk appetite than the default; an earlier date could be chosen based on a low risk appetite, thus starting to reduce risk earlier.

3.3 Element 3: Procured index funds

55. As discussed in section 2.3, the purpose of this element is to allow a saver to choose a mix of types of investment without having to choose fund managers, indeed by avoiding the implications of having active management.

56. INDEX FUNDS. As an example, these could be organised along the lines of the US Thrift Savings Plan (discussed in Appendix 2), but designed specifically for Sweden. As

[6] If the earliest pension age were to be indexed for demography, a projection of future earliest ages for workers of different ages should be used for this targeting.

noted in the Inquiry (p. 841), in that plan, a worker can choose from the following options, which can be chosen either separately or combined into target-date offerings:

Government Securities Investment (G) Fund;
Fixed Income Index Investment (F) Fund;
Common Stock Index Investment (C) Fund;
Small Capitalization Stock Index (S) Fund;
International Stock Index Investment (I) Fund; and
Lifecycle funds, which are invested in the individual TSP funds—G, F, C, S, and I.

Each fund (other than the G Fund) is managed by a private provider on the basis of a competitive bidding process. An explanation of categories of asset types could be introduced to encourage diversification across different types of index funds. Moreover, the target-date funds constructed from the index funds would incorporate diversification. As in element 2, we favour allowing a worker to specify a target date different from the worker's anticipated earliest pension age.

57. The choice of an investment approach without a choice of fund manager implies that there is only one fund per category. Give the reservations we set out in section 2.4, about the limited ability of a central entity to distinguish reliably on a sustained basis between similarly described well and badly managed funds, or specifically a single best fund, we consider only index funds in element 3.

3.4 Element 4: Marketplace of procured funds organized by category

58. It follows from previous discussion, that the ambition in element 4 should be focussed largely on weeding out funds that appear to be badly-designed, or badly-managed, or fraudulent, rather than choosing a small set of funds believed to be particularly good. Thus, we suggest the following approach.

59. ALLOWING FUNDS TO ENTER THE MARKETPLACE. Privately-managed funds can be admitted to the marketplace on the basis of a procurement process set out by the new Agency for the Premium Pension Fund Management, following best practice in occupational and private plans, with explicit rules covering the design of funds, the nature of the audit process and the frequency of review. Those requirements should include that an admitted fund should be at least a significant minimum size in the private market (which is cheap to check).

60. CATEGORIES IN THE FUND MARKETPLACE. Finance theory recognizes the value of wide diversification across types of assets as well as across similarly situated individual assets. To encourage wide diversification and assist comparison, the presentation of the procured individual funds should be divided into categories. For example, the category of US equities should have a list of funds that concentrate on US equities, and similarly for equity funds with a different geographical focus, and for various bond funds. The choice of categories should reflect the range of types of funds which add significantly to the risk-return frontier. There could also be other options of categories, such as ethical funds and green funds.

61. CHOICE BY SAVERS. A saver should be allowed to choose as many funds as he/she wishes, including actively managed funds and index funds. Note that diversification applies to a saver's overall portfolio. Savers should be reminded of this message, and the system should continue to allow for differences in individual circumstances. For example, someone with a good occupational pension might choose to remain in AP7 Aggressive; for the same

reason, such a person might wish to hold mainly funds not available in the person's other portfolio.[7]

62. CONSUMER PROTECTION. A government-financed guarantee to cover cases of fraud would be fair as a response to a failure of procurement and would also emphasize that, other than the pursuit of fraud, procurement is not a guarantee.

3.5 Combining different elements

63. The discussion in section 2.5 suggests a three-fold conclusion:

- Assuming research by the Agency is supportive, workers should be allowed to combine funds in elements 2 and 3 or combine funds in elements 3 and 4. Similarly, based on supportive research, AP7 funds should be listed in the wide marketplace.
- Choice across the three elements should include nudges that remind savers of the risks involved in making choices from element 4 and the difficulty of making judgments.
- Outcomes should be monitored, with an eye to adjustment, if useful, to the way the funds are presented and to the design of the different aspects of support and guidance. These considerations reinforce the need for the Agency managing the Premium Pension to have some flexibility. Allowing some combination of markets would be more informative of the quality of the design than trying to draw inferences from individual choices without combination. This approach – the possibility of evolution in detailed design within a legal framework – would be in keeping with Sweden's record of pioneering pension design.

4 Conclusion: The system as a whole

64. Our starting point is a twofold doubt:

- About the ability of many savers to make good choices in a fund marketplace, and the reluctance of many to try to do so – doubts that are shared by the Inquiry and amply documented by the findings of behavioural economics and experiences worldwide;
- About the ability of even the best procurement process reliably to select a limited number of good funds and only good funds on a sustained basis.

65. Those doubts point to the need to give savers firm nudges towards elements 1, 2 and 3. Put another way, we agree with the Inquiry that the 2000 nudge – that savers should make a choice from the fund marketplace – should be reversed. Nudges in the form of support and guidance appear in three places in Figure 1, and implicitly include a nudge along the lines of, 'Don't go into the fund marketplace unless you know what you are doing'.

66. In sum, we think that this design, with a default, a marketplace of AP7 offerings, a marketplace of index funds, and a wide marketplace, together with the nudges just outlined, achieves the objective of the Inquiry to benefit the three types of covered workers it identifies – those making no decisions, those taking a limited role in designing their investing, and those making detailed decisions about their investments. Moreover we favour giving the pension Agency flexibility in allowing combinations of funds from the separate elements.

[7] As annuitization is mandatory, it would be good to consider the possibility of hedging cohort life-expectancy risk as it affects benefits through the annuity divisors and with-profit annuity calculations.

Appendix 1: Evidence from behavioural economics

67. The appendix considers individual investors (A1.1), the supply side response (A1.2) and some evaluations of market outcomes (A1.3).

A1.1 Consumer behaviour

68. There is considerable evidence on consumer behaviour at variance with the predictions of the simple economic model points. For an oversight of such evidence see the Handbook chapter by Barber and Odean (2013). Moreover, many investors accept the default. For some this (in)action reflects an absence of attention, perhaps reflecting limited financial literacy. For others this action can reflect a recognition that the default offers a better option than they could construct in the wide marketplace. Indeed, the suggested small set of offerings in the AP7 marketplace is available for those wanting to build on AP7 expertise, while recognizing that their individual preferences or circumstances differ somewhat from a hypothetical worker for whom the default would be an optimal choice on the risk-return frontier.

69. The findings are powerful.

> 'The bulk of research in modern economics has been built on the notion that human beings are rational agents who attempt to maximize wealth while minimizing risk...
>
> 'A large body of empirical research indicates that real individual investors behave differently from investors in these models. Many individual investors hold under-diversified portfolios. Many apparently uninformed investors trade actively, speculatively, and to their detriment. And, as a group, individual investors make systematic, not random, buying and selling decisions....
>
> 'Unlike those in models, real investors tend to sell winning investments while holding on to their losing investments...
>
> 'Real investors are influenced by where they live and work. They tend to hold stocks of companies close to where they live and invest heavily in the stock of their employer.
>
> 'Real investors are influenced by the media. They tend to buy, rather than sell, stocks when those stocks are in the news' (Barber and Odean 2013, pp. 1533-4)

70. Other savers are inactive:

> 'Many investors seem uninterested, display inertia (Madrian and Shea (2001)), or lack financial literacy (Lusardi and Mitchell (2014)), ending up in the default option' (Dahlquist, Setty and Vestman 2018, p. 1893).

71. Limited financial literacy and poor actions of these sorts are widespread internationally (Lusardi and Mitchell 2011, 2014) and Sweden is not spared (Cronqvist and Thaler 2004; Cronqvist, Thaler and Yu 2018).

> 'One central conclusion is that many adults have deficient knowledge of fundamental financial concepts and difficulty in performing simple calculations. One result is that many savers have considerable difficulty in understanding and assessing the importance of fees and returns … Without knowledge of the difference between equities and fixed income it is probably difficult for savers to compose an adapted portfolio and manage it efficiently for the rest of their lives….' (Inquiry, p. 836)

Research by the Swedish Financial Supervisory Authority found

> 'great differences in numeracy and financial skills in the Swedish adult population …' (Inquiry, p. 836).[8]

72. Similarly, the Murray Inquiry in Australia (Australia Financial System Inquiry 2014) found that consumers generally do not behave in ways that the simple model of rational behaviour predicts. Instead there is a lack of consumer engagement, with sluggish responses and poor choices, including making no choice.

73. Reinforcing the problem is that managing a pension is a continuing process over the whole of working life, not an event like buying a car.

74. Moreover, reliance on financial advisors is costly and sometimes not fully in the best interests of the savers. One example of conflict of interest concerns the choice of US workers to roll over their 401(k) accumulation, normally organised by employers, into an individual retirement account (IRA) if they leave the firm. A government report finds that,

> 'Plan participants are often subject to biased information and aggressive marketing of IRAs when seeking assistance and information regarding what to do with their 401(k) plan savings when they separate or have separated from employment with a plan sponsor.. … [T]he opportunity for service providers to sell participants their own retail investment products and services, such as IRAs, may create an incentive for service providers to steer participants toward the purchase of such products and services even when they may not serve the participants' best interests' (US Government Accountability Office 2013*a*, p. 22).

75. Pool *et al*. (2015, p. 5), similarly, find 'evidence that mutual fund companies involved in plan management often act in ways that appear to advance their interests at the expense of plan participants'.

76. The Inquiry is very clear, exemplified by the quotes in paras 5-7, above. As the Inquiry also notes,

> '[S]avers often have difficulty assessing the quality of different fund managers and funds and the probability of different outcomes' (p. 834).
>
> 'One central conclusion is that many adults have deficient knowledge of fundamental financial concepts and difficulty in performing simple calculations. (p. 836).
>
> 'There are, of course, a considerable number of savers who have made conscious, informed and rational choices in the management of their pension capital. However, *the Inquiry has not been able to find support in behavioural economics research for the great bulk or even a majority of savers having done so or having the capacity or even the wish to do so*.' (p. 835, emphasis added).

For such reasons,

> 'The Inquiry can conclude that neither information, transparency nor standardisation is of any help if the product sold is too complex for most individuals.' (pp. 61-62).

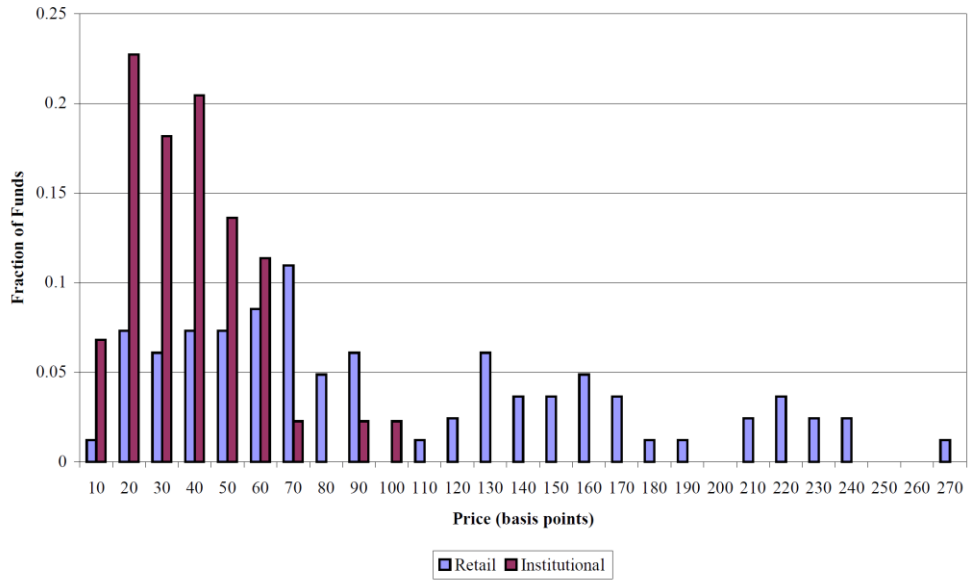
[8] As an example of inertia, 'around 40 per cent, or over a million savers, have retained the same fund choices they made in 2000, a sign of the *status quo bias* in behavioural economics' (Inquiry, p. 832).

A1.2 The supply side

77. Individuals are typically less well-informed than pension providers, and – unsurprisingly – this information imbalance has generated adverse outcomes. Beyond the evidence in Del Guercio and Reuter, 2014, cited in para. 27, we note the following.

78. As a straightforward example nearly identical funds are often available at very different fees, as Figure A1.1 shows.

Figure A1.1 2000 Price Histograms: Retail and Institutional S&P 500 Funds



Hortacsu and Syverson (2003, Figure 5).

79. In a study of the US, Cooper *et al*. (2014) report that:

> 'We find economically large fee dispersion in the mutual fund industry, even after controlling for a comprehensive set of fund characteristics such as performance, activeness or risk exposures. This dispersion is not driven by small funds, as it is also substantial among the very largest funds (top quintile). It is also not driven by the early years of the sample; rather in contrast, dispersion measures show a tendency to increase until the late-90ties, to then stay at elevated levels until the recent financial crisis, and to only decrease slightly in most recent years.'

80. Firms respond to the nature of the determinants of consumer behaviour and to the supply behaviour of competing firms. The former is exploited by the provision of complex financial instruments – complexity designed to attract demand, not narrowly focused on usefully informing consumers. And the latter limits competition that might improve outcomes.

> 'We focus on a large market of investment products targeted exclusively at households: retail structured products. These products typically offer a high return under their best-case scenario—the headline rate—that is nested in a complex payoff formula. Using a text analysis of the payoff formulas of the 55,000 products issued in Europe from 2002 to 2010, we measure product headline rates, complexity, and risk.... In the cross section, the headline rate of a product is positively correlated with its level of complexity and risk' (Célérier and Vallée 2017, p. 1469).

81. This type of supply behaviour is an issue not only in dealing with consumers. A similar pattern shows up more widely in financial offerings.

> 'We study complexity in the market for securitized products, a market at the heart of the financial crisis of 2007–9. The complexity of these products rose substantially in the years preceding the financial crisis. We find that securities in more complex deals default more and have lower realized returns. The worse performance is economically meaningful: a one standard deviation increase in complexity represents an 18% increase in default on AAA securities. However, yields of more complex securities are not higher indicating that investors did not perceive them as riskier. Our results are consistent with complexity obfuscating security quality' (Ghent et al. 2019, p. 694).

A1.3 Market outcomes

82. A review of financial markets in Australia found that,

> '[T]he current framework is not sufficient. The [Global Financial Crisis] brought to light significant numbers of Australian consumers holding financial products that did not suit their needs and circumstances — in some cases resulting in severe financial loss. The most significant problems related to shortcomings in disclosure and financial advice, and over-reliance on financial literacy' (Australia Financial System Inquiry, 2014, p. 27).

83. Those conclusions echo those of an earlier review:

> 'There are three sources of market failure in superannuation: member inertia and disengagement; product complexity and low consumer financial literacy; and conflicted remuneration structures within the financial planning industry' (Australia Industry Super Network, 2010, p. 1).

84. Experience in Chile has included successive reforms to drive down administrative charges, culminating in the introduction of an auction mechanism. In Hong Kong, ' …it is not enough merely to rely on market forces to drive down fee levels of MPF funds' (Hong Kong Legislative Council Secretariat 2013, p. 7).

85. In looking across OECD countries with pension systems that include choice from multiple private providers, two sets of issues stand out – charges and financial advice.

86. CHARGES. Charges during accumulation are high and vary widely across providers; and higher charges are not generally correlated with better performance (see, for example, Minifie 2014).

87. FINANCIAL ADVICE.

- Problems arise even where providers generally try to do a good job. For example, it is not clear how to choose a good financial adviser.
- Limited competence: complexity means that some advisers may not do a good job on some issues.
- Biased advice: advisers may suggest the wrong product or the wrong price.
- Deception: lack of consumer information and missing or ineffective regulation creates a risk of misleading advertising and misselling.

Thus, the analysis of the Inquiry, based on evidence on behaviour by consumers and suppliers in Sweden, aligns strongly with wider international experience.

Appendix 2: Examples from international experience

88. We briefly describe three examples to show foreign designs and experiences which can help to inform the current discussion. Though the Canada Pension Plan is a defined-benefit plan, we note its approach to investment to help frame the investment role of AP7. The UK National Employment Savings Trust is a government organizer of defined-contribution plans available to private employers in competition with private plan suppliers. The approach has some similarities with AP7. The US Thrift Savings Plan is a defined-contribution plan for US federal employees which follows an investment strategy relying on index funds. These examples are meant to frame discussion of improving the Premium Pension, not as alternative designs to be adopted.

A2.1 The Canada Pension Plan

89. The pension system in Canada has three elements, a noncontributory pension (Old Age Security), a minimum income guarantee (the Guaranteed Income Supplement), and the Canada Pension Plan (CPP), a partially-funded defined-benefit plan, with an analogous plan for Québec. There is also scope for employer- and individual retirement plans.

90. The CPP has some similarities to the Inkomstpension, but also significant differences.

- In both cases there is partial funding, although with different levels of targeted funding. The CPP has the long-run objective of covering 20-25% of benefit expenditures on an ongoing basis, while roughly maintaining its balance relative to annual expenditures.
- In both cases the funding is handled by independent government agencies, in Canada by the Canada Pension Plan Investment Board, in Sweden by the various AP funds that handle the portfolios for the Inkomstpension buffer fund.

While the role of such funds is different from its role in the Premium Pension default, in all cases the goal is to select a good point on the risk return frontier and in each case the process of locating the frontier is approached similarly.

91. With national defined-benefit plans the level of funding is a choice variable. Over the 1990s it was increasingly recognised that the Canada Pension Plan was unsustainable, mainly because of changing demographics, and in 1997 the federal, provincial, and territorial governments introduced the concept of *steady-state funding* (i.e. partial funding), with a goal of stabilizing the ratio of assets to expenditures over time. And they introduced full funding of any changes that would increase benefits or add new benefits.

92. While the effect of risky returns in a defined-benefit plan is different from that of a defined-contribution plan such as the Premium Pension, the approach to investing is relevant background to the investment strategy of AP7. The diversified fund is invested worldwide**,** managed by the independent Canada Pension Plan Investment Board, which describes its investment objectives and strategy on its website:[9]

> ‘Through our investment departments we invest the assets of the Canada Pension Plan with a view to achieving a maximum rate of return without taking excessive risk. In doing

[9] See Canada Pension Plan Investment Board (2018).

so, we apply our comparative advantages – scale, certainty of assets and our long investment horizon – to pursue the best investment opportunities in the world.'

'CPPIB invests the assets of the CPP with a singular objective – to maximize returns without undue risk of loss. In doing so we are explicitly required to act in the best interests of contributors and beneficiaries and take into account the factors that affect the financial obligations of the CPP. Our investment strategy is designed to capitalize on our comparative advantages while ensuring we maintain our commitment to responsible investing.' http://www.cppib.com/en/what-we-do/

'We adopt a truly global perspective as we invest across a wide range of asset classes. We seek the best possible investment opportunities wherever they may be.' http://www.cppib.com/en/how-we-invest/global-perspective/

'Our strategy is structured to be resilient in the face of wide-ranging market and economic conditions. It covers all major asset classes, addresses significant risk factors, and encompasses approximately 30 distinct investment programs.

'We firmly believe that organizations that manage environmental, social and governance factors effectively are more likely to endure and create more value over the long term than those that do not.

'CPPIB invests globally across a wide range of asset classes through both passive and active investing. Passive index-weighted investments require limited maintenance and appreciate over time with some predictability. Active investments require skilled management and offer the potential to achieve risk-adjusted returns above those expected for passive investing in public markets.

'Our overall investment strategy is comprised of three key elements: the CPP Reference Portfolio, Value-Adding Active Management and Total Portfolio Approach.

'We believe that an active and adaptive approach to managing the portfolio is essential to preserving and growing assets in ever-changing capital markets – and in achieving greater returns over the long term. http://www.cppib.com/en/how-we-invest/

93. While the use of the returns from investment differs between defined-benefit and defined-contributions plans, the ability to construct individual portfolios out of portions of the overall portfolio leaves considerable scope for similarities in overall strategy.

A2.2 The UK National Employment Savings Trust (NEST)[10]

94. NEST pensions (www.nestpensions.org.uk), which have been phased in since 2012, are a defined contribution plan designed round four central elements: automatic enrolment, limited choice, centralised account administration, and wholesale fund management.

95. AUTOMATIC ENROLMENT. An employer with no other approved plan is obliged to enrol workers in NEST, who can choose to opt out. A worker who makes no choice is enrolled in the default fund – a target-date fund with a foundation phase, a growth phase and a consolidation phase.[11]

[10] See UK National Employment Savings Trust (2015, 2017a,*b*)

[11] NEST Retirement Date Funds, https://www.nestpensions.org.uk/schemeweb/nest/aboutnest/investment-approach/nest-retirement-date-funds.html

- The foundation phase – a novelty in pension design – operates for about the first five years of an accumulation with the primary aim of developing the saving habit. Research has shown that losses in the early years are profoundly discouraging, so the investment strategy during this phase seeks to keep pace with inflation and avoid investment shocks that would reduce the value of the nascent accumulation. Such an arrangement is regarded as helpful in an auto-enrolment plan but may be less relevant in a mandatory plan.
- The growth phase, once the accumulation is established, can adopt a less conservative approach. NEST's aim is to produce a long-run average annual real return of 3 per cent net of all charges. Since its launch in 2012, the 2040 target date fund has produced an average annual net real return of about 6 per cent.
- The consolidation phase (about the last ten years before the worker's target retirement date) starts to crystallise the gains.

96. LIMITED CHOICE. Alongside target date funds are additional options for workers, including a Higher Risk (i.e. potentially higher growth) Fund, an Ethical Fund, a Sharia Fund, a Lower Growth (i.e. lower risk) Fund, and a pre-retirement fund. All of these funds are offered as target-date funds, with the worker free to choose the date. NEST does not offer access to additional individually-chosen portfolios.

97. CENTRALISED ACCOUNT ADMINISTRATION. NEST keeps all records of individual NEST accumulations, automatically accommodating job changes.

98. WHOLESALE FUND MANAGEMENT. NEST decides in-house on overall exposure to building block funds and asset classes, outsourcing most fund management to the private sector and publishing quarterly updates on strategic allocation and fund returns.[12]

99. The centralisation of both account administration (i.e. record keeping) and fund management (i.e. choosing which financial assets to hold) in NEST (and in the US Thrift Savings Plan) is crucial. The former reaps administrative economies of scale by being centralised, the latter is properly diverse in the assets it holds and gains from competitive bidding by outside fund managers.

100. The total charge to the worker, including record keeping and investment costs, is a 0.3% annual management charge on a worker's total accumulation plus a temporary additional charge of 1.8% of each year's contributions,[13] equivalent to a combined annual management charge for the average member of about 0.5%.

[12] Investment Implementation Document, https://www.nestpensions.org.uk/schemeweb/nest/aboutnest/investment-approach/other-fund-choices/fund-factsheets.html and Quarterly Investment Report, https://www.nestpensions.org.uk/schemeweb/nest/aboutnest/investment-approach/other-fund-choices/fund-factsheets.html

[13] To maintain a level playing field with private providers, the set up costs of NEST were financed with a loan from government which the additional change of 1.8% of contributions is intended to pay off. Once the loan has been repaid that additional charge will disappear.

A2.3 The US Thrift Savings Plan

101. The US government offers a defined contribution plan, established in 1986, to its employees (www.tsp.gov). There are currently about 5.5 million participants in the plan. The Thrift Savings Plan (TSP) has the same four central elements as NEST:

- Automatic enrolment;
- Limited choice: the plan offers choice from six funds, listed below, including a life-cycle option.
- Centralised account administration: a government agency keeps centralised records of individual portfolios.
- Wholesale fund management: investment in private sector assets is handled by private financial firms, which bid for the opportunity (and which manage the same portfolios in the voluntary private market, thus providing some insulation against political interference).

102. Individuals designing their own portfolios can combine shares in the following funds:

Government Securities Investment (G) Fund;
Fixed Income Index Investment (F) Fund;
Common Stock Index Investment (C) Fund;
Small Capitalization Stock Index (S) Fund;
International Stock Index Investment (I) Fund; and
Lifecycle funds, which are invested in the individual TSP funds—G, F, C, S, and I.

103. The funds are managed by private providers who bid for the right to invest the total balances. The F, C, S, and I Funds are index funds, invested in order to replicate the risk and return characteristics of its appropriate benchmark index. For example, the C Fund is invested in a stock index fund that fully replicates the Standard and Poor's 500 (S&P 500) Index, a broad market index made up of the stocks of 500 large to medium-sized U.S. companies. The C Fund's objective is to match the performance of the S&P 500. The F, C, S, and I Funds remain invested regardless of the performance of the securities markets or the overall economy. The L Funds are invested in the five individual TSP funds based on professionally-determined asset allocations. Among the lifecycle funds an individual can select a planned retirement date with fund balances adjusting to that planned age.

104. Partly as a result of separating account administration and fund management, administrative costs are astonishingly low. The gross expenses include the costs of:

- Operating and maintaining the TSP's record keeping system,
- Providing participant services, and
- Printing and mailing notices, statements, and publications.

105. The net expenses represent the amount that participants' investment returns were reduced by TSP administrative expenses. For 2018, the average net expense was $0.40 per $1,000 invested. Of course the overall expenses are kept low by the fact that there is only a single employer, although with many separate units.

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