Financial Decision Making and Retirement Security in an Aging World

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OXFORD
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Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

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First Edition published in 2017

Impression: 1

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Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data
Data available

Library of Congress Control Number: 2017935043

ISBN 978–0–19–880803–9

Printed and bound by
CPI Group (UK) Ltd, Croydon, CR0 4YY

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Chapter 5

Choosing a Financial Advisor: When and How to Delegate?

Hugh Hoikwang Kim, Raimond Maurer, and Olivia S. Mitchell

We examine how and when delegating one's investment decisions to a financial advisor can enhance consumer well-being, taking into account the fact that workers need to spend time to manage their own portfolios. When workers manage their own money, this reduces their opportunity to undertake on-the-job learning. Therefore, self-management of personal investments reduces future labor market earnings. We first investigate how introducing an investment delegation option at different points in workers' careers can change results. Young investors have few investable assets but they have the longest horizon to benefit from sound financial advice. Thus it is not clear *ex ante* whether younger investors benefit more from having a delegation option. We also compare these outcomes with what would obtain if the worker instead adopted simple rule-based investment portfolios such as conventional Target Date Funds (TDFs) with age-linked investment glide paths. We explore welfare gains of a few portfolio rules with fixed asset allocations. Our goal is to quantify the benefits of having access to personalized financial advice versus portfolios managed according to simple rules, at different stages over the life cycle.

Our baseline model reflects widely observed portfolio management patterns of individual investors, namely *portfolio inertia*. A great deal of empirical research shows that most workers are inactive investors: that is, they tend to 'set and forget' their investment portfolios. For instance, Ameriks and Zeldes (2004) showed that over a twelve-year period, three-quarters of the retirement account holders they examined never altered their retirement asset allocations at all; similarly, Agnew et al. (2003) reported that almost 90 percent of retirement account holders never altered their portfolios. Such inertia also applies to non-retirement accounts, in that a majority of equity owners exhibited portfolio inertia in the Panel Study of Income Dynamics (PSID) data (Bilias et al. 2010). A prominent explanation for why investors display such inertia is the fact that financial management requires people to pay substantial amounts of monetary or non-monetary transaction costs. In this chapter, we build a baseline model of investor inertia based on the

time costs that people need to incur when self-managing their portfolios (Kim et al. 2016).

A Life Cycle Model of Rational Investor Inertia

At the outset, we outline a baseline model of rational inertia used for evaluating financial advice over the life cycle (Kim et al. 2016).[1]

Time Cost of Financial Management

We posit individual investors who are not financial experts and who must incur time cost (or mental resources) when managing their financial portfolios. Time costs become particularly important when individuals gain job-specific human capital on their jobs via learning by doing (Arrow 1962; Becker 1964). In such a case, devoting time to investment management comes at the cost of reducing workers' future labor earnings.

Inertia vs. Active Management

We consider portfolio inertia as one investment management method. If an investor chooses *portfolio inertia* in period t, he keeps his current stock balance for the next period, and the next period's stock balance is only influenced by the stock market return. By choosing portfolio inertia, he incurs no time cost for managing his financial assets, sparing him the need to analyze new information to reshuffle this portfolio. By electing *active portfolio management*, he could determine a new mix of equity and bonds, but in turn, this requires him to incur time cost. This latter will be deducted from his available time for working, and he may lose an opportunity to accumulate more job-specific skills. We formulate the lifetime discounted utility for each portfolio management method and allow the investor to optimally choose the portfolio management method with the higher-value function.[2] Thus, central to the rational inertia model are two competing costs: an opportunity cost for human capital accumulation, and suboptimal portfolio allocation for a long time.

Preferences

The consumer has a time-separable power utility function defined over a composite good consisting of current consumption + and time devoted to leisure L_t, which is given by $U_t(C_t, L_t) = \frac{1}{1-\gamma}(C_t L_t^{a})^{1-\gamma}$. Here $a > 0$ captures

the investor's preference for leisure relative to consumption and the parameter γ measures relative risk aversion.

Labor Earnings

Yearly labor income (E_t) is determined by the individual's job-specific human capital level (H_t), wage shock (Y_t), and labor supply (l_t):

$$E_t = (1 - h_t)(1 - \tau_t) l_t H_t Y_t U_t,$$

where h_t and τ_t represent housing expenditures and labor income tax, respectively. U_t is a temporary idiosyncratic shock in the labor market. After the (exogenous) age-65 retirement age ($t = 45$), the individual stops working ($l_t = 0$) and receives a lifelong pension benefit equal to a fraction of his final labor earnings.

We have calibrated this model for the US using information on labor income patterns, mortality, retirement benefits, and capital market parameters (see Kim et al. 2016). Our calibrated parameters appear in the Appendix. Consistent with most prior life cycle models (e.g., Cocco et al. 2005), our baseline model matches well with empirically observed patterns of labor earnings, consumptions, stock balance, and wealth accumulation/decumulation profiles (Figure 5.1).

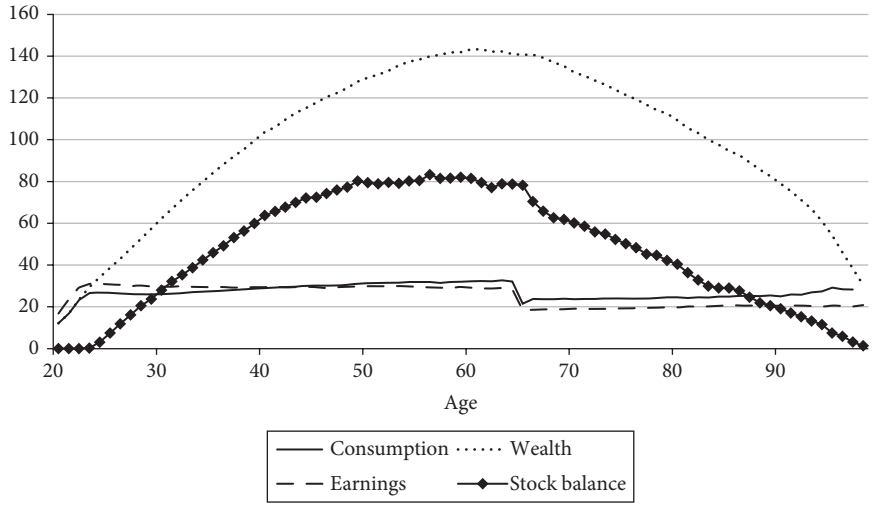

Figure 5.1. Life cycle profiles of key variables from a baseline model

Notes: This figure shows average life cycle profiles of key variables when only active management or inertia are available, generated from 2,000 independent simulations based on the baseline specification. All dollar amounts are in $1,000s deflated to year 2012.

Source: Kim et al. (2016).

When Does Financial Delegation Make Sense?

We model the main benefit of having the option to delegate one's investment decisions to a financial advisor as the time saved for accumulating more job-specific skills or human capital (Kim et al. 2016). When an individual uses an advisor, he must pay a fee for the customized advice. By contrast, if he self-manages his portfolio, this takes time which reduces his opportunity to invest in job-related human capital that can enhance his future earnings. Evidently, the attractiveness of delegating to an advisor will vary over the life cycle in a complex manner. For example, younger workers have longer time horizons over which to reap the benefits of financial advice. But they also have little money to manage, so hiring a financial advisor might add little value.

If a worker handles his own portfolio himself (*self-management*), he incurs time costs which can cut into both leisure and work time. The individual seeking to limit such time costs could simply maintain his current portfolio allocation (*inertia*). Alternatively, he could engage a financial advisor (*delegation*) to do the job in exchange for a fixed plus a variable management fee. To evaluate *when* access to financial advice would be most beneficial, we introduce the delegation option at different points over the life cycle. Prior to the introduction of the advice, investors are assumed to either do nothing (i.e., engage in portfolio inertia), or self-manage the account (and thus incur the time cost), whichever is optimal. After access to the advisor is introduced, this remains an option for the rest of his life.

We assume that financial advisors charge an annual management fee which is a percentage of total assets under management (AUM), along with a minimum fixed fee. According to documents filed by Registered Investment Advisors (RIAs) reporting to the US Securities and Exchange Commission, we have determined that the average annual percentage fee was 1.41 percent of AUM in 2014. The baseline minimum fixed fee was \$2,100 for an investor with a minimum balance of \$150,000 ($\approx$\$2,100/1.41 percent).

Table 5.1 summarizes how making financial advice available at different ages shapes several key outcome variables, including welfare gains (i.e., the certainty equivalent amount of consumptions), wealth, labor earnings, consumption, labor supply, and leisure time. Four introduction dates are considered for the delegation option, namely ages 20, 30, 45, and 60. What we see is, first, that consumers are always better off when given access to a financial advisor (row (a)). Second, these gains decline with the age when the delegation option is made available. That is, workers can expect a 1.07 percent improvement in lifetime welfare when they have an opportunity to delegate their financial decisions to an advisor from the start of their working lives, at age 20. By contrast, a ten-year delay in the introduction of the delegation option cuts the gains by almost half. When the delegation

TABLE 5.1 Impact of introducing a delegation option at alternative ages: investor gains in well-being

	(1)	(2)	(3)	(4)
	Age = 20	Age = 30	Age = 45	Age = 60
(a) Welfare gain	1.07	0.51	0.19	0.02
(b) Wealth	20.03	14.42	9.05	7.95
(c) Earnings	5.08	2.95	1.25	1.29
(d) Consumption	6.05	3.86	2.10	2.20
(e) Labor supply	7.53	4.62	2.19	2.14
(f) Leisure	7.28	7.18	6.75	6.10

Notes: This table displays the impact of having access to a financial advisor to whom investment decisions can be delegated, at different points in the life cycle. The model with investor inertia in Kim et al. (2016) is the benchmark case. The table describes the worker's welfare gains and average changes in key variables under the delegation option versus the benchmark without a delegation option. All numbers are in percentage points (%).

Source: Authors' calculations.

option is introduced just prior to retirement, at age 60, the lifetime welfare gain is tiny, only 0.02 percent.

Third, we find that early exposure to financial advisors generates substantial additional lifetime wealth (row (b)). If workers have access to investment delegation from age 20 onward, their average wealth is 20 percent higher than in the no-delegation case. If the delegation is available ten years later, wealth accumulation rises by less, just 14 percent. And for even later ages, the impact on wealth is smaller still. And fourth, delegation also changes income and consumption patterns, as reported in rows (c) and (d) of Table 5.1. Delegation allows workers to provide more labor supply by saving their time (row (e)). Again, we see that making advice accessible early in the work career enhances outcomes the most. We also highlight the interesting pattern that emerges when we compare the result from introducing delegation at age 45 versus age 60. When financial advice is made available only from age 60, people enjoy slightly more consumption compared to when it is introduced at age 45 (2.2 percent vs. 2.1 percent) as well as more income (1.29 percent vs. 1.25 percent), but less leisure (6.1 percent vs. 6.75 percent). The smaller leisure levels produce less measured life satisfaction (0.02 percent vs. 0.19 percent in welfare terms) compared to the benchmark case.

In sum, our results indicate that it is better for investors to have an early opportunity to hire financial advisors, since access to financial management early in life can produce important improvements in wealth and well-being. If financial advisory services are only introduced when people are in their 60s, welfare increases by only small amount (0.02 percent).

Comparing Customized Financial Advice vs. Simplified Investment Portfolios

In our benchmark model of investor inertia (Kim et al. 2016), the benefit of hiring a financial advisor is due to the time saved in financial management. In return, an investor will need to pay fees comprised of a minimum fixed and a variable fee based on total assets under management. To judge how sensitive people's welfare gains are to such costs, we next consider varying fee levels. This question is timely because we observe an emerging industry of low-cost financial advice providers based on modern portfolio theory and sophisticated computer programs, sometimes called 'robo-advisors'. These represent a relatively new phenomenon in the financial advice industry, and they involve the provision of online automated investment services with virtually no human contact (Reklaitis 2015). Compared to human advisors, robo-advisors have a cost advantage since their investment suggestions are pre-programmed based on clients' characteristics and conditions (e.g., risk aversion, background risk, current asset mix). In what follows, we model robo-advisors as investment advice providers charging a lower minimum fixed fee (i.e., requiring a lower minimum balance) than do human advisors. In return, they provide recommended asset mixes derived from solving clients' dynamic portfolio choice problems.

To evaluate results conservatively, we assume that robo-advisors charge an annual management fee of 1.41 percent of AUM, just as do the human advisors, but they levy a lower minimum fixed fee.[3] Table 5.2 reports results for workers having access to robo-advisors from age 20. When there is no minimum annual fee, we see that the young worker's lifetime consumption is higher by 1.3 percentage points, or around 19 percent above the levels with customized but more expensive human financial advisors. As the minimum annual fee rises, this decreases client welfare gains. In other

Table 5.2 Welfare consequences of financial advice provision for alternative minimum fees

	(1)	(2)	(3)
	No minimum fee	Minimum fee = $700	Minimum fee = $1,400
Welfare gain	1.30	1.11	1.08

Notes: This table displays the impact of having access to a financial advisor charging alternative annual minimum fixed fees. In each case, the annual variable fee is assumed to be an annual 1.41% of AUM. The model with investor inertia in Kim et al. (2016) is the benchmark case. The table describes the worker's welfare under the delegation option alternative, versus the benchmark without a delegation option. All numbers are in percentage points (%).

Source: Authors' calculations.

TABLE 5.3 Impact of introducing plain-vanilla portfolios in lieu of investor inertia: how the change in investor well-being compares to benchmark, for alternative management fees and equity glide paths

Investment glide path	(1)	(2)	(3)	(4)
	Mgmt fee = 0.84%	Mgmt fee = 0.5%	Mgmt fee = 0.2%	Mgmt fee = 0%
(a) 60%	0.52	0.63	0.88	1.10
(b) 60% → 20%	0.49	0.59	0.84	1.06
(c) 100-age	0.38	0.56	0.81	0.94
(d) 80-age	0.56	0.69	0.98	1.20

Notes: This table displays the impact of having access to alternative equity paths over the life cycle, versus the benchmark model with investor inertia as in Kim et al. (2016). Each column shows results for different management fees for the glide path products. All numbers are in percentage points (%). The row labeled 60% indicates results for the case where 60% of savings are always invested in stocks. The row labeled 60% → 20% indicates results for the case where the investor's equity fraction is 60% prior to retirement, and then falls to 20% thereafter. The row labeled 100-age indicates results for the case where the fraction of savings invested in equity is 100 minus the investor's age. The row labeled 80-age indicates results for the case where the glide path varies with age but the minimum percentage invested in equity is zero.
Source: Authors' calculations.

words, robo-advisors have a substantial advantage when busy investors seek to delegate financial management.

In Table 5.3 we compare investor well-being when 'plain-vanilla' investment portfolios are offered in lieu of customized financial advice. The first row (a) assumes that the investor must hold 60 percent of his assets in equity, while the second (b) assumes the equity fraction is 60 percent prior to retirement, and 20 percent afterwards. The third row (c) assumes that the equity share equals 100 minus the investor's age, while the final row (d) assumes that the glide path has the equity share fall to zero as of age 80. The latter two examples are akin to the prominent portfolio rule of conventional Target Date Funds, which have become extremely popular in the marketplace over the last two decades.[4] None of these plain-vanilla portfolios takes account of differences in investors' background risk or job-specific earnings patterns. Thus these rules ignore the fact that investors' decisions regarding portfolio allocation and the characteristics of their other sources of investable assets are tightly connected. For example, investors whose labor earnings are quite volatile would prefer investment profiles with a lower equity share to hedge against their labor income risk.

The outcomes reported speak to the question of how plain-vanilla portfolios akin to those seen in the marketplace affect lifetime well-being, across

different management fee levels. Column (1) assumes an annual management fee of 0.84 percent of AUM, which is the same as the average fee for TDFs (Yang and Lutton 2014). Columns (2)–(4) show results for successively lower AUM fees. Results show that consumers do benefit from these plain-vanilla portfolios, as compared to the baseline model with no access to delegation options. Nevertheless, the gains are only 30–43 percent of the robo-advisor case. In columns (2)–(3), we show how lower fees increase consumers' levels of well-being, and the final column reports results for a zero management fee. Generally speaking, plain-vanilla investment accounts and zero management fees generate similar (though still lower) welfare gains as compared to robo-advisors. TDFs do not perform better because the equity investment rules depend only on the clients' ages, and they ignore clients' particular circumstances such as human capital risk, wealth levels, and the time costs of portfolio management. Overall, Table 5.3 suggests a customized delegation option such as a robo-advisor could be more desirable than a simple rule-based equity share account standardized for all.

Additional Considerations

Thus far we have noted that having a delegation option tends to increase consumer well-being. Nevertheless this can also give rise to a principal–agent problem, due to information asymmetry and possible conflicts of interest between advisors and investors. For example, financial advisors might attempt to maximize their compensation at the expense of investors' gain. In this chapter, our model considers 'ideal' financial advisors without such agency issues. It might be possible that a sophisticated robo-advisor can mitigate this problem, but including this issue in a life cycle model calls for additional research beyond the scope of the present chapter.

Another question is what an optimal default option would be for inactive investors, taking into account additional decisions including how much clients should contribute to and withdraw from their retirement accounts. This consideration can become an important issue in retirement plans, and automatic default options would appropriately explore optimal contribution and withdrawal patterns over the life cycle, in addition to the portfolio management.

We have also assumed here that there are no communications problems between financial advisors and investors. Nevertheless, fee communications are often shrouded (Anagol and Kim 2012) when investors lack knowledge or have limited time to evaluate information presented. Understanding how financial advisor disclosures shape investor behaviors is likely to have rich policy implications for regulating the financial advisory industry.

Conclusions

We have quantitatively analyzed the impact of having a delegation option at different points over the life cycle. We show that having access to a delegation option in one's early career can have a substantially positive impact on the investor's lifetime welfare. Access to advice at age 60 is less beneficial in the context of our model. And finally, although TDFs are widely used, they appear to deliver lower gains compared to having a financial advisor customize portfolios to investors' specific financial and economic circumstances. Clearly, however, these conclusions about investment advice and portfolio management depend on the costs of each, as well as the benefits.

Acknowledgments

The authors are grateful for research support provided by NIH/NIA Grant # P30 AG12836 and NIH/NICHD Population Research Infrastructure Program R24 HD-044964, and the Pension Research Council/Boettner Center for Pensions and Retirement Security at the University of Pennsylvania. The authors also received research funding from the Metzler Exchange Professor program at the Goethe University of Frankfurt and the Special Research Fund at the SKK GSB, SKK University. The Wharton High Performance Computing Platform provided an excellent setting for the numerical analysis. Opinions, findings, interpretations, and conclusions represent the views of the authors and not those of the affiliated institutions.

Appendix

TABLE 5A.1 Summary of calibrated parameters for the baseline model

Parameter	Baseline value
Working periods	45
Retirement periods	35
Time discounting	0.96
Risk aversion	3
Leisure preference	1.0
Std. dev. of permanent wage shock	0.0710
Std. dev. of human capital shock	0.0434
Std. dev. of transitory wage shock (pre-retirement)	0.1726

(*continued*)

TABLE 5A.1 Continued

Parameter	Baseline value
Std. dev. of transitory earnings shock (post-retirement)	0.28
Risk premium	0.04
Std. dev. of stock return	0.205
Risk-free rate	1.01
Delegation annual fee: variable rate	1. 41% per annum
Delegation annual fee: fixed fee (1.41% of min. req'd balance of $150,000)	$2,115

Note: This table summarizes parameter values for the benchmark case in Kim et al. (2016).
Source: Authors' calculations.

Notes

1. This section summarizes a model developed in Kim et al. (2016) to which readers may refer for a discussion of model parameters.
2. There can be behavioral reasons for why investors are inactive in managing their portfolios. For example, investors may have emotional hurdles to actively manage their financial asset. Although this line of reasoning can be informative, here we focus on the rational optimization framework to provide quantitatively more accurate evaluations of having financial advice over the life cycle.
3. In practice, robo-advisors can charge even less; see <https://investorjunkie.com/42668/true-costs-robo-advisors/>.
4. Not all TDFs implement the same gliding path of equity allocation. Some TDFs use a glide path targeted towards the retirement year (called a 'to' glide path), and others lower the equity allocation through retirement (called a 'through' glide path). The latter group of TDFs have more equity exposure in general (Yang and Lutton 2014).

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