MARKETS AND MANDATES: RETIREMENT IN CHILE AND THE UNITED STATES

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ABSTRACT

Ordinary Americans are accustomed to a strict separation between private markets and public-benefits programs. Government programs, such as Social Security for retirees, disburse benefits to households without regard to the private options available to them. Conversely, private-market regulators, including the Securities and Exchange Commission, make rules about private retirement savings without accounting for public retirement benefits. The result is a disjointed experience for American retirees, whose public benefits are restricted by the Social Security Administration but whose private retirement accounts are so lightly regulated that significant wealth can be lost to conflicted intermediaries.

Using an international comparative case study, this Essay demonstrates that this approach has significant disadvantages. In Chile, retirement pensions are privatized, meaning that the Superintendencia de Pensiones *oversees both benefits and private-market regulation. Moreover, Chilean policy offers more choices for retirees to meet their needs than Social Security in the United States. Ultimately, these benefits result in private markets with more competition and lower prices. This Essay argues that U.S. regulators can learn from their Chilean counterparts by improving their coordination across public benefits and related private-market regulation and by providing more choices to retirees. Balancing markets and mandates in policy design can improve market efficiency and result in more just outcomes from government programs.*

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INTRODUCTION

Individuals rely on private markets to obtain most necessary goods and services. Government intervention is typically indirect, with regulation correcting market failures[1] and ensuring safety in key markets such as labor,[2] food,[3] retail goods,[4] healthcare,[5] and financial services.[6] Occasionally, however, the government directly interfaces with individuals to provide public benefits. The Internal Revenue Service calculates workers' yearly tax refunds from

[1] Oren Bar-Gill and Cass Sunstein describe many of these types of regulations as delegation of decision-making by individuals to government actors to mitigate the effects of individuals' decision-making biases. Oren Bar-Gill & Cass R. Sunstein, *Regulation as Delegation*, 7 J. LEGAL ANALYSIS 1, 30 (2015) ("[U]nder plausible assumptions, sensible principals would delegate authority to public officials, in recognition of limitations in information and time, and of their own behavioral biases").

[2] Labor market regulators such as the Occupational Safety and Health Administration, the Department of Labor, and the Equal Employment Opportunity Commission are just some of the agencies tasked with overseeing workers, each of which have an impact on the function of the labor market. *See, e.g.*, Olivia S. Mitchell, *The Labor Market Impact of Federal Regulation: OSHA, ERISA, EEO, and Minimum Wage*, *in* INDUSTRIAL RELATIONS RESEARCH IN THE 1970'S: REVIEW AND APPRAISAL 149, 150, 173 (Thomas A. Kochan, Daniel J.B. Mitchell & Lee Dyer eds., 1982) (critically evaluating "the impact of federal regulation of the workplace").

[3] The Food and Drug Administration must assure the safety of food, among other consumer goods, and was revitalized by the Food Safety Modernization Act of 2011. *See, e.g.*, A. Bryan Endres & Nicholas R. Johnson, *United States Food Law Update: The FDA Food Safety Modernization Act, Obesity and Deceptive Labeling Enforcement*, 7 J. FOOD L. & POL'Y 135, 136 (2011) (noting that the Food Safety Modernization Act "will close some of the gaps in the existing food safety system").

[4] The Consumer Product Safety Commission has been tasked with overseeing the safety of retail products, with varying success. *See* Teresa M. Schwartz, *The Consumer Product Safety Commission: A Flawed Product of the Consumer Decade*, 51 GEO. WASH. L. REV. 32, 34 (1982) (noting that Consumer Product Safety Commission was created "to protect the public against unreasonable risks of injury associated with consumer products" (quoting 15 U.S.C. § 2051(b)(1) (1976))).

[5] The Department of Health and Human Services was tasked with implementing the Affordable Care Act's federal provisions in 2010, though it had to coordinate with state insurance commissioners through the governing organization of state level agencies, called the National Association of Insurance Commissioners. *See, e.g.*, Miriam Seifter, *States as Interest Groups in the Administrative Process*, 100 VA. L. REV. 953, 975 (2014) (explaining that Affordable Care Act requires Department of Health and Human Services to "develop its regulations on multiple discrete issues 'in consultation with' the [National Association of Insurance Commissioners]").

[6] After years of complaints that existing financial regulators were not adequately protecting individuals, especially during times like the 2008 financial crisis, the Consumer Financial Protection Bureau was created to make sure that individuals had access to fair and safe financial products. Adam J. Levitin, *The Consumer Financial Protection Bureau: An Introduction*, 32 REV. BANKING & FIN. L. 321, 322 (2013) (suggesting that creation of Consumer Financial Protection Bureau was "the most immediately tangible" reform covered by Dodd-Frank Act).

income and demographics.[7] State welfare agencies screen assets and family size to award benefits like the Supplemental Nutrition Assistance Program ("SNAP")[8] and Temporary Aid for Needy Families ("TANF").[9] And the Social Security Administration ("SSA") and the Department of Health and Human Services disburse Social Security[10] and Medicare[11] to retirees. The design of public programs interacts with private markets. Regulation can impact the efficacy of government benefits by changing the prices and availability of necessary goods and services.[12] Receiving benefits can also change individuals'

[7] For 2020 and 2021, individual tax filers received an average refund of approximately $2,700 per year. *Filing Season Statistics for Week Ending June 11, 2021*, INTERNAL REVENUE SERV., https://www.irs.gov/newsroom/filing-season-statistics-for-week-ending-june-11-2021 [https://perma.cc/UQ6C-PDKJ] (last updated June 17, 2021); *see also* Carmen Reinicke, *Another 1.5 Million Refunds Are Going Out to Those Who Paid Taxes on 2020 Unemployment Pay*, CNBC (July 28, 2021, 2:25 PM), https://www.cnbc.com/2021/07/28/irs-sends-more-refunds-to-those-who-paid-taxes-on-2020-unemployment-pay.html [https://perma.cc/5BSW-245X] (describing refunds from unemployment insurance taxation, which averaged $1,686).

[8] Approximately 38 million people received SNAP benefits in 2019. Thomas B. Foster, Brian Knop & Renuka Bhaskar, *Access and Eligibility for Supplemental Nutrition Assistance Program Varies County by County*, U.S. CENSUS BUREAU (Feb. 2, 2021), https://www.census.gov/library/stories/2021/02/demographic-snapshot-not-everyone-eligible-for-food-assistance-program-receives-benefits.html [https://perma.cc/XQQ3-XK6Z].

[9] Approximately 2 million people per month received TANF benefits during 2020. HEALTH & HUM. SERVS., OFF. OF FAM. ASSISTANCE, TANF: TOTAL NUMBER OF RECIPIENTS FISCAL AND CALENDAR YEAR 2020 (2021), https://www.acf.hhs.gov/sites/default/files/documents/ofa/fy2020_tanf_caseload_trec_0.pdf [https://perma.cc/DX74-RDCG].

[10] Approximately 3.8 million people newly started receiving retirement benefits from the SSA in 2019. SOC. SEC. ADMIN., PUB. NO. 13-11785, FAST FACTS & FIGURES ABOUT SOCIAL SECURITY, 2020, at 13 (2020), https://www.ssa.gov/policy/docs/chartbooks/fast_facts/2020/fast_facts20.pdf [https://perma.cc/D9YB-MC7S].

[11] Approximately 3.8 million people newly enrolled in Medicare in 2019. CTRS. FOR MEDICARE & MEDICAID SERVS., MEDICARE NEWLY ENROLLED BENEFICIARIES: TOTAL, AGED, AND DISABLED ENROLLEES, CALENDAR YEARS 2014-2019 (2019), https://www.cms.gov/files/document/2019cpsmdcrenrollab21.pdf [https://perma.cc/ZN3K-2WV9].

[12] For example, regulation that requires that landlords maintain high standards may increase costs for tenants; likewise, regulation banning payday loans may make credit less accessible to low-income borrowers. *See* Rory Van Loo, *Broadening Consumer Law: Competition, Protection, and Distribution*, 95 NOTRE DAME L. REV. 211, 242 (2019) (surveying the role of the law in lowering prices paid by consumers). This phenomenon has been demonstrated empirically in a variety of settings. *See generally* Ann P. Bartel & Lacy Glenn Thomas, *Predation Through Regulation: The Wage and Profit Effects of the Occupational Safety and Health Administration and the Environmental Protection Agency*, 30 J.L. & ECON. 239 (1987) (explaining the role of Occupational Safety and Health Administration and Environmental Protection Agency regulations on labor markets); Julie A. Caswell & Gary V. Johnson, *Firm Strategic Response to Food Safety and Nutrition Regulation*, *in* ECONOMICS OF FOOD SAFETY 273 (Julie A. Caswell ed., 1991); Anthony A. DeFusco, Stephanie Johnson & John Mondragon, *Regulating Household Leverage*, 87 REV. ECON. STUD. 914 (2020) (considering impacts of regulation on household debt).

preferences on the private market.[13] Despite these overlaps, agencies in the United States tasked with regulating private markets are separate from those tasked with administering public programs, limiting the availability of creative regulatory strategies such as government-run marketplaces.[14] Legislators and agencies have little guidance in public programs that complement regulatory goals.

This Essay develops a case study to understand the relationship between mandatory public programs and private-market regulation—a comparison of retirement policy in the United States and Chile. The typical American household relies on a combination of public benefits from Social Security and tax-advantaged private savings vehicles, such as 401(k)s, that are managed by private financial institutions.[15] Though a majority of Americans get at least some Social Security benefits every month from retirement until their death, the amount they receive may not even cover rent and food.[16] To supplement this, American retirees, on average, have nearly $150,000 in private retirement savings.[17]

Utilizing this money efficiently, however, is a serious challenge. Retirees may be in good health at retirement, but if they live for a long time, private savings

[13] In many contexts, this concept is called "crowd out"—when government spending on public programs causes individuals who were otherwise using the private market to switch to the public market, resulting in lower private demand and potentially higher prices in the private market. *See generally* David M. Cutler & Jonathan Gruber, *Does Public Insurance Crowd Out Private Insurance?*, 111 Q.J. ECON. 391 (1996) (considering effects of public spending on health insurance); Stuart A. Gabriel & Stuart S. Rosenthal, *Do the GSEs Expand the Supply of Mortgage Credit? New Evidence of Crowd Out in the Secondary Mortgage Market*, 94 J. PUB. ECON. 975 (2010) (considering effects of public spending on mortgage markets).

[14] Outside the United States, examples of such government-run marketplaces include the health insurance market in the Netherlands and the pension system in Chile. *See* ROBERT E. LEU, FRANS F.H. RUTTEN, WERNER BROUWER, PIUS MATTER & CHRISTIAN RÜTSCHI, THE SWISS AND DUTCH HEALTH INSURANCE SYSTEMS: UNIVERSAL COVERAGE AND REGULATED COMPETITIVE INSURANCE MARKETS, at vii (2009), https://www.issuelab.org/resources/11352/11352.pdf [https://perma.cc/6MXG-CRWL]; *English Overview*, SUPERINTENDENCIA DE PENSIONES, https://www.spensiones.cl/portal/institucional/594/w3-propertyvalue-10118.html [https://perma.cc/E2LA-N4N5] (last visited Apr. 10, 2022).

[15] *See* NARI RHEE, NAT'L INST. ON RET. SEC., THE RETIREMENT SAVINGS CRISIS: IS IT WORSE THAN WE THINK? 2 (2013), https://www.nirsonline.org/wp-content/uploads/2017/06/retirementsavingscrisis_final.pdf [https://perma.cc/V2N3-PU85] (noting that most American families rely on investments in 401(k)s and IRAs to supplement Social Security).

[16] *The Average Social Security Benefit Does Not Cover Basic Living Expenses*, HOWMUCH.NET (Sept. 9, 2018), https://howmuch.net/articles/cost-of-living-social-security [https://perma.cc/LF89-RUL4].

[17] *See* TRANSAMERICA CTR. FOR RETIREMENT STUDS., RETIREMENT SECURITY: A COMPENDIUM OF FINDINGS ABOUT U.S. WORKERS 168 (2020), https://transamericacenter.org/docs/default-source/retirement-survey-of-workers/tcrs2020_sr_20th_annual_compendium_of_workers_report.pdf (noting that Baby Boomers have highest retirement savings at $144,000).

can quickly run out.[18] To insure against this risk, retirees need to convert a pot of money into a stream of income, which is usually done with an *annuity*.[19] Unfortunately, the market for annuities in the United States is plagued with allegations of fraud and mistreatment of ordinary investors with little financial sophistication.[20] Regulators at the Department of Labor ("DOL")[21] and the Securities and Exchange Commission ("SEC")[22] have intervened in this market due to concerns that financial advisors were selling products with high prices that give advisors high commissions, cheating retirees out of thousands of dollars.[23] Ultimately, although more than $2.5 trillion of U.S. retirement assets are invested in annuities,[24] a great deal of retirement money is being funneled to ineffective investment strategies via conflicted sales agents, and much of it may be gone by the time retirees need it most.[25] When older adults run out of savings and have health problems, they suffer from lost dignity, poor health with insufficient medical care, and high financial costs that are often borne in part by Medicaid.[26] Though the SSA provides an important source of retirement security, the failure to coordinate across agencies results in retirees facing significant risk in old age.

The regulatory divide in the United States stands in direct contrast to the case study presented here: retirement policy in Chile. Chile is known for its long

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[18] *See* Harriet Edleson, *Almost Half of Americans Fear Running Out of Money in Retirement*, AARP (May 21, 2019), https://www.aarp.org/retirement/planning-for-retirement/info-2019/retirees-fear-losing-money.html [https://perma.cc/J9DL-F8VX].

[19] *See* Sharon Epperson, *Annuities for Retirement: Good or Bad Idea?*, CNBC (Oct. 24, 2014, 4:13 PM), https://www.cnbc.com/2014/10/24/annuities-for-retirement-good-or-bad-idea.html [https://perma.cc/3FM7-K6KZ].

[20] *See* Michael J. Borden, *PSLRA, SLUSA, and Variable Annuities: Overlooked Side Effects of a Potent Legislative Medicine*, 55 MERCER L. REV. 681, 681 (2004).

[21] *See* JOHN J. TOPOLESKI & GARY SHORTER, CONG. RSCH. SERV., R44884, DEPARTMENT OF LABOR'S 2016 FIDUCIARY RULE: BACKGROUND AND ISSUES 1 (2017), https://sgp.fas.org/crs/misc/R44884.pdf [https://perma.cc/6ASP-FPLX].

[22] *See* Regulation Best Interest: The Broker-Dealer Standard of Conduct, 84 Fed. Reg. 33,318 (July 12, 2019) (to be codified at 17 C.F.R. pt. 240).

[23] Vivek Bhattacharya, Gaston Illanes & Manisha Padi, *Fiduciary Duty and the Market for Financial Advice* 5 (Nat'l Bureau of Econ. Rsch., Working Paper No. 25861, 2019); *see also* Mark L. Egan, Shan Ge & Johnny Tang, *Conflicting Interests and the Effect of Fiduciary Duty—Evidence from Variable Annuities* 1 (Nat'l Bureau of Econ. Rsch., Working Paper No. 27577, 2020).

[24] *Release: Quarterly Retirement Market Data*, INV. CO. INST. (Dec. 16, 2021), https://www.ici.org/statistical-report/ret_21_q3 [https://perma.cc/FN8J-5H8W].

[25] *See* COUNCIL OF ECON. ADVISORS, EXEC. OFF. OF THE PRESIDENT, THE EFFECTS OF CONFLICTED INVESTMENT ADVICE ON RETIREMENT SAVINGS 2 (2015) [hereinafter EFFECTS OF CONFLICTED INVESTMENT ADVICE], https://obamawhitehouse.archives.gov/sites/default/files/docs/cea_coi_report_final.pdf [https://perma.cc/86A9-HAPV].

[26] *See* ELANA D. BUCH, INEQUALITIES OF AGING: PARADOXES OF INDEPENDENCE IN AMERICAN HOME CARE 4 (Paul Brodwin, Michele Rivkin-Fish & Susan Shaw eds., 2018); Benjamin D. Sommers & Donald Oellerich, *The Poverty-Reducing Effect of Medicaid*, 32 J. HEALTH ECON. 816, 817 (2013).

history of privatized pensions.[27] Chilean retirees who have worked in the formal sector must save a fraction of their income in private accounts that are managed by a single private fund, as mandated by the government.[28] Chilean workers can also save voluntarily in tax-advantaged accounts, akin to IRAs.[29] Upon retirement, the mandatory accounts are not required to be converted into lifetime income, like Social Security in the United States. Instead, retirees can choose to buy a lifetime annuity on a government-run exchange, akin to the Affordable Care Act health exchanges.[30] Alternatively, retirees can take highly regulated withdrawals from their private account.[31] One regulator, the *Superintendencia de Pensiones* ("SP"), is tasked with overseeing the entire system, from the contributions phase through retirement, with constituents including individual workers and financial institutions.[32] This choice-based system with managed competition from a private market has provided retirees with very high payouts: Chilean retirees receive a 6% return on average for every dollar invested in annuities, while U.S. retirees lose 6% on each dollar invested in similar annuities.[33] Despite these positives, Chile's system suffers from high inequality in pension generosity because it does little to redistribute across retirees.[34]

The Chilean example provides two sets of lessons for U.S. regulators. First, compared to the United States, retirees in Chile benefit from the existence of a single agency and pension exchange that handle all types of retirement wealth with a focus on maximizing competition and minimizing market failures.[35]

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[27] The history of privatized pensions in Chile is a bloody affair, made possible in large part by the coercive power of Pinochet's dictatorship. *See* Peter Diamond, *Privatization of Social Security: Lessons from Chile* 5 (Nat'l Bureau of Econ. Rsch., Working Paper No. 4510, 1993); *see also infra* note 102.

[28] *Id.* at 4.

[29] Silvia Borzutzky, *Reforming the Reform: Attempting Social Solidarity and Equity in Chile's Privatized Social Security System*, 11 J. POL'Y PRAC. 77, 79-80 (2012).

[30] Diamond, *supra* note 27, at 5 ("On becoming eligible to receive pension benefits, a worker can choose between a sequence of phased withdrawals or a real annuity. The annuity option involves a switch of financial intermediary, as the annuity must be purchased from an insurance company.").

[31] Gastón Illanes & Manisha Padi, *Retirement Policy and Annuity Market Equilibria: Evidence from Chile* 8-9 (Nat'l Bureau of Econ. Rsch., Working Paper No. 26285, 2019); Marco Morales & Guillermo Larraín, *The Chilean Electronic Market for Annuities (SCOMP): Reducing Information Asymmetries and Improving Competition*, 42 GENEVA PAPERS ON RISK & INS. 389, 390 (2017).

[32] *English Overview*, *supra* note 14.

[33] Craig Thorburn, Roberto Rocha & Marco Morales, *An Analysis of Money's Worth Ratios in Chile*, 6 J. PENSION ECON. & FIN. 287, 306 (2007).

[34] Lisa Nikolau, *Chile: Millions Protest Pension System They Say Perpetuates Inequality*, HUMANOSPHERE (Mar. 28, 2017), https://www.humanosphere.org/basics/2017/03/chile-millions-protest-pension-system-they-say-perpetuates-inequality/ [https://perma.cc/C4JX-XZ7L].

[35] Illanes & Padi, *supra* note 31, at 3.

Chile's SP is authorized to oversee nearly every aspect of the pension system.[36] It manages the government-run exchange that facilitates access to the annuity market,[37] but it also implements redistributive policy[38] and promulgates regulations that ensure company solvency.[39] Unlike the multiagency approach of the United States, Chile's unitary pension authority can efficiently account for spillovers between regulatory tasks, such as gaps in the market that can be exploited by high fee intermediaries.[40]

Moreover, the Chilean system benefits retirees by allowing them to opt out of annuitizing their wealth.[41] Relative to mandatory Social Security, a choice-based system allows retirees to customize their retirement experience and decreases prices for private annuities.[42] The Chilean system promotes some forms of redistribution by allowing sick and poor retirees to take more benefits in the first few years of retirement than their counterparts in the United States receiving fixed Social Security payments.[43] The benefits of the choice-based Chilean system arise from a counterintuitive source: no mandatory annuity, which leads to lower levels of adverse selection.[44] Though it is far from perfect, the Chilean pension system provides U.S. regulators with an example of carefully designed, coordinated agency action that provides public benefits through markets, rather than mandates.

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[36] Law No. 20.255, tit. 2, art. 47, Marzo 17, 2008, DIARIO OFICIAL [D.O.] (Chile); *see also La Institución*, SUPERINTENDENCIA DE PENSIONES, https://www.spensiones.cl/portal/institucional/594/w3-propertyvalue-5990.html [https://perma.cc/8MCS-P8CC] (last visited Apr. 10, 2022).

[37] Law No. 19.934, art. 1 § 8, Febrero 21, 2004, D.O. (Chile); *see also Las Pensiones de Vejez y el SCOMP*, SUPERINTENDENCIA DE PENSIONES, https://www.spensiones.cl/portal/institucional/594/w3-propertyvalue-10264.html [https://perma.cc/4KNS-PTR6] (last visited Apr. 10, 2022).

[38] Law No. 20.255, tit. 2, art. 47 (authorizing SP to advise Ministry of Labor on social welfare matters); *see also* OSVALDO MACÍAS, SUPERINTENDENCIA DE PENSIONES, PILAR SOLIDARIO Y BONO POR HIJO NACIDO VIVO (2016), https://www.spensiones.cl/portal/institucional/594/articles-11104_recurso_1.pdf [https://perma.cc/4W4P-ULZT].

[39] SUPERINTENDENCIA DE PENSIONES, DIVERSIFICACIÓN DE LAS INVERSIONES DE LOS FONDOS DE PENSIONES (2021), https://www.spensiones.cl/portal/institucional/594/articles-14467_recurso_1.pdf [https://perma.cc/XTH9-QNEY]; INT'L MONETARY FUND, FINANCIAL INTEGRATION IN LATIN AMERICA: A NEW STRATEGY FOR A NEW NORMAL 161-66 (Charles Enoch, Wouter Bossu, Carlos Caceres & Diva Singh eds., 2017), https://www.elibrary.imf.org/downloadpdf/books/071/23552-9781513520247-en/23552-9781513520247-en-book.pdf.

[40] *See, e.g.*, Thorburn et al., *supra* note 33, at 302 (discussing regulatory changes in 2004 that allowed SP to reduce the influence of brokers and reduce intermediary fees).

[41] *See* Illanes & Padi, *supra* note 31, at 8-9.

[42] *Id.* at 52.

[43] *Id.* at 6.

[44] *Id.* at 3 (discussing choice-based system's role in crowding-in private annuity market and decreasing adverse selection).

I. PRIVATE ANNUITIES AND SOCIAL SECURITY IN THE UNITED STATES

Many American retirees have spent their working life paying FICA taxes towards Social Security and Medicare and have been given access to employer-sponsored retirement plans through their jobs.[45] Upon retirement, they expect to receive some public benefits through the nation's social insurance system but do not usually depend entirely on those benefits.[46] Social Security income is usually supplemented with private wealth savings, both through employer provided and self-directed plans.[47] Historically, these were likely to include defined benefit pensions that pay income each year.[48] Since the passage of ERISA in 1974, however, concerns about the solvency of defined benefit pensions have led to the creation of the Pension Benefit Guaranty Corporation to insure pension beneficiaries, and to fewer defined benefit pensions.[49] Since the 1980s, a larger fraction of retirement wealth has been held in accounts like 401(k)s and IRAs, and a smaller fraction has been held in defined benefit pension plans.[50] Defined contribution retirement accounts managed by large financial institutions such as Fidelity and Charles Schwab are now essential to retirees' solvency.[51] As a result, retirees rely implicitly on regulators like the SEC,[52] the DOL,[53] and the Consumer Financial Protection Bureau ("CFPB")[54] to ensure these assets are

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[45] Ryan Bubb, Patrick Corrigan & Patrick L. Warren, *A Behavioral Contract Theory Perspective on Retirement Savings*, 47 CONN. L. REV. 1317, 1319-20 (2015).

[46] *Id.* at 1320; Kathryn L. Moore, *An Overview of the U.S. Retirement Income Security System and the Principles and Values It Reflects*, 33 COMP. LAB. L. & POL'Y J. 5, 5 & n.4 (2011).

[47] Bubb et al., *supra* note 45, at 1327 ("Approximately sixty-five percent of private sector workers in recent years had access to a retirement plan through their employer.").

[48] Moore, *supra* note 46, at 18 n.107 (listing private pension enrollment rates by employer size (citing Craig Copeland, *Employment-Based Retirement Plan Participation: Geographic Differences and Trends*, EBRI Issue Brief No. 348, at 10 fig.2 (2010))).

[49] *See generally* Zvi Bodie, Alan J. Marcus & Robert C. Merton, *Defined Benefit Versus Defined Contribution Pension Plans: What Are the Real Trade-offs?*, *in* PENSIONS IN THE U.S. ECONOMY 139 (Zvi Bodie, John B. Shoven & David A. Wise eds., 1988).

[50] RHEE, *supra* note 15, at 5.

[51] U.S. DEP'T OF LABOR, EMP. BENEFITS SEC. ADMIN., FACT SHEET: FINAL REGULATION RELATING TO SERVICE PROVIDER DISCLOSURES UNDER SECTION 408(b)(2) (2012), https://www.dol.gov/sites/dolgov/files/EBSA/about-ebsa/our-activities/resource-center/fact-sheets/final-regulation-service-provider-disclosures-under-408b2.pdf [https://perma.cc/6CNX-9PSX].

[52] *Investor Bulletin: Retirement Investing Through 403(b) and 457(b) Plans*, SEC. AND EXCH. COMM'N (July 20, 2017), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_retirementinvesting [https://perma.cc/C53X-RAMR].

[53] *Investing and Diversification*, EMP. BENEFITS SEC. ADMIN., https://www.dol.gov/agencies/ebsa/laws-and-regulations/laws/pension-protection-act/investing-and-diversification [https://perma.cc/S224-G3R5] (last visited Apr. 10, 2022).

[54] Irene Skricki, *Helping People Plan for Retirement*, CONSUMER FIN. PROT. BUREAU (June 13, 2017), https://www.consumerfinance.gov/about-us/blog/helping-people-plan-retirement/ [https://perma.cc/D7MM-BN3H].

safe and adequate to support any number of retired years. Stuffing savings under the mattress rather than investing in retirement accounts makes it more likely that long-lived retirees will run out of savings and fall into poverty at old age.[55] Investing in safe assets that provide a steady source of income can make the most out of limited resources.[56]

Annuities, which convert a quantity of money into a stream of payments, can be essential retirement investments for retirees sitting on a pile of savings.[57] As life average expectancy increases, retirees in the United States face growing risks of outliving their savings.[58] Despite these risks, life income annuities are relatively unpopular, a phenomenon that economists have labeled the "annuity puzzle."[59] Several theories have been proposed as an explanation to the annuity puzzle. Some scholars have suggested that people do not wish to part with a large lump sum of savings because if they die earlier than expected, they want to leave their money to their heirs.[60] Others have suggested that psychological biases have caused individuals to underinsure against longevity risk.[61] Indeed, the only annuity-like products that are popular among retirees are fixed indexed and variable annuities, each of which behave much differently from a traditional life annuity.[62] Fixed indexed annuities are investment vehicles with varied

[55] Jonathan Skinner, *Are You Sure You're Saving Enough for Retirement?*, 21 J. ECON. PERSPS. 59, 65-66 (2007) (prescribing aggressive annual retirement saving goals that depend on capital gains, interest, etc. to ensure savings to last through retirement).

[56] Ron Lieber & Todd St. John, *How to Win at Retirement Savings*, N.Y. TIMES, https://www.nytimes.com/guides/business/saving-money-for-retirement (last visited Apr. 10, 2022).

[57] Kim Lankford, *5 Things You Should Know About Annuities*, AARP (May 21, 2020), https://www.aarp.org/retirement/retirement-savings/info-2020/learn-about-annuities.html [https://perma.cc/9QZL-TBVG].

[58] ELIZABETH ARIAS, BETZAIDA TEJADA-VERA, FARIDA AHMAD & KENNETH D. KOCHANEK, NAT'L CTR. FOR HEALTH STATS., REP. NO. 015, PROVISIONAL LIFE EXPECTANCY ESTIMATES FOR 2020, at 2 (2021).

[59] *See generally* Menahem E. Yaari, *Uncertain Lifetime, Life Insurance, and the Theory of the Consumer*, 32 REV. ECON. STUD. 137 (1965) (introducing mathematics behind valuing lifetime income as opposed to pot of savings at retirement); Benjamin M. Friedman & Mark Warshawsky, *The Cost of Annuities: Implications for Saving Behavior and Bequests*, 105 Q.J. ECON. 135 (1990) (showing that annuities should be highly valuable to retirees even at high prices).

[60] Lee M. Lockwood, *Bequest Motives and the Annuity Puzzle*, 15 REV. ECON. DYNAMICS 226, 226 (2012).

[61] Shlomo Benartzi, Alessandro Previtero & Richard H. Thaler, *Annuitization Puzzles*, 25 J. ECON. PERSPS. 143, 161 (2011).

[62] INV. CO. INST., 2021 INVESTMENT COMPANY FACT BOOK 113, 177 (2021), https://www.ici.org/system/files/2021-05/2021_factbook.pdf [https://perma.cc/SKG6-TQWS] (showing that 26% of ETF-owning households hold fixed or variable annuities and that more than $2.5 trillion of retirement assets are invested in annuities).

payouts that are tied to various financial indices and are often time limited.[63] Variable annuities are similar, except that they give choices over investments and often include the option to convert them into life annuities.[64] Each of these defer the actual payment of fixed income each month, so they do not provide the type of security that older adults badly need.[65] Moreover, the market for retirement investments like annuities are fraught with conflicts of interest that have long troubled regulators.[66]

Older adults with relatively little investment expertise are sitting on an average of $144,000 by age sixty-five, and they are often targets for financial advisors with incentives to sell high-fee products.[67] Some of these advisors are fiduciaries, but not all. Advisors who are legally classified as broker-dealers are free to recommend products that are expensive and provide advisors with large commissions, without regard to how much money the customer is losing.[68] These poor incentives were targeted by the 2016 DOL rule which required broker-dealers handling retirement savings to act as fiduciaries, under threat of enforcement actions and class action lawsuits.[69] The Fifth Circuit vacated the rule in 2018 because the court deemed the rule not to be a reasonable interpretation of the DOL's statutory authority.[70] In 2019, the SEC enacted Regulation Best Interest ("Reg BI"), which was intended to harmonize standards between broker-dealers and their fiduciary counterparts, registered investment advisors ("RIAs").[71] Reg BI was interpreted by many as significantly weaker than the DOL rule, and it failed to define broker-dealers as fiduciaries. The exclusion from fiduciary obligations comes at an estimated cost to retirees purchasing annuities of over fifty basis points in lost returns, or about $10,000 in lost retirement wealth.[72] Retirees who cannot access low-cost retirement income products on the private market must rely more heavily on publicly provided Social Security to fund their retirement expenses.

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[63] *The Complicated Risks and Rewards of Indexed Annuities*, FIN. INDUS. REGUL. AUTH. (May 11, 2016), https://www.finra.org/investors/insights/complicated-risks-and-rewards-indexed-annuities [https://perma.cc/ZG2R-KN2G].

[64] *Your Guide to Annuities: Variable Annuities*, FIN. INDUS. REGUL. AUTH. (May 16, 2016), https://www.finra.org/investors/insights/your-guide-annuities-variable-annuities [https://perma.cc/77NR-3QKV].

[65] *Id.*

[66] Bhattacharya et al., *supra* note 23, at 5.

[67] *See* ALICIA H. MUNNELL & ANQI CHEN, CTR. RET. RSCH. AT BOS. COLL., 401(K)/IRA HOLDINGS IN 2019: AN UPDATE FROM THE SCF 1 (2020) (stating that households approaching retirement hold average 401(k)/IRA balances of $144,000).

[68] Bhattacharya et al., *supra* note 23, at 4.

[69] Chamber of Com. of the U.S. v. U.S. Dep't of Lab., 885 F.3d 360, 388 (5th Cir. 2018).

[70] *Id.*

[71] 17 C.F.R. pt. 240 (2021).

[72] Bhattacharya et al., *supra* note 23, at 16.

The fundamental design of Social Security in the United States has not changed since 1935.[73] The system helps older people avoid poverty in their nonworking years.[74] Social Security is structured as an unfunded system, meaning that today's workers pay directly to today's retirees.[75] As an intergenerational transfer system, Social Security depends heavily on the number of working adults contributing to the program matching the number who need benefits at any given time.[76] When exceptionally large worker populations age, though, the system may be strained for resources.[77] The retirement of the "Boomer" generation, along with trends towards increasing longevity, have given rise to estimates that the Social Security system is on a path to bankruptcy within twenty years unless it is significantly reformed.[78]

Despite these risks, Social Security is one of the largest public-benefit programs in the United States.[79] Workers contribute 12.4% of their salaries towards their retirement through the FICA tax.[80] Half the contribution is paid directly by the worker and the other half by the employer.[81] Workers must either be in the labor force for a minimum duration or make a certain amount of income to qualify for Social Security.[82] Every $1,510 in covered earnings each year

[73] Martha A. McSteen, *Fifty Years of Social Security*, SOC. SEC. ADMIN., https://www.ssa.gov/history/50mm2.html [https://perma.cc/B5PS-3KVB] (last visited Apr. 10, 2022).

[74] Kathleen Romig, *Social Security Lifts More Americans Above Poverty Than Any Other Program*, CTR. ON BUDGET AND POL'Y PRIORITIES (Feb. 20, 2020), https://www.cbpp.org/research/social-security/social-security-lifts-more-americans-above-poverty-than-any-other-program [https://perma.cc/BQ52-D37D].

[75] McSteen, *supra* note 73.

[76] Tejesh Pradhan & James C. Capretta, *Social Security's Intergenerational Conundrum*, REALCLEARPOLICY (July 11, 2016), https://www.realclearpolicy.com/blog/2016/07/12/social_securitys_intergenerational_conundrum_1661.html [https://perma.cc/2D74-G6Z2].

[77] *Id.* (discussing the challenges arising from an imbalance in numbers of beneficiaries and contributors to Social Security).

[78] Rob Reutman, *Will Baby Boomers Bankrupt Social Security?*, CNBC (Sept. 13, 2013, 4:33 PM), https://www.cnbc.com/2010/02/08/will-baby-boomers-bankrupt-social-security.html [https://perma.cc/AC6K-DJBK]; Lorie Konish, *Turns Out It's Not Baby Boomers Who Have Taken the Most from Social Security*, CNBC (June 11, 2019, 12:54 PM), https://www.cnbc.com/2019/06/10/its-not-baby-boomers-who-have-taken-the-most-from-social-security.html [https://perma.cc/4RAM-KGKV].

[79] Joy Moses, *The Facts About Americans Who Receive Public Benefits*, CTR. FOR AM. PROGRESS (Dec. 16, 2011), https://www.americanprogress.org/issues/economy/reports/2011/12/16/10767/the-facts-about-americans-who-receive-public-benefits/ [https://perma.cc/H82Z-VDZR].

[80] DAVE SHOFFNER, SOC. SEC. ADMIN., POL'Y BRIEF NO. 2010-01, DISTRIBUTIONAL EFFECTS OF RAISING THE SOCIAL SECURITY PAYROLL TAX (2010), https://www.ssa.gov/policy/docs/policybriefs/pb2010-01.html [https://perma.cc/6N5D-9YEL].

[81] *Id.*

[82] *Retirement Benefits: How Credits Are Earned*, SOC. SEC. ADMIN., https://www.ssa.gov/benefits/retirement/planner/credits.html#h1 [https://perma.cc/D7QK-5P3T] (last visited Apr. 10, 2022).

provides workers with one "credit," up to a maximum of four credits per year.[83] In order to claim retirement benefits, a worker must have forty credits.[84] This is often achieved by working for ten full years, but it can be accomplished in different ways.[85] Importantly, there is no accounting for credits once eligibility is established: all workers are treated under the same rules once they qualify.[86]

Retirees can begin to claim benefits anytime after age sixty-two.[87] Starting to claim benefits between sixty-two and sixty-seven is considered early retirement, leading to fewer benefits.[88] Claiming early can lead to a loss of 30% or more in benefits generosity.[89] Waiting to claim benefits increases the total amount received each month until the age of seventy.[90] Benefit generosity depends on the amount the worker made during the thirty-five highest-income years of their life.[91] Each of these income levels are adjusted to account for changes in cost of living over time.[92] The result is averaged to obtain the Average Indexed Monthly Earnings ("AIME").[93] The amount of the benefit is calculated as a progressive fraction of AIME—in 2021, for example, eligible retirees received 90% of the first $996, plus 32% up to $6,002, and 15% of earnings above $6,002.[94] Highly paid workers receive a much lower fraction of their income in retirement than low-income workers. These benefits are paid out until the retiree passes away, and their spouse or dependents may claim survivor benefits after that point.[95]

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[83] *Id.*

[84] *Id.*

[85] *Retirement Benefits: Learn About Retirement Benefits*, SOC. SEC. ADMIN., https://www.ssa.gov/benefits/retirement/learn.html [https://perma.cc/L6SL-W6AP] (last visited Apr. 10, 2022).

[86] *Retirement Benefits*, *supra* note 82 ("Nobody needs more than 40 credits.").

[87] *Retirement Benefits: Learn About Retirement Benefits*, *supra* note 85.

[88] *Id.*

[89] *Benefit Reduction for Early Retirement*, SOC. SEC. ADMIN., https://www.ssa.gov/OACT/quickcalc/earlyretire.html [https://perma.cc/T93F-LM3S] (last updated Nov. 25, 2008).

[90] *Id.*

[91] *Id.*

[92] *Cost-of-Living Adjustments*, SOC. SEC. ADMIN., https://www.ssa.gov/oact/cola/colaseries.html [https://perma.cc/8P6F-MKBU] (last visited Apr. 10, 2022).

[93] *See Social Security Benefit Amounts*, SOC. SEC. ADMIN., https://www.ssa.gov/oact/cola/Benefits.html [https://perma.cc/22NM-WTYJ] (last visited Apr. 10, 2022) (describing AIME calculations); Emily Guy Birken, John Schmidt, *How Much Social Security Will You Get in Retirement?*, FORBES ADVISOR (Aug. 23, 2021), https://www.forbes.com/advisor/retirement/social-security-benefits/ (explaining the benefits calculation for 2021).

[94] *Benefit Calculation Examples for Workers Retiring in 2022: Primary Insurance Amount*, SOC. SEC. ADMIN., https://www.ssa.gov/oact/progdata/retirebenefit2.html [https://perma.cc/9M45-RXKA] (last visited Apr. 10, 2022).

[95] *Retirement Benefits: Benefits for Your Spouse*, SOC. SEC. ADMIN., https://www.ssa.gov/benefits/retirement/planner/applying7.html#h2 [https://perma.cc/V6XX-NHT8] (last visited Apr. 10, 2022).

The process of claiming benefits occurs entirely through direct contact with the Social Security office and does not offer retirees many choices.[96] Potential retirees can apply for benefits online and may be required to take additional documentation to a local field office to complete the process.[97] Once a retiree chooses an age of retirement, payouts are calculated from standard formulas based entirely on the age and working life income pattern of an individual.[98] Despite this inflexibility, benefits generosities do vary due to income correlation with sex, race, and other characteristics.[99] Overall, benefits are progressive, with individuals who had lower lifetime incomes receiving a larger fraction of their earnings during retirement.[100] Women without long enough work histories due to childbearing, for example, and poor individuals who never secured traditional employment do not receive retirement benefits, but they may get a minimum source of income through Supplemental Security Income ("SSI").[101] Individuals who expect little payout from Social Security may depend even more than others on their private savings to help them pay for expenses close to the end of their life.

II. A GOVERNMENT-RUN PENSION EXCHANGE IN CHILE

Government retirement programs in Chile are structured quite differently. The system is fully funded, meaning contributions are saved in individual accounts and later claimed in a similar fashion to 401(k)s and IRAs. The Chilean government moved to funded accounts from a U.S.-style unfunded system in 1981.[102] Many of today's retirees have only ever contributed to private accounts,

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[96] *See Apply for Social Security Benefits*, SOC. SEC. ADMIN., https://www.ssa.gov/benefits/forms/ [https://perma.cc/MFZ4-35MR] (last visited Apr. 10, 2022).

[97] *Id.*

[98] *Benefit Calculation Examples for Workers Retiring in 2022: Earnings Before and After Indexing*, SOC. SEC. ADMIN., https://www.ssa.gov/oact/progdata/retirebenefit1.html [https://perma.cc/CM4H-PB2S] (last visited Apr. 10, 2022).

[99] Jeffrey B. Liebman, *Redistribution in the Current U.S. Social Security System* 1 (Nat'l Bureau of Econ. Rsch., Working Paper No. 8625, 2001).

[100] *Id.*

[101] In order to qualify for SSI, elderly individuals must have less than $2,000 in savings. *See Understanding Supplemental Security Income SSI Eligibility Requirements—2021 Edition*, SOC. SEC. ADMIN., https://www.ssa.gov/ssi/text-eligibility-ussi.htm [https://perma.cc/ENA8-5R2H] (last visited Apr. 10, 2022).

[102] This transition occurred shortly after democratically elected leader Salvador Allende was displaced by the Military Junta, led by Augusto Pinochet. SEBASTIAN BRETT, REED BRODY & HELENA COOK, HUM. RTS. WATCH, WHEN TYRANTS TREMBLE: THE PINOCHET CASE, pt. II (José Miguel Vivanco, Anne Manuel & Cynthia Brown, Wilder Taylor & Reed Brody eds., 1999), https://www.hrw.org/reports/1999/chile/index.htm [https://perma.cc/FPW4-85V8]. Pinochet went on to impose harsh military rule for twenty years, resulting in thousands of deaths and many convictions of human rights violations. CHILEAN NAT'L COMM'N ON TRUTH & RECONCILIATION, REPORT OF THE CHILEAN NATIONAL COMMISSION ON TRUTH AND RECONCILIATION 1122 (William Lewers & José Zalaquett trans., 1993). Allende made an

and now they must draw on their own savings.[103] The system set up for claiming these benefits was changed in 2004 to a government-run marketplace.[104] The regulatory structure is similar to the ACA's structure which took effect some years later.[105]

During their working life, Chileans must pay 10% of their income into a retirement account managed by a private company.[106] Those who voluntarily save more than 10% receive proportionally more pension payments.[107] There are five companies, called *Administradoras de Fondos de Pensiones* ("AFPs"), who compete to manage workers' mandated investments prior to retirement.[108] Within AFPs, workers may choose between diversified portfolios with different risk exposures.[109] Workers may move their portfolios both between different funds with different risks in one AFP or between separate AFPs.[110] The default investment strategy starts with high risk, high reward investments for young workers, and moves money into progressively safer investments until

agreement with the Central Única de Trabajadores, which was the largest Chilean trade union, to achieve a 100% increase in pension amounts, improve the participation of workers' representatives in the Seguridad Social, and create new benefits for workers. LUIS HERNÁN VARGAS FAULBAUM, NACIONES UNIDAS, COMISIÓN ECONÓMICA PARA AMÉRICA LATINA Y EL CARIBE, REFORMAS DEL SISTEMA DE PENSIONES EN CHILE 22-23 (1952-2008) (2018). On September 11, 1973, a group of military officers led by Pinochet seized power in a coup, ending civilian rule. BRETT ET AL., *supra*, § I.A. The pension reform began in 1977 as an addition to the labor reform, which was proposed by former admiral Roberto Kelly. In 1972, Kelly began to lead a team of economists designing policy for a new, economically prosperous Chile. Most of them were educated at the Department of Economics of the University of Chicago and worked on an alternative economic plan. ARTURO FONTAINE ALDUNATE, LOS ECONOMISTAS Y EL PRESIDENTE PINOCHET 18 (1988). Their studies resulted in a voluminous document known as *El Ladrillo* and finished almost on the eve of the military uprising. *Id.* at 38. That report is considered the base of many economic policies followed by the military dictatorship that ruled Chile from 1973 to 1990. *Id.* In 1978, José Piñera took over the Ministry of Labor, taking charge of the double labor and pension reform. This new system was regulated by Decree Laws 3.500 and 3.501, published in November 1980, and operational as of May 1, 1981. Law No. 3.500, Establece Nuevo Sistema de Pensiones, Noviembre 4, 1980, DECRETO LEY (Chile); Law No. 3.501, Fija Nuevo Sistema de Cotizaciones Previsionales y Deroga Disposiciones Legales Que Indica, Noviembre 4, 1980, DECRETO LEY (Chile).

[103] Ruth Needleman, *Social Security Privatized: The Case of Chile*, NEW LAB. F., Fall 2005, at 77, 77-79.

[104] Law No. 19.934, Enero 30, 2004, D.O. (Chile).

[105] VANESSA C. FORSBERG, CONG. RSCH. SERV., R44065, OVERVIEW OF HEALTH INSURANCE EXCHANGES 1 (Apr. 29, 2021), https://crsreports.congress.gov/product/pdf/R/R44065.

[106] Barbara E. Kritzer, *Chile's Next Generation Pension Reform*, 68 SOC. SEC. BULL., no. 2, 2008, at 69, 69.

[107] *Id.* at 78, 80.

[108] Joaquin Vial Ruiz-Tagle & Francisca Castro, *The Chilean Pension System* 6 (Org. for Econ. Coop. & Dev. [OECD], Working Paper No. 5.6, 1998).

[109] *Id.* at 79, 81.

[110] *Id.* at 69-70.

retirement.[111] The standard retirement age is sixty-five for men and sixty for women, but there is no mandatory retirement age.[112] Individuals who wish to retire before the standard age can only do so if they have sufficient savings in their retirement account, but the average retirement age is seventy.[113]

There are several ways to begin the retirement process. Workers can request a withdrawal of benefits either directly or through an intermediary such as a financial adviser or a life insurance company sales agent.[114] In any case, the worker or their intermediary can access a government software program that sends a solicitation of pension offers to all life insurance companies offering life annuities.[115] The solicitation includes demographic information—such as gender, age, details about their spouse or other beneficiaries—and the total amount of money in the retiree's retirement account. Life insurance companies can choose whether to bid on each individual.[116] Insurance companies who choose to bid send in a pension offer in the form of a monthly payout.[117] Workers with very little savings may only be able to contribute the minimum amount to a pension and in turn receive the minimum payout.[118]

About a week after solicitation, retirees are presented with a list of companies from which they could receive an annuity, ordered by the value of monthly payments.[119] This form of lifetime income is not the only way in which they can claim benefits, however. There is an alternative to lifetime income called

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[111] *See id.* at 81.

[112] OECD, PENSIONS AT A GLANCE: COUNTRY PROFILES–CHILE 1 (2021) [hereinafter CHILE PENSIONS], https://www.oecd.org/els/public-pensions/PAG2021-country-profile-chile.pdf [https://perma.cc/MM7V-PXCA].

[113] *Id.* at 2 (describing early retirement restrictions); OECD, AVERAGE EFFECTIVE AGE OF RETIREMENT IN 1970-2018 IN OECD COUNTRIES (2019), www.oecd.org/els/emp/Summary_1970%20values.xlsx. As in the United States, retirees may claim benefits and continue to work, either at their preretirement job or elsewhere. *Compare* CHILE PENSIONS, *supra* note 112, at 4 (demonstrating that a person's income tax in Chile includes pension income), *with Retirement Benefits: Receiving Benefits While Working*, SOC. SEC. ADMIN., https://www.ssa.gov/benefits/retirement/planner/whileworking.html [https://perma.cc/2WJX-WN76] (last visited Apr. 10, 2022).

[114] Law No. 19.934, Enero 30, 2004, D.O. (Chile).

[115] *Id.*

[116] Kritzer, *supra* note 106, at 72.

[117] *Id.* Retirees receive a full set of offers separately for each contract type they are interested in, allowing them to choose both the company and the product type that best suits their needs. *See id.*

[118] The minimum monthly old-age pension is CLP 142,452.33, which is about USD 175 per month. CHILE PENSIONS, *supra* note 112, at 2. The average Chilean pension payment is around USD 400. *Protesters Demand Reforms to Chile's Private Pension System*, DEUTSCHE WELL (Aug. 8, 2016) [hereinafter *Protestors Demand Reforms*], https://www.dw.com/en/protesters-demand-reforms-to-chiles-private-pension-system/a-19491321 [https://perma.cc/7QJK-QX3E].

[119] Illanes & Padi, *supra* note 31, at 9-10.

programmed withdrawal.[120] Because retirement accounts are privatized, individuals may take a fraction of their total account out of the system each month, allowing them quicker access to a larger portion of their savings up front.[121] However, the remainder of the money remains invested in a low risk portfolio, leading to fluctuations in payout.[122] A very long-lived individual may spend down all their assets and be left with no income late in life, except a small baseline payment in accordance with Chilean antipoverty programs.[123] All potential retirees receive a printout from the government containing the full list of offers they received from private companies as well as information about programmed withdrawal.

Figure 1 shows an example retiree's printout showing annuity offers.[124] The retiree's most generous offer is CLF 26.61, which translates to about USD 970.[125] Their least generous offer is CLF 25.36, or USD 925. That means a retiree choosing a Consorcio Vida annuity loses 4.6% of their income per month, which can result in lifetime wealth decreasing by USD 8,500 for an average retiree.[126] By taking programmed withdrawal, the same retiree could get USD 1,009 per month at first, but that amount could drop to about USD 800 per month by age eighty-five. The type of retirement product the retiree chooses—annuity or programmed withdrawal—matters a great deal to their financial well-being in old age. Figure 1 shows the simple immediate annuity, which pays out the exact same amount of money each month. There are two other popular annuity types. Annuities with *guarantees* will pay money to an individuals' heirs, such as their grown children, for a specified number of years even if the individual dies.[127] These are valuable to retirees who are afraid they will die early and leave their families with too small of a bequest. Annuities with *deferrals* will start paying out a year or more in the future.[128] These pensions benefit wealthy or long-lived individuals who do not need money immediately upon retirement and would rather get a slightly more generous pension later in life.

[120] *Id.* at 3-4.

[121] *Id.*

[122] *Id.*

[123] *Id.*

[124] *Id.* at 11 fig.3.

[125] Note that all the payments are in inflation-adjusted currency.

[126] Note that each firm's risk rating is prominently displayed in the printout, encouraging individuals to choose firms that are rated as having low risk of bankruptcy. Retirement payments are partially reinsured by the government in case a life insurance company does go bankrupt.

[127] Illanes & Padi, *supra* note 31, at 2.

[128] *Id.*

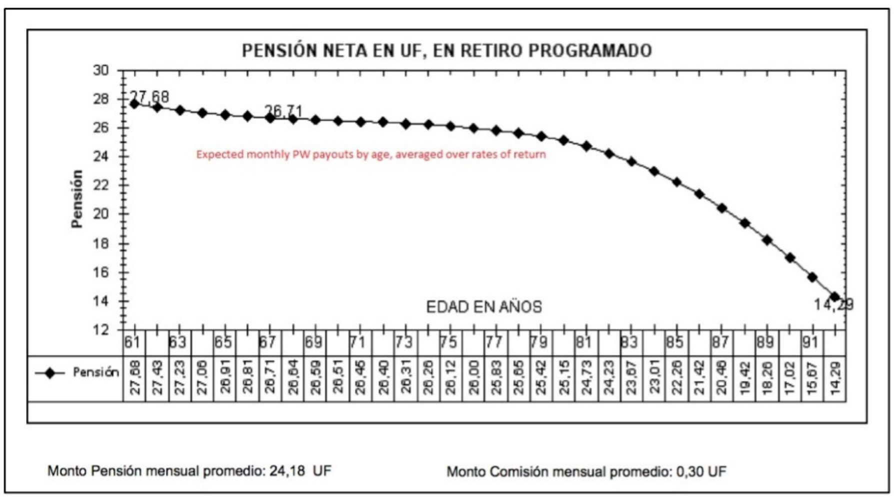
Figure 1. Sample printout from Chile's retirement system—Immediate Simple Annuity.

MODALIDAD RENTA VITALICIA INMEDIATA

RENTA VITALICIA INMEDIATA SIMPLE Annuitize full wealth, 0 guarantee, 0 deferral

N° Oferta	Compañía de Seguros de Vida Brand Name	Pensión final Mensual sin Retiro de Excedente UF	Pensión final Mensual en UF Considerando un retiro de excedente de 0,00 UF	Pensión con retiro de Excedente Máximo		Clasificación de riesgo de la Compañía de Seguros (2)
				Pensión final Mensual UF	Excedente UF	
43872093	CRUZ DEL SUR	26,61	<- Monthly payment		Risk rating ->	AA-
43872099	RENTA NACIONAL	26,58				BBB-
43872083	METLIFE	26,52				AA
43872100	CORPSEGUROS	26,34				AA-
43872094	PRINCIPAL	26,28				AA
43872097	CORPVIDA	26,26				AA-
43872084	EUROAMERICA VIDA	26,25				AA-
43872090	PENTA VIDA	26,25				AA-
43872091	OHIO NATIONAL	26,24				AA
43872098	SURA	26,21				AA
43872095	CN LIFE	25,90				AA
43872092	BICE VIDA	25,86				AA+
43872085	CHILENA CONSOLIDADA	25,59				AA
43872086	CONSORCIO VIDA	25,36				AA+

Figure 2. Sample printout from Chile's retirement system—Programmed Withdrawal.



After receiving offers, retirees can visit the sales agents of life insurance companies and bargain for better pension offers.[129] Finally, they can decide to put all their money into an annuity or programmed withdrawal or put part of

[129] *Id.*

their money in each. Figure 2 shows that programmed withdrawal provides more money in the first few years than an annuity, but the received amount drops over time as the principal decreases. The decision process is facilitated by the government program—but, regardless, retirees contract directly with a private life insurance company or an AFP that facilitates programmed withdrawal. The resulting contracts are low price and high quality.[130] On average, a retiree gets almost all of their savings back from the insurance company in expected payouts during their lifetime, except for 1-2% of the total which accrues to the insurance company. This is an excellent deal for those who live longer than expected and get a generous payout for the rest of their life. Retirees who unluckily die earlier than the statistical average lose money, as is standard in all insurance contracts.

Because pension generosity is determined by the private market, there are no restrictions on the distribution of pension generosity across demographics. Because women are likely to live longer than men, they usually get lower payouts than men with the same savings.[131] Older retirees get higher payouts than younger retirees.[132] Finally, and most worryingly, people without formal work history, such as those working "off the books" during their preretirement life, do not qualify for participation in the pension system.[133] The pension system has therefore been widely critiqued as a poor social safety net for low-resourced Chileans.[134] However, several features of the Chilean retirement system change the distributional effects of the system. First, since 2009, women who had children are awarded a "child bonus" that adds significantly to the total wealth in their retirement account in proportion to the number of children they had.[135] The goal of this reform was to redistribute capital toward women who stayed home to care for children and had too little job history to create a significant amount of wealth to pay for their retirement. Second, the government does pay a small amount of basic income to retirees regardless of wealth level.[136] The amount is low, but the mechanism exists to redistribute further to poor and elderly individuals.[137]

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[130] *See id.* at 52 (comparing the cost of U.S. and Chilean pension funds); Kritzer, *supra* note 106, at 71 (discussing the diversification and internationalization of AFPs, resulting in the resiliency of the funds).

[131] Kritzer, *supra* note 106, at 76.

[132] CHILE PENSIONS, *supra* note 112, at 1.

[133] *Id.* at 2.

[134] *See Protestors Demand Reform*, *supra* note 118.

[135] CHILE PENSIONS, *supra* note 112, at 2-3.

[136] Law No. 20.255, tit. 2, art. 47, Marzo 17, 2008, D.O. (Chile). This Statute creates and establishes a Solidarity Pension System. Chile provides and finances benefits such as basic solidarity pensions and social security contributions for old age and disability.

[137] Increased generosity of the minimum pension is a reform priority for both parties. *See, e.g.*, *Presidente Firma Proyecto de Ley para Subir las Pensiones: "Nuestro Gobierno Tiene un Compromiso Político y Moral con Mejorar las Pensiones*,*"* PRENSA PRESIDENCIA (Sept. 20, 2021), https://prensa.presidencia.cl/comunicado.aspx?id=180023 [https://perma.cc

III. LESSONS FROM CHILE

Chile's experience provides two sets of lessons for U.S. policy makers. First, a centralized pension authority in Chile has combined annuity market regulation with creation of an exchange that facilitates communication between retirees and companies. Retirees in this setup reap the benefits of competition while regulators can watch over market transactions to make sure pensions are adequate. For instance, Chile regulates commissions that intermediaries can take from retirees, limiting the conflicts of interest between financial advisers and their clients. No such rule exists in the United States, resulting in a broken market for financial advice on retirement investment. Private-market regulators such as the DOL, the SEC, the CFPB, and state insurance commissioners must regulate conflicts of interest indirectly, with each facing limitations on their power.[138]

Second, Chilean regulators have not imposed a mandate on retirees to annuitize any part of their retirement savings, unlike the United States which mandates participation in Social Security while allowing other retirement savings to be utilized freely. Avoiding a mandate provides three benefits to retirees. The ability to opt out of annuitization allows retirees to better match their financial strategy during retirement to their preferences. Moreover, partially mandating annuitization can have a negative impact on private markets for annuities due to *adverse selection*—retirees in the United States buying private annuities cost more for companies to insure than those buying in Chile. Finally, the choices retirees make in Chilean system ultimately redistributes wealth toward sick and poor retirees who might want their retirement savings as quickly as possible.

A. *Consolidated Agency Authority*

In Chile, the SP oversees every aspect of the pension system. Their mission is to "[p]rotect people's pension rights, contribute to the proper functioning of the pension system and unemployment insurance, with quality regulation and supervision and the timely delivery of clear and reliable information."[139] The SP is in charge of coordinating the government-run exchange, as well as audits of private companies, regulatory rule-making, enforcement actions, and risk management.[140] The Chilean SP combines the roles of state insurance commissioners, the Pension Benefit Guaranty Corporation, the DOL, the SEC,

/H2CA-W7RD] (noting outgoing president's position of increasing minimum pension distributions); *Consagración de un Estado Social de Derecho*, BORIC PRESIDENTE, https://boricpresidente.cl/propuestas/pensiones/ [https://perma.cc/VDK3-ZFGA] (last visited Apr. 10, 2022) (noting incoming president's proposal to increase minimum pension distributions).

[138] *See supra* Part I.

[139] *La Institución*, *supra* note 36 (author's translation).

[140] Law No. 101, art. 3(i)-(t), Noviembre 13, 1980, D.O. (Chile); *see also* Law No. 20.789, art. 10, Octubre 29, 2014, D.O. (Chile).

the CFPB, and several other administrators in the United States. First, the SP is tasked with ensuring the solvency of financial services companies involved in the pension market. Companies handling pension assets may invest only in eligible assets, which include state securities analogous to Treasury bills, bond markets, securitized debt instruments, and deposit-taking institutions.[141] Highly regulated investment options differ significantly from pension funds and insurance company investing in the United States, where there is an incentive to "reach for yield" by investing in high risk assets such as private equity funds.[142]

Despite this difference, Chile and the United States share a risk-based capital requirement approach that requires insurance companies to submit their financial statements to regulators and demonstrate their solvency by retaining cash reserves in case of liquidity needs.[143] In the case of annuities, if a company goes bankrupt while actively making payouts to retirees, the government will step in and make payments on behalf of the provider.[144] This government "reinsurance" is limited—only 75% of the monthly pension generosity is covered, up to a cap—but it increases individuals' confidence that the annuity market can be trusted throughout their lifetime.[145] Even retirees who do not choose to get an annuity are provided for.[146] Pension fund administrators continue to manage wealth, with yield targets that ensure their ability to match the schedule of payments in Figure 2.[147] If the targets are not reached, the SP can step in and fill the gap.[148] They also manage any insolvencies of pension fund administrators. The Pension Benefit Guaranty Corporation and state insurance commissioners oversee pension solvency and insurance company

[141] SUPERINTENDENCIA DE ADMINISTRADORAS DE FONDOS DE PENSIONES, *A Description of the Current Pension System*, *in* THE CHILEAN PENSION SYSTEM 53, 73-75 (Alejandro Ferreiro Yazigi ed., Linda Craddock trans., 4th ed. 2003), https://www.spensiones.cl/portal/institucional/594/articles-3523_chapter4.pdf [https://perma.cc/Y53B-EBQY].

[142] Timothy W. Martin, *Pension Pile on Risky Investments—A More Volatile Mix of Stocks, Real Estate and Private Equity Needed to Match Prior Returns*, WALL ST. J., June 1, 2016, at C1 (discussing pension funds); Bo Becker & Victoria Ivashina, *Reaching for Yield in the Bond Market*, 70 J. FIN. 1863, 1863 (2015) (discussing insurance companies).

[143] *See generally* OECD, CHILE: REVIEW OF THE INSURANCE SYSTEM (2011), https://www.oecd.org/finance/insurance/49497462.pdf [https://perma.cc/84H4-LFAZ] (describing Chile's requirements); FRED E. KARLINSKY, RICHARD J. FIDEI & CHRISTIAN BRITO, GREENBERG TRAURIG LLP, SOLVENCY REGULATION FRAMEWORK FOR UNITED STATES INSURERS (Oct. 22, 2019), http://www.lexisnexis.com/supp/LargeLaw/no-index/business/insurance-solvency-regulation-framework-for-united-states-insurers.pdf (describing United States' requirements).

[144] SUPERINTENDENCIA DE ADMINISTRADORAS DE FONDOS DE PENSIONES, *supra* note 141, at 71.

[145] *See id.*

[146] *See id.* at 54 (describing eligibility for state-guaranteed pension).

[147] *Id.* at 53-54.

[148] *Id.* at 54.

solvency in the United States without paying any explicit attention to the solvency of Social Security except in budget analyses.[149]

In addition to its role as a financial regulator focused on macroprudential policy and solvency risk, the SP takes on a role in protecting and providing for retirees. One important role for the SP is deciding how much of retirement accounts can be paid out in programmed withdrawal, the alternative to buying an annuity in the Chilean system.[150] The SP simulates possible future interest rate paths and based on these, decides how much a retiree can safely remove from their account.[151] The average path of these withdrawals is shown to retirees in Figure 2, but there is some uncertainty as to how much a payment will be each month. This calculation demonstrates the SP's overall challenge: the amount of programmed withdrawal allowed must be large enough to serve the needs of retirees waiting for their payouts but also preserve enough capital to ensure adequacy of payouts in future years.

The SP also oversees companies providing annuities and ensures that they are complying with all required rules. The SP can conduct audits and investigate internal data from life insurance companies and impose fines if there is evidence of wrongdoing.[152] This more traditional regulatory role also allows the SP to monitor overall pension adequacy of retirees. Because regulated entities manage all retirement savings, the SP has rich individual level data on how much retirees save, how generous their pension offers are, and how much retirees ultimately gain from the pension system.[153] The data allow the SP to simulate the cost of paying out pensions under different economic conditions, including some form of stress testing that helps regulators anticipate future pension shortfalls. In the United States, the Pension Benefit Guaranty Corporation makes risk projections that help it insure private pension plans.[154] However, that role is not combined with any authority to directly interact with retirees and modify benefits.

Moreover, financial regulators in the United States do not generally influence how retirees make choices over pension investment options. In Chile, however, the SP can modify the interface users see when trying to access the retirement

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[149] *See, e.g.*, *Own Risk and Solvency Assessment (ORSA)*, NAT'L ASS'N OF INS. COMM'RS (Apr. 9, 2021), https://content.naic.org/cipr_topics/topic_own_risk_and_solvency_assessment_orsa.htm [https://perma.cc/B9UD-3VHV].

[150] *See* Solange Berstein, Olga Fuentes & Nicolás Torrealba, *In an Individually Funded Pension System: How Can Risks Be Mitigated?* 3 (Superintendencia de Pensiones, Working Paper No. 36, 2010).

[151] *See id.*

[152] *See, e.g.*, Press Release, Comisión Para el Mercado Financiero, CMF Sanctions 10 Life Insurance Companies for Breaching SCOMP Regulations in Contracting Life Annuities (Sept. 11, 2020), https://www.cmfchile.cl/portal/principal/613/w3-article-29811.html [https://perma.cc/C5JU-WKFC].

[153] The data are publicly available from the SP on request.

[154] PENSION BENEFIT GUAR. CORP., FY 2020 PROJECTIONS REPORT 1 (2021), https://www.pbgc.gov/sites/default/files/documents/092021-fy2020-projrep.pdf [https://perma.cc/CA54-DPNT].

system. Currently, individuals can enter the system themselves through a government-run website.[155] If the SP wants to educate retirees on the increasing costs associated with high longevity, it can easily incorporate that into the printout retirees receive. The SP can choose to highlight pension features other than generosity, such as risk rating, that it believes are of policy importance.[156] Scholars refer to these features as "choice architecture," usually referring to the psychological importance these aspects have to individuals interacting with a system.[157] The SP's role in designing and overseeing the government-run exchange places it in the position of a platform, similar to private platforms like ride-sharing companies.[158] Platforms are uniquely positioned to ensure both companies and individuals are complying with internal protocols and encouraging participation by desired private companies and retirees.[159] Importantly, the SP also has the ability to regulate access to the system—if a retiree chooses to hire an intermediary, such as an insurance company sales agent or a financial advisor, the commission the intermediary can charge is limited.[160]

Last, but not least, the SP manages redistribution through the Chilean pension system. There are two antipoverty components to the retirement program. First, all retirees receive a minimum guaranteed pension that helps the poorest retirees get some income.[161] Second, the SP pays government subsidies directly into individuals' private retirement account in cases such as the *bono por hijo* program, which increases retirement assets for women who have had children

[155] The website for accessing the system has a public landing page, which any Chilean citizen may then access to determine eligibility and solicit offers. *Canalizamos Tus Ofertas de Pensión para que Puedas Decidir de Manera Informada y Transparente*, SCOMP, http://www.scomp.cl/ [https://perma.cc/YGN3-M653] (last visited Apr. 10, 2022).

[156] *See generally* Gaurab Aryal, Eduardo Fajnzylber, Maria F. Gabrielli & Manuel Willington, *Auctioning Annuities* (Wharton Pension Rsch. Council, Working Paper No. 2021-06, 2021) (conducting empirical analysis of Chilean market for annuity contracts where "retirees with lowest savings quintiles value firms' risk ratings . . . the most, while the high savers do not").

[157] *See generally* Richard H. Thaler, Cass R. Sunstein & John P. Balz, *Choice Architecture*, *in* THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY 428 (Eldar Shafir ed., 2013).

[158] Ride-sharing companies like Uber and Lyft have relied on a business model that matches private sellers of ride services with private purchasers (riders). The platform's role is to manage the marketplace, including imposing regulations on drivers and riders. *See generally* Kevin J. Boudreau & Andrei Hagiu, *Platform Rules: Multi-sided Platforms as Regulators*, *in* PLATFORMS, MARKETS AND INNOVATION 163 (Annabelle Gawer ed., 2009). Private platforms have been key players in the modern regulatory state. *See generally* Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267 (2017) (exploring public use of platforms and other digital intermediaries to regulate markets, and their limits).

[159] *See id.*

[160] *Compendio de Normas del Sistema de Pensiones*, SUPERINTENDENCIA DE PENSIONES, https://www.spensiones.cl/portal/compendio/596/w3-propertyvalue-3275.html [https://perma.cc/22EZ-88MV] (last visited Apr. 10, 2022).

[161] Ruiz-Tagle & Castro, *supra* note 108, at 8, 10.

during their preretirement years.[162] In the United States, similar forms of redistribution occur through the Social Security system because different populations receive different fractions of their preretirement income. It is difficult for administrators in the United States to target specific characteristics, however, such as women who have less retirement savings due to childbearing, since benefit formulas can depend only on the information reported to the SSA and cannot differ by gender.

Chile's administrative system is also likely more efficient than the United States because it places nearly every key regulatory task related to retirement under the banner of the SP. Consolidated authority is particularly important in areas such as retirement policy where individuals are receiving benefits that are partially provided by public actors and partially provided by private markets.[163] For instance, Chile regulates commissions for financial advisors that help retirees access their retirement savings. In the United States, authority over retirement policy is split across multiple agencies, leaving a gap in oversight of financial intermediaries. No single regulator has the right to eliminate conflicts of interest in provision of financial advice. Instead, U.S. authorities can at most interpret the law of fiduciary duty more strictly or more leniently. Similarly, Chilean law requires firms offering annuities to provide offers through the government-run market, which includes key disclosures.[164] In contrast, U.S. annuity providers must disclose fees to their customers, but they can and do make it difficult for retirees to understand fees, compare across products, and make informed decisions. No agency could require private annuity providers to consolidate their offers on one platform, to the detriment of U.S. retiree welfare. Finally, a consolidated agency in charge of pension policy makes it possible for Chile to have a successful government-run exchange for pension products. The United States has struggled to make an exchange work in the context of health insurance, despite explicit provisions made by the Affordable Care Act ("ACA") in 2010.[165] The ACA health exchanges have successfully weathered multiple

[162] This benefit is granted to all Chilean women who receive a pension according to the Decree Law No. 3.500 or from the Social Security Institute ("IPS"), despite not being affiliated to a pension scheme. Additionally, qualifying women must be at least sixty-five years of age; they must maintain a residence in Chilean territory for twenty years, continuous or discontinuous, counted from the age of twenty; and they must have resided in Chile for at least four of the five years prior to the application date.

[163] It is not always optimal to place the authority to complete all tasks related to a specific market under one administrator—different agencies with overlapping jurisdiction can be more resistant to regulatory capture, more effectively specialize in the task they are assigned, and provide redundancies in case one actor fails to do their job. David A. Hyman & William E. Kovacic, *Why Who Does What Matters: Governmental Design and Agency Performance*, 82 GEO. WASH. L. REV. 1446, 1460-63, 1477-80, 1481-82 (2014). *See generally* Jody Freeman & Jim Rossi, *Agency Coordination in Shared Regulatory Space*, 125 HARV. L. REV. 1131 (2012).

[164] Law No. 19.934, Febrero 21, 2004, D.O. (Chile) (promulgating "rules regarding the granting of pensions through the life annuity modality").

[165] 42 U.S.C. § 18031.

constitutional challenges and pushback from state governments, with 31 million Americans buying insurance from exchanges.[166] Consolidated agency power in other key markets could expand the usage of this regulatory tool.

B. *Options in Retirement Income*

Retirees in the Chilean pension system are granted a great deal of choice over retirement products. The profile of payments retirees will receive over the years can be tailored to satisfy individual preferences—those who want a lot of money shortly after retirement can choose programmed withdrawal, those who are worried about expenses late in life can take a deferred annuity, and those who are concerned about their adult children can take a guarantee period. Moreover, retirees can split their wealth into multiple products, taking a programmed withdrawal with part of the funds and an annuity with the remainder. In comparison, the U.S. Social Security system has very few choices available—once a worker chooses an age of retirement, their benefits are limited to fixed payments for life according to the government's formula.

A choice-based system has the potential to be disastrous for both retiree welfare and the function of the market due to *adverse selection*. An issue that was raised to the public consciousness during debates about the ACA in the United States, adverse selection occurs when individuals who impose the highest costs on the system decide to buy into a market, while low-cost individuals opt out.[167] If adverse selection is mild, the market is left with inefficiently high prices that keep some individuals from participating.[168] In severe cases, adverse selection can result in a "death spiral" where all participants opt out due to high costs, effectively killing the market.[169] The phenomenon is particularly common in insurance markets, though it can be true in any market where there is asymmetric information between the producers and consumers of a good. Adverse selection was used to justify the imposition of an individual mandate in

[166] *See* Press Release, U.S. Dep't of Health & Hum. Servs., New HHS Data Show More Americans than Ever Have Health Coverage Through the Affordable Care Act (June 5, 2021), https://www.hhs.gov/about/news/2021/06/05/new-hhs-data-show-more-americans-than-ever-have-health-coverage-through-affordable-care-act.html [https://perma.cc/5LLR-YBFF] (compiling data on ACA enrollment by state).

[167] *See, e.g.*, Tom Baker, *Health Insurance, Risk, and Responsibility After the Patient Protection and Affordable Care Act*, 159 U. PA. L. REV. 1577, 1619 (2011) (arguing exchanges can tolerate noncompliance).

[168] *Risk Pooling: How Health Insurance in the Individual Market Works*, AM. ACAD. OF ACTUARIES, https://www.actuary.org/content/risk-pooling-how-health-insurance-individual-market-works-0 [https://perma.cc/UJ9Y-3W9G] (last visited Apr. 10, 2022) ("Adverse selection increases premiums for everyone in a health insurance plan or market because it results in a pool of enrollees with higher-than-average health care costs.").

[169] Larry Levitt & Gary Claxton, *Is a Death Spiral Inevitable If There Is No Mandate?*, KAISER FAM. FOUND. (June 19, 2012), https://www.kff.org/health-reform/perspective/is-a-death-spiral-inevitable-if-there-is-no-mandate/ [https://perma.cc/TEU5-3PEP] (contending that invalidating individual mandate would not necessarily result in death spiral under ACA).

the ACA, which required everyone, even young healthy people with low medical costs, to buy health insurance on the government exchange. The original design of the ACA required individuals who remained uninsured to pay a penalty, though Congress reduced this penalty to zero.[170] In the annuity context, adverse selection occurs when only individuals who expect to live long, healthy lives choose to buy annuities. The result is that annuity providers are on the hook for many more monthly payments than expected, causing losses and potential insolvency. Companies that expect adverse selection may not even enter the market as a result.

In previous work, the author, with collaborator Professor Gastón Illanes, studied the extent to which adverse selection impacted the Chilean annuity market.[171] Using cutting-edge computational techniques, Professor Illanes and the author show that adverse selection does exist in the Chilean market, with those buying annuities living longer on average than those who take a programmed withdrawal of their assets.[172] However, other forms of selection are at work as well. Individuals vary in their preferences for leaving money to their heirs after death, with some being very concerned for the fate of their adult children and others not having living relatives they need to provide for. Some individuals who are long lived and potentially costly to annuity providers take programmed withdrawal in order to protect the inheritance value of their retirement savings.[173] Alternatively, individuals with a lot of wealth outside the retirement system often choose not to buy annuities because they have enough money to pay for end-of-life expenses. These high-wealth individuals who choose programmed withdrawal are also likely to be long-lived, lessening the impact of adverse selection. Therefore, choices available in the Chilean system allow people to match their retirement income strategy to their particular needs and also lessen market failures that could drive up annuity prices.

As a result of low adverse selection, annuities in Chile are very generous. On average, annuitants receive 5.5% of their total wealth per year, meaning they will receive all their money back in 18.5 years.[174] The average sixty-year-old woman in Chile has a life expectancy of nearly twenty-five more years.[175] That means that a woman will profit by 6.5 years of annuity payments on average, which adds up to nearly USD 3,000. Unsurprisingly, these annuities are popular, with more than two-thirds of the population choosing an annuity over

[170] *See* California v. Texas, 141 S. Ct. 2104, 2112 (2021) ("In 2017, Congress amended the [ACA] by setting the amount of the penalty in each category . . . to '$0,' effective beginning tax year 2019.").

[171] Illanes & Padi, *supra* note 31, at 15.

[172] *Id.*

[173] *See id.* at 4 ("[P]rogrammed withdrawal allows retirees to leave more wealth for their heirs if they die early, and provides more liquidity early in retirement.").

[174] *Id.* at 24-25.

[175] Ximena Moreno, Lydia Lera & Cecilia Albala, *Disability-Free Life Expectancy and Life Expectancy in Good Self-Rated Health in Chile: Gender Differences and Compression of Morbidity Between 2009 and 2016*, PLOS ONE, Apr. 30, 2020, at 2.

programmed withdrawal.[176] The remaining individuals must take a programmed withdrawal, since savings are mandatory.[177] Although the Chilean system is not entirely voluntary, offering choices across profiles of payments after retirement has resulted in a well-functioning market for annuities in Chile.

The U.S. policy environment produces very different outcomes. Economists have modeled the environment as a partial mandate, in which a retiree must take a fraction of wealth as an annuity due to Social Security.[178] The retiree then has choices with respect to the rest of her money, such as buying a private annuity, investing in other assets, or simply holding onto the money in an illiquid form like housing wealth. Professor Illanes and the author demonstrate that a private market for annuities functions very differently in the presence of a partial mandate.[179] Some households are satisfied with the amount of money that is mandated to be held in annuity form, and choose not to buy an annuity with the remaining money. Those who would like to annuitize their private savings are much more adversely selected than their Chilean counterparts. That is, the marginal individual who wants to buy an annuity in a U.S.-type system is much more costly to insure than the comparable person in a Chile-type system.

The high cost of insuring longevity in the U.S. private market may partially explain the poor quality of annuities offered in U.S. markets.[180] Insurance companies would find it too costly to offer cheap life annuities to the typical retiree who needs more income than Social Security can offer. To compensate for the adverse selection of customers, insurance companies offer worse quality products, such as variable annuities, which shift some risks to the retirees. They also charge higher prices, hidden in complex fee structures.[181] Moreover, it suggests a counterintuitive downside of Social Security: it may be forcing individuals to annuitize money that they wish to use for immediate consumption or private investment. For instance, sick and unhealthy retirees may prefer to take several months of Social Security benefits as soon as they retire so they can take a long-awaited vacation before their health declines further. Others may want to use the cash to pay for a home close to their children, or to pay off debts that have kept them financially constrained. Under the current design of the Social Security system, these individuals are out of luck; they are required to take their benefits in a constant payment every month. The distributional

[176] *See* Illanes & Padi, *supra* note 31, at 13.

[177] *See id.* at 3-4.

[178] *See* Olivia S. Mitchell, James M. Poterba, Mark J. Warshawsky & Jeffrey R. Brown, *New Evidence on the Money's Worth of Individual Annuities*, 89 AM. ECON. REV. 1299, 1299 (1999).

[179] *See* Illanes & Padi, *supra* note 31, at 2-6.

[180] *See* Ken Fisher, *Why I Still Hate Annuities: Here Are the Reasons These Investments Are Bogus*, USA TODAY (Apr. 14, 2019, 11:50 AM), https://www.usatoday.com/story/money/columnist/2019/04/14/annuity-reasons-why-annuities-bogus/3447557002/.

[181] *See* Tyler Harrison, *The Hidden Costs of Variable Annuities and How to Avoid Them*, KIPLINGER (Oct. 19, 2017), https://www.kiplinger.com/article/retirement/t003-c032-s014-how-to-avoid-hidden-costs-of-variable-annuities.html [https://perma.cc/8SL7-QUZW].

consequences can be undesirable as short-lived retirees are more likely to be poor.[182]

IV. INTEGRATING MANDATES AND MARKETS

Despite its positive qualities, Chile's pension system has an undesirable history and is still in need of reform. Chile's economic policy during Pinochet's military rule was adopted as a whole, with the single goal of improving Chile's growth rate.[183] Pinochet's regime was not equally concerned with the welfare of all Chilean citizens; not only was Pinochet's military government responsible for the torture and death of tens of thousands of political dissidents, but its economic policies disproportionately harmed the poorest Chileans.[184] Though Chile experienced significant growth with the adoption of the original economic plan, *El Ladrillo*, a recession in the 1980s permanently worsened inequality and led to fewer economic opportunities for Chile's poorest populations.[185] Echoes of this history remain in modern Chile's retirement policy, in which individual wealth accumulation is the primary source of retirement benefits and pension payments to poor and low-income populations are small.[186] In contrast, the U.S. pension system is heavily focused on redistribution. Moreover, democratic processes make policy changes more gradual, ruling out an *El Ladrillo*–type root-and-branch reform.

Rather than adopting Chile's policies wholesale, U.S. policy makers can borrow the most positive aspects of Chile's system. It is important to note that since the end of military rule in Chile in 1989, there have been multiple democratic reforms that have maintained the basic outlines of the original

[182] *See* Kevin Fiscella & Peter Franks, *Poverty or Income Inequality as Predictor of Mortality: Longitudinal Cohort Study*, 314 BRIT. MED. J. 1724, 1725 (1997).

[183] *See* STEVE J. STERN, BATTLING FOR HEARTS AND MINDS: MEMORY STRUGGLES IN PINOCHET'S CHILE, 1973–1988, at 168 (2006).

[184] *See Chile Dictatorship Victim Toll Bumped to 40,018*, CBC NEWS (Aug. 18, 2011, 8:35 PM), https://www.cbc.ca/news/world/chile-dictatorship-victim-toll-bumped-to-40-018-1.998542 [https://perma.cc/BT9W-UHL7]; *see also Chile's Crisis: A Legacy of Pinochet*, U.S. NEWS (Nov. 18, 2019, 10:57 AM), https://www.usnews.com/news/best-countries/articles/2019-11-18/chiles-political-crisis-is-another-brutal-legacy-of-long-dead-dictator-pinochet (discussing how Pinochet sought to dismantle welfare and socialist systems former President Allende had begun to build by targeting labor rights, retirement, and health care, creating major inequities).

[185] *See* David E. Hojman, *Poverty and Inequality in Chile: Are Democratic Politics and Neoliberal Economics Good for You?*, 38 J. INTERAMERICAN STUD. & WORLD AFFS. 73, 77 (1996) ("After the 1973 military coup, a drastic price stabilization program . . . led to an increase in poverty and inequality. Although some recovery did take place between 1977 and 1981, a financial crisis in 1982-1983 . . . pushed the unemployment rate to unprecedented levels . . . [and] the incidence of poverty was at its highest, and inequality at its most extreme, from the mid-1970s to the mid-1980s.").

[186] *See* Diamond, *supra* note 27, at 4, 20.

framework in *El Ladrillo*.[187] One of those was the introduction of *El Sistema de Consultas y Ofertas de Montos de Pensión* and the "choice architecture" that has resulted in excellent outcomes for middle- and upper-class retirees in 2004.[188] The legislature could have replaced the privatized system with a public Social Security fund, but it chose not to. Similarly, the 2008 reform that introduced the *bono por hijo* and minimum pension kept the underlying structure of the pension system.[189] Gradual reforms have had some success in Chile and may provide a way forward for the United States.

Two aspects of U.S. retirement policy can benefit from following the Chilean example. First, administrative agencies at the state and federal levels that are involved in overseeing retirement wealth can work together to create a harmonious regulatory agenda.[190] Cooperative agency action is hard to achieve and often fraught with inefficiency.[191] However, the current divided framework leaves too many gaps in retirement regulation that private companies can exploit. Consider, for example, the debate over annuity sales to retirees. Financial advisors who are compensated by commissions have the incentive to recommend expensive products, costing retirees thousands of dollars.[192] Much of the legal debate has focused on curbing these conflicts of interest.[193] However, a more fundamental problem exists in the annuity market—the nonexistence of "good" annuities that are popular in Chile. U.S. retirees need but cannot access inflation-adjusted fixed lifetime annuities that cover spouses.[194] The current regulatory framework can do nothing about this exclusion. A Chilean-style coordinated reform, however, could remedy this deeper issue. If individuals were offered tax incentives to buy inflation-adjusted fixed annuities, or if agencies worked together to facilitate their purchase through a government-run marketplace, annuity providers may feel more comfortable offering these

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[187] *See* STEVE J. STERN, RECKONING WITH PINOCHET: THE MEMORY QUESTION IN DEMOCRATIC CHILE, 1989–2006, at 1 (2010).

[188] Law No. 19.934, Febrero 21, 2004, D.O. (Chile).

[189] *See supra* note 162 and accompanying text.

[190] *See* Hyman & Kovacic, *supra* note 163, at 1499; Jonathan R. Macey, *Organizational Design and Political Control of Administrative Agencies*, 8 J.L. ECON. & ORG. 93, 104-07 (1992).

[191] *See generally* Freeman & Rossi, *supra* note 163 (discussing challenges of interagency coordination while arguing its importance).

[192] *See* EFFECTS OF CONFLICTED INVESTMENT ADVICE, *supra* note 25, at 2 (noting that "financial advisors are often compensated through fees and commissions that . . . generate acute conflicts of interest").

[193] *See* Bhattacharya et al., *supra* note 25, at 1-4.

[194] *See* Mike Piper, *Inflation-Adjusted Annuities No Longer Available: Now What?*, OBLIVIOUS INVESTOR (Feb. 17, 2020), https://obliviousinvestor.com/inflation-adjusted-annuities-no-longer-available-now-what/ [https://perma.cc/V94B-JTPS]. Rare exceptions exist for public sector employees with defined-benefit plans through their employer that offer cost of living adjustment. *See, e.g.*, *Cost-of-Living Adjustment (COLA)*, CALPERS, https://www.calpers.ca.gov/page/retirees/cost-of-living/cola [https://perma.cc/4Z8F-CTV4] (last updated Mar. 11, 2022).

products despite the risk of adverse selection. A consortium of agencies addressing retirement policy, including at least the DOL, the SEC, and state regulators, would be needed to implement any such policy. However, the benefits to retirees may be even more significant than any regulation targeting intermediaries.[195]

The second lesson U.S. regulators can take from Chile is that retirement income is valued very differently by different populations. Healthy individuals who expect to live a long life and have little desire to leave money to their heirs find annuities very valuable. But, sick individuals who want to leave money after they die may not want to buy an annuity, and may even prefer to take a lump sum of cash in lieu of their Social Security payments. Even within the mandatory Social Security system in the United States, policy makers can do more to accommodate both of these populations. Social Security can be redesigned to offer retirees choices over benefit structures that better match their needs.[196] Specifically, retirees of any age could be given the choice to take larger payments in the first few years after retirement, followed by a decreasing profile of payments over time. This front-loaded payout structure, inspired by Chile's programmed withdrawal, would allow retirees who are poor or sick to enjoy their retirement fully.

There are pros and cons to this type of reform. Retirees choosing a more front-loaded payout should be warned that this option would likely lead to lower benefits overall and the possibility of poverty in old age. Giving people access to retirement assets up front, rather than spreading them over time, may increase temptation for individuals to waste their assets and worsen their financial position.[197] However, these temptations already exist in the Social Security system—early claiming of Social Security benefits already accommodates some of these needs at a steep cost to retirees.[198] Moreover, there are multiple benefits from offering more differentiated choices within Social Security. If all claimants choose a front-loaded payout structure, the private annuity market would experience higher demand for fixed annuities from those individuals who want long-term income. Private-market prices would improve, and insurance companies may be willing to introduce inflation-adjusted products that retirees need. Carefully designed reform could benefit both the claimants of the mandatory public program and participants in the private market.

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[195] David Blanchett, *Why Most Annuities Aren't Inflation Adjusted (And Why That's a Problem)*, WALL ST. J. (Sept. 23, 2019, 9:02 AM), https://www.wsj.com/articles/why-most-annuities-arent-inflation-adjusted-and-why-thats-a-problem-01569243748.

[196] *See* Raimond Maurer, Olivia S. Mitchell, Ralph Rogalla & Tatjana Schimetschek, *Will They Take the Money and Work? People's Willingness to Delay Claiming Social Security Benefits for a Lump Sum*, 85 J. RISK & INS. 877, 903-04 (2018).

[197] *See* Paul M. Secunda, *The Behavioral Economic Case for Paternalistic Workplace Retirement Plans*, 91 IND. L.J. 505, 522-23 (2016).

[198] For the vast majority of retirees, delaying pension benefits increases lifetime wealth significantly. John B. Shoven & Sita Nataraj Slavov, *Does It Pay to Delay Social Security?*, 13 J. PENSION ECON. & FIN. 121, 141 (2014).

Reforming the agency oversight of retirement policy and introducing choices into Social Security benefit claiming can together improve financial security in retirement significantly. Allowing retirees to claim more of their Social Security benefits up front if they so choose can release financial constraints on short-lived individuals, freeing up funds that can be used to purchase private annuities. Private annuity markets will likely function more smoothly due to more coordinated regulatory oversight. Taking lessons from the Chilean system will give retirees more options for financial stability in old age, including poor and sick retirees who are currently contributing disproportionately to U.S. social safety nets without receiving proportionate benefits.

CONCLUSION

Different countries have developed social institutions with varying reliance on private markets, as opposed to direct government action. Comparing across regimes illuminates possibilities that U.S. policy makers have overlooked. This Essay uses the unique example of retirement policy in Chile to consider the optimal mix of mandatory social programs and market mechanisms. Chile's privatized system has several valuable features that can be naturally adapted to U.S. retirement policy. First, administrative agencies in Chile have jurisdiction over nearly every aspect of retirement, allowing for important regulatory actions like limiting intermediary commissions and designing choice architectures for retirees engaging in retail investment. Second, Chile offers choices over the structure of retirement benefits, which accommodates retirees with different preferences and combats adverse selection in the private annuity market. Adapting these reforms for the United States can simultaneously improve the efficiency and fairness of mandatory public programs and voluntary private markets.