FINANCIAL INNOVATION FRONTIERS

Retirement Readiness

Healthcare Emergencies

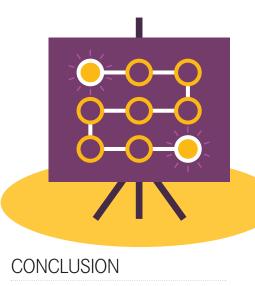
Financial Fitness





INTRODUCTION

TABLE OF CONTENTS



PAGE 38



PAGE 14



50+ CONSUMERS ARE OFTEN ILL-PREPARED (YET THEY DON'T ACT THAT WAY)

PAGE 30



50+ CONSUMERS FACE UNPRECEDENTED FINANCIAL COMPLEXITY

PAGE 20

INTRODUCTION

7 STRESS FACTORS PRESSURE 50+ CONSUMERS



M eet the most financially challenged generation in American history. There are over 111 million Americans aged 50 and older, confronting a financial future that AARP's Financial Innovation Frontiers Study describes in terms of high anxiety, great struggle, and kitchen table economics that are more complex than any generation has ever faced. Most of them are at a critical juncture: financial decisions are numerous and amplified in importance because they can have a lifetime impact on their later years. And time and again, they are voicing a question that should echo throughout the financial services industry:

Where do I start and whom do I turn to for help?"



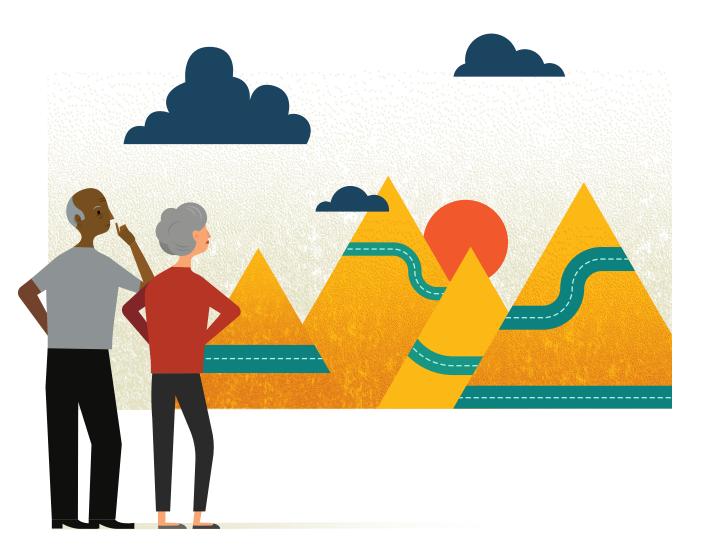
Much is at stake, not only for 50+ consumers but also for the banks, brokerages, insurers, fintech startups, venture capitalists, policymakers, and other players that enable consumers to address that question effectively. Although the 50+ segment represents only 35% of the entire U.S. population, they control more than half of the nation's investable assets. And they are avid users of digital tools, services, and products that will serve the next wave of consumers who soon will confront the final years before they retire.

SOME BACKGROUND

ARP's 2017 Financial Innovation Frontiers study offers ample evidence that the digital acumen of 50+ Consumers is not to be underestimated. They have spent their adulthood adapting to technological change that has fundamentally touched virtually every aspect of their daily lives. And they didn't miss a beat with the introduction of the smartphone a decade ago.

That has only accelerated their demand for change to accommodate their expectations for always-on, ever-present interaction that amplifies the power of real-time decision-making. At the head of this wave is an affluent, technologically proficient segment of consumers who represent more than half of all consumers 50 and older—and 70% of those are a decade or less away from the traditional retirement age of 65. They tell a story of

a generation of Americans that has enjoyed rising incomes. Yet they are straining to cope with debt, are racing to catch up on saving, and are worrying they must scale back their retirement dreams. They have good savings habits, yet they don't know where or how to start tightening their belts. In their scramble to manage their finances with every available tool, they are turning to alternative financial services and products when traditional approaches fail them.



21ST CENTURY FINANCIAL STRESS FACTORS

They carry digital devices. They use them regularly, too – even when it comes to something as important, private, and challenging as managing their money. And they're desperately seeking answers to seven financial stress factors that increasingly are part of life in the 21st century economy:













- 1. The impact of unexpected expenses and financial emergencies. The increase in the number of dual-income households has enabled couples to lift their standard of living and flex their buying power. However, households that stretch to buy or rent in the best school districts are at heightened risk if they suffer unexpected expenses, financial emergencies, and the seismic shake triggered by events such as a layoff, divorce, or an illness.
- 2. The realities of caregiving for parents. Many adults financially support and care for parents, often from a great physical distance. Many anticipate that expenses of financial dependents will decline after children leave home and instead these costs are often replaced by those associated with caring for aging parents.
- **3. The burden of student loans.** Rising college costs have put many 50+ Consumers in a position to bear the burden of multigenerational student loans for their children, their grandkids, and sometimes even their own decades-old debt.
- **4. The personal responsibility of saving for retirement.** The shift from defined-benefit pensions to 401(k)s and other defined-contribution plans is forcing ever-growing legions of ill-prepared workers to assume responsibility for saving for retirement, tending investments, and drawing down assets.
- **5. The rising cost of healthcare.** Healthcare costs are forcing more Americans to evaluate complex medical insurance plans, budget and shop for affordable care, and track and document mounds of bills, deductibles, co-payments, and reimbursements.
- 6. The overwhelming complexity of financial products. The growing variety and complexity of financial products are overwhelming for many Americans whose financial understanding leaves them ill-prepared to take a comprehensive view and balance the interplay of investments, taxes, insurance, and regulation.
- **7. The lack of tailored and helpful digital tools.** Ready access to digital information has empowered Americans to be self-sufficient, and there is no lack of tools aimed at helping Millennials manage their spending and burgeoning financial lives. Yet today's digital tools typically fall short for the do-it-yourselfers in the 50+ segment, let alone those with less financial experience and digital knowhow.

THE CLOCK IS TICKING

 \land ll too often, 50+ Consumers don't know how to balance glass-half-full dreams while also preparing for glass-half-empty risks. Opportunities abound for financial innovators who can rethink their products to address the needs of the millions of digitally proficient 50+ Consumers. For example, there has been a recent burst of creative apps and tools with the admirable goal of helping Millennials. They typically develop a savings habit by squirreling away dollars here and there and stashing away the "change" every time they swipe a card. This approach can be meaningful for Millennials living paycheck



to paycheck, especially if the savings are invested wisely to take advantage of the chief advantage of youth: time and compounding.

But that dimes-and-quarters, save-over-time approach is of little value to 50+

Consumers who are facing down retirement and desperately playing catch-up. At that stage, hitting retirement targets can require dramatically revising how a household defines its standard of living. Identifying ways to save and invest is critical for all age groups, but the urgency is amplified for 50+ Consumers.

50+ Consumers readily wield the necessary digital devices. They are open to trying new approaches. They have proven they can adapt to rapid technological change. What they lack are the innovative digital tools, services, and products necessary for a generation facing uniquely complex financial times. And the clock is ticking.

FINANCIAL OPPORTUNITY IN THE 50+ SEGMENT

Tinancial services has seen in 2017. That represents I 'no shortage of breathless enthusiasm for the Millennial generation, with banks and startups clamoring to be the first to understand and serve the needs of young "digital natives" and "the mobile-first generation." But what about the rest of Americans?

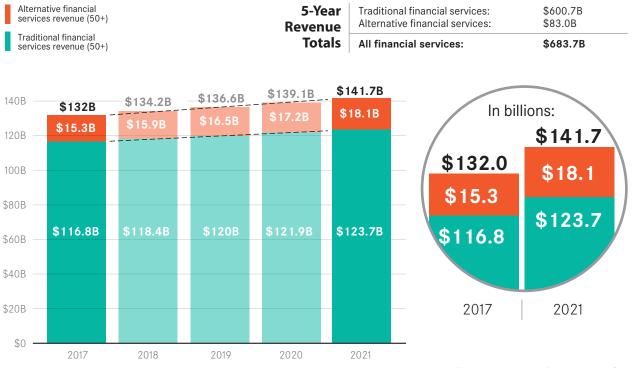
Americans 50 and over account for an enormous portion of the traditional banking industry, to the tune of \$116.8 billion in revenue

a combination of revenue derived from checking and savings (DDA) relationships, credit cards, and consumer lending. AARP expects that total to reach \$123.7 billion by 2021.

But crucially, 50+ Consumers increasingly find that their needs are not met by bank offerings alone. The 50+ segment will spend \$15.3 billion in the fast-emerging alternative financial services

sector by the end of 2017, and that number is expected to grow by a healthy 4.25% annually through 2021. Furthermore, this industry is gradually encroaching on the traditional financial services space, syphoning off \$1.6 billion from banking revenue on DDA, consumer credit card and lending products in the next four years, in addition to \$1.2 billion in organic growth.

U.S. FINANCIAL SERVICES REVENUE: CONSUMERS AGE 50+ (FORECAST)



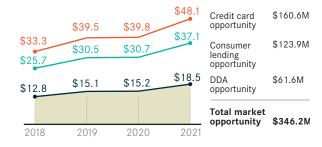
Financial Innovation Frontiers 2017 | 9



The opportunity is clear: Ignoring the 50+ segment translates to leaving money on the table. For a single investor addressing the needs of 50+ Consumers for non-bank DDA, consumer credit or lending products, tapping the growth in the market without replacing existing players is a multimillion-dollar opportunity. By the end of 2021, an investor who stakes a 12.5% share in any of these markets could have potentially earned between \$61.6 million and \$160.6 million from customers 50 and over. Consumer credit is the most lucrative market for investors, with lending close behind with a 12.5% market share equating to \$123.9 million in revenue over the next four years.

SINGLE-INVESTOR REVENUE **OPPORTUNITY**

Credit card opportunity: 12.5% market share in growth Consumer lending opportunity: 12.5% market share in growth DDA products: 12.5% market share in growth

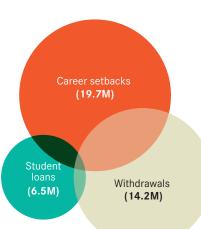


ALTERNATIVE FINANCIAL SERVICES **GROWTH BREAKDOWN**



FINTECH INNOVATORS CAN TARGET MULTITRILLION DOLLAR FINANCIAL GAPS

The likelihood that 50+ Americans will achieve financial freedom rests on them making wise decisions both in the spur of the moment and also as they prepare for health emergencies and eventual retirement. One way or another, Americans will take their financial journeys. But AARP's 2017 Financial Innovation Frontiers study underscores



that they would be far better prepared if they could turn to trusted financial innovators who could guide them as they spend, save, borrow, invest, insure, and plan their financial lives.

Trillions of dollars are in play for financial innovators that tap into the large and growing markets for 50+ Consumers who are approaching retirement.

Three key opportunities that merit spotlighting: helping Americans avoid or catch up from financial setbacks related to job instability, life-altering events, and education costs. Such events—which occur with unfortunate frequency and significantly set back financial progress-present ready opportunities for financial innovators.

1. CAREER SETBACKS: \$4.3 TRILLION

The 29% who have lost a job or experienced wage stagnation in the past five years have saved \$207,000 less, on average, for retirement. This will represent a \$4.3 trillion retirement savings gap by 2021.

2. UNPLANNED WITHDRAWALS: \$4.1 TRILLION

The 21% who tapped their savings to cope with a life event such as divorce or a medical emergency in the past five years have saved \$270,000 less for retirement. This will represent a nearly \$4.1 trillion retirement savings gap by 2021.

3. STUDENT DEBT: \$1.3 TRILLION

The 10% burdened by student loans in the past five years have saved \$182,000 less for retirement. This will represent a nearly \$1.3 trillion retirement savings gap by 2021.

FORGONE	Career	\$4.07	\$4.13	\$4.19	\$4.25	\$4.31
RETIREMENT	setbacks	\$3.85	\$3.90	\$3.95	\$4.01	\$4.07
SAVINGS	Withdrawals to cover major					
DUE TO	expenses					
BURDENS	Student Ioan	loan \$1.18 \$1.20	\$1.22	\$1.24	\$1.25	
	ownership					
		2017		2019	2020	2021

5 KEY AREAS WHERE FINANCIAL INNOVATORS CAN HELP

ARP's 2017 Financial Innovation Frontiers study spotlights key financial Aneeds for 50+ Consumers. Here are five key areas where innovators can have a transformative impact.



1. Remove friction from the user experience

- Enable consumers to choose the channel-or a blend of channels-they prefer.
- · Satisfy real-time expectations for moving money.

2. Improve customer service

- · Connect customers with advisers at pivotal moments.
- Take advantage of teachable moments by enabling customers to learn in the context of a digital transaction.
- Provide secure, authorized access to family and advisers.

3. Proactively deliver personalized insight and advice

- Tailor products and services specifically to help consumers prepare for financial shocks.
- · Help Americans cope with ongoing healthcare costs.
- · Help them save for retirement.
- · Identify the appropriate amount of risk for each investor.
- Mine data for one-to-one insights and advice.
- Develop "robo writing" to redefine statements and on-demand updates.

4. Transform financial anxiety into digital empowerment

- Directly tie digital services to time-honored personal finance principles.
- Show customers a bigger, more comprehensive financial picture.
- · Proactively coach consumers how to establish healthy financial habits.

5. Influencing regulatory change and financial policy

 Encourage healthy digital disruption in key topics such as consumer protection, aggregation, the fiduciary role, the expansion of access to government data, and new models to evaluate creditworthiness and sell loans.

THE FINTECH UNIVERSE TODAY

C cores of fintech players are taking aim at ways to disrupt the traditional ways that **J**50+ consumers monitor their day-to-day finances, tackle larger financial planning issues, and prepare for unexpected financial setbacks.

FINANCIAL FITNE	SS	HEALTHCARE EMERGENCIES				
BEHAVIOR	FRAUD	GENIVITY SafetyNet LendUp PayActiv				
j∋ay j∋erks	EVERSAFE Protecting 1 United of Strengt					
DAY-TO-DAY OVERSIGHT	GENERAL PLANNING					
Prosper Daily	Support pay	RETIREMENT READINESS				
PROPEL SIMPLE	LIFE EVENTS	⇒Abaris <u></u> Advızr DIVY.				
DEBT MANAGEMENT	SAVING					
		Financial A Betterment				
DOCUMENT ACCESS						
everplans ScifeSite	TRANSACTING	M wealthfront united Income				
FutureVault *	Cardpool Moven	SILVER WEALTH				

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

🔷 KEY TAKEAWAYS

- 50+ Consumers represent
 Career setbacks, only 34% of the overall U.S. population but control more than half of the nation's investable assets.
 - unplanned withdrawals for unexpected life events, and student debt have caused retirement savings gaps totaling in the trillions of dollars.
 - This generation is facing seven financial stress factors that make this an unprecedented time of anxiety and financial complexity.

A GENERATION OF DIGITAL ADOPTERS, ADAPTERS, AND PIONEERS



Don't make the mistake of thinking that 50+ Consumers are a paperbound, analog generation that can't get a grip on technological change. They have witnessed and pioneered the mobile-first world their children have inherited.

They were a driving force as party-line rotary phones evolved into princess phone handsets and then into today's smartphones. They used overnight delivery services, then fax machines, and now electronic document scanning and mobile e-signature options. They looked at supercomputers the size of a room and answered the question of whether Americans would ever want a personal computer on their desktop. They witnessed the birth of the Internet and its movement to the office, the home, their palms, their wrists, their cars, and even into their "Frigidaires." Today, 99% of 50+ Consumers own a tablet, laptop, or a desktop device. Even the 70+ seniors are tech-enabled, with virtually all owning a computer and 54% toting a smartphone.

When it comes to technology, they adapted to it, adopted it, demanded it, and made it an essential part of American life.

50+ CONSUMERS' INVESTIBLE ASSETS



50+ CONSUMERS AND MOBILE DEVICES

Today, we're in a mobile-first era. When Americans have a question or need information, they reach reflexively for their smartphones—and that includes 50+ Consumers.

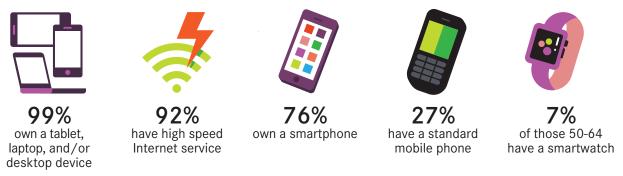
While ownership of smartphones more than tripled among U.S. adults from 2010 to 2015, it jumped 11 times among consumers who were born

before the Baby Boom generation began in 1946. Just like younger Americans, many 50+ Consumers use their mobile phones for a lot more than phone calls. They text. They snap pictures. They post on social media. 50+ Consumers also like the convenience of using mobile banking to manage their day-to-day finances. They monitor their accounts with text alerts, and engage

in a chat session for customer service. Commerce has forever changed. too, with 45% of 50+ Consumers saying they are comfortable shopping, buying, and paying bills on mobile devices.

A significant number of holdouts are interested in trving new features. For example, though only 10% of 50+ Consumers use biometric authentication regularly or occasionally, 22% would like to try it.

50+ ARE ACTIVE USERS OF DIGITAL DEVICES



50+ CONSUMERS AND FINANCIAL DECISIONS

Consumers preparing for retirement at the traditional age of 65 arguably have the most to gain from innovative digital innovation for one crucial—sometimes lifealtering-financial decisions. They can circle retirement

day on a calendar, but financial wellbeing might be no more than a shimmering mirage. Comparing these Americans to those who are 65 or older simple reason: They must make illustrates the fundamentally different retirement challenges ahead for this generation. Notably, only about 1

50+ FINANCIAL PROFILE

Age	Retired	Home -owner	Have a mortgage	Have a pension	Have a 401(k)	Have an IRA	Own disability insurance	Have outstanding Ioan debt
50- 64	16%	72%	37%	11%	45%	30%	23%	71%
65·	▶ 76%	83%	30%	46%	20%	40%	6%	58%

in 10 of those approaching retirement earns a pension, compared with nearly half of those who have reached retirement age. The shift to self-funded definedcontribution plans is well in motion, with 45% of pre-65 consumers owning a 401(k), more than double the 20% for Americans older than 65. Adding to the squeeze, 71% of this younger segment must repay loans of some sort, compared with 58% of over-65 adults.

50+ CONSUMERS HAVE ANXIETY ABOUT RETIREMENT

The result is that retirement can be a topic of high anxiety for many 50+ Consumers. Currently, 41% of 50+ Consumers have retired, and 46% plan to retire—with nearly 1 in 6 planning to do so within 5 years. But here's a significant disconnect that points to the need for effective, user-friendly, and affordable digital

- innovation for 50+ Consumers: · Only 26% say they are highly confident they'll even be able to meet their financial needs over the next five years.
- Despite saving for an average of 25 years, they have amassed less than half of their individual retirement savings goals, and 40% say they cannot feasibly retire until they meet this goal.
- 45% say they spend more time and effort managing their finances than they did five years ago, and they anticipate that need will increase over the coming five years.
- Nearly half are confident that they are best qualified to manage their own money, meaning that they are ripe for using new self-help options enabled by digital tools.

THREE SEGMENTS OF 50+ CONSUMERS HAVE DIFFERENT NEEDS

No age group is a monolith with equal resources to address the same set of problems. AARP's 2017 Financial Innovation Frontiers study reveals opportunities to target three segments of 50+ Consumers-those who are particularly likely to use digital services to address their financial squeeze, an affluent segment with more complex finances, and those for whom financial and physical health are both in question.



OVEREXTENDED BUT DIGITALLY ENGAGED 53% of 50+ Consumers 61 million Americans

They represent the wave of digitally-savvy consumers who are finding that rising affluence often leads to rising debt.

Three out of four are in the critical period before the traditional retirement agefacing make-or-break decisions as they balance dreams of tomorrow's financial well-being with today's financial, household, and family realities. Many have suffered a career setback (29%), and many have prematurely tapped a retirement account to make

ends meet (24%). As a result, 36% expect they must work into their "retirement" years to support their financial needs. They also might be the canaries in the coal mine as retirement policies have shifted away from pensions in favor of self-funded retirement plans. Although just 19% have accrued pensions, only 44% have a 401(k) and 32% an IRA.



FINANCIALLY SECURE 41% of 50+ Consumers 47 million Americans

These affluent Americans have generally benefited from a combination of good fortune and good health. More than 1 in 3 has received a lift from wise investments. inheritances, or trusts. Half are older than 65, but only 40% are fully retired. They are more likely to have a pension (37%), have IRAs (62%) or a 401(k) (50%), and many draw income from savings account interest (34%) and retirement plan distributions (28%).

Confidence is high: 93% believe they can pay off their debts. Many also share their good fortune: 77% are paying student loans for children or grandchildren, and 31% say they'll volunteer after they retire.



HEALTH-STRESSED 48% of 50+ Consumers 55 million Americans

Their financial health is closely linked to their physical health. In the past five years 41% have suffered a major medical event such as an operation or emergency room visit. About

or maintain their health to achieve their desired lifestyle as they age. Despite their awareness of the frailty of health, just 11% have recently started saving for health emergencies, and they are no more likely than 50+ Consumers overall to buy disability or long-term care insurance products. Their finances are tenuous. They are the least likely segment to have saved in 401(k)s(34%)or IRAs (30%), 36% have suffered a career setback that affected their retirement saving, and 25% have taken withdrawls from retirement funds to pay for health care or other needs. As a result, 37% anticipate that they must continue working into retirement.

9 in 10 want to improve

KEY AREAS WHERE FINANCIAL INNOVATORS CAN HELP

CONNECT CUSTOMERS WITH ADVISERS WHEN IT MATTERS

Digital tools are most powerful when they promote one-to-one interactions with advisers at moments that are relevant and actionable. This puts a premium on a range of support options placed contextually within digital channels and financial alerts. Done right, they will enable customers to initiate a text and video chat, click to call, request a call-back, schedule an appointment, or share control of their screens.

TAKE ADVANTAGE OF **TEACHABLE MOMENTS** Digital tools will be more effective and satisfying when customers can learn

🔷 KEY TAKEAWAYS

When it comes to digital technology, 50+ Consumers have seen it all - from the birth of the Internet to the introduction of the smartphone. When it comes to technology. they have adapted to it, adopted it, demanded it, and made it an essential part of life and money management.

in the context of a digital transaction, rather than having to take the initiative to conduct a keyword search or comb through a library of evergreen FAQs and generic educational material. Enable customers to hover their cursor or pop open a window to learn more about a confusing term, explore planning or product options, or view relevant fees and terms.

PROVIDE SECURE, AUTHORIZED ACCESS TO THIRD PARTIES

Many 50+ Consumers share oversight of their financial and medical matters. Sometimes it's by choice when they hire professional advisers, sometimes it's out of

Americans approaching

to gain from financial

retirement have the most

innovation for one simple

reason: They must make

crucial-sometimes life-

in the next five years.

Only 1 in 4 50+ Consumers

is highly confident they can meet their financial needs

necessity because of failing health. Notably, 45% of 50+ Consumers have unofficially authorized a partner or family member to access depository and investment accounts by sharing login credentials. This creates a need for more secure ways to enable consumers to authorize access, restrict what third parties can see and do, and create audit trails and alerts that guard against fraud and elder abuse. Another need: Enable stewards and heirs to track down accounts and assets that can get lost as 50+ Consumers turn off traditional statements that can provide a paper trail after death.

INNOVATOR PROFILE StickK

Focused on changing behavior with psychological sticks and rewards, it enables users to define goals, create binding "commitment contracts," and appoint "referees" who track and evaluate progress.

FutureVault Future**Vault**

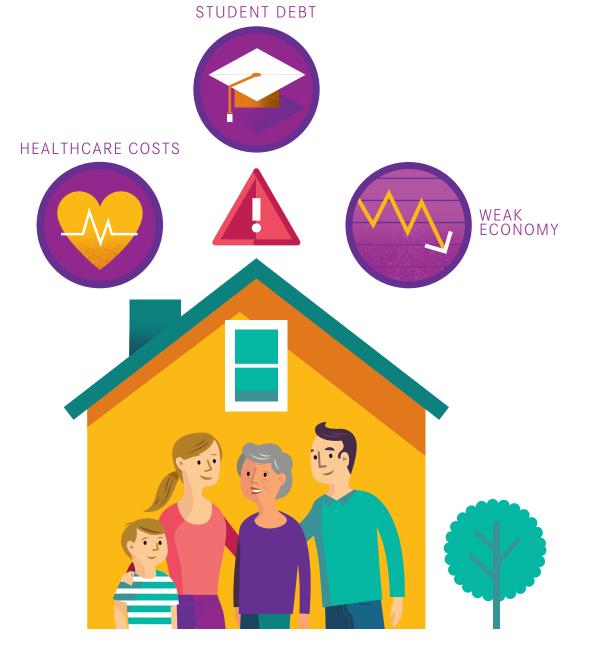
A "digital safety deposit box" that enables users to share access with financial advisers to financial, legal, and personal documents related to personal affairs as well as small business, trusts, and other entities.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

AARP's 2017 Financial Innovation Frontiers study reveals opportunities to target three segments of 50+ Consumers with particular needs: altering-financial decisions.

- Overextended but **Digitally Engaged**
- **Financially Secure**
- Health Stressed

50+ CONSUMERS FACE UNPRECEDENTED FINANCIAL COMPLEXITY



Financial complexity is a fact of life for today's 50+ Consumers. That's partly because there are so many financial products and services from which to choose. But that's actually a symptom of the evolution of kitchen-table economics, the meaning of breadwinner, a multigenerational financial squeeze, the erosion of employment entitlements, and an economic meltdown that was debilitating for many Americans now approaching retirement. These factors heighten financial anxiety, but they also create urgent opportunities for financial innovators.

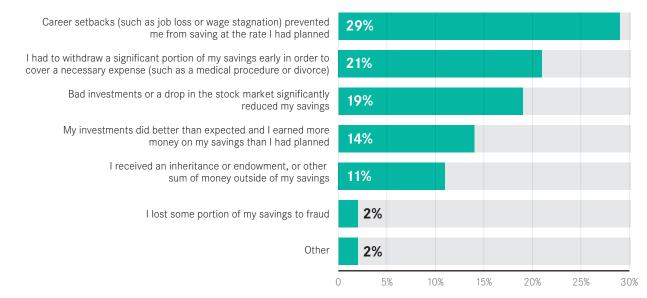
More income earners means more earning power—and sometimes more risk."

In their lifetimes, 50+ Consumers have seen the story of U.S. households play out on their television screens. The single-earner family with a stay-at-home mom in "*Leave It to Beaver*" gave way to "*Modern Family*," where multiple generations live under one roof and it takes two (or more) incomes to make ends meet. This decline in single-earner and increase in two-generation parent/children households began just after 1980, as many of today's retirement generation were launching their families and careers. The norm is one in which 60% of households were headed by dual-income earners by 2012, and 60.6 million Americans—nearly 1 in 5—lived in multigenerational households by 2014.¹

Dual-income households provided important economic advantages. They enabled families to build earning power, buy or rent homes in better school districts, care for parents and boomerang children, and boost their standards of living. The downside is that the practice also placed many households at greater risk if an income-earner steps out of the workforce to care for a child or parent, or suffers an unexpected health problem, layoff, or divorce. The drop in income can place dramatic pressure on households to cover day-to-day expenses, to say nothing of saving to buy homes, college, or retirement.

¹ http://www.pewresearch.org/fact-tank/2016/08/11/a-record-60-6-million-americanslive-in-multigenerational-households/ Such setbacks are more common than many Americans fathom. In fact, 29% of 50+ Consumers say they have suffered career setbacks such as a layoff or wage stagnation, making it the No. 1 obstacle for saving money. And 21% of 50+ Consumers report that career setbacks caused them to dig into their retirement savings to make ends meet. Recovering from these stumbles is complicated and has put millions of 50+ Consumers behind the necessary pace to attain financial freedom.

CONSUMERS COMMONLY FACED WITH ECONOMIC MISFORTUNE THAT AFFECTS SAVINGS



EMPLOYERS FORCE WORKERS TO BECOME DO-IT-YOURSELF INVESTORS



The dynamics of saving for retirement have been forever altered by the decades-long move away from employerfunded pension programs to self-directed and often self-managed investments such as 401(k)s, IRAs, and SEPs. Although plans like 401(k)s theoretically give Americans more control over their retirement investments, their voluntary nature means that millions of Americans often forego saving for retirement in order to pay for immediate expenses and spending goals.

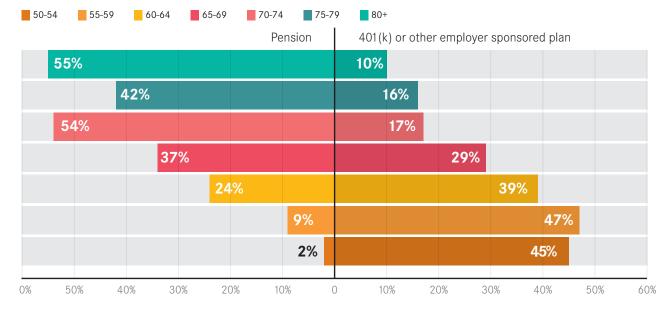
Today, only 11% of 50+ Consumers who are approaching traditional retirement age can count on the steady income from a pension, down from 46% of Americans older than 65. Instead, 44% of consumers approaching retirement are contributing to 401(k) plans, double the 20% rate for Americans older than 65. Even more ominously: 89% of adults nearing retirement age lack a pension, and 56% lack a 401(k).

50+ Consumers without a pension must make saving and investment decisions

their predecessors didn't face. That begins with accurately assessing their retirement needs and successfully setting aside savings. It requires understanding investment strategy, picking a mix of investments that entails an appropriate degree of investment risk, and periodically tending the portfolio to keep it on track during volatile times. It also poses the challenge of understanding tangled tax and Social Security rules to withdraw money in a manner that minimizes the tax bite. Personal finance is

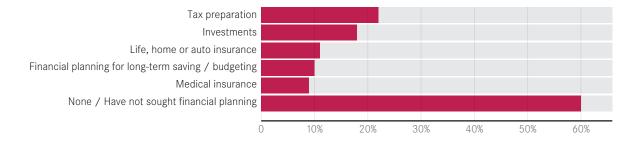
a field that requires both comprehensive understanding and arcane specialization. Most Americans lack both, yet they make decisions themselves either out of choice or a lack of affordable professional services. About 60% of 50+ Consumers have not consulted with a financial professional of any type in the past five years—a list that runs the gamut from investments to taxes to insurance. And when asked whom they trust most to manage their investments, 48% look in the mirror and 21% turn to a close relative.

50+ CONSUMERS WITH RETIREMENT INCOME

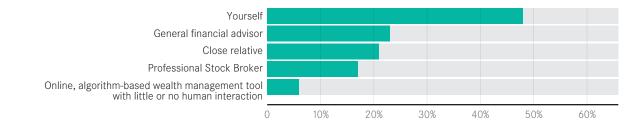


Financial Innovation Frontiers 2017 | 23

FINANCIAL ADVISOR USED IN LAST FIVE YEARS



PERCENTAGE OF 50+ CONSUMERS WITH "MUCH" OR "TOTAL" CONFIDENCE IN PARTIES' ABILITY TO MANAGE INVESTMENTS



INNOVATOR PROFILE Financial Engines

Offered through employers, it manages investments and provides financial planning for budgeting, life insurance, estate planning, taxes, health care, and retirement distributions.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

RISING HEALTH CARE COSTS

The burden of health care is growing. The cost of the average family health care plan climbed to \$18,142 in 2016, rising at a rate that outpaces both inflation and wage growth. In addition, 51% of employees paid a deductible of \$1,000 or more, up from 31% in 2011.

Financial

Engines*

The self-employed or workers at small firms generally pay higher deductibles and higher premiums than employees of mid-size to large companies.² AARP's Financial Innovation survey shows that 57% of 50+ Consumers saw their health care costs increase in the past year.

50+ Consumers face rising pressure to "shop" more wisely for medical care in an industry that lacks price transparency. They weigh whether it's worth the added cost of seeing an out-of-network doctor. They quiz doctors and pharmacists about whether they can switch to a less costly generic drug. They think twice before making an appointment to see a doctor, head to urgent care, rush to an emergency room, or dial 9-1-1. And as a new year approaches, many carefully accelerate or defer medical care to minimize their out-of-pocket expenses and maximize the savings from tax-advantaged savings accounts.

This drain on family finances and time has made healthcare a divisive national political issue. What's not in question is whether Americans face a financial risk if they lack sufficient medical coverage or are not prepared for big medical bills. Sadly, such events are commonplace and risky:

- 41% of 50+ Consumers faced a major medical event in the past five years.
- 18% say they could not cover any out-of-pocket expenses if they experienced a healthcare emergency a figure that jumps to 29%

of individuals who are less financially secure.

50+ Consumers Facing Medical Emergencies in the Past 5 Years



Health-Stressed consumers —nearly half of whom have suffered a major medical event in the past five years —offer another barometer of risk and need. Compared to 50+ Consumers for whom health issues are not a concern, the Health-Stressed:

- Have saved \$20,000 less for retirement, which represents a retirement gap of nearly \$1 billion for the nearly 47 million affected Americans.
- Are less confident they can meet their financial needs in the coming year (59% vs. 71%)
- Are less certain they can afford to spend without worry or scrutiny (45%

vs. 56%)

Are more likely to acknowledge they must make changes to their finances in the coming years but say they don't know where to start (29% vs. 17%)

LIFE EXPECTENCY

Improvements in health care means Americans are living longer, adding to the need to plan wisely for serious ailments and possibly lengthening the need for medical care. In 2015, Americans lived nearly 79 years,³ an increase of almost nine years since 1960.⁴ At \$50,000 per year, that adds \$450,000 in income to support adults in their latter years of life. The increase in life expectancy also contributes to the sandwiching of generations as those approaching or entering retirement often have parents who also need care or financial support.

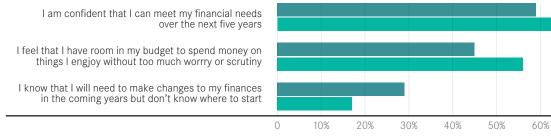




² 2016 Kaiser/HRET Employer Health Benefits study

³National Center for Health Statistics, https://www.cdc.gov/nchs/products/databriefs/db267.htm Financial Innovation Frontiers 2017 | **25** ⁴World Bank, http://data.worldbank.org/indicator/SP.DYN.LE00.IN

HEALTH CONCERNS COME WITH SIGNS OF POORER FINANCIAL OUTLOOK



OTHER SOURCES OF DEBT



STUDENT LOAN DEBT

Rising college costs compound student loan burden. Loan debt originates from a variety of sources, but one of the most unique aspects of student loan debt is the multigenerational sandwiching of expenses that can make it difficult for 50+ Consumers to save effectively for retirement. Career setbacks and the need to extend working years to build savings and make ends meet mean that

more adults 50+ are incurring student loan debt on their own behalf.

Overall, just 7% of older consumers carry student loan debt, but the proportion is double, at 14%, among adults who are 50 to 54. This segment is the most likely to take on student loan debt in the next five years: 13%, more than double the 5% rate among 50+ Consumers overall. The debt represents a combination of loans for children, grandchildren, and even their own college bills. Still others act as a cosigner for family members.

Financially Secure consumers are the most likely to take on debt for younger generations. Overall, 77% of the Financially Secure who owe student

loans are paying on behalf of other family members, nearly double the 37% rate for those who are 50 to 54.

70%



WEAK ECONOMY

The Great Recession continues to hamper many 50+ Consumers. The U.S. economy has recently emerged from one of the longest and deepest recessions since the end of World War II. Beginning in 2007, the downturn led

to widespread layoffs, turmoil in the financial markets, and mortgage foreclosures. Many 50+ Consumers are still struggling to recover lost retirement savings and learning the hard way that homes cannot be treated as piggy banks. While some regions have experienced recovery, others are still

struggling to return to prerecession levels.

Interest rates also fell dramatically during the financial crisis to stimulate the economy and boost the collapsed housing market. This extended period of low interest rates caught many 50+ Consumers off guard because they had anticipated earnings

on their savings that are largely unrealistic in the recent market.





INNOVATOR PROFILE Genivity

A client-facing platform that incorporates family health information to enable financial advisers to consult with clients about hereditary and lifestyle-based health risks and estate planning. Also provides storage for health records, insurance, advance directives, and wills.

PayActiv

An employee benefit that enables employees to access up to \$500 of the income they have earned before payday, for a flat fee up to \$5.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

🔷 KEY TAKEAWAYS

Today's households have more income earners and more earning power -but that can subject them to greater financial risk if they aren't prepared for a setback.

• The shift from employerfunded pensions to self-directed retirement plans has forced 50+ Consumers to become do-it-yourself investors.

The financial burden of health care is growing, forcing 50+ Consumers to "shop" more wisely in an industry that lacks price transparency and bill confusion.

Many 50+ Consumers are confronting multigenerational student loan debt that is making it difficult to save for retirement.

• The Great Recession continues to hobble many 50+ Consumers because it eroded their retirement savings, home values, and net worth.

KEY AREAS WHERE FINANCIAL INNOVATORS CAN HELP

MAKE MANY CHANNELS WORK AS ONE

No single channel is always best. Consumers want to choose the touchpoint or a blend of touchpointsthat makes sense for a given interaction at a given time. In the case of, for example, account opening, the best experience could start with researching products online but applying on a mobile device. An online applicant might prefer to scan documents and track an application's progress with a smartphone. And if an applicant wants advice, he or she could chose to visit a branch, phone a call center,

or fire up a chat or video session. At no stage, should consumers have to start over. my money now?"

SATISFY REAL-TIME **EXPECTATIONS**

Consumers know that bits and bytes travel faster than the eye can blink, reinforcing their sense that digital transactions should be instantaneous. Account balances should update as soon as consumers walk away from the checkout stand, count cash from an ATM, or execute a stock trade. An adviser should have immediate access to information a customer provides. And consumers

should never have to ask, "Why won't you let me have

TAILOR PRODUCTS AND SERVICES TO FIX **HIGH-PRIORITY NEEDS**

Financial innovators can influence what customers spend, save, borrow, insure, and invest. Take particular aim at the three areas of great need: 1) preparing for financial shocks, 2) coping with ongoing healthcare costs, and 3) saving for retirement. Refashion tools for consumers whose sense of urgency is amplified.



PRESCRIBE BETTER WAYS TO MANAGE HEALTH CARE COSTS

Anticipating and managing health care bills is an increasingly crucial aspect of their financial safety net.

Emphasize digital tools that enable patients to understand their payment options and the limits of their insurance plans. Empower patients to "shop" more wisely for medical care and prescriptions by shedding light on opaque pricing. And manage the thicket of out-of-pocket costs and co-payments, the higher price tags of out-of-network care, and the bills and refunds that land in a patient's mailbox months after their medical care.

HELP INVESTORS TAKE THE RIGHT AMOUNT OF RISK

The investment industry is continually seeking better ways to assess a client's tolerance for investment risk. It not only is essential to recommend appropriate investments and asset allocations, but it also is a powerful opportunity to inform, advise and establish trust.

MINE DATA FOR ONE-TO-ONE INSIGHTS AND ADVICE

Providing a personalized experience requires critical advances in the ability to collect accurate customer data, mine it, and apply predictive analytics and artificial intelligence. High-quality data is critical, for example, to initiate meaningful "conversations" with customers and the success of account aggregation, spending categorization, financial alerts, financial fitness features, gamification and graphic insights, and "alt lending" credit analysis.

DEVELOP "ROBO WRITING" TO REDEFINE STATEMENTS AND ON-DEMAND UPDATES Draw on a customer's

structured data to create unique summaries and insights in real time, with every login or alert, on a one-to-one

basis. Such updates initially will add value to traditional, transaction-centric quarterly or monthly statements by incorporating personal details, goal-based background, and unique insights in narrative sections and graphics. Before long, however, they will set the stage for conversational, voice-driven interaction that can be informative, soothing, and educational.



INNOVATOR PROFILE

Abaris Abaris

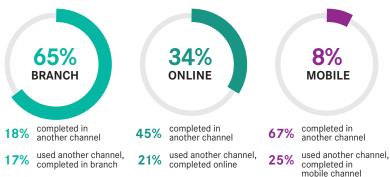
A direct-to-consumer marketplace for retirement annuities from insurers such as AIG, Pacific Life, Guardian, Principal Financial Group, and Lincoln Financial Group.

Ellevest An investment advisory firm that targets female investors, saying it is the first "gender-aware robo adviser." Rather than set allocations based on measures of risk tolerance. Ellevest sets risk based on factors such as an investor's goals and a woman's longer life expectancy.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

STRAIGHT-THROUGH DIGITAL SUCCESS **REMAINS ELUSIVE**

Checking Account Applications Completed in a Single Channel



50+ CONSUMERS ARE OFTEN ILL-PREPARED (YET THEY DON'T ACT THAT WAY)

HEALTHCARE FINANCIAL FITNESS RETIREMENT There's a dangerous disconnect in American thinking. On the one hand, AARP's 2017 Financial Innovation Frontiers study provides ample evidence that millions of 50+ Consumers rely on a frayed financial safety net, and many say they are uncertain how to improve their odds for achieving financial well-being. On the other hand, the typical 50+ Consumer handles his or her own financial planning and seldom seeks comprehensive professional services.

That's not always a matter of choice, of course. The financial services industry historically has catered primarily to affluent consumers because it hasn't found a way to advise less-affluent Americans profitably. That's why digital innovation is critical if the industry is to expand financial services to a broader audience in a sustainably profitable way.

In particular, there are warning signs that many 50+ Consumers are financially exposed and ill-prepared in three critical areas:





Emergencies



Retirement Readiness

"I know what steps I need to take

the long term, including budget

and insurance needs"

to ensure my financial health over

"I know that I will need to make changes to my finances in the coming years, but I do not know where to start"

All 50+ 67% Consumers Financially 80% 13% Secure Overextended but 67% **Digitally Engaged** 65% Health-Stressed 70% 10% 60% 50% 40% 30% 20% 10% 80%

Financial Innovation Frontiers 2017 | 31

20%

23%

28%

29%

30%

1. FINANCIAL FITNESS

Unexpected financial events can come from many directions. Some can be life-changing, like a job loss or a medical emergency. But for many 50+ Consumers setbacks can be as mundane and commonplace as a car or home repair. Whatever the cause, the risk of a financial spiral can be scary: Belt-tightening. Mounting credit card debt. Skidding credit scores. The inability to refinance or consolidate loans. In the worst cases, the spiral ends in bankruptcy and foreclosure.

In the past five years, 29% of 50+ Consumer households suffered a career setback such as job loss or wage stagnation that prevented them from saving as much as they had planned, a figure that rises

to 35% of the Health-Stressed. About 10% of the Overextended but Digitally Engaged fear that they will be unable to repay their loans, putting an estimated \$540 billion in loans at risk in 2021. Similarly, 41% of 50+ Consumer households experienced a healthcare emergency. Of course, the odds that Americans will need medical care rises with age. In 2014, the CDC estimated that more than 40% of Americans over 55 were in fair to poor health.⁵

Yet on average AARP estimates that even a bill of \$3,750 could jeopardize the typical household's financial security. Some consumers do not have a safety net at all: Nearly one in five 50+ Consumers lack any savings to cover emergency needs. The combination of job strains and healthcare can sometimes be the one-two punch that knocks out both the safety net and retirement savings. A quarter of the Health-Stressed dug into their retirement savings to cope with a job loss or medical event.

HOW STRONG IS YOUR SAFETY NET?

More than 40% of 50+ Consumers says they or a partner suffered a major medical event such as an operation or an emergency room visit in the past five years. They typically estimate they can pay only \$3,750 for a medical emergency without jeopardizing their financial security.

INNOVATOR PROFILE

AboutLife Free personal finance and retirement planning tools such as a "retirement age predictor," plus the option to consult financial advisers. Acquired by NerdWallet in 2016. ProActive Links to customers' accounts to put aside money to pay loans "when you can afford it," then m

ProActive loa

32

Links to customers' accounts to put aside money to pay loans "when you can afford it," then makes loan payments automatically. **Propel**

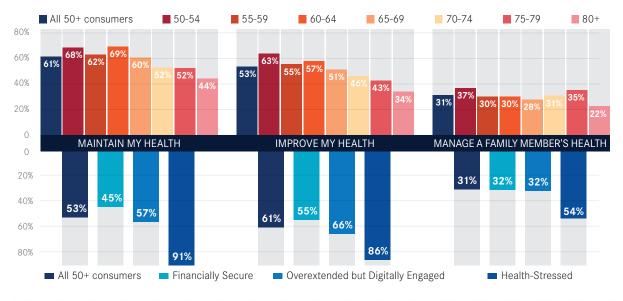
PROPEL The free FreshEBT app enables recipients to monitor electronic benefit transactions, food stamp and welfare balances, anticipate deposits, and find stores that accept EBT payments.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

2. HEALTHCARE EMERGENCIES

The cost of health care seems to ride only the "up" escalator. Employers are paring back health plans, forcing workers to pay increasing out-of-pocket bills. The rise in high-deductible plans puts more families at risk of paying thousands of dollars in medical bills before their insurance kicks in; such plans covered 38% of 50+ Consumers in 2015.⁶ Per-capita spending on health care rose to \$9,523 in 2014⁷—more than \$5,770 more than the average 50+ Consumer estimates he or she can comfortably spend without placing their financial security at risk.

Health concerns weigh heavily with 50+ Consumers. When asked to rank the top concerns that will affect the lifestyle they desire, health was a recurring factor, with 61% citing the need to maintain their own health, and 31% grappling with a family member's health. Among the Health-Stressed, these concerns spike sharply, with nearly 9 in 10 citing his/ her own health and more than half citing a family member's health.



INNOVATOR PROFILE

BILLSHARK BillShark



Negotiates on behalf of consumers and small businesses to lower a range of bills, including cable TV, Internet, wireless service and electricity bills.

Links to customers' accounts to put aside money to pay loans "when you can afford it," then makes loan payments automatically.

*This does not imply endorsement; examples provided are selective representation of the ecosystem.

⁶ AHIP, https://www.ahip.org/wp-content/uploads/2015/11/HSA_Report.pdf ⁷ The Center for Disease Control, https://www.cdc.gov/nchs/fastats/health-expenditures.htm

3. RETIREMENT READINESS

Despite saving for an average of 25 years, the typical 50+ Consumer has stockpiled less than half of his or her retirement savings goal. The implications are significant not only for their individual financial freedom but also for the overall workforce and national policy. Among the distressing signs among 50+ Consumers:

40%

Among those who 35% of those

have set a retirement who plan to retire target, 40% say anticipate they they cannot feasibly will need to work retire until they after retiring to supplement meet their goal. their income.

35% 35%

of this group is approaching the age of 65.

• 30% 35% are uncertain 30% report they they can even meet have never saved for their financial needs retirement. Among over the next five those who have years—and two-thirds saved, 65% wish they had started earlier than at the traditional retirement average age of 34.

HELPING 50+ CONSUMERS MAKE WISER FINANCIAL CHOICES

But here's the disconnect. For a variety of reasons, 50+ Consumers have assumed responsibility for their finances and often consider themselves good stewards. At the same time, many doubt their financial decisionmaking, have failed to take basic steps to save, and don't seek help from pros. These contradictions amount to an opportunity for financial innovation that helps selfdirected 50+ Consumers make wiser choices.

Actions that would

strengthen the safety net are also slow in coming. For example, it is rare for 50+ Consumers to even take fundamental planning steps. In the past five years, only 7% have created a five-year financial plan, and only 9% plan to do so in the next five years. Similarly, just 10% of 50+ Consumers have opened a savings account intended for emergency purposes, and only 9% plan to open an account for this purpose. Opening such an account isn't necessary, of course.

But doing so has its advantages for the many Americans who adopt an "envelope" method that enables them to compartmentalize important financial goals. For starters, simply setting a target provides a goal that can be tracked. A separate account also reduces the confusion when money for goals and day-to-day living is comingled. It also can open the door to invest these savings in a manner that keeps the money liquid but earns higher rates of return.

ACTIONS IN PAST FIVE YEARS	All consumers	50-54	55-59	60-64	65-69	70-74	75-79	80+
Calculated the amount of retirement income you will need (such as with the Employee Benefit Research Institute, a financial planner, or an online tool)	15%	15%	18%	23%		10%	7%	1%
Created a five-year plan for my finances	7%	7%	10%	11%	6%	5%	3%	-
PLANNED ACTIONS IN NEXT 5 YEARS								
Calculated the amount of retirement income you will need (such as with the Employee Benefit Research Institute, a financial planner, or an online tool)	13%	16%	21%	1 9 %	9 %	5%	5%	1%
Open savings account intended for emergency purposes	9 %	15%	10%	11%	9%	4%	4%	3%

FINANCIAL COUNSELING

Many 50+ Consumers are self-directed, do-it-yourselfers. When faced with questions about financial planning, investments, taxes, insurance, debt repayment and other matters in the past five years, these consumers typically do some research. The Internet was their No. 1 choice (35%), followed by consulting a trusted friend or relative (25%). Others turn to bank employees (17%) or personal finance software and apps (14%, topped by Turbo Tax and Credit Karma).

Still, more than 1 in 3 had no questions because they consider themselves well-versed in personal finance matters. About 40% of 50+

Consumers turned to financial pros in the past five years. But as a general rule they didn't seek out comprehensive financial advice, instead engaging financial specialists such as a tax preparer (22%), an investment adviser (18%), or an insurance broker (11%). Not surprisingly, Financially Secure consumers were far more likely than 50+

Consumers overall to seek advice on comprehensive financial planning (18% vs. 10%).

Have you or your partner/spouse personally sought financial counseling from a trained professional in any of the following areas in the past 5 years? 50+ Consumers

22%	Tax preparation
18%	Investments
11%	ife, home or auto insurance.
10%	Financial planning for long- term saving a budgeting
3%	Debt counseling
9 %	Medical insurance
5%	Mortgages
3%	Long-term care insurance
60%	None/Have not sought financial counseling



KEY AREAS WHERE FINANCIAL INNOVATORS CAN HELP REINFORCE TIME-HONORED PERSONAL FINANCE PRINCIPLES

There is no need to reinvent the fundamentals of personal finance. The challenge is to devise ways to show customers how digital channels can help them save automatically, oversee their finances comprehensively, minimize impulsive decisions, avoid costly missteps, build borrowing power, and accelerate progress to financial freedom. Place a priority on digital tools that develop healthy, lifelong habits and build trust and loyalty with every login, alert, or interaction. Examples include account aggregation, actionable notifications,

cash-flow projections, financial fitness indicators, automated savings, and gamification features that motivate customers and lead them along their financial journey.

HELP CUSTOMERS SEE THE BIGGER PICTURE

Millions of Americans benefit from specific services that take aim at specific needs: for example, tax preparation software or a robo investment service. This approach opens the door, however, for innovators that provide a comprehensive picture of customers' overall financial health, enable them to take action, and advise on how to best balance conflicting factors such as tax savings, investment performance, and tangled regulatory issues.

COACH CONSUMERS TO ESTABLISH HEALTHY FINANCIAL HABITS

The social networking site LinkedIn treats career-building as a process that continually enhances a user's personal "brand" and expands his or her network of contacts and industry influence. Similarly, financial innovators can apply lessons from LinkedIn by: 1) using gamification to pique interest and stimulate engagement, 2) providing insight that can act as a catalyst for changing financial habits, 3) inviting interaction by enabling customers to visualize and customize insight, and 4) recommending wise actions at every step of a 50+ Consumer's financial journey.

PARTICIPATE IN SHAPING FINANCIAL POLICY

It's inevitable that innovative financial services will collide with regulations and industry practices that are intended to protect consumer interests. Aggregation is one topical area of policy debate as financial institutions, aggregators, and financial apps square off over two key questions: 1) how to fix a system that depends on sharing confidential login credentials, and 2) how to best answer the question, "Whose data is it?" Financial innovators also have a stake

in the debate over whether they are regulated most effectively and uniformly by state or federal regulators, the definition of a fiduciary role, the expansion of access to government data, and the development of ways to evaluate creditworthiness and sell loans.

50+

FINANCIAL RESOURCES THAT 50+ CONSUMERS USE

Aside from professional counseling, which of the following resources have you used in the past 5 years to answer your financial questions regarding planning, investments, taxes, insurance, debt repayment, etc.?



Despite saving for

25 vears the typical

50+ Consumer has

socked away less

than half his or her

retirement savings

goal, and many

are uncertain it

retire or even

needs the next

five years.

is feasible to truly

meet their financial

♦ KEY TAKEAWAYS

Many 50+ Consumers are financially exposed and ill-prepared in three critical areas:

- Financial fitnessHealthcare
- emergenciesRetirement
- readiness

 Although it is common for 50+ Consumer households to suffer a job setback or a medical emergency, the AARP estimates that even a bill for \$3,750 could jeopardize the typical household's financial security. The disconnect: Many 50+ Consumers doubt their past financial decisions and have failed to take basic steps to save, yet they seldom seek help from professional advisers. In short, they don't know what they don't know-and affordable services often aren't available.



hen the most financially challenged generation in U.S. history asks, "Where do I start, and whom do I turn to for help?"—they're talking to you – the fintech innovators, retail bankers, investment brokers, venture capitalists, insurers, advisers, and regulators. You're the ones who can forge a new prototype for how 50+ Consumers achieve financial freedom.

The opportunities run the gamut. The financial services industry must rethink how it delivers financial services. It must devise a way to proactively engage customers more deeply and powerfully. It must use digital tools to put the "personal" into "personal finance" with one-to-one insight, advice, and recommendations.

Seizing those opportunities starts with a mindset that 50+ Consumers care about financial freedom—a lot. They're motivated because time is no longer on their side. They have the digital tools, a record of adapting to change, and digitalfirst habits. They're empowered by digital access and real-time oversight. But they face unprecedented financial stress and complexity. They need personalized help that guides them in their increasingly mobile-first lifestyle.

And they're eager for you to back it up when you say, "Start here, with me."

ABOUT THE STUDY

AARP retained Javelin Strategy & Research in November 2016 to conduct a comprehensive independent study of the financial needs and behaviors of U.S. consumers 50 and older. Javelin maintains complete independence in its data collection, findings, and analysis.

Javelin conducted an online survey of a representative sample of 2,000 consumers over the age of 49 in January and February 2017. The overall margin of sampling error is +/-2.19 percent.

Additional data analyzed in this report come from a proprietary Javelin consumer survey fielded to 10,639 U.S. consumers in May 2016. The overall margin of sampling error is +/- 0.95 percent.

The margin of sampling error is larger for subsegments in either survey sample. Some supplemental data for Javelin's models were drawn from third parties. Other sources for inputs into the models in this report include: The Center for Financial Services Innovation, Federal Reserve, Moebs Services, BankDirector.com and Creditcards.com.



AARP[®]

AARP is the nation's largest nonprofit, nonpartisan organization dedicated to empowering Americans 50 and older to choose how they live as they age. With nearly 38 million members and offices in every state, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, AARP works to strengthen communities and advocate for what matters most to families with a focus on health security, financial stability and personal fulfillment. AARP also works for individuals in the marketplace by sparking new solutions and allowing carefully chosen, high-quality products and services to carry the AARP name. As a trusted source for news and information, AARP produces the world's largest circulation publications, AARP The Magazine and AARP Bulletin. To learn more, visit www.aarp.org or follow @AARP and @AARPadvocates on social media.

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