

AN UPDATE ON 401(k) PLANS: INSIGHTS FROM THE 2007 SCF

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Introduction

The maturation of the 401(k) system and the enactment of the Pension Protection Act of 2006, which made 401(k) plans easier and more automatic, were expected to enhance the role that 401(k)s played in the provision of retirement income. So, originally, the release of the Federal Reserve's 2007 *Survey of Consumer Finances* (SCF) seemed like a great opportunity to reassess 401(k)s. The SCF is a triennial survey of a nationally representative sample of U.S. households, which collects detailed information on households' assets, liabilities, and demographic characteristics.¹

Of course, the 2007 SCF reflects a world that no longer exists. Interviews were conducted during the late summer and early fall when the Dow Jones was at 14,000 (the peak was October 9, 2007) and housing prices were only slightly off their peak. While the economic crisis had already begun, its effects were not yet visible.² Since the time of the interviews, the stock market has imploded, reducing the value of equities in 401(k)s and IRAs by about \$2 trillion. Housing prices have fallen by 20 percent. And the crisis has spread to the real economy, throwing 3.6 million people out of work.³

Given the collapse of the financial markets and the economy, this *Issue in Brief* uses the 2007 SCF data as a starting point in evaluating the condition of 401(k)s and relies on more recent data and estimates to paint a full and current picture. The *brief* proceeds as follows. The first section describes the evolution of 401(k) plans and how the Pension Protection Act of 2006 would be expected to improve the performance of these plans. The second section uses data from the 2007 SCF and other sources to update previous findings on participation, contribution levels, investments, and withdrawals. The third section then projects how the events of 2008 have affected various aspects of 401(k) plans. The final section concludes that whereas 401(k) plans were showing some improvement in 2007, the events of 2008 highlight their limitations in serving as the only supplement to Social Security.

The Evolution of 401(k) Plans

The advent of 401(k) plans is still relatively recent. Twenty-five years ago, defined benefit plans (together

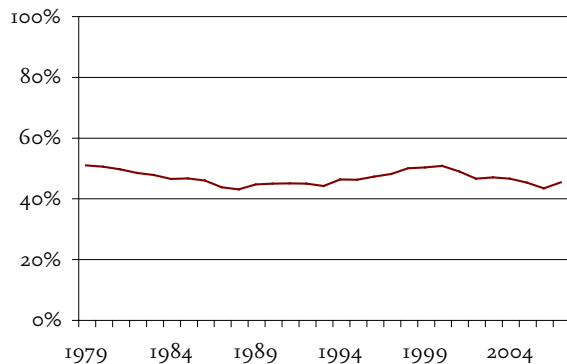
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with certain types of traditional defined contribution pension plans – such as employer-funded profit-sharing plans and money purchase plans) were workers' primary source of private pension coverage. These plans require workers to make almost no important financial choices before retirement. The firm enrolls all eligible workers, makes contributions, makes investment decisions (or retains professional investment managers), and generally provides a lifetime benefit at retirement. The worker's only real choice is when to collect benefits.

When 401(k) plans began to spread rapidly in the early 1980s, they were viewed mainly as supplements to employer-funded pension and profit-sharing plans. Since 401(k) participants were presumed to have their basic retirement income security needs covered by an employer-funded plan and Social Security, they were given substantial discretion over 401(k) choices, including whether to participate, how much to contribute, how to invest, and when and in what form to withdraw the funds.

Over the past 25 years, the pension landscape has remained remarkably unchanged in one respect. Less than half of private sector workers – at any moment in time – are participating in any form of employer-sponsored plan (see Figure 1). Since median job tenure for those 25 years and older is only 5 years, many workers will move in and out of coverage.⁴ As a result, more than half of the workforce will end up with some pension accumulations at retirement, but many will find it difficult to ensure continuous coverage.

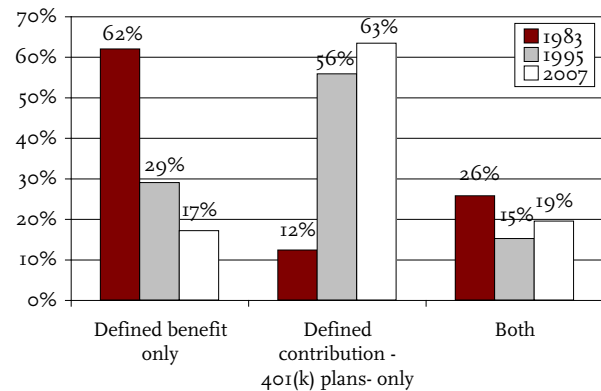
FIGURE 1. PERCENT OF PRIVATE-SECTOR WORKERS AGED 25-64 PARTICIPATING IN AN EMPLOYER-SPONSORED PENSION, 1979-2007



Source: Authors' calculations from U.S. Bureau of Labor Statistics, *Current Population Survey* (1980-2008).

In terms of the nature of coverage, the landscape has changed dramatically. Whereas, in the early 1980s, most workers lucky enough to work for an employer providing a pension were covered by a defined benefit plan, today most workers have a 401(k) as their primary or only plan (see Figure 2). (See Appendix Table A1 for data from intervening SCFs.) Yet 401(k)s still operate under the old rules. Workers continue to have almost complete discretion over whether and how much to contribute, how to invest, and how and when to withdraw the funds.

FIGURE 2. WORKERS WITH PENSION COVERAGE BY TYPE OF PLAN, 1983, 1995, AND 2007



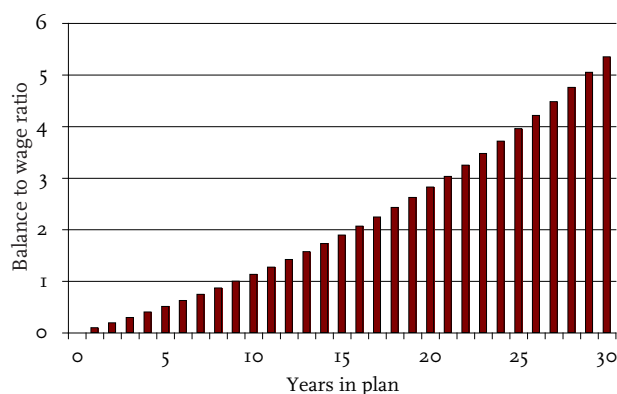
Source: Authors' calculations based on U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (SCF), 1983, 1995, and 2007.

Two changes have occurred since pension experts and policymakers first began assessing the effectiveness of 401(k)s as a mechanism for retirement saving. First, time has passed, so an increasing proportion of workers have spent most of their worklives covered by a 401(k) plan. Second, Congress has enacted legislation and the U.S. Department of Labor has issued regulations to make 401(k) plans more effective.

The Passage of Time

Because 401(k) plans were introduced relatively recently, the passage of time is an important consideration when evaluating their success in terms of balances.⁵ Figure 3 (on the next page) shows the relationship between the length of time in the plan and accumulations for a hypothetical male worker

FIGURE 3. HYPOTHETICAL 401(k) BALANCES RELATIVE TO WAGES, BY NUMBER OF YEARS IN THE PLAN



Source: Authors' calculations based on the 2007 SCF.

who contributes 6 percent per year and enjoys an employer match of 3 percent.⁶ Participants need to be in plans for a substantial period of time to accumulate meaningful balances. The passage of time alone would be expected to produce a more favorable picture of 401(k) performance in 2007 than in 1995.

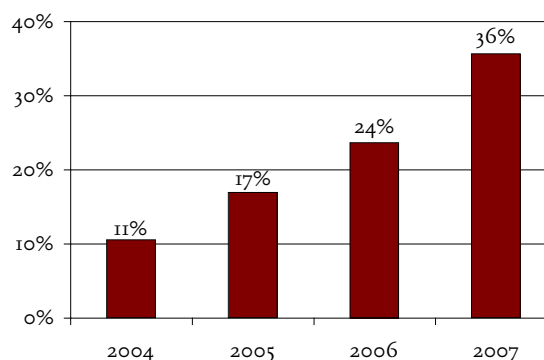
The Pension Protection Act of 2006

Over the last ten years, policymakers and business leaders came to recognize the challenges inherent in 401(k) plans and began to take steps to make these plans easier and more automatic. Many of these efforts built on a series of studies by behavioral economists who demonstrated that inertia plays a major role in how workers participate and invest in 401(k)s.⁷ The lessons learned by individual employers were reflected in the provisions of the Pension Protection Act of 2006 (PPA).⁸ The PPA encouraged automatic enrollment, fostered automatic increases in deferral rates, and broadened default investment options.

Encouraged Automatic Enrollment. The major innovation to encourage participation has been automatic enrollment.⁹ Studies show that this simple change in the default increases participation by as much as 41 percentage points.¹⁰ Even after three or four years, the vast majority of those automatically enrolled were still participating.¹¹ The Pension Protection Act removed obstacles that had kept some

employers from adopting these arrangements and established a safe harbor whereby employers that adopt automatic enrollment are deemed to have met the “top heavy” and discrimination rules.¹² In 2007, about 36 percent of plans had automatic enrollment provisions, a substantial increase over previous years (see Figure 4).¹³

FIGURE 4. PERCENT OF PLANS WITH AUTOMATIC ENROLLMENT, 2004-2007



Source: Profit Sharing/401(k) Council of America (2005-2008).

Sanctioned Increases in Default Contribution Rates.

One problem with automatic enrollment is that the inertia that makes the approach effective for participation can lock people into low levels of contributions. That is, the typical default contribution rate is 3 percent,¹⁴ and, left on their own, people would tend to stay at this level. Thus, to combat this problem, the Pension Protection Act, under the safe harbor provisions, encouraged sponsors to increase the deferral percentage by at least 1 percentage point annually up to 6 percent of compensation – or until the employee stops the increases. Sponsors can continue the increases up to 10 percent of compensation.¹⁵

Broadened Investment Options. The third problem that the PPA addressed was the use of stable value funds or money market funds as the default investment option for automatic deferrals. These funds are safe investments, but, as such, they produce low returns. Given inertia, most individuals remained in these conservative investments. The Pension Protection Act directed the Department of Labor to issue regulations

governing the default investment of assets. In October 2007, the Secretary released a list of “qualified default investment alternatives” that included target date funds (funds that change asset allocation based on a participant’s age), balanced funds (funds with a target risk level appropriate for the plan’s participants as a whole), and managed accounts (accounts managed by an investment service that determines allocations based on age and target retirement date). Plans that place a participant’s defaulted contributions in these investments avoid fiduciary liability; the liability shifts to the participant.

With the passage of the Pension Protection Act, hopes were high that many of the problems associated with the accumulation phase in 401(k) plans had been addressed. And indeed, the 2007 *Survey of Consumer Finances* provides some evidence that things were improving.

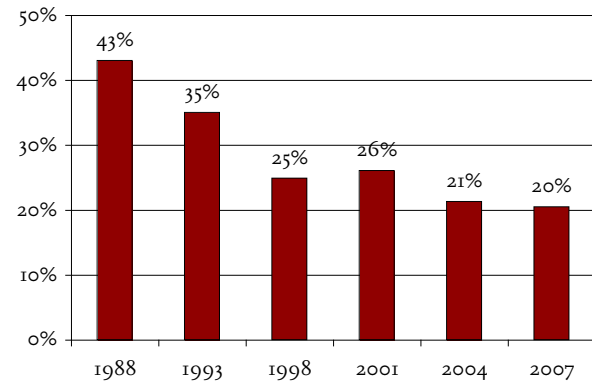
Participants Making Better 401(k) Decisions in 2007

As noted above, participants have to make decisions at every step in the 401(k) process. They have to decide whether or not to join the plan, how much to contribute, how to invest those contributions, and whether to cash out when changing jobs. Historically, poor decisions have led to low 401(k) balances. The 2007 SCF suggests, however, the steps taken to make 401(k)s easier and more automatic have led to somewhat better outcomes.

Participation

If 401(k) plans are ever to be a reasonable way to save for retirement, individuals with access to a plan need to participate. Levels of non-participation were extremely high in the early days of 401(k)s, but declined to about 25 percent in the late 1990s. The 2007 SCF suggests that the movement to auto enrollment has begun to improve the picture somewhat, driving the non-participation rate down slightly to 20 percent (see Figure 5).¹⁶

FIGURE 5. PERCENT OF ELIGIBLE WORKERS NOT PARTICIPATING IN 401(k) PLANS, 1988-2007



Sources: U.S. Bureau of Labor Statistics, *Labor Force Statistics from the Current Population Survey* (2003); and authors’ calculations based on 1988-2007 SCF.

Not surprisingly, low-income and younger workers are much less likely to participate than their older and higher-paid counterparts (see Table 1). Unfortunately, delay reduces the likelihood that these workers will be adequately prepared for retirement.¹⁷

TABLE 1. PARTICIPATION OF ELIGIBLE WORKERS IN 401(k) PLANS, BY INCOME AND AGE, 2007

Age	All	Thousands		
		<\$20	\$20-60	>\$60
20-29	63%	31%	67%	66%
30-39	80	54	77	90
40-49	82	57	79	86
50-59	86	61	86	88
60-64	81	23	82	88

* Fewer than 100 observations.

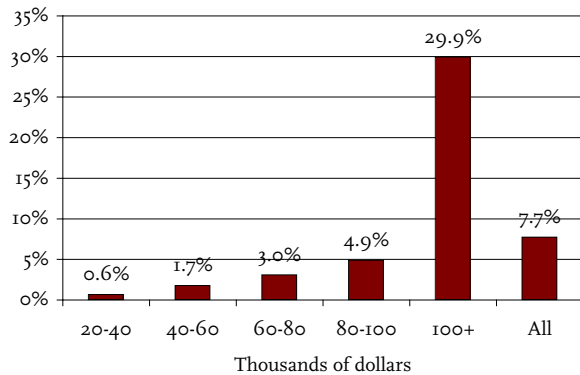
Source: Authors’ calculations based on the 2007 SCF.

Contributions

In 2007, most employees were entitled to contribute \$15,500 on a tax-deductible basis to their 401(k) plan.¹⁸ Workers approaching retirement could contribute another \$5,000 under “catch-up” provisions introduced in 2002. One question is how many workers contribute the maximum. Maximum has to be defined because it is not reasonable to think that a person earning \$20,000 could contribute \$15,500. Defining the maximum as the lower of \$15,500 (\$20,500 if over

50) or 25 percent of salary,¹⁹ the 2007 data indicate that only 8 percent contributed the most they could to their 401(k) plans.²⁰ Not surprisingly, maximum contributions are closely related to income. Less than 2 percent of those earning \$40,000-\$60,000 contribute the maximum compared to 30 percent for those earning \$100,000 or more (see Figure 6).

FIGURE 6. PERCENT OF PARTICIPANTS MAKING MAXIMUM CONTRIBUTIONS, BY EARNINGS, 2007



Source: Authors' calculations based on the 2007 SCF.

It would also be nice to know the percent of participants who contribute at least up to the employer match. Those who do not are essentially leaving money on the table. Unfortunately, such data are not available in the SCF. A study by Hewitt Associates finds that only 22 percent of 401(k) participants in 2005 did not contribute enough to maximize their employer match.²¹

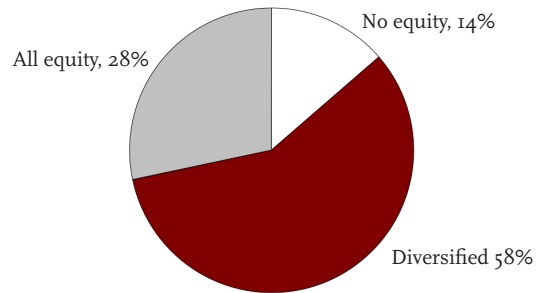
Investment Decisions

In addition to participation and contribution decisions, employees have to decide how to invest their money. The investment process requires determining the initial allocation of contributions between stocks and bonds, deciding about investing in company stock, and changing allocations over time with age and market fluctuations.

Diversification. Modern portfolio theory demonstrates that by building a portfolio of securities with differing risk characteristics, an investor can create a more efficient portfolio, one expected to achieve a given level of expected return while minimizing risk. Therefore, a natural concern

with 401(k) plans is the extent to which participants hold a mix of stocks and bonds. According to the 2007 SCF, 14 percent of participants held no equity and 28 percent held all their balances in equity; only 58 percent held a mix of stocks and bonds (see Figure 7). Thus, even though new employees are increasingly in target date and balanced funds, diversification remains a challenge.²²

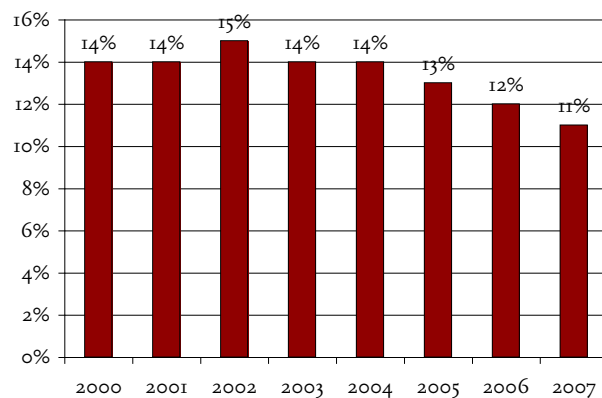
FIGURE 7. 401(k) PARTICIPANTS BY EQUITY HOLDINGS, 2007



Source: Authors' calculations based on the 2007 SCF.

Investment in Company Stock. Company stock creates another investment challenge. Concentrating 401(k) investments in company stock means that employees hold a large share of their portfolio in a single stock, which is more risky than a diversified portfolio. Moreover they concentrate their financial bets on a security directly correlated with their own human capital and earnings. In short, participants with large holdings of company stock expose themselves to unnecessary risk. In 2007, about 11 percent of all assets were invested in company stock (see Figure 8).²³

FIGURE 8. COMPANY STOCK AS A PERCENTAGE OF 401(k) ASSETS, 2000-2007

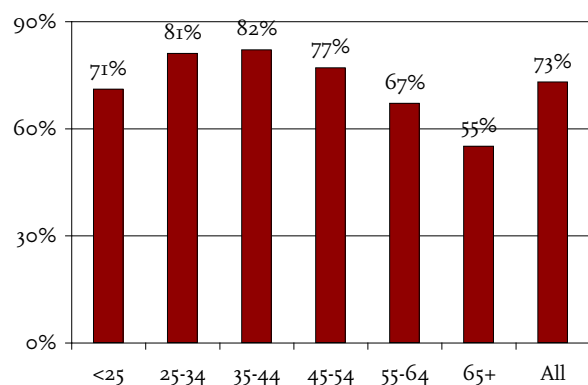


Source: Vanguard (2008).

An aggregate number does not tell the full story, however, since most 401(k) plans do not offer company stock as an investment option. The practice is concentrated among large plans – those with 5,000 or more participants – where company stock accounted for 26 percent of the total.²⁴

Rebalancing. In most instances, it makes sense for individuals to reduce their equity holdings as they age. At first glance, the data suggest that individuals are following this advice since most data sets show lower equity holdings for older people than younger ones (see Figure 9).²⁵ But it appears that this pattern reflects the fact that people born more recently have chosen to hold more equity than those born in earlier years. Studies that follow people over time reveal very little portfolio adjustment either in response to increasing age or returns.²⁶

FIGURE 9. PERCENT OF 401(k) BALANCES IN EQUITIES BY AGE, 2007



Source: Vanguard (2008).

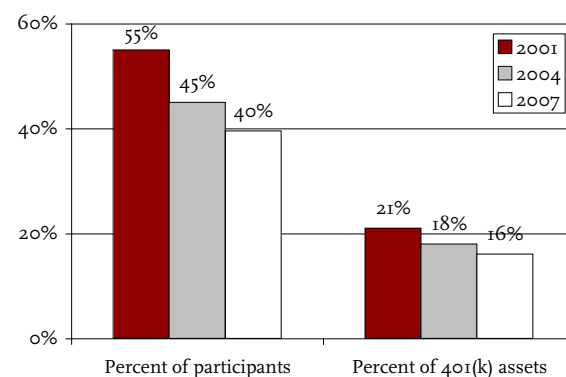
Cashing Out

The only way to end up at retirement with significant accumulations is to put the money into the 401(k) account and leave it there until retirement. Cashing out even small amounts – that is, taking money out instead of rolling it over into an IRA or into an employer's 401(k) – can have a detrimental effect on ultimate accumulations. To discourage cashing out, the Federal Government has imposed a 10-percent penalty in addition to regular income taxes on any withdrawal before age 59 ½. Employers are also

required to withhold 20 percent of any distributions paid directly to recipients. To specifically discourage the cashing out of small amounts, a 2005 Department of Labor regulation requires that employers roll over any 401(k) plan with a value between \$1,000 and \$5,000 into an IRA – unless the separating worker elects to have it cashed out or rolled over into a new 401(k) at his new company.²⁷

The SCF asks participants if they have ever received a lump-sum distribution from a retirement plan and, if so, how much they received and what they did with the money.²⁸ This analysis looks only at the two-thirds of 401(k) participants who took lump-sum distributions when switching jobs and ignores the one-third who kept assets in their former employer's plan.²⁹ Figure 10 shows that 40 percent of participants who received a lump sum did not roll the money over into another tax-deferred savings vehicle.³⁰ Since most of the people cashing out were younger workers with relatively small amounts, the dollar volume of the cash outs equaled only 16 percent of the assets distributed. The extent of cashing out has shown a downward trend since 2001 (see Figure 10).

FIGURE 10. PERCENT OF PARTICIPANTS WITH LUMP-SUM DISTRIBUTIONS WHO "CASH OUT" AND PERCENT OF DISTRIBUTED ASSETS "CASHED OUT"



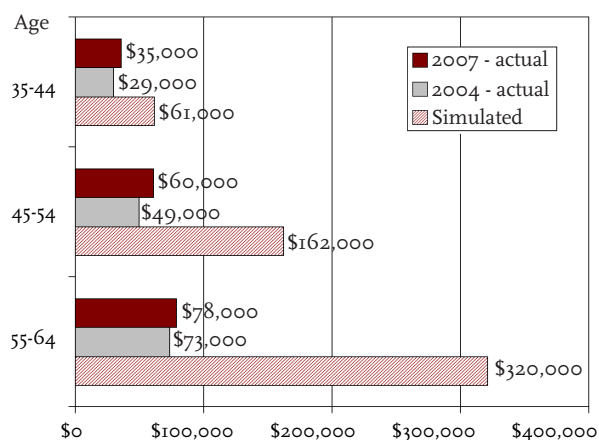
Note: This figure only looks at those who took a lump-sum distribution when switching employers and does not factor in those who switched jobs but left assets in their former employer's retirement plan.

Sources: Authors' calculations based on the 2001, 2004, and 2007 SCF.

Accumulations in 401(k) Plans

Despite the recent improvements, the cumulative effect of earlier 401(k) missteps by individuals has had a major impact on plan accumulations. In theory, a typical worker who ends up at retirement with earnings of about \$50,000 and who contributed 6 percent steadily with an employer match of 3 percent should have about \$320,000. The bottom bar in Figure II shows the amounts that the typical worker would have at each age along this path of accumulation.

FIGURE II. 401(k)/IRA ACTUAL AND SIMULATED ACCUMULATIONS OF INDIVIDUALS WITH 401(k) PLANS, BY AGE GROUP, 2004 AND 2007



Note: 401(k) holdings alone in the 2007 SCF were \$25,000 for 35-44, \$45,000 for 45-54, and \$60,000 for 55-64. Sources: Munnell and Sunden (2004 and 2006); and authors' calculations from the 2007 SCF.

The SCF reports the actual amount that the typical worker has in his account at each age. In 2004, the typical individual approaching retirement had only \$73,000, far short of the simulated amount. (Note that the reported amounts include holdings in IRAs because these balances consist mostly of rollovers from 401(k) plans.) By 2007, the picture had improved somewhat, most likely because of the strong stock market and the fact that the new cohort of those 55-64 had spent more of their working life covered by a 401(k). Still, actual holdings of \$78,000 for those 55-64 are dramatically lower than those simulated for the hypothetical worker. Moreover, as shown in Figure II, those at younger ages do not appear to be on track in their accumulations either.

In terms of wealth, 401(k) accumulations accounted for only 7 percent of total holdings for the typical household age 55-64 (see Table 2).³¹ Thus, even after nearly 30 years, 401(k) plans account for only a small portion of the wealth of households approaching retirement.

TABLE 2. WEALTH OF A TYPICAL HOUSEHOLD APPROACHING RETIREMENT, 2007

Source of wealth	Amount in dollars	Percent of total
Primary house	\$138,600	20%
Business assets	15,900	2
Financial assets	29,600	4
401(k)/IRAs ^a	50,500	7
Defined benefit	122,100	18
Social Security	298,900	44
Other non financial assets	21,000	3
Total	676,500	100

^a Includes thrift savings plans and other defined contribution plans.

Note: The "typical household approaching retirement" refers to the mean of the middle 10 percent of the sample of households headed by an individual aged 55-64.

Source: Authors' calculations based on the 2007 SCF.

The Effect of the Financial Crisis

If this update focused solely on data through 2007, it would have concluded that 401(k) plans were functioning somewhat better – slightly more people were participating, participants were investing less in company stock, and cashing out was becoming less of a problem. These favorable developments were reflected in an increase in 401(k) balances.

Unfortunately, in 2008, financial markets collapsed, highlighting the risk associated with 401(k) plans. The decline in equity values cut 401(k) balances by about 30 percent. Moreover, the collapse in financial markets has spread to the real economy. People are losing their jobs, putting enormous financial pressure on families. This pressure has led to an increase in hardship withdrawals. At the same time,

the retrenchment of consumers has forced many corporations – faced with the alternative of laying off workers – to cut back on their 401(k) match.

Decline in Equity Values

Over the year following the peak of the stock market (October 9, 2007–October 9, 2008), all major stock indices plunged by about 40 percent.³² During this period, the value of equities in retirement accounts declined by almost \$4.0 trillion (see Table 3). Individuals were sheltered from the immediate impact of the \$1.7 trillion of losses in defined benefit plans. But they did experience a direct hit on the \$2.0 trillion in losses that occurred in 401(k)s and IRAs.

TABLE 3. EQUITY DECLINES FROM OCTOBER 9, 2007 TO OCTOBER 9, 2008 IN RETIREMENT PLANS, TRILLIONS OF DOLLARS

Type of Plan	10/9/2007	10/9/2008	Decline
Defined contribution	\$4.7	\$2.7	\$2.0
IRAs	2.0	1.1	0.8
Private defined contribution	2.6	1.5	1.1
Federal government ^a	0.2	0.1	0.1
Defined benefit	4.2	2.4	1.7
Private defined benefit	1.8	1.0	0.7
State and local	2.4	1.4	1.0
Total	8.8	5.1	3.7

^a The federal government holdings are those in the Thrift Savings Plan.

Note: This figure varies slightly from that in Munnell and Muldoon (2008) due to changes in *Flow of Funds*' estimates of equity holdings.

Source: Authors' updates based on Munnell and Muldoon (2008); and U.S. Board of Governors of the Federal Reserve System (2008).

As noted earlier, participants in 401(k) plans approaching retirement held about two-thirds of their balances in equities. As a result, the market value of assets in 401(k)s/IRAs tumbled by about 30 percent. That decline means that the median 401(k)/IRA holdings were \$56,000 at the end of 2008 compared to the reported figure of \$78,000 from the 2007 SCF (see Figure 12).

FIGURE 12. 401(k)/IRA BALANCES OF HOUSEHOLD HEADS APPROACHING RETIREMENT, BEFORE AND AFTER THE STOCK MARKET DECLINE



Note: Figure assumes that 55–64 year olds have 67 percent of their assets in equities (Vanguard 2008) and shows the hypothetical change in the balance based on the 42 percent drop in the Dow Jones Wilshire 5000 from October 9, 2007 – the peak of the stock market – to October 9, 2008.

Sources: Authors' calculations from the 2007 SCF; Vanguard (2008); and Wilshire Associates (2008).

Employer Match

A second way the financial crisis has impacted 401(k) plans is through its effect on the real economy and employers' inability to make matching payments. Although employers are not obligated to make contributions to 401(k) plans, the vast majority of participants – 91 percent – belong to plans that offer a match.³³ The probability of a company match increases with plan size, but a match is fairly prevalent across the board. The most common employer match is 50 cents for each dollar contributed by the employee with the match ending when employee contributions equal 6 percent of earnings. The employer match encourages both participation in the plan and the level of employee contributions.³⁴

As the recession gained momentum in 2008 and companies came under severe earnings pressure, they began to announce suspensions of their 401(k) matches. This response mirrored what happened in the wake of the 2001 recession when about 15 large companies stopped matching employee contributions. Once again, the automobile companies led the way with Ford, General Motors, and Chrysler suspending the match for their salaried employees. But suspensions at Sears, FedEx, UPS, Sprint, and about forty-five other companies so far have affected large numbers of employees (see Table 4 on the next page and the CRR website for a [complete list](#) to date).

TABLE 4. SAMPLE OF COMPANIES SUSPENDING EMPLOYER MATCH, 2008-2009

Company	Announcement Date	Employees affected	Comments
Sears Holding Corp.	December 2008	305,081	Suspended February 2009; will review when financial performance improves.
FedEx	December 2008	115,330	Suspended February 2009; will review.
UPS	February 2009	100,368	Suspended February 2009; will review.
Sprint	January 2009	79,321	Suspended for a minimum of one year starting March 2009; will review.
Chrysler LLC	February 2009	32,900	Suspended February 2009; will review.
General Motors	October 2008	32,000	Suspended November 2008; will review.
Motorola	December 2008	30,076	Suspended January 2009; will review.
Ford Motor Companies	November 2008	22,600	Suspended for 2009; no decision made about reinstatement.

Source: Newspaper reports; conversations with companies; and Form 5500 filings.

The question is the impact that these suspensions will have on participation and contributions. Inertia suggests that the vast majority of people enrolled in 401(k) plans will not leave. Fewer new employees might join, but with little hiring the impact is likely to be small. On the contribution side, inertia is also likely to result in unchanged employee contributions. Thus, employees, without the employer match, will see less going into their 401(k) accounts.

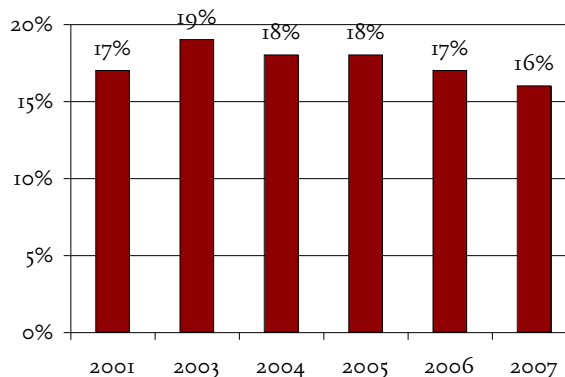
The seriousness of the current suspensions of employer matches will depend on whether more firms follow suit and whether the suspensions are a temporary or permanent phenomenon. If, as was the case in the wake of the 2001 recession, the suspensions are temporary, the effects will probably be modest and must be compared to the impact of other ways the firm could have responded. For example, cutting the employer match may have been an alternative to cutting payrolls by 3 percent. On the other hand, if these suspensions lead to a permanent decline of the employer match, significantly fewer people will participate – especially among the lower paid – and many of those affected will end up with an inadequate retirement income.

Loans and Hardship Withdrawals

In most 401(k) plans, participants can borrow up to 50 percent of their balances (up to a maximum of \$50,000), and they can take money out (with a penal-

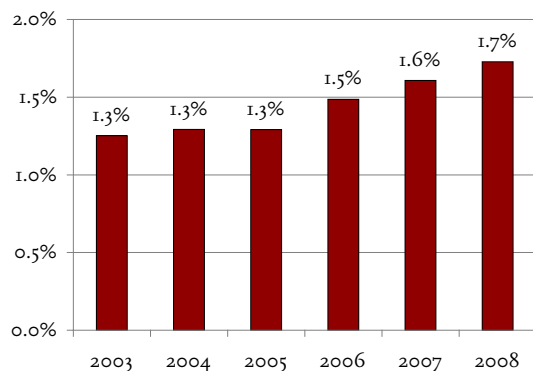
ty before age 59 ½) in the event of a hardship. Reasons for hardship withdrawals include purchasing a primary residence, educational expenses, medical expenses, or general financial pressures. The percent of participants with loans has remained remarkably constant over time at about 15-20 percent (see Figure 13).³⁵

FIGURE 13. PERCENTAGE OF DEFINED CONTRIBUTION PLAN PARTICIPANTS WITH LOANS, 2001-2007



Note: Includes only participants in plans which offer loans.
Source: Vanguard (2002-2008).

FIGURE 14. PERCENTAGE OF PARTICIPANTS TAKING A HARDSHIP WITHDRAWAL, 2003-2008



Source: Vanguard Center for Retirement Research (2009 forthcoming).

In contrast to loans, hardship withdrawals have increased somewhat. By the end of 2008, about 1.7 percent of participants had withdrawn funds because of financial pressure (see Figure 14). If the current recession continues for an extended period, many more individuals may be forced to use their retirement savings to cover current expenditures. Such a trend would further erode the retirement security of many employees who have already seen their 401(k) balances reduced substantially by the financial collapse.

Conclusion

The 2007 SCF suggests that 401(k) plans were starting to function better. With the spread of automatic enrollment, a slightly higher percentage of workers were joining the plans, and with the automatic default into qualified investments, more participants were diversified. Balances were up due to the passage of time, slightly higher participation rates, and less leakage from the system. Despite the improvement, the typical individual approaching retirement had only \$78,000 in 401(k)/IRA holdings.

Then the financial markets collapsed, and the collapse spread to the real economy. Balances in 401(k) plans lost 30 percent of their value, reducing the median for those approaching retirement from \$78,000 to \$56,000. In addition, companies started cutting back on the employer match and hardship withdrawals, while still at low levels, ticked upward. These events occurred just as the baby boom is approaching retirement, with an increasing number reliant on 401(k)s as their only supplement to Social Security – a role for which 401(k)s were never intended.

The time may have come to consider returning 401(k) plans to their original position as a third tier on top of Social Security and employer-sponsored pensions. Given the demise of traditional employer pensions, such a rearrangement would require a new tier of retirement accounts. This additional protection would help those reliant solely on Social Security and those with 401(k) plans where – for one reason or another – balances end up being very modest.

Endnotes

- 1 Kennickell, Starr-McCluer, and Surette (2000) describe the *Survey of Consumer Finances* in detail.
- 2 For a useful discussion of the evolution of the economic crisis, see Taylor (2009).
- 3 U.S. Bureau of Labor Statistics (2009).
- 4 U.S. Bureau of Labor Statistics (2008).
- 5 The Revenue Act of 1978, which contained a provision that became section 401(k) of the Internal Revenue Code, went into effect on January 1, 1980. But employers did not begin to adopt 401(k) provisions until the regulations were issued in November 1981.
- 6 The salary at age 50 is about \$46,000 for the median worker with a pension according to the 2007 SCF. The real rate of return on a portfolio invested half in equities and half in bonds is assumed to be 4.1 percent (after fees).
- 7 Madrian and Shea (2001); Choi, Laibson and Madrian (2004).
- 8 Even before the Pension Protection Act, policymakers had attempted to reduce the cashing out of small balances in 401(k) plans through changes in Department of Labor regulations.
- 9 The government changed the rules in 1998 to allow firms to require workers to “opt out” of a plan, instead of the traditional requirement to “opt in.”
- 10 Nessmith, Utkus, and Young (2007); Fidelity Investments (2007); Madrian and Shea (2001).
- 11 Choi et al. (2001).
- 12 One obstacle for employers was state laws that required employers to obtain an employee’s permission before making payroll deductions. The Pension Protection Act amended ERISA to pre-empt state laws that conflict with automatic enrollment provisions. To qualify for the safe harbor, the plan sponsor must enroll employees at a deferral rate of at least 3 percent of compensation, increase the employee’s deferral percentage by at least 1 percentage point annually up to 6 percent of compensation, and provide matching or non-elective contributions for the non-highly compensated of 100 percent on the first 1 percent of contribution and 50 percent on the next 5 percent for a total match of 3.5 percent.
- 13 The Profit Sharing/401(k) Council of America shows a higher percentage of plans with automatic enrollment than Fidelity Investments (2007) and Vanguard (2008), which report 17 percent and 15 percent respectively, because its survey contains several large corporations that were leaders in automatic enrollment. All three sources show an increasing trend in automatic enrollment over the past few years.
- 14 Profit Sharing /401(k) Council of America (2008).
- 15 In addition to addressing the problem of low saving rates due to inertia, auto escalation also helps increase future saving among individuals who may find it difficult to save more out of their current incomes. For example, see Benartzi and Thaler (2004).
- 16 The SCF data portray a more favorable participation picture than Vanguard (2008), which shows 34 to 35 percent of eligible workers not participating in the plan over the period 2000-2007, and Fidelity Investments (2007), which shows 35 to 37 percent of eligible workers not participating from 2004-2006.
- 17 Some critics contend that the lack of participation is not a serious problem because many are covered by their employer’s defined benefit plan. In fact, the 2007 SCF shows that only 22 percent of non-participants are covered by a defined benefit plan, and the majority of these workers are high earners. This means that most low-income and younger workers who choose not to participate are without pension coverage.
- 18 The Economic Growth and Tax Relief Reconciliation Act of 2001 increased the contribution rate to \$15,000 in 2006, with the limit indexed for inflation thereafter in \$500 increments.
- 19 In 2007, total contributions to the plan (employee and employer) were limited to the lesser of 25 percent of compensation or \$45,000.

20 Most analyses of contribution levels overlook the opportunity to make catch-up contributions, yet these contributions can be an important savings vehicle for plan participants over the age of 50. Excluding the catch-up contribution from the calculation and maintaining a maximum of \$15,500 for all workers, the data show that 8.9%, rather than 7.7%, of all workers contribute the maximum.

21 Hewitt Associates (2006).

22 Both Fidelity Investments (2007) and Vanguard (2008) show that, in the wake of the PPA, more participants are using target date funds, balanced funds, and other life-cycle options today than in the past.

23 The Vanguard data reported in Figure 8 are consistent with data from Fidelity Investments (2007) and VanDerhei et al. (2008). Both sources show similar levels and trends in ownership of company stock. In contrast, the Profit Sharing/401(k) Council of America (2008), reports that the percent of retirement assets invested in company stock still remains above 20 percent. The Profit Sharing/401(k) Council of America tends to focus on large companies where company stock ownership is more prevalent.

24 Profit Sharing/401(k) Council of America (2008).

25 Fidelity Investments (2007) looks at different age groups, but finds a similar pattern.

26 Ameriks and Zeldes (2004).

27 One problem is that the rollover amounts are placed in money market funds or similar low risk/low return investments. Since most of those with low balances are probably young people, many, as a result of inertia, could pass up higher returns on these early accumulations for an extended period of time. Nevertheless, this change should reduce the extent to which people cash out.

28 The SCF combines lump-sum distributions from defined benefit and defined contribution plans. However, we assume that 90 percent of these distributions come from defined contribution plans because defined benefit lump-sum distributions only occur when the expected value of the benefit is less than \$5,000.

29 Hewitt Associates (2005 and 2009); Hurd and Panis (2006).

30 Two recent studies show a higher percentage of people “cashing out.” Copeland (2009) analyzes the *Survey of Income and Program Participation* and finds that approximately 60 percent of those who receive a lump-sum payment cash out at least some of the distribution. Analyzing the same data, Purcell (2009) finds that 54 percent of those who received lump-sum distributions between 2000 and 2006 did not roll over the entire amount.

31 Note the difference between the amounts in Figure 11 and Table 2 arises because the former looks only at individuals with a 401(k) plan, while the latter calculates average wealth for households in the middle 10 percent of the sample of households both with and without a 401(k).

32 The Dow Jones Industrial Average fell 39 percent, the Standard and Poor’s 42 percent and the broadest gauge of market activity – the Wilshire 5000 – 42 percent.

33 Matching contributions are a common feature of 401(k) plans because plan participation and contributions are voluntary. Workers must decide whether or not to participate and how much to contribute, which is very different from traditional pensions where eligible workers are covered automatically and the employer makes contributions on their behalf. Because the plan’s tax benefits are especially valuable to high-paid employees with high marginal tax rates, the government was concerned that only high-paid employees would join. Thus, the Internal Revenue Code requires that 401(k) plans meet a special non-discrimination test to ensure that lower-paid as well as higher-paid workers join the plan. The employer’s matching contribution is an important tool to ensure broad participation and ample contributions.

34 The presence of an employer match produces a large initial return on the employee’s contribution and supplements the advantages of tax deferral. Results from statistical analyses that relate the participation decision to individual characteristics and plan design consistently show that the presence of an employer match makes it much more likely that employees will participate. On the contribution side, the rela-

tionship between the employer match and the level of employee contributions is theoretically ambiguous. The employee's response to the employer match depends on whether the "income effect" or "substitution effect" dominates. Hence, the theoretical outcome is ambiguous and needs to be determined empirically. Munnell, Sundén, and Taylor (2003) looked at this issue using the 1998 SCF. They found that the presence of an employer match increases the contribution rate by almost one percentage point of earnings – a substantial effect given that the median contribution rate is 6 percent of earnings.

35 The Vanguard data are consistent with analysis from the SCF that shows, in 2001, 14 percent of participants in defined contribution plans offering loans had one or more. This percentage rose to almost 16 percent in 2004 before falling back to 14 percent in 2007. For participants with an outstanding loan in 2007, the mean balance was \$8,571 according to Vanguard. According to the SCF, the mean balance was \$6,607 and the median balance was \$4,700.

References

- Ameriks, John and Stephen P. Zeldes. 2004. "How Do Household Portfolio Shares Vary with Age?" Working Paper. Columbia University Business School: New York, NY.
- Benartzi, Shlomo and Thaler, Richard H. 2004. "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving." *Journal of Political Economy* 112(1): S164-S187.
- Choi, James J., David Laibson, and Brigitte C. Madrian. 2004. "Plan Design and 401(k) Savings Outcomes." Working Paper 10486. Cambridge, MA: National Bureau of Economic Research.
- Choi, James J., David Laibson, Brigitte Madrian, and Andrew Metrick. 2001. "For Better or for Worse: Default Effects and 401(k) Savings Behavior." Working Paper 8651. Cambridge, MA: National Bureau of Economic Research.
- Copeland, Craig. 2006. "Retirement Plan Participation and Retirees' Perception of Their Standard of Living." Issue Brief 289. Washington, DC: National Bureau of Economic Research.
- Copeland, Craig. 2009. "Lump-Sum Distributions at Job Change." Notes 30(1). Washington, DC: Employee Benefit Research Institute.
- Fidelity Investments. 2007. *Building Futures Volume VIII: A Report on Corporate Defined Contribution Plans*. Boston, MA.
- Hewitt Associates. 2005. "Are Workers Preserving Their 401(k) Retirement Wealth?" Lincolnshire, IL.
- Hewitt Associates. 2006. *How Well Are Employees Saving and Investing in 401(k) Plans: 2006 Universe Benchmarks*. Lincolnshire, IL.
- Hewitt Associates. 2009. Personal communication with Catherine Brandt.
- Hurd, Michael and Constatijn Panis. 2006. "The Choice to Cash Out Pension Rights at Job Change or Retirement." *Journal of Public Economics* 90(12): 2213-2227.
- Kennickell, Arthur B., Martha Starr-McCluer, and Brian J. Surette. 2000. "Recent Changes in U.S. Family Finances: Results from the 1998 Survey of Consumer Finances." *Federal Reserve Bulletin* 86(1): 1-29.
- Madrian, Brigitte C. and Dennis F. Shea. 2001. "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior." *The Quarterly Journal of Economics* 116(4): 1149-1187.
- Munnell, Alicia H. and Dan Muldoon. 2008. "Are Retirement Savings Too Exposed to Market Risk." *Issue in Brief* 8-16. Center for Retirement Research at Boston College: Chestnut Hill, MA.
- Munnell, Alicia H. and Annika Sundén. 2004. *Coming up Short: The Challenge of 401(k) Plans*. Washington, DC: Brookings Institution Press.
- Munnell, Alicia H. and Annika Sundén. 2006. "401(k) Plans Are Still Coming Up Short." *Issue in Brief* 43. Center for Retirement Research at Boston College: Chestnut Hill, MA.
- Munnell, Alicia H., Annika Sundén, and Catherine Taylor. 2003. "What Determines 401(k) Participation and Contributions?" *Social Security Bulletin* 64(3): 64-75.
- Nessmith, William E., Stephen P. Utkus, and Jean A. Young. 2007. "Measuring the Effectiveness of Automatic Enrollment." Volume 31. Valley Forge, PA: Vanguard Center for Retirement Research.
- Profit Sharing/401(k) Council of America. 2005. *Forty-Eighth Annual Survey of Profit Sharing and 401(k) Plans, Reflecting 2004 Plan Experience*. Chicago, IL.
- Profit Sharing/401(k) Council of America. 2006. *Forty-Ninth Annual Survey of Profit Sharing and 401(k) Plans, Reflecting 2005 Plan Experience*. Chicago, IL.
- Profit Sharing/401(k) Council of America. 2007. *Fiftieth Annual Survey of Profit Sharing and 401(k) Plans, Reflecting 2006 Plan Experience*. Chicago, IL.
- Profit Sharing/401(k) Council of America. 2008. *Fifty-First Annual Survey of Profit Sharing and 401(k) Plans, Reflecting 2007 Plan Experience*. Chicago, IL.

- Purcell, Patrick. 2009. *Pension Issues: Lump-Sum Distributions and Retirement Income Security*. Congressional Research Service Report for Congress No. RL30496. Washington, DC: Library of Congress.
- Taylor, John B. 2009. "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong." Working Paper 14631. Cambridge, MA: National Bureau of Economic Research.
- U.S. Board of Governors of the Federal Reserve System. *Survey of Consumer Finances, 1983-2007*. Washington, DC
- U.S. Board of Governors of the Federal Reserve System. 2008. *Flow of Funds Accounts of the United States*. (December 11 Release). Washington, DC.
- U.S. Bureau of Labor Statistics. 1980-2008. *Current Population Survey*. Washington, DC.
- U.S. Bureau of Labor Statistics. 2003-2005. *Labor Force Statistics from the Current Population Survey*. Washington, DC.
- U.S. Bureau of Labor Statistics. 2008. *Employee Tenure in 2008*. Washington, DC.
- U.S. Bureau of Labor Statistics. 2009. *The Employment Situation: January 2009*. Washington, DC.
- VanDerhei, Jack, Sarah Holden, Luis Alonso, and Craig Copeland. 2008. *401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2007*. Issue Brief 324. Washington, DC: Employee Benefit Research Institute.
- Vanguard. 2002. *How America Saves 2002: A Report on Vanguard Defined Contribution Plans*. Valley Forge, PA.
- Vanguard. 2004. *How America Saves 2004: A Report on Vanguard Defined Contribution Plans*. Valley Forge, PA.
- Vanguard. 2005. *How America Saves 2005: A Report on Vanguard 2004 Defined Contribution Plan Data*. Valley Forge, PA.
- Vanguard. 2006. *How America Saves 2006: A Report on Vanguard 2005 Defined Contribution Plan Data*. Valley Forge, PA.
- Vanguard. 2007. *How America Saves 2007: A Report on Vanguard 2006 Defined Contribution Plan Data*. Valley Forge, PA.
- Vanguard. 2008. *How America Saves 2008: A Report on Vanguard 2007 Defined Contribution Plan Data*. Valley Forge, PA.
- Vanguard Center for Retirement Research. 2009 (forthcoming). "2008 Hardship Withdrawals." Valley Forge, PA.
- Wilshire Associates. 2008. Dow Jones Wilshire 5000 (Full Cap) Price Levels Since Inception. Available at: <http://www.wilshire.com/Indexes/calculator/csv/w5kppidd.csv>.

APPENDIX

TABLE A1. WORKERS WITH PENSION COVERAGE BY TYPE OF PLAN, 1983-2007

Year	Defined Benefit only	Defined Contribution only	Both
1983	62%	12%	26%
1989	46	32	21
1992	44	40	16
1995	29	56	15
1998	23	60	16
2001	23	61	16
2004	20	63	17
2007	17	63	19

Source: Authors' calculations based on the 1983-2007 SCF.

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