Why did some employers suspend their 401(k) match?

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By Alicia H. Munnell and Laura Quinby*

Introduction

The employer match of employee contributions is an important characteristic of 401(k) plans.[1] The match was designed to encourage participation and contributions – particularly by lower-paid employees. However, at many companies, the employer match became a casualty of the financial collapse and ensuing recession. While several large companies have restored their match, it is still important to understand what causes such a response.

This *Issue in Brief* attempts to explain why some firms suspended their match while others did not. It proceeds as follows. The first section explains the rationale for, and mechanics behind, employer matching of employee contributions. The second section considers the economic impact of the match. The third section describes the companies that have suspended their match. The fourth section examines how several factors impact the probability of an employer suspending its match. The results suggest that liquidity constraints, rather than profitability issues, are the main reasons for suspending the match. The fifth section speculates about the likely impact of the 401(k) match suspensions on employees. The final section concludes that cash-strapped companies appear to have been forced to cut back, and, if the pattern follows that of the 2001 recession, most companies are likely to restore their match once the economy recovers. To the extent that the match is quickly restored, little harm may have been done – especially compared with the alternative of laying off workers.

Why an Employer Match?

Under 401(k) plans, employees can save a percentage of their annual salary on a tax-deferred basis, which they may withdraw upon retirement. Unlike traditional pension plans, in which employees are covered automatically and receive fixed annuities from their employer after retirement, participation in a 401(k) is entirely voluntary. Despite the recent trend toward automatic enrollment, most employees must choose whether or not they want to participate and how much of their salary to contribute to the plan.[2] Like all tax-deferred savings vehicles, the tax savings from a 401(k) are greater for the higher-paid, because they face higher marginal tax rates. To encourage broad participation, Congress requires all plans to pass

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a nondiscrimination test, which limits how much highly compensated workers can contribute relative to the rank and file.[3] By matching employee contributions, employers encourage a broader spectrum of their workforce to join a 401(k) plan.[4]

Although employers are not obligated to make contributions to 401(k) plans, the vast majority of participants belong to plans that offer a match. The probability that a company matches increases with plan size, but a match is fairly prevalent across the board (see Table 1).

Table 1. Percent of Plans with Employer Match, by Plan Size, 2008

Plan size (participants)	Percent of plans with match
1-49	92.2%
50-199	93.7
200-999	94.2
1,000-4,999	96.7
5,000 and more	92.9
All	94.1

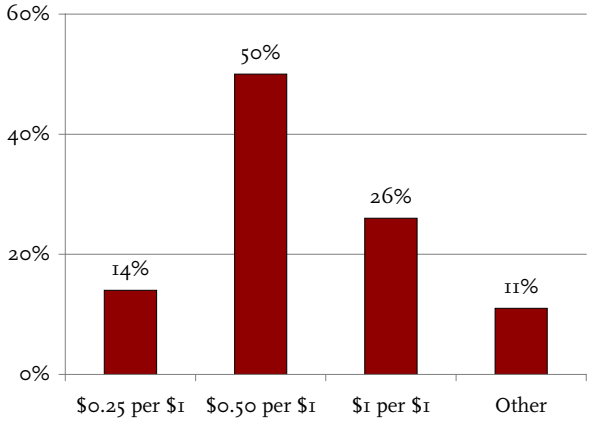
Source: Profit Sharing/401(k) Council of America (2009).

The employer match has two components: the percentage of contributions that the employer will match (the match rate) and the percentage of the employee's earnings on which the match will be provided (the match level). Although employers have adopted a variety of match rates (see Figure 1), the typical employer match consists of a 50 percent match on 6 percent of the employee's salary.[5] Taken together, the typical employer match is thus 3 percent of employee earnings. Most employers permit their workers to continue contributing on an unmatched basis past the 6 percent match level.[6]

The Economic Impact of the Employer Match

A number of studies have explored factors that affect 401(k) participation and contribution decisions. These studies consistently find that, even after accounting for individual characteristics, the employer match is an important determinant.

Figure 1. Distribution of Plans by Employer Match Rate, 2008



Source: Profit Sharing/401(k) Council of America (2009).

On the participation side, the relationship is straightforward. The presence of an employer match produces a large initial return on the employee's contribution that supplements the benefits of tax deferral and encourages participation. Empirically, several studies have used cross-sectional data to explore the relationship between the presence of an employer match and 401(k) participation. The results consistently show a positive relationship, whereby the presence of a match increases participation by 5 to 10 percentage points.[7] Several studies have also documented a positive relationship between the *level* of the employer match and 401(k) participation.[8]

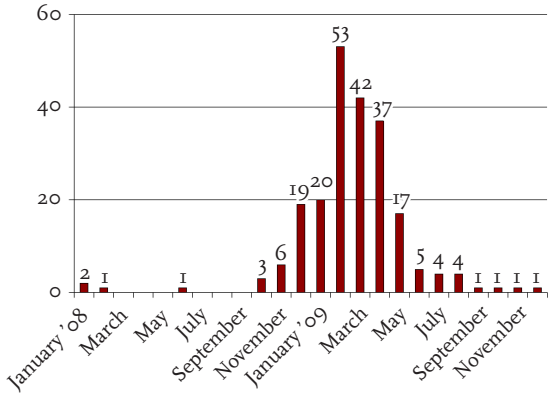
On the contribution side, the relationship between the employer match and employee contributions is unclear. Suppose a firm that previously did not match contributions decides to match 50 percent on the employees' contributions up to 6 percent. Some employees might lower their contribution rate because they need to contribute less to reach the same overall contribution level. Other employees might increase their contributions up to 6 percent because they receive an extra 50 cents for each dollar they contribute. Hence, the theoretical outcome is ambiguous and the issue needs to be resolved empirically.[9] Studies that examine the relationship between the average match rate and employee contributions generally find a positive relationship, although a few find no effect or even a negative one.[10] Studies that carefully account for the effect of both the match rate and match level find that contributions increase with a higher match rate and a higher match level.[11]

Employers Suspend Their Match

The propensity for employers to decrease or suspend their 401(k) match in times of economic hardship became evident in the wake of the 2001 recession, when several large companies (General Motors, Ford, DaimlerChrysler, Textron, Goodyear Tire & Rubber, and Charles Schwab, among others) announced their decision.[12] As the economy recovered, most of these firms restored their original matches. But the phenomenon returned in spades following the 2008 financial collapse and ensuing recession. News accounts suggest that 218 companies suspended their 401(k) match between January 2008 and November 2009 (see Figure 2). We estimate that 4.9 percent of all 401(k) participants were affected. (A list of companies that suspended their 401(k) match and estimates of the number of employees affected is available on the CRR website. The participant counts come from the U.S. Department of Labor's Form 5500.[13])

While match suspensions began as early as January 2008, the majority of employers instituted their suspensions between December 2008 and May 2009, with the peak occurring in February 2009.

Figure 2. Number of Suspended Employer 401(k) Matches Announced, 2008-2009



Sources: Available upon request.

What Causes Employers To Suspend Their Match?

The following analysis attempts to sort out why some firms suspended their match when the economy collapsed while others did not. The process involves identifying possible factors that might affect employer decisions and then using regression analysis to identify the importance of these factors. The discussion first describes the factors considered and then presents the regression results.

Possible Explanations

Possible factors that may either encourage or discourage firms to suspend their match include the liquidity, profitability, and size/industry of the firm, as well as the nature of its pension arrangement.

Two measures of liquidity or lack of liquidity were considered.

- *Quick ratio*. This variable, which is the ratio of cash, cash equivalents, marketable assets, and accounts receivable to current liabilities, measures the firm's ability to discharge its current liabilities. In an economy facing a financial crisis and bank failures, companies may find it difficult to roll over their debt. Such cash-strapped companies would use every method to reduce their exposure to the market. The expectation is that the larger the quick ratio, the less likely the firm is to suspend its match.

- *Failure to transmit*. This variable comes from the following question in the Form 5500: "Did the employer fail to transmit to the plan any participant contributions within the specified time period?" An affirmative response is set equal to one, a negative response equal to zero. The notion is that delaying the transfer of contributions serves as a safety valve for cash-strapped employers, making it less likely that they will suspend their match.

An important question is whether firms are suspending their match to preserve their profitability. To address that issue, the analysis includes a measure of profits.

- *Gross margin*: This variable, which is the ratio of annual gross profit to the cost of goods sold, measures the firm's profitability. If profitability is the motive, the higher the ratio, the less likely the firm is to suspend its match.

The nature of the firm's pension arrangements could also affect the probability of suspending the match.

- *Defined benefit plan*: This variable is set equal to one if the firm has a defined benefit plan in addi-

tion to its 401(k). The hypothesis is that firms with defined benefit plans might be more likely to suspend the match because their employees already have some pension protection.

- *Employer contribution*: The size of the employer contribution is measured by the ratio of employer contributions to the sum of employee and employer contributions. The hypothesis is that the larger the employer's contribution, the greater the financial burden and the more likely the company is to suspend the match.

Finally, the characteristics of the firm and the industry may also affect the probability of a firm suspending its match.

- *Large firm*: A firm is characterized as large if it has 2,000 or more employees. The hypothesis is that larger firms have relatively larger 401(k) expenses and therefore are more likely to suspend the match when under pressure.

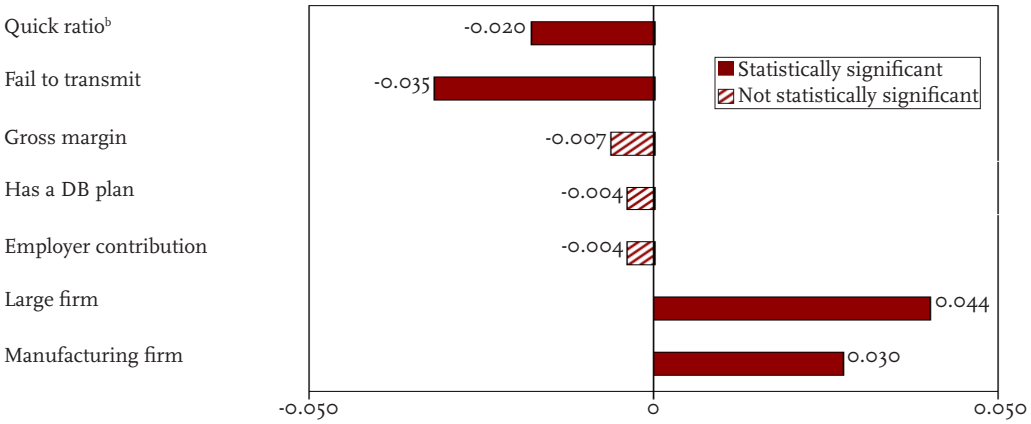
- *Manufacturing firm*: The variable is set equal to one if the firm is in the manufacturing industry. Manufacturing firms – already weakened by global competition – are more likely to be hurt by the economic downturn and therefore more likely to suspend the match.

The Results

The analysis uses financial data from Standard & Poor's 2009 Compustat linked to plan data from the 2007 Form 5500 filing.[14] Of the 218 firms on the list we compiled, 165 could be found in Compustat. Combining these firms with an additional 2,517 firms in Compustat that did not suspend their matches produced a total sample of 2,682 firms. Missing values in the Compustat data, however, reduced the final sample to 1,861 (127 suspenders, 1,734 non-suspenders).

The results, shown in Figure 3, are interesting on several levels – first and foremost in that they point to liquidity constraints as the primary reason employers suspend their 401(k) matches. The quick ratio is significant and negative, indicating that firms with more short-term assets relative to liabilities are less likely to suspend their match.[15] Similarly, failure to transmit employee contributions also has a statistically significant and negative impact on the probability of suspending the match. It suggests that those firms willing to compromise on their accounting by holding on to employee contributions rather than transmiting them to the 401(k) are less likely to face the liquidity constraints that would force them to suspend their match. Additionally, both firm characteristics are significant and positive, suggesting that large firms and those in the manufacturing sector are more likely to suspend their 401(k) match.

Figure 3. Effect of Selected Factors on Probability of an Employer Suspending its 401(k) Match[a]



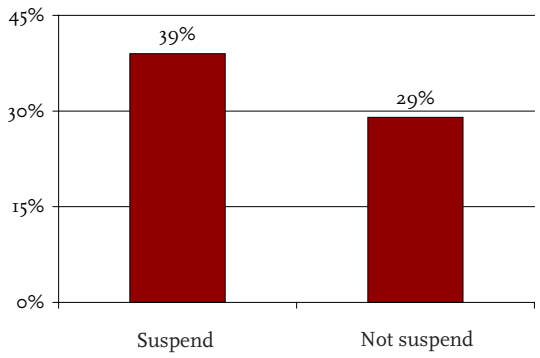
[a] The effects of the three continuous variables – quick ratio, gross margin, and contribution ratio – are for a one-standard-deviation change from the mean.

[b] The quick ratio and fail-to-transmit variables are significant at the 5 percent level. All other significant variables are significant at the 1 percent level.

Sources: Authors' calculations from U.S. Department of Labor (2007) and Standard & Poor's (2009).

Interestingly, firm profitability is not a significant factor in the decision to suspend the match, once liquidity has been taken into account.[16] The same is true for the employer-to-total-contribution ratio, which serves as a measure of the size of the employer match. The presence of a defined benefit plan is not significant either. This last variable has been the subject of recent discussion, as one study noted that most firms with suspended matches also had defined benefit pensions.[17] It is true that the incidence of defined benefit plans is 10 percentage points higher for suspended-match firms than non-suspended-match firms (see Figure 4), but this difference apparently does not have a significant effect once other factors are taken into account.

Figure 4. Percent of 401(k) Firms with a Defined Benefit plan



Source: Authors' calculations from U.S. Department of Labor (2007).

Impact of Suspensions on Individuals

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, without the employer match, employees will see less going into their 401(k) accounts.

The seriousness of the current suspensions of employer matches will depend on 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, indeed, several large companies – accounting for 1.2 percent of 401(k) participants – have restored their match.[18] Moreover, the match suspension must be compared with the impact of other ways firms 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 in 401(k) plans – especially among the lower-paid – and many of those affected will end up with an inadequate retirement income.

Conclusion

The recent financial crisis and ensuing recession has once again sorely strained 401(k) participants. As in 2000, employees have been reminded that they are on the hook for financial risk. At the same time, it is once again clear that the employer match, a valued component of 401(k) plans, is neither mandatory nor permanent. About 5 percent of active participants in 401(k) plans have seen their employer's match suspended. The key cause of this phenomenon is likely a lack of liquidity on the part of employers, which renders them unable to continue their previous contributions. As the crisis abates, companies appear to be restoring the match. If this trend continues, the suspensions may have done little harm and may have been better than the alternative of cutting payroll or laying off workers.

Endnotes

1 Employer contributions can take a variety of forms, including voluntary matches of employee contributions, as well as involuntary profit-sharing, money purchase, and employer stock ownership plan (ESOP) contributions. Of these, matching, profit-sharing, and ESOP contributions can all vary as economic conditions change. However, this study focuses only on the role of the more common employer match.

2 A recent trend toward automatic enrollment in 401(k) plans has sought to increase participation. Employees who join companies with automatic enrollment participate in their employer's 401(k) by default, unless they specifically request to opt out. In 2008, about 42 percent of companies had adopted automatic enrollment (Profit Sharing/401(k) Council of America, 2009).

3 Internal Revenue Service (2009).

4 Munnell and Sundén (2003). Mitchell, Utkus, and Yang (2006) suggest an alternative explanation of employer matching – namely, that companies offer a match in order to attract and retain higher-paid workers, who value the tax benefits of 401(k) saving.

5 For more detailed information on the heterogeneity of matching structures, see Mitchell, Utkus, and Yang (2005).

6 As per Internal Revenue Code, employees are not permitted to make contributions in excess of $16,500 in 2009 and 2010. However, employees over 50 years of age can make an additional contribution of $5,500 per year. Total employer and employee contributions are not to exceed the lesser of 100% of the employee's compensation, or $49,000, in 2009 and 2010.

7 For example, see Papke and Poterba (1995); Papke (1995); Basset, Fleming, and Rodrigues (1998); Kusko, Poterba, and Wilcox (1998); and Beshears, Choi, Laibson, and Madrian (2007).

8 Papke and Poterba (1995); Clark and Schieber (1998); Munnell, Sundén, and Taylor (2000); Huberman, Iyengar, and Jiang (2003); and Engelhardt and Kumar (2006).

9 More precisely, in the wake of the introduction of the match, those employees already contributing 6 percent should lower their contributions because of the income effect, while those contributing less than 6 percent experience an offsetting income effect and substitution effect, making the outcome ambiguous. The effects are similar for increasing the match rate while maintaining the same match level. The impact of raising the match level, keeping the match rate constant, depends on the employee's initial position. For those contributing below the old match level, the increase should have no effect. For those at the old match level, contributions should increase (the substitution effect). For those above the old but below the new match level, the outcome is ambiguous (the offsetting income and substitution effects). For those contributing above the new threshold, contributions should decrease (the income effect). For further discussion, see Choi, Laibson, and Madrian (2004). Most of the empirical literature has focused on the relationship between the match rate and average 401(k) contributions and does not account for the effect of both the match rate and the match level.

10 Andrews (1992) finds that a higher employer match rate reduces the average 401(k) contribution; Bassett, Fleming, and Rodrigues (1998) find no effect; Papke and Poterba (1995), Even and Macpherson (2004), Kusko, Poterba, and Wilcox (1998), and Munnell, Sundén, and Taylor (2000) find a positive relationship. Papke (1995) finds a positive effect at low match rates but a negative effect at higher rates. This finding is consistent with Munnell, Sundén, and Taylor, who find that once the match exists, increasing the match rate has a negative, albeit small, effect on contributions.

11 See Choi, et al. (2002); and Engelhardt and Kumar (2006).

12 See Munnell and Sundén (2003); and Profit Sharing/401(k) Council of America (2002).

13 The DOL requires pension plan sponsors to file an annual Form 5500 report detailing their plans' finances, participants, and administrators. The form is comprised of eight schedules; the main form contains identifiers for each plan, schedule B contains actuarial reports for defined benefit plans, and schedule

H contains financial information. The data used in this study are for 71,864 pension plans sponsored by 60,395 firms. The 218 firms presented on the CRR list employ at least 100 employees and filed Form 5500 reports for 2007.

14 Standard & Poor's (2009). The financial variables – quick ratio and gross margin – and the industry variables are based on Compustat data for fiscal year 2009. The plan characteristics fail to transmit, contribution ratio, has a DB, and large firm are based on data in the 2007 Form 5500.

15 The timing of the data could affect this causal interpretation, since quick ratio is coincident with the decision to suspend the match. However, when we ran the regression using each company's quick ratio in fiscal year 2008, the results were identical.

16 Gross margin is positively correlated with the quick ratio (correlation coefficient of 0.2); failure to transmit is not. Removing the liquidity variables from the model produces a significant, negative coefficient on gross margin. However, we consider the model that takes liquidity into account to be a better representation of the situation faced by employers.

17 Employee Benefit Research Institute (2009).

18 To date, 21 companies have reinstated their match, including 7-Eleven, AARP, American Express, AutoGroup, Black and Decker, CTS, Commercial Vehicle Group, Dollar Thrifty, Eastman Kodak, FedEx, Forbes, General Motors, Harman International Holdings, Intermountain Healthcare, JP Morgan Chase, KapStone Paper and Packaging, Libbey, Mercury General, Regions Financial, Starbucks, Stein Mart, and Zep. Together, they employ approximately 1 percent of active 401(k) participants.

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APPENDIX

Appendix A

Table A1. Summary Statistics for Suspended Match Regressions

Variables	Match suspended		Match not suspended	
	Mean	Standard deviation	Mean	Standard deviation
Suspend match	1	0	0	0
Quick ratio	1.301	1.115	1.951	2.552
Fail to transmit	0.063	0.244	0.142	0.349
Gross margin	0.335	0.180	0.386	0.232
Has a DB plan	0.394	0.491	0.287	0.453
Employer contribution	0.282	0.119	0.276	0.132
Large firm	0.764	0.426	0.554	0.497
Manufacturing firm	0.551	0.499	0.473	0.499
Number of observations	127		1,734	

Sources: Authors' calculations from U.S. Department of Labor (2007) and Standard & Poor's (2009).

Table A2. Effect of Selected Factors on Probability of an Employer Suspending its 401(k) Match

Variables	Suspend match
Quick ratio	-0.009 **
	(0.004)
Fail to transmit	-0.035 **
	(0.012)
Gross margin	-0.031
	(0.022)
Has a DB plan	-0.004
	(0.012)
Employer contribution	-0.033
	(0.038)
Large firm	0.044 ***
	(0.011)
Manufacturing firm	0.029 ***
	(0.011)
Pseudo R^2	0.046
Number of observations	1,861

Notes: Robust standard errors are in parentheses. ** Denotes significance at the 5 percent level and *** at the 1 percent level. This table reports the marginal coefficients and standard deviations from a probit model in which the dependent variable is a binary variable indicating whether the employer suspended its 401(k) match, conditional on having offered the match previously.
Sources: Authors' calculations from U.S. Department of Labor (2007) and Standard & Poor's (2009).

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