LARGE GROUP HEALTH PLANS STUDY

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Michael J. Brien, PhD
Deloitte Financial Advisory Services LLP
202-378-5096
michaelbrien@deloitte.com

Constantijn W.A. Panis, PhD
Advanced Analytical Consulting Group, Inc.
424-785-1383
stanpanis@aacg.com

SUMMARY

Section 1254 of the Patient Protection and Affordable Care Act (ACA) requires the Secretary of Health and Human Services to conduct a study of the fully-insured and self-insured group health plan markets. The U.S. Department of Labor engaged Deloitte Financial Advisory Services LLP and its subcontractor Advanced Analytical Consulting Group, Inc. to assist the Secretary of Health and Human Services in her response to the law's requirement to compare employers that fully-insure their health plans through an external insurer and those that self-insure. First, we document the differences between firms that self-insure their group health plans and those that fully-insure. In particular, we analyze how financial metrics and other firm characteristics are related to health benefit funding mechanisms. Second, we construct several econometric models to identify the factors that may influence the selection of particular health benefit funding mechanisms.

Our primary data source is the information provided by health plan sponsors on Form 5500 filings. For a subset of firms, we augment the Form 5500 data with firms' financial data. The analysis in this report is restricted to large plans, defined as having 100 or more participants.

Our primary findings include:

- In 2008, 27.2% of large plans were self-insured while 11.7% were funded through a mixture of insurance and self-insurance, resulting in 38.9% of large plans having a self-insured component. In contrast, the majority of participants were in plans that were self-insured (34.7%) or mixed-funded (37.5%).
- The fraction of plans with mixed-funding or self-insurance has remained relatively stable in the period from 2000 to 2008. However, the number of plan participants covered by self-insured plans has increased over this period.
- The prevalence of self-insurance increases with plan size. For example, 26.8% of plans with 100-199 participants were mixed-funded or self-insured in 2008, compared with 76.4% of plans with 5,000 or more participants.
- Larger plans are also more likely to have a mixture of funding mechanisms, i.e., some plan components are self-insured whereas others are fully-insured. For example, 5.4% of plans with 100-199 participants were mixed-funded, compared with 43% of plans with 5,000 or more participants.
- Multiemployer and multiple-employer plans are more likely to self-insure than single-employer plans. In 2008, 64.4% of multiemployer or multiple-employer plans were self-insured or mixed-funded, compared with 36.8% of single-employer plans.
- Self-insurance varies by industry, with utilities firms having the highest percentage of mixed-funding or self-insurance.

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1. INTRODUCTION

The majority of Americans receive employment-based health benefits.[1] Employers that sponsor a health benefit plan may choose, generally speaking, to fund it in one of two ways: purchase insurance (i.e. fully-insure their health plan) or self-insure. For the most part, purchased insurance places the financial risk of unanticipated medical costs with an insurance company.[2] In contrast, self-insured employers bear the risks of health benefit expenses themselves. Prior research suggests that larger employers are more likely to self-insure their health benefit plans. At one extreme, 16% of covered workers at employers with three to 199 workers were in a self-insured plan in 2010. In contrast, 93% of covered workers at employers with 5,000 or more workers were in a self-insured plan. Overall, 59% of covered workers were in a self-insured plan in 2010, up from 44% in 1999.[3]

Self-insurance may offer numerous potential advantages to employers, including:[4]

- Control over the design of the benefits program, including potential avoidance of state-mandated benefits
- Lower administrative services costs than would be charged by a commercial carrier
- Easier access to utilization and claims data, improving the employer's ability to evaluate health benefit costs and implement cost containment measures
- Avoidance of state insurance premium taxes that can range from 1% to 2.5% of premiums paid

In addition, self-insurance can allow employers to achieve equity and efficiency goals through standardization of plans across states and through economies of scale and cost savings by offering a single set of plans to all employees regardless of location. If the employer's workforce has fewer or lower-cost claims than other firms, the benefits of self-insurance, measured by avoided premiums, may be greater.

The main disadvantage of self-insurance is the financial risk of paying claims and the accompanying risk-management challenges. The financial risks are driven by the limited predictability of claims over time. Some of these risks may be mitigated through the purchase of stop-loss insurance.[5]

Section 1254 of the Patient Protection and Affordable Care Act (ACA) requires an analysis of the fully-insured and self-insured group health plan markets. Specifically,

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[1] "Income, Poverty, and Health Insurance Coverage in the United States: 2009." U.S. Census Bureau, Report P60-238, September 2010.
[2] It is possible that large firms are experience rated and may face risk in future years.
[3] "Employer Health Benefits, 2010 Annual Survey." Kaiser Family Foundation and Health Research & Educational Trust.
[4] Source: The Bureau of National Affairs, Inc (2010).
[5] As defined by the U.S. Government's Interdepartmental Committee on Employment-based Health Insurance Surveys, stop-loss coverage is "[a] form of reinsurance for self-insured employers that limits the amount the employers will have to pay for each person's health care (individual limit) or for the total expenses of the employer (group limit)." http://www.bls.gov/ncs/ebs/sp/healthterms.pdf

the law seeks a comparison of employers that purchase insurance for their health plans versus those that self-insure. This comparison should consider:

- Firm characteristics such as industry and firm size
- Plan benefits
- Financial solvency of the firms
- Capital reserve levels
- Risk of insolvency

The law also requires an analysis of whether the legislated changes will create adverse selection in the large group market and whether smaller companies, who appear to be less likely to self-insure, are encouraged to choose this funding mechanism.

The objective of this report is to address two related research issues called for in Section 1254 of the ACA. First, we document the differences between firms that self-insure their group health plans and those that purchase insurance. In particular, we are interested in whether the characteristics of the firm, such as its financial health, are related to the funding choices made by the firm.

To accomplish this we use data from multiple sources. Our primary data source is the information provided by health plan sponsors on the Form 5500. Health plans with 100 or more participants are required to annually file a Form 5500 with the Department of Labor. Additionally plans that fund benefits through a trust need to file a Form 5500 regardless of the number of participants. This form captures such information as the number of participants covered by the plan, insurance expenses, and in some cases plan expenses and participant contributions. Important for our analysis, the form also contains information to determine, albeit with limitations, whether the plan is self-insured. We examine Form 5500 data for the plan years 2000 to 2008.

The Form 5500 contains relatively little information on the firms that sponsor the plans. To obtain greater information about the firms, we match the Form 5500 data to external financial data. Specifically, for a subset of firms we match Form 5500 data to firm financial data captured on the Capital IQ database. The purpose of this match is to gain a deeper understanding of these firms, their characteristics, and their financial health.

Our second objective is to gain insights into the factors that influence the decision to select a particular method of funding health plans. For this purpose we again make use of the Form 5500 data matched to firm financial data. We construct several econometric models to identify the factors that may influence funding choice.

Section 2 provides an overview of Form 5500 filings and the other data used in our analysis. This section also discusses how we distinguish between self-insured and fully-insured plans. Section 3 analyzes the data and compares firm and plan characteristics across funding choices. In Section 4, we analyze the factors that influence funding choices, and Section 5 concludes.

2. DESCRIPTION OF DATA SOURCES

The quantitative analysis in this report is based on two primary data sources: Form 5500 filings and financial information from annual reports. We discuss both sources in turn. We then discuss the definition of self-insured, as used in this report, and point at some of the data limitations.

Form 5500 Data

The Employee Retirement Income Security Act of 1974 (ERISA) requires companies that sponsor certain employee benefit plans to annually report details on such plans on the Form 5500. The Form 5500 consists of a main form and a number of schedules, depending on the type of plan. The main form collects general information on the plan, such as the name of the sponsoring company, the type of benefits that it provides (pension, health, disability, life insurance, etc.), the funding and benefit arrangement, and the number of plan participants.[6] The plan benefits may be provided through external insurance contracts. Form 5500 must include one or more Schedules A with details on each insurance contract (name of insurance company, type of benefit covered, number of persons covered, expenses, etc.). If the plan operates a trust, a Schedule H or Schedule I needs to be attached with financial information. Schedule H applies to plans with 100 or more participants, whereas smaller plans may file Schedule I, which is shorter.

Not all plans need to file a Form 5500. Generally, the form is required for plans with 100 or more participants at the beginning of the reporting period and for plans of any size that operate a trust. The analysis in this report is restricted to large plans, defined as plans with 100 or more participants at the beginning of the reporting period. The analysis excludes plans that were terminated or that had no participants at the end of the plan year. It includes single-employer, multiemployer, and multiple-employer plans, but not filings by direct filing entities.[7]

A plan year is defined as the year in which the Form 5500 reporting period started. Our analysis covers plan years 2000 through 2008. Where our analysis is based on Form 5500 only, it covers the universe of plans that filed a Form 5500, not a sample. Some parts of the analysis involve financial data from annual reports, which was available for only a subset of plans.

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[6] For the purpose of this report, only health benefits are relevant. However, it is our understanding that sponsors of multiple types of benefits have discretion over what they consider a plan. More than 90% of employers consider all their welfare benefits—health, dental, vision, life, etc.—as a single plan and file a consolidated Form 5500. Similarly, an employer may offer multiple types of health benefits (PPO, HMO) and file a single Form 5500 on which some of the information is consolidated. While multiple benefit types may be consolidated on a single Form 5500, plan sponsors are required to include separate details on each pertinent insurance contract.

[7] Direct Filing Entities (DFE) are certain types of trusts and other arrangement and their Form 5550 filing may include multiple plans. The Form 5500 instructions describe the filing requirements for DFEs. See: http://www.dol.gov/ebsa/pdf/2010-5500inst.pdf.

We categorize health plans according to the size of the plan, using the number of participants at the beginning of the plan year.[8] Our focus in this report is on plans with 100 or more participants. Table 1 shows, by plan size, the number of plans observed in 2008 and the number of participants covered by those plans. About two-thirds of the plans served 100-499 participants. While only 4.9% of plans served 5,000 or more participants, these very large plans accounted for about two-thirds of participants.

Table 1: Health Plans and Participants, by Number of Participants, 2008

Plan size	Number of plans	Percent of plans	Number of participants	Percent of participants
100-199	13,246	34.2%	1,901,918	2.9%
200-499	12,683	32.7%	3,950,347	6.1%
500-999	5,406	14.0%	3,799,942	5.8%
1,000-1,999	3,189	8.2%	4,473,012	6.9%
2,000-4,999	2,318	6.0%	7,193,936	11.0%
5,000+	1,905	4.9%	43,931,425	67.3%
Total	38,747	100.0%	65,250,580	100.0%

Source: Form 5500 filings.

Table 2 shows the number of plans and covered participants by year for the years 2000 to 2008. The data include between 36,000 and 43,000 health benefit plans per year, averaging approximately 40,000 plans per year. The number of covered participants ranges from 52.4 million to 67.3 million per year.

Table 2: Health Plans and Participants, 2000-2008

Plan year	Number of plans	Number of participants
2000	36,301	52,391,315
2001	38,863	56,101,835
2002	40,239	59,706,236
2003	39,713	60,250,932
2004	40,065	59,769,792
2005	40,768	60,661,221
2006	41,987	65,258,041
2007	42,477	67,344,573
2008	38,747	65,250,580

Source: Form 5500 filings.

Matching with Financial Information

Firms that self-insure expose themselves to financial risks if claims significantly exceed expectations in a given year. While this risk can be mitigated through stop-loss insurance, firms may be forced to use general assets or other resources to meet unfunded obligations which may in turn affect how they choose to provide health insurance for their participants. As such, the relationship between the financial health of a plan sponsor and its plan's characteristics are of significant interest. To facilitate our analysis, we matched financial information with Form 5500 plan filing data. In

[8] The number may include active and retired participants. It does not include dependents.

this section we describe our approach and the number of Form 5500 filers for which we achieved a match.

The financial information for our analysis is sourced from Capital IQ, a provider of financial and other data for companies in the United States and elsewhere. Capital IQ culls Form 10-K filings and other sources to collect data on companies with public financial statements, which generally includes companies with publicly-traded stock or bonds.[9] As of December 2010, its database contained 2009 financial information for 32,808 companies. Of these, 14,646 companies were public companies and approximately 64% of these public companies had at least 100 employees.

We attempted to match companies that filed a Form 5500 to financial data from Capital IQ.[10] Most Form 5500 filers are private companies without public financial statements, so the match is limited.

We extracted fields that capture company characteristics, financial strength, financial health and financial size:

- *Descriptive and Company Information* fields allow for segmentation by company financial characteristics;
- *Cash from Operations* and *Operating Income* allows the measurement of resources available at hand to fund various activities, including welfare plan funding;[11]
- *Total Debt* measures the total debt outstanding;[12]
- *The Altman Z-score* is an index for predicting the probability that a firm will go into bankruptcy within two years. The lower the score, the greater the probability of insolvency.

Table 3 shows that we were able to match 4,989 plans, or about 13% of the large plans (100 or more participants) observed in the 2008 Form 5500 data.[13] When considering the number of participants in matched plans, the 4,989 plans cover 29,702,205 participants or 46% of all participants across large group health plans.

[9] A Form 10-K is an annual financial report required by the Securities and Exchange Commission (SEC).

[10] We matched by Employer Identification Number (EIN) and by company name. Both are available on Form 5500, but the Capital IQ database does not contain EIN. We obtained EINs through an automated crawl of Form 10-K filings on the website of the SEC. Some sponsor names and other values of Form 5500 data fields contained errors, because the data were largely obtained through scans of hardcopy filings. While there are other ways to expand the number of matches, we believe that our approach provides a high level of confidence in the quality of the match.

[11] Capital IQ defines "Cash from Operations" as the total of net income, depreciation and amortization and other items; and "Operating Income" is total revenues net of total operating expenses.

[12] Capital IQ defines "Total Debt" as including such items as short-term borrowings, long-term debt, and long-term capital lease.

[13] While this is a small number, many of the companies represented by the plan filings in 2008 are not represented in Capital IQ data because they are private and have no public debt, and, therefore, have no requirement to issue public financial statements. One rough way of gauging the quality of the match is to analyze the number of companies in the Capital IQ data reporting 100 or more employees that we can match to a plan. This would suggest we capture data for approximately 56% of the relevant companies in the Capital IQ data.

Among the matched plans, 65% are sponsored by public companies, 33% by private companies with publicly available financial data, and 2% by some other ownership arrangement.

Table 3: Plans and Participants Matched to Capital IQ, by Plan Size (2008)

Number of participants	Number of plans	Percent of plans	Number of participants	Percent of participants
100-199	691	13.9%	100,535	0.3%
200-499	1,056	21.2%	343,514	1.2%
500-999	831	16.7%	598,404	2.0%
1,000-1,999	701	14.1%	999,269	3.4%
2,000-4,999	761	15.3%	2,439,235	8.2%
5,000+	949	19.0%	25,221,248	84.9%
Total	4,989	100.0%	29,702,205	100.0%

Source: Form 5500 filings and Capital IQ data.

Table 4 shows similar matching information for each of the years we consider in the analysis. Over time there is generally a decreasing trend in the number of matches that could be made between the data sources.

Table 4: Plans and Participants Matched to Capital IQ, by Plan Year

Plan year	Number of plans	Number of participants
2000	5,735	24,552,194
2001	6,031	26,521,551
2002	5,968	29,460,617
2003	5,810	28,925,104
2004	5,706	28,552,426
2005	5,633	29,113,249
2006	5,652	29,531,061
2007	5,470	30,264,667
2008	4,989	29,702,205

Source: Form 5500 filings and Capital IQ data.

Definition of Self-Insured

As defined in this report, the funding mechanism is based on information in Form 5500 filings. In some cases, that information is incomplete or internally inconsistent. Given these limitations, the classification in this report should not be interpreted as an official or legal definition. The definition of funding mechanism is driven by available data.

A plan's funding mechanism is derived from Form 5500 questions on funding or benefit arrangement and from details on external insurance contracts associated with the plan. Plan administrators should file a Schedule A for every external insurance contract that relates to the welfare plan. The classification is based on the following.

- A fully-insured plan should specify that the funding or benefit arrangement is through purchased insurance and it should attach one or more Schedules A with details on the applicable insurance contract.

- A self-insured plan should specify that the funding or benefit arrangement is from a trust or from general assets. There should be no evidence of any external health insurance contract.

Many plans file a single Form 5500 for their umbrella welfare benefit plan that provides multiple types of welfare benefits (health, vision, dental, life, etc.), some of which may be fully-insured and some of which may be self-insured. The funding mechanism of the health benefit component of consolidated filings could typically be resolved. For example, a plan that provides health, dental, and vision benefits may report that it is funded through both insurance and from general assets, and include Schedules A for dental and vision insurance contracts. Since there is no health insurance contract, the health benefits portion of the plan is classified as self-insured.

However, some plans contain both fully-insured and self-insured health benefits components. We characterize such plans as having "mixed-funding." For example, an employer may offer a fully-insured Health Maintenance Organization (HMO) and a self-insured Preferred Provider Organization (PPO) plan, reported in a single Form 5500 filing. Suppose the funding or benefit arrangement indicates that a plan was funded through both insurance and a trust or general assets, and the Form 5500 filing includes a Schedule A with details of a health insurance contract. This could reflect a mixed-funded plan. It could also be a fully-insured health plan in combination with a self-insured other plan (vision, dental, etc.). We resolved the issue by comparing the number of plan participants with the number of persons covered by the health insurance contract. As explained below, these numbers are not directly comparable, so we applied a safety margin. If the number of persons covered by a health insurance contract was more than 50% of the number of plan participants and the plan did not operate a trust that made benefit payments to participants, we classified the plan as fully-insured. Otherwise, we characterized the plan as mixed-insured.[14]

While this algorithm is subject to some data quality issues (further discussed below), we believe it results in a meaningful characterization of health plans' funding mechanism.

Stop Loss Insurance

While self-insured plans bear the financial risks of health benefits, some self-insured plans purchase insurance against particularly large losses, known as stop-loss insurance. Roughly one in four self-insured plans report such stop-loss insurance on their Form 5500 filings. However, if the beneficiary of stop-loss insurance is the sponsor rather than the plan and it was not purchased with plan assets, it need not be reported on Form 5500.[15] Also, the stop-loss insurance need not relate to health benefits but could protect other self-insured benefits, such as disability benefits. The true prevalence of stop-loss insurance can thus not be learned from Form 5500 filings alone.

[14] Some plans use a trust or a voluntary employees' beneficiary association (VEBA) as a vehicle to pass insurance premiums through to an insurance company. Insofar as such plans did not make benefit payments to participants, they are correctly classified as fully-insured.

[15] See the 2008 Form 5500 instructions http://www.dol.gov/ebsa/pdf/2008-5500inst.pdf (p. 22).

For the purpose of defining self-insurance, we do not account for the presence of stop-loss insurance. A self-insured plan may thus have only limited exposure to financial risks of health benefits.

Form 5500 Data Issues

As noted above, the information on Form 5500 is sometimes incomplete or inconsistent. Some of the issues are as follows.

- Some self-insured companies have set up a subsidiary that acts as an in-house insurance company and sells health insurance for employees. Such subsidiaries are known as "captive" insurance companies and are subject to all the regulatory rules regarding insurance companies. Plan sponsors purchasing insurance from a captive insurance company would file Schedule A, which does not require that use of a captive insurance company be disclosed. In our classification, such plans would thus be considered fully-insured, even though they are economically self-insured.
- As noted above, we classify plans as having mixed-funding if the number of persons covered by health insurance contracts is less than 50% of the number of plan participants. The two metrics may not be strictly comparable. First, the number of "persons covered" by insurance contracts, as asked on Schedule A, may be interpreted as inclusive of dependents, whereas the Form 5500 instructions explicitly exclude dependents from the term "participants." Second, on plans that provide multiple types of benefits, not all reported participants may in fact be participants in the health benefits component of the plan.
- In some cases, a plan filed a Schedule A for a health insurance contract, but did not specify how many persons were covered by that contract. The plan could also have incorrectly filed a Schedule A for an "Administrative Services Only" (ASO) plan which would not cover any participants. In such cases, the algorithm assumed that the majority of participants were covered by an insurance contract, so that these plans were classified as fully-insured.
- Some plans reported a funding or benefit arrangement through insurance, but did not file any Schedule A with insurance contract details. In such cases, the algorithm assumed that the plan was fully-insured.
- Some plans reported a funding or benefit arrangement through insurance and filed one or more Schedules A without specifying the type of benefit that the insurance contract covered. In such cases, the algorithm assumed that the insurance contract provided health benefits.

3. FORM 5500 ANALYSIS

In this section we report on our analysis of the Form 5500 data.

Analysis of Plans

For plan year 2008, Table 5 shows the distribution of funding mechanisms. About 27% of plans were self-insured, 61% were fully-insured, and 12% were mixed-funded. Smaller plans tend to be fully-insured and many very large plans are mixed-funded, so the funding distribution is quite different for plan participants than it is for plans. About 35% of participants are in self-insured plans, 28% are in fully-insured plans, and 38% are in mixed-funded plans[16].

Table 5. Distribution of Funding Mechanism (2008)

	Number of plans	Percent of plans	Number of participants	Percent of participants
Fully-insured	23,658	61.1%	18,128,194	27.8%
Mixed-funded	4,535	11.7%	24,490,275	37.5%
Self-insured	10,554	27.2%	22,632,111	34.7%
Total	38,747	100.0%	65,250,580	100.0%

Source: Form 5500 filings.

According to a Kaiser/Health Research and Educational Trust (HRET) study, 55% of covered workers in firms with three or more employees were in self-funded or partially self-funded plans in 2008.[17] Our findings are not directly comparable, because we exclude plans with fewer than 100 participants and because as many as 37.5% of plan participants are in mixed-funded plans. Given the limitations of Form 5500 filings, our results are not inconsistent with Kaiser/HRET results.

Table 6 shows the distribution of funding mechanism by plan size for health plans reporting in 2008. The level of self-insurance increases with the number of plan participants. Larger plans are also more likely categorized as mixed-funded, possibly because large plans may offer multiple options (e.g., HMO, PPO), some of which are fully-insured and some of which are self-insured. Among plans with 5,000 or more participants, approximately 76% are mixed-funded or self-insured, compared with 27% among plans with 100-199 participants.

[16] More accurately, the health benefits of any individual participant are either fully-insured or self-insured, but the information on Form 5500 does not permit a breakdown of plans into fully-insured and self-insured components. The weighted figures for plans with mixed-funding need to be interpreted with caution. The weights represent the total number of participants in the plan, but some of them are in a fully-insured plan.

[17] "Employer Health Benefits, 2010 Annual Survey." Kaiser Family Foundation and Health Research & Educational Trust.

Table 6: Funding Mechanism of Large Health Plans by Plan Size (2008)

Participants	Unweighted fraction			Fraction weighted by participants		
in plan	Fully-insured	Mixed	Self-insured	Fully-insured	Mixed	Self-insured
100-199	73.2%	5.4%	21.5%	73.3%	5.3%	21.3%
200-499	66.8%	7.6%	25.6%	65.9%	8.0%	26.1%
500-999	53.8%	13.3%	32.9%	53.4%	13.7%	32.9%
1,000-1,999	43.0%	19.9%	37.1%	42.5%	20.5%	37.0%
2,000-4,999	32.9%	29.7%	37.4%	32.8%	30.1%	37.1%
5,000+	23.6%	43.0%	33.4%	17.9%	46.6%	35.5%
All	61.1%	11.7%	27.2%	27.8%	37.5%	34.7%

Source: Form 5500 filings.

Table 7 shows the number of large plans and the funding mechanism fractions (unweighted and weighted by plan participants), for plan years 2000 through 2008. The total number of large plans in each year is approximately 40,000 (see Table 2). The fraction of plans that are self-insured ranges from 23.7% in 2000 to 27.2% in 2008. Over the same period, the fraction of mixed-funded plans decreased, so that there is no discernible trend over time in the fraction that bears at least some of the health-benefits risks. Weighted by number of participants, the fraction of plans that self-insure is greater than the unweighted fraction, because larger plans tend to be more likely to self-insure. The weighted percentages may be interpreted as the percentage of participants in self-insured plans. The data indicates that the number of plan participants covered by self-insured plans has increased over the 2000-2008 period.

Table 7: Funding Mechanism of Large Heath Plans, by Plan Year

Plan	Unweighted fraction			Fraction weighted by participants		
year	Fully-insured	Mixed	Self-insured	Fully-insured	Mixed	Self-insured
2000	61.1%	15.2%	23.7%	36.9%	36.6%	26.5%
2001	60.8%	14.5%	24.7%	36.6%	36.7%	26.7%
2002	60.1%	13.5%	26.5%	34.0%	37.8%	28.2%
2003	60.3%	13.2%	26.5%	32.8%	37.3%	29.9%
2004	59.9%	13.1%	27.1%	31.3%	38.0%	30.7%
2005	60.5%	12.5%	27.0%	31.2%	37.5%	31.4%
2006	61.3%	12.2%	26.5%	28.6%	37.4%	34.0%
2007	61.7%	11.7%	26.6%	28.3%	37.5%	34.2%
2008	61.1%	11.7%	27.2%	27.8%	37.5%	34.7%

Source: Form 5500 filings.

Plan Sponsor Characteristics

Table 8 shows the industry distribution based on the business code that Form 5500 filers provided. We present the percentage breakdown of the funding mechanism for a classification of major industry groups. Plans in the mining and utilities industries tend to be most likely to be self-insured, whereas the services, wholesale trade, communications and information, and retail trade industries are the most likely to be fully-insured.

Table 8. Large Health Plans, by Industry and Funding Mechanism

	Fully-insured	Mixed-funded	Self-insured
Agriculture	54.6%	8.9%	36.4%
Communications and information	62.3%	11.9%	25.7%
Construction	49.2%	18.9%	31.9%
Finance, insurance & real estate	59.9%	13.3%	26.7%
Manufacturing	58.5%	12.5%	29.0%
Mining	44.8%	11.1%	44.1%
Retail trade	63.9%	12.7%	23.4%
Services	65.4%	9.3%	25.3%
Transportation	53.5%	14.9%	31.5%
Utilities	38.3%	19.0%	42.6%
Wholesale trade	65.6%	10.5%	23.8%
Misc. organizations	61.7%	11.6%	26.7%
Industry not reported	66.5%	7.2%	26.2%

Source: Form 5500 filings.

Another dimension of plans we considered is whether the plan is a multiemployer or multiple-employer plan as opposed to a single-employer plan. A multiemployer plan covers employees from more than one employer and is often part of a collective bargaining arrangement.[18] Multiple-employer plans are similar to multiemployer plans in that they cover employees from more than one employer but are not associated with a collective bargaining agreement. Table 9 shows the number of each type of plan in the 2008 Form 5500 data and the proportion in each funding mechanism. The figures suggest that the multiemployer and multiple-employer plans are much more likely to choose some form of self-insurance than single-employer plans.

Table 9: Funding Mechanism of Multiemployer and Multiple-Employer Plans (2008)

	Plans	Fully-insured	Mixed-funded	Self-insured
Multiemployer or multiple-employer	2,767	33.6%	29.2%	37.1%
Single-employer	35,853	63.2%	10.3%	26.5%

Source: Form 5500 filings.

[18] The instructions for the Form 5500 state that a plan is a multiemployer plan "if: (a) more than one employer is required to contribute, (b) the plan is maintained pursuant to one or more collective bargaining agreements between one or more employee organizations and more than one employer; (c) an election under Code section 414(f)(5) and ERISA section 3(37)(E) has not been made; and (d) the plan meets any other applicable conditions of 29 CFR 2510.3-37." Similarly, a multiple-employer plan is "a plan that is maintained by more than one employer and is not one of the plans already described [a multiemployer plan or a single-employer plan]" (http://www.dol.gov/ebsa/pdf/2010-5500inst.pdf).

Analysis of Form 5500 Filings Matched To Financial Data

Focusing on the subset of Form 5500 filers that were matched to financial information in Capital IQ, Table 10 presents information on company size as measured by revenue, market capitalization,[19] net income and employment. The results show that companies offering fully-insured health plans tend to be smaller on all these dimensions than companies offering self-insured or mixed-funded health plans. Companies offering mixed-funded health plans tend to be the largest.

Table 10: Characteristics of Companies Matched to Form 5500

		All	Fully-insured	Mixed-funded	Self-insured
Revenue (in $ millions)	25 pct	218	109	782	379
	Median	979	362	2,742	1,329
	75 pct	4,105	1,577	9,886	5,392
	# Obs	3,867	1,716	851	1,300
Market capitalization (in $ millions)	25 pct	122	60	431	224
	Median	593	290	1,750	868
	75 pct	2,739	1,175	7,614	3,610
	# Obs	3,406	1,538	750	1,118
Net income (in $ millions)	25 pct	-21	-23	-22	-16
	Median	17	5	67	31
	75 pct	160	63	462	217
	# Obs	3,894	1,730	855	1,309
Total employees	25 pct	803	412	2,850	1,250
	Median	3,150	1,300	8,110	4,110
	75 pct	13,500	5,700	28,000	15,637
	# Obs	3,641	1,606	809	1,226

Source: Form 5500 filings and Capital IQ data.

Table 11 presents three financial metrics of the financial health of matched companies. The Altman Z-Score is an index that uses five financial measures to predict bankruptcy risk. A company with a Z-score greater than 2.99 is considered to be in a "safe" zone, one with a score between 1.80 and 2.99 in a "grey" zone and a company with score less than 1.80 to be in a "distress" zone.[20] Companies offering different types of plans appear to have comparable levels of Z-scores. Put differently, the risk of insolvency, as measured by the Z-score, does not appear to be related to the choice of funding mechanism.

When measured on two other metrics of financial health that involve ratios of cash or income to total debt, the results are mixed. At the median, fully-insured firms have about as much cash flow relative to total debt as other firms, but lower operating income relative to debt than mixed-funded or self-insured firms. The distributions of financial metrics are more dispersed for fully-insured firms than for other firms: the 25th percentiles are lower and the 75th percentiles are higher. Overall, there is no

[19] Market capitalization is the aggregate dollar value of all common shares outstanding.

[20] Altman, Edward I. (1968). "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *Journal of Finance*: 189–209. Also: Altman, Edward I. "The Use of Credit Scoring Models and the Importance of a Credit Culture." http://pages.stern.nyu.edu/~ealtman/Presentations.htm

evidence that financially-weaker firms would disproportionately opt to self-insure. We will revisit this issue using multiple regression models of the decision to self-insure in the next section.

Table 11: Financial Health of Companies Matched to Form 5500

		All	Fully-insured	Mixed-funded	Self-insured
Altman Z-Score	25 pct	1.39	1.02	1.67	1.54
	Median	2.68	2.61	2.77	2.70
	75 pct	4.05	4.13	3.96	3.90
	# Obs	2,801	1,281	620	900
Cash from Operations over Total Debt	25 pct	0.08	0.05	0.10	0.10
	Median	0.28	0.28	0.27	0.29
	75 pct	0.93	1.28	0.77	0.85
	# Obs	3,846	1,703	849	1,294
Operating Income over Total Debt	25 pct	0.03	-0.07	0.09	0.06
	Median	0.22	0.18	0.27	0.23
	75 pct	0.74	0.78	0.72	0.69
	# Obs	3,869	1,716	853	1,300

Source: Form 5500 filings and Capital IQ data.

4. THE DECISION TO SELF-INSURE

Our analysis above documents differences in the characteristics between firms with self-insured group health plans and fully-insured group health plans. Building on that analysis, we now focus on identifying factors that influence the decision to select a particular method of funding health plans. The funding mechanism choice is addressed by multivariate models that can jointly account for the various factors that may influence the decision to self-insure.

Multivariate models can control simultaneously for a number of variables. For example, Table 8 above indicated that plans in the utilities sector are more likely to be self-insured than plans in other sectors. However, the median plan size for utilities firms is greater than that in other sectors (not shown). The high self-insurance rate among utilities plans may thus reflect their plan size, rather than something that is specific to the utilities sector. A multivariate analysis can jointly control for both plan size and industry sector and distil the separate contributions of size and sector.

We first estimate a logistic model in which the dependent variable is an indicator for whether in a given filing year the firm has chosen to self-insure its health plan. We develop both a standard logistic model in which mixed-funded plans are grouped with self-insured plans and an ordered logistic model to distinguish fully-insured, mixed-funded, and self-insured plans. We present a version without financial variables (based on Form 5500 filings only) and a version with financial variables (based on Form 5500 filings matched with financial data).

Our second econometric analysis exploits the longitudinal nature of the available data. We focus on transitions across filing years between the various funding methods. This model helps identify the drivers of changes in funding the mechanism, as opposed to the funding mechanism itself. We estimate separate models of switching behavior for fully-insured plans and for self-insured plans.

Cross-sectional Econometric Analysis

We start with all large plans that filed a Form 5500 and estimate a series of cross-sectional logistic regression models—see Table 12. The first and third columns of Table 12 distinguish fully-insured plans from mixed-funded and self-insured plans. We group mixed-funded plans with self-insured plans since the sponsor bears at least some of the financial risks in both cases. The outcome variable is an indicator for whether the plan is mixed-funded or self-insured. The second and fourth columns estimate ordered logistic regression models that distinguish fully-insured, mixed-funded, and self-insured plans. The first and second columns are estimated on 2008 filings only, whereas the third and fourth columns are based on 2000-2008 filings.

Table 12: Logistic Model Estimates of the Decision to Self-Insure

	Outcome (two or three categories)			
	(Mixed, self-insured) vs fully-insured 2008	Self-insured vs mixed vs fully-insured 2008	(Mixed, self-insured) vs fully-insured 2000-'08	Self-insured vs mixed vs fully-insured 2000-'08
Multiemployer/multiple-employer	0.9065 **	0.5801 **	0.8519 **	0.5640 **
Plan size 200-499	0.2742 **	0.2752 **	0.2178 **	0.2131 **
Plan size 500-999	0.7672 **	0.7217 **	0.6394 **	0.5942 **
Plan size 1,000-1,999	1.1542 **	0.9982 **	0.9662 **	0.8218 **
Plan size 2,000-4,999	1.5536 **	1.1707 **	1.3038 **	0.9878 **
Plan size 5,000+	2.0049 **	1.2418 **	1.7474 **	1.1071 **
Public financials	0.2087 **	0.1476 **	0.0653 **	0.0529 **
Agriculture	0.5066 **	0.5226 **	0.6113 **	0.6194 **
Communications, information	0.0349	0.0144	0.0062	-0.0071
Construction	0.4733 **	0.3385 **	0.6187 **	0.4770 **
Finance, insurance, real estate	0.0938 *	0.0674	0.1647 **	0.1395 **
Manufacturing	0.2633 **	0.2220 **	0.2679 **	0.2347 **
Mining	0.7496 **	0.7663 **	0.9162 **	0.8845 **
Retail trade	-0.0346	-0.0519	0.0647 **	0.0323 *
Transportation	0.3289 **	0.2793 **	0.2821 **	0.2566 **
Utilities	0.8790 **	0.7385 **	1.0086 **	0.8970 **
Wholesale trade	0.0944	0.0496	0.1256 **	0.0797 **
Misc. organizations	0.1367	0.1088	0.1896 **	0.1659 **
Industry not reported	0.0841	0.0817	-0.1158	-0.1448 *
Year 2000			-0.0695 **	-0.1080 **
Year 2001			-0.0649 **	-0.0876 **
Year 2002			0.0135	-0.0041
Year 2003			0.0054	-0.0090
Year 2004			0.0359 *	0.0206
Year 2005			0.0161	0.0067
Year 2006			-0.0126	-0.0208
Year 2007			-0.0256	-0.0278
Intercept 1	-1.1851	1.0828	-1.1057	0.9958
Intercept 2		1.6524		1.6269
# Observations	38,747	38,747	359,160	359,160

Source: Form 5500 filings.

Note 1: In the first and third columns, the dependent variable is 0 for fully-insured plans and 1 for mixed-funded or self-insured plans. In the second and fourth columns, the dependent variable is 0 for fully-insured, 1 for mixed-funded, and 2 for self-insured plans.

Note 2: Significance levels: *=5 percent, **=1 percent

The regressions control for type of plan (single-employer, multiemployer, multiple-employer), number of plan participants, whether the sponsor has public financial statements, industry of the plan sponsor, and plan year. Multiemployer and multiple-employer plans are significantly more likely to self-insure than single-employer plans, even controlling for plan size and other determinants. The omitted plan size category is 100-199 participants. The propensity to self-insure increases monotonically with plan size, as expected. Firms with public financial statements are more likely to sponsor self-insured plans than other firms, even conditional on plan

size. All else equal, firms in agriculture, mining, construction, manufacturing, transportation, utilities, and finance/insurance/real estate are more likely to self-insure than those in communications and information, wholesale trade, retail rade, and services (the omitted category). utilities and mining firms, especially, are likely to self-insure, even controlling for their plan sizes. The plan year indicators for 2002-2007 were generally not statistically different from the 2008 plan year (omitted category), suggesting the absence of a time trend since 2002. Prior to 2002, however, plans were less likely to self-insure than after 2002.

Generally, the results are qualitatively the same for standard logistic and ordered logistic models. Our subsequent analysis will therefore present estimates of only standard logistical models in which mixed-funded and self-insured plans are grouped together.

Table 13 present estimates of models for firms that were matched to financial information from Capital IQ. The first two columns are based on 2008 filings, whereas the third and fourth columns incorporate all matched plans from 2000 to 2008.

The results for the matched data are generally consistent with those for all Form 5500 filings.

A key objective of the financial analysis is to determine whether companies' financial health co-determines the decision to self-insure. A commonly-used metric to capture the risk of insolvency is the Altman Z-score. Lower Z-scores indicate greater risk of insolvency and higher Z-scores reflect greater financial stability. All specifications control for an indicator of whether the firm's net income was negative and for the Altman Z-score.[21] The results suggest that companies experiencing losses may be less likely to self-insure. The Altman Z-score did not significantly predict funding mechanism in any of the specifications.

The second and fourth columns control for various additional indicators of total revenue. We find that firm revenues are positively correlated with the propensity to self-insure, even while controlling for plan size. We believe this may be due to large firms with large revenues filing separate Form 5500 for its plans, some of which have relatively few participants,

The second and fourth columns also control for additional indicators of financial health. We created indicator variables for firms in the bottom or top quartiles of the ratios of cash flow or operating income to total debt. Indicators for the bottom quartiles capture firms with negative or little cash flow or operating income relative to their debt load, whereas indicators for the top quartiles reflect good financial performance. The omitted categories are the second and third quartiles, i.e., firms with roughly average financial performance. The cash-flow findings indicate that both companies in the bottom quartile and companies in the top quartile of cash flow relative to total debt were less likely to self-insure than firms with roughly average cash flow. The operating-income findings suggest that companies in the top quartile of operating income relative to total debt were less likely to self-insure than

[21] The Altman Z-score, calculated by Capital IQ, is missing for about 45% of matched plans. We captured missing Z-scores through an indicator variable and replaced missing Z-scores with their mean value over non-missing values. Similarly, we created missing indicators for other financial metrics and set missing values of those indicators equal to their averages over non-missing values.

companies in the bottom three quartiles. In other words, there is no monotonic relationship between financial performance and choice of funding mechanism. Also in light of our finding that loss-making firms are less likely to self-insure than profitable firms, there does not appear to be evidence that firms with relatively poor financial performance would disproportionately opt to self-insure.

We note that the relationship is not necessarily causal. For example, a firm's financial performance may affect the choice of funding mechanism, but the causality may go in the other direction: the magnitude of health claims can affect a firm's financial performance. For example, we cannot rule out that self-insurance, on average, is less expensive than fully-insured health plans, so that self-insurance boosts the financial health of their sponsors.

Finally, the third and fourth columns control for plan year. The omitted category is 2008. All estimates are negative, indicating that plans in the matched sample were more likely to self-insure in 2008 than in prior years. This finding was not present in our analysis of all large plans that filed a Form 5500 (Table 12), and may thus be related to our ability to match Form 5500 filings with financial data.

Table 13. Estimates of the Decision to Self-Insure (Matched Data)

	(Mixed, self-insured) vs fully-insured 2008	(Mixed, self-insured) vs fully-insured 2008	(Mixed, self-insured) vs fully-insured 2000-'08	(Mixed, self-insured) vs fully-insured 2000-'08
Plan size 200-499	0.1476	0.1139	0.0698	0.0301
Plan size 500-999	0.4555 **	0.2863 *	0.4463 *	0.2661 **
Plan size 1000-1999	0.8668 **	0.5977 **	0.7096 **	0.4128 **
Plan size 2000-4999	1.1469 **	0.7637 **	1.0323 **	0.6183 **
Plan size 5000+	1.7695 **	1.2145 **	1.5510 **	0.9699 **
Revenue: 2nd quartile		0.5085 **		0.5616 **
Revenue: 3rd quartile		0.8304 **		0.8150 **
Revenue: top quartile		1.1120 **		1.0598 **
Revenue missing		0.8057		0.4109 **
Agriculture	0.4951	0.4085	0.5297 **	0.4458 **
Communications, information	0.2403	0.1943	0.0644	0.0125
Construction	0.2802	0.2039	0.1048	-0.0119
Finance, insurance, real estate	0.2567 *	0.2073	0.1998 **	0.1270 **
Manufacturing	0.2170 **	0.1546	0.2339 **	0.1228 **
Mining	0.9704 **	0.6893 **	0.8412 **	0.6125 **
Retail trade	0.1808	0.0931	0.0692	-0.0287
Transportation	0.4937 *	0.3711	0.3761 **	0.2576 **
Utilities	1.1073 **	0.8319 **	0.9956 **	0.6631 **
Wholesale trade	0.1690	0.0956	0.0775	-0.0572
Profits negative	-0.2095 **	-0.1426	-0.2832 **	-0.1432 **
Altman Z-score	0.0094	0.0059	0.0000	0.0000
—missing	0.0278	0.2221 *	-0.0834 **	0.0236
Cashflow/debt in bottom quartile		-0.2025 *		-0.1889 **
—in top quartile		-0.0067		-0.1182 **
—missing		-0.8744		-0.3481 *
Operating income/debt in bottom quartile		0.0651		-0.0010
—in top quartile		-0.1090		-0.1134 **
—missing		0.3315		0.2198
Year 2000			-0.4386 **	-0.3897 **
Year 2001			-0.3156 **	-0.2799 **
Year 2002			-0.2136 **	-0.1816 **
Year 2003			-0.2146 **	-0.1850 **
Year 2004			-0.1787 **	-0.1492 **
Year 2005			-0.1395 **	-0.1130 **
Year 2006			-0.1519 **	-0.1349 **
Year 2007			-0.1130 **	-0.0938 *
Intercept	-0.7326	-1.0677	-0.5360	-0.7772
# Observations	4,989	4,989	50,994	50,994

Source: Form 5500 filings and Capital IQ.

Note 1: In the first and third columns, the dependent variable is 0 for fully-insured plans and 1 for mixed-funded or self-insured plans. In the second and fourth columns, the dependent variable is 0 for fully-insured, 1 for mixed-funded, and 2 for self-insured plans.

Note 2: Significance levels: *=5 percent, **=1 percent

Longitudinal Analysis of Switching Behavior

The analysis presented in Table 14 takes advantage of the longitudinal nature of the Form 5500 data. Table 14 shows the number of plans with 100 or more participants that were matched to their filings in the previous year. For example, in 2008 we observed 38,747 large plans. Of those, we located the 2007 filing and constructed the funding mechanism measure for 33,518 plans (86.5%). The year-over-year match percentage ranges from 75.2% in 2001 to 86.5% in 2008.

Table 14: Match Rate of Plan Filings to Their Prior-Year Filing, by Plan Year

Plan year	Number of plans in year *t*	Total number of plans in year *t* matched to a plan in year *t-1*	Fraction matched (%)
2000	36,301		
2001	38,863	29,242	75.2%
2002	40,239	31,799	79.0%
2003	39,713	33,391	84.1%
2004	40,065	33,803	84.4%
2005	40,768	34,353	84.3%
2006	41,987	35,262	84.0%
2007	42,477	36,074	84.9%
2008	38,747	33,518	86.5%

Source: Form 5500 filings.

Table 15 presents the number of matched plans that retained their funding mechanism and those that switched to an alternative funding mechanism from one year to the next. In 2008, for example, of the 33,518 plans that were also observed in 2007, 35.5% remained mixed-funded or self-insured, 57.4% remained fully-insured, 4% of plans switched from fully-insured to mixed-funded or self-insured and 3% switched in the opposite direction. The table shows that the switching rate has declined somewhat over time. In other words, while some migration to alternative funding mechanisms remains, plans appear to adhere to a particular funding mechanism for longer durations than they did in the past.

Table 15: Incidence of Year-on-Year Switching in Funding Mechanism, by Plan Year

Plan year	Number of matching plans	Remain mixed or self-insured	Remain fully-insured	Switch to mixed or self-insured	Switch to fully-insured
2001	29,242	34.1%	55.6%	5.2%	5.0%
2002	31,799	35.0%	55.6%	5.1%	4.3%
2003	33,391	35.9%	55.5%	4.3%	4.3%
2004	33,803	36.0%	55.4%	4.8%	3.8%
2005	34,353	35.9%	55.4%	4.5%	4.2%
2006	35,262	35.8%	56.6%	3.9%	3.6%
2007	36,074	35.3%	57.5%	3.8%	3.4%
2008	33,518	35.5%	57.4%	4.0%	3.0%

Source: Form 5500 filings.

Plans, of course, switch funding mechanism for a variety of reasons. Our second set of econometric estimates utilizes the longitudinal nature of the data and considers the factors that influence a company to switch between fully-insured and mixed-funded/self-insured, or vice versa. We estimate separate logistic regression models for plans that were fully-insured last year and for those that were mixed-funded or self-insured last year.

This framework highlights drivers of change and allows an analysis of whether different factors influence the decision to go from self-insured to fully-insured as opposed to the decision to go from fully-insured to self-insured.

The estimates for this model are presented in Table 16.

Table 16: Estimates of the Decision to Switch Funding Mechanism*

	Fully-insured in prior year		Self-insured in prior year	
	Switch to mixed/self-insured? 2008	Switch to mixed/self-insured? 2000-'08	Switch to fully-insured? 2008	Switch to fully-insured? 2000-'08
Multiemployer/multiple-employer	-0.0515	0.1430 **	-0.9389 **	-0.7043 **
Plan size 200-499	0.2967 **	0.3203 **	0.0392	0.0005
Plan size 500-999	0.7439 **	0.7262 **	0.0324	-0.1702 **
Plan size 1,000-1,999	1.1606 **	1.0928 **	-0.1166	-0.2204 **
Plan size 2,000-4,999	1.6566 **	1.2972 **	-0.0960	-0.3866 **
Plan size 5,000+	1.9095 **	1.7667 **	-0.2108	-0.5042 **
Public financials	0.2467 **	0.1401 **	0.0086	0.1013 **
Agriculture	0.0736	0.4091 **	-0.7821	-0.3298 **
Communications, information	-0.2064	-0.0418	-0.4466 *	-0.1315 *
Construction	0.1681	0.1761 **	-0.1368	-0.5486 **
Finance, insurance, real estate	-0.0332	-0.0778 *	-0.0292	-0.2758 **
Manufacturing	0.2558 **	0.2626 **	0.0294	-0.1015 **
Mining	0.3822	0.6483 **	-0.4583	-0.4682 **
Retail trade	0.2504 *	0.1709 **	0.3079 *	0.1008 *
Transportation	0.1983	0.2560 **	-0.2071	-0.1189 *
Utilities	-0.0086	0.3190 **	-0.7019 *	-0.9478 **
Wholesale trade	-0.0125	0.1742 **	0.1701	-0.0015
Misc. organizations	-0.5967 *	-0.1878 **	-0.1378	-0.2168 **
Industry not reported	0.2113	0.0223	1.0646 *	0.5185 **
Year 2001		0.2018 **		0.5952 **
Year 2002		0.2099 **		0.3798 **
Year 2003		0.0530		0.3551 **
Year 2004		0.1632 **		0.2326 **
Year 2005		0.1073 **		0.3184 **
Year 2006		-0.0317		0.1771 **
Year 2007		-0.0838 *		0.1178 **
Intercept	-3.2549	-3.2281	-2.3230	-2.1529
# Observations	21,069	166,608	13,160	108,015

Source: Form 5500 filings.

Note 1: The dependent variable is 0 if the plan remained funded in the same way as in the prior year and 1 if the plan switched to the alternative funding mechanism.

Note 2: Significance levels: *=5 percent, **=1 percent

Multiemployer or multiple-employer plans that were self-insured were unlikely to switch to fully-insured status. Among plans that were fully-insured in the previous year, the ones with more participants tended to be more likely to adopt some or all of the financial risks of their health benefits by switching to mixed-funding or self-insurance. In contrast, plan size did not play an important role in identifying plans that switched from self-insurance to fully-insured plans.

The trends by industry sector were largely mixed, except that retail trade firms exhibited more switching behavior, in both directions, than those in services (the omitted category).

The estimates of plan year indicators demonstrate that plans were switching more, in both directions, in the earlier years than in 2008. In other words, plans' funding appears to have become more stable in recent years.

5. CONCLUSION

The primary objective of this report was to help address several of the provisions of Section 1254 of the ACA. To accomplish this objective we used plan-level data that allow us to observe the funding status of health plans for tens of millions of Americans. While these data have limitations, they provide a fairly clear picture of some of the key aspects of health plans. Specifically, we document the prevalence of self-insurance among health plans, its trend over time, and how it varies by characteristics of the plan or the sponsoring firm. In 2008, for example, almost 40% of plans had some form of self-insurance. While this fraction has remained relatively stable since 2000, the number of participants covered by self-insured plans has increased. By combining the plan-level data with firm financial data we are able to consider a wider range of firm characteristics. Our conclusions are enhanced through an econometric analysis that simultaneously considers multiple factors that influence the decision to fund health plans through self-insurance. This analysis shows no evidence that firms with relatively poor financial performance would disproportionately opt to self-insure.

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