ANALYSIS OF FORM 5500 FILING PATTERNS
FINAL VERSION

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EXECUTIVE SUMMARY

The U.S. Department of Labor (DOL) Employee Benefits Security Administration (EBSA) administers and enforces the reporting, disclosure, and fiduciary requirements of Title I of the Employee Retirement Income Security Act of 1974 (ERISA). Each year, employee benefit plans are required to submit Form 5500 to EBSA to report information about the plan. Form 5500 captures important employee benefit plan information on plan type, plan administration, and plan benefits. Timely filing of Form 5500 protects plan participants' rights and benefits while satisfying annual reporting requirements. In addition, these data directly enhance assessments of tax and employee benefit-related economic trends and policies. We studied Form 5500 data from 2000 to 2016. This 16-year interval ensures a sufficiently long analysis period while considering computational time concerns.

In 2015, the most recent, complete year of filings, EBSA received about half of plan filings by the calendar plan-year deadline (July 31) and nearly 90% by the calendar plan-year extension deadline (October 15). This filing behavior is consistent over the 2000–2016 period reviewed in this report. However, less than 20% of large plans (defined as those with more than 1,000 participants) file by the July 31 filing deadline, compared to over 50% of small plans (defined as those with fewer than 25 participants).

This report offers two filing pattern-related analyses. First, we explore the Form 5500 population to learn more about filing patterns. We sought to identify whether plans with the same filing pattern have similar characteristics. We produce descriptive statistics on filing patterns, total assets, and plan type. Next, we examine the effect of EBSA's Stop-Filer Initiative on filing compliance. For this analysis, we aimed to determine whether the initiative has helped EBSA more quickly and effectively achieve its goal of improving Form 5500 reporting compliance.

Filing Pattern Analysis

We conducted a descriptive analysis of Form 5500 filings to identify and describe common filing patterns. Based on behavior between Plan Years 2000 and 2016, we classified filers[1] into five filing pattern categories:

- **Complete Filers**: Plans that have filed every year since 2000 and were established before 2000. Most frequent characteristics:
  - 401(k) plans[2] with over 1,000 participants
  - High plan fees and high returns
  - Fidelity bond[3] amount at least 10% of plan's assets

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[1] Exempt filers are not considered in this analysis.

[2] A 401(k) plan is a type of defined contribution plan, where the employee can make contributions from his or her paycheck before taxes are taken out. The contributions go into a 401(k) account, with the employee often choosing the investments based on options provided under the plan. In some plans, the employer also makes contributions, matching the employee's contributions up to a certain percentage. SIMPLE and safe harbor 401(k) plans have additional employer contribution and vesting requirements.

[3] A fidelity bond is an insurance product that protects the benefits plan from losses incurred due to fraud or dishonesty.

- **Consecutive Filers:** Plans that have filed consecutively across years without skipping filings, and the plan originated in 2001 or later. Most frequent characteristics:
    - High income-to-asset ratio
    - Low asset-to-participant ratio
- **Skip Filers:** Plans that have missed filing at least one filing year and then resumed filing for one or more subsequent years. Most frequent characteristics:
    - Welfare plans[4] and non-401(k) defined contribution plans[5]
    - Low income-to-asset ratio
- **Stop Filers:** Plans that are over one year past the Plan Year 2015 filing extension deadline (655 days from October 2, 2017) and have not indicated termination. Most frequent characteristics:
    - Low asset-to-participant ratio
    - High income-to-asset ratio
- **Terminated Plans:** Plans whose Form 5500 indicates this return is a "final return/report," the Schedule H/I indicates all its assets were distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the Pension Benefit Guaranty Corporation (PBGC), or indicates a resolution to terminate the plan during the plan year or any prior plan year. In addition, if the plan meets the "stop-filer" definition, but indicates on its Form 5500 that the plan has no assets and no participants, then it is a terminated plan. Most frequent characteristics:
    - Non-401(k) defined contribution plans
    - Defined benefit plans

Classification by filing pattern category provides a way to profile characteristics for each pattern type. These characteristics can help EBSA customize communication strategies across these groups.

"Stop" Filer Enforcement and Voluntary Compliance Programs

The Office of the Chief Accountant (OCA) under EBSA monitors Form 5500 compliance. Since 1995, OCA managed the Delinquent Filer Voluntary Compliance Program (DFVCP) to encourage plan administrators to voluntarily file their past-due filings and pay significantly reduced civil penalties. Among other ongoing reporting compliance enforcement programs, OCA has a long history of targeting plans that appear to have inappropriately stopped filing the required Annual Reports. Through the Stop-Filer Initiative, OCA uses historical filing information to identify plans that did not file but were expected to file in the current reporting year. OCA sends inquiry letters to these plans to ask for explanations for the apparent violations and warns the administrators that they may be subject to civil penalties.

This report examined the impact of OCA's 2015 Stop-Filer Initiative, which attempted to improve upon the existing Stop-Filer Initiative, by systematically assessing the reasons plans stop filing and the characteristics of plans that stop filing. We compared filing behavior among plans that received enforcement correspondence as part of this initiative to similar "stop" filer plans in a control group (plans that were noncompliant but did not receive such letters). In general, we found that a larger percentage of "stop" filer plans that receive OCA's inquiry letters file their Form 5500's compared to the control group of "stop" filers. We show specific results for two years of the initiative.

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[4] A welfare plan is one that provides "(i) medical, surgical, or hospital care or benefits, or benefits in the event of sickness, accident, disability, death or unemployment, or vacation benefits, apprenticeship or other training programs, or day care centers, scholarship funds, or prepaid legal services." 29 CFR 2510.3-1.

[5] A "non-401(k) defined contribution" plan is a defined contribution plan that is not a 401(k), i.e. a profit-sharing plan.

In the first year, targeting "stop" filers who filed a Form 5500 in 2013, but not in 2014, resulted in:

- **56.4%** of plans that received the inquiry letter filed for the missing plan year after receipt, compared to **34.5%** in the control.
- The median time to submit the filing from the inquiry letter date was **52.5 days**, compared to **107 days** among filers in the control group.

In the second year, targeting "stop" filers who filed a Form 5500 in 2014, but not in 2015, resulted in:

- **69.0%** of plans that received the inquiry letter filed for the missing plan year after receipt, compared to **11.0%** in the control.
- The median time to submit the filing from the inquiry letter date was **74 days**, compared to **171 days** among filers in the control group.

Changes in the targeting criteria from the first year of the initiative to the second could have contributed to the differences in results. For example, the first year restricted the population to plans with at least $750,000 in end-of-year assets and 25–200 end-of-year participants. The second year was not restricted by asset or participant size.

A caveat – the IRS has an *Employee Plans Compliance Unit* aimed at ensuring compliance with annual Form 5500 filing requirements.[6] This program lags one year behind the DOL program and targets all "stop" filers. Due to the one-year lag and the prompt action by DOL, IRS contact would not have had much, if any, influence in the Stop-Filer Initiative. Nonetheless, the IRS program may have contributed to increased compliance among the population of "stop" filers DOL contacted, and this report does not control for the effect of IRS involvement.

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[6] https://www.irs.gov/retirement-plans/employee-plans-compliance-unit-epcu-5500-non-filer-dol-project. Last Accessed: June 19, 2018

TERMINOLOGY

We use the following terms throughout this report:

- **Complete Filing Pattern**—A plan that has completed an annual filing for every plan year since 2000 and was established in or before 2000.
- **Consecutive Filing Pattern** —The plan has filed consecutively across years without skipping filings, and the plan originated in 2001 or later. This filing pattern distinguishes younger plans from more mature benefits plans ("complete" plans).
- **Defined Benefit (DB) plan**—Pension plan in which the employer promises either a lump-sum or predetermined pension payment upon retirement. The lump-sum or predetermined payment is calculated based on employee characteristics, such as salary, age, and tenure.
- **Defined Contribution (DC) plan**—Pension plan that provides an individual account for each participant. Each participant and/or employee contributes to the employee's account and any income, expenses, gains, and losses experienced by that account only applies to that individual account.
- **Direct Filing Entity (DFE)**—Some plans participate in certain trusts, accounts, and other investment arrangements that file the Form 5500 annual return report as a DFE. A DFE most frequently represents a pooled investment arrangement, although not all pooled investment arrangements are required to file as a DFE. A Form 5500 must be filed for a master trust investment account (MTIA). A Form 5500 is not required but may be filed for a common/collective trust (CCT), pooled separate account (PSA), 103-12 investment entity (103-12 IE), or group insurance arrangement (GIA). However, plans that participate in CCTs, PSAs, 103-12 IEs, or GIAs that file as DFEs, generally are eligible for certain annual reporting relief. For reporting purposes, a CCT, PSA, 103-12 IE, or GIA is not considered a DFE unless a Form 5500 and all required attachments are filed for it in accordance with the DFE Filing Requirements.
- **Employee Stock Ownership Plan (ESOP)**—DC pension plan wherein a company provides its own stock to the employees enrolled in the plan. Individual accounts for each participant contain rights to employer stock which get distributed to the participant account upon retirement, termination, death, or disability.
- **Filing year**—The year a plan files a Form 5500 filing. This term is capitalized when referring to a specific year and lowercase otherwise.
- **Form year**—The year designated on the Form 5500 (e.g., 2016 Form 5500). The form year corresponds to the year that the first day of the plan year is in and is equivalent to the Plan Year Beginning (plan year, in this report). This term is capitalized when referring to a specific year and lowercase otherwise.
- **Plan year**—The year containing the day the plan year begins. In this report, plan year refers to Plan Year Beginning (PYB), the year that the first day of the plan year is in for which the plan is reporting; this generally will be the same as the form year. This term is capitalized when referring to a specific year and lowercase otherwise.
- **Skip Filing Pattern**—The plan has skipped at least one filing year and then resumed filing for one or more subsequent years.

- **Statistical year**—The year containing the day the plan year ends, which is equivalent to the Plan Year End (PYE), the year that the last day of the plan year is in for which the plan is reporting. This term is capitalized when referring to a specific year and lowercase otherwise.
- **Stop Filing Pattern**[7]—The plan is over one year past the Plan Year 2015 filing extension deadline (655 days from October 2, 2017) and has not indicated termination.
- **Terminated Filing Pattern**[8]—The plan's Form 5500 indicates this return is a "final return/report"; the Schedule H/I indicates all its assets were distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the Pension Benefit Guaranty Corporation (PBGC); or there was a resolution to terminate the plan during the plan year or any prior plan year. In addition, if the plan meets the "stop-filer" definition, but indicates on its Form 5500 that the plan has no assets and no participants, then it is a terminated plan.
- **Welfare plan**—A welfare plan is one that provides "(i) medical, surgical, or hospital care or benefits, or benefits in the event of sickness, accident, disability, death or unemployment, or vacation benefits, apprenticeship or other training programs, or day care centers, scholarship funds, or prepaid legal services." 29 CFR 2510.3-1.

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[7] Merger activity is not tracked longitudinally within the reported data. As a result, a plan that merges with another plan and does not check the terminated box the year it stopped filing would be classified as a "stop" filer in the data.

[8] Merger activity is not tracked longitudinally within the reported data. As a result, a plan that merges with another plan and checks the terminated box the year it merged would be classified as a "terminated" filer in the data.

ANALYSIS OF FORM 5500 FILING PATTERNS

1   INTRODUCTION

The U.S. Department of Labor (DOL) Employee Benefits Security Administration (EBSA) administers and enforces the reporting, disclosure, and fiduciary requirements of Title I of the Employee Retirement Income Security Act of 1974 (ERISA). Employee benefit plans report information about the plan annually on Form 5500. Form 5500 captures important employee benefit plan data on plan type, plan administration, and plan benefits. Timely filing of Form 5500 protects plan participants' rights and benefits, and data from the form directly enhances assessments of tax and employee benefit-related economic trends and policies. The 2000-2016 interval ensures a sufficiently long analysis period while considering computational time concerns. This report offers two filing pattern-related analyses. First, we explore the Form 5500 population (that is, those employee benefit plans that file the Form 5500) to learn more about filing patterns and define filing pattern categories based on historical filing activity. We discuss the most frequent characteristics of plans in each filing pattern category. In the second portion of our analysis, we examine the effect of EBSA's Stop-Filer Initiative, launched to systematically assess the reasons plans stop filing to inform future efforts to increase reporting compliance.

Section 2 describes our data sources. Section 3 includes descriptive statistics of the filing population classified by common filing patterns. Section 4 presents results of the Stop-Filer Initiative.

2   DATA SOURCES

Our analysis uses data from Form 5500 filings, the Office of the Chief Accountant Tracking System (OCATS) database, and the Enforcement Management System (EMS).

- **Form 5500** reports information for employee benefit plans and direct filing entities (DFEs).[9] EBSA maintains the Form 5500 database, a collection of all Form 5500 filings submitted electronically to the ERISA Filing Acceptance System2 (EFAST2) by benefit plan administrators. The database contains information such as plan type, assets, number of participants, and whether this is the plan's final

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[9] Some plans participate in certain trusts, accounts, and other investment arrangements that file the Form 5500 annual return/report as a DFE. A DFE most frequently represents a pooled investment arrangement, although not all pooled investment arrangements are required to file as a DFE. A Form 5500 must be filed for a master trust investment account (MTIA). A Form 5500 is not required but may be filed for a common/collective trust (CCT), pooled separate account (PSA), 103-12 investment entity (103-12 IE), or group insurance arrangement (GIA). However, plans that participate in CCTs, PSAs, 103-12 IEs, or GIAs that file as DFEs, generally are eligible for certain annual reporting relief. For reporting purposes, a CCT, PSA, 103-12 IE, or GIA is not considered a DFE unless a Form 5500 and all required attachments are filed for it in accordance with the DFE Filing Requirements.

filing. From 2000 to 2016, over 200,000 filings are received per year. In addition, over 500,000 Form 5500 Short Form (Form 5500-SF) filings are received each year, providing information on plans with fewer than 100 participants. Researchers and other end users can use a database created from information populated by Form 5500 and Form 5500-SF filers, including the information filed on required schedules.

- **OCATS** reports the assessment findings and results of the Office of the Chief Accountant (OCA) examinations. OCA will open investigations on plans whose filings are delinquent, deficient, or need clarification. OCA uses OCATS to track the progress of the different cases that are open on specific plans, which typically includes either filing compliance or an audit quality review. There are over 4,000 entries per year in the database during the period of study.
- **Enforcement Management System (EMS)** contains information for civil investigations since 1990 conducted by the DOL EBSA Office of Enforcement (OE). The information stored in EMS includes source and subject of the investigation, status, violations determined, and monetary results.

Data used to produce this report includes filings submitted as of October 2, 2017. As plans may submit multiple Form 5500s in a year to correct previous filings or account for short plan years, we chose the most complete filing for each plan. When we encountered multiple complete Form 5500s for one plan, we retained the most recent plan filing per form year. We link data across these systems using a combination of Employee Identification Number (EIN), Plan Number (PN), and plan year. EIN refers to the IRS's unique, nine-digit code identifying businesses operating in the United States.

3   FILING PATTERN ANALYSIS

Summit conducted an analysis on the filing pattern distributions for all Form 5500 filers between 2000 and 2016. We present our findings in three parts:

- **Filing Timeline Analysis** examines the filing timeline of Form 5500 filers.
- **Categories of Form 5500 Filers** provides a background and definitions for each of the filing patterns created in our analysis.
- **Filing Pattern Distribution and Characteristics** reports the distribution of filing pattern categories in the analysis population and the most frequent plan characteristics for each filing pattern category.

3.1   FILING TIMELINE

A "calendar year plan" begins on January 1 of a year and ends on December 31 of the same year. A non-calendar year plan starts on a day other than January 1 and may end up any subsequent date. A plan year may not exceed 12 months in length. The plan administrator determines the plan year.

Plans must file all required forms, schedules, statements, and attachments by the last day of the 7th calendar month after the end of the plan year. For example, a plan with a year ending in December must file by July 31. Filers may request a 2½-month extension of the original deadline.

Figure 1 below shows the Form 5500 filing lifecycle for plans with different timelines. Approximately 81% of all filings are from calendar year plans.
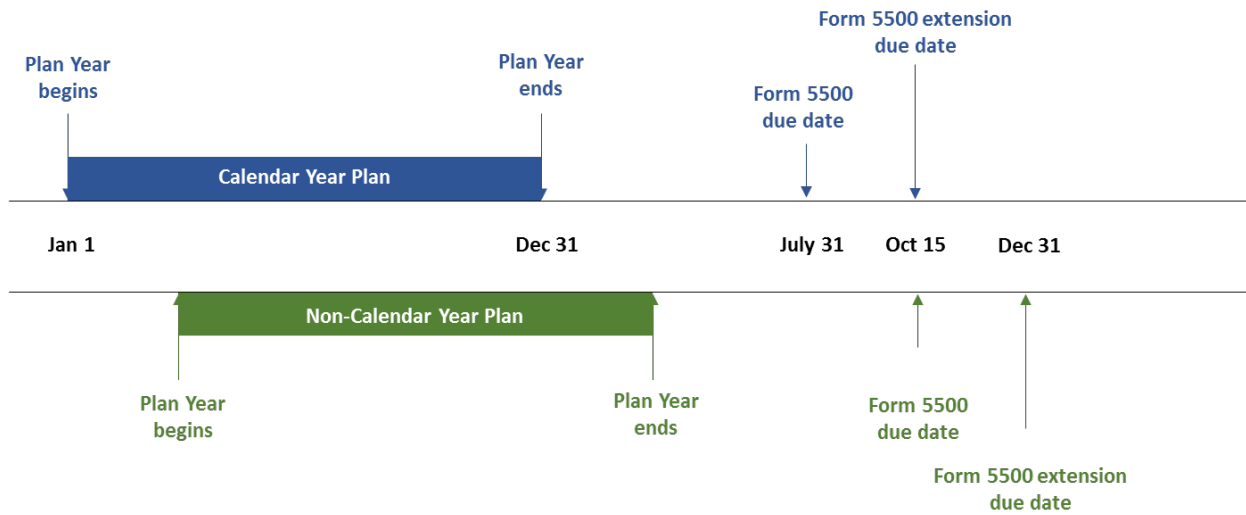
Figure 1: Annual Plan Filing Cycle

Note: A "calendar year plan" begins on January 1 of a year and ends on December 31 of the same year. A non-calendar year plan starts on a day other than January 1 and may end up any subsequent date afterwards. A plan year may not exceed 12 months in length. The plan year is determined by the plan administrator.

Figure 2 below shows the distribution of Form 5500 filings submitted for Plan Year 2015, the most recent, complete year of filings. As expected, filers submit most filings by two dates: the "calendar year plan" deadline on July 31 (50% of filings) and the "calendar year plan" extension deadline on October 15 (90% of filings). This pattern is consistent across time (2000–2016).

Figure 2: Filing Times for Plan Year 2015 Filers
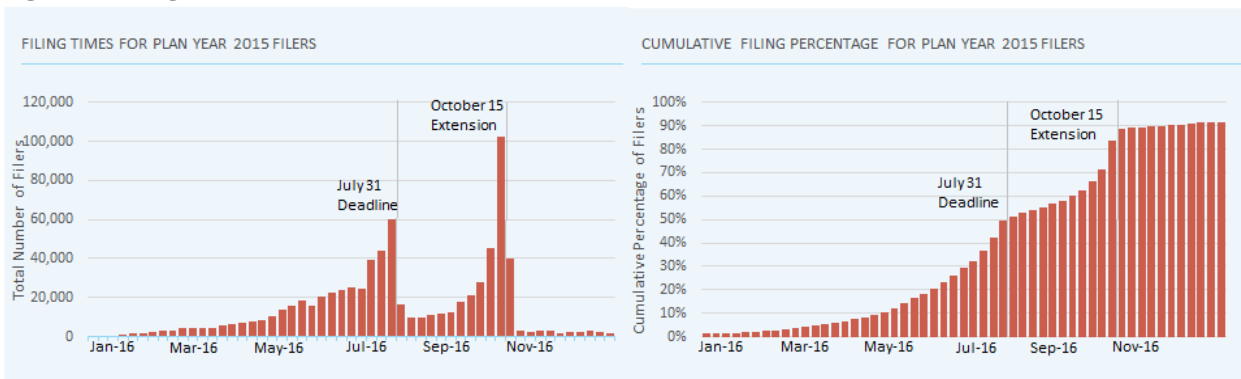
Source: Date submitted for Plan Year 2015 Form 5500 filings
N = 752,671 Plan Year 2015 Form 5500 filings (including Form 5500-SF filings) filed in calendar year 2016
Note: 91.7% of all Plan Year 2015 filers filed through December 31, 2016. An additional 8.3% of filers in 2017 are not included in the graphs above.

Differences exist by plan type and plan size. Approximately 55% of defined contribution (DC) plans file by July 31, compared to less than 40% of welfare plans and less than 30% of defined benefit (DB) plans. [10, 11] Large plans generally file later than small plans. Less than 20% of large plans (defined for this study as those with more than 1,000 participants) at the beginning of the plan year file by the July 31 filing deadline compared to over 50% of small plans (defined for this study as those with fewer than 25 participants). **Appendix A** includes a comparison of filing times across plan sizes and plan types. Understanding the differences in filing behavior between subpopulations can inform outreach and communication strategies that are customized to these plan administrators.

3.2   FORM 5500 FILING PATTERNS

We classified each plan into one of these five filing pattern categories using the entity's plan year filing history between 2000 and 2016. This 16-year interval ensures a sufficiently long analysis period while considering computational time concerns. **Table 1** gives an overview of these five patterns and describes the business rules used to define each filing pattern. Note that the classification is mutually exclusive, such that each plan is classified into only one filing pattern category. A plan that meets the criteria for more than one category is assigned to the first one it meets, as ordered in the table below. The circumstance in which a plan meets multiple criteria is most likely to be a plan that both skips filings and stops filing. In this case, a plan is categorized as a "skip" filer.

Table 1: Filing Pattern Category Definitions

Category	Definition
Terminated	The plan's Form 5500 indicates this return is a "final return/report"; the Schedule H/I indicates all its assets were distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the Pension Benefit Guaranty Corporation (PBGC); or there was a resolution to terminate the plan during the plan year or any prior plan year. In addition, if the plan meets the "stop-filer" definition, but indicates on its Form 5500 that the plan has no assets and no participants, then it is a terminated plan. *Merger activity is not tracked longitudinally within the reported data. As a result, a plan that merges with another plan and checks the terminated box the year it merged is classified as a "terminated" filer in the data.*
Skip	The plan has skipped at least one filing year and then resumed filing for one or more subsequent years.
Stop	The plan is over one year past the Plan Year 2015 filing extension deadline (655 days from the last day of the plan year) and has not indicated termination. *Merger activity is not tracked longitudinally within the reported data. As a result, a plan that merges with another plan and does not check the terminated box the year it stopped filing, would be classified as a "stop" filer in the data.*

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[10] A **defined benefit plan** is a pension plan wherein the employer promises either a lump-sum or predetermined pension payment upon retirement. The lump-sum or payment is calculated based on employee characteristics, such as salary, age, and tenure. A **defined contribution plan** is a pension plan that provides an individual account for each participant. Each participant and/or employer contributes to the employee's account and any income, expenses, gains and losses experienced by that account only applies to that individual account.

[11] A **welfare plan** is one that provides "(i) medical, surgical, or hospital care or benefits, or benefits in the event of sickness, accident, disability, death or unemployment, or vacation benefits, apprenticeship or other training programs, or day care centers, scholarship funds, or prepaid legal services" as defined in 29 CFR 2510.3-1.

Category	Definition
Complete	A filer that has completed an annual filing for every plan year since 2000. The plan originated in 2000 or earlier.
Consecutive	The plan has filed consecutively across years without skipping filings, but the plan originated in 2001 or later.

3.3   FILING PATTERN DISTRIBUTION AND CHARACTERISTICS

To understand plan filing behavior, we classified plans into one of the five filing patterns above. We first examined the entire distribution of filing patterns for filers whose plan years began between 2000 and 2016. We looked at the entire filing history for each plan. After classifying plans, we restricted the database to plans that last filed for Plan Year 2015 or later. However, we classified plans that stopped filing in 2014 as a "stop" filer in 2015 and included them in the analysis population. This population reflects the most recent filing available for a plan. It excludes plans that terminated before Plan Year 2015 or stopped filing before Plan Year 2014.[12] Lastly, we exclude exempt plans from the analysis population.[13]

Figure 3 shows the distribution of filing patterns in the study population. Over half of the plans are "consecutive" filers.

Figure 3
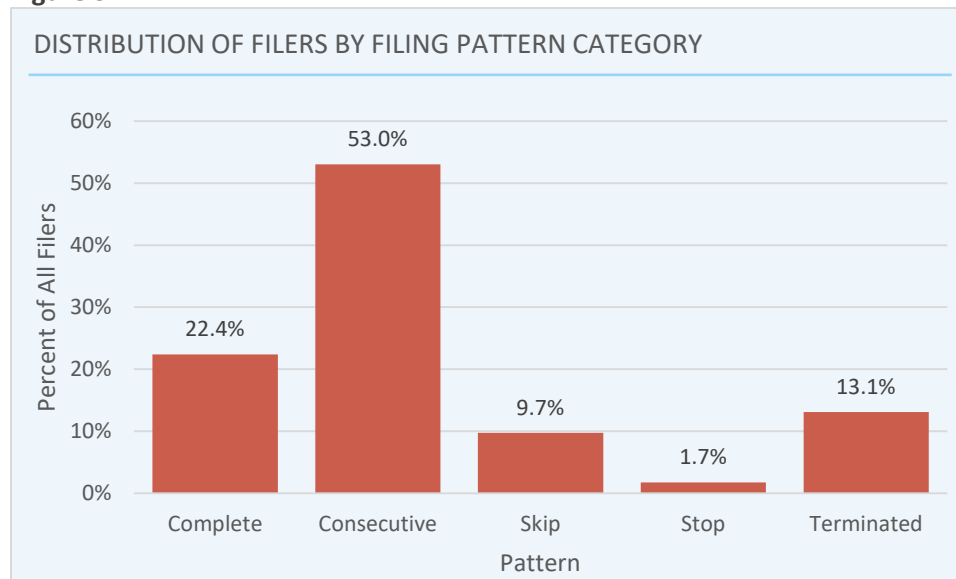
Source: Form 5500 filings per plan
N = 874,788 filers

In **Figure 4**, we show the distribution of filing patterns by plan type. Within the study population, the plan types are distributed as follows:

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[12] A total of 836,882 plans terminated between 2000 and 2015 or stopped filing before 2014.
[13] A total of 8,006 plans that filed in Plan Year 2015 are exempt.

- DB, Defined Benefit[14]—6.6% of the study population
- DC, Defined Contribution[15]—82.4% of the study population
- DFE, Direct Filing Entity[16]—0.2% of the study population
- ESOP, Employee Stock Ownership Plans[17]—0.8% of the study population
- Welfare[18]—10.0% of the study population

The distribution of filing patterns within each plan type is fairly consistent, except for DFE plans. Approximately 70%–80% of filers within DB, DC, ESOP, and welfare plans are "complete" or "consecutive" filers.

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[14] A defined benefit plan is a pension plan where the employer promises either a lump-sum or predetermined pension payment upon retirement. The lump-sum or payment is calculated based on employee characteristics, such as salary, age, and tenure. We categorized plans as DB plans if the plan had any "1" pension benefit code marked (Form 5500 Part II, item 8a).

[15] A defined contribution plan is a pension plan which provides an individual account for each participant. Each participant contributes to their own account and any income, expenses, gains, and losses experienced by that account only applies to that individual account. We categorized plans as DC plans if the plan name had "401" in its name, pension benefit code 2J, or any "2" pension benefit code was marked (Form 5500 Part II, item 8a) while not being an ESOP plan.

[16] A Direct Filing Entity (DFE) is an investment arrangement that manages money from more than one plan. Common and master trusts are classified as DFEs as they hold plan assets for either several plans from a single employer or pool assets from a group of similar employers, such as unions. We categorized plans as DFEs if the plan entity code (Form 5500 Part I, Item A) had "a DFE" checked.

[17] An Employee Stock Ownership Plan (ESOP) is a pension plan where a company provides its own stock to the employees enrolled in the plan. Individual accounts for each participant contain rights to employer stock which get distributed to the participant account upon retirement, termination, death or disability. We categorized plans as ESOPs if they had a "2O", "2P", or "2Q" pension benefit code marked (Form 5500 Part II, item 8a).

[18] A welfare plan is one that provides "(i) medical, surgical, or hospital care or benefits, or benefits in the event of sickness, accident, disability, death or unemployment, or vacation benefits, apprenticeship or other training programs, or day care centers, scholarship funds, or prepaid legal services. We categorized plans as welfare plans if any "4" welfare benefit code (Form 5500 Part II, Item 8b) was marked or the plan number was a marked as 500 or greater.

Figure 4
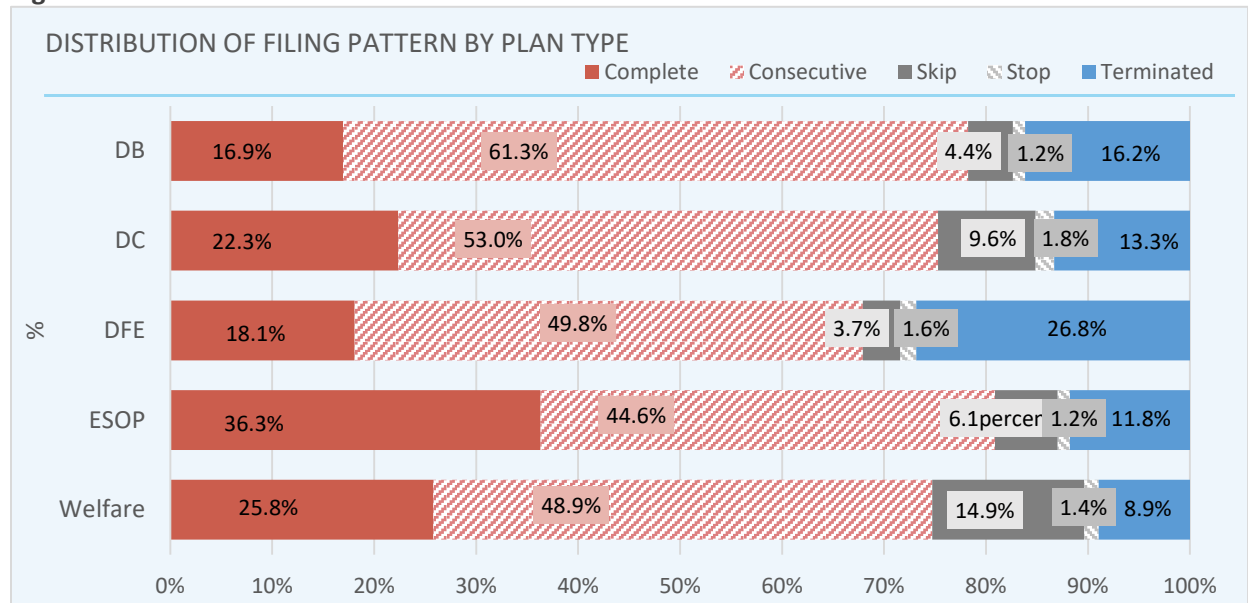
DISTRIBUTION OF FILING PATTERN BY PLAN TYPE

Legend: ■ Complete ▨ Consecutive ■ Skip ▨ Stop ■ Terminated

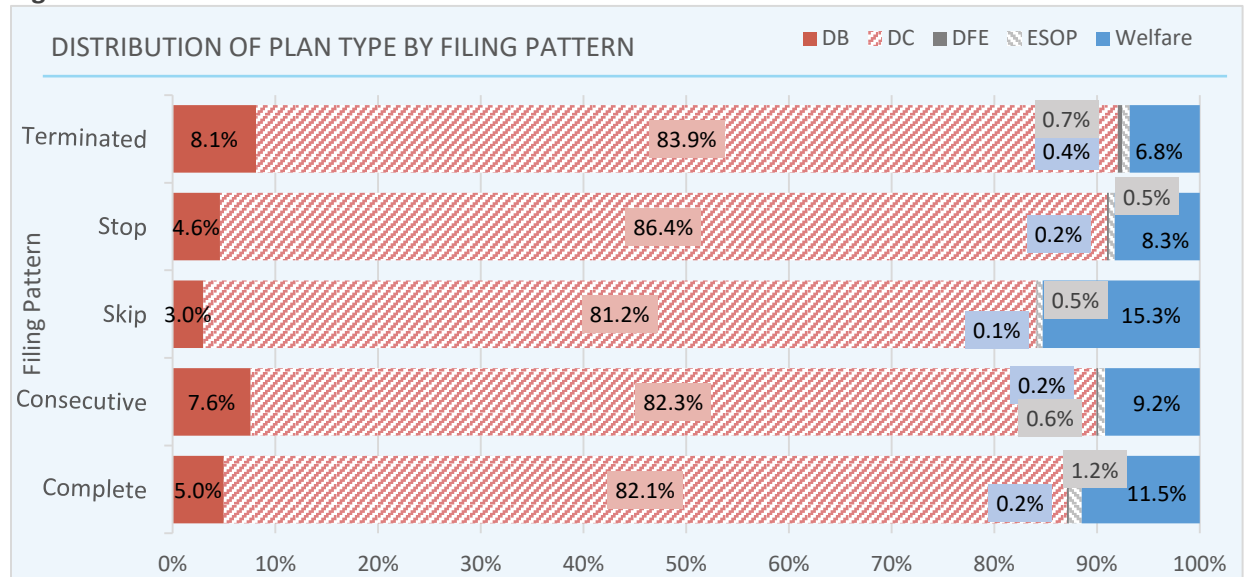| Plan Type	Complete	Consecutive	Skip	Stop	Terminated
DB	16.9%	61.3%	4.4%	1.2%	16.2%
DC	22.3%	53.0%	9.6%	1.8%	13.3%
DFE	18.1%	49.8%	3.7%	1.6%	26.8%
ESOP	36.3%	44.6%	6.1percer	1.2%	11.8%
Welfare	25.8%	48.9%	14.9%	1.4%	8.9%

Source: Form 5500 filings per plan and Form 5500 Part II item 1a, 6f, 8a, and 8b
N = 874,788 excludes 1,186 plans without a plan type classification. The population is distributed by plan type as follows—
DB: 6.6%, DC: 82.4%, DFE: 0.2%, ESOP: 0.8%, Welfare: 10.0%.

Figure 5 presents the distribution of plan types within a given filing pattern. As expected, DC plans (which account for 82.4% of the study population) are the most frequent type in all filing patterns.

Figure 5

DISTRIBUTION OF PLAN TYPE BY FILING PATTERN

Legend: ■ DB ▨ DC ■ DFE ▨ ESOP ■ Welfare

Filing Pattern	DB	DC	DFE	ESOP	Welfare
Terminated	8.1%	83.9%	0.7%	0.4%	6.8%
Stop	4.6%	86.4%	0.5%	0.2%	8.3%
Skip	3.0%	81.2%	0.5%	0.1%	15.3%
Consecutive	7.6%	82.3%	0.2%	0.6%	9.2%
Complete	5.0%	82.1%	1.2%	0.2%	11.5%

Source: Form 5500 filings per plan and Form 5500 Part II item 1a, 6f, 8a, and 8b
N = 874,788 excludes 1,186 plans without a plan type classification. Values of 1% or less are not labeled. The population is distributed by plan type as follows: DB: 6.6%, DC: 82.4%, DFE: 0.2%, ESOP: 0.8%, Welfare: 10.0%.

We conducted further analysis on the Form 5500 characteristics within each filing pattern category. First, we compared plan assets and participants across groups. Next, we examined the most frequent

characteristics of each filing pattern group. Last, we examined the frequency of EBSA investigations within each filing pattern.

3.3.1   Plan Assets and Participants

As **Figure 6** shows, so-called "complete" filers have much higher mean and median plan assets compared to all other filing pattern categories. "Complete filers" are generally larger plans and more mature firms (originated 2000 or earlier), while "consecutive" plans are younger (originated after 2000). Approximately half of "terminated" filers do not contain plan assets because "terminated" filers are expected to wind down both plan assets and plan participants as of their last filing.

Figure 6

MEAN AND MEDIAN PLAN ASSETS BY FILING PATTERN
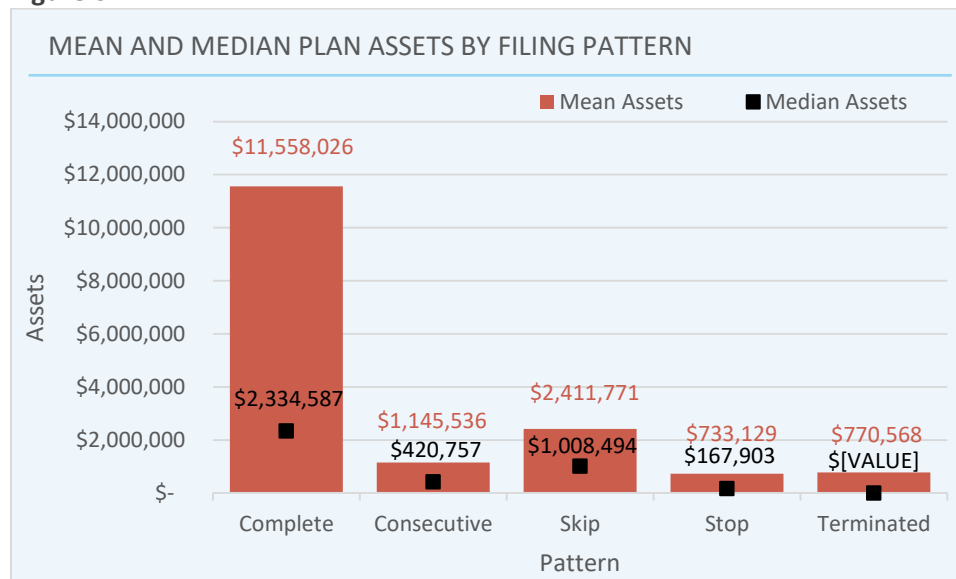
Source: Form 5500 filings per plan and Form 5500 Schedule H, item 1f(b) or Schedule I, item 1a(b)
N = 789,982
Note: We exclude the top 1% of filers in terms of plan assets. A select few plans have extremely high plan assets. Additionally, 78,008 plans were missing end-of-year assets.

Figure 7 displays the mean and median number of plan participants for each filing pattern. Like plan assets, "complete" filers show the largest mean and median number of plan participants. "Skip" filers are generally the second largest plans in terms of participants, while "terminated" filers have the lowest median number of participants.

Appendix B presents mean and median plan assets (participants) among plans with more than zero assets (plan participants). In Appendix B, the main differences in graphics appear within the "terminated" and "stop" filing patterns, which include 53.3% and 2.6% of filers with zero dollars in reported end-of-year assets. Also, 54.1% of "terminated" filers and 0.7% of "stop" filers have a value of zero for end-of-year participants.

Figure 7

MEAN AND MEDIAN PLAN PARTICIPANTS BY FILING PATTERN
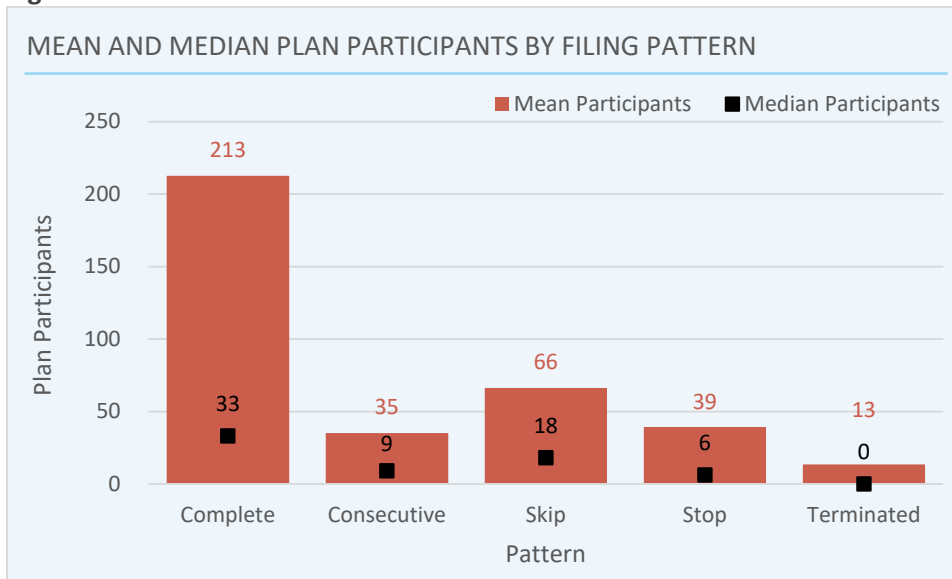
Source: Form 5500 filings per plan and Form 5500 item 6f
N = 801,046
Note: In our study population, there are a small number of filers with an extremely high number of participants relative to the rest of the group. Consequently, we exclude the top 1% of filers in terms of plan participants. Additionally, 66,828 plans were missing end-of-year participants.

3.3.2   Filing Pattern Profiles

This section presents the most frequent characteristics for each filing pattern type. The complete set of 24 characteristics that we examined to profile each filing pattern is in **Appendix C**. We chose characteristics that reflect the breadth of plan attributes using data reported on Form 5500 and through EBSA's EMS. These characteristics include variables that corresponded to the plan's assets, participants, and liabilities, as well as calculated plan fees and returns. We also included categorical variables related to plan entity types and variables indicating previous EMS investigations and the ERISA violations found in each investigation.

3.3.2.1   Complete Filers

"Complete" filers account for 22.4% of all filers in the analysis population. Complete filers tend to have plan assets of higher value than those of other filers and have sufficiently covered their participants from loss of assets due to fraud or dishonesty (fidelity bond[19] amount is at least 10% of plan's assets, also known as sufficient fidelity bond amount). These plans have been in operation for a longer period. With their relatively large size and high complexity, complete filers tend to have higher plan fees than the other filers in the study.

Complete filers are associated with the following characteristics:

- **401(k) plans with over 1,000 participants**—57.1% of large 401(k) plans are complete filers.

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[19] A fidelity bond is an insurance product that protects the benefits plan from losses incurred due to fraud or dishonesty.

- **Plans among the highest 25% of plan fees**[20]—Among plans that report plan fees, over half of plans in the highest 25% of plan fees are complete filers.[21]
- **Plans among the highest 25% of plan returns**[22]—Over one-third of plans in the highest 25% of plan returns are complete filers.
- **Plans with a fidelity bond amount that is at least 10% of a plan's assets**—47.6% of sufficient fidelity bond amount plans are complete filers.[23]

3.3.2.2 Consecutive Filers

"Consecutive" filers account for 53.0% of all filers in the filing pattern analysis population. "Consecutive" filers have filed consecutively across years without skipping filings, and the plan originated in 2001 or later. Many of these plans have a smaller number of participants and assets compared to plans in other filing pattern categories. In contrast to "complete" filers, "consecutive" filers have a high income-to-asset ratio due to the smaller amount of assets in the plan.

Consecutive filers are associated with the following characteristics:

- **Plans with an income-to-asset ratio in the top 25% of all filers**—Nearly 90% of plans in the top 25% of income-to-asset ratios are "consecutive" filers.
- **Plans with an asset-to-participant ratio in the lowest 25% of all filers**—71.9% of plans in the lowest 25% asset-to-participant ratio are "consecutive" filers.
- **401(k) plans with 1 to 25 plan participants**—64.7% of small 401(k) plans are "consecutive" filers.
- **DB plans**—61.3% of DB plans are "consecutive" filers.

3.3.2.3 Skip Filers

"Skip" filers account for 9.7% of all filers in the study population. "Skip" filers are associated with the following characteristics:

- **Welfare plans**—14.9% of welfare plans are "skip" filers, compared to 10.1% "skip" filers in the study population.[24]
- **Non-401(k) DC plans**—13.0% of non-401(k) DC plans are "skip" filers, compared to 9.7% "skip" filers in the study population.
- **Plans with an income-to-asset ratio in the bottom 25% of all filers**—12.7% of low income-to-asset plans are "skip" filers, compared to 9.7% "skip" filers in the study population.

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[20] Defined using three consecutive filing years, controlled by plan type, plan year, and the plan asset size for plans that report this information.

[21] Only "administrative expenses" are reported on the Form 5500-SF, and no indirect compensation is reported at all on the Form 5500-SF. On the Schedule C, only compensation in excess of $5,000 is reported, and so-called "eligible indirect compensation" is not required to be reported. On neither the Form 5500-SF, nor the Schedule H, or C, are expenses paid by the plan sponsor instead of the plan reported.

[22] Defined using three consecutive filing years, controlled by plan type, plan year, and the plan asset size for plans that report this information.

[23] Section 412 of ERISA generally requires a 10% coverage amount (or at least $1,000,000 for plans with employer securities). A 10% bonding coverage is necessary for employee benefit plans; however, plans that are completely unfunded or that are not subject to Title I of ERISA are exempt from these bonding requirements.

[24] A welfare plan that covers fewer than 100 participants may be exempt from filing. A welfare plan that did not file in a given year due to this exemption is not classified as "skip" filer.

From the 24 characteristics examined, there does not seem to be a general profile of this filing pattern category (e.g. plans with low assets, plans with financial distress).

3.3.2.4   Stop filers

"Stop" filers account for 1.7% of all filers in the study population.[25] Based on Form 5500 characteristics, the population of "stop" filers is more likely to have lower assets compared to the other filer profiles. "Stop" filers were also less likely to have adequate fidelity bond coverage for losses due to fraud or dishonesty. Lack of fidelity bond coverage could signal plan mismanagement, inexperience in managing the plan, or possible fraudulent activity. "Stop" filers are associated with the following characteristics:

- **Plans with an asset-to-participant ratio in the lowest 25% of all filers**—3.4% of plans with a low asset-to-participant ratio are "stop" filers compared to 2% "stop" filers in the study population.
- **Plans with an income-to-asset ratio in the top 25% of all filers**—2.8% of high income-to-asset plans are "stop" filers compared to 2% "stop" filers in the study population.

3.3.2.5   Terminated Filers

"Terminated" filers account for 13.1% of all filers in the study population. "Terminated" filers are associated with the following characteristics:

- **Non-401(k) DC plans**—18.7% of non-401(k) DC plans are "terminated" filers, compared to 13.1% "terminated" filers in the study population.
- **DB plans**—16.2% of DB plans are "terminated" filers, compared to 13.1% "terminated" filers in the study population.

Like "skip" filers, "terminated" filers are a heterogeneous population. We expect "terminated" filers to have low plan returns or to be struggling financially. However, "terminated" filers were not readily distinguishable in that regard. For example, a plan that merges with another plan and checks the "terminated" box the year it merged is classified as a "terminated" filer in the data. A future study could examine the common reasons for termination.

3.3.3   Relationship between EBSA Investigations and Filing Patterns

The DOL EBSA Office of Enforcement tracks the status of civil investigations on benefit plans in EMS. We matched EBSA investigations to each Form 5500 filing based on the year that the investigation opened and the plan year of the Form 5500 filing to determine if certain Employee Retirement Income Security Act of 1974 (ERISA) violations were more common among specific filing pattern categories. **Figure 8** shows the distribution of filing patterns in the four most common ERISA violations committed by our analysis population.

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[25] Note that only MTIAs are required to file a Form 5500. PSAs, CCTs, GIAs, 103-12IEs are only DFEs if they choose to file the Form 5500. Thus, "stop" file has a different analytical structure for DFEs than for plans/MTIAs.

These four violations are:

- Imprudence[26]
- Not providing benefits for exclusive purpose of participants and beneficiaries[27]
- Prohibited transfer, use, or benefit of plan assets[28]
- Fiduciary self-dealing[29]

Figure 8 shows specific violation types, broken down by the filing pattern of the plan that committed the ERISA violation. Grouping by violation type, we present each violation type's filing pattern distribution. This distribution can be compared to the proportion each filing pattern represents in the study population, as shown in the lowest bar. For example, "stop" filers account for 2% of the overall study population but contribute to 29% of the population of plans that violated the imprudence provision. Similarly, "complete" and "consecutive" filers account for nearly 75% of the study population, compared to 58%-65% of plans with a violation.

Figure 8

DISTRIBUTION OF FILING PATTERN CATEGORIES BY EMS VIOLATION
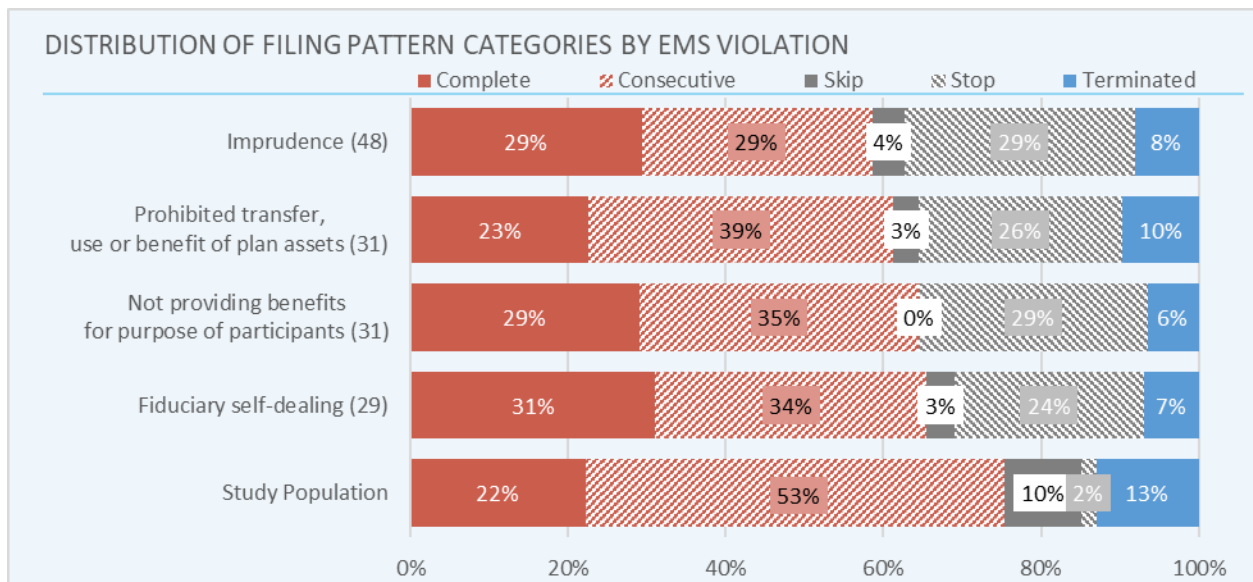
Source: Form 5500 filings and EMS investigation information from Plan Years 2014–2016
N = 725 filers with an associated EBSA investigation; count of plans in violation of EBSA above in parentheses

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[26] ERISA section 404(a)(1)(B) requires plan fiduciaries to act with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.
[27] ERISA section 404(a)(1)(A) requires fiduciaries, among other things, to discharge their duties solely in the interest of plan participants and beneficiaries and for the exclusive purpose of providing benefits and defraying reasonable expenses of administering the plan.
[28] ERISA section 406(a) prohibits various types of transactions between a plan and parties in interest. Among these transactions prohibited between a plan and a party in interest are: sale or leasing of any property; lending of money or other extension of credit; and furnishing of goods, services, or facilities.
[29] ERISA section 406(b) does not allow certain prohibited transaction and dealings with parties in interest who can exercise improper influence over plan assets. Plan fiduciaries are also prevented from taking actions with respect to a plan that involve self-dealing and conflicts of interest.

4   STOP-FILER INITIATIVE

This section examines "stop" filers and provides a summary of EBSA's Stop-Filer Initiative, which targets plan administrators expected to file a Form 5500 for a given plan year that did not. Apart from the filing pattern analysis above, for purposes of this initiative, a "stop" filer is defined as a plan that is expected to file in the subject form year but does not. The motivation of this initiative is to improve reporting compliance in the current year, in contrast to observing filing patterns over time.

4.1   2015 STOP-FILER INITIATIVE

Most benefit plans are required to file a Form 5500 every plan year. Unless otherwise exempt, plans that do not file are noncompliant with the reporting provisions of ERISA. We do not include plans that are exempt from filing in this analysis. In fiscal year 2015, EBSA began a project to systematically assess the reasons plans stop filing to inform future efforts to increase reporting compliance. In April 2015, the OCA opened investigations on a statistical sample of suspected "stop" filers to collect information regarding the reasons that a plan administrator stopped filing Form 5500.[30] While the primary reason identified was the plan administrator forgot to file, other reasons included the plan filed under a different identifier, the plan terminated, and the plan is exempt from filing.

The results of the investigations started in April 2015 prompted OCA to focus its efforts in subsequent years on the population of filers most likely to stop filing. OCA identified plan administrators they had expected to file a Form 5500 for their plan based on the previous year's activity yet had not filed by the deadline. OCA mailed these plan administrators filing inquiries to inform the plan administrator that OCA had not received the plan's Form 5500 filing for the subject year. The filing inquiry asked the plan administrator to do one of the following:

- If the plan administrator filed a Form 5500, OCA asked them to provide information to identify the filing.
- If the plan administrator did not file a Form 5500, OCA asked them to explain why they did not file, instructed the administrator to submit a late filing, and suggested the administrator participate in the Delinquent Filer Voluntary Compliance Program (DFVCP).[31]

In the following section, we describe the analysis population, followed by descriptive results from two years of the program.

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[30] The sample consisted of 736 inquiry letters sent to filers with a 2012 Form 5500, but no 2013 Form 5500
[31] As discussed earlier, the DFVCP encourages plan administrators to voluntarily file their past-due filings and pay significantly reduced civil penalties

4.2 ANALYSIS POPULATION

This analysis examines two years of the Stop-Filer Initiative for which data are available:

- **Year One, or first year (2013/2014):** Plans that filed in Form Year 2013 but did not file in Form Year 2014
- **Year Two, or second year (2014/2015):** Plans that filed in Form Year 2014 but did not file in Form Year 2015

While the Stop-Filer Initiative targeted suspected "stop" filers, the selection criteria for suspected "stop" filers changed between Year One and Year Two, as we describe below and illustrate in **Figure 9**. Before this analysis, we applied several exclusions to control for differences between years and create comparable study populations. As a result, our analysis dataset is restricted to plans that did not file before either the extension deadline or the inquiry mail date.[32] A caveat: The IRS has an *Employee Plans Compliance Unit* aimed at ensuring compliance with annual Form 5500 filing requirements.[33] This program lags one year behind the DOL program and targets all "stop" filers. Due to the one-year lag and the prompt action by DOL, IRS contact would not have had much, if any, effect on the Stop-Filer Initiative. Nonetheless, the IRS program may have contributed to increased compliance among the population of "stop" filers contacted by DOL, and this report does not control for the effect of IRS involvement.
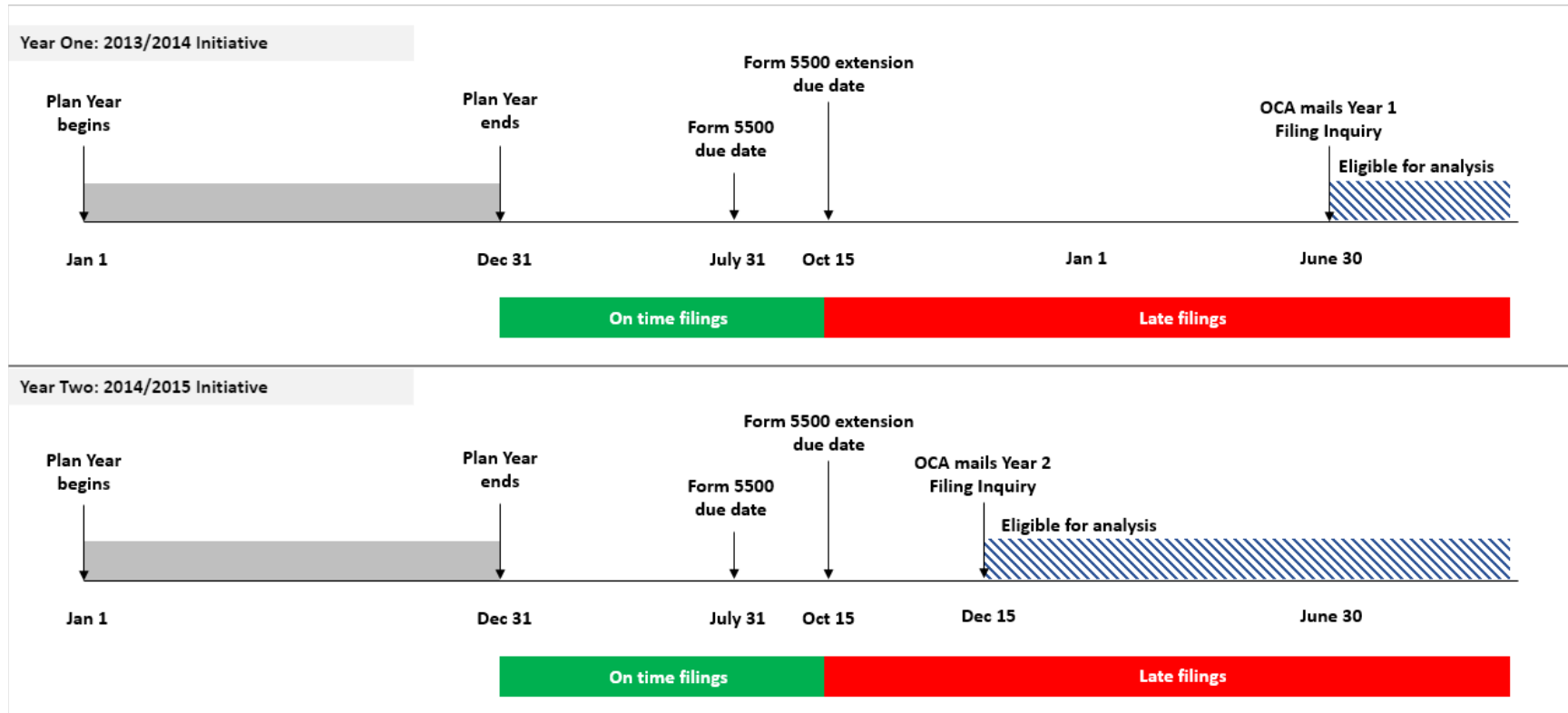
The first selection criterion relates to plan assets. Year One was restricted to plans with at least $750,000 in end-of-year assets and 25 to 200 end-of-year participants. We determined these criteria in consultation with OCA based on review of asset and participant distribution in the population. Year Two was not restricted by asset or participant size. The second selection criterion change is the timeframe eligible for the study. In Year One, OCA sent the inquiry on June 30, approximately 7.5 months after the extension deadline for calendar year plans. Plans that filed in this timeframe filed after receipt of OCA's inquiry. In Year Two, OCA sent the inquiry on December 15, approximately 2 months after the extension deadline for calendar year plans. **Figure 9** compares the calendar year filing timeline for Year One and Year Two. Along the bottom of each timeline, green and red bars indicate the timeframes when a filing is considered on-time and late, respectively. The blue-hashed box indicates the timeframe eligible for analysis for each enforcement initiative.

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[32] This population also excludes DFEs, 1-participant plans, plans with a DOL investigation in the past two years, and plans that had an 'undeliverable letter.'

[33] https://www.irs.gov/retirement-plans/employee-plans-compliance-unit-epcu-5500-non-filer-dol-project. Last Accessed: June 19, 2018.

Figure 9: Filing Timeline for the Stop-Filer Initiative

Note: the inquiry mailing date is estimated based on the "date added" variable recorded for records.

From all *potential* "stop" filers, OCA selected a random sample to send inquiries. Some in-sample plans did not receive the inquiry due to resource constraints (e.g., insufficient administrative personnel). We utilize the non-treated group as our control group, as the univariate characteristics from both groups are similar. We hypothesize that a higher percent of plans that received the inquiry would file Form 5500 compared to the control group. **Table 2** shows the analysis population between those that received the inquiry and the control group for each year.

Table 2: Summary of the Study Population

	Inquiry (Treatment Group)	Control Group	Total
2013/2014 Enforcement Initiative	599	380	**979**
2014/2015 Enforcement Initiative	113	771	**884**

We analyzed Form 5500 filing activity in the period after OCA sent an inquiry and classified each plan into one of three categories. These categories are specific to this program and defined differently from the definitions used in Section 3 on filing patterns.

- **"Stop" Filer**—A plan whose last filing was the year before the stop year.
- **"Skip" Filer**—A plan that did not file for the stop year but did file a Form 5500 after the stop year.
- **Filed after Inquiry**—A plan that filed for their stop year after OCA sent an inquiry.
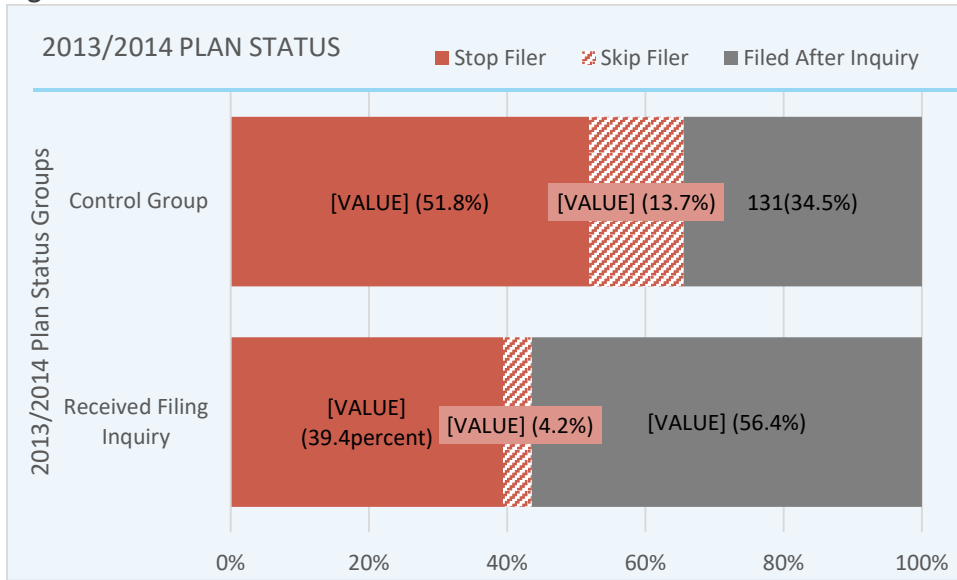
The results that follow present filing activity classification for the plans that received the inquiry and the control group.

4.3   DESCRIPTIVE RESULTS

Figure 10 and **Figure 11** display the distribution of filing pattern (stop, skip, filed after inquiry) by plan status (received the inquiry, control) for the 2013/2014 and 2014/2015 enforcement initiatives, respectively. In both years, we see a higher percentage of late filers (filed after inquiry) in the group receiving an inquiry, indicated by the gray bar. The control group is more likely to remain a "stop" filer than the treated plans receiving an inquiry. In the first year, 56.4% of plans that received the inquiry letter filed for the missing plan year after receipt, compared to 34.5% in the control. In the second year, 69.0% of plans that received the inquiry letter filed for the missing plan year after receipt, compared to 11.0% in the control. Among those that received the filing inquiry and remained "stop" filers, a follow-up study could examine the reasons why the filing inquiry did not prompt these plans to file.

Figure 10

2013/2014 PLAN STATUS — Stop Filer · Skip Filer · Filed After Inquiry

Control Group: [VALUE] (51.8%), [VALUE] (13.7%), 131(34.5%)

Received Filing Inquiry: [VALUE] (39.4percent), [VALUE] (4.2%), [VALUE] (56.4%)

N = 979 plans

Figure 11

2014/2015 PLAN STATUS — Stop Filer · Skip Filer · Filed After Inquiry

Control Group: [VALUE] (79.1%), [VALUE] (9.9%), 85(11.0%
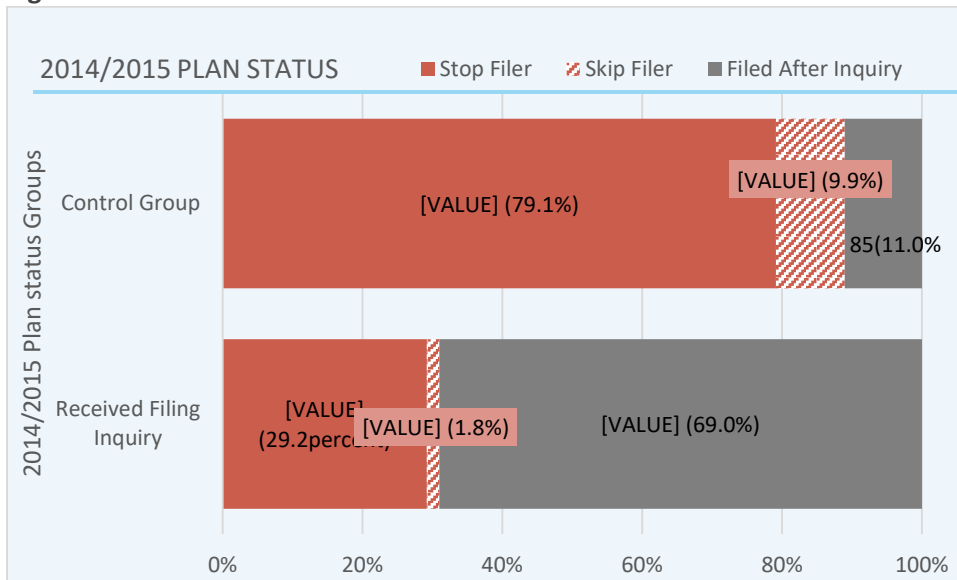
Received Filing Inquiry: [VALUE] (29.2percent), [VALUE] (1.8%), [VALUE] (69.0%)

N = 884 plans

4.3.1 Time to Submit Filing

For plans that did file after the inquiry, **Table 3** and **Table 4** show the number of days that elapsed between when OCA sent the inquiry and when the plan filed its Form 5500. Plans receiving an inquiry took less time to file than plans that did not receive an inquiry.

Table 3: Summary Statistics of Time between Inquiry Date and Submitting Form Year 2014 Form 5500—Plans that Filed after Receiving an Inquiry

Sample	Plan Count	Minimum (days)	25th Percentile (days)	Mean (days)	Median (days)	75th Percentile (days)	Maximum (days)
Inquiry	338	4	22	92	53	125	422
Control	131	1	43	137	107	198	443

Table 4: Summary Statistics of Time between Inquiry Date and Submitting Form Year 2015 Form 5500—Plans that Filed after Receiving an Inquiry

Sample	Plan Count	Minimum (days)	25th Percentile (days)	Mean (days)	Median (days)	75th Percentile (days)	Maximum (days)
Inquiry	78	6	28	89	74	121	262
Control	85	1	70	153	171	223	276

4.3.2 *Voluntary Compliance*

The DFVCP facilitates voluntary compliance by plan administrators delinquent in filing Form 5500. It permits plan administrators to pay reduced civil penalties for voluntarily complying with DOL reporting requirements. **Table 5** and **Table 6** show the percentage of late filers that entered the DFVCP for the 2013/2014 and the 2014/2015 enforcement initiative, respectively.

Table 5: Percentage of 2013/2014 Late Plans in the DFVCP

Group	Total Plans	Plans in DFVCP	Percent of Plans in DFVCP on Each Group
Inquiry	338	189	55.9%
Control	131	87	66.4%

Table 6: Percentage of 2014/2015 Late Plans in the DFVCP

Group	Total Plans	Plans in DFVCP	Percent of Plans in DFVCP on Each Group
Inquiry	78	34	43.6%
Control	85	48	56.5%

A higher percentage of plans in the control group filed under the DFVCP compared to those that received a filing inquiry. This difference may be because filers that responded to the inquiry submitted a corrected filing but did not also enter the DFVCP. The above-introduced IRS program targets 100% of the late filer population and ensures entrance into the DFVCP, the results of which are not captured through this study. A follow-up study could further explore this.

5   SUMMARY

This report summarizes two filing pattern-related analyses. First, we analyze the Form 5500 population to learn more about filing patterns. Then we examine the effectiveness of two years of the OCA Stop-Filer Initiative. This analysis provides insight into the efficacy of the program.

In our review of Form 5500 filing patterns, we identified and described five filing patterns: "complete," "consecutive," "stop," "skip," and "terminated." "Complete" filers are generally larger plans and are always more mature firms (originated 2000 or earlier), while "consecutive" plans are younger (originated after 2000). "Stop" filers are more common than other filing patterns in the population of ERISA violators. The frequent characteristics identified for each filing pattern may inform ways to customize communication and outreach strategies for each of these subpopulations.

Our analyses also examined the 2015 Stop-Filer Initiative. We compared filing behavior among plans that received an inquiry to plans in a control group. Over our two-year study, we observed filing compliance around 56–69% among "stop" filer plans that received the filing inquiry, compared to 11–35% among "stop" filer plans that did not. We further found that plans that received the letter filed more quickly than plans that did not (median 53–74 days among those that received the filing inquiry compared with 107–171 days in the control group). These results demonstrate that the program more quickly and effectively achieves the goal of improving Form 5500 reporting compliance.

Appendix A FILING SUBMISSIONS FOR PLAN YEAR 2015

Figure A-1: Filing Times and Cumulative Filing Percentage for Plan Year 2015 Filers (1-25 Participants)
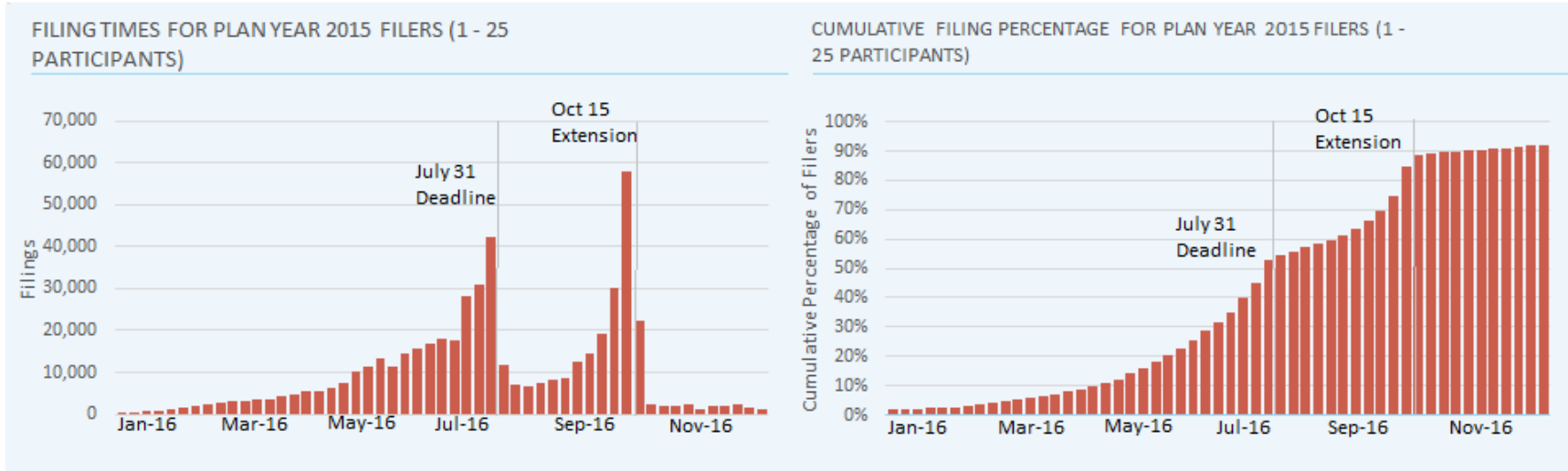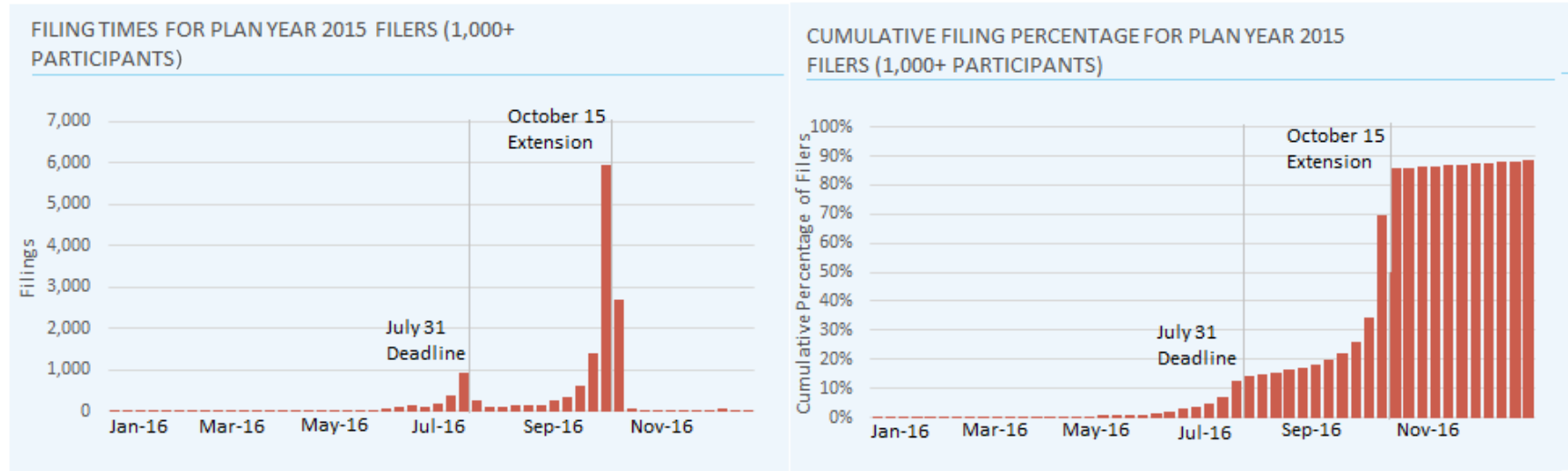

Source: Date submitted for Plan Year 2015 Form 5500 filings
N = 514,676 Plan Year 2015 Form 5500 filings filed in calendar year 2016
Note: 91.9% of all Plan Year 2015 filers filed through December 31, 2016. An additional 8.1% of filers in 2017 are not included in the graphs above.

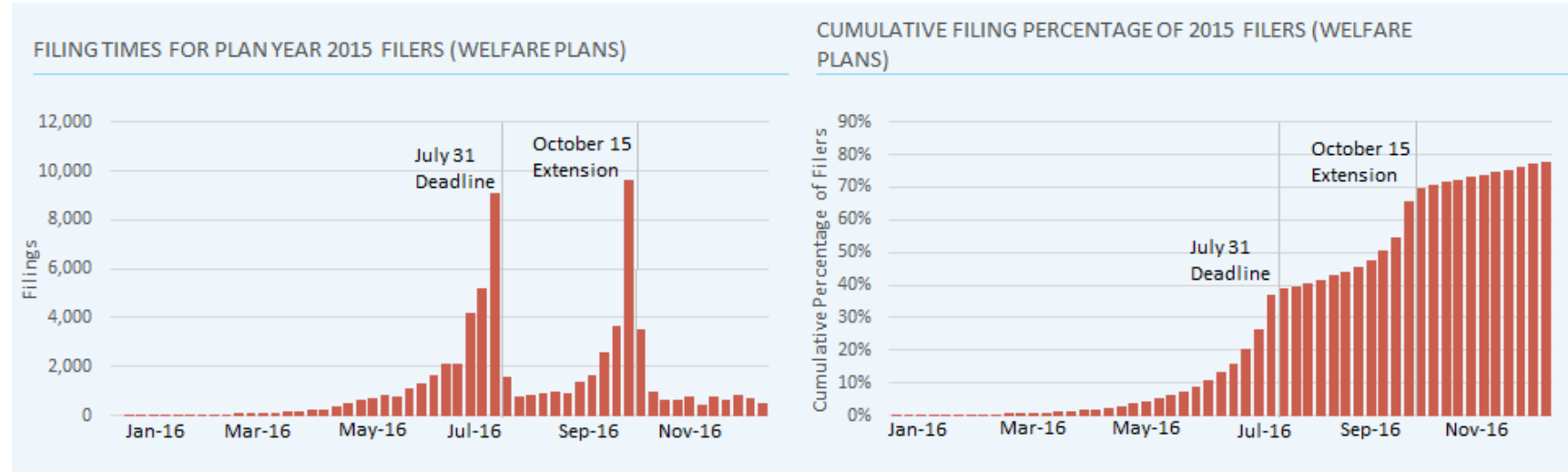**Figure A-2: Filing Times and Cumulative Filing Percentage for Plan Year 2015 Filers (1,000+ Participants)**

Source: Date submitted for Plan Year 2015 Form 5500 filings

N = 14,816 Plan Year 2015 Form 5500 filings filed in calendar year 2016

Note: 88.5% of all Plan Year 2015 filers filed through December 31, 2016. An additional 11.5% of filers in 2017 are not included in the graphs above.

Figure A-3: Filing Times and Cumulative Filing Percentage for Plan Year 2015 Filers (Welfare Plans)
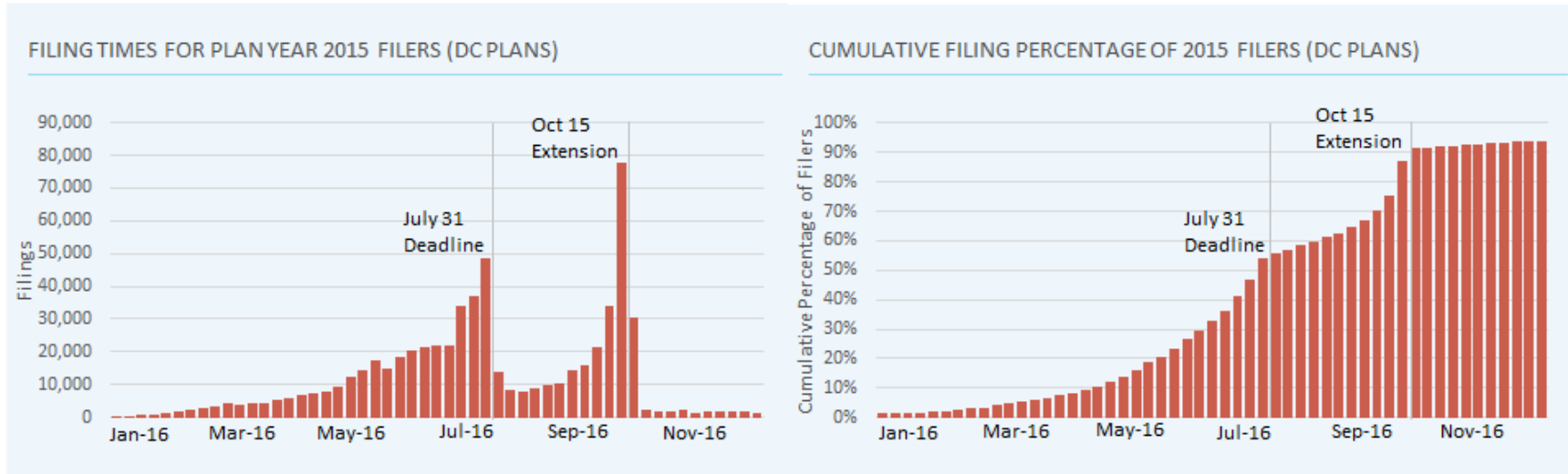

Source: Date submitted for Plan Year 2015 Form 5500 filings

N = 67,582 Plan Year 2015 Form 5500 filings filed in calendar year 2016

Note: 77.6% of all Plan Year 2015 filers filed through December 31, 2016. An additional 22.4% of filers in 2017 are not included in the graphs above.

Figure A-4: Filing Times and Cumulative Filing Percentage for Plan Year 2015 Filers (DC Plans)

Source: Date submitted for Plan Year 2015 Form 5500 filings
N = 623,943 Plan Year 2015 Form 5500 filings filed in calendar year 2016
Note: 94.0% of all Plan Year 2015 filers filed through December 31, 2016. An additional 6.0% of filers in 2017 are not included in the graphs above.

Figure A-5: Filing Times and Cumulative Filing Percentage for Plan Year 2015 Filers (DB Plans)
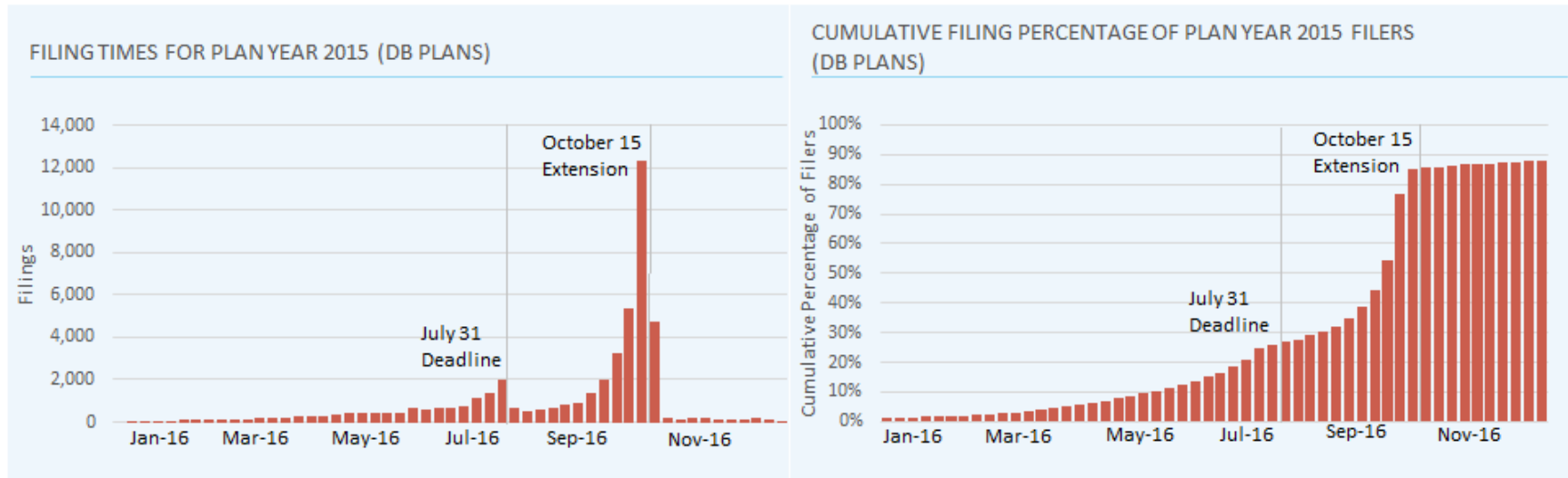

Source: Date submitted for Plan Year 2015 Form 5500 filings
N = 47,446 Plan Year 2015 Form 5500 filings filed in calendar year 2016
Note: 88.0% of all Plan Year 2015 filers filed through December 31, 2016. An additional 12.0% of filers in 2017 are not included in the graphs above.

Appendix B PLAN ASSETS AND PARTICIPANTS

These charts present the same information as **Figure 6** and **Figure 7**, but exclude records with zero assets and zero participants, respectively. The main differences in these charts are with the terminated and "stop" filer patterns:

- **Plans with $0 end-of-year assets:** 0.1% of "complete" filers, 0.6% of "consecutive" filers, 0.4% of "skip" filers, 2.6% of "stop" filers, and 53.3% of "terminated" filers have a value of $0 for end-of-year assets. These plans are excluded from the chart.
- **Plans with zero end-of-year participants:** 0.3% of "complete" filers, 0.3% of "consecutive" filers, 0.6% of "skip" filers, 0.7% of "stop" filers, and 54.1% of "terminated" filers have a value of zero for end-of-year participants. These plans are excluded from the chart.

Figure B-1

MEAN AND MEDIAN PLAN ASSETS (GREATER THAN $0) BY FILING PATTERN
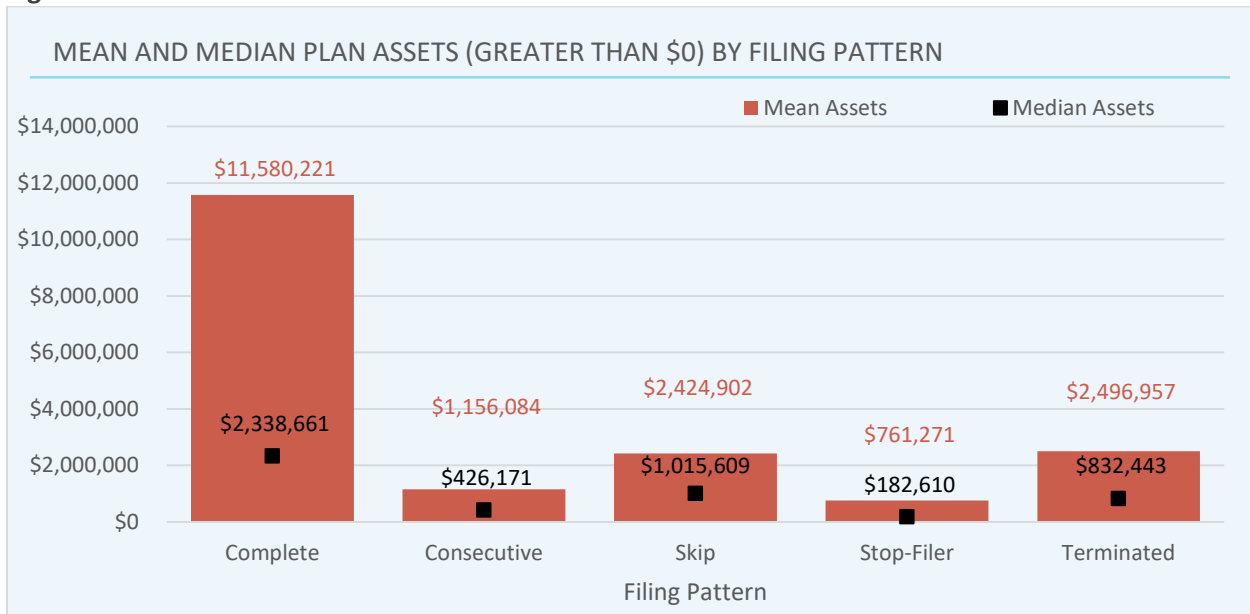
Source: Form 5500 filings per plan and Form 5500 Schedule H, item 1f(b) or Schedule I, item 1a(b)
N = 725,533
Note: This excludes the top 1% of filers in terms of plan assets and plans with zero dollars in assets. Additionally, this excludes 78,008 plans were missing end-of-year assets and 0.1% of complete filers, 0.6% of consecutive filers, 0.4% of "skip" filers, 2.6% of "stop" filers, and 53.3% of "terminated" filers have a value of $0 for end-of-year assets.

Figure B-2

MEAN AND MEDIAN PLAN PARTICIPANTS (GREATER THAN 0) BY FILING PATTERN
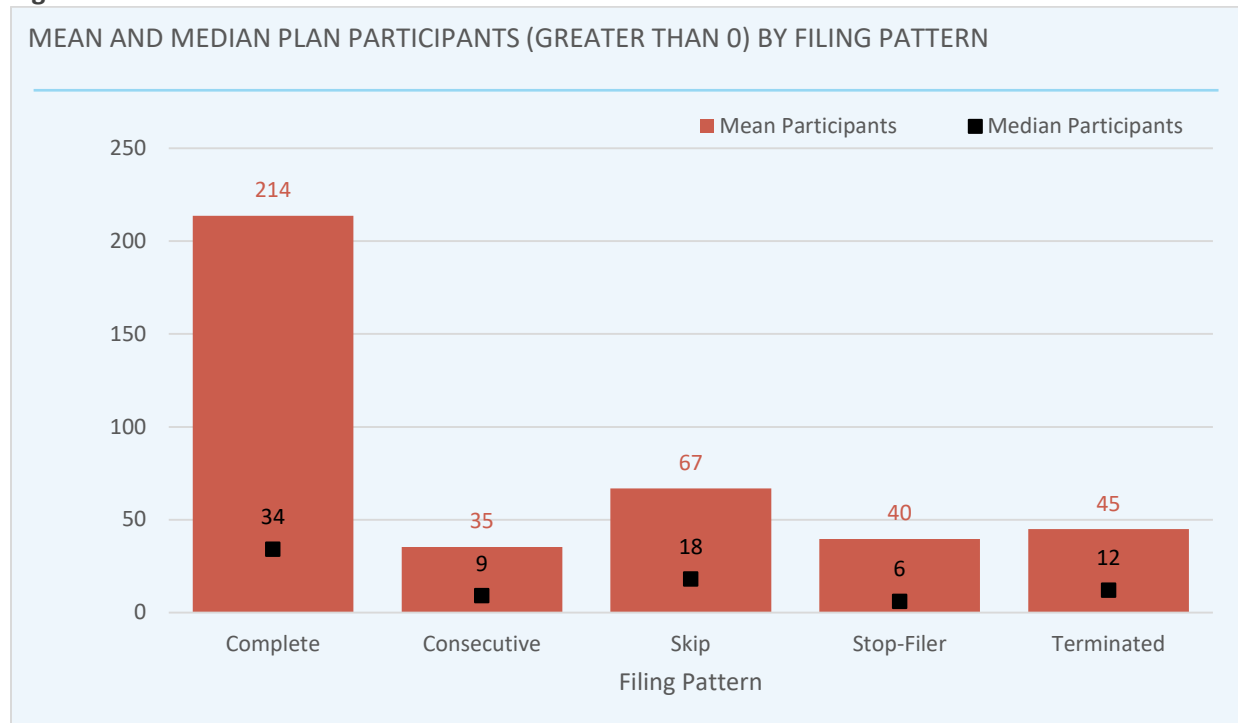
Source: Form 5500 filings per plan and Form 5500 item 6f
N = 736,683

Note: This excludes the top 1% of filers in terms of plan participants and plans with zero participants. Additionally, this excludes 66,828 plans were missing end-of-year participants and 0.3% of complete filers, 0.3% of "consecutive" filers, 0.6% of "skip" filers, 0.7% of "stop" filers, and 54.1% of "terminated" filers have a value of zero for end-of-year participants.

Appendix C VARIABLES USED FOR FILING PATTERN PROFILING

Table C-1: Variables Used for Filing Pattern Profiling

Variable Category	Description of Variable	Input Variables	Mathematical Formula for Calculation
Plan Fees and Returns	Lowest 10% of plan returns within a given plan type, plan year, and plan asset size	**RET** = Plan returns **EInt =** Total earned interest on investments = 2b(1)(G) **EDiv** = Total earned dividends on investments = 2b(2)(D) **ERent** = Total earned on rents = 2b(3) **ESale** = Total earned on net gain (loss) on sale of assets= 2b(4)(c) **EAprec =** Total unrealized appreciation of assets = 2b(5) (c) **ETrust** = Net investment gain from common/collective trusts = 2b(6) **EPool** = Net investment gain from pooled separate accounts = 2b(7) **EMast** = Net investment gain from master trust investment accounts = 2b(8) **E103** = Net investment gain from 103-12 investment entities= 2b(9) **EReg** = Net investment gain from registered investment companies = 2b(10) OI = Other Income from Schedule I = 2c	**Plan Returns Calculation:** **For Schedule H filers:** $$RET = \frac{\begin{pmatrix} EInt_t + EDiv_t + ERent_t + ESale_t + EAprec_t + \\ ETrst_t + EPool_t + EMast_t + E103_t + EReg_t \end{pmatrix}}{(TAEOY_t + TABOY_t)/2}$$ **For Schedule I filers:** $$RET = \frac{OI_t}{(TAEOY_t + TABOY_t)/2}$$ **Plan Returns Percentile Ranking:** Percentile rank (within plan type, plan year, and plan asset size) of: $$RET$$

Variable Category	Description of Variable	Input Variables	Mathematical Formula for Calculation
		TAEOY = Total assets, end of year = (1f(2))	
		TABOY = Total assets, beginning of year = (1f(1))	
Plan Fees and Returns	Highest 10% of plan fees within a given plan type, plan year, and plan asset size	**AE** = Total administrative expenses = (2i(5)) **TPBOY** = Total plan participants at beginning of the year = (5) **TPEOY** = Total plan participants at the end of the year = (6f)	Percentile rank (within plan type, plan year, and plan asset size) of: $$\frac{AE_t}{\max(TPBOY_t, TPEOY_t)}$$
Plan Fees and Returns	Plan has fees in the highest 5% and returns in the lowest 20%		$$FeesRet_t = \begin{cases} 1 \; if\; plan\; fees\; are\; in\; the\; top\; 5\% \\ nd\; returns\; are\; in\; the\; lowest\; 20\% \\ 0 \; otherwise \end{cases}$$
Plan Fees and Returns	Plan reports zero fees (or fees are missing)	**AE** = Total administrative expenses = (2i(5)) **TPP** = Total plan participants = (6f)	$$NoFees_t = \begin{cases} 1 \; if\; plan\; fees\; are\; zero \\ or\; if\; fees\; are\; missing \\ where\; fees = \left(\frac{AE_t}{TPP_t}\right) \\ 0 \; otherwise \end{cases}$$
Plan Fees and Returns	Plan has been in the lowest 25% of plan returns for three consecutive years	**RET** = Plan returns	$$RETRepeatInd_t = \begin{cases} 1 \; if\; RET_t, RET_{t-1}, RET_{t-2} are\; all\; less\; than\; 25 \\ 0 \; otherwise \end{cases}$$
Plan Fees and Returns	Plan has been in the highest 25% of plan fees for three consecutive years	**FEE** = Plan fees	$$FEERepeatInd_t = \begin{cases} 1 \; if\; FEE_t, FEE_{t-1}, FEE_{t-2} are\; all\; less\; than\; 25 \\ 0 \; otherwise \end{cases}$$
Plan Demographic Information	Plan entity type	**PE** = Plan entity type code as labeled on the Form 5500 = (1a)	$$PE_t = \begin{cases} multiemployer\; plan \\ multiple-employer\; plan \\ single\; employer\; plan \end{cases}$$

Variable Category	Description of Variable	Input Variables	Mathematical Formula for Calculation
Plan Demographic Information	Plan strata	**PS** = Plan type strata	$$PS_t = \begin{cases} defined\ benefit\ plan \\ defined\ contribution\ plan\ (1-25\ participants) \\ defined\ contribution\ plan\ (26-50\ participants) \\ defined\ contribution\ plan\ (1000+\ participants) \\ ESOP\ plan \\ Welfare\ Plan \end{cases} PS_t$$ $$= \begin{cases} defined\ benefit\ plan \\ defined\ contribution\ plan\ (1-25\ participants) \\ defined\ contribution\ plan\ (26-50\ participants) \\ defined\ contribution\ plan\ (1000+\ participants) \\ ESOP\ plan \\ Welfare\ Plan \end{cases}$$
Plan Financials	Plan has end-of-year liabilities in the lowest 25% (negative end-of-year liabilities) of all plans	**TL** = Total liabilities = (1k)	$$LiabilitiesEOY = \begin{cases} 1\ if\ TL\ is\ in\ bottom\ 25\%percent\ of\ all\ plans \\ 0\ otherwise \end{cases}$$
Plan Financials	Plan has a net income-to-asset ratio in top 25% of all plans	**NI** = Net income = (2k) **TA** = Total Assets = (1f) **NIA** = Net income/assets	$$NIATInd_t = \begin{cases} 1\ if\ NIA\ is\ in\ top\ 25\ \%percent\ of\ all\ plans \\ 0\ otherwise \end{cases}$$
Plan Financials	Plan has a net income-to-asset ratio in bottom 25% of all plans	**NI** = Net income = (2k) **TA** = Total Assets = (1f) **NIA** = Net income/assets	$$NIABInd_t = \begin{cases} 1\ if\ NIA\ is\ in\ bottom\ 25\ \%\ of\ all\ plans \\ 0\ otherwise \end{cases}$$
Plan Financials	Change in evaluation of employer stock	**ESV** = Employer security valuation = (1d(1)(b))	$$\Delta ESV_t = \begin{cases} 1\ if\ ESV_t \neq ESV_{t-1} \\ 0\ otherwise \end{cases}$$
Plan Financials	No change in benefits payable	**BCP_b** = Benefit claims payable, beginning of year = (1g(a)) **BCP_e** = Benefit claims payable, end of year = (1g(b))	$$\Delta BCP_t = \begin{cases} 1\ if\ BCP\_b_t \neq BCP\_b_{t-1} \\ OR\ BCP\_e_t \neq BCP\_e_{t-1} \\ OR\ BCP\_b_t \neq BCP\_e_t \\ \\ 0\ otherwise \end{cases}$$

Variable Category	Description of Variable	Input Variables	Mathematical Formula for Calculation
Plan Financials	Change in real estate valuation	**RE_b** = Real estate, beginning of year = (1c(6)(a)) **RE_e** = Real estate, end of year = (1c(6)(b))	$\Delta RE_t = \begin{cases} 1 \text{ if } RE\_b_t \neq RE\_b_{t-1} \\ \text{OR } RE\_e_t \neq RE\_e_{t-1} \\ \text{OR } RE\_b_t \neq RE\_e_t \\ \\ 0 \text{ otherwise} \end{cases}$
Plan Financials	Insufficient fidelity bond amount	**FB** = Amount of fidelity bond = (4e) **TAI** = Sum of total assets and selected income = (1f) + (2a(3)) + (2b(1)(G)) + (2b(2)(D)) + (2b(3)) + (2b(4)(C)) + (2c) **FB_pct** = Proportion of fidelity bond coverage	$FB\_pct_t = \begin{cases} 1 \text{ if } \dfrac{FB_t}{TAI_t} < 0.1 \\ 0 \text{ otherwise} \end{cases}$
Plan Financials	Plan has an asset-to-participant ratio in top 25% of all plans	**AP** = Assets/ participant = (TA/TPP) = ((1f)/(6b+6e))	$HighAP_t = \begin{cases} 1 \text{ if } AP_t \text{ in top 25\% of all plans} \\ 0 \text{ otherwise} \end{cases}$
Plan Financials	Plan has an asset-to-participant ratio in bottom 25% of all plans	**AP** = Assets/ participant = (TA/TPP) = ((1f)/(6b+6e))	$LowAP_t = \begin{cases} 1 \text{ if } AP_t \text{ in bottom 25\% of all plans} \\ 0 \text{ otherwise} \end{cases}$
Plan Financials	Plan has an income-to-asset ratio in top 25% of all plans	**NI** = Net income = (2k) **TA** = Total Assets = (1f) **NIA** = Net income/assets	$HighNIA_t = \begin{cases} 1 \text{ if } NIA_t \text{ in top 25\% of all plans} \\ 0 \text{ otherwise} \end{cases}$
Plan Financials	Plan has an income-to-asset ratio in bottom 25% of all plans	**NI** = Net income = (2k) **TA** = Total Assets = (1f) **NIA** = Net income/assets	$LowNIA_t = \begin{cases} 1 \text{ if } NIA_t \text{ in bottom 25\% of all plans} \\ 0 \text{ otherwise} \end{cases}$
Plan Name Matching	Same name for plan sponsor and service provider on Sch A	**NmMtch_A** = Indicator for a name match between last name of the employer/plan sponsor/plan administrator and the last name of the service provider (compares Main Form with Schedule A)	$NmMtch\_A_t = \begin{cases} 1 \text{ if there is a name match between the last name} \\ \text{of the plan sponsor and service provider} \\ \text{on Schedule A} \\ 0 \text{ otherwise} \end{cases}$

Variable Category	Description of Variable	Input Variables	Mathematical Formula for Calculation
Plan Name Matching	Same name for plan sponsor and service provider on Sch C	**NmMtch_C** = Indicator for a name match between last name of the employer/plan sponsor/plan administrator and the last name of the service provider (compares Main Form with Schedule C)	$NmMtch\_C_t = \begin{cases} 1 \text{ if there is a name match between the last name} \\ \text{ of the plan sponsor and service provider} \\ \text{ on Schedule C} \\ 0 \text{ otherwise} \end{cases}$
EMS Investigations	Plan had an EMS investigation that resulted in criminal dollars recovered	**Crim** = Dollars recovered from EMS criminal investigation	$CrimInd_t = \begin{cases} 1 \text{ if } Crim > 0 \\ 0 \text{ otherwise} \end{cases}$
EMS Investigations	Plan had an EMS investigation that resulted in civil dollars recovered	**Civil** = Dollars recovered from EMS civil investigation	$CivilInd_t = \begin{cases} 1 \text{ if } Civil > 0 \\ 0 \text{ otherwise} \end{cases}$
EMS Investigations	Plan had an EMS investigation that resulted in at least one fiduciary violation	**Fid** = Number of fiduciary violations found during an EMS investigation	$FidInd_t = \begin{cases} 1 \text{ if } Fid > 0 \\ 0 \text{ otherwise} \end{cases}$