

# An Account Analysis Of PCAOB Inspection Reports For Triennially-Inspected Audit Firms

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## ABSTRACT

*Since 2005, the PCAOB (Public Company Accounting Oversight Board) has been issuing inspection reports for triennially-inspected audit firms as part of its overall mission to improve audit quality. This study analyzes the findings in the PCAOB inspection reports by classifying the audit deficiencies cited in the reports by area of deficiency and type of audit failure. CPA firms can utilize these findings in their efforts to reduce client engagement audit risk. The results indicate that the overall number of cited deficiencies is declining each year, revenue and asset accounts are the most frequently cited accounts, business combinations and equity transactions are the most cited transactions, and insufficient testing or documentation is the primary type of audit failure. We also document that most departures from GAAP occur in the accounting for business transactions or in liability accounts.*

**Keywords:** audit; PCAOB; auditor oversight; account analysis

## INTRODUCTION AND MOTIVATION

The first PCAOB inspection reports were issued in 2005 with the stated goal of increasing audit quality. However, while a growing body of research links PCAOB inspection reports to other measures of audit quality (e.g., Gunny and Zhang 2009) or the public's reaction to PCAOB reports (e.g., Lennox and Pittman 2010), relatively little research has been conducted on the actual findings reported in the inspection reports themselves. Analysis of the deficiencies most frequently cited by the PCAOB is important if inspection reports are to serve as a guide for audit firms to minimize audit risk and improve audit quality. To that end, this study presents descriptive analyses of the accounts and transactions cited in the PCAOB inspection reports for triennially-inspected<sup>1</sup> audit firms.

Because triennial firms are smaller firms, they have more opportunity to improve audit quality. Research has shown that larger auditors (and particularly Big 4 auditors) have lower thresholds for issuing modified reports, are more able to restrict earnings management behaviors, and are sanctioned less by the Securities and Exchange Commission. All of these are indications that larger firms provide higher quality audits to preserve their reputation or defend against costly litigation (Francis 2004). The reports of the PCAOB inspections of triennial firms can yield valuable insights into the specific areas of smaller firm audits that need the most improvement and thereby assist those firms in improving audit quality.

Only three other published studies to our knowledge have reported account and transaction analyses of inspection reports. Roybark (2006) compares triennial firm and annual firm inspection reports issued by the PCAOB in 2005 and documents the types of deficiencies found on the inspection reports, but does not tabulate the

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<sup>1</sup> Firms with over 100 issuer clients are inspected annually by the PCAOB and are referred to as "annual" firms. Firms with less than 100 issuer clients are inspected once every three years and are referred to as "triennial" firms.

frequencies of deficiencies. Gramling and Watson (2009) analyze the inspection reports of the largest twenty triennial firms, but they do not tabulate the frequencies of the deficiencies either. Hermanson et al. (2007) examine triennial firm inspection reports issued in 2005 and 2006, the first two years of the PCAOB inspections. They find that inadequate testing or documentation is the most common audit failure, and that revenue accounts and receivable accounts were most likely to have deficiencies. However, they do not document which account deficiencies are most associated with which types of failures. The PCAOB also issued a report summarizing its observations for triennial inspections between 2004 and 2006 (PCAOB 2007b).

Since 2006, the PCAOB has begun publicly criticizing auditors for conducting too much work rather than not enough work (Palmrose 2006; Glover et al. 2009), and so the reports analyzed by Roybark (2006) and Hermanson et al. (2007) may reflect different areas of deficiencies than newer reports as a consequence of this shift in philosophy. This study examines all PCAOB inspections reports issued between 2005 and 2008. Thus, in addition to documenting areas of deficiencies on triennial firm inspections, our expanded sample also allows us to examine the potential effects of this new philosophy.

## **RESEARCH METHOD**

We examined 770 PCAOB inspection reports of triennially-inspected firms issued between 2005 and 2008. Of these, 339 reports had deficiencies. We coded each deficiency on those reports, and each deficiency had two parts: the area of the deficiency, and the type of audit failure that the auditor had committed.

### **Areas of Deficiencies**

We identified five general areas of deficiencies. The first area is account deficiencies; these refer to improper audit procedures that affected a specific account such as revenues or loan loss reserves. Occasionally, the PCAOB inspectors would identify two accounts for the same deficiency in which case we would classify the deficiency by our judgment of the primary reason for the deficiency (for example, if the PCAOB cited “revenues and the related liabilities”, we would code it as a revenue deficiency). We categorized the various accounts by account type for additional analyses. Account types are assets, equity, expenses, income / revenues, liabilities, and reserves. Reserves are isolated from other assets because of the attention they have received by regulators and researchers when analyzing or discussing earnings management (Levitt 1998; Nelson et al. 2002); more earnings management is generally considered to be one indicator of poor audit quality (Francis 2004). All identified accounts and their account type are listed in Appendix 1.

The second area of deficiency relates to audit procedures performed by the audit firm. Audit procedure deficiencies are generally deficiencies in the types of tests used by auditors (e.g., analytical procedures, use of third parties) or the conclusions reached by auditors (e.g., going concern reports, discrepancies in the financial statements and audit work papers). The third area of deficiency is overall financial statements. Overall financial statement deficiencies are those deficiencies in which the PCAOB inspectors do not cite specific accounts but instead cite general errors for a certain financial statement such as the balance sheet or income statement; these errors are broader in nature than account-specific or transaction-specific deficiencies. The fourth area of deficiency, systems deficiencies, refers to deficiencies in internal control testing or electronic data processing testing. Finally, the fifth area of deficiency is transaction deficiencies which refer to problems in testing specific business events or exchanges. All identified transaction deficiencies are listed in Appendix 2.

### **Types of Failures**

We identified three general types of failures. Pervasive audit failures are usually noted by the PCAOB as such; these indicate substantial failures by the auditor to follow GAAS. They also include the failure to modify a financial statement after an error was detected, or if an auditor performs insufficient work to be considered the primary auditor. Departures from GAAP occur when the PCAOB determines that an account balance or transaction treatment is not recorded in accordance with GAAP. We consider both pervasive audit failures and departures from GAAP to be “severe” audit failures. Inadequate test failures refer to failure by the audit firm to either perform sufficient tests or to document those tests in the workpapers; these are the least severe and most common type of failure.

## RESULTS

Table 1 summarizes the number of PCAOB inspection reports issued for triennial firms by year. Beginning in 2007, the PCAOB started issuing the second inspection report for some firms, and we analyze those reports separately from the first inspection reports issued for audit firms. Panel A shows an overall declining trend in the number of deficiencies found on each report. While the second-report firms have very few deficiencies per report (0 in 2007 and 0.2 in 2008, on average), the trend also holds for first-report firms. This trend may reflect a shift in inspection philosophy that occurred in May 2005 (which would not be reflected in most inspection reports until 2007) in which the PCAOB moved from criticizing audit firms for not doing enough work to doing too much auditing (Palmrose 2006; Glover et al. 2009). Along these lines, Panel A also indicates the highest number of deficiencies reported on inspection reports were found in the year 2006 as the average number of deficiencies was 1.9 deficiencies per report. However, we note these trends may also reflect improving audit quality in response to PCAOB inspections.

Table 1: Number of Deficiencies by Firm Report

<b>Panel A: Number of deficiencies by first- and second-report firms</b>					
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Total</b>
No. of first reports	166	198	152	113	629
No. of deficiencies	287	379	149	174	989
Deficiencies per report	1.7	1.9	1.0	1.5	1.6
No. of second reports	0	0	6	135	141
No. of deficiencies	0	0	0	26	26
Deficiencies per report	--	--	0	0.2	0.2
Total reports	166	198	158	248	770
Total deficiencies	287	379	149	200	1015
Deficiencies per report	1.7	1.9	0.9	0.8	1.3
<b>Panel B: Number of firms with deficiencies by first- and second-report firms</b>					
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Total</b>
<i>First-report firms</i>					
With deficiencies	77	136	61	57	331
Percent	46%	69%	40%	50%	53%
Without deficiencies	89	62	91	56	298
Percent	54%	31%	60%	50%	47%
Total first reports	166	198	152	113	629
<i>Second-report firms</i>					
With deficiencies	0	0	0	8	8
Percent	--	--	0%	6%	6%
Without deficiencies	0	0	6	127	133
Percent	--	--	100%	94%	94%
Total second reports	0	0	6	135	141

Panel B of Table 1 shows the number of first- and second-report firms containing audit deficiencies. The results of this analysis indicate two major findings: first, roughly half of the first-report firms (53 percent) have deficiencies, but firms greatly improve their performance for their second inspection report as only 6 percent of second-report firms had deficiencies. Second, first-report firms in 2007 and 2008 were not able to “learn” enough from reports issued for other audit firms in 2005 and 2006 that they were able to avoid deficiencies altogether. Fifty percent of first-report firms still had deficiencies in 2008, and the overall trend for first-report firms is noticeably trending downward. Clearly, though, audit firms learn from their own inspections.

Table 2, Panel A shows the areas of deficiencies by year. The table indicates that account deficiencies comprise 60 percent of the deficiencies. However, the percentage of transaction deficiencies appears to be trending

slightly upward in recent years. We expect to observe this trend over time because audit firms are able to establish procedures for examining specific accounts, but due to the unique nature of transactions, audit procedures or controls may not be in place to ensure the transactions are properly audited. As such, this increasing proportion of transaction deficiencies appears to support the argument that PCAOB inspections increase audit quality.

**Table 2: Number of Deficiencies by Area and Failure Type**

<b>Panel A: Number of deficiencies by area</b>					
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Total</b>
Account					
Number	178	226	95	107	606
Percent (of year's total)	62%	60%	64%	54%	60%
Audit procedure					
Number	42	47	25	27	141
Percent	15%	12%	17%	14%	14%
Overall financial statements					
Number	7	11	1	4	23
Percent	2%	3%	1%	2%	2%
Systems					
Number	6	8	2	1	17
Percent	2%	2%	1%	1%	2%
Transactions					
Number	54	87	26	61	228
Percent	19%	23%	17%	31%	22%
Total deficiencies	287	379	149	200	1015
<b>Panel B: Number of deficiencies by failure type</b>					
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Total</b>
Pervasive audit failures	17	4	4	4	29
Percent	5.9	1.1	2.7	2.0	2.9
Inadequate tests or documentation	237	348	140	183	908
Percent	82.6	91.8	94.0	91.5	89.5
Departures from GAAP	33	27	5	13	78
Percent	11.5	7.1	3.4	6.5	7.7
Total	287	379	149	200	1015

Panel B of Table 2 tabulates the deficiencies by type of audit procedure failure. The vast majority, just under 90 percent of deficiencies, relate to inadequate audit testing procedures or the documentation of those tests. Departures from GAAP are the second most frequent failure, and pervasive audit failures are third. Panel B indicates that a substantial number of departures from GAAP and pervasive audit failures were reported in 2005, the first year of inspection reports, and the numbers have since been steadily trending downward. This finding suggests that audit quality is improving over time, though it may also reflect a shift in the PCAOB inspection philosophy.

We next analyze the trends in specific accounts that were cited in the inspections in Table 3. While overall account deficiencies are decreasing as previously discussed, in recent years, income and revenue accounts constitute a rising proportion of deficiencies. However, asset accounts still comprise the plurality of account deficiencies (39 percent), followed by income and revenue accounts (21 percent), and reserve accounts (13 percent).

**Table 3: Account Deficiencies by Year**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Total</b>
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<b>Asset</b>						
Number	78	82	36	38	234	
Percent	44%	36%	38%	36%	39%	
<b>Equity</b>						
Number	10	26	8	10	54	
Percent	6%	12%	8%	9%	9%	
<b>Expense</b>						
Number	18	7	7	3	35	
Percent	10%	3%	7%	3%	6%	
<b>Income / revenue</b>						
Number	30	39	29	28	126	
Percent	17%	17%	31%	26%	21%	
<b>Liability</b>						
Number	30	23	6	18	77	
Percent	17%	10%	6%	17%	13%	
<b>Reserve</b>						
Number	12	49	9	10	80	
Percent	7%	22%	9%	9%	13%	
<b>Total</b>	178	226	95	107	606	

Table 4 separates the account deficiencies by account type and audit failure type. In Panel A, the asset accounts are analyzed, and the findings show that the most common asset accounts with audit deficiencies are intangible assets and inventory. While most of the inventory account deficiencies relate to inadequate audit testing, the intangible asset values deviated from GAAP on three occasions. Still, the vast majority of audit failures for intangible assets (and assets in general) relate to inadequate testing or documentation of audit tests.

Panel B shows analysis of income and revenue accounts, and revenue is the overall most frequently-cited account with 93 percent of audit deficiencies. Most of the revenue failures are inadequate tests or documentations. Panel C, showing the liability account analysis, indicates that departures from GAAP account for over 19 percent (or 15/77) of the deficiencies; of all account types, this is by far the highest percentage. The PCAOB attributed most deficiencies to liabilities in general without identifying a specific liability account, though convertible debt also accounted for 31 percent of the deficiencies. Finally, Panel D of Table 4 analyzes the reserve accounts and indicates that the loan loss reserve account suffered the most audit deficiencies; all were attributable to insufficient testing. Interestingly, despite the role of reserves in contributing to earnings management (Nelson et al. 2002), the PCAOB did not find any departures from GAAP in reserve accounts. Findings for equity or expense accounts were not tabled because of the relatively small number of deficiencies reported for those account types; however, findings for those accounts are listed in Appendix 1.

Transaction deficiencies are analyzed in Table 5. Business combinations were found to contain the most deficiencies, including failures resulting from inadequate testing and departures from GAAP, as well as the only pervasive audit failure related to transactions. Departures from GAAP accounted for almost 13 percent of the total transaction-based deficiencies, which is the next highest concentration of departures from GAAP after liability accounts. The PCAOB found many deficiencies in general equity transactions, stock-based compensation, and sale of stock, indicating that equity transactions represent a troublesome area for triennial audit firms.

Finally, we analyze audit procedures in Table 6. Two primary findings emerge from this table. First, auditors did not adequately test the work of external parties. The use of service or third party auditors accounted for 30 percent of the audit procedure deficiencies; most of these related to auditors failing to properly test the work of the service or third party auditors. In five cases, overreliance on these auditors was so severe that the PCAOB declared these to be pervasive audit failures. In addition to the work of service or third party auditors, the work of specialists also appeared not to be adequately tested as specialists (other than loan review specialists) accounted for another 20 percent of the total deficiencies. Overreliance on service auditors, third party auditors, or specialists can increase liability exposure to audit firms, so these findings may be of particular interest to audit firms. The second major finding is that on 18 occasions, the PCAOB declared the overall audits to suffer pervasive audit failures, and on an additional 12 occasions, the PCAOB cited the overall audit as suffering from inadequate audit tests or documentation.

Table 4: Deficiencies by Account Type

<b>Panel A: Asset accounts</b>					
<b>Asset account</b>	<b>Pervasive audit failures</b>	<b>Inadequate audit tests</b>	<b>Departures from GAAP</b>	<b>Total Deficiencies</b>	<b>Percent</b>
Intangible asset value		46	3	49	20.9
Inventory		40		40	17.1
Marketable securities		34	3	37	15.8
Accounts receivable		30		30	12.8
Asset valuation		16	3	19	8.1
Net deferred tax assets		13		13	5.6
Leases and rental property		11		11	4.7
Notes receivable		9		9	3.8
Property, plant, & equipment		8		8	3.4
Real estate investments		5		5	2.1
All others		13		13	5.6
<i>Total asset deficiencies</i>	<i>0</i>	<i>225</i>	<i>9</i>	<i>234</i>	<i>100.0</i>
<b>Panel B: Income / Revenue accounts</b>					
<b>Income / revenue account</b>	<b>Pervasive audit failures</b>	<b>Inadequate audit tests</b>	<b>Departures from GAAP</b>	<b>Total Deficiencies</b>	<b>Percent</b>
Revenue	1	114	2	117	92.9
Interest income		4		4	3.2
Royalties		2		2	1.6
Other income		1		1	0.8
Intercompany revenues			1	1	0.8
Investment income		1		1	0.8
<i>Total income / revenue deficiencies</i>	<i>1</i>	<i>122</i>	<i>3</i>	<i>126</i>	<i>100.0</i>
<b>Panel C: Liability accounts</b>					
<b>Liability account</b>	<b>Pervasive audit failures</b>	<b>Inadequate audit tests</b>	<b>Departures from GAAP</b>	<b>Total Deficiencies</b>	<b>Percent</b>
Liabilities (general)		24	6	30	39.0
Convertible debt		21	3	24	31.2
Notes payable		3	2	5	6.5
Deferred expenses		3	1	4	5.2
Accounts payable		3		3	3.9
Long-term debt		2		2	2.6
Taxes payable		1	1	2	2.6
Due-on-demand line of credit			2	2	2.6
Unearned revenue		1		1	1.3
Interest payable		1		1	1.3
All others		3		3	3.9
<i>Total liability deficiencies</i>	<i>0</i>	<i>62</i>	<i>15</i>	<i>77</i>	<i>100.0</i>
<b>Panel D: Reserve accounts</b>					
<b>Reserve account</b>	<b>Pervasive audit failures</b>	<b>Inadequate audit tests</b>	<b>Departures from GAAP</b>	<b>Total Deficiencies</b>	<b>Percent</b>
Loan loss reserve		49		49	61.3
Allowance for doubtful accounts		16		16	20.0
Inventory obsolescence reserve		7		7	8.8
Pension		4		4	5.0
Insurance reserve		2		2	2.5
Policy and claim reserves		1		1	1.3
Income tax valuation allowance		1		1	1.3
<i>Total reserve deficiencies</i>	<i>0</i>	<i>80</i>	<i>0</i>	<i>80</i>	<i>100.0</i>

Table 5: Deficiencies by Transaction

	<b>Pervasive</b>	<b>Inadequate</b>	<b>Departures</b>	<b>Total</b>
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Transaction	audit failures	audit tests	from GAAP	Deficiencies	Percent
Business combinations	1	41	8	50	21.9
Stock-based compensation		25	2	27	11.8
Related party transactions		25	1	26	11.4
Equity transactions		22	1	23	10.1
Software expense and capitalization		12	1	13	5.7
Contingency		11	1	12	5.3
Sale of stock		8	3	11	4.8
Discontinued operations		4	3	7	3.1
Financing transaction		4	2	6	2.6
Litigation - current and settlements		2	2	4	1.8
Asset retirement obligation		3	1	4	1.8
Contracts and implications		4		4	1.8
Subsequent event disclosure		4		4	1.8
Joint venture		4		4	1.8
Purchase transactions		3		3	1.3
Loan covenant compliance		2		2	0.9
Environmental remedial obligations		2		2	0.9
Compensation - accrued		2		2	0.9
Derivatives		2		2	0.9
All others		18	4	22	9.6
<i>Total transaction deficiencies</i>	<i>1</i>	<i>198</i>	<i>29</i>	<i>228</i>	<i>100.0</i>

Table 6: Deficiencies by Audit Procedure

Audit procedure	Pervasive audit failures	Inadequate audit tests	Departures from GAAP	Total Deficiencies	Percent
Service auditor or Third party auditor	5	38		43	30.3
Audit - overall	18	12	2	32	22.5
Use of specialist		29		29	20.4
Going concern opinion	2	19		21	14.8
Service organization		6		6	4.2
Cut-off testing		4		4	2.8
Materiality threshold		3		3	2.1
Auditor workpaper discrepancies	1			1	0.7
Loan review specialist		1		1	0.7
Fraud potential		1		1	0.7
Analytical procedures		1		1	0.7
<i>Total audit procedure deficiencies</i>	<i>26</i>	<i>113</i>	<i>2</i>	<i>142</i>	<i>100.0</i>

In addition to these two main findings, two other findings are noteworthy. First, despite the report issued in 2007 by the PCAOB which criticized audit firms for failing to conduct the required SAS 99 brainstorming sessions in assessing fraud potential (PCAOB 2007a), the PCAOB only cited one firm for inadequate audit testing in relation to fraud potential. Second, going concern testing accounts for 21 deficiencies, including two pervasive audit failures, which represents a large percentage of total audit procedure deficiencies (almost 15 percent).

## CONCLUSION

This study provides descriptive statistics of the areas of deficiencies and types of audit failures reported on triennial PCAOB inspection reports. Several findings are noteworthy. First, the overall trend of deficiencies reported by the PCAOB is decreasing, which is consistent with two different arguments put forth by researchers - that either the PCAOB inspection reports improve audit quality or that a shift in the PCAOB inspection philosophy is resulting in fewer reported deficiencies. Future research may attempt to parse these arguments. Second, revenue is the most frequently-cited account, but assets, as a whole, are responsible for most account deficiencies. Third, most departures from GAAP occur in liability accounts and transactions. Fourth, equity-related transactions are a

major source of transaction deficiencies, and inadequate tests of third party auditors are a major source of audit procedure deficiencies. Finally, the vast majority of deficiencies that the PCAOB report are related to inadequate audit testing or the documentation of those tests.

These findings may be useful to practitioners for a variety of reasons. Auditors may use these to anticipate likely areas of detection risk on future audits, or they may use these findings to examine their current competencies on commonly-cited areas of deficiency. For example, equity-related transactions may be an important topic for auditors' CPE training, or auditors may wish to obtain education on the latest workpaper documentation requirements. These findings may also be important to academic researchers. The declining trend in PCAOB deficiencies, both in overall deficiencies and severe deficiencies, suggests that the inspection report date may be an important variable in statistical models. Also, despite academic findings citing reserves and revenue as common areas for earnings management (Nelson et al. 2002), our findings indicate that the PCAOB did not identify any severe deficiencies in reserve accounts and only two in revenue accounts. To the extent that measures of earnings management rely on reserve and revenue accounts (see, for example, Stubben 2010), associations between these measures and severe deficiencies in PCAOB inspections (e.g., Gunny and Zhang 2009) may be caused by other variables within the earnings management measures or from other sources.

As regulators, courts, congressional leaders, scholars, and practitioners continue to debate the role and scope of the PCAOB, it is important to know the type of findings that have been reported on one of the PCAOB's most important disclosures - its inspection reports. Additionally, if the PCAOB is to improve audit quality, it is also important that the inspection reports be analyzed in a manner that facilitates the identification of common problem areas of audits. The findings in this study aim to contribute to both of those discussions.

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## APPENDIX 1

## Account Classifications

Account	Account Type	Total deficiencies	Percent
Accounts payable	Liability	3	0.5
Accounts receivable	Asset	30	5.0
Allowance for doubtful accounts	Reserve	16	2.6
Asset valuation	Asset	19	3.1
Cash	Asset	2	0.3
Commission expense	Expense	1	0.2
Common and preferred stock	Equity	18	3.0
Consulting expense	Expense	2	0.3
Convertible debt	Liability	24	4.0
Cost of goods sold / services provided	Expense	1	0.2
Deferred compensation	Liability	1	0.2
Deferred expenses	Liability	4	0.7
Deferred revenue	Asset	3	0.5
Depreciation expense	Expense	1	0.2
Diluted EPS	Equity	6	1.0
Due-on-demand line of credit	Liability	2	0.3
Equity	Equity	20	3.3
Expenses (in general)	Expense	14	2.3
Extraordinary loss	Expense	1	0.2
Foreign currency translation	Expense	1	0.2
Income tax expense	Expense	1	0.2
Income tax valuation allowance	Reserve	1	0.2
Insurance reserve	Reserve	2	0.3
Intangible asset value	Asset	49	8.1
Intercompany revenues	Income / Revenue	1	0.2
Interest income	Income / Revenue	4	0.7
Interest payable	Liability	1	0.2
Inventory	Asset	40	6.6
Inventory obsolescence reserve	Reserve	7	1.2
Investment income	Income / Revenue	1	0.2
Leases and rental property	Asset	11	1.8
Liabilities	Liability	30	5.0
Loan loss reserve	Reserve	49	8.1
Loans receivable	Asset	4	0.7
Long-term debt	Liability	2	0.3
Marketable securities	Asset	37	6.1
Natural resource valuation and costs	Asset	1	0.2
Net deferred tax assets	Asset	13	2.1
Notes payable	Liability	5	0.8
Notes receivable	Asset	9	1.5
Other income	Income / Revenue	1	0.2
Payroll expense	Expense	5	0.8
Payroll taxes - accrued	Liability	1	0.2
Pension	Reserve	4	0.7
Policy and claim reserves	Reserve	1	0.2
Prepaid assets	Asset	1	0.2
Prepaid expenses	Asset	2	0.3
Property, plant, & equipment	Asset	8	1.3
Real estate investments	Asset	5	0.8
Research & development costs	Expense	5	0.8
Revenue	Income / Revenue	117	19.3
Royalties	Income / Revenue	2	0.3
Salary and wage expense	Expense	3	0.5
Taxes payable	Liability	2	0.3
Unearned revenue	Liability	1	0.2
Unpaid losses	Liability	1	0.2
Warrants	Equity	10	1.7
<i>Total</i>		<i>606</i>	<i>100.0</i>

**APPENDIX 2**

**List of Transactions**

<b>Transaction</b>	<b>Total deficiencies</b>	<b>Percent</b>
Asset retirement obligation	4	1.8
Business combinations	50	21.9
Capitalized licenses	1	0.4
Compensation - accrued	2	0.9
Compensation and loans - officers	1	0.4
Contingency	12	5.3
Contracts and implications	4	1.8
Debt covenant violation	1	0.4
Debt extinguishment	2	0.9
Debt maturities	1	0.4
Debt restructuring	1	0.4
Derivatives	2	0.9
Discontinued operations	7	3.1
Environmental remedial obligations	2	0.9
Equity transactions	23	10.1
Financing transaction	6	2.6
Gain from pension curtailment	1	0.4
Gain on sale of asset	1	0.4
Hedge contracts	1	0.4
Joint venture	4	1.8
Litigation - current and settlements	4	1.8
Loan acquisition costs	1	0.4
Loan covenant compliance	2	0.9
Mortgage securitization	1	0.4
Nonmonetary exchanges	2	0.9
Oil and gas accounting	1	0.4
Proceeds from government grants	1	0.4
Purchase options	1	0.4
Purchase transactions	3	1.3
Related entity investment	1	0.4
Related party transactions	26	11.4
Reverse acquisitions	1	0.4
Sale of real estate	1	0.4
Sale of stock	11	4.8
Software expense and capitalization	13	5.7
Stock-based compensation	27	11.8
Stock-debt exchange	1	0.4
Subsequent event disclosure	4	1.8
Vendor rebates	1	0.4
<i>Total</i>	228	100.0

NOTES