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Teaching and educational notes

An approach to learning risk-based auditing



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ABSTRACT

This paper presents a discussion of a risk-based auditing project that can be used in an undergraduate or graduate auditing course. The project gives students an opportunity to apply the concepts learned in their auditing class about risk-based auditing to a real world company. A number of companies are selected from a particular industry. Each student team is assigned a company and performs business risk analysis related to the entity and its environment using a structured questionnaire (template). The students are required to perform analytical procedures (ratio analysis) on the company and compare it to industry data or a competitor. Student evaluations of the project indicate that it helped them apply their audit knowledge, and was relevant to the auditing class.

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1. Introduction

Risk-based auditing (RBA) is the central framework that guides the financial statement audit process. Auditing students need to develop skills to help them understand the concepts that underlie RBA and how to apply those concepts when they enter the auditing profession. In this paper, a class project is described that provides students with an opportunity to perform RBA on a real-world company. While I have only used this project in the undergraduate course, it can be adapted for use in a graduate auditing class.

In the next section, an overview of the RBA project is provided. The following section discusses the development, use, and grading of the RBA project. The next section discusses the evaluation of the RBA project. The last section provides some concluding comments.

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2. Overview of risk-based auditing

Since the late 1990s, public accounting firms have been implementing audit approaches generically referred to as *risk-based auditing* (Bell, Peecher, & Solomon, 2005, Chapter 2; Knechel, 2007; Lemon, Tatum, & Turley, 2000). All of the major standard setters have issued risk assessment standards. The Auditing Standards Board (ASB) and the International Auditing and Assurance Standards Board (IAASB) issued their standards in 2005–2006 (American Institute of Certified Public Accountants (AICPA), 2013; International Auditing, 2013), while the Public Company Accounting Oversight Board (PCAOB) issued risk assessment standards in 2010 (Public Company Accounting Oversight Board (PCAOB), 2013).¹ Standard setters believe that the introduction of a risk-based auditing process will improve the quality of audits. For example, the ASB stated that its risk assessment standards would enhance audit quality by requiring (1) a more in-depth understanding of the entity and its environment to identify the risks of material misstatement in the financial statements and what the entity is doing to mitigate them, (2) a more rigorous assessment of the risks of material misstatement of the financial statements based on that understanding, and (3) an improved linkage between the assessed risks and the nature, timing, and extent of audit procedures performed in response to those risks (AICPA, 2006a, iii).

The auditor's risk assessment process starts by performing risk assessment procedures (i.e., inquiries of management and others within the entity, analytical procedures, and observation and inspection) for the purpose of obtaining an understanding of the entity and its environment (Public Company Accounting Oversight Board (PCAOB), 2013, AS 12; American Institute of Certified Public Accountants (AICPA), 2013, AU-C 315), to identify business risks, and assess the risk of material misstatement.² The auditor uses the information obtained from the understanding of the entity and its environment to make acceptance and continuation decisions about clients and to design and perform audit procedures that address the risks of material misstatement. In other words, the auditor links the risks of material misstatement to what can go wrong in the related financial statement accounts affected by the various business processes. Lastly, the auditor evaluates the evidence obtained from the risk assessment procedures, tests of controls, and substantive tests, and then issues the appropriate opinion on the financial statements.

3. The RBA project

3.1. RBA project content and development

The project is intended to provide the students with an opportunity to perform business risk analysis on a real company. Auditing standards indicate that the auditor must develop an understanding of the entity and its environment in order to assess the business risks faced by the entity. The first part of the project includes a questionnaire (WORD template) that contains the following six categories of information that are used to evaluate the entity and its environment:

- The nature of the entity.
- Industry, regulatory, and external factors.
- Objectives, strategies, and business risks.

¹ The effective dates for the ASB, IAASB, and PCAOB standards are December 15, 2012, December 15, 2009, December 15, 2010, respectively. The clarified SASs issued by the ASB use "AU-C" instead of "AU" section numbers. "AU-C" is a temporary identifier to avoid confusion with references to existing "AU" sections, which remain effective through 2013, in AICPA *Professional Standards*. The "AU-C" identifier will revert to "AU" in 2014, by which time these SASs become fully effective for all engagements. Throughout the paper, we will generally only refer to the PCAOB and recent ASB (clarified) standards. The ASB standards are virtually identical to the IAASB standards as a result of the convergence project (see AICPA, 2008 and Morris & Thomas, 2011 for a discussion of the clarity and convergence project).

² Most auditing textbooks provide a description of risk-based auditing (e.g., Arens, Elder, & Beasley, 2014 Chapter 8 and 9; Louwers, Ramsay, Sinason, Strawser, & Thibodeau, 2013, Chapters 3 and 4; and Messier, Glover, & Prawitt, 2014, Chapter 4).

- Entity performance measures and monitoring.
- Management.
- Governance.

Each category contains questions that relate to specific information about the entity and business risk factors that must be evaluated in order to determine whether any business risks are present. The questions contained in the questionnaire were taken from auditing standards, the AICPA audit guide (AICPA, 2006b), and similar sources. Students are required to respond to each question (or indicate that no information is available) and consider the possible effects of any identified business risks on the audit. Exhibit 1 contains the most recent version of the RBA questionnaire and Exhibit 2 presents the template used to summarize the significant business risks, accounts affected, and auditor responses.

The second part of the project requires the students to perform analytical procedures (ratio analysis) for a 3-year period for their assigned company and compare those ratios to either industry data or a major competitor. This mimics the types of analytical procedures that an auditor would perform as part of the risk analysis process. The students provide an analysis of the ratios across time and to industry data or a competitor. An EXCEL template is provided to record the company's ratios and students' analysis (see Exhibit 3). Using WORD and EXCEL templates mimics the type of templates used in major public accounting firms' software and makes it easy for the students to record their answers.

I have used the questionnaire at two large public universities in an undergraduate auditing course. The questionnaire has been revised based on student input and grading.

One key feature of the RBA project is assigning companies from the same industry. Prior to the start of the semester, I decide on a specific industry and then identify 5–10 public companies from that industry. In choosing the companies, I try to get a mix of large and small public companies within the industry.³ To date, I have used four industries (biotechnology, gaming, pharmaceutical, and social media). There are a number of benefits with this approach. First, the instructor can pick an industry that may be relevant to the students' future work in public accounting. Second, it facilitates discussions in class because all students have completed the analysis on companies from the same industry. Third, companies of varying size tend to have different business risks. Finally, it makes grading the projects easier because the instructor has a standard set of business risks for the companies and industry.

3.2. Learning objectives

As stated earlier, the main purpose of this project is to provide auditing students with an opportunity to perform a hands-on business risk analysis of a real world company. The project mimics some of the tasks (e.g., data gathering) that students might perform early in their public accounting careers. The RBA project has the following learning objectives:

- Demonstrate an understanding the auditor's risk assessment process.
- Develop an understanding of an entity and its environment.
- Recognize the components that make up the entity and its environment.
- Identify business risks for each entity component.
- Demonstrate an understanding of industry specific business risks.
- Evaluate how identified business risks might affect specific accounts and assertions.

3.3. Assigning the project

The RBA project is to be completed in groups of 3 students. The students are allowed to form their own groups so many times the groups vary in size from 2 to 4. Each group is assigned one company to evaluate. Exhibit 4 presents the instructions for the project.

³ It is also possible to use private companies, as a number of large private companies do provide public disclosures of their financial statements (e.g., using retail industry firms, as some large private grocery stores).

Client Name: Entity and Environment Category: Nature of the Entity Year ended:		Completed by:
		Reviewed by:
Business Risk Factors	Response	Possible Effect(s) on the Audit
What are the entity's major sources of revenue and what is the nature of its products and/or services?		
Who are the entity's key customers?		
Who are the entity's key suppliers?		
Where are its major locations?		
What are the entity's major assets?		
What are the entity's major liabilities?		
What are the entity's sources of financing, and current and prospective financial condition? (Note that your ratio analysis may help answer this question.)		
Are there any potential related parties? If so, describe the relationship.		
Were there any significant events and transactions (e.g., acquisitions or disposals of subsidiaries, businesses, or product lines) that occurred during the year?		
Does the entity have any major uncertainties or contingencies (e.g., lawsuits)?		

Client Name: Entity and Environment Category: Industry, Regulatory, and External Factors Year ended:		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
What is the level of competition in the industry and does this level of competitiveness present any risks for the entity?		
Do technological factors present any risks for the entity?		
Do general economic conditions present any risks for the entity?		
Does the regulatory environment present any risks for the entity?		
Does the legal/political environment present any risks for the entity?		
Do accounting principles, including those that are industry-specific or determined by a regulatory authority, present any risks for the entity?		
Do social/environmental factors present any risks for the entity?		
Are there any other external factors that present a risk for the entity?		

Client Name: Entity and Environment Category: Objectives, Strategies, and Business Risks Year ended:		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
Does the entity have an entity risk assessment process that includes estimating the significance of the risks, assessing the likelihood of their occurring, and determining the actions needed to respond to the risks?		
Does management adequately monitor business risks?		

Exhibit 1. RBA Questionnaire.

An issue that should be considered is when to assign the project during the semester. When I first started using the RBA project, I assigned it shortly after covering the material on the auditor's risk assessment process (i.e., about 3 to 4 weeks into the semester). Based on student feedback and my evaluation of the projects, this was too early in the class. The students needed a better framework for understanding the entire audit process. In recent semesters, the project has been assigned after

Client Name: Entity and Environment Category: Entity Performance Measures and Monitoring Year ended:		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
What key performance indicators does the entity use to measure performance?		
Are there communication channels within the entity for individuals to report suspected improprieties?		
Does the entity have an internal audit function?		
Does the internal audit function have a charter?		
Who does the chief audit executive report to?		

Client Name: Entity and Environment Category: Management Year ended:		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
Do one or a few individuals dominate management and operating decisions?		
Has a code of conduct been established that includes appropriate entity policies regarding acceptable business practices and conflicts of interest? Are these policies adequately communicated to employees?		
Does management encourage that everyday dealings with customers, suppliers, employees, and other parties be based on honesty and fairness?		
Has management established and maintained effective internal control over financial reporting?		
Is there a motivation for management to engage in fraudulent financial reporting? (Refer to Tables 4-4 to 4-6 in the textbook for a list of specific indicators that might indicate fraudulent reporting.)		
Is there high turnover of senior management, legal counsel, or board members?		
Is there a known history of securities law violations or claims against the entity or its senior management alleging fraud or violations of securities laws?		

Client Name: Entity and Environment Category: Governance Year ended:		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
Does the board of directors and its major committees (e.g., audit committee) contain an appropriate number of “independent” directors?		
Are there regular meetings of the board of directors to set policies and objectives, review the entity’s performance, and take appropriate action?		
Does the audit committee have a charter?		
Does the audit committee have adequate resources and authority to discharge its responsibilities?		
How often does the audit committee meet annually?		
Does the audit committee meet individually with the external auditor and internal audit executive without management present?		

Exhibit 1 (continued)

Instructions: After completing the business risk questionnaire, summarize the significant business risks that were identified and their possible effects on the financial statements. Be as specific as possible as to the financial statement effects. In other words, indicate the accounts and assertions that might be affected by the significant business risk. Indicate how your audit team should respond to this identified risk (i.e., what audit work might be necessary).

Significant Business Risks	Accounts/Assertions Affected	Auditor Response
Pricing pressures: <ul style="list-style-type: none"> In the US from federal and state governments under Medicare. Outside the US from government sponsored healthcare systems. From managed care organizations and private insurers. 	Revenue (Valuation) and Inventory (Valuation)	Consider effect of price declines on entity profitability.
Expiration of patents and competition from generic products	Revenue (Valuation) Intangibles - Patents (Rights & Obligations)	Consider effect of price declines on entity profitability.
Dependence on key products.	Revenue (Valuation)	Consider effect of loss of revenue on entity profitability.
Success of research and development of new products.	R&D expenses	Consider possible effect on entity profitability.
Regulatory approval of products.	R&D expenses including costs of clinical trials.	Consider possible effect on entity profitability and possibility of litigation costs.
Patent protection and enforcement.	Legal expense	Consider possible effect on entity profitability.
Foreign exchange, interest rate risk, and inflation.	Currency gains/losses and increased interest expense.	Review currency and interest rate derivative transactions.
Risks related to international operations.	Various accounts.	Consider effects of political stability; local laws and regulations; capital and exchange controls; and other factors on international operations. Review entity controls in place to mitigate risk factors.
Global economic conditions, including the US.	Various accounts.	Review entity controls in place to mitigate risk factors related to slowdowns in global activity.
Outsourcing of certain services to third parties (e.g., transaction processing, accounting, information technology, manufacturing, clinical trial execution, non-clinical research, safety services and other areas).	Various accounts.	Review the entity's monitoring controls over outsourced activities.
Product manufacturing and marketing risks.	Inventory (Valuation).	Review the entity's monitoring controls over manufacturing and marketing activities.
Counterfeit products.	Litigation and reputational costs.	Review the entity's monitoring controls over the entity's supply chain.
Value of intangible assets including goodwill and IPR&D.	Goodwill and IPR&D.	Impairment tests for goodwill and IPR&D.
Legal proceedings	Contingent liabilities and litigation expense.	Review entity controls for contingent liabilities and litigation expense and perform detailed testing of each.

Exhibit 2. Significant business risk template with suggested risks for the pharmaceutical industry.

Example ratios	Ratio Analysis						Analysis
	Assigned Company			Industry data or Competitor			
	2013	2012	2011	2013	2012	2011	
Current Ratio							
Quick Ratio							
Operating Cash Flow Ratio							
Receivable Turnover							
Days Outstanding in Accounts Receivable							
Inventory Turnover							
Days of Inventory on Hand							
Gross Profit Margin							
Profit Margin							
Return on Assets							
Return on Equity							
Debt to Equity							
Times Interest Earned Ratio							

Exhibit 3. Example ratios in template format.

Introduction and Project Requirements

The objective of this project is to provide you with an opportunity to assess the business risks and perform analytical procedures for a real world company. The project focuses on the following categories of information related to the understanding the entity and its environment:

- Nature of the Entity
- Industry, Regulatory, and External Factors
- Objectives, Strategies, and Business Risks
- Entity Performance Measures and Monitoring
- Management
- Governance

The project is to be completed in three person groups. Below is a list of public companies in the pharmaceutical industry.⁴ Your team number is shown next to the company.

Company	Team #s
Johnson & Johnson	1, 11, 21, 31
Pfizer	2, 12, 22, 32
Roche	3, 13, 23
GlaxoSmithKline	4, 14, 24
Novartis	5, 15, 25
Sanofi	6, 16, 26
AstraZeneca	7, 17, 27
Abbott Labs	8, 18, 28
Merck	9, 19, 29
Eli Lilly	10, 20, 30

Part 1 – Assessing Business Risks

Attached is a questionnaire (WORD template) that is to be used for assessing and documenting your assigned company's business risks. In completing the questionnaire, you need to attempt to answer each question and then determine the possible effects on the audit. There is also a Significant Risk Summary Template at the end of the questionnaire that needs to be completed.

Information needed to identify the business risks can be obtained from the company's annual report, FORM 10K, and proxy materials. Typically, these documents can be obtained from the company's website. The company's website also contains information on the audit committee (e.g., charter), internal audit function, and corporate ethics (e.g., conflict of interest policies). You should also consider obtaining a financial analyst's report on the assigned company. If you cannot find a free analyst's report, do not pay for one.

⁴ In 2012, the following companies from the gaming industry were used: Boyd Gaming, Full House Resorts, Las Vegas Sands, MGM, Monarch Casino, Penn National, Pinnacle, Stations Casino, and Wynn. In 2014, the following social media companies were used: Google, Facebook, LinkedIn, Yelp and Yahoo.

There may be some questions that you will not be able to answer. If you cannot answer a question, respond "information not available."

Part 2 – Performing Analytical Procedures

You are also required to perform analytical procedures (ratio analysis) on the selected company for 3 years and compare those ratios across time, and to industry data or a major competitor.

The class website contains an EXCEL template that can be used to document your analyses. While the template provides a standard set of ratios, you should investigate whether there are industry-specific ratios that may be helpful in conducting the analyses. Industry information can be obtained from sites such as <http://yahoo.marketguide.com> and <http://www.bizstats.com>.

Part 3 – Complete the Assignment Assessment Questionnaire

Each team member must complete the Assessment Questionnaire that is posted on WebCampus.

Exhibit 4. Project instructions.

the revenue process is covered (i.e., about 8–10 weeks into the semester). Based on the student performance and discussions in class, the students were much better prepared to complete the project when it was assigned at a later point in the semester.

3.4. *Introducing the project in class*

The syllabus for the undergraduate course notes that students will be required to complete the RBA project. The syllabus also indicates the date when the project will be discussed in class. The students are required to bring a copy of the instructions (posted on the course website) and the templates to class the day the project will be introduced. I spend about 15 min discussing the instructions (see [Exhibit 4](#)) and the two templates. The students are told that the RBA project is an opportunity to apply the concepts learned in class about risk-based auditing to a real world company. The discussion includes how to complete the questionnaire, including the various sources of information. Students are told that there may not be able to find some information and how to respond if they are unable to obtain information necessary to answer a question. The students are also told that the ratios are planning analytical procedures that were discussed in class as part of the risk assessment process. The students are told that the project takes approximately 10 h in total (2–3 h per team member) to complete.

It is very important to spend time during the introduction of the project discussing the sources of information that can be researched to complete the project. The instructions list the following sources:

- The company's annual report, Form 10 K, and proxy materials.
- The company's website.
- Industry information from websites such as <http://yahoo.marketguide.com> and <http://www.bizstats.com>.

We discuss how the companies' websites normally have information on the audit committee, internal audit function, and corporate ethics (i.e., conflicts of interest policies).

Normally, an example of the project from a prior semester is placed on the class website. While the example presents a company from a different industry, it provides the students with a benchmark for preparing their responses.

3.5. *Project grading*

Since the RBA project is an important part of the course, it usually makes up approximately 15% of the total course grade. When I decide on the industry for the current semester project, I develop a preliminary understanding of the industry and its business risks for use in grading. Much of the information on business risks can be found in the companies' Form 10Ks. This list of risks is revised as the RBA projects are graded (see [Exhibit 2](#) for the list of risks used for the pharmaceutical industry).

Normally there are about 35–40 projects to grade across two sections of the undergraduate auditing class. Each project takes about 10 to 15 min to grade. The grading process starts by sorting the projects by company. Then the largest company is graded first followed by the smallest company. By grading the team projects one company at a time, grading consistency is improved. By grading the largest and then the smallest company, it is possible to develop a good understanding of the spectrum of responses. For example, a large gaming company (e.g., MGM) has a number of business risks (e.g., international operations) that are different than a small gaming company (e.g., Monarch Casino). In addition, factors related to management and governance categories may also vary (see [Exhibit 1](#)).

As the projects are graded, a list of key items is developed for class discussion. [Exhibit 5](#) presents the grading form used. During 2012 and 2013, the projects were graded by the instructor and then ranked based on relative quality and placed into categories: A, A–, B+, B, etc. A numerical grade was then assigned to each category. In 2014, a graduate student graded the first three items on the grading rubric form and I graded the last two items (i.e., the significant risk and ratio templates). A numerical score was determined based on the rating of the 5 grading items. Using a teaching assistant

Team Number:

Company Name:

Rating Scale: 1 = low/poor 3 = average 5 = high/excellent

Evaluation Criteria	Rating				
	1	2	3	4	5
1. Quality and sufficiency of responses to risks.					
2. Quality and sufficiency of effect(s) on audit.					
3. Quality of written responses.					
4. Quality and sufficiency of responses to business risk template.					
5. Quality of ratio analysis.					

Overall grade for the assignment:

Comments:

Exhibit 5. RBA grading form.

reduces the amount of grading time for the instructor. [Exhibit 6](#) presents a student team’s response to the “Industry, Regulatory, and External Factors” component of the entity’s environment.

3.6. Class discussion

The project is discussed in class after grading is completed. Discussing the project at this point, rather than when they are submitted, provides a good basis for student discussion and questions. An entire class period (75 min) is spent covering the project by proceeding sequentially through the questionnaire. Because a list of key points has been developed, the discussion can be focused towards those issues. When discussing a particular question, it is important to bring out any differences between companies. For example, a smaller public company may have a different organizational structure than a large one. This is also a good time to discuss the questions where students could not find any information. For example, one question asks the students to obtain the internal audit function charter. In many cases, this document is not publicly available. We talk about how this document would be easy to obtain on a real audit and its importance. Following this approach provides the students with sound feedback and an understanding of how the projects were graded.

4. Project evaluation

When I first used the RBA project, a formal evaluation of the project was not done. I relied exclusively on informal feedback from the students in class. During the last three semesters (Spring 2012 – 2014), students were provided with an evaluation questionnaire. The questionnaire was posted on the course website and turned in by each member of the team anonymously after completion of the project. [Exhibit 7](#) presents the evaluation questionnaire.

[Table 1](#) contains the student evaluations by section for the RBA project across the three years. The evaluations of the 9 questions are very similar across both sections and years. It should be noted that some teams contain students from different sections.

The students strongly agreed that the written and class discussion were easily understood (questions 1 and 2). The students also felt that they had sufficient time to complete the assignment

Client Name: GlaxoSmithKline Entity and Environment Category: Industry, Regulatory, and External Factors Year ended: 12/31/12		Completed by:
		Reviewed by:
Business Risk Factor	Response	Possible Effect(s) on the Audit
What is the level of competition in the industry and does this level of competitiveness present any risks for the entity?	Aside from competition with competing pharmaceutical companies in the research and discovery of new products, the greatest competition lies in generic manufactures. As patents expire or deemed invalid by the courts, generic manufactures undercut profits and can have material effects on GSK's financial results.	Evaluating pending litigation and the expiration of patents is critical to determining the percent of annual sales that is at risk from year to year. The effectiveness of GSK's global patents organization should be evaluated. This committee is tasked with ensuring and protecting intellectual property rights of the entity.
Do technological factors present any risks for the entity?	GSK relies on critical data such as corporate strategic plans, trade secrets and intellectual property to drive and plan its operations. The entity has been exposed to escalating external threats with increasing sophistication that put its information system and data at risk.	An assessment of data governance and information security should be made. An evaluation of mitigation activities should also be made to determine their reliability and effectiveness.
Do general economic conditions present any risks for the entity?	Currently, the greatest risk is from the European markets that are still struggling due to austerity measures. Several other key countries are also struggling to reign in deficits. Even emerging markets have grown slower than expected in the last year.	The current economic conditions could pose a threat to revenues and cash flow. GSK is dependent on growth to generate enough cash to invest in research and development. It must keep its pipeline of new products going and older patents expire and related products become less profitable.
Does the regulatory environment present any risks for the entity?	The pharmaceuticals and vaccines industry is highly regulated. Regional and country-specific laws and regulation determine whether a product can be approved. The number and impact of regulatory requirements is increasing across aspects of product quality and safety. Prices are all determined by law in many countries.	There is a threat of violating a regulatory law when trying to approve products globally with varying degrees of health care laws. Future profits could also be at risk due to austerity measures and health care reforms taking place in France, Spain and Germany. Many countries are restricting pricing and mandating the use of generics.
Does the legal/political environment present any risks for the entity?	GSK is faced with various complex product liability, anti-trust and patent litigation common in the pharmaceutical business. It is also confronted with investigations into its operations by various government regulatory agencies. The extent of these investigations varies based on the political/regulatory environment individual countries.	The auditor should check with the General Counsel Group and discuss significant litigation pending and ongoing governmental investigations.
Do accounting principles, including those that are industry-specific or determined by a regulatory authority, present any risks for the entity?	One of the most challenging risks is the uncertainty surrounding regulations in emerging markets. Not only the volume and pace of change but the consistency of guidance can hurt profits in these developing economies. Meeting the various regulatory and accounting requirements can be difficult to achieve.	Assess whether the company has strong internal controls to insure regulatory and accounting conditions are met in the varying jurisdictions in which products are manufactured and sold.
Do social/environmental factors present any risks for the entity?	Due to the various jurisdictions GSK operates in, the entity is exposed to the risk of ineffectively managing environment, health, safety and sustainability requirements.	GSK is currently identified as a potentially responsible party in the U.S. for environmental violations. The likelihood and magnitude of remediation costs relating to these events should be assessed and disclosed.
Are there any other external factors that present a risk for the entity?	Other external factors that present risk to the entity include: Risk of interruption of product supply, risk to global political and economic environments, compliance with tax law in various jurisdictions and the various forms of litigation ranging from product liability to anti-trust lawsuits.	Assessment of the company's risk evaluation and mitigation activities should be completed.

Exhibit 6. Example student solution to the industry, regulatory, and external factors of the RBA project.

(question 3), although some informal feedback indicates that the project took longer than 10 h to complete. Question 4 was the only question that consistently had a mean lower than 4.0 where students indicated that they did have some difficulty finding information required for answering questions. This is not surprising because in some cases the information asked for in the questionnaire was either not available or difficult to locate (e.g., audit committee charter, internal audit charter, conflicts of interest policies). The students agreed that the timing for completing the RBA project was right (question 5). The students also agreed that the case was realistic, helped them apply their audit knowledge, and was relevant to the auditing class (question 6–8). Lastly, they agreed that they would recommend that the project be used in future auditing classes.

The grades for each semester and class provide strong evidence that the students met the learning objectives. Table 1 shows that the means for each section ranged from 88% to 92%.

Instructions: The following questions relate to the Business Risk Case that you completed as a requirement of ACC 470/670. Please answer each question below by placing an “X” in the box for the number that represents your opinion about different aspects of the Business Risk Case. Results of the questionnaire, which are anonymous, will be used to improve the assignment and may be used in reporting the results of the assignment in a journal article.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

Question	Rating				
	1	2	3	4	5
1. The Business Risk Case written instructions were clearly worded and easily understood.					
2. The Business Risk Case class instructions were clear and easily understood.					
3. I felt like I was given enough time to complete the assignment (approximately 3 weeks).					
4. I was able to find most of the information required in the case questionnaire.					
5. The timing of the Business Risk Case during the semester was appropriate and allowed me to put my audit knowledge to use.					
6. The assignment was realistic.					
7. The assignment was helpful in applying the business risk knowledge learned in class to a real world company.					
8. The Business Risk Case was interesting and relevant to the auditing class.					
9. I would recommend using the Business Risk Case in future auditing classes.					

Exhibit 7. Assessment questionnaire for the business risk case (Each group member is to complete this form. All responses are anonymous.)

Table 1
Evaluation of RBA project and student grades.

Question	Mean responses					
	2012		2013		2014	
	Section 1 (n = 32)	Section 2 (n = 59)	Section 1 (n = 31)	Section 2 (n = 54)	Section 1 (n = 56)	Section 2 (n = 57)
1. The business risk case written instructions were clearly worded and easily understood	4.34	4.36	4.39	4.15	4.07	4.07
2. The business risk case class instructions were clear and easily understood	4.19	4.14	4.13	3.98	4.00	3.98
3. I felt like I was given enough time to complete the assignment (approximately 3 weeks)	4.47	4.51	4.23	4.28	4.61	4.49
4. I was able to find most of the information required in the case questionnaire	3.97	3.97	3.87	3.87	4.00	4.12
5. The timing of the Business Risk Case during the semester was appropriate and allowed me to put my audit knowledge to use	4.06	4.10	3.87	4.06	4.29	4.18
6. The assignment was realistic	4.13	4.19	4.13	4.11	4.09	4.21
7. The assignment was helpful in applying the business risk knowledge learned in class to a real world company	4.28	4.19	4.13	4.02	4.16	4.25
8. The Business Risk Case was interesting and relevant to the auditing class	4.09	4.19	3.97	3.83	4.23	4.09
9. I would recommend using the Business Risk Case in future auditing classes	4.34	4.24	4.03	3.96	4.11	4.09
Total points available	50	50	40	40	75	75
Average grades (percentage)	0.90	0.92	0.88	0.90	0.89	0.91

5. Concluding comments

Feedback from the students indicates that the project provides a good learning experience about risk-based auditing. Overall, the students report that completion of the RBA project helped them to better understand the risk-based audit process that auditors must go through to plan and perform the audit.

Some limitations should be acknowledged. First, the project takes a significant amount of student time to complete and faculty time to grade. The student time limitation can be overcome by carefully explaining to the students the importance of the project and how it mimics tasks they will complete early in their public accounting careers. Faculty time can be limited by using a teaching assistant to grade the simpler portions of the project. Second, the inability of students to find certain information in public forums can prove frustrating. The instructor can reduce this frustration by telling the students during the introduction of the project not to search too long for any particular piece of information. It also helps to tell them that on a real audit engagement such information would be easy to obtain.

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References

- AICPA. (2006a). *Statements on auditing standards nos. 104–111*. New York: AICPA.
- AICPA (2006b). *AICPA Audit Guide, Assessing and responding to audit risk in a financial statement audit*. New York: AICPA.
- AICPA (2008). *Clarification and convergence*. An AICPA auditing standards board project. New York: AICPA.
- American Institute of Certified Public Accountants (AICPA) (2013). *AICPA professional standards (clarified)*. <<http://www.aicpa.org>>.
- Arens, A. A., Elder, R. J., & Beasley, M. S. (2014). *Auditing and assurance services*. 15e. London: Pearson Education.
- Bell, T., Peecher, M. E., & Solomon, I. (2005). *The 21st century public company audit: Conceptual elements of KPMG's global audit methodology*. KPMG LLP.
- International Auditing and Assurance Standards Board (IAASB) (2013). *International standard on auditing*. Available at <http://www.ifac.org/auditing-assurance>.
- Knechel, W. R. (2007). The business risk audit: Origins and obstacles (and opportunities?). *Accounting, Organizations, and Society*, 32(4/5), 383–408.
- Lemon, W. M., Tatum, K. W., & Turley, W. S., (2000). *Developments in the audit methodologies of large accounting firms*. ABG Professional Information.
- Louwers, T. J., Ramsay, R. J., Sinason, D. H., Strawser, J. R. & Thibodeau, J. C. (2013). *Auditing and assurance services*. 5e. New York: Irwin-McGraw-Hill Inc.
- Messier, W. F., Jr., Glover, S. M. & Prawitt, D. F. (2014). *Auditing and assurance services: A systematic approach*. 9e. New York: Irwin-McGraw-Hill Inc.
- Morris, J. T., & Thomas, C. W. (2011). Clarified auditing standards: A quiet revolution. *Journal of Accountancy*, 211(6), 24–28.
- Public Company Accounting Oversight Board (PCAOB) (2013). *PCAOB auditing standards*. <<http://www.pcaobus.org>>.