LIBRARY LEADERSHIP & MANAGEMENT

Supply Chain Risk after Swets: Evaluating the Financial Viability of Library Vendors

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Abstract

The financial collapse of a library vendor can have serious repercussions, but steps can be taken to investigate the financial health of vendors to help avoid surprises. Useful tools and techniques to minimize risk and maximize business continuity are described and the limits of such research explored. The broader supply chain context of library vendors is also outlined.

Introduction

The bankruptcy of Swets, a subscription agent based in the Netherlands, in September 2014 sent shockwaves through the library world with some libraries suffering financial losses and others scrambling to ensure uninterrupted access to key resources. This failure echoed the collapse of another subscription agent, RoweCom/Faxon, in 2003; an event which even then spurred calls for closer scrutiny of the financial viability of library vendors.

While clearly of vital importance to librarians working in serials and collections, the financial viability of library vendors potentially affects the work of libraries in all areas ranging from information technology and capital construction to disaster recovery and office supplies. Vendors that are financially ailing may provide worse service, be less responsive to customer needs and could ultimately fail, leaving libraries and their users without access to key information resources. Libraries within larger organizations such as a university or state government may have Purchasing or Procurement departments which can assist with this work, but librarians are very often on their own outside of formal request for proposal (RFP) events. Nonetheless, there are several formal and informal research techniques that can provide useful insights into the vendors we rely upon.

This article will review some of the key literature dealing with this topic, describe tools and techniques to investigate the financial viability of library vendors, critically assess the limits of these tools and suggest some backup plans for minimizing the fallout from vendor failure. The broader context of library vendor relationships will also be explored from the perspective of supply chain risk and how other industries have dealt with it. Although many librarians are reluctant to apply the language of business to their profession, it is useful to survey the key concepts of supply chain research and to consider how it does and does not apply to the leadership and management of libraries.

Literature Review

There has certainly been a great deal written about the Swets bankruptcy and, like the RoweCom/Faxon failure eleven years earlier, it triggered introspection and discussion over whether it could have been avoided. Much of the analysis has been done by collections, serials, and acquisitions librarians at a fairly operational level and the debate over whether or not to use subscription agents continues to rage (Davis et al. 2016, 283).

Three years before the Swets collapse, Williams and Downes recommended structured vendor viability reviews with continuously updated "profiles" coupled with regular frank discussions with vendors regarding their strategy, business model, financial results, staff turnover and new products and services (Williams and Downes 2010, 320). In the immediate aftermath of the Swets bankruptcy, Smith warned of the dangers of relying on commercial players and called for the use of protective escrow funds and more on-campus, nonprofit publishing, warning that commercial organizations "do not necessarily share the values or goals of the academy or beliefs about how best to achieve those goals" (Smith 2014).

Ferguson described how libraries can research potential new vendors and stated that the "financial stability of vendors and the security of library funds should play an increasingly important role in determining to whom libraries choose to give their business" (Ferguson 2015, 193). Writing in *The Serials Librarian*, Busby prescribed a fairly detailed set of analytical procedures to follow before concluding somewhat pessimistically that libraries "rarely have the skill set needed to undertake due diligence" (Busby 2015, 18).

These articles and more have laid an excellent foundation for understanding the need to review the financial health of library vendors, but it is useful to get out of the weeds of serials management and step back a bit to review the broader context of supply chain risk. Wathen has was one of the first to review the possible application of supply chain principles to library work (Wathen 2012). Wang's recently published book is devoted to the application of supply chain research to collections work in academic libraries (Wang 2017). Both of these authors, however, see supply chain analysis as a means to wring increased efficiency out of library operations and have little to say about the risks posed by vendor financial failure.

Libraries and Related Industries

Libraries are the skilled intermediaries between content suppliers such as publishers and the end users who may be students and faculty, members of the public or specialized professionals. According to the 2017 *Library and Book Trade Almanac*, total spending on library acquisitions is almost $2.5 billion across all types of libraries (243-251). Libraries license or purchase the content directly from publishers or they may also hire intermediaries to aggregate and organize the publisher content in electronic or print formats. In addition, libraries may license or purchase additional services and technologies to help organize the massive inflows of content coherently such as through an integrated library system (ILS). Finally, as operators of physical facilities with personnel, libraries or their parent organizations must purchase or acquire everything from office furniture and supplies to payroll, benefits, building maintenance, information technology (IT) support, consulting services and more. As our friends in Accounts Payable are well aware, libraries are awash in vendor invoices and each bill reflects a supplier relationship that could go off the rails.

Keeping up with developments in the industries that supply libraries, particularly publishing and certain niche technology fields, is a key responsibility of library leaders and managers. Basic professional practices such as regularly reading key trade publications, listservs and social media outlets as well as personal networking with colleagues and vendors take time and compete with more prosaic day-to-day responsibilities. Dramatic developments such as a major bankruptcy or buyout will get the headlines, but broader, more gradual trends can easily be overlooked or not fully understood.

Structured industry profiles provided by – who else? – library vendors can offer deeper analysis missing from our daily observations. These reports can provide excellent insight into the publishing industry and related fields and offer a different perspective from the usual library sources. Examples of such reports include those provided by IBISWorld ("Libraries & Archives in the US") (O'Hollaren 2017), Simba Information ("Global Social Science and Humanities Publishing 2016-2020") (Newman and Strempel 2016) or MarketLine ("Global Publishing Industry Profile") (Marketline 2016).

Although sometimes only updated on an annual basis, these reports may include helpful business insights such as Porter's Five Forces analysis which examines the industry's degree of rivalry, opportunities for new entrants, availability of substitutes, buyer power, and supplier power (Marketline 2016, 13). Many libraries have access to these reports through their existing database subscriptions or they may be worth purchasing on a one-off basis. The specialized technology industry for libraries such as ILS is more difficult to research and is considered "niche" in the huge information technology market, but analysts such as Marshall Breeding provide expert coverage and analysis with practical insights into vendor stability and outlook (Breeding 2017). Upper-level library administrators should be familiar with these industry reports and analysis as they provide good summaries of key developments and summaries of the major movers and shakers.

Company Research: Initial Steps

Although industry research can provide a useful wide-angle view of our suppliers, it is through research into specific companies that the most insight will be gained. Whether during an RFP process or before an annual renewal invoice is paid, an examination of the company's financial health would be a prudent step, at least for the largest vendors. A methodical approach will help break down the process.

1st Step: identify your vendor. This can be more difficult than it seems as local providers may have distant parent companies whose legal and trade names may be confusing and, when one goes too far up the ownership chain, the ultimate owner shown may be a generic-sounding holding company or investment firm. Springer, for example, has an entire webpage devoted to differentiating between the different "Springer" companies that are entirely separate, but have similar names (Springer). In addition, prior buyouts, mergers and acquisitions may cause further confusion as previous names are still used in everyday conversation even though the ultimate official corporate entity has changed. It is usually best (and easiest) to analyze the parent company rather than a subsidiary as their financial health is key.

2nd Step: Public or Private? Public companies sell shares of stock to the public and are listed on stock exchanges in locations such as New York or London. Extensive information is available on public companies, because a great deal of money can be made through investing in them. Shareholders, analysts and financial journalists scrutinize these companies very thoroughly and this research is comparatively easy to locate. However, relatively few library vendors are public companies. RELX Group (www.relx.com), formerly Reed Elsevier, includes brands and products such as LexisNexis, Scopus, ScienceDirect, and Elsevier. Informa PLC (https://informa.com) is based in London and includes Taylor & Francis, Routledge, CRC Press, Garland Science, and Cogent OA among its businesses. Wolters Kluwer (http://wolterskluwer.com) is based in the Netherlands and provides CCH tax and accounting products as well as health science information products through OVID. Pearson (www.pearson.com) is based in London and provides learning technology and materials. Public companies are often identified by their stock ticker symbol.

Private companies, on the other hand can operate more opaquely and it may difficult to obtain current, accurate financial information. EBSCO Industries (www.ebscoind.com) is a large, family-owned private company that provides everything from academic library services to fishing lures and rifles. ProQuest (www.proquest.com) now owns ILS-vendor ExLIbris and their parent company is Cambridge Information Group (www.cig.com), a private holding company. Springer Nature (http://group.springernature.com) is another large private company with a complex heritage, having merged with Macmillan, but it may go public soon (Schuetze and Hubner 2017). To further complicate matters, not all private companies are operated for profit; OCLC (www.oclc.org) and scholarly societies such as the American Chemical Society (www.acs.org) are private, not-for-profit entities and the information available on them will vary.

3rd Step: US or Foreign-based? Whether public or private, the amount of information available is largely dependent upon the laws which apply to the company. In the US, private companies are not required to publicly disclose their finances, but those based in certain other countries may need to. Swets, based in the Netherlands, released detailed annual reports with financial statements on their public website even though they were a private company. Most private companies do not provide such information.

Informal Company Research

It is often through informal observation and information-gathering that questions may first arise regarding a vendor's financial health. If the company is a current vendor, are service levels consistent or trending downward? Is there a great deal of staff turnover? Is the vendor asking for early payments and, if so, why? Even rapid growth can be a red flag if a company has recently taken on more customers than it can handle (Williams and Downes 2010, 318). It can also be a warning sign if the vendor outsources more and more functions to outside companies (Stasik 2015, 269). Interestingly, one analyst has noted that, while vendors in poor financial shape generally provide a lower level of customer service than healthier ones, service levels drop again as a vendor becomes very strong financially and achieves monopolistic hegemony over a market and competition withers (Wilson 2009, 4). Finally, there is always the undeniable role of gossip and rumors, whether whispered over refreshments at a library conference or flashed through social media. Responsible library leaders know that unsubstantiated rumors and hearsay may be inaccurate, but they can raise doubts and spur more formal, verifiable research.

Formal Company Research

Formal research into vendors may be broken down into primary and secondary sources. Documented primary sources would consist of information provided by the company, perhaps on their own website, in an annual report, or in response to an RFP. The gold standard would be several years of audited financial statements including a balance sheet, an income statement, and a cash flow statement. Public companies should have these available on their websites or in their annual reports and they can also be found in several library databases. Private companies do not customarily release this information to the public, but may provide financial statements to major customers on request often in conjunction with a signed nondisclosure agreement.

The problem with financial statements is – what to do with them? Are librarians adequately trained to analyze them accurately? Busby and others have noted some of the key financial metrics to consider such as overall net equity, current ratios of assets and liabilities, amount of long-term debt, level of credit usage and net profit trends (Busby 2015, 16). Tips and hints on analyzing financial statements are readily available from several public websites (SCDigest Editorial Staff 2017), but which librarians are qualified to do or review these calculations accurately and consistently? A library's parent organization such as a university or state government procurement office may have specialized staff to assist during an RFP process, but they may not be available during annual reviews of an existing relationships.

Secondary research sources – what others write about our vendors – can flesh out the picture. News articles, particularly from trade publications such as *Library Journal*, *American Libraries* and *Information Today*, can very helpful, although too often "industry news" is tilted towards press releases lauding the release of new products when hard-nosed analysis of the latest financial results would be more helpful. Beyond the library press, public companies are the subject of intense scrutiny from expert financial analysts who pore over their financial statements, interview their executives in earnings calls and summarize their key findings. These investment analyst reports or "stock reports" are typically not available to the public, but libraries may have resources they can tap. ProQuest offers research reports from JP Morgan (ProQuest) and the Thomson ONE (Thomson Reuters), Mergent Online (Mergent), and NetAdvantage (S&P Global) databases provide the full text of detailed analyst reports on thousands of public companies and a few private ones as well.

Lexis-Nexis Academic and Factiva, in addition to their vast stores of articles, also have specific capabilities for researching companies and these do a particularly good job with public companies, combining financial information with news articles. Lexis-Nexis currently offers GMI Ratings for some companies which include numerical risk scores for accounting and governance risk, litigation, financial distress, environmental, social and governance, and more. Unfortunately, these risk reports are not consistently available for all companies, not even public ones. The Mint Global database, provided by Bureau van Dijk (Bureau Van Dijk), includes some detailed company reports from MarketLine (http://marketline.com) and GlobalData (www.globaldata.com). These often include analysis of a company's strengths, weaknesses, opportunities and threats (SWOT) which can be very helpful and some of these are available for private companies. Such company reports are also available in other databases such as EBSCO's Business Source Complete. The PrivCo database (www.privco.com) tries to address the need for private company information and it can provide some financial information as well as merger and acquisition information.

Fortunately, there exists an entire industry that focuses on analyzing the financial health of public and private companies and libraries should take better advantage of its expertise. Credit bureaus and credit ratings agencies provide information, analysis and detailed ratings on the credit worthiness of companies, individuals, securities or financial obligations (Rivera 2017, 2). Credit bureaus such as Experian (www.experian.com) , Equifax (www.equifax.com), and TransUnion (www.transunion.com) are best known as arbiters of credit scores for individual consumers, but Experian and Equifax, along with Dun & Bradstreet (www.dnb.com), also provide credit reports on businesses which anyone can purchase. Credit ratings agencies, on the other hand, such as Moody's (www.moodys.com), Standard & Poor's (www.standardandpoors.com) and Fitch (www.fitchratings.com), focus more on analyzing bonds, fixed income securities, and other debt instruments issued by businesses and governments including foreign countries. Both credit bureaus and credit ratings agencies analyze the ability of a business to pay its obligations and assign scores based on strict proprietary methodologies and these scores can provide insight into the financial health of both public and private companies.

Ratings and reports from Moody's, Standard & Poor's and Fitch sometimes generate news stories are these are often available through library databases. A search in Factiva using the Intelligent Indexing command "NS=C174" and the name of the company will retrieve reports from Moody's and Standard & Poor's. This free text search sets the Factiva subject code ("NS") to corporate credit ratings and adding the name of the company will execute a search for articles about ratings from Fitch, Moody's and Standard & Poor's.

Bloomberg terminals and the Thomson ONE database provide a wealth of information on most public and few private companies, particularly ratings of the individual bonds issued by these companies. As might be expected, the NetAdvantage and Capital IQ databases from Standard & Poor's provide their own credit rating information including links to purchase additional information.

Credit bureau scores and reports, on the other hand, are not typically available through library resources nor do they generate news stories. Such reports list the types of credit a company is using, how long the accounts have been open, whether it is current in repayments. The reports may describe how much credit a company used and whether it is seeking additional credit (Carbajo 2015). Dun & Bradstreet, Experian and Equifax offer a variety of business credit reports for sale on their public websites with prices typically ranging from less than US$50 for US and Canadian companies to several hundred dollars for reports on foreign companies; anyone can purchase these. These reports provide a wide range of scores and ratings including viability ratings, late payment information, company profiles, supplier risk evaluations, delinquency predictions, financial stress scores and much more. There are also companies such as Business Credit Reports (BCR) (www.businesscreditreports.com) which offer blended business credit reports from multiple providers.

There are a few library databases that try to replicate this credit bureau information with spotty results. The Reference USA database (http://resource.referenceusa.com) provides basic information on US companies and provides letter grade "Credit Rating Scores" which are described as "indicators of probable ability to pay." Next to this score, the database also provides a link to purchase a full business credit report from Experian. The Mint Global database has some score and risk ratings from Cortera (www.cortera.com), another credit bureau company, but only for some companies. The Hoovers database uses data from Dun & Bradstreet to create a simple "Prescreen Score" of high, medium or low risk of default for some, but not all, companies.

Like the financial calculations and analysis of financial statements, this company research may be best done by experts. The process of searching each of these databases and others can take a great deal of time, depending on which are available for use either in one's own library or in nearby academic or public libraries. Content in each database changes often and this may be a task best left to experienced business librarians who are familiar with the tricks of locating the information efficiently.

Limits of Analysis

Researching any company is an imperfect process. Informal information-gathering is subject to inaccuracies and misinterpretations. Formal research using professional news sources and analyst reports may not uncover problems such as fraud or anticipate future changes in vendor strategy. Library business databases are quite good for researching public companies, but much less so for private companies, particularly small ones, such as Springshare, and those based overseas such as Harrassowitz. The purchase of credit reports is probably the most systematic, standardized approach to reviewing the financial viability of library vendors even though some analysts contend that such measures were not designed to describe the relative strength of a vendor or show how changes in financial circumstance may lead to future changes in vendor behavior (Wilson 2009, 7).

Things Look Bad, Now What?

Let's suppose that a librarian leader has done their homework and, from whispered warnings to declining credit scores, there is indeed cause to be alarmed. Now what? Certainly, a frank conversation with the vendor is in order, but a local sales representative's assurances should be met with some skepticism because it is in their interest to encourage customer confidence. Also, they may not know what is going on at the upper levels of their own company. Top executives will need to be questioned as well and vendors should welcome this research process. EBSCO is one of the few vendors to explicitly call for increased librarian attention to the financial health of vendors (Powell 2016).

At some point, vendors will need to be upfront about their financial difficulties. In the United States, companies often file for Chapter 11 bankruptcy protection and continue operations while they are reorganized and seek to emerge a stronger company. Such filings are not unusual in our industry as explained by one librarian:

> [It] didn't dissuade us, since takeovers and even bankruptcies are common in the library world. We had just spent an entire year paying Cengage/Gale invoices with 'in Chapter 11 bankruptcy proceedings' written in bold type at the top (Ferguson 2015, 193).

A Chapter 11 filing will at least give a library the chance to explore alternative suppliers or make contingency plans in case the company fails entirely. More serious is a Chapter 7 bankruptcy in which the company shuts down and creditors line up to recover some fraction of what they are owed, often with meager results. Companies based outside of the US must follow local bankruptcy laws and these may vary widely from country to country.

If a large publisher shows signs of failing, there may be no competitor that can offer the same content and all libraries and their users may simply need to ride out the resulting convulsions as the affected journals, books and ebooks cease publication or are bought up by competitors and authors migrate elsewhere. A potentially troubling issue will be the status of “perpetual access” agreements with vendors and it may be a grim day when the “Doomsday” provisions of LOCKSS, CLOCKSS and Portico are implemented on a large scale. Library technology is one industry where it may be easier to replace a vendor. If an IT vendor shows signs of stress, libraries may be able to eventually shift some of their business to competitors, an action which, however, could collectively ensure the death spiral of any ailing vendor.

Supply Chain Context and Perspectives from Outside the Library World

It is only recently that librarians have begun using the perspective of supply chain management to analyze their work. Supply chain management has been defined as “the cost-effective organization of the flow and storage of materials, in-process inventory, finished goods, and related information from point of origin to point of consumption to satisfy customer requirements” (Prater and Whitehead 2012, 9).

Applying this concept to libraries, Wang considers vendors as the “Source” part of supply chain management and warns that:

> “… if vendors do not meet libraries or their patrons’ expectations, vendors are not being great partners and put libraries and their patrons in inopportune situations as well. The true partnership involves a sophisticated selection process, through which library vendors and libraries establish long-term associations. This long-term cooperation builds a strategic relationship to align infrastructure, systems, and processes to maximize the benefits of the supplier, the library, and, ultimately, the end users (Wang 2017, 57).

One must look outside of the library world to find supply chain analysis that focuses on the financial viability of vendors. The *Altman Z Score* methodology was developed in the 1960s to assess the likelihood of manufacturing companies going bankrupt. A recent analysis of the tool found that it was still valid and could be used in other industries as well, provided that detailed financial information is available upon which to perform the calculations (Sherbo and Smith 2013).

It is within the world of information technology, with its many suppliers and eclectic mix of large public companies and private start-ups, that more parallels to libraries may be seen. Technology consulting firms such as Gartner have developed detailed methodologies to assess vendor risk and they issue detailed reports on their products, services, strategy, corporate viability and more. For Gartner:

> The concept of IT VRM [IT Vendor Risk Management] is the same as that of supplier risk management (SRM). The difference is that, in the case of IT VRM, the risks are associated principally with the "logical" or information supply chain rather than the "physical" supply chain, which is associated with tangible commodities, supply chain services or manufactured goods (Ambrose and Ellery 2017).

In the IT field, much of the vendor risk is associated with legal compliance issues, security and privacy concerns, but financial viability is also a concern and Gartner recommends a mix of financial metrics and qualitative measures to analyze vendors that have been identified as “higher-risk” (Wilson 2009). Although the smaller library market will never receive the same attention as general purpose information technology vendors, some of the concepts and methodologies are similar.

Conclusion

The symbiotic relationship between libraries and vendors is remarkable for its complexity as well as the pace with which it is changing. Most vendors are not overly dependent on a single library for their financial livelihood, but libraries must often rely on vendors for content that is not available elsewhere as well as more commodified goods and services.

There are a few steps that libraries should take to establish an "early warning system" to ensure business continuity and minimize risk. Aside from general awareness of professional trends and developments in the publishing and library technology industries, library leaders and managers should identify key vendors whose failure would present the greatest risk and these companies should be researched using the tools and techniques described above. Contingency plans should be created to minimize loss in the event of their failure. Also, great care should be taken when considering prepayments to such vendors. Tempting discounts may be dangled, but librarians must carefully assess the ratio of risk vs. reward based on sound company research and risk assessment. Some analysts have also suggested the use of escrow accounts and performance bonds for library vendors, but these ideas do not seem to have taken off in the marketplace (West, Wiegand, and Lesher 2005, 304).

Ultimately, there is only so much that libraries can do to strengthen their supply chains and it is possible that warning signs will be missed that are clear in hindsight. It is somewhat depressing to note that questions were raised about the viability of library subscription agents as far back as 1985, almost twenty years before the RoweCom/Faxon bankruptcy and almost thirty years before Swets collapsed (Tuttle 1985). As one observer put it: "… one librarian's early warning sign is another's accounting bobble. Again, if the service remains high quality, the business concerns can sometimes seem small." (Collins et al. 2014, 236).

Although the focus of this article has been on the potential business failure of library vendors, it is at least as likely that the true risk to libraries is not that a vendor will suddenly go out of business, but rather that vendors will change their business models, expand their intellectual property requirements or escalate their pricing structures to our detriment. Absent a major economic downturn, the steady erosion of libraries' buying powers due to exorbitant journal price increases is probably a greater threat to libraries than the chance that a large publisher will suddenly shut down. Or perhaps a key vendor will decide to let its library products atrophy as it focuses on higher margin customers. Future enhancements in open access publishing and open source software may eventually mitigate some of these risks including that of vendor failure, but, in the meantime, librarians will need to remain vigilant.

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