Research Report

Visibility in Organic Search: Why Should Managers and Investors Care about It?

AS WE INCREASINGLY RELY ON SEARCH ENGINES AS AN IMPORTANT SOURCE OF INFORMATION TO SUPPORT OUR DECISIONS, SEARCH ENGINES BECAME AN IMPORTANT VENUE FOR FIRMS TO ATTRACT ATTENTION AND SECURE THE LONGEVITY OF THEIR OPERATIONS. THIS ARTICLE DISCUSSES THE RESULTS OF OUR EMPIRICAL STUDIES ON HOW TO CAPTURE A FIRM'S VISIBILITY IN ORGANIC SEARCH AND HOW IT AFFECTS ITS SHORT- AND LONG-TERM FINANCIAL PERFORMANCE.

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Introduction

The Internet gave us an unprecedented possibility of easily accessing many different sources of information before making any decision. While this increased access to information is generally welcome, the flipside of the coin is that the number of sources available can quickly become overwhelming. For example, a search for "buy running shoes" in Google returns more than 400 million links, making it virtually impossible for a person to browse through all of them. Whether it is to compare among different products, investment opportunities, or corporate business partners, search engines help us to dwell in this territory by working as a sorting mechanism. Search engines aim at placing the most relevant links for us within the top ranks, helping us to sort the wheat from the chaff.

According to Forrester Consulting (2016), more than 70% of B2C (business-to-consumer) customers already use search engines both for discovery and consideration purposes. Similarly, Snyder and Hilal (2015) report that 80% of B2B (business-to-business) customers use search engines to support their business purchase decisions. These results suggest that firms that succeed in being sorted as "wheat" by search engines, i.e., being placed in a top rank, are in a differentiated position of drawing attention to themselves. While it is possible for firms to pay search engines to place their links in top ranks within the sponsored links, organic links still attract the most attention, concentrating about 95% of all clicks (Jerath et al., 2014). As a result, organic search clicks became the most important source of online traffic for firms in several industries in the past years (SimilarWeb, 2016).

Achieving top ranks can enable firms to gain visibility and stand out from the competition, attracting more attention from customers, investors, and potential business partners. Conversely, failing to do so may threaten firms' ability to sustain long-term performance, as highlighted by Overstock's CEO in a recent earnings call: "an unusually large amount of traffic actually comes from SEO [search engine optimization], and [...] when Google sneezes, we catch pneumonia" (Byrne, 2017). Indeed, as ranks in organic search are subject to frequent changes, especially in periods of updates to search engines' algorithms, firms' visibility in organic search can be very volatile, even for large and prominent firms. Figure 1 displays changes to visibility in organic search for Amazon and eBay over four years measured by Searchmetrics' weekly SEO Visibility Index.

Given the increasing pressure on marketing managers to demonstrate the contribution of marketing to a firm's performance and firm value, it is imperative to understand to what extent and through which mechanisms a firm's visibility in organic search impacts its short- and long-term performance.

Visibility in Organic Search

We define a firm's visibility in organic search as a firm's ability to achieve prominent ranks in the organic results of search engines. Therefore, the more prominent the organic

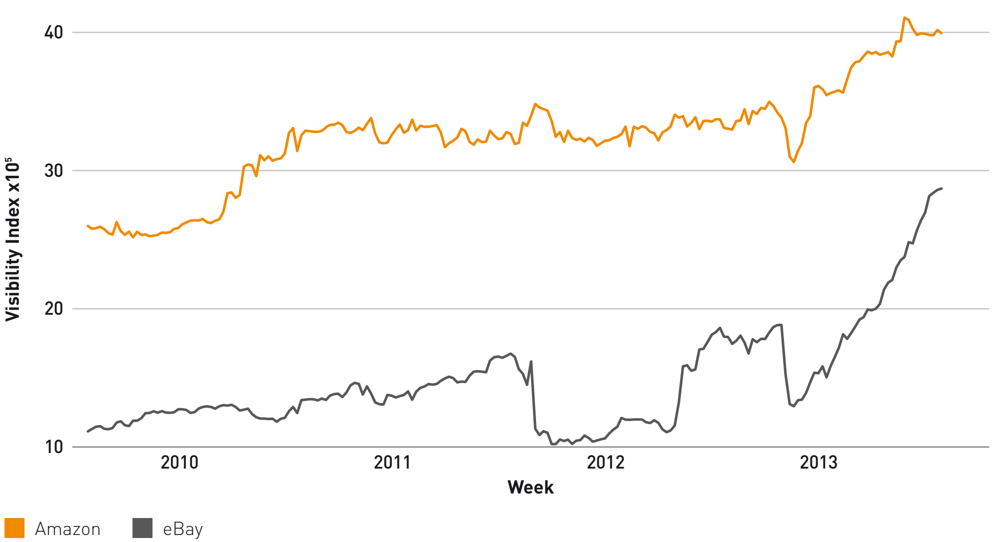

Figure 1: Volatility in Firms' Visibility in Organic Search

search ranks a firm attains for the search terms that are relevant to its business, the higher is its visibility in organic search.

The visibility in organic search should also account for the fact that certain search terms might matter more than others. For instance, Google Trends reports the number of worldwide searches in Google for "running gear" to be over 50 times higher than for "sumo gear". For a retailer, it becomes then more important to achieve prominent ranks in searches related to "running gear" since there is a higher demand for these products. Therefore, the firm rank for "running gear" should have a higher weight in determining the firm's visibility in organic search.

Prior research shows that top ranks in organic search results have higher click-through and conversion rates (e.g., Yang and Ghose, 2010). In addition, Drèze and Zufryden (2004) find that a firm's visibility in search engines affects its overall online visibility. These results suggest that firms with higher visibility in organic search are likely in a better position to attract and convert customers, increasing their customer base. Furthermore, by having their links appearing in more prominent (i.e., more visible) positions, firms can increase the awareness of their brands. As we tend to prefer items on the top of a list regardless of their actual relevance (what is known as position bias), higher visibility in organic search may additionally strengthen our perceptions and associations with the firms' brands. Finally, higher visibility in organic search may help firms to capitalize more than their competitors on periods of economic expansion since higher visibility enables firms to capture a larger share of the increased demand. Conversely, higher visibility in organic search can insulate firms in periods of economic contractions since higher visibility helps firms to stand out from the competition and signals a lower uncertainty to potential customers and investors.

However, some of the outlined effects may also run in the opposite direction. For instance, firms whose brands have a high awareness will likely be considered more relevant by search engines and, as such, have higher visibility. Also, while current visibility affects current click-through rates, past click-through rates are likely to be one of the determinants of current visibility. Because both current and past click-through rates are driven by the unobserved attractiveness of a firm and its brands, it is challenging to measure the entire chain of effects using observational data.

Visibility in Organic Search and a Firm's Performance

While the importance of visibility in organic search is not subject to debate among marketers, it is to date unclear to which extent a higher (lower) visibility in organic search can enhance (hurt) a firm's performance. Even if firms cannot entirely influence their visibility in organic search, as organic ranks are determined by search engines' proprietary algorithms, understanding and quantifying the effects is crucial to aid managers in marketing strategy, risk management, and investment allocation decisions.

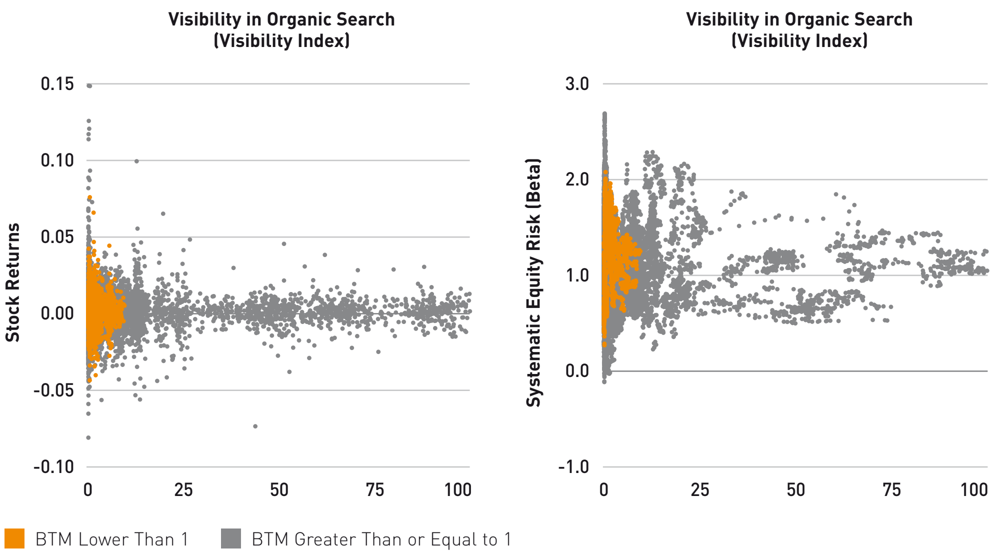

Figure 2: Firms with Higher Visibility in Organic Search Have a Lower Equity Risk

Based on the effects proposed in the previous section, we expect that higher visibility in organic search translates into higher revenues and cash flows. Also, because firms do not need to pay the search engine for organic clicks, firms with a higher share of clicks coming from organic search should be able to generate more profits.

While these effects mostly hinge on the short-term, it is possible that visibility in organic search also enhances firms' long-term value. For instance, by increasing brand awareness and reputation, higher visibility in organic search can lead to more future purchases. In addition, by reducing switching to competition, higher visibility in organic search can reduce the volatility (i.e., the risk) of future cash flows.

Furthermore, by enabling firms to capitalize more in periods of economic expansion and insulating them in periods of economic contraction, visibility in organic search may contribute to reducing firms' systematic equity risk. Systematic risk expresses firms' vulnerability to shocks that affect the whole market, such as a financial crises, wars, or interest rates. It is important because systematic equity risk is difficult to influence and cannot be reduced by portfolio diversification (Madden et al., 2006).

The relationships depicted in Figure 2 suggests that visibility in organic search helps to reduce the overall volatility in a firm's stock returns as well as a firm's systematic equity risk. Whereas these relationships could be partially driven by other intangible assets that are highly correlated with visibility in organic search, they remain after controlling for book-to-market (BTM) ratio. The book-to-market ratio proxies for a firm's share of off-balance sheet assets – a value lower than one indicates a market value higher than the value of the assets recorded in the firm's books.

If the effects of visibility in organic search also extend to future periods, then its long-term value will be less evident according to accounting measures, such as revenue or profit, which are backward looking in nature (Rust et al., 2004).

Therefore, to obtain a full picture of the value of visibility in organic search to firms' shareholders, it is important to focus both on current (e.g., revenue, cash flow) and expected future (e.g., market value, equity risk) performance.

Empirical Results

In a study with more than 1,000 firms of different sizes and industries over almost seven years (Alves Werb et al., 2019), we find that half of the studied firms have the risk of losing up to 54% of their current visibility in organic search within one year, with 95% confidence. We also find that, on average, a 1% loss of visibility in organic search in a given week is associated with a 1.9% revenue loss within the next 4 weeks.

The results of another study with 127 publicly listed firms from the S&P 500 Index (Alves Werb, 2019) suggest that a 1% improvement in a firm's visibility in organic search leads, on average, to a 0.01% increase in shareholder value, after controlling for firm-specific risk factors, market-wide and industry-specific shocks. For a typical firm in the analyzed sample, a 1% improvement in visibility in organic search translates into approximately USD 2.1 million more returns for shareholders in the long-term. The results of the second study also indicate that a firm's visibility in organic search substantially reduces a firm's systematic equity risk, also known as beta (-0.02984, $p < 0.01$).

Implications for Marketing Managers and Investors

Overall, we find theoretical and empirical evidence that a firm's visibility in organic search is a valuable marketing asset with long-term benefits. The measured effects suggest that managers should closely monitor and report the evolution of firms' visibility in organic search, as well as consider the risk of losing visibility in risk management policies.

In addition, losses (gains) of visibility in organic search can help managers to detect the early stages of a decreasing (an increasing) customer interest in the firm's brand and products. Managers can then use these signs to set in motion actions to understand the reasons behind such a shift in a timely manner. Furthermore, given the evidence that visibility in organic search drives shareholder value above and beyond current period performance, the findings suggest that investing in SEO can make financial sense to promote shareholder value.

For investors, the findings suggest that, all else being equal, they should rate downward the stocks of firms that are affected by visibility losses in organic search. In addition, investors could potentially reduce their exposure to the overall market risk by investing in "organic search winning" firms. In particular, given that many SEO monitoring tools provide a measure of a firm's visibility on a granular level (usually daily or weekly), monitoring this metric should come at a rather low cost, nevertheless providing valuable information.

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