Can your valuation be improved?

New research on diversification discounts can help conglomerates manage their portfolio strategy.
New research from KPMG reveals that financial disparity among business units contributes to a business’ diversification discount. Business leaders need to understand how companies with multiple business units that have one or more disparate financial characteristics (e.g. growth rate) may be exposed to a higher diversification discount than those without.
Introduction

In 1995, two academic researchers (Philip Berger and Eli Ofek) introduced the concept of the “diversification discount” and demonstrated that conglomerates with differing businesses were frequently undervalued. They estimated what each of the company segments would have been worth had they operated as stand-alone businesses, then compared the sum of these imputed segment values to each company's actual market capitalization. Companies whose market caps were lower than their imputed market values were said to be operating with a diversification discount. They found that, on average, these companies operated at a 13–15 percent discount relative to the sum of their parts. These findings had two significant implications: (1) companies might be making strategic choices that were leading them to be undervalued by investors and (2) companies might be able to take strategic steps to tackle this undervaluation.

Since then, there has been much debate on this topic in both the academic and the business communities. Economists have argued about the magnitude of the diversification discount and its variance over time, across geographies, and across industries. The business community has also debated the factors that might cause the diversification discount, such as the decision to diversify in and of itself, the choices that managers make concerning which businesses to invest in, and the extent to which reported data on segments accurately reflects their operational and financial performance.

More recently, activist investors have been pushing the idea that simply divesting or spinning off divergent businesses can significantly lessen a conglomerate’s discount. Most management teams recognize that they have to consider the potential valuation discount when strategizing about maintaining or increasing the diversity of their corporate portfolio. But, they have received relatively little guidance on specifically what factors to consider and how to analyze this problem relative to other strategic portfolio considerations.

Working in conjunction with Professor Emilie R. Feldman at the Wharton School, KPMG has produced new research that sheds insight on the portfolio strategy topic. Based on observations working with many client companies, we hypothesized that a disparity of financial characteristics among the business units within a corporate portfolio would be correlated with the size of the diversification discount. We conducted a rigorous set of statistical data analyses to test this thesis.

Our research demonstrates the hypothesis that financial disparity among business units is significantly correlated with the diversification discount.

These findings have practical implications for managers contemplating the valuation consequences of portfolio changes through both acquisitions and divestitures.

The financial characteristics analyzed in this study were:

- **Growth rates**: Business units with very different growth rates (fast or slow)
- **Profitability profiles**: Business units with very different profitability profiles (high or low)
- **Asset intensity**: Business units with very different capital / asset intensities (heavy or light)

---

2Emilie R. Feldman is an associate professor of Management at the Wharton School of the University of Pennsylvania. Her research focuses on corporate strategy and governance, with particular interest in the internal functioning of multibusiness firms and the role that divestitures, spin-offs, and mergers and acquisitions play in corporate reconfiguration.
Financial disparity as an explanation for the discount

Most corporations have a working model regarding how their strategies link to their valuations. That model is generally reflected in their definition of acceptable operating performance ranges and how they allocate capital. Similarly, external securities analysts (both buy-side and sell-side) use a simplified financial model to value corporations. These models inform shorthand metrics for expected financial ratios and valuation multiples.

Business units whose financial characteristics deviate from their prevailing corporate model have the potential to be undervalued by investors and analysts. This can occur because the investors’ application of the prevailing financial model does not accurately value the disparate units or because investors anticipate that financially dis-similar units will lead to sub-optimal capital allocation.

To test our thesis, we conducted a rigorous statistical analysis, which included the following steps:

1. Gathered quarterly Capital IQ data from 1999 to 2016 on almost 750 companies with greater than $200 million in market capitalization and reporting at the segment level (excluding companies operating in the financial services industry)

2. Calculated the diversification discount for each company

3. Defined metrics for three types of financial disparity amongst segments within a firm (growth rate, profitability, and asset intensity)

4. Calculated the disparity metrics for each segment / year in the population

5. Tested whether financial disparity was significantly correlated with the size of the diversification discount.³

Our results showed a large correlation between the diversification discount and the existence of financial disparity among business units. Within our sample, consistent with prior research, the average diversification discount for multisegment firms was 15 percent. Within that population, multisegment firms that did not meet our criteria for any dimension of financial disparity had a much smaller diversification discount, an average of 4 to 5 percent. Conversely, firms that registered one or more measures of financial disparity between segments had a much larger diversification discount.

In fact, our research found that the greater the points of financial disparity, the greater the discount:

— 12 to 20 percent for firms having one measure of disparity across segments

— 20 to 28 percent for firms having two measures of disparity across segments

— 33 percent for firms having all three measures of disparity across segments

³The statistical methods are described in detail at the end of the article.
Professor Feldman explains, “For various reasons, companies often end up operating in sets of businesses that are not fully valued by investors. The concept of the diversification discount is a particularly interesting one because it provides a concrete and concise way of quantifying the magnitude of a problem faced by many management teams. Conventional wisdom holds that companies that operate in diverse businesses face a significant diversification discount. KPMG’s research is a very exciting development and an important contribution to the field because it introduces a novel factor—financial disparity across business segments—that appears to be strongly correlated with the diversification discount. We now have a better understanding for why the discount exists.”

In addition to contributing to the academic research, these findings have important implications for business leaders. KPMG Principal Alex Miller notes, “This research provides management teams with a new way of thinking about portfolio decisions by raising the possibility that financial disparity, rather than divergent business sectors, may cause the market to undervalue their companies. It also provides corporate strategists with an actionable set of tools, from changing investor communications to divesting financially disparate businesses, as a way to unlock value.”

The greater the number of financial disparities, the deeper the discount

The data represents the mean observed discounts by financial disparity characteristic(s).
Implications for corporate portfolio strategy

While not all companies whose business units exhibit financial disparity may be undervalued by the market, management should be aware that financial disparity may be as important or even more important a factor than sector diversification when examining their companies stock performance.

According to KPMG Principal Todd Dubner, “Companies should use these new insights to identify elements of their firm’s portfolio that are financially disparate, especially those relating to growth rates, profitability, and capital intensity for a better understanding of both their valuations and strategic options.”

In summary, if both a discount and financial disparity is found, management teams should consider strategies to tackle their diversification discount.

1 **Business management:** Develop strategies to shift and better align performance of operating units and/or to re-align capital alignment across the portfolio.4

2 **Investor communication:** Refine Investor Relations strategies to ensure segment reporting, investor presentations, and other communications provide adequate information to enable investors and analysts to understand how to fully value disparate units.5

3 **Changes to the portfolio:** Develop new portfolio management strategies and define associated divestiture or acquisition plans to craft a better-aligned and higher-valued portfolio.6

---

4 For example, Feldman (2016) and Gertner, Powers, and Scharfstein (2002) showed that capital resources may not be allocated as efficiently as they should be in multibusiness firms. These findings support the recommendation that internal changes could help reduce the diversification discount in companies with financially disparate business units.

5 For example, Villalonga (2004) showed that a lack of clarity in how companies report financial data on their business segments is correlated with a larger diversification discount, and Feldman, Gilson, and Villalonga (2014) showed that companies may be undervalued by investors when analysts have less information available to them about the multibusiness firms that they cover. These findings support the recommendation that communication changes could help reduce the diversification discount in companies with financially disparate business units.

6 For example, Feldman (2014, 2016) showed that investors respond favorably to divestiture and spin-off announcements that are made by large, diversified companies, and McConnell, Sibley, and Wu (2015) found that companies that undertake spinoffs, as well as the businesses they spin off, outperform comparable benchmark portfolios. These findings support the recommendation that structural changes could help reduce the diversification discount in companies with financially disparate business units.
Notes on statistical research methods

Valuation and calculation of the conglomerate discount

The discount for each multi-segment company was calculated based on the difference between its market value and a sum of the parts buildup of the estimated market value of its individual segments. To do this, each segment was valued using an enterprise value to asset value multiple based on the median multiple for single business companies operating in the segment in the year being evaluated.

Defining disparity

The three disparity metrics were defined by the percentage difference between a segment and the company-level values in terms of growth rates, profitability, and capital intensity in a year. For each of the three financial characteristics, we quantify a “normal” range of the percentage difference based on its distribution across all companies in the sample. The normal range was defined by starting with the first and third quartile points, and extending each of them outward by 1.5 times the interquartile range. A company was classified as disparate for each metric if it has at least one segment outside of the range in the year being evaluated.

Estimating the impact of disparity

The effect of disparity on diversification discount was quantified by running a linear regression with year, industry, and company asset as control variables. All disparity metrics were statistically significant with P value less than 0.05, which lead to the conclusion that disparity between a company’s business units is predictive of how much the company is undervalued. We also tested different control variables and thresholds for disparity, which produced similar results. Increasing the threshold for disparity resulted in larger coefficients for the disparity variables, indicating the greater disparity is correlated with a larger valuation discount.
About the authors

**Todd Dubner** is a principal in KPMG’s Corporate Strategy Group. Todd has more than 25 years of experience in strategy and corporate development and has advised clients in industrial manufacturing, transportation & logistics, consumer products and media & entertainment sectors on growth strategies, business transformations, performance improvements and organizational effectiveness topics.

**Professor Emilie R. Feldman** is an Associate Professor of Management (with tenure) at the Wharton School of the University of Pennsylvania. Professor Feldman’s research focuses on corporate strategy and governance, with particular interests in the internal functioning of multibusiness firms and the role that divestitures, spinoffs, and mergers and acquisitions play in corporate reconfiguration.

**Eric Shapiro** is a director in KPMG’s Corporate Strategy Group. He has substantial experience in the automotive and diversified industrial sectors. He specializes in growth strategy, strategic planning, and business due diligence.

**Tom Pernsteiner** is a retired partner in KPMG’s Corporate Strategy Group. He supported corporate and Private Equity clients facing portfolio strategy questions.

**Ramahi Sarma-Rupavtarm** is a Director in KPMG Strategy’s M&A Services Group. He specializes in organic and inorganic growth strategy development for corporate and Private Equity clients.

We would like to thank our contributors: **Yan Chen** and **Tipton Horn**
About KPMG

KPMG Strategy provides a new perspective on how to design and implement strategies that win in today’s market. Our professionals help organizations and executive teams change, grow, adapt, shape and respond to disruptive forces. We support organizations in defining their ambition and executing innovative organic and inorganic strategies to redefine “where they play” and “how they win”. Through proprietary solutions, leading industry perspectives, advanced data and analytics, and interlock across KPMG service lines, we support our clients where they are in their journey, helping them realize value from “innovation to results”.

For more information, please contact:

Todd Dubner  
Principal, Corporate Strategy  
212-954-7359  
tdubner@kpmg.com

Tom Mayor  
Lead, Industrial Manufacturing  
216-875-8061  
tmayor@kpmg.com

Andy Steinhubl  
Lead, Energy & Natural Resources  
713-319-2614  
asteinhubl@kpmg.com

Alex Miller  
U.S. Service Leader, Strategy  
312-665-1325  
amiller@kpmg.com

Talley Lambert  
Lead, Corporate Strategy  
404-739-5685  
talleylambert@kpmg.com

Per Edin  
Lead, Technology, Media & Telecom  
408-367-8628  
pedin@kpmg.com

Some of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

kpmg.com/socialmedia

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

© 2018 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.