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Business Model Transformation: *Merger Activity of Low-tech Firms*

MARG, together with Porsche Consulting, has studied the merger activity of low-tech firms around the world. The collaborative research initiative highlights that low-tech firms show an increasing appetite for transformative deal acquisitions. In 2020 one out of five deals was transformative in nature. In a deep-dive, a sectoral study examining large car manufacturers, the research documents that these transformative deals can pay off for low-tech firms.

Motivation and setting

How do firms transform their business models to adapt to external influences, and what are the consequences? Understanding the extent and effect of *business model transformation* is important for businesses as well as society. Challenged by digitalization and disruptive technologies as well as rapidly changing customer behavior, many firms need to adapt and transform their business model to survive in the long run.

Many firms consider acquisitions as a fast and most direct way to achieve transformation. Indeed, disruption often originates from transformative M&A deals, i.e., deals that provide access to new technologies and know-how. As such, the research examined merger activity of low-tech firms as a means to enable transformation of these firms.

> Firm's willing to actively transform their business often engage in transformative deals and use the target firm as a focal point for business transformation.

Do low-tech firms engage in transformative deals?

As illustrated in Figure 1, the deal activity of low-tech firms displays the expected cyclicality, with only a limited impact of Covid-19: From 2019 to 2020, the number of announced deals decreased by only some 10%.

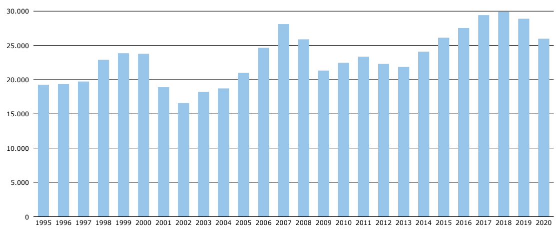

Figure 1: *M&A deals announced by low-tech firms over time*

With respect to transformative deal activity, Figure 2 illustrates that low-tech firms show an increasing appetite for transformative acquisitions. For instance, the proportion of intended transactions referring to "digital," "software," or "platform" is soaring. In 2020 one out of seven intended M&A activities referred to that. Specifically, deals referring to "platform" technologies gained momentum in recent years. In 2020, one out of 20 deals referred to "platform". Overall in 2020, one out of five deals was transformative.

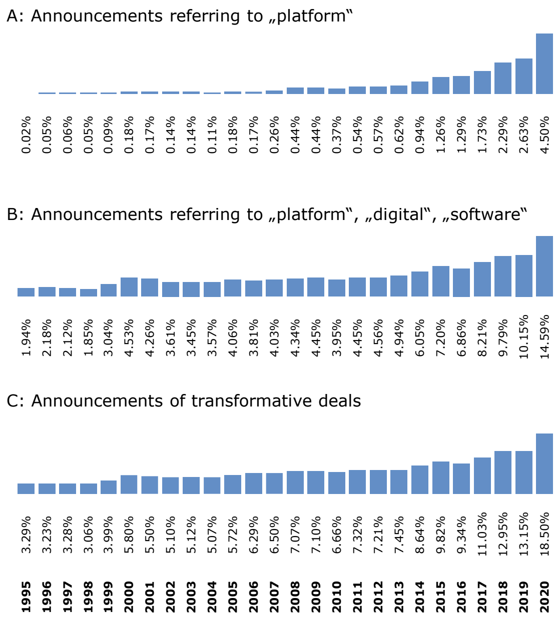

Figure 2: *Transformative deals announced by low-tech firms*

Do transformative deals pay off? Evidence from car manufacturers

Interested in the consequences of transformative deal activity, the research studied 24 large car manufacturers from around the world. Over the sample period from 2005 to 2020, the proportion of transformative deals has increased from 1% to 37%. Thereby, a key contributing factor was the proportion of "software-related" deals, which has increased from 0% to 19%.

Regarding the consequences, Figure 3 illustrates that large car manufacturers with a high transformation activity level show higher market-to-book ratios and lower downside risk, suggesting that transformative deal activity can pay off.

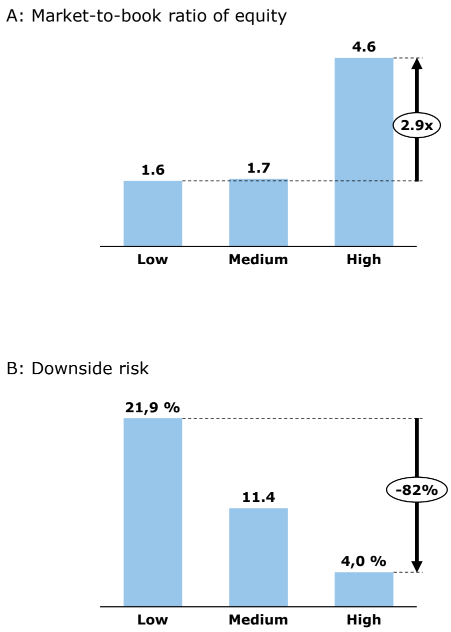

Figure 3: *Consequences of transformative deals for large car manufacturers*

Research design

The research examined all acquisition announcements by listed and unlisted firms from Europe (EU 17), Japan, and the US during the period 1995-2020. Interested in low-tech firms, a total of 604,137 deal announcements have been identified and analyzed. To identify transformative deals, the research utilizes textual analysis techniques. Based on a list of expressions, characterizing digital and emerging technologies, and studying the deal synopsis as well as the target firm's business model description, the research has identified 46,004 transformative deals (7.24% of all deals). Regarding the sectoral analysis, the research analyses a total of 994 announced deals of 24 large car manufacturers from around the world (incl. countries like South Korea) over the period 2005-2020.

About the collaboration

The research initiative was in collaboration with Pschemyslav Pustelniak, Dr. Philipp Schaller, and Jens Pfeifer (all from the Finance Practice of Porsche Consulting).

About the researchers

Three MARG researchers have contributed to this research: **Prof. Dr. Marc Steffen Rapp** (Head of the MARG and Scientific Co-Director of MACIE; e-mail: rappm@uni-marburg.de), **Markus Fütterer**, M.Sc. (Researcher at MARG), and **Michelle Schlosser**, M.Sc. (Researcher at MARG).

About the figures

Figure 1 documents the (per year) deal activity, measured in terms of deal announcements of low-tech firms over time as identified by the research. Figure 2 documents the (per year) deal activity regarding selected types of deals (Panel A: Platform deals; Panel B: Deals referring to "platform," "digital," or "software"; Panel C: All transformative deals). Figure 3 documents the consequences of transformative deal activity in terms of market-to-book ratio (Panel A) and downside risk (Panel B), where firms are grouped according to their relative transformative deal activity (cutoff rate: 25% and 75%).