

A Financial Capitalism Perspective on Start-up Acquisitions: Introducing the Economic Goodwill Threshold Test

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Abstract

This paper discusses the acquisition of start-ups by major technology firms. Such transactions pose a significant anticompetitive threat, yet often escape competition scrutiny because they fail to trigger merger notification threshold tests. Alongside a financial analysis of historic acquisitions by Google, Apple, Facebook, Amazon and Microsoft, the paper introduces a new threshold test—the economic goodwill test. The economic goodwill test is concerned with the value of a target’s net tangible assets as a proportion of total transaction value. The difference between these figures largely represents the gains an acquirer expects to realise from a strengthened competitive position, therefore reflecting the logic driving the mass acquisition of technology start-ups. Although a specific triggering figure is not prescribed, the economic goodwill test represents a useful innovation that could bring potentially anticompetitive start-up acquisitions under substantive merger review. More broadly, the paper argues start-up acquisitions are representative of the difficulties that competition law faces governing economic activity in the era of financial capitalism. The modern financial system creates a strong bridge between the present and the distant future. This enables firms to engage in future-oriented competitive strategies that challenge competition law’s static approach.

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1. Introduction

In recent decades, hundreds of nascent enterprises in the digital economy have been acquired by major technology firms. Between 1987 and 2019, Google, Apple, Facebook, Amazon and Microsoft (GAFAM) acquired over 700 companies.¹ There have been over 430 acquisitions in the last ten years alone.² We are in the midst of a merger wave rivalling that which engulfed the American economy between 1895 and 1904.³

Acquisitions in the digital economy are typically characterised by astronomical transaction values, especially relative to the stature of the acquired firm—targets are typically young, lacking in tangible assets and yet to earn significant revenues.⁴ Prominent examples include Google's purchase of YouTube for \$1.7 billion in 2006,⁵ Microsoft's purchase of LinkedIn for \$26 billion in 2016,⁶ and Facebook's purchase of Instagram for \$1 billion in 2012, and WhatsApp for \$19 billion in 2014.⁷

The acquisition of a nascent firm by an established firm may be viewed positively. The latter may provide the skills, finances and other assets necessary to commercialise the former's ideas.⁸ Moreover, the opportunity to be acquired by incumbents is a recognised element of the venture capital system—by providing an exit route, start-up acquisitions incentivise not only entrepreneurs but also early-stage investment.⁹

For these reasons, it is reasonable to suggest that many acquisitions witnessed in recent years have been efficiency-enhancing, while also creating an investment-for-buyout mechanism that has induced venture capital to invest heavily in digital start-ups. Moreover, it is likely that some acquired firms would have failed absent acquisition.¹⁰ Yet, there is another, more sceptical, perspective on the digital merger wave.

On this view, dominant firms acquire start-ups to maintain and strengthen their competitive positions, to the detriment of consumers and society. The acquiring party may simply terminate the business operations of the acquired firm—a so-called 'killer acquisition'—or otherwise use the acquisition to enhance its market power.¹¹ The present paper adheres to this more wary position.

¹ Diana L Moss, 'The Record of Weak US Merger Enforcement in Big Tech' (American Antitrust Institute White Paper, July 2019) <https://www.antitrustinstitute.org/wp-content/uploads/2019/07/Merger-Enforcement_Big-Tech_7.8.19.pdf> accessed 18 June 2020, 4.

² Elena Argentesi, Paolo Buccrossi, Emilio Calvano, Tomaso Duso, Alessia Marrazzo and Salvatore Nava, 'Ex-post Assessment of Merger Control Decisions in Digital Markets' (Competition and Markets Authority Report, May 2019) 31.

³ During this period, more than 1800 companies disappeared through combining with competitors. Consequently, almost every sector of the American economy came under the control of a single monopolist. See Naomi R Lamoreaux, *The great merger movement in American business, 1895-1904* (Cambridge University Press 1988) 2.

⁴ Argentesi et al (n 2).

⁵ Kevin Allison, 'Google to buy YouTube for \$1.65bn' *Financial Times* (London, 9 October 2006).

⁶ Pan Kwan Yuk, 'Microsoft to buy LinkedIn in \$26.2bn deal' *Financial Times* (London, 13 June 2016).

⁷ Richard Waters and Chriss Nuttall, 'Facebook to buy Instagram for \$1bn' *Financial Times* (London, 9 April 2012); Hannah Kuchler and Tim Bradshaw, 'Facebook buys WhatsApp in \$19bn deal' *Financial Times* (London, 20 February 2014).

⁸ Marc Bourreau and Alexandre de Streel, 'Digital Conglomerates and EU Competition Policy' (March 2019) <<http://www.crid.be/pdf/public/8377.pdf>> accessed 30 October 2019.

⁹ See Sai Krishna Kamepalli, Raghuram G Rajan and Luigi Zingales, 'Kill Zone' (2020) NBER Working Paper No 27146 <<https://www.nber.org/papers/w27146>> accessed 11 June 2020; Mark A Lemley and Andrew McCreary, 'Exit Strategy' (2020) Stanford Law and Economics Olin Working Paper 542 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3506919> accessed 11 June 2020.

¹⁰ Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, 'Competition policy for the digital era' (European Union 2019) (the 'Panel of European Experts Report' hereinafter).

¹¹ See Section 2.

Despite gaining substantial attention from the competition law community and beyond,¹² few start-up acquisitions have been subjected to merger review and none prohibited.¹³ Merger control has been largely unable to reach such transactions for two principal reasons. First, due to the small financial stature of many start-ups, many transactions fail to satisfy merger notification threshold tests.¹⁴ Second, the substantive legal test employed in substantive merger review is primed to govern transactions based on actual competition and struggles to deal with issues of potential future competition.¹⁵ This paper explores the first of these hurdles.¹⁶

Based on an understanding of the financial context in which start-up acquisitions take place, a new threshold test is proposed—the ‘economic goodwill’ test. The economic goodwill threshold test is a proportion-based test, concerned with a target’s net tangible assets as a proportion of transaction value. The paper argues that the difference between net tangible assets and transaction value principally represents the gains the acquirer expects to realise from its strengthened competitive position (notwithstanding the value of intangible assets). Therefore, the economic goodwill test reflects the logic driving killer acquisitions.

To support this claim, the paper conducts a financial analysis of the major transactions noted in GAFAM Securities and Exchange Commission (SEC) filings between 2004 and 2019. This study finds that, on average, acquired firms had very few tangible assets. Therefore, the typical transaction value is based almost entirely on incorporeal factors. Naturally this includes the value of intangible assets, such as intellectual property rights. Centrally, however, the paper argues that it also represents the additional expected profit GAFAM expect to realise from subduing future competition and/or strengthening market power.¹⁷

A precise numerical threshold for the economic goodwill test is not prescribed. Rather, the paper introduces the test as a conceptual advancement in our understanding of start-up acquisitions and as a practical tool to aid competition law enforcement. The precise percentage of net-tangible-assets-to-transaction-value that would trigger substantive merger review is a normative decision for competition authorities to make—the higher the proportion of net tangible assets to transaction value, the stricter the test.¹⁸

More broadly, the paper argues that the mass acquisition of start-ups is representative of the difficulties competition law faces governing economic activity in the era of financial capitalism. The liberalised modern financial system creates a strong bridge between the present and the distant future. This enables firms to engage in competitive strategies that fundamentally challenge competition law’s static approach.¹⁹

The remainder of the paper is organised as follows. Section 2 articulates the anticompetitive threat posed by start-up acquisitions. Section 3 makes use of an institutional economics concept known as

¹² See Jason Furman, Diane Coyle, Amelia Fletcher, Derek McAuley and Philip Marsden, ‘Unlocking digital competition: Report of the Digital Competition Expert Panel’ (March 2019); BRICS Competition Law and Policy Centre, ‘Digital Era Competition: A BRICS View’ (September 2019) (the ‘BRICS Report’ hereinafter); Stigler Committee on Digital Platforms, ‘Final Report’ (September 2019) (the ‘Stigler Center Report’ hereinafter); OECD Secretariat, ‘Start-ups, Killer Acquisitions and Merger Control – Background Note’ (12 May 2020) <[https://one.oecd.org/document/DAF/COMP\(2020\)5/en/pdf](https://one.oecd.org/document/DAF/COMP(2020)5/en/pdf)> accessed 17 June 2020; Gilad Edelman, ‘Why the FTC Wants to Revisit Hundreds of Deals by Big Tech’ (Wired, 12 February 2020) <<https://www.wired.com/story/ftc-special-order-review-big-tech-killer-acquisitions/>> accessed 10 June 2020.

¹³ Note some competition authority action on the subject, particularly in the United Kingdom and Australia. See, Competition and Markets Authority, ‘PayPal Holdings, Inc / iZettle AB merger inquiry’ (20 September 2018) <<https://www.gov.uk/cma-cases/paypal-holdings-inc-izettle-ab-merger-inquiry>> accessed 17 June 2020; Australian Competition & Consumer Commission, ‘Google LLC proposed acquisition of Fitbit Inc’ (18 June 2020) <<https://www.accc.gov.au/public-registers/mergers-registers/public-informal-merger-reviews/google-llc-proposed-acquisition-of-fitbit-inc>> accessed 18 June 2020.

¹⁴ See Section 4.

¹⁵ Giulio Federico, Fiona Scott Morton and Carl Shapiro, ‘Antitrust and Innovation: Welcoming and Protecting Disruption’ (2019) NBER Working Paper No 26005 <<https://www.nber.org/papers/w26005.pdf>> accessed 31 October 2019.

¹⁶ While the substantive legal test applied to start-up acquisitions is crucially important, it is beyond the scope of the paper. For an analysis of substantive merger and its limitations in the killer acquisition scenario, see *ibid* and Mark Glick and Catherine Ruetschlin, ‘Big Tech Acquisitions and the Potential Competition Doctrine’ (2019) Institute for New Economic Thinking Working Paper No 104 <<https://www.ineteconomics.org/uploads/papers/WP-104-Glick-and-Reut-Oct-10.pdf>> accessed 31 October 2019.

¹⁷ See Section 4.

¹⁸ *ibid*.

¹⁹ See Section 3.

futurity to explore the financial dimension of start-up acquisitions. Building on this, Section 4 introduces the economic goodwill threshold test and analyses GAFAM SEC filings. The final section concludes.

2. The Anticompetitive Threat of Start-up Acquisitions

Characterising start-up acquisitions and their anticompetitive threat is a contentious issue. Some commentators use the term ‘killer acquisition’ to denote any acquisition of a start-up by a major established firm. Others reject this label altogether. To circumvent such distracting debate, the present paper offers a brief typology of start-up acquisitions that readers will hopefully find both clear and fair.

We may distinguish between two types of start-up acquisitions: killer acquisitions and digital conglomerate acquisitions. Killer acquisitions are those in which the business operations of an acquired firm are terminated by its acquirer. Digital conglomerate acquisitions are those in which the acquired firm is integrated into the acquirer’s ecosystem. Each are addressed in turn below. Note, however, that ‘killer’ or not, start-up acquisitions present a potent anticompetitive threat.

A. Killer acquisitions

In an influential working paper, Colleen Cunningham, Florian Ederer and Song Ma coined the phrase ‘killer acquisitions’ and empirically demonstrate that incumbents often acquire innovative start-ups only to discontinue their innovative activities, pre-empting potential future competition.²⁰

Cunningham, Ederer and Ma provide systematic empirical evidence for the prevalence of the killer acquisitions by tracking the development of more than 35,000 pharmaceutical drug projects. Specifically, the authors argue that killer acquisitions arise from incumbents seeking to protect the profits they enjoy from their existing products. Overall, Cunningham, Ederer and Ma estimate that approximately 6.4 per cent of all acquired firms in their sample were discontinued.²¹

The authors proceed to show that killer acquisitions have a deleterious effect on innovation.²² This arises out of the replacement effect, first articulated by Kenneth Arrow, whereby the incumbent that acquires an innovative start-up has weaker incentives to continue developing the start-up’s projects compared to the standalone entrepreneur if the entrepreneur’s projects overlap with the incumbent’s existing products or projects.²³

Therefore, killer acquisitions prevent innovation that may otherwise reduce the profits of the incumbent.²⁴ Moreover, by pre-emptively removing the threat of competitive entry, an incumbent’s incentive to innovate is diminished as it has less need to improve its products in order to protect its market position.²⁵ Cunningham, Ederer and Ma estimate that eliminating killer acquisitions would raise drug project development rate by almost five per cent.²⁶

Such a pattern can be observed in the digital economy too. Facebook, for instance, has closed almost half of its acquired firms.²⁷ Examples include Divvyshot and Lightbox, photo app start-ups acquired by Facebook in 2010 and 2011, respectively. These firms were closed soon after acquisition, being potential rivals to Instagram which Facebook purchased in 2012.²⁸

²⁰ Colleen Cunningham, Florian Ederer and Song Ma, ‘Killer Acquisitions’ (2018) SSRN Electronic Journal, available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3241707> accessed 23 April 2020.

²¹ *ibid.*

²² *ibid.*

²³ See Kenneth Arrow, ‘Economic Welfare and the Allocation of Resources to Invention’ in Universities-National Bureau Committee for Economic Research, Committee on Economic Growth of the Social Science Research Council, *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press 1962).

²⁴ Cunningham et al (n 20).

²⁵ Jonathan B Baker, *The Antitrust Paradigm: Restoring a Competitive Economy* (Harvard University Press 2019), 160-163.

²⁶ Cunningham et al (n 20).

²⁷ Tommaso Valletti, ‘Big fish eat small fish - our monthly reminder’ (Twitter, 19 November 2019) <<https://twitter.com/TomValletti/status/1196696614594891776>> accessed 19 November 2019.

²⁸ Glick and Ruetschlin (n 16).

In this way, killer acquisitions pose a threat to the quantity of innovation in the digital economy. Furthermore, killer acquisitions may cause a further, subtler, distortion to the innovative process. In addition to reducing rate of innovation, killer acquisitions may negatively affect the qualitative nature of innovation.

Clearly, being acquired by a major incumbent for a vast sum is an attractive proposition for many start-ups. Arguably, this incentive to be acquired means that start-ups do not pursue disruptive innovation that might permit them to compete with incumbents. Rather, nascent firms strive to create products similar to those already in existence and that pose greatest threat to incumbents' profits. That is, in order to extract a lucrative pay-day, start-ups create products so as to place them in the crosshairs of incumbents.

The trend towards so-called 'me too' innovation is clear in the pharmaceutical sector. Rather than pursue novel research and development to produce therapeutic drugs that meet actual healthcare needs, pecuniary motivations drive pharmaceutical products to routinely imitate one another.²⁹ Although this is an under-researched topic, it is possible that a similar phenomenon affects the digital economy also.³⁰ If so, the start-up acquisition phenomenon may be incentivising a generation of sub-optimal innovation that coddles rather than disrupts existing digital markets.

B. Digital conglomerate acquisitions

The above notwithstanding, pure 'killer' acquisitions are likely not the primary anticompetitive concern in the digital economy. Rather, digital conglomerate acquisitions seem to be the key threat. Instead of terminating acquired firms to avoid profit cannibalisation, GAFAM typically absorb start-ups into their digital 'ecosystems'. In doing so, they create a presence across multiple value chains, enhance data-related economies of scale and leverage customers from adjacent markets towards their core market.³¹

GAFAM's mass acquisition of start-ups has driven a conglomeration movement not witnessed since the 1960s and 1970s.³² At this time, faced with strict antitrust enforcement, industrial firms expanded into unrelated or weakly related markets through conglomerate mergers.³³ These sprawling firms have long since disappeared,³⁴ yet conglomeration has now reappeared in the form of the five largest technology companies.³⁵

Facebook again provides a good example. Since the firm's founding in 2004, it has acquired over 90 companies. Facebook's targets largely did not compete with its core offering of social networking. Rather, they typically competed in tangential markets to social networks. Prior to acquisition, Facebook's two best known acquisitions, Instagram and WhatsApp, could have been characterised in this manner.³⁶

Through rapidly scaling up in adjacent markets, Instagram and WhatsApp were arguably poised to challenge Facebook's dominant position in social networking. Instead, Facebook removed this potential competitive threat by acquiring them, while also drawing WhatsApp and Instagram users into the

²⁹ See Hannah E Kettler, *Competition Through Innovation, Innovation Through Competition* (Office of Health Economics 1998); Mariana Mazzucato, 'High cost of new drugs' (2016) 354 *British Medical Journal* 1; Mariana Mazzucato and Victor Roy, 'Rethinking Value in Health Innovation: from mystifications towards prescriptions' (2017) UCL Institute for Innovation and Public Purpose Working Paper 2017-04 <https://www.ucl.ac.uk/bartlett/public-purpose/sites/public-purpose/files/iipp_working_paper_rethinking_value_in_health_innovation_1.pdf> accessed 4 November 2019.

³⁰ Tellingly, Mark Lemley and Andrew McCreary suggest the venture capitalists who back tech start-ups have a 'pathological' desire to be bought out by incumbents. See Lemley and McCreary (n 9), 1.

³¹ Panel of European Experts Report (n 10); Furman Report (n 12).

³² Bourreau and de Stree (n 8); Yong Lim, 'Tech Wars: Return of the Conglomerate - Throwback or Dawn of a New Series for Competition in the Digital Era?' (2017) SSRN Electronic Journal, available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3051560> accessed 18 November 2019.

³³ See John Kenneth Galbraith, *The New Industrial State* (Hamish Hamilton 1967).

³⁴ Gerald F Davis, Kristina A Diekmann and Catherine H Tinsley, 'The Decline and Fall of the Conglomerate Firm in the 1980s: The Deinstitutionalization of an Organizational Form' (1994) 59(4) *American Sociological Review* 547.

³⁵ See Andrew Ross Sorkin, 'Conglomerates Didn't Die. They Look Like Amazon' *The New York Times* (New York 19 June 2017).

³⁶ Panel of European Experts Report (n 10).

Facebook ecosystem.³⁷ Today, 2.7 billion people use at least one Facebook ecosystem offering each month.³⁸

Through acquiring firms in markets distinct or tangential to their own core market, large technology companies have become highly diversified conglomerates. For instance, Amazon's offering has expanded from online book selling to cloud computing, payment services, and television production and distribution. Similarly, Google has evolved from a search engine to producing mobile phones and personal computers, amongst other lines.³⁹

Conglomerate mergers are not ordinarily thought to be a major concern for competition law as they are believed to provide substantial scope for efficiencies.⁴⁰ Yet, the digital economy has unique characteristics that render such an approach overly permissive. Specifically, digital platforms benefit from network effects and strong economies of scale and scope that act as concentrating forces and lead to market tipping, whereby a winner takes most of the market.⁴¹

Although digital markets also possess some features that could undermine network effects, such as consumers' ability to multi-home, concentrating forces predominate.⁴² Market concentration may be advantageous so long as the efficiencies associated with economies of scale and scope and network effects are sufficiently shared with consumers. However, in the absence of competition in the market, consumers will only benefit if incumbents face competition *for* the market and the possibility of being displaced by entrants.⁴³

Therefore, the capacity of new entrants to access a market is vital in digital markets characterised by network externalities and economies of scale that catalyse tipping and a winner takes most dynamic.⁴⁴ Clearly start-up acquisitions further reduce competition for the market by removing potential entrants. Additionally, through allowing incumbents to combine network externalities with their targets and also benefit from greater data-related economies of scale, start-up acquisitions intensify the concentrating forces inherent to digital markets.⁴⁵

Despite oft-repeated claims that competition is 'just a click away', competition for the market is not vibrant.⁴⁶ The market positions enjoyed by GAFAM have not been eroded over time and their profits continue to grow.⁴⁷ Durable supra-profits, Carl Shapiro argues, indicate significant and enduring market power.⁴⁸ Ultimately, as noted by Luigi Zingales, 'entry into the digital markets dominated by incumbents such as Google and Facebook is very difficult.'⁴⁹

³⁷ Tim Wu, *The Curse of Bigness: Antitrust in the New Gilded Age* (Columbia Global Reports 2018), 110-112.

³⁸ Eric Rosenbaum, 'Facebook former privacy chief on why Mark Zuckerberg will win his biggest political battle' (CNBC, 30 October 2019) <<https://www.cnbc.com/2019/10/30/warren-to-break-up-facebook-good-luck-fbs-former-privacy-chief.html>> accessed 31 October 2019.

³⁹ Bourreau and de Streel (n 8).

⁴⁰ See Damien Neven, 'Analysis of conglomerate effects in EU merger control' in Paolo Buccirossi (ed) *Handbook of Antitrust Economics* (MIT Press 2008).

⁴¹ Furman Report (n 12); Luigi Zingales, 'The Digital Robber Barons Kill Innovation': the Stigler Center's Report Enters the Senate' (Pro-Market, 25 September 2019) <<https://promarket.org/2019/09/25/digital-robber-barons-kill-innovation-stigler-center-senate/>> accessed 12 November 2019.

⁴² Furman Report (n 12).

⁴³ See William J Baumol, 'Contestable Markets: An Uprising in the Theory of Industry Structure' (1982) 72(1) *The American Economic Review* 1.

⁴⁴ Jean Tirole, 'Regulating the Disrupters' *Project Syndicate* (Prague, 9 January 2019).

⁴⁵ Panel of European Experts Report (n10).

⁴⁶ This quote is often attributed to Google founder Larry Page. See David Wismer, 'Google's Larry Page: "Competition is One Click Away" (And Other Quotes of the Week)' (*Forbes*, 14 October 2012) <<https://www.forbes.com/sites/davidwismer/2012/10/14/googles-larry-page-competition-is-one-click-away-and-other-quotes-of-the-week/#1f4dec8b5ea1>> accessed 21 June 2020. See also Richard A Posner, 'Antitrust in the New Economy' (2001) 68 *Antitrust Law Journal* 925; Geoffrey A Manne and Joshua D Wright, 'Google and the Limits of Antitrust: The Case Against Google' (2011) 34 *Harvard Journal of Law & Public Policy* 171.

⁴⁷ See Tommaso Valletti and Hans Zenger, 'Increasing Market Power and Merger Control' (2019) 5(1) *Competition Law & Policy Debate* 26.

⁴⁸ Carl Shapiro, 'Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets' (2019) 33(3) *Journal of Economic Perspectives* 69, 70.

⁴⁹ Zingales (n 41).

In addition to the systematic use of start-up acquisitions, GAFAM's growth can certainly be attributed to organic growth and the consequences network effects and economies of scale and scope.⁵⁰ Nevertheless, no matter how such market power arises, when a company is dominant there is the meaningful risk that non-competitive outcomes will arise.⁵¹ This certainly appears to be the case in digital markets. Competition problems abound in relation to GAFAM, with a host of practices raising concerns related to privacy and choice, among other issues.⁵²

It is not the aim of this paper to explore the anticompetitive harm arising out of GAFAM's dominance, this is extensively covered elsewhere.⁵³ It is sufficient to state that, given tipping, protecting competition for the market is key to achieving more competitive digital markets. Correspondingly, if GAFAM continue to acquire and extinguish potential future rivals, as well as build conglomerate ecosystems, the digital economy will fail to reach its full potential.⁵⁴ Competition law enforcement must therefore ensure that established market positions remain vulnerable to competitive challenge, including by properly governing start-up acquisitions.

3. Financial Capitalism and the Digital Economy

Emphasising a financial perspective, the present paper departs from most of the literature on start-up acquisitions.⁵⁵ Start-up acquisitions are usually discussed as part of the debate surrounding digitisation and competition law. Instead, this paper frames GAFAM's mass acquisition of nascent firms as a symptom of financial capitalism and representative of the challenge financialisation poses to competition law. The concept of an economic goodwill test arises out of this finance-centric analysis.

Financialisation is the process through which financial capitalism has replaced the industrial, manager-led capitalism of the post-World War II period.⁵⁶ Incited by financial liberalisation and deregulation, financialisation emerged from the 1970s onwards, first in the United States (US) and later to some degree in other jurisdictions also.⁵⁷

Financialisation has two defining characteristics. First, the growth of in size and complexity of the financial sector, including financial markets and institutions. Second, the ascendancy of shareholder value maximisation as the guiding principle of corporate behaviour.⁵⁸

Financialisation interacts with the start-up acquisition phenomenon in two ways. From the top down, bullish investor sentiment about the future prospects of the digital economy—and the GAFAM firms in particular—catalyses extensive, speculative acquisition activity. From the bottom up, venture capital funds have emerged as a means through which start-ups gain financial capital and other resources.⁵⁹ The present paper centres on the former.

⁵⁰ Moss (n 1).

⁵¹ Tirole (n 44).

⁵² See, for example, Fiona M Scott Morton and David C Dinielli, 'Roadmap for an Antitrust Case Against Facebook' (Omidyar Network, June 2020); Lina M Khan, 'Amazon's Antitrust Paradox' (2017) 126(3) *The Yale Law Journal* 564; Dina Srinivasan, 'The Antitrust Case Against Facebook: A Monopolist's Journey Towards Pervasive Surveillance in Spite of Consumers' Preference for Privacy' (2019) 16(1) *Berkeley Business Law Journal* 39. See generally, Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (Profile Books, 2019).

⁵³ *ibid.*

⁵⁴ Furman Report (n 12).

⁵⁵ Note there is an emerging literature on the intersection between finance and killer acquisitions. This takes two forms. First, examination of the role played by venture capitalists in funding start-ups, noted above. Second, the use of financial valuation analysis in substantive merger analysis. See Kamepalli et al (n 9); Lemley and McCreary (n 9); Oliver Latham, Simon Chisholm and Sam Lynch, 'Acquisitions of Potential Rivals in Digital/Tech: Valuation Analysis as Key Economic Tool - *PayPal/iZettle*' (2019) Charles River Associates Competition Memo <http://www.crai.com/sites/default/files/publications/Competition%20Memo_Use%20of%20valuation%20analysis%20in%20merger%20assessment.pdf> accessed 16 June 2020.

⁵⁶ Note that financial capitalism is alternately known as 'money manager', 'financialised' or 'asset manager' capitalism. See Charles J Whalen, 'Integrating Schumpeter and Keynes: Hyman Minsky's Theory of Capitalist Development' (2001) 35(4) *Journal of Economic Issues* 805.

⁵⁷ Robert Guttman, *Finance-Led Capitalism: Shadow Banking, Re-Regulation, and the Future of Global Markets* (Palgrave Macmillan 2016).

⁵⁸ See Thomas Palley, *Financialization* (Palgrave Macmillan 2013).

⁵⁹ See Kamepalli et al (n 9); Lemley and McCreary (n 9).

Under financial capitalism, investment has become increasingly speculative and detached from the workings of the real economy.⁶⁰ Investors in the modern economy care less and less about the profits and cashflow firms achieve in the present day. Instead they aspire towards realising tremendous profits many years in the future.⁶¹

This feature of financial capitalism provides a strong bridge between the present and distant future that facilitates future-oriented competitive strategies.⁶² The GAFAM firms, who enjoy tremendous positive sentiment in the financial markets, are able to leverage this characteristic to augment their market power.⁶³ They are able to take advantage of investors' beliefs about their future dominance to make those beliefs a reality through extensive start-up acquisitions.⁶⁴

The failure of competition authorities to govern start-up acquisitions demonstrates a tension between competition law and financial capitalism. Following the Chicago school revolution, neoclassical price theory (NPT) has come to animate competition law.⁶⁵ Yet this is an insufficient framework with which to analyse modern economic activity. Finance—which drives modern capitalism—is invisible within neoclassical economics, viewed only as a neutral intermediary.⁶⁶

Yet finance is not neutral. Financialisation and speculative financial markets shift the locus of economic behaviour from the present to the future. Compared to their industrial-era predecessors, shareholder-oriented firms care less about current profits and more about competing for capital. Modern competition law struggles to apprehend this new form of competition—we can see this already in the issue of common ownership.⁶⁷

Although competition law frequently claims to be thoroughly economic, the field draws on only one branch of economics—NPT and related industrial organisation economics. Yet this approach is increasingly challenged by financialisation.⁶⁸ NPT-based analysis centres on prediction in well-defined equilibrium states, making use of an a priori deductive methodology.⁶⁹ It is, however, a poor framework with which to understand systemic, evolutionary changes in the nature of the economy, such as the ascent of financial capitalism.⁷⁰

We should look to alternate sources of economic knowledge to engage with firm conduct under financial capitalism. Specifically, the paper invokes institutional economics and a concept known as 'futurity'.⁷¹ Futurity denotes the extent to which economic activity is oriented towards the future. The wave

⁶⁰ See Hyman P Minsky, 'The Financial Instability Hypothesis' in Philip Arestis and Malcolm Sawyer (eds), *Handbook of Radical Political Economy* (Edward Elgar 1993); Stuart Banner, *Speculation: A History of the Fine Line Between Gambling and Investing* (Oxford University Press 2017), 307-330.

⁶¹ See Stefan Leins, *Stories of Capitalism: Inside the Role of Financial Analysts* (University of Chicago Press 2018); Eve Chiapello, 'Financialisation of Valuation' (2015) 38(1) *Human Studies* 13.

⁶² See also Cristina Caffarra, Gregory Crawford and Tommaso Valletti, "'How tech rolls": Potential competition and "reverse" killer acquisitions' (Voxeu, 11 May 2020) <<https://voxeu.org/content/how-tech-rolls-potential-competition-and-reverse-killer-acquisitions>> accessed 12 May 2020.

⁶³ GAFAM are five of six largest companies in the world by market capitalisation, with only Berkshire Hathaway breaking their dominance. See Statista, 'The 100 largest companies in the world by market value in 2019 (in billion US dollars)' <<https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-value/>> accessed 12 June 2020.

⁶⁴ On the speculative nature of investment in the technology sector, see Rana Foroohar, 'Another tech bubble could be about to burst' *Financial Times* (London, 27 January 2019).

⁶⁵ Patrice Bougette, Marc Deschamps and Frédéric Marty, 'When Economics Met Antitrust: The Second Chicago School and the Economization of Antitrust Law' (2015) 16(2) *Enterprise & Society* 313.

⁶⁶ Guttman (n 58), 65-66.

⁶⁷ On common ownership, see, for example, José Azar, Martin C Schmalz and Isabel Tecu, 'Anticompetitive Effects of Common Ownership' (2018) 73(4) *The Journal of Finance* 1513; Einer Elhauge, 'Horizontal Shareholding' (2016) 129(5) *Harvard Law Review* 1267.

⁶⁸ See Ioannis Lianos, 'Digitalisation and Competition Law: New Challenges' (2019) 7(1) *RDC* 5; Ioannis Lianos, Alina Velias, Dmitry Katalovsky and George Ovchinnikov, 'Financialization of the food value chain, common ownership and competition law' (2020) 16(1) *European Competition Journal* 149.

⁶⁹ See J M Alec Gee, 'The Neoclassical School' in Douglas Mair and Anne G Miller (eds), *A Modern Guide to Economic Thought* (Edward Elgar 1991).

⁷⁰ This argument echoes the sentiment of the growing law and political economy movement. See Jedediah Britton-Purdy, David Singh Grewal, Amy Kapczynski and K Sabeel Rahman, 'Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis' (2020) 129(6) *The Yale Law Journal* 1784.

⁷¹ John R Commons, *Institutional Economics: Its Place in Political Economy* (Macmillan 1934). See also Glen Atkinson and Charles J Whalen, 'Futurity: cornerstone of Post-Keynesian Institutionalism' in Charles J Whalen (ed) *Financial Instability and Economic Security After the Great Recession* (Edward Elgar 2011).

of start-up acquisitions—in which dominant firms pay tremendous sums for often nascent firms that pose no immediate competitive threat—is a clear example of futurity-led behaviour.

Futurity is a vital concept in understanding modern competitive behaviour.⁷² Therefore, the paper makes considerable effort to introduce the concept of futurity. Below, this section traces the legal origins of futurity before highlighting how futurity drives economic behaviour in the era of financial capitalism, including start-up acquisitions.

A. The legal origins of futurity-led competition

Futurity denotes the extent to which economic activity is oriented towards the future. Of course, all economic activity, pecuniary or otherwise, is oriented towards the future. The trapper catches a rabbit in the morning so her family can eat in the evening. The vintner plants grape vines in the spring so he can ferment wine in the autumn. The worker sacrifices salary to pension contributions each month in the hope of enjoying a comfortable retirement many years in the future. Yet, futurity in the present context also has more precise meaning in addition to this general claim.

Writing almost one hundred years ago, institutional economist John Commons started using the term ‘futurity’ to describe a narrower phenomenon: firm valuation coming to rest on the present value of expected future profits.⁷³ Commons’ analysis centres a series of court cases in the late nineteenth century through which the US economy began to be reoriented towards the future. This section explores this work in detail.

Prior to the emergence of futurity at the end of the nineteenth century, firm valuation was based solely on the estimated market price of net tangible assets. Primarily, a firm’s value balanced its debts against the value of its cash-on-hand, buildings, land and machinery. That is, for valuation purposes, firms were treated as if they had ceased to trade and were simply a collection of illiquid assets awaiting liquidation.⁷⁴ Commons’ analysis of futurity centres on the replacement of this practice by the treatment of firms as living entities—as ‘going concerns’—that are expected to earn profits in the future.⁷⁵

An institutionalist, Commons’ scholarship broadly focuses on the economic consequences of legal change. In regard to the emergence of futurity, Commons bases his analysis on a series of cases heard by the Supreme Court of the United States at the end of the nineteenth century, in which the court interpreted the meaning of property.⁷⁶ Through this investigation, articulated in his *Legal Foundations of Capitalism*, Commons emphasises a shift in the manner in which property is defined, from ‘use value’, based on the understanding of property simply as tangible assets, to ‘exchange value’, where the expectation of future earnings is recognised as property equivalent to tangible assets.⁷⁷

The exchange value interpretation of property is the essence of futurity. Under a use value definition of property, a firm is valued on the basis of its tangible assets alone. In contrast, under an exchange value definition, a firm is treated as a going concern and its valuation reflects its capacity to generate profits in the future. Across the four cases that Commons examines, we can observe a change in the meaning of property, from a use value understanding to an exchange value understanding. In this way, the present analysis uncovers the antecedents of futurity-led, financial capitalism.

The first two cases examined in the *Legal Foundations of Capitalism*, together known as the ‘Slaughter House’ cases, concerned butchers operating in New Orleans in the late nineteenth century. The first

⁷² See Ioannis Lianos, ‘Competition Law for a Complex Economy’ (2019) 50(6) *International Review of Intellectual Property and Competition Law* 643.

⁷³ Commons is arguably most well-known as a founder of labour economics, alongside Beatrice and Sidney Webb. Yet, from early 1920s, Commons focused on the development of institutional economics. Together with Thorstein Veblen, Commons is regarded as one of the original institutional economists. Note that this ‘old’ variety of institutional economics is distinct from the new institutional economics of Ronald Coase, Oliver Williamson and Douglass North, which can be characterised as an extension of the neoclassical economic framework.

⁷⁴ Commons (n 71).

⁷⁵ *ibid.*

⁷⁶ John R Commons, *Legal Foundations of Capitalism* (Macmillan 1924), 11-20, 172-3.

⁷⁷ *ibid.*

Slaughter House case, heard in 1872, revolved around a monopoly franchise granted by the legislature of Louisiana to a franchisee corporation to establish a central slaughterhouse in the city.⁷⁸

The city authority argued that a single, centralised slaughterhouse was necessary to ensure sanitary food processing standards, and therefore the granting of the monopoly fell under the scope of police powers.⁷⁹ The case arose when butchers in New Orleans disputed the right of the legislature to establish the monopoly franchise. Under the monopolised conditions, independent butchers could access the slaughterhouse but were required to pay a fee to the franchisee butcher to do so.⁸⁰

Due to this fee, the plaintiffs argued their property had been appropriated by the state when it established the monopoly slaughterhouse as it adversely affected their ability to trade profitably.⁸¹ The independent butchers' argument rested on the Fourteenth Amendment to the Constitution of the United States,⁸² which prohibited a state from depriving any person of 'life, liberty, or property' without 'due process of law.'⁸³

The justices of the Supreme Court were divided. The division stemmed from differing interpretations of the meaning of property. The state's granting of a monopoly franchise impeded the independent butchers' ability to gain from future trade (exchange value), yet it did not deprive them of their tangible property (use value). In these circumstances, if property means only use value, then the federal Supreme Court could not interfere with the legislature of Louisiana under the Fourteenth Amendment. Under an exchange value understanding of property, however, the Supreme Court would have jurisdiction.⁸⁴

Affirming the use value of property, Justice Miller for the majority declared that the granting of the monopoly franchise was not a deprivation of property as no physical property had been taken.⁸⁵ Justice Miller held that the meaning of property was that of physical things held exclusively for one's own use, stating that '[u]nder no construction of [the Fourteenth Amendment] that we have ever seen can the restraint imposed by the state of Louisiana upon the exercise of their trade by the butchers of New Orleans be held to be a deprivation of property within the meaning of that provision.'⁸⁶ Commons argues this ruling reflects the then-prevailing understanding of property in law and economics.⁸⁷

The minority, however, argued for an exchange value interpretation of property. It contended that the city could just as well have regulated all butchers in the interest of public health, rather than using police power to establish a monopoly slaughterhouse to guarantee sanitary conditions. Based on this reasoning, the minority argued that the independent butchers' property was unjustly appropriated. For the minority, Justice Bradley held that the monopoly deprived the other butchers of their property, stating that 'a calling, when chosen, is a man's property and right...their occupation is their property,' as well as the physical things that he may own.⁸⁸ Likewise, Justice Swayne claimed 'property is everything which has exchangeable value.'⁸⁹

The second Slaughter House case, heard in 1884, arose when the Louisiana legislature allowed another butcher to operate a second slaughterhouse.⁹⁰ Acting as plaintiff, the original franchisee claimed that, by undermining its monopoly, it had been unjustly deprived of its property, understood as its ability to earn future profits. As in the first Slaughter House case, the majority of the Supreme Court found against the plaintiff, retaining its use value definition of property.⁹¹

⁷⁸ 83 U.S. (16 Wall.) 36 (1872).

⁷⁹ *ibid.*

⁸⁰ 83 U.S. 37.

⁸¹ 83 U.S. 42.

⁸² 83 U.S. 43.

⁸³ U.S. Constitution, amendment XIV.

⁸⁴ Commons (n 76), 11.

⁸⁵ 83 U.S. 44.

⁸⁶ 83 U.S. 81.

⁸⁷ Commons (n 76), 158.

⁸⁸ 83 U.S. 116.

⁸⁹ 83 U.S. 127.

⁹⁰ *Butchers' Union Co. v Crescent City Co.*, 111 U.S. 746 (1884).

⁹¹ 111 U.S. 764.

Yet, in dissenting opinions, Justices Bradley and Field stated their acceptance of the exchange value definition of property.⁹² In particular, Justice Field noted that his belief in the exchange value of property stemmed from Adam Smith's labour theory of value, citing the Scottish economist's assertion that:

the property which every man has in his own labor, as it is the original foundation of all other property, so it is the most sacred and inviolable. The patrimony of the poor man lies in the strength and dexterity of his own hands, and to hinder his employing this strength and dexterity in what manner he thinks proper...is a plain violation of this most sacred property. It is a manifest encroachment upon the just liberty both of the workman and of those who might be disposed to employ him.⁹³

Therefore, while the rulings in the Slaughter House cases relied on the use value definition of property, minority statements lay the foundations for the treatment of firms as going concerns, with Commons reporting that the exchange value definition soon began to infiltrate decision-making in lower courts.⁹⁴

The Supreme Court, however, remained unmoved, as demonstrated in 1876 by *Munn v Illinois*.⁹⁵ In 1871, the legislature of Illinois set maximum rates that firms could charge for the storage and transport of agricultural products. Munn and Scott, a firm that operated a grain warehouse in Chicago, was found to be violating the price ceiling, but contested this finding on the grounds that the rate-setting regulation undermined its ability to earn future revenue and therefore constituted a deprivation of its property under the Fourteenth Amendment.⁹⁶

Reaffirming the definition of the use value of property laid out in the Slaughter House cases, the Supreme Court held that when a state legislature reduced the prices that a firm could charge, it was not 'taking' their property; the owners continued to own their tangible property, even if they were deprived of the power to charge prices as they saw fit.⁹⁷ However, dissenting once more, Justice Field rebuked the court's continued adherence to the use value definition of property, remarking that 'the title of ownership or the possession of physical property is empty as a business asset if the owner is deprived of his liberty to fix a price on the sale of the product of that property.'⁹⁸

The Slaughter House cases and *Munn v Illinois* demonstrate that exchange value had no legal status at this time. In Commons' view, the Supreme Court demonstrated a 'primitive definition of property as the mere holding of physical objects for one's own use and enjoyment.'⁹⁹ On a broader level, in protecting the use value of property, while rejecting an exchange value interpretation, the Supreme Court's decision-making reflected the view of firms as static bundles of illiquid assets, rather than as going concerns valued on the basis of their ability to earn profits in the future.

The turn towards futurity has its roots in the Minnesota Rate case of 1890.¹⁰⁰ In *Minnesota Rate*, we see a transformation in the definition of property employed by the Supreme Court, from use to exchange value.¹⁰¹ The case concerned maximum charges for the transportation of freight and passengers set by the Railroad & Warehouse Commission of the state of Minnesota. Three firms—Northern Pacific Railway Company, the Great Northern Railway Company and the Minneapolis & St Louis Railroad Company—asked the Supreme Court to restrain the state from setting rates that fixed the prices they could charge for the use of their property, based on the same logic as the put forward by Munn and Scott.¹⁰²

⁹² *ibid.*

⁹³ 111 U.S. 757.

⁹⁴ See *Powell v Penn*, 127 U.S. 678 (1887); *Matter of Jacobs*, 98 N.Y. 98 (1885); *People v Marx*, 99 N.Y. 377 (1885); *People v Gillson*, 109 N.Y. 399 (1888). Commons (n 76), 14.

⁹⁵ 94 U.S. 113 (1876).

⁹⁶ 94 U.S. 118.

⁹⁷ 94 U.S. 134.

⁹⁸ 94 U.S. 143.

⁹⁹ Commons (n 76), 15.

¹⁰⁰ 134 U.S. 418 (1890).

¹⁰¹ Commons (n 76), 14.

¹⁰² 134 U.S. 445.

Critically, the Supreme Court found in favour of the plaintiffs.¹⁰³ By agreeing that rate control could amount to a confiscation of property, the Supreme Court reversed its earlier view on the exchange value of property. In doing so, the court established exchange value as a legal basis for valuation.¹⁰⁴ Commenting on the decision, Commons remarks that '[t]he majority...now held...that not merely physical things are property, but the expected earning power of those things is property.'¹⁰⁵

In 1897, the *Adams Express Company* case confirmed the Supreme Court's acceptance of the exchange value definition of property.¹⁰⁶ The *Adams Express Company* was a transportation firm that facilitated interstate commerce. It was therefore subject to taxation by various states. In Ohio, the Ohio State Board of Assessment calculated the firm's tax liability based on an estimation of the discounted present value of its future earnings—that is, based on an exchange value interpretation of property. This amounted to \$449,377.60. The *Adams Express Company* objected, claiming that its liability ought to be based on a value calculation of the tangible assets it owned within Ohio, a figure that amounted to only \$23,400.

The company claimed that its property in the state included only its horses, wagons, safes and other tangible property. The majority of the Supreme Court rejected this claim. While the Court accepted that '[c]onsidered as distinct objects of taxation, a horse is indeed a horse; a wagon, a wagon; a safe, a safe; a pouch, a pouch,' it contended that when 'separate articles of tangible property are joined together...there is not infrequently developed a property' and that '[i]t is enough that it is property which, though intangible, exists, which has value, produces income and passes current in the markets of the world.'¹⁰⁷

Commons confirms that in *Adams Express Company*, 'the court completed a transition, that had been going on for fifty years, in the meaning of property from that of tangible property owned by individuals to that of...a going concern.'¹⁰⁸ By the turn of the twentieth century, the Supreme Court had come to recognise that firms can own something that they do not actually possess—expected future profits.¹⁰⁹ The Court, being the highest authority on the meaning of property in the US, lay the legal foundations for futurity-led capitalism.

B. The concept of economic goodwill

In protecting expected future income, US courts acknowledged that firms generate a form of value distinct from the tangible assets they owned: 'economic goodwill'. With legal protection granted to expected future profits, economic goodwill became a further type of asset.¹¹⁰ The meaning of economic goodwill is helpfully set out by Warren Buffet in a letter he penned in 1984 to the shareholders of his investment company, Berkshire Hathaway.

Buffet writes that 'businesses logically are worth far more than net tangible assets when they can be expected to produce earnings on such assets...The capitalized value of this excess return is economic Goodwill.'¹¹¹ That is, economic goodwill is the surplus of a firm's total valuation over its net tangible assets. In turn, economic goodwill is equal to the present value of future income, with high economic goodwill implying the expectation of high future profits.¹¹²

¹⁰³ 134 U.S. 459.

¹⁰⁴ Atkinson and Whalen (n 71).

¹⁰⁵ Commons (n 76), 16.

¹⁰⁶ 165 U.S. 194 (1897); re-hearing, 166 U.S. 185 (1897).

¹⁰⁷ 166 U. S. 219.

¹⁰⁸ Commons (n 76), 172.

¹⁰⁹ Ronen Palan, 'The financial crisis and intangible value' (2013) 37(1) *Capital & Class* 65.

¹¹⁰ Commons (n 76), 18.

¹¹¹ Warren Buffet, 'Letter from to the Shareholders of Berkshire Hathaway (14 March 1984) available at <<http://www.berkshirehathaway.com/letters/1983.html>> accessed 30 October 2019.

¹¹² Two clarifications are pertinent. First, this is not the goodwill of everyday use. As Buffet notes, '[a] business may be well liked, even loved, by most of its customers but possess no economic goodwill. And, regrettably, a business may be disliked by its customers but possess substantial, and growing, economic Goodwill.' Second, there is a distinction between the economic goodwill discussed here and goodwill as used by the accounting profession. While economic goodwill can be estimated at any point in time, based on the difference between a firm's market capitalisation and the net value of tangible assets, accounting goodwill is generated specifically in the context of mergers. When one firm acquires another, accounting goodwill is recorded as an intangible asset on the acquirer's balance sheet if the purchase price exceeds the net value of the target firm's tangible assets. From this perspective,

Buffet imagines firms possess a sort of competitive ‘moat’ around them. Dominant firms benefit from wide moats, keeping competitors away from their market positions. Factors that create economic goodwill may include loyal customers, intellectual property rights, a natural monopoly unconstrained by price regulation, network effects or economies of scale and scope.¹¹³

The notion of a competitive moat will be entirely familiar to competition lawyers and economists as barriers to entry. A wide moat means that other firms cannot easily challenge it, leading to the expectation of high future profits and, consequently, high economic goodwill.¹¹⁴ The potential for excess returns a firm can realise in the future through such factors has a market value, a value which is accounted for as economic goodwill.

The legal protection granted to exchange value and expected future profit facilitated the emergence of economic goodwill in the US economy.¹¹⁵ This was especially apparent in the merger wave that occurred at the turn of the twentieth century.¹¹⁶ In recognising that parties owned more than just tangible assets, mergers began to account for economic goodwill.¹¹⁷

A prominent example of this is found in the establishment of the steel trust by John Pierpont Morgan in 1901. In 1900, Morgan financed the creation of the Federal Steel Company. To remove the competition presented by Andrew Carnegie’s Carnegie Steel Company, Morgan purchased this enterprise and merged it with his own to create a new trust, the United States Steel Corporation.¹¹⁸ Carnegie received assets worth \$300 million for his interests. The estimated value of the Carnegie Steel Company’s net asset value was just \$75 million, with economic goodwill equalling \$225 million.¹¹⁹

Rather than reflecting anticipated merger efficiencies, the high transaction value resulted from Morgan’s desire to remove the competitive pressure presented by Carnegie’s firm.¹²⁰ From this perspective, \$225 million was an estimation of Carnegie’s capacity to reduce Morgan’s future income. The absence of the Carnegie Steel Company would lead to monopoly profits and, consequently, the removal of a rival had a market value equivalent to the gains Morgan expected to make unencumbered by competition.

Below, the section examines the link between futurity and financialisation—that is, how the economy has become future-oriented in the era of financial capitalism—and, concurrently, the importance of economic goodwill in the understanding modern competitive behaviour.

C. Futurity and economic goodwill in the era of financial capitalism

Futurity has intensified in the era of financial capitalism. Futurity is inherently tied to the financial system because it is finance that provides ‘the necessary link between the present and the future.’¹²¹ Therefore, unfettered financial markets promote a futurity-led economy. As financialisation accelerated over recent decades, so too has the degree of futurity and economic goodwill in the economy.¹²²

To better understand the relationship between futurity and financialisation, it is instructive to examine a little-known connection between Commons and John Maynard Keynes. Despite both being among the leading economists in the first half of the twentieth century, today Commons is scarcely known while

economic and accounting goodwill appear to be the same, but they are not. Accounting goodwill is only a subset of economic goodwill. Although accounting goodwill records the value of some intangibles, for example patents and trademarks, its scope is limited. Economic goodwill reflects more broadly the competitive situation of a firm. Economic goodwill is also more reliable and transparent than accounting goodwill, which is internally devised by firms. *ibid.* See also Wolfgang Schultze and Andreas Weiler, ‘Goodwill accounting and performance management’ (2010) 36(9) *Managerial Finance* 768; Keith W Chauvin and Mark Hirschey, ‘Goodwill, Profitability, and the Market Value of the Firm’ (1994) 13 *Journal of Accounting and Public Policy* 159.

¹¹³ Buffet (n 111).

¹¹⁴ Buttonwood, ‘Trench fever: The eternal quest to find companies that have a lasting competitive advantage’ *The Economist* (London, 4 May 2019).

¹¹⁵ Commons (n 76), 18.

¹¹⁶ See Lamoreaux (n 3).

¹¹⁷ Ronen Palan, ‘Futurity, Pro-cyclicality and Financial Crises’ (2015) 20(3) *New Political Economy* 367.

¹¹⁸ See Lamoreaux (n 3), 144-47.

¹¹⁹ Commons (n 71), 650.

¹²⁰ *ibid.*

¹²¹ Wallace C Peterson, ‘Institutionalism, Keynes, and the Real World’ (1977) 11(2) *Journal of Economic Issues* 201, 217.

¹²² Palan (n 117).

Keynes' legacy endures.¹²³ Yet, in private correspondence between the two, Keynes stated of Commons 'there seems to me to be no other economist with whose general way of thinking I feel myself in such genuine accord.'¹²⁴

In particular, a strong association exists between Commons' concept of futurity and the theory of investment behaviour developed by Keynes. In his seminal work, *The General Theory of Employment, Interest, and Money*, Keynes writes that 'when a man buys an investment or capital-asset, he purchases the right to the series of prospective returns, which he expects to obtain from selling its output, after deducting the running expenses of obtaining that output, during the life of the asset.'¹²⁵ That is, Keynes argues that credit is generated against future interest payments. Therefore, as in Commons' work, Keynesian theory incorporates the importance expectations of future returns.¹²⁶

Crucially, for both Keynes and Commons, economic actors are boundedly rational and their expectations about the future are subject to moods of sentiment, whether optimistic or pessimistic. This feature is captured in the following famous passage from *The General Theory*:

[D]ue to the characteristic of human nature...a large proportion of our positive activities depend on spontaneous optimism rather than mathematical expectations, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as the result of animal spirits—a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.¹²⁷

Likewise, in a 1925 manuscript, *Reasonable Value*, Commons explains that in a futurity-led economy:

[all activities have their present values] not on account of what has happened in the past, nor even on account of what is happening at the present point of time, but on account of what I and others hope, expect, or fear will happen in the future. The extent to which this human ability of forecasting has its influence on present behavior and values may be given the name, Futurity.¹²⁸

Under financial capitalism, investment has become increasingly speculative and detached from the workings of the real economy.¹²⁹ Animal spirits have been unleashed alongside financialisation. This possibility was first suggested by Keynes in his reflections on the causes of the Wall Street Crash. He argued '[a]s the organisation of investment markets improves, the risk of the predominance of speculation increase[s].'¹³⁰

To observe the extent of futurity in the digital economy, in the context of liberalised, speculative financial capitalism, we may examine the composition of tech firm valuations. As noted, a firm's valuation rests on the net present value of its expected future profit—therefore, it is illustrative to observe the different periods in which income is expected. Consider Amazon's valuation, for example. In 2017, only eight per cent of its valuation was attributed to net tangible assets and expected profits in the subsequent three years.

¹²³ See, for example, Robert Skidelsky, *Keynes: The Return of the Master* (Penguin 2010).

¹²⁴ John Maynard Keynes, 'Letter to John R Commons', (26 April 1927), Reproduced in John R Commons Papers (microfilm edition [reel 4], 1982), State Historical Society of Wisconsin.

¹²⁵ John Maynard Keynes, *The General Theory of Employment, Interest and Money* (first published 1936, Cambridge University Press 2013), 135.

¹²⁶ Palan (n 117).

¹²⁷ Keynes (n 125), 161-2.

¹²⁸ John R Commons, *Reasonable Value* (unpublished manuscript), 2. Cited in Atkinson and Whalen (n 71), 53-4.

¹²⁹ See Hyman P Minsky, 'The Financial Instability Hypothesis' in Philip Arestis and Malcolm Sawyer (eds), *Handbook of Radical Political Economy* (Edward Elgar 1993); Stuart Banner, *Speculation: A History of the Fine Line Between Gambling and Investing* (Oxford University Press 2017), 307-330.

¹³⁰ Keynes (n 125), 158-9.

The remaining 92 per cent was accounted for by the expectation of profits after 2020, demonstrating the extent of investors' orientation towards the future.¹³¹

Analysis conducted by *The Economist* suggests similar findings for the remainder of the GAFAM firms, as well as other technology companies like Uber and Tesla.¹³² Indeed, Tesla is perhaps the best possible illustration of speculation and futurity in financial markets. Tesla is now the most valuable car manufacturer in the world. At the time of writing, Tesla is worth \$183 billion. The next most valuable car manufacturer is Toyota, which is worth \$176 billion. Yet Toyota sells many times more cars than Tesla.¹³³ The difference in the two firms' valuations may be attributed to speculative anticipation of Tesla being extraordinarily successful in the future.¹³⁴

Economic goodwill—the difference between valuation and net tangible assets—has increased as investors look further into the future in expectation of profit. The GAFAM firms benefit from immense investor positivity about the future prospects of the digital economy. Because of such sentiment, GAFAM appear to have been granted scope to behave almost unilaterally from traditional financial constraints.¹³⁵

This is illustrated clearly by the experience of the dominant tech firms during the coronavirus pandemic. Their stocks prices have surged, in contrast to the experience of the real economy.¹³⁶ Buoyed by bullish market sentiment, several GAFAM firms have announced significant transactions, including Facebook's acquisition of Giphy for \$400 million.¹³⁷ Tech acquisition activity is at its highest intensity since 2015.¹³⁸

By permitting the current wave of digital start-up acquisitions, competition authorities have implicitly allowed GAFAM to grow in size and power, harming consumers and diminishing innovation. The present paper therefore argues for competition law to be strengthened in the face of futurity-driven, financial capitalism, of which start-up acquisitions are a symptom. It suggests that we can use the insight of rising economic goodwill to devise a new legal test to submit start-up acquisitions to substantive merger review. Specifically, it suggests a novel 'economic goodwill' jurisdictional threshold test, discussed in the following section.

4. The Economic Goodwill Threshold Test

Despite delivering prominent critiques of GAFAM's anticompetitive threat, competition authorities globally have failed to react to the ongoing digital merger wave.¹³⁹ As noted, part of the enforcement challenge is that start-up acquisitions often fail to satisfy traditional jurisdictional threshold tests.¹⁴⁰

¹³¹ See Schumpeter, 'A trip to the shrink' *The Economist* (London, 25 February 2017).

¹³² *ibid.*

¹³³ In 2019, Toyota sold 2,383,349 cars in the US. Tesla sold just 192,250. Nick Routley, 'Tesla is Now the World's Most Valuable Automaker' (Visual Capitalist, 16 June 2020) <<https://www.visualcapitalist.com/tesla-is-now-the-worlds-most-valuable-automaker/>> accessed 18 June 2020.

¹³⁴ Likewise, Uber is the highest valued private start-up, yet there is an increasing appreciation that its actual business model is unlikely to ever generate significant economic returns beyond speculative financial valuation. See Nicole Aschoff, 'No Rational System Would Value Tesla at \$100 billion' *Jacobin* (New York, 26 January 2020); Hubert Horan, 'Will the Growth of Uber Increase Economic Welfare?' (2017) 44 *Transportation Law Journal* 33.

¹³⁵ See Foroohar (n 64); Annie Lowry, 'More Money Than Anyone Imagined: a quick explanation for why the tech bubble never burst' (The Atlantic, Washington DC, 26 July 2019); Leaders, 'How to make sense of the latest tech surge' *The Economist* (London, 20 February 2020).

¹³⁶ Robin Wigglesworth, 'How Big Tech got even bigger in the Covid-19 era' *Financial Times* (London, 1 May 2020). See also International Monetary Fund, 'A Crisis Like No Other, An Uncertain Recovery' (World Economic Outlook Update, June 2020); Larry Elliot, 'Global stock market rally is a gamble, IMF warns investors' *The Guardian* (London, 25 June 2020).

¹³⁷ Miles Kruppa and James Fontanella-Khan, 'Big Tech goes on pandemic M&A spree despite political backlash' *Financial Times* (London, 28 May 2020).

¹³⁸ *ibid.*

¹³⁹ See Margrethe Vestager, 'Competition in a Digital Age: Changing Enforcement for Changing Times' (15th Annual ASCOLA Conference, 26 June 2020) <https://ec.europa.eu/commission/commissioners/2019-2024/vestager/announcements/competition-digital-age-changing-enforcement-changing-times_en> accessed 27 June 2020; Competition and Markets Authority, 'New regime needed to take on tech giants' (1 July 2020) <<https://www.gov.uk/government/news/new-regime-needed-to-take-on-tech-giants>> accessed 1 July 2020.

¹⁴⁰ In the United States, the merger threshold test is stipulated by the Hart-Scott-Rodino Antitrust Improvements Act. a deal is not reportable where the transaction value is below \$90 million, all deals are reportable where the transaction value exceeds \$359.9

Acquired firms are often too small in financial stature to trigger notification and substantive merger review.¹⁴¹ In light of this oversight, the paper introduces the economic goodwill test.

The economic goodwill threshold test is concerned with a target's net tangible assets as a proportion of transaction value. The paper argues that the difference between net tangible assets and transaction value represents the gains the acquirer expects to realise from its strengthened competitive position, notwithstanding the value of intangible assets such as intellectual property rights. Therefore, the economic goodwill test reflects the logic driving start-up acquisitions and represents a useful innovation in competition law enforcement.

A precise numerical threshold for the economic goodwill test is not prescribed here. The specific percentage of net-tangible-assets-to-transaction-value that would trigger substantive merger review is a normative decision for competition authorities to make. The higher the proportion of net tangible assets to transaction value that would trigger notification, the more expansive the test.¹⁴²

To uncover the economic goodwill in past start-up acquisitions, the paper examines the major acquisitions highlighted by the GAFAM firms in their annual financial statements between 2004 and 2019.¹⁴³ This is detailed in Table 1, below.

Table 1. Financial analysis of GAFAM acquisitions, 2004-19

Acquirer	Acquired firm	Transaction value, \$m	Net tangible assets, \$m	Intangible assets, \$m	Economic goodwill, \$m	Use value	Exchange value
Amazon	Kiva	678	-75	193	753	-11%	111%
-	Zappos	1134	-84	440	1218	-7%	107%
-	Joyo	75	-1	6	76	-1%	101%
Apple	Beats	2600	-236	636	2836	-9%	109%
Facebook	WhatsApp	17193	-932	2783	18215	-5%	105%
-	Oculus	1853	-47	367	1900	-3%	103%
-	Instagram	521	-50	138	571	-10%	110%
Google	Apigee	571	68	127	503	12%	88%
-	bebop	272	7	59	265	3%	97%
-	Nest	2600	-130	430	2730	-5%	105%
-	Dropcom	517	10	55	507	2%	98%
-	Skybox	478	21	69	457	4%	96%
-	Waze	969	-65	193	1034	-7%	107%
-	ITA	676	-41	394	717	-6%	106%
-	Doubleclick	3193	38	801	3155	1%	99%
-	Postini	546	-46	146	592	-8%	108%
-	YouTube	1194	-118	177	1312	-10%	110%
Microsoft	GitHub	7500	736	1267	6764	10%	90%
-	LinkedIn	27009	2319	7887	24690	9%	91%
-	Yammer	1100	-15	178	1115	-1%	101%
-	Skype	8600	-100	1600	8700	-1%	101%
-	FAST	1300	53	266	1247	4%	96%
-	aQuantive	5900	-239	939	6139	-4%	104%

Source: Author compilation based on GAFAM SEC 10-K Forms.

million, and a 'size-of-persons' tests applies for deals where the transaction value falls between these amounts. The size-of-persons test is met if one of the parties has sales or assets of at least \$180 million and the other party has sales or assets of at least \$18 million. 15 U.S.C. § 18a. See also Federal Trade Commission, 'Hart-Scott-Rodino Premerger Notification Program: Introductory Guide II' available at <<https://www.ftc.gov/sites/default/files/attachments/premerger-introductory-guides/guide2.pdf>>.

¹⁴¹ This issue is exacerbated in the technology sector owing to the unique business models of digital firms. Rather than pursue revenue, nascent digital firms prioritise achieving a critical mass in order to reach the scale necessary to benefit from network effects. Therefore, in the initial stages of their development, the competitive potential of digital start-ups will not be reflected in turnover or financial assets. See David S Evans and Richard Schmalensee, 'Failure to Launch: Critical Mass in Platform Businesses' (2010) 9(4) Review of Network Economies 1.

¹⁴² Firms with a higher proportion of tangible assets will likely be more established. Therefore, a higher threshold would equate to a bigger jurisdictional net.

¹⁴³ The analysis filters for acquired firms that had been established for more than 15 years at the time of purchase. These are Microsoft/Nokia (149 years old), Google/Motorola (84 years), Google/HTC (21 years), Amazon/Whole Foods (37 years).

Transaction value, net tangible assets and intangible assets are recorded in the SEC filings.¹⁴⁴ Economic goodwill is calculated as transaction value minus net tangible assets. The ‘use value’ column displays net tangible assets over total transaction value. The ‘exchange value’ column is the proportionate inverse of use value, displaying economic goodwill over total transaction value. The lower the use value, and the higher than exchange value, the greater the economic goodwill present in a transaction.

The figure indicated in the use value column is the key parameter for economic goodwill threshold test. Say, for example, a competition authority sets the triggering figure for the economic goodwill test at 0%. In this case, all transactions with a negative use value percentage would trigger merger notification and attract substantive review.

From the transactions detailed in Table 1, a 0% threshold trigger would capture: Amazon/Kiva, Amazon/Zappa, Amazon/Jojo, Apple/Beats, Facebook/WhatsApp, Facebook/Oculus, Facebook/Instagram, Google/Nest, Google/Waze, Google/ITA, Google/Postini, Google/YouTube, Microsoft/Yammer, Microsoft/Skype and Microsoft/aQuantive.

As the triggering figure is raised, targets with positive net tangible assets—likely those that are more established—would come under the notification threshold. A 15% threshold, for example, would capture all transactions in Table 1: Google/Apigee, Google/bebop, Google/dropcom, Google/Skybox, Google/Doubleclick, Microsoft/GitHub, Microsoft/LinkedIn and Microsoft/FAST, in addition to those mentioned above.

Figure 1, below, breaks down the composition of the total transaction value of the deals highlighted in Table 1—transaction value being the sum of net tangible assets and economic goodwill.

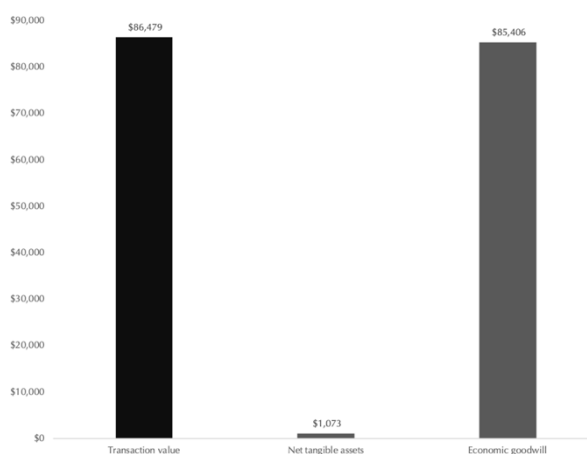


Figure 1. Major GAFAM transactions, 2004-19: Composition of total transaction value

Figure 1 shows that approximately 99 per cent of the total value of GAFAM’s major transactions from 2004 to 2019 can be accounted for as economic goodwill. Just one per cent of total transaction value can be attributed to targets’ tangible assets. Therefore, the average start-up acquisition was based almost entirely on incorporeal factors. Naturally this includes the value of intangible assets, such as intellectual property rights. However, centrally, the present paper argues that it also represents the additional expected profit GAFAM expect to realise from subduing future competition and/or otherwise strengthening market power.¹⁴⁵

¹⁴⁴ Note a difference between the transaction valuations stated in some SEC filings and those stated elsewhere. For example, Facebook eventually paid \$21.8 billion for WhatsApp, not \$17.2 billion. SEC 10-K forms are submitted annually and are not updated retrospectively to reflect the changing specifics of deals.

¹⁴⁵ Of course, this empirical exercise is regrettably limited by the availability of pertinent information. The clearest issue is that it represents a very small sample size. Detailed acquisition data provided by the GAFAM companies is scarce, therefore the above analysis relies on public filings, composed only of large 23 deals, compared to the more than 700 completed transactions. However, in the absence of more extensive data, for such a conceptual exercise as presented here, we can realistically assume that the ratios

Figure 2 extends the analysis to analyse the composition the economic goodwill in these transactions—economic goodwill being the sum of the value of intangible assets and the value of expected future profit.

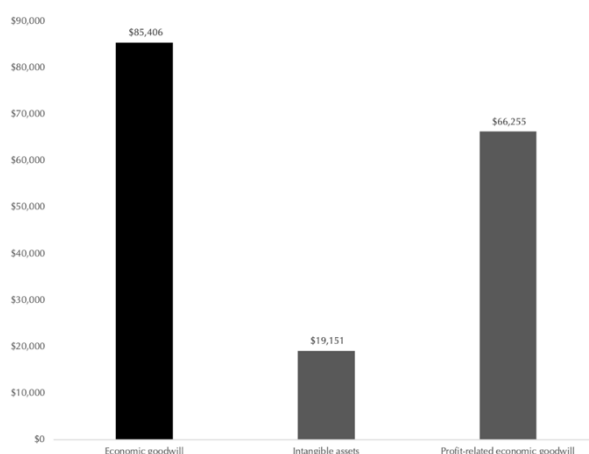


Figure 2. Major GAFAM transactions, 2004-19: Composition of economic goodwill

Profit-related economic goodwill is the key concern in start-up acquisitions.¹⁴⁶ However, for the threshold test, we must look to the overall economic goodwill value because intangible assets valuations are internally generated and therefore subject to manipulation to avoid competition scrutiny.¹⁴⁷ Comparing the value of profit-related economic goodwill and economic will derived from the value of intangible assets could then be considered within the substantive merger analysis.

Figure 2 shows that approximately 78 per cent of the total economic goodwill present in GAFAM’s major transactions from 2004 to 2019 can be understood as profit-related, while 22 per cent can be attributed to targets’ intangible assets. Therefore, the value of the average start-up acquisition was based largely on the expected of increased future income. This indicates the competitive threat posed by start-up acquisitions, profit margin being closely associated with anticompetitive markets.¹⁴⁸

Economic goodwill is clearly a pertinent issue to consider when appraising the acquisition of nascent firms. Likewise, the economic goodwill test reflects the underlying impetus behind the start-up acquisition phenomenon. In this way, the present paper argues that it is superior to the only other new threshold test proposed in reaction to the digital merger wave, suggested by the German and Austrian competition authorities.

The German-Austrian test is transaction-value-based: transactions would be notifiable where the deal value exceeds €400 million in Germany and €200 million in Austria.¹⁴⁹ This, however, fails to get to the heart of the digital merger wave. Rather, competition authorities should be interested in transaction values insofar as they relate to the underlying assets of the target and the economic goodwill within an acquisition. This is captured by the economic goodwill threshold test.

The economic goodwill threshold test reflects the motivation of start-up acquisitions to inhibit potential competition and secure profits in the future. An incredibly high valuation placed on a start-up with few

of use value (and exchange value) to transaction value are similar. Despite these limitations, this exercise represents a useful step towards developing a threshold test capable of catching start-up acquisitions.

¹⁴⁶ The expected future income is inclusive of the acquirer’s improved competitive position and the expected future profits of acquired company had it remained independent.

¹⁴⁷ On the proclivity of firms to purposefully circumvent merger notification tests, see Thomas G Wollmann, ‘Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act’ (2019) 1(1) AER: Insights 77.

¹⁴⁸ See Tommaso Valletti and Hans Zenger, ‘Should Profit Margins Play a More Decisive Role in Merger Control? – A Rejoinder to Jorge Padilla’ (2018) 9(5) Journal of European Competition Law & Practice 336.

¹⁴⁹ See Bundeskartellamt, ‘Guidance on Transaction Value Thresholds for Mandatory Pre-merger Notification (Section 35 (1a) GWB and Section 9 (4) KartG)’ (July 2018), available at <https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Leitfaden/Leitfaden_Transaktionsschwelle.pdf?__blob=publicationFile&v=2> accessed 1 June 2020.

tangible assets primarily reflects the anticipated future profits the incumbent anticipates from pre-emptively removing future competition and otherwise strengthening its competitive position. Therefore, the proposed test is a useful starting point at which to instigate substantive merger review—the proportion of net tangible assets to transaction value is a clear, simple and reliable indicator of how much the acquisition will strengthen the acquirer’s market power.

5. Conclusions

This paper makes two contributions, one narrow and one broad. Narrowly, it introduces the economic goodwill threshold test. The test draws on the observation that the enormous transaction values that characterise tech start-up acquisitions largely reflect the value an acquiring party expects to realise from diminishing future competition and otherwise strengthening its competitive position. This novel approach represents a useful innovation that would enable competition authorities to subject potentially anticompetitive transactions to review, in turn protecting consumers and promoting innovation.

More broadly, the paper contends that financialisation and futurity are pertinent concepts with which competition law must engage. The failure to govern start-up acquisitions demonstrates an incompatibility between competition law and futurity-led, financial capitalism. Competition law must look beyond its neoclassical economic foundations to understand the powerful role finance plays in shaping economic activity. A liberalised and speculative financial system creates a strong bridge between the present and the distant future. This enables firms to engage in future-oriented competitive strategies—such as start-up acquisitions—that fundamentally challenge the static orientation of modern competition law.