

# **NEXT GENERATION COMPETITION**

## **THE BRICS CHALLENGE**



**Professor Ioannis Lianos**  
**UCL Centre for Law, Economics and Society (CLES), UCL**  
**BRICS Competition Law Centre, HSE, National Research**  
**University**

# COMPETITION LAW IN A COMPLEX ECONOMY



- **Complex systems: 'intricate systems of interdependent feedback loops connecting micro-behaviours, interaction patterns and global (as opposed to just local) regularities' (Tesfatsion, 2005)**
- **Dynamic systems of interacting agents**
  - **Nonlinear: Small changes in inputs or parameters may produce large changes in behavior**
  - **Populated by a collection of heterogeneous agents whose state influenced and is influenced by the state of others (feedback loops), and**
  - **Characterised by constant adaptive learning**
- **Some concepts:**
  - **Increasing returns**
  - **Leverage points**
  - **Tipping points**
  - **Path dependence...**

# 'Prediction platforms': Network effects, increasing returns to scale, learning effects, 'winner-takes-most' dynamics



- **'Superstar firms' command growing market shares and become highly profitable**



- **Is this always the case in the presence of network and learning effects?**

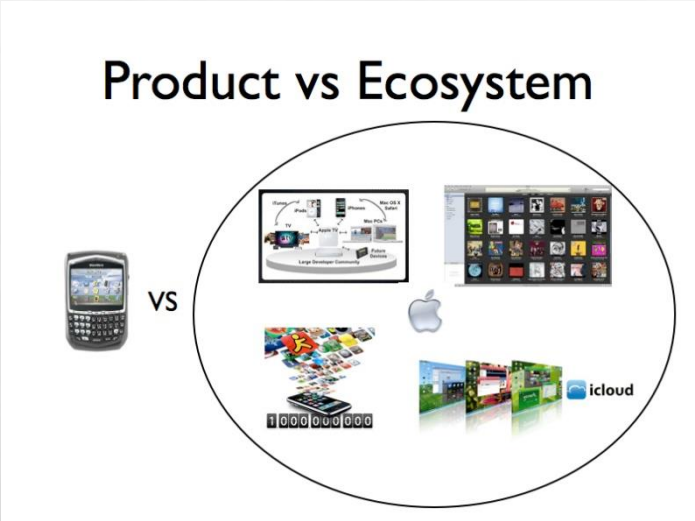
- **Successes: Windows, Google, iPhone, Facebook, Adobe, LinkedIn, Visa, MasterCard, Amex, Alibaba, WeChat (Tencent). BUT ALSO**

**Failures: Betamax, IBM OS/2, Blackberry, Discover Card, Symbian, Windows Phone**



- **Platforms have high fixed cost and low to zero marginal costs**
- **Data and network effects: data as a barrier to entry?**
- **Learning effects**
- **Network effects and learning effects create high inequality among companies in sales and profits**
- **Larger scale increases profits exponentially**
- **Very concentrated markets**
- **Top company has much higher sales and profits than the second one; second one much larger than third, etc.**
- **Often the fourth or fifth largest company are too small to make any difference in the market structure**

# PRODUCT VERSUS ECOSYSTEM



or

**Nespresso Coffee Capsules**

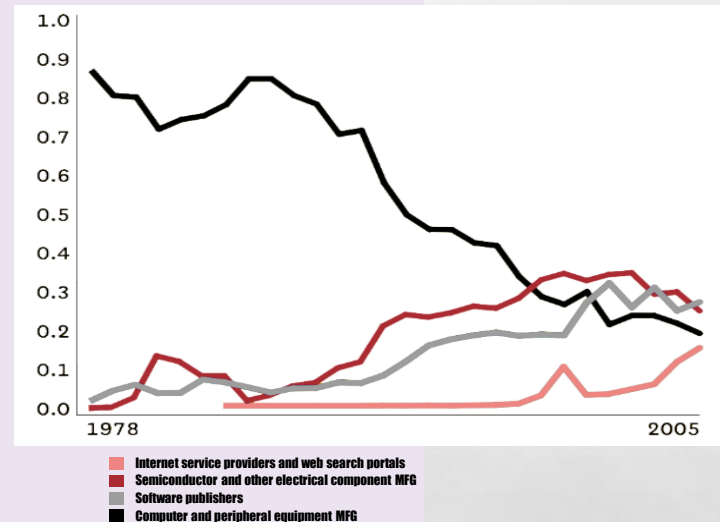
A collection of ten Nespresso coffee capsules in various colors (black, gold, green, blue, purple, orange) arranged in two rows. To the right of the capsules is a black and silver Nespresso coffee machine with a glass of coffee being dispensed into a cup.

**Identification  
Flavor  
& Type Guide**

# INDUSTRY ARCHITECTURES: NOT DOMINATING *WITHIN* A SEGMENT, BUT *SHAPING* ARCHITECTURES

- Computer OEMs outsourced component design and production responsibilities to suppliers
- Outsourcing led to vertical unbundling by creating a set of modular, open-access components
- Vertical unbundling undermined the OEM's system integrator role as suppliers could standardize components across OEMs
- The new roles of suppliers
  - The suppliers became the locus of differentiability, e.g. Intel inside, NVIDIA graphic cards
  - The suppliers became the guarantors of quality for their respective component
  - Suppliers became "bottlenecks" by taking up positions that give them control over scarce resources, allowing them to capture a bigger share of value
- The OEMs could not revert the trend as they lost the expertise within their firm's boundaries, also due to the industry's short product cycles (measured in months)

Computer OEMs have seen their share of the sector's total market cap fall from more than 80% to less than 20%



Jacobides & MacDuffie, 2013 *HBR*; Jacobides & Tae, 2015 *OrgSci*

# LIMITED EFFECTS OF COMPETITION LAW TO PROMOTE INTER-PLATFORM COMPETITION

- **In markets with strong network effects, once few firms are in operation, the addition of new competitors, even under free entry, does not change the market structure in any significant way**
- **Although eliminating barriers to entry can encourage competition, the resulting competition may not significantly affect market structure**
- **In markets with strong network effects, antitrust authorities may not be able to significantly affect market *structure* by eliminating barriers to entry**

# DIGITAL PLATFORMS: COMPETITION POLICY AND INDUSTRIAL POLICY

Tencent

Alibaba.com



Yandex

Baidu 百度

## Geography of platform businesses Key innovation hubs around the world



Note: Clusters represent cities with 4 or more platform companies that have a market value of \$1 billion or more and includes publicly traded as well as private platform companies.

Source: Global Platform Database, Center for Global Enterprise, 2015

Country	HQ City	Company Market Cap	No. Platform Companies
US	San Francisco Bay Area	\$2,061B	43
	New York	\$25B	6
	Seattle	\$628B	4
China	Beijing	\$124B	11
	Shanghai	\$26B	6
	Hangzhou	\$182B	5
	London	\$20B	6
Germany	Berlin	\$17B	4
Japan	Tokyo	\$105B	5
<b>Grand Total</b>		<b>\$3,191B</b>	<b>94</b>

# FOCUS: INDIA

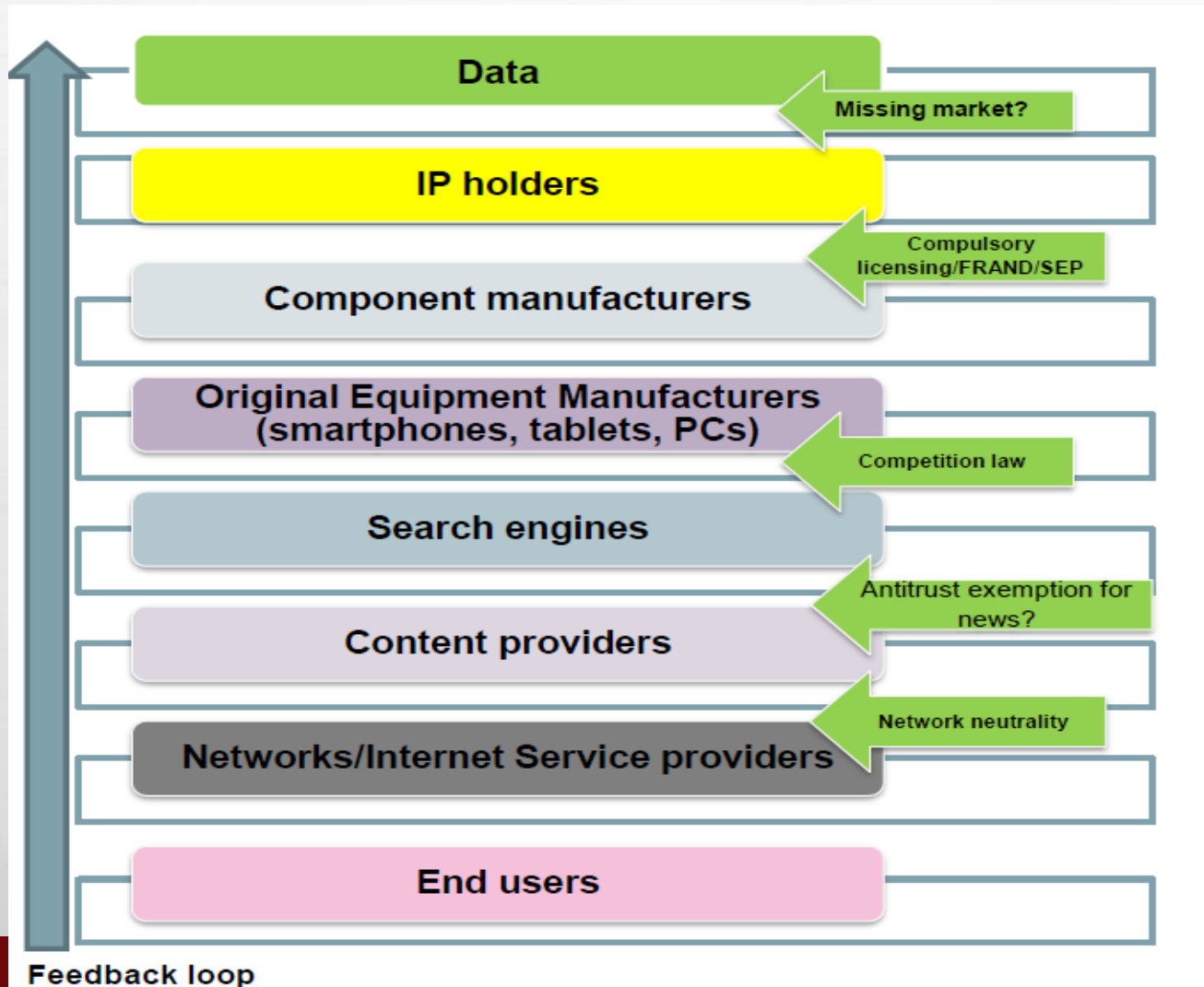


- **560 million internet users (increasing from 238.7 million in 2013)**
- **1.2 billion mobile users**
- **294 million Indians engaged in social media with an average Indian social media user spending as many as 17 hours a week on a social media platform, thus surpassing the number in US and China**
- **Number of people registered with Aadhaar (the unique biometric digital identity system in India) stood at 1.22 billion in 2019 (increasing from 510 million in 2013) with 870 million Aadhar linked bank accounts and 26.7 billion Aadhaar authenticated transactions**
  
- **Prominent platforms**
  - **Hotstar (Video Streaming platform)**
  - **Ola (Taxi-aggregator platform)**
  - **Oyo Rooms (Hotel Booking platform)**
  - **Paytm (Payments wallet platform)**
  - **Big Basket (Online grocery platform)**
  - **Byju (Online learning platform): the world's most valued education technology firm.**
  - **Swiggy (Online Food Delivery platform)**





# VERTICAL COMPETITION: DIGITAL VALUE CHAINS



- **Business Eco-systems: modular architecture, non-generic super-modular complementarities/they replace industries**
- **Market power in multiple segments of the chain**
- **Allocation of the total surplus value of the value chain: vertical competition**
- **Extraction of revenue and capture of value: limiting the market power of other segments of the value chain to increase your share**
- **Different ways of public action (competition law, net neutrality, compulsory licensing, regulation)**
- **Financialisation**

# DIFFERENT DIMENSIONS OF POWER IN A COMPLEX ECONOMY



## Dimensions of power relevant for competition law analysis

- Resource dependency - horizontal or vertical (e.g. market share, bottleneck power, economic dependence, technological dependence)
- Panopticon power (being at the centre of a network)
- Power to set the agenda/manipulate preferences (on personalised markets)
- 'Architectural advantage': Being in a position to influence the way the industry is organised/structured and the value allocation between the industry (or ecosystem) actors.
  - Power emerging out of central positioning in networks and informational asymmetries
  - Positioning not necessary in adjacent vertical markets
  - Advanced Social Network Analysis
  - See I. Lianos et al., Vertical Power: Theory and Metrics (forth., 2019)

## ▪ Modernising the law on abuse of market power - Report (2017)

- 'Intermediation power'
  - A significant ability to steer "information consumers" to certain offers, and thereby to affect – and possibly restrain – competition'
  - Relevance of a platform in mediating access to sales or supply markets even vis-à-vis firms that do not have a market relationship with the platform
- Furman Report (2019)
  - 'Strategic market status'

# A LEGAL INSTITUTIONALIST PERSPECTIVE

- **THE INSTITUTIONAL/LEGAL FOUNDATIONS OF VALUE EXTRACTION IN DIGITAL CAPITALISM**
  - **SUBSTANTIVE LAW AND INSTITUTIONS**
- **A TOOLKIT APPROACH**
  - ✓ **PERVASIVE UTILITIES' STYLE REGULATION (BUT IS IT A NATURAL MONOPOLY?)**
  - ✓ **SOFT REGULATION VIA CODES OF CONDUCT**
  - ✓ **CREATION OF MISSING DATA MARKETS AND INCREASING COMMODIFICATION (OF ATTENTION)**
    - ✓ **Establishing property rights for the new fictitious commodities (data, attention) or data portability**
    - ✓ **More than just property rights : Indian Draft National e-Commerce Policy (2019) pp. 14-15 '(t)he data of a country, therefore, is best thought of a collective resource, a national asset, that the government holds in trust, but rights to which can be permitted. The analogy of a mine of natural resource or spectrum works here'**
  - ✓ **COUNTERVAILING POWERS – COLLECTIVE BARGAINING**
    - ✓ **Article 18 of EU Copyright Directive creates a right to 'appropriate and proportionate remuneration' for exploitation of creative works – Recital 73 – collective bargaining being a possibility**
    - ✓ **Collective bargaining from freelancers/users etc.**
  - ✓ **POLYCENTRIC COMPETITION LAW**

# THANK YOU FOR YOUR ATTENTION!

**Some recent papers available at**

**[https://papers.ssrn.com/sol3/cf\\_dev/Abs  
ByAuth.cfm?per\\_id=565608](https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=565608)**

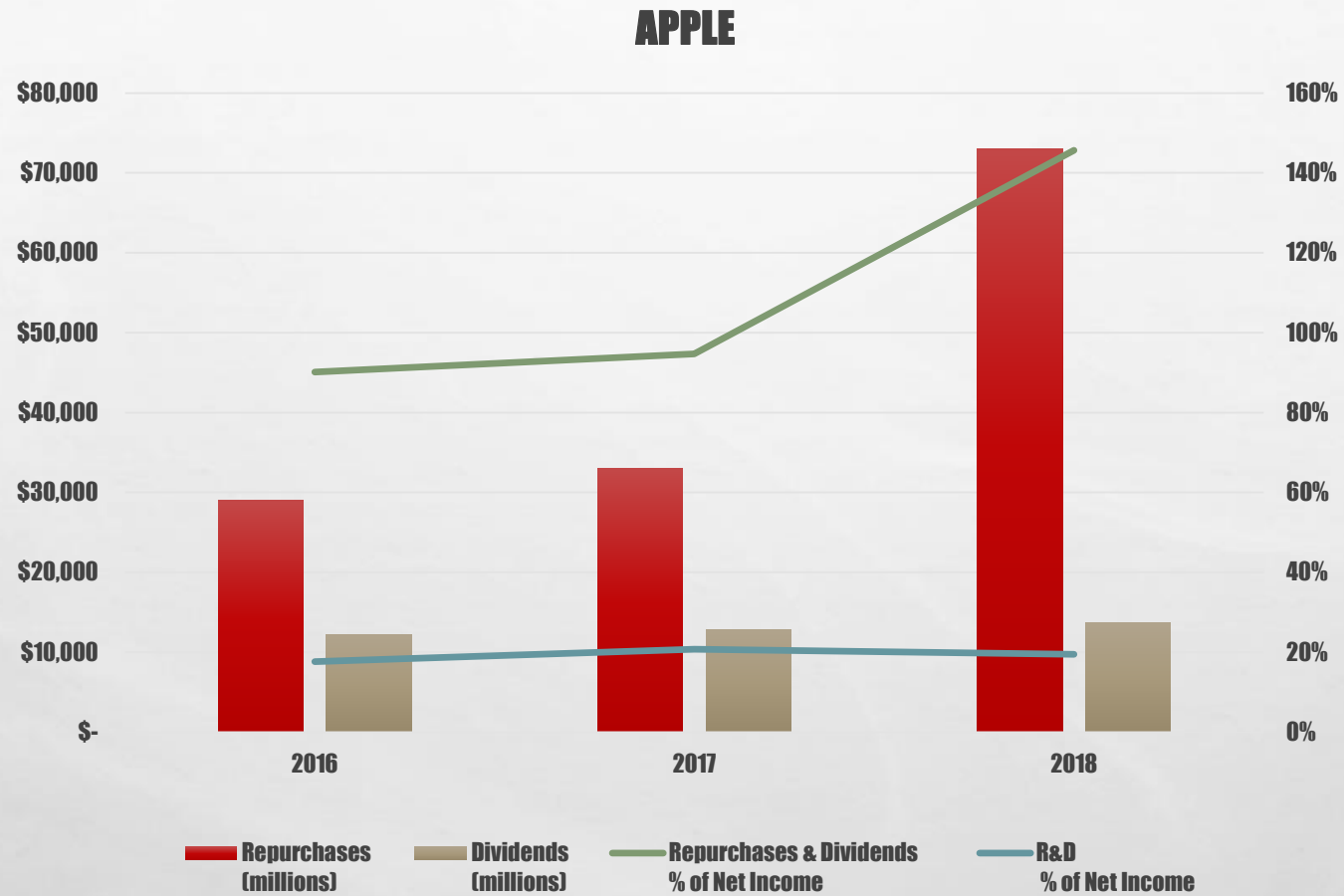


**My recent book**

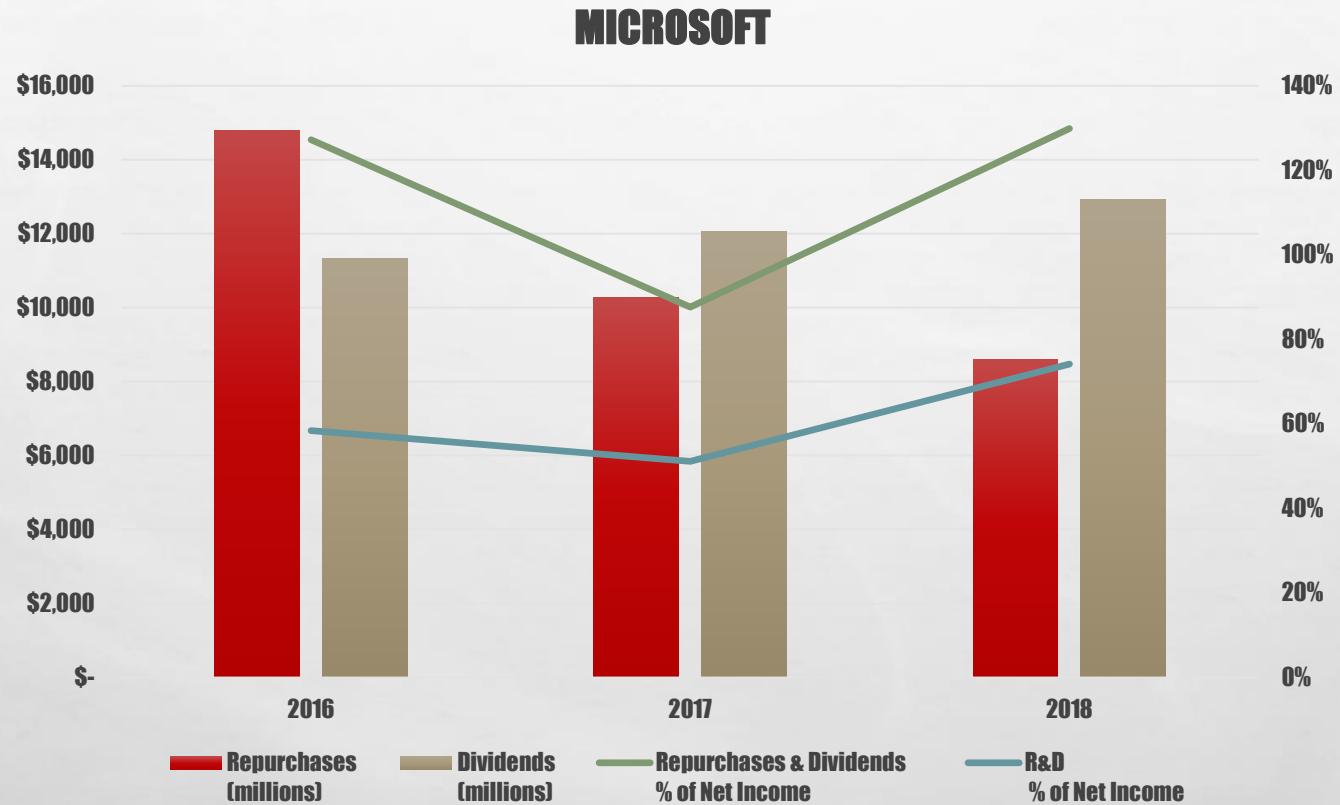
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**ADDITIONAL SLIDES**

# REPURCHASES – DIVIDENDS- R&D SPEND APPLE



# REPURCHASES – DIVIDENDS- R&D SPEND - MICROSOFT



# LOWER AND DECLINING SHARE OF THE VALUE GOING TO LABOUR

- **Uber, the largest taxi company, owns no taxicabs**
- **Airbnb, the largest accommodation provider, owns no real estate**
- **Alibaba, the most valuable retailer, has no inventory**
- **Facebook, the most popular media company, creates no content**

FIRM	YEAR	EMPLOYEES	MKT CAP
BMW	1916	116,000	\$53B
UBER	2009	7,000	\$60B
MARRIOTT	1927	200,000	\$17B
AIRBNB	2008	5,000	\$21B
WALT DISNEY	1923	185,000	\$165B
FACEBOOK	2004	12,691	\$315B
KODAK	1888	145,000	\$30B (heyday)
INSTAGRAM	2010	13	\$1B (acquisition)

➤ **One may observe a larger decline in labour's share: D. Autor, D. Dorn, L. Lawrence, F. Katz, C. Patterson & J. Van Reenen, 'Concentrating on the Fall of the Labor Share', (2017) 107(5) American Economic Review 180**



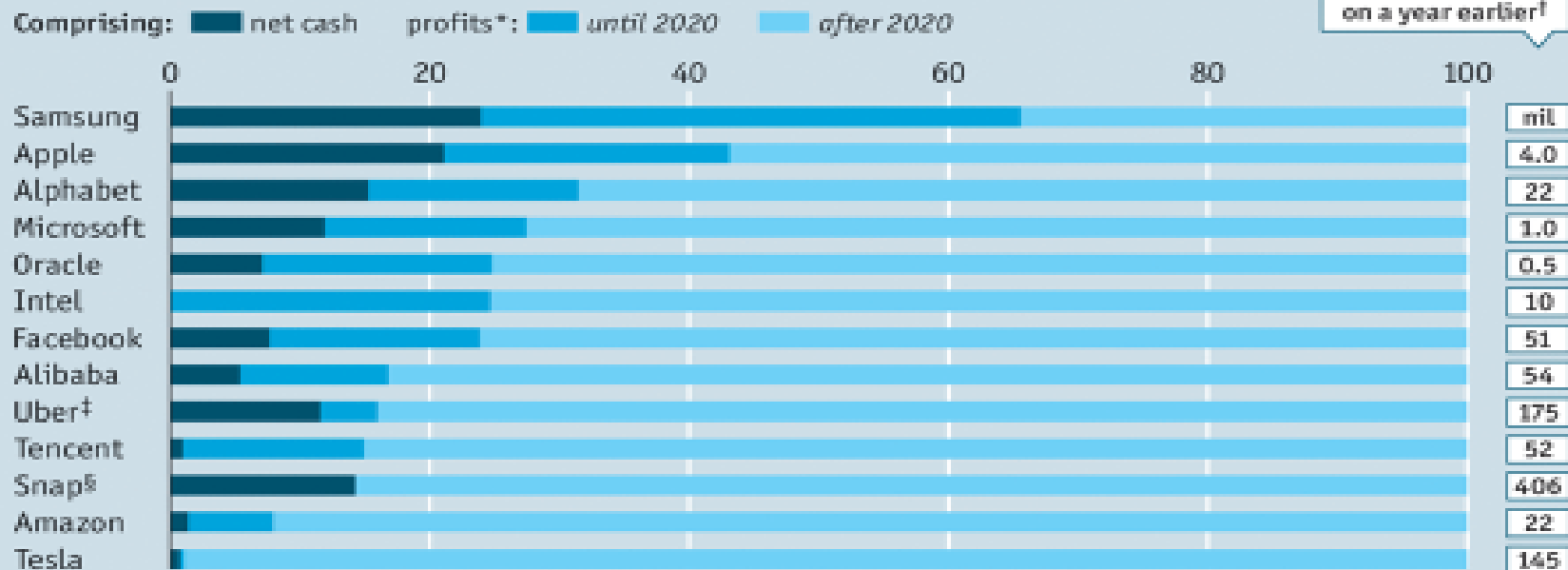
# FUTURITY, FINANCIAL MARKETS AND VALUE

## Follow the value Financialisation Rocks!

"Shares of technology firms trade on their highest ratio to sales since the turn of the century"

### The good, the mad and the ugly

Market value of technology firms, %



Sources: Bloomberg; company reports

\*Present value <sup>†</sup>Latest <sup>‡</sup>Implied by latest funding <sup>§</sup>Reported IPO value