Competition in the Age of Data

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WHAT’S HAPPENING IN THE WORLD?

- Increasing Digitization
- Datafication
- ML/AI
- Regulatory Facilitation

Source: Gartner
### RISE OF PLATFORMS

#### LARGEST GLOBAL COMPANIES IN 2018 VS 2008: SEVEN OUT OF TEN ARE NOW BASED ON PLATFORM BUSINESS MODELS

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Founded</th>
<th>USDbn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Apple</td>
<td>1976</td>
<td>890</td>
</tr>
<tr>
<td>2.</td>
<td>Google</td>
<td>1998</td>
<td>768</td>
</tr>
<tr>
<td>3.</td>
<td>Microsoft</td>
<td>1975</td>
<td>680</td>
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<td>4.</td>
<td>Amazon</td>
<td>1994</td>
<td>592</td>
</tr>
<tr>
<td>5.</td>
<td>Facebook</td>
<td>2004</td>
<td>545</td>
</tr>
<tr>
<td>6.</td>
<td>Tencent</td>
<td>1998</td>
<td>526</td>
</tr>
<tr>
<td>7.</td>
<td>Berkshire Hathaway</td>
<td>1955</td>
<td>496</td>
</tr>
<tr>
<td>8.</td>
<td>Alibaba</td>
<td>1999</td>
<td>488</td>
</tr>
<tr>
<td>9.</td>
<td>Johnson &amp; Johnson</td>
<td>1886</td>
<td>380</td>
</tr>
<tr>
<td>10.</td>
<td>J.P. Morgan</td>
<td>1871</td>
<td>375</td>
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<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Founded</th>
<th>USDbn</th>
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</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.</td>
<td>PetroChina</td>
<td>1999</td>
<td>728</td>
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<tr>
<td>2.</td>
<td>Exxon</td>
<td>1870</td>
<td>492</td>
</tr>
<tr>
<td>3.</td>
<td>Gazprom</td>
<td>1982</td>
<td>358</td>
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<tr>
<td>4.</td>
<td>China Mobile</td>
<td>1997</td>
<td>344</td>
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<tr>
<td>5.</td>
<td>ICBC</td>
<td>1984</td>
<td>336</td>
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<tr>
<td>6.</td>
<td>Gazprom</td>
<td>1989</td>
<td>332</td>
</tr>
<tr>
<td>7.</td>
<td>Microsoft</td>
<td>1975</td>
<td>313</td>
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<tr>
<td>8.</td>
<td>Shell</td>
<td>1907</td>
<td>266</td>
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<tr>
<td>9.</td>
<td>China Telecom</td>
<td>2000</td>
<td>257</td>
</tr>
<tr>
<td>10.</td>
<td>AT&amp;T</td>
<td>1885</td>
<td>238</td>
</tr>
</tbody>
</table>

* Companies based on the platform model

Sources: Bloomberg, Google
HOW DID THEY GROW SO BIG?
Volkswagen invests $300m in taxi app Gett
German carmaker backs Israeli start-up as Toyota follows suit with undisclosed Uber stake

GM invests $500 million in Lyft, sets out self-driving car partnership

Toyota strikes $500m driverless car deal with Uber
The world’s most valuable resource

Data and the new rules of competition

UNDERSTANDING DATA AS THE NEW OIL
Jeff Bezos’ Big Mandate
(circa 2002 — paraphrased)

1. All teams will henceforth expose their data and functionality through service interfaces.
2. Teams must communicate with each other through these service interfaces.
3. No other communication is allowed other than service interfaces over the network.
4. It doesn’t matter what technology they use.
5. All service interfaces must be designed to be externalizable.
DISRUPTION EVEN IN REGULATED MARKETS
BIG TECH ‘COLONIZING’ THE HEALTH SECTOR

- Patients
- Pharma / Biotech
- Hospitals / Clinics / Specialists
- Pharmacies
- Doctors (GP Practices)
- Healthcare device manufacturers
- Medical researchers
- Healthcare IT providers
- Insurance
- Healthcare Conglomerates
- Amazon
- Google
- Microsoft
- Apple
- Facebook
- Amazon
- Google

Regulation of outputs/products: Google, Microsoft, Amazon
Regulation of service providers: Apple, Facebook, Amazon, Google
IS BIG TECH COMING INTO EDUCATION?
### BIG TECH ENTRY INTO FINANCE

Illustration of BigTech descendence into banking, adapted from CBInsights and Business Insider

<table>
<thead>
<tr>
<th></th>
<th>Amazon</th>
<th>Facebook</th>
<th>Apple</th>
<th>Google</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payments</strong></td>
<td>Amazon pay</td>
<td>Messenger</td>
<td>Apple pay</td>
<td>Google Pay</td>
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<tr>
<td></td>
<td>Amazon cash</td>
<td>WhatsApp</td>
<td>Wallet</td>
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<td></td>
<td>Reload</td>
<td>Instagram</td>
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<td></td>
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<td></td>
<td>Amazon allowance</td>
<td>Libra</td>
<td></td>
<td></td>
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<tr>
<td><strong>Wealth</strong></td>
<td>Amazon protect</td>
<td></td>
<td>Apple Card</td>
<td></td>
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<tr>
<td><strong>Insurance</strong></td>
<td>Amazon protect</td>
<td></td>
<td>Apple Care</td>
<td>Car Insurance (Pilot Stage)</td>
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<tr>
<td><strong>Unsecured lending</strong></td>
<td><em>Amazon lending</em></td>
<td>Apple Rewards Card</td>
<td>Thru Partnerships on Google Pay</td>
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<tr>
<td>and credit*</td>
<td></td>
<td>Apple Card</td>
<td></td>
<td></td>
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<tr>
<td><strong>Mortgages and</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>secured lending</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td>Apple Store</td>
<td>Current accounts</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>(announced for 2021)</td>
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</tbody>
</table>

*Core banking profit pools

Source: Jones & Ozcan, 2020
DATA-DRIVEN INNOVATION IN FINANCE
FINANCE IS A DATA-INTENSIVE AND DATA-SENSITIVE INDUSTRY

→ NEED DATA TO COMPETE
HOW DO PEOPLE ACCESS THEIR FINANCIAL DATA?
ARE YOU THE OWNER OF THAT DATA?

"No, it's MY data!"
CATALYSTS OF DATA-DRIVEN INNOVATION: OPEN BANKING & PSD2
KEY ISSUE: ACCESSING CUSTOMERS (& DATA)
Google to roll out fintech services in Japan
US tech major's acquisition of cashless payment startup heralds more competition

Amazon ramps up fintech play with investment in Smallcase

Facebook buys blockchain firm Chainspace

Microsoft's $19.7 billion acquisition of Nuance gets EU approval
TRADITIONAL PLAYERS NEED TO RETHINK COMPETITIVE ADVANTAGE
THANK YOU

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