



Big Data Platforms in Korea: Commons or Anti-commons?

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Platform Competition and Regulation

- Online platforms?
 - Undertakings “that are capable of facilitating direct interactions between users via online systems, and that capitalize on data-driven efficiencies enabled by network effects.”
 - ❖ European Commission, ‘Online Platforms and the Digital Single Market Opportunities and Challenges for Europe,’ (May 25, 2016)

Platform Competition and Regulation

- Data, Data, Data!!!
 - In considering the regulation of platforms, “[t]he most interesting questions concern how platforms collect data from users and connected devices.”
 - ❖ ‘Regulating technology companies: Taming the bests,’ *The Economist* (May 28, 2016)



Developing Big Data Platforms

- Government as a coordinator (or, a builder)?
 - In Korea, the government sometimes serves as a coordinator and often practically determines whether and how a data platform can be established and maintained.
 - Sometimes this means establishing a centralized data repository
 - This data repository can possibly serve as a *de facto* “common property” with few access restrictions among members (and often not granting access to outsiders)
 - At the same time, there could also be a anti-commons problem because (1) it is often not very clear what exactly can be done with the Big Data that this repository holds and (2) those with access to the repository’s Big Data tend to align their decision-making with everyone else’s decisions
 - A result is a very homogeneous and conforming business culture

Two cases in Korea

- Case 1: Consumer Credit Information
 - In Korea, there is a centralized repository/clearinghouse, served by the public credit register
 - Also, there is a market served by credit bureaus.
- Case 2: Health and Medical Information
 - In Korea, virtually all citizens are covered by the National Health Insurance scheme.
 - The National Health Insurance Service accumulates a vast amount health and medical information
 - Massive DBs comprised of: Eligibility DB; Medical Treatment DB; Health Examination DB; Medical Care Institution DB

Case 1: Market for Credit Information

Credit Bureaus: US v. Korea

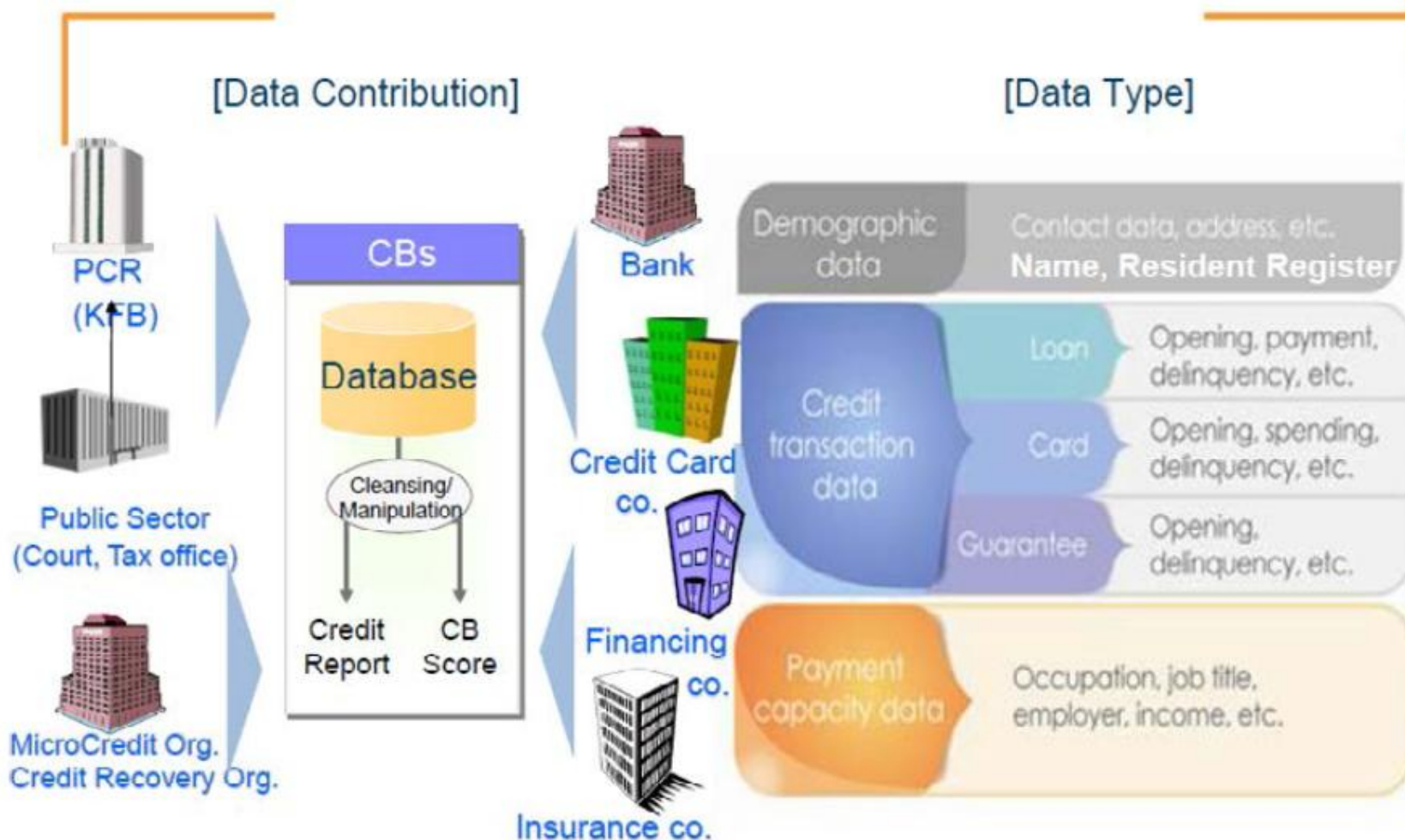


NICE Information Service



Korea Credit Bureau

Credit Information System: Public Credit Register (PCR) and Credit Bureaus (CB)

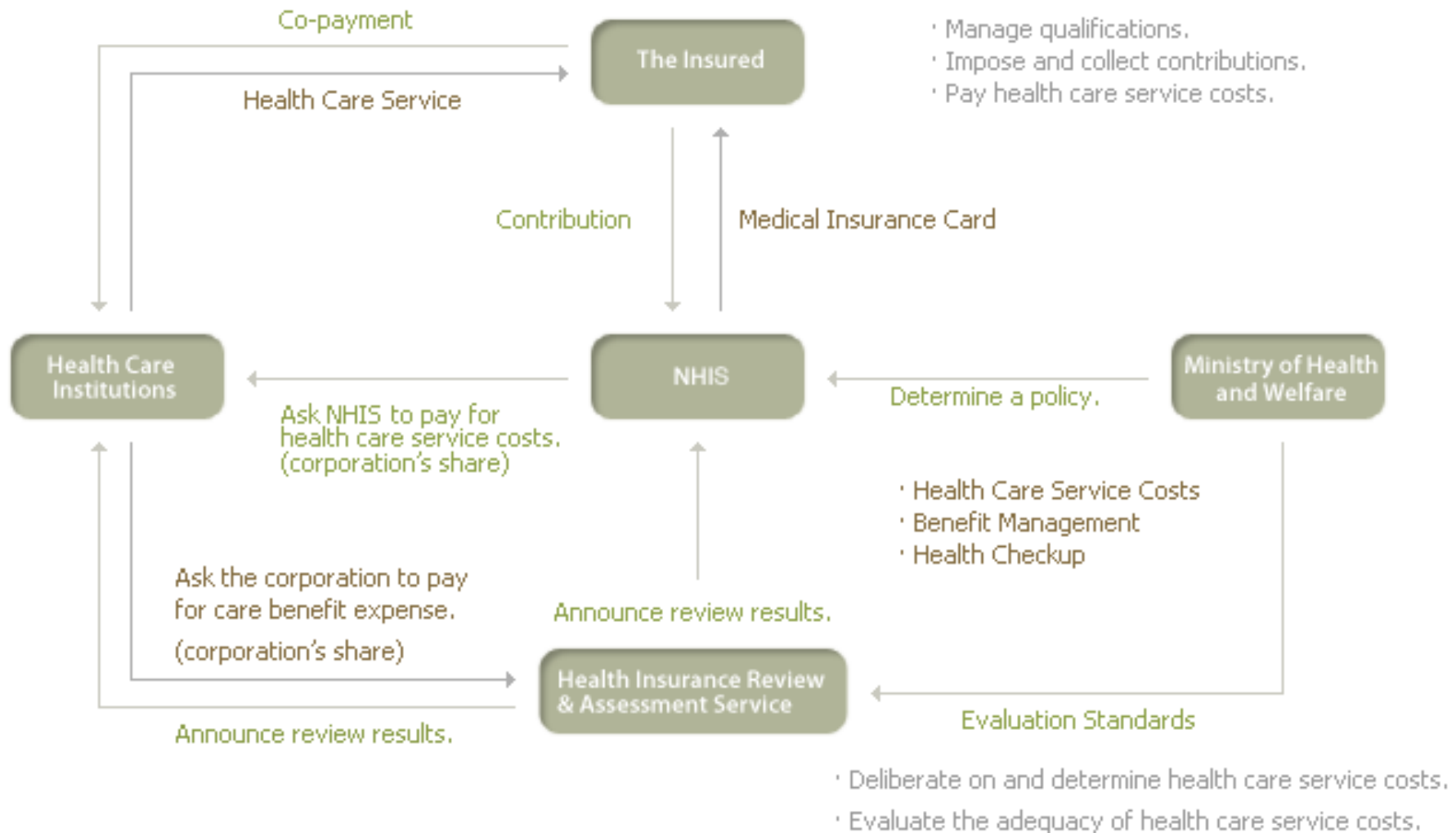


Source: Byong-ki Min, Use of Consumer Credit Data for Statistical Purposes: Korean Experience (2014), at www.bis.org/ifc/publ/ifcb39u.pdf

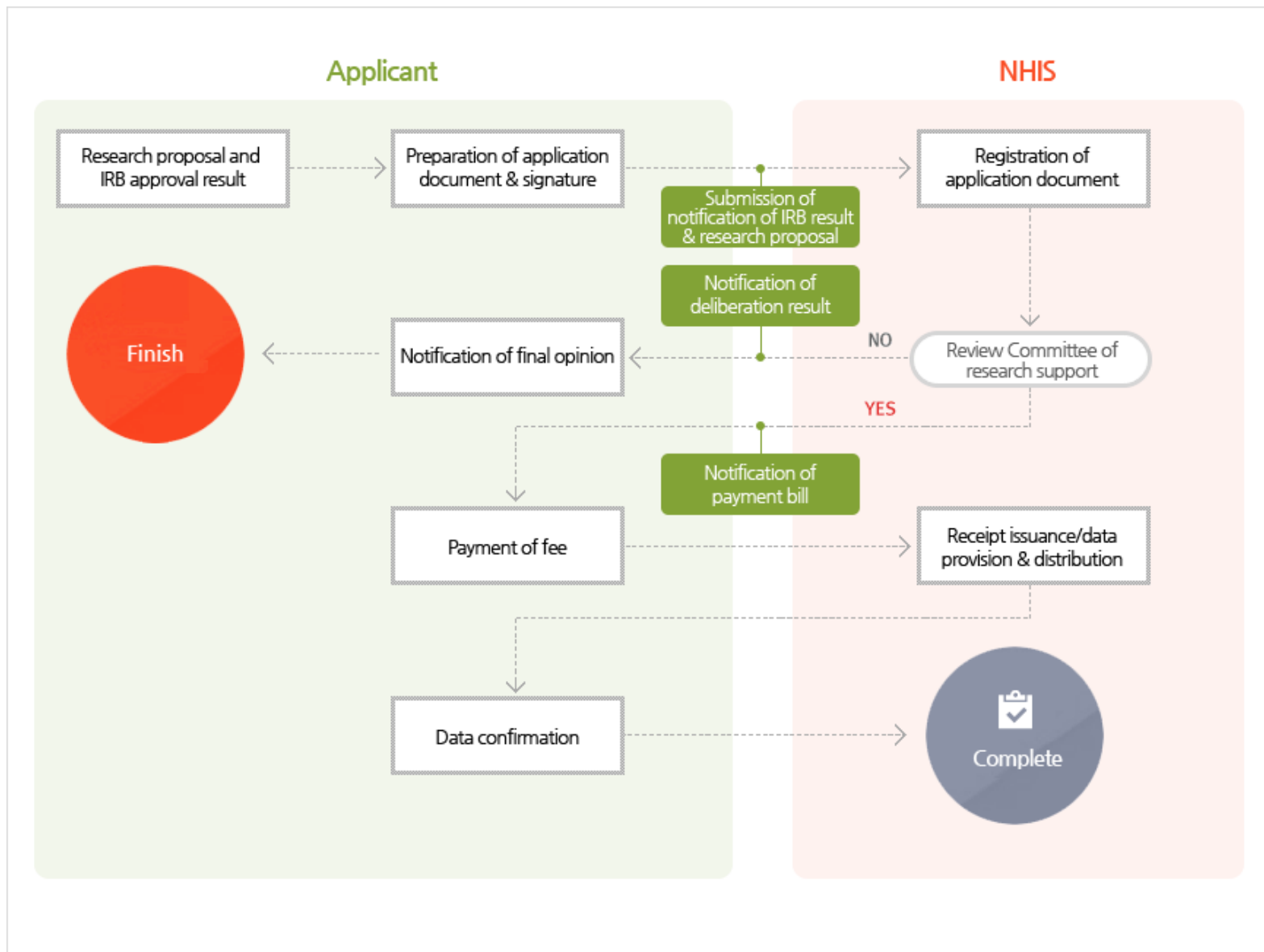
Some Characteristics and Issues regarding the Market for Korean Consumer Credit Information

- Government as a coordinator (or, a builder)?
 - There are both (1) the public credit register (PCR), “Korea Credit Information Services” (KCIS), and (2) credit bureaus.
 - The PCR serves as a central data repository among financial intermediaries
 - KCIS has a statutory mandate and authorization to collect consumer credit information under the Credit Information Act
 - KCIS feeds consumer financial information to financial institutions, CBs, and other member institutions.
 - CBs:
 - There are several CBs but, in practicality, the CB market is duopoly.
 - CB are private companies: one is listed on the Korean stock market, and the other has major banks as major shareholders
 - Why 2 CBs in the market?
 - For CBs, KCIS is a major source for obtaining relevant data

Case of National Health Insurance Service (NHIS)



Case of National Health Insurance Service (NHIS): Sample Cohort DB



Some Characteristics and Issues Surrounding Health and Medical Information

- Health and medical data repositories?
 - National Health Insurance Service has accumulated a vast amount of information
 - Also, large individual (tertiary) hospitals hold more detailed information
 - On the other hand, for instance, start-ups in the healthcare and medical service arena have virtually no access to useful health information
- Main issue
 - Certain institutions and hospitals hold massive information, while there are many restrictions utilizing the information, for research purposes or otherwise
 - There are many reasons for this, including very stringent data privacy regulations
 - At times, efforts are made by private companies, trying to find a way to bypass regulations...

Ongoing Conundrums on Building a Platform for Health and Medical Data

- Debates surrounding IMS Health
 - IMS Health
 - “provides information, services and technology for the healthcare industry” and is “best known for its collection of healthcare information spanning sales, de-identified prescription data, medical claims, electronic medical records and social media.” (from https://en.wikipedia.org/wiki/IMS_Health)
 - US: Sorrell vs IMS Health, 131 S.Ct. 2653 (2011)
 - Collection of information was viewed inherently as a first amendment issue, and the Court ruled in favor of IMS Health
 - UK:
 - “A minimum of 99% of acute English hospitals supply data to IMS Health about all medicines issued by hospital pharmacy departments.”
(from UK HSCIC, <http://www.hscic.gov.uk/catalogue/PUB13413/use-nice-app-med-nhs-exp-stat-eng-12-qual.pdf>)
 - Korea:
 - Criminal and civil lawsuits pending against IMS Health and other defendants, for alleged violations of data privacy statutes