## Implementation of Account Aggregator for Optimizing NBFCs and its Major Role in Mortgage Lending

## Prasad Wagh Ruby S Chanda

Symbiosis Institute of Management Studies, Symbiosis International(deemed) University, Pune Email:prasad.wagh2022mbae@sims.edu;ruby.chanda@sims.edu

## Abstract

The business of providing, under an agreement, the service of retrieving or collecting economic facts about its customers that may be unique through periodic FIPs; and combining, organizing, and providing, to the FIUs, such information that may be unique via periodic FIPs with the express consent of the customers. The customer's economic data, however, will no longer be NBFC-AA's property and cannot be utilised in any other way..

The home loan marketplace in India is expected to grow over \$300 billion, which indicates a mortgage-to-GDP ratio of 11%. Favorable situations like growing earnings stages, progressed affordability, and financial assistance for the demand for homes as actual property in India is on an uptrend, builders are now financially stronger.

while comparing to Asian economies, loan-to-GDP ratios range between 20-30 percent

This paper discusses the role, challenges and opportunities for the customers and the companies to implement account aggregators for a smooth process and better returns.

Keywords: Account aggregator, NBFC, Lending, Loan, Housing corporations

# Introduction

The covid changed the way customers use technology and look to buy or refinancea place are going to lenders who offer online tools to complete their mortgage loans from their place. Many lenders re-evaluated their innovative partners, how they were using technology, the systems, and the tools used. Many lenders totally and permanently shifted the way they serve borrowers.

Mortgage lending performs a major role in the current economy as, for the majority population, the only way to own a home. Under the conventional lending arrangement, banks provide mortgage loans by acting as intermediaries between depositors and borrowers, collecting collateral in the form of acquired assets, and keeping the mortgage debt recorded on their balance sheets. This model has become step by step extra complex with the advent of a secondary marketplace.

India has gone through economic expansion, in terms of a robust increase of financialservices companies and new enterprises getting into the marketplace. Business banks, insurance companies, mutual funds, NBFCs, cooperatives, pension and mutual funds, and other financial institutions are housed in this industry. The bank regulators have allowed new enterprises, including payment banks to be created recently. But, financial services in India are predominantly a banking area, with industrial banks accounting for greater than 64% of the

entire belongings held with the aid of the financial system.

The economic services sector in India has experienced tremendous growth recently. It's expected that this trend will continue. The personal wealth control industry in India is incredibly capable. By 2025, 6.11 lakh HNWIs are expected in India; this may make the country the world's largest private wealth market until 2028. India is predicted to have a US\$ 250 billion insurance market by 2025, which may provide the country access to an additional US\$ 78 billion in premium revenue between 2020 and 2030.

Housing Finance in India is one of the fastest growing financial systems within the globe and is anticipated or expected to be one of the tier 3 economies by 2030. This system is considered to be 5<sup>th</sup> biggest financial system by way of nominal GDP and also the 3<sup>rd</sup> biggest purchasing power parity (PPP) on the globe because of the increasing per capita earnings. In India, dem for residential properties is growing due to migration from villages to cities. More than one crore rural Indians are migrated to cities every year. In 2019-20, US\$6.06 billion was invested in Indian real estate.

It is projected that certain segments of the Fintech industry in India will grow. With the help of 2022, the mobile wallet market in India is anticipated to grow at a 150% Compound Annual Growth Rate (CAGR) to reach US\$ 4.4 billion. At the same time, mobile wallet transactions are estimated to reach Rs. 32 trillion (USD\$492.6 billion).

## Objectives

To optimize NBFCs and mortgage lending products using an account aggregatorfor process improvement of the lending business and customer satisfaction by:

- Effortless data gathering, delivering financial data from authorized accountseliminating data errors,
- To serve the unserved population who don't have access to credit facilities forbuying homes.
- Promoting Financial inclusion.
- faster processing for quicker access to products or services.
- transparency for a better picture of finances, real-time account data syncingfor reducing marginalerrors

### **Literature Review**

Housing Finance Co. (HFC) is governed by the National Housing Bank, which was established by the Indian government on July 9, 1988, in accordance with the NHB Act 1988. With the help of the Finance Statute of 2019, this statute was modified and now validates the Reserve Bank of India's (RBI) regulatory authority.

Dr. N.K. Thingalaya and colleagues (2009) conducted a study to understand the challenges in the housing finance domain. The primary goal of the research was to analyze issues with housing finance and policy in our nation.

Manoj, P.K. (2010) study examines the issues encountered by home financing Companies (HFCs) in India, drawing attention to their prior creation of a home financing system. Using ROE and cost-income ratio, the operational effectiveness of the largest HFCs in India was examined. the recommendation of appropriate strategic work ideas for creating an effective system.

According to Ms. Soniya Mohil's 2013(5) study, financial organisations have been slow to implement marketing strategies. To boost their company, HFCs should prioritise public deposits and solicit bank proposals for new HFC policies.

The growth of housing finance institutions, commercial banks, and HFCs were all examined in Prabitha P.K. et al.'s 2018(6) study, which also examined how scheduled commercial banks and HFCs performed in terms of outstanding advances, housing finance disbursements, and the proportion of housing finance to the total loan portfolio. Equity Research, "Credit Issue," (2013).

In India, the home financing industry encountered several obstacles. In terms of economic penetration, the Indian mortgage market lags nine to ten years behind economies such as Thailand and China, while growing at a 16% CAGR over the last five years. The youthful population, smaller families, urbanization, rising income levels, and other factors will all contribute to this segment's long-term, robust growth rates.

Centum, Volume 10, Issue 2, 2017, ISSN 2231-1475 20 -The housing standards still need to be met. The cause is a combination of rising labor and property costs, insufficient cash, and financial institutions' limited capabilities. Because of its connections to other economic sectors, housing financing is a great option in nations that are experiencing urbanization. Thanks to competitive housing finance companies (HFCs), favourable income tax incentives, and low-interest rates, obtaining a house loan is now simple. HFCs are oversaturated in the market and are vying for customers by offering a wide range of choices. (Rao (2013). Intense rivalry has been there in the Indian mortgage market recently. In order to meet the needs of both the business class and the salaried class, as well as to meet the near-term requirements of modern India and global standards for residential and commercial property, project funding, equity funding, etc., a control process is necessary for the mortgage market's sustained growth. The government has approved proposals to establish credit rating agencies, contemporary mortgage insurance products, and to update land laws, rental regulations, and registration procedures in order to cater to India's rapidly expanding mortgage sector.

#### **Data Analysis**

# of Consumers (Mn)

#### Research from TransUnion, a credit reporting agency

India's retail market is highly growing with support from the speed and scale of digital transformation. Research aimed to clear the credit perspective of the underserved population. Unserved- Consumer who never opened in credit account/product

Using the World Bank database, estimate the population that is underserved. When clients are serviced, underserved, newly granted credit, and deducted. There are still unsatisfied numbers. Undeserved: Customers have a small amount of credit history.



Source -TransUnion CIBIL and World bank

The study investigated the characteristics of individuals who are underserved by credit and how

66

Countries	Number Unserved	Percentage of adult population	Number of underserved	Percentage of adult
		unserved		population
				underserved
United States	8.1M	3%	37M	14%
Canada	2.1M	7%	7.5M	24%
Colombia	16.3M	44%	7.1M	19%
Hongkong	1M	16%	1.8M	28%
India	408M	50%	164M	20%
South Africa	20.6M	51%	5.96M	15%

they feel about credit offers. The following data pertains to a global research conducted on underserved and unserved customers using identical parameters.

Source-TransUnion CIBIL

In the survey to collect information from an underserved and unserved populationrelated to credit accessibility, finding suggested consumer beliefs, experiences, and attitudes toward credit will influence current and future trend

Among the survey's main conclusions are the following:

(a) 27% of underserved customers lack adequate access to credit. For the customer sector that is unserved, this percentage is 58%.

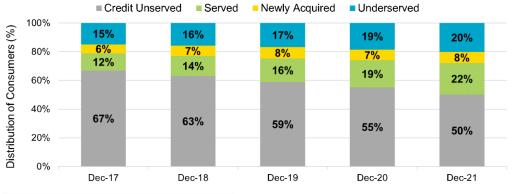
(b) Of customers, 38% of underserved and 65% of unserved feel that the quantity of credit they now have is insufficient.

(c) As a result of the higher interest rates that financial institutions charge, 39% of underserved consumers do not require additional credit, compared to 66% of unserved consumers.

(d) In the following six months, 84% of underserved and 35% of unserved clients intend to seek for new credit. These customers want to apply for personal loans and credit cards as their top two credit products.

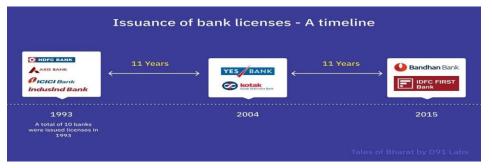
# Categorization of Population on Credit Eligibility

Studies revealed that the number of credit-served customers increased from 91 million in 2017 to 179 million in 2021, and that the proportion of credit-served adults increased from 12% to 22%.



Source -TransUnion CIBIL

The manner that e-commerce utilises technology is unlike how banks and NBFC have used it. To begin with, the banking industry is strictly regulated. Anyone with a creative idea and technical know-how could launch an online store. However, you cannot open a bank. The Indian Reserve Bank has been extremely selective when awarding complete banking licences. After an 11-year lapse, IDFC (now IDFC First) and Bandhan Bank were granted the last licence for a new bank in 2015. There are few competitors and a high entrance barrier in the private banking sector.



Unserved customers' lack of a credit score and credit history makes it difficult for them to access credit as many lenders are reluctant to give credit to those who don't have either. A procedure that lowers lending risk and gives quicker, more transparent financing to a population without access to credit might be implemented to address this issue. The demand cannot be met by banks and NBFCs' current procedures, and processing times are extremely long. This is due to their business model.

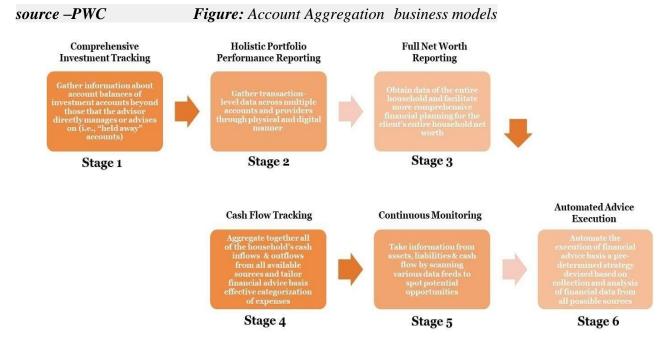
# Scope of NBFC-AA

RBI has certified NBFC-AA to act as a middleman or a bridge to obtain data from financial information providers (FIPs), such as banks, that store the private financial data of their clients. They are permitted to share the information with financial information users (FIUs), such as wealth management companies or lending associations, who may be charging their clients for financial services.

# Introduction to Account Aggregator

Account Aggregators facilitate the exchange of data between financial institutions via technology. Data sharing with consumer consent is the way of the future. They are the RBI-licensed NBFC that serves as a conduit for the exchange of data between financial institutions. Account aggregators (AAs) are companies that let FIPs and FIUs share structured financial data while keeping track of the consents given and providing the ability to monitor and revoke consents.

The diagram below shows the stages in the development of AAs and their path towards creating cutting-edge services and goods that provide customers and financial institutions with an automated, real-time, and much enhanced environment to enjoy.



### **Regulatory surroundings**

A new class of non-banking economic businesses was granted approval by the crucial financial institution in 2016 to act as AAs.7 Those aggregators are designed to offer services (gathering, compiling, and disseminating information on a particular consumer or business and submitting it to a Federal Bureau of Investigation) solely with the users' express consent.

March, 2016 Sep, 2016 March, 2017 July, 2017 Aug, 2017 March, 2018 July, 2018 Jan, 2019 Oct, 2019 Dec, 2019 March, 2020



Source Image-PWC Figure: AA journey so far

### Account Aggregator (AA)

AA is a company governed by the RBI. They oversee consent for the exchange of financial data.

Any FIP may plugin to any AA to obtain permission and deliver data thanks to the Account Aggregator system's common API framework, which consists of a collection of APIs and schemas. In a similar vein, FIUs can request permission and obtain data from FIPs by plugging into any AA. The user may utilize this framework to download and store the data locally, as well as exchange it with other FIUs.

Financial Information Provider (FIP): Institutions that retain and supply consumer data are

known as FIPs.Mutual funds: (data of available money, investment and withdrawal), Banks: (data of current and savings accounts, transactions, and balances), Data about insurance, amount of premium paid, and maturity date GST Network: (information on the timing and amount of taxes paid)

**Financial Information Users (FIU):** Institutions known as FIUs make use of the data produced by FIPs.

Lenders: Lenders (banks or NBFC) that give the customer a loan. FIP data is used to track asset quality and assess consumer credit risk. Private companies: These businesses offer services related to personal finance and wealth management.

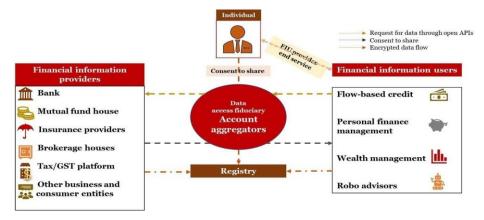
### Technology Service Providers (TSP)

#### How do account aggregators work?

Under the account aggregator framework, data sharing is enabled by three mainentities:

- 1. Financial information provider (FIP): Entity that holds your data(Banks, Income tax department, GST, AMCs, etc)
- 2. Financial information user (FIU): Organization that requests your data(Fintech app, digital lender, etc.
- 3. Account aggregator (AA): An RBI-licensed entity that enables this datasharing (Mostly an app or a website)

Unlike UPI, account aggregators share multiple types of financial data from various FIPs.



The consented data sharing under AA allows any third-party app to securely receive users' data, which in turn gives rise to a range of new use cases.



# The NBFC - AA

NITI Aayog's information Empowerment and safety structure empower each Indianto have seamless and comfortable entry to their facts and to allow portability of relied-on facts among service companies. The Unified payments Interface (UPI)of NPCI to payments, the NBFC - AA framework can to revolutionize financial services by means of simplifying statistics sharing with client consent among regulated entity to save its misuse.

NBFC – AA framework, for this reason can help in decision-making required forprovision of diverse financial offerings, viz., lending, loan monitoring, wealth management, private finance management, and so on., with the aid of getting rid of paper trails. these entities can facilitate the get right of entryto to economic offerings and credit to earlier underserved and unserved segments by using reducing records asymmetry.

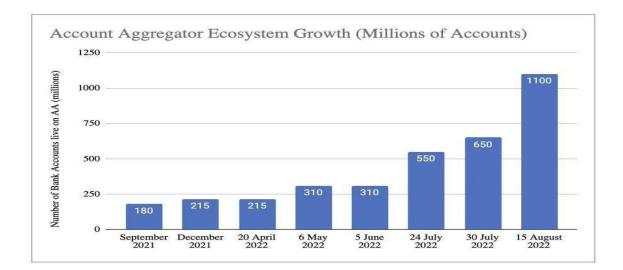
## How Will the Account Aggregator System Change How Credit isDistributed?

- 1. Improved Security and Privacy: one of their predominant cost propositions is the progressed facts privacy and safety supplied. this is backed by the aid of robust policies across the framework of the aggregator.
- 2. Integrations for Financial Players: With time, it turns into not unusual for banksand lending establishments to combine their structure to make their present structures compliant. for instance, lending establishments maywant to include transaction-based lending as this would allow banks to receive monetary information about clients in a hassle-free manner.
- 3. Standardized Financial Information: Partnering with account aggregators will standardize economic information throughout all FinTech gamers.

SR.NO	COMPANY NAME					
1	CAMSFinServ					
2	Cookiejar Technologies Private Limited (Product titled Finvu)					
3	FinSec AA Solutions Private Limited (Product titled OneMoney)					
4	NESL Asset Data Limited					
5	Perfios Account Aggregation Services Pvt Ltd (Product titled Anumati)					
6	Yodlee Finsoft Private Limited					

List Account Aggregator with operating license

A Seminal moment for the world's largest #OpenBanking ecosystem



SR. NO	INSTITUTION NAME	FI TYP E	ANUMATI	CAMS	FINVU	NADL	ONE MONEY
1	AU Small Finance BankLimited	Bank	Live	Live	Live	Х	Live
2	Axis Bank	Bank	Live	Live	Live	Live	Live
3	Bank of Baroda	Bank	Х	X	Testing	х	Live
4	Bank of India	Bank	Live	X	Х	х	Х
5	Bank of Maharashtra	Bank	Х	X	X	Live	Х
6	Canara Bank	Bank	х	X	Live	Live	Х
7	Central Bank of India	Bank	Х	X	X	Live	х
8	Federal Bank Bank		Live	Testing	Live	Live	Live
9	HDFC Bank Bank		Live	Live	Live	Live	Live
10	ICICI Bank Banl		Live	Live	Live	Live	Live
11	IDFC First Bank	Bank	Live	Live	Live	Live	Live
12	Indian Bank	Bank	Х	X	Х	Live	Х
13	Indian Overseas Bank	Bank	Х	X	X	Live	x
14	IndusInd Bank	Bank	Live	Live	Live	Testing	Live
15	Karnataka Bank	Bank	Live	X	X	х	Х
16	Karur Vysya Bank (KVB)	Bank	Live	Live	Live	Live	Live
17	Kotak Bank	Bank	Testing	Testing	Live	Testing	Live
18	Punjab National Bank	Bank	X	X	X	Live	X
19	Punjab & Sind Bank	Bank	Х	X	Live	Live	х
20	SBI	Bank	Х	X	Х	Live	Х
21	UCO Bank	Bank	Live	X	X	Live	Live
22	India	Bank	Live	Testing	Live	Live	X
23	HDFC Life Insurance	Insurer	X	X	Live	Х	Х

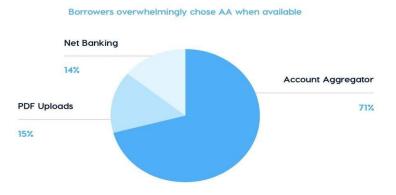
The following table shows the AAs with whom citizen can link their FIPaccount.

### Performance of AA after implementation

In India's first analysis of account aggregator overall performance, a B2B credit score infrastructure fintech agency FinBox revealed that 90% of people who usedaccount aggregator finished their mortgage applications, nearly double the conversion price as found in internet banking and guide PDF upload strategies.

The business enterprise surveyed over 3.8 lakh accounts to recognize the cutting-edge landscape and adoption version 71% of the consumers pick account aggregator to percentage data compared to other alternatives. Account aggregator decreased drop-offs by way of approx.2X, compared to different alternatives Creditors introduced down fraud by means of 45% put up account aggregator integration.

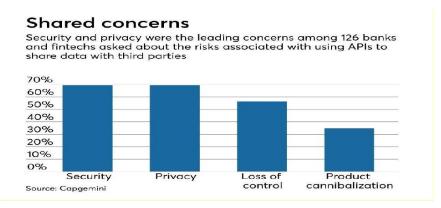
The record additionally states that monetary assertion fraud dropped via an outstanding 45% after FinTech included the account aggregator frameworkin its risk evaluation.



#### Account aggregation challenges,

• Financial protection and privacy are leading worries when banks open updatabases to third parties. Account aggregators institute virtual ethics

and deal with concerns of privacy and security via emphasizing time-certain, smart access to data after securing considered necessary permissions.



- Customer drop-offs at the document verification stage, even though virtual lending has eliminated the need for physical files. Customers are much more likely to abandon a mortgage need when requested to put up financial institution statements, evendigitally.
  - The account aggregator network, said to be the UPI movement for virtual lending, remains

unadopted by all the FI and will take time to establish roots deep enough to make a tangible distinction.

• The framework will take time to onboard fraud-detecting mechanisms, such as the distributed ledger generation.

• Only ten odd FIP/FIU are completely live, which as a restricted ecosystem toscale, will take time to get every major FIP and FIU completely

## Conclusion

By collecting all the data and offering a single digital framework to exchange in real time, AA gives you the power to quickly transfer data between multiple financial service providers. Credit facilities, with the launch of an account aggregatorservice, shall enhance and cater to the largely untapped pool of potential borrowers who might constitute the base of loyal customers for a particular banking and financial service. This would make credit accessibility a real deal for people from all levels of society.

AA solutions can bring about a paradigm shift not simply in credit assessment and lending but also in financial planning and wealth control. Banks and NBFCs should use the mega opportunity of AA to increase the lendingbusiness.

## References

 $1.\,https://inc42.com/resources/indias-account-aggregator-framework-is-set-to-transform-fintech-\ beyond-lending-heres-how/$ 

2. https://sahamati.org.in/

3. https://www.india-briefing.com/news/indias-account-aggregator-network-makes-financial-data- more-accessible-allows-individual-consent-

23161.html/#:~:text=On%20September%202%2C%202021%2C%20the,over%20their%20perso nal%20financial%20data.

4. https://amlegals.com/effects-of-personal-data-protection-bill-on-account-aggregator- ecosystem/#

5. https://www.rbi.org.in/Scripts/bs\_viewcontent.aspx?Id=31426.https://api.rebit.org.in/

7. https://www.livemint.com/money/personal-finance/account-aggregators-these-banks-have-joined-it-how-it-will-benefit-customers-11631417562966.html 8.https://www.jetir.org/papers/JETIR2110224.pdf

9.Screen Scraping

10..Master Direction- Non-Banking Financial Company - Account Aggregator (Reserve Bank)Directions, 2016

11. Finbox as an AA

12. Announcing Data Empowerment And Protection Architecture (DEPA) Workshop On 18th May 13..Alam, Tausif (2018): "Growth Comes with Glitches: It's Not Easy to Recover Money 14.Lost in UPI Transfer," ENTRACKR, 11 March,

15.Baruah, Ayushman (2019): "Rapid Adoption of Account Aggregators can Make India16Leader in Digital Economy: Nandan Nilekani," Livemint, 4 December,

17.https://www.livemint.com/companies/news/-rapid-adoption-of-account-aggre....

18.GoI (2019a):Section 14(2), The Personal Data Protection Bill, 2019, "Government ofIndia.Privacy by Design Foundation (nd): "About IRMA," 19.https://privacybydesign.foundation/irma-en/.

20.https://www.outlookindia.com/newsscroll/rbi-asks-nbfcs-not-to-use-coerci. 21.Tabarrok, Alex and Tyler Cowen (2007): Modern Principles of Economics, New York:

22. https://mediabrief.com/account-aggregator-reduces-financial-fraud-by-45-finbox-report/

 $\label{eq:23. https://www.pwc.in/industries/financial-services/fintech/fintech-insights/account-aggregators- putting-the-customer-in-charge.html$ 

24. https://www.outlookindia.com/business/five-ways-in-which-rbi-s-account-aggregator-platform- cansmoothen-your-financial-paperwork-news-197548

25.https://realty.economictimes.indiatimes.com/news/allied-industries/nbfcs-hfcs-securitisation-volumes-almost-doubled-to-rs-33000-crore-in-april-june-report/92807570

 $26.https://realty.economictimes.indiatimes.com/news/allied-industries/housing-finance-\ companies-likely-to-grow-at-10-12-in-fy23-report/93336528\ 27.https://economictimes.indiatimes.com/small-$ 

biz/money/how-account-aggregators-can-bring- an-era-of-democratised-

28.credit/articleshow/87577782.cms?from=mdr 29.https://newsroom.transunioncibil.com/more-than-160-million-indians-are-credit-underserved/

30.INDIANMORTGAGEINDUSTRYWITHREFERENCETOREVERSEMORTGAGESCHEME-AREVIEW.pdf

31.Regulation of information flows as Central Bank functions?

32.https://www.researchgate.net/profile/Amee-

Nagar/publication/344430609\_Indian\_mortgage\_industry\_with\_reference\_to\_reverse\_mortgage\_s cheme\_A\_review/links/5f7482d3299bf1b53e0066e4/Indian-mortgage-industry-with-reference-to- reverse-mortgage-scheme-A-review.pdf?origin=publication\_detail

33. http://scholarshub.net/index.php/ijcms/article/view/330/321

34.https://www.livemint.com/news/india/mortgages-have-grown-to-11-of-india-s-gdp-says- national-housing-bank-director-11630325848399.html

35. https://www.thehindubusinessline.com/money-and-banking/indias-home-loan-market- expected-to-double-to-48-lakh-cr-in-5-years-sbi-report/article65744880.ece

36. https://indianexpress.com/article/business/banking-and-finance/home-loan-market-to-double- to-600billion-in-5-years-deepak-parekh- 7957920/#:~:text=%2C%E2%80%9D%20he%20added.-,The%20home%20loan%20market%20in%20India%20is%20estimated%20at%20slightly,India%2 0is%20on%20an%20upcycle.

#### 37. ResearchPaperIJRAR.pdf

38. SSRN-id3924793.pdf. https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3924793 39.https://www.researchgate.net/publication/221550442\_A\_conceptual\_approach\_to\_information\_security\_in\_financial\_account\_aggregation