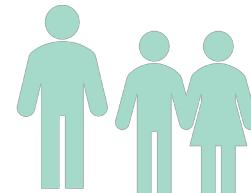


RDBMS Design For a P2P Lending Platform

The peer-to-peer(P2P) lending marketplace works through a simple **online platform**, which connects **borrowers** and **lenders**.



Normalization Procedure

Dataset Source:

Prosper client data

The dataset has a rich records of **81 variables** and **113,979 observation** for each loan list data from 2005 to 2014, which are suitable for a database design.



first_name	last_name	state	city	street_address	zip_code	reason_for_loan	loan_amount	loan_tenure_in_month
Kattie	Furley	Virginia	Roanoke	6 Mallory Road	24048	Debt consolidation	9,425.00	36
Dyann	Masi	Oklahoma	Oklahoma City	7075 Riverside Park	73147	Debt consolidation	10,000.00	36
Freeland	Marcombe	Utah	Salt Lake City	143 Reindeer Junction	84110	Debt consolidation	3,001.00	36
Valentia	Doby	Texas	El Paso	8718 Coolidge Drive	88553	Debt consolidation	10,000.00	36
Nikoletta	Carson	Virginia	Alexandria	90 Steensland Way	22301	Debt consolidation	15,000.00	36
Fern	MacFadin	Indiana	South Bend	36737 Twin Pines Circle	46634	Credit card refinancing	15,000.00	60
Davy	Gelletly	Virginia	Roanoke	1076 Menomonee Crossing	24034	Debt consolidation	3,000.00	36
Fabio	Owbrick	West Virginia	Charleston	50 Summer Ridge Pass	25321	Car financing	10,000.00	36
Meggy	Greiser	Arizona	Gilbert	98 Forest Avenue	85297	Home improvement	10,000.00	36
Nanni	Vasiltsov	Kansas	Shawnee Mission	8 Harbort Trail	66220	Debt consolidation	10,000.00	36
Harriot	Gamell	Texas	Houston	551 Daystar Court	77223	Credit card refinancing	13,500.00	60
Drugi	Rainford	Florida	Saint Petersburg	1005 Stang Terrace	33742	Debt consolidation	1,000.00	36
Agnes	Mollene	California	San Jose	6560 Logan Junction	95113	Debt consolidation	4,000.00	36
Timofei	Casetta	Maine	Portland	33691 Artisan Lane	4109	Debt consolidation	8,500.00	36
Gualterio	Buzine	Texas	El Paso	5026 Carioca Hill	88541	Debt consolidation	19,330.00	60
Jerri	Waugh	Alabama	Montgomery	55836 Dorton Circle	36125	Credit card refinancing	4,000.00	36

Row data

Separate
non-atomic
values

1NF

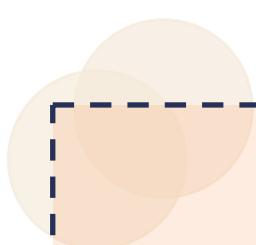
Remove
Partial
Dependency

2NF

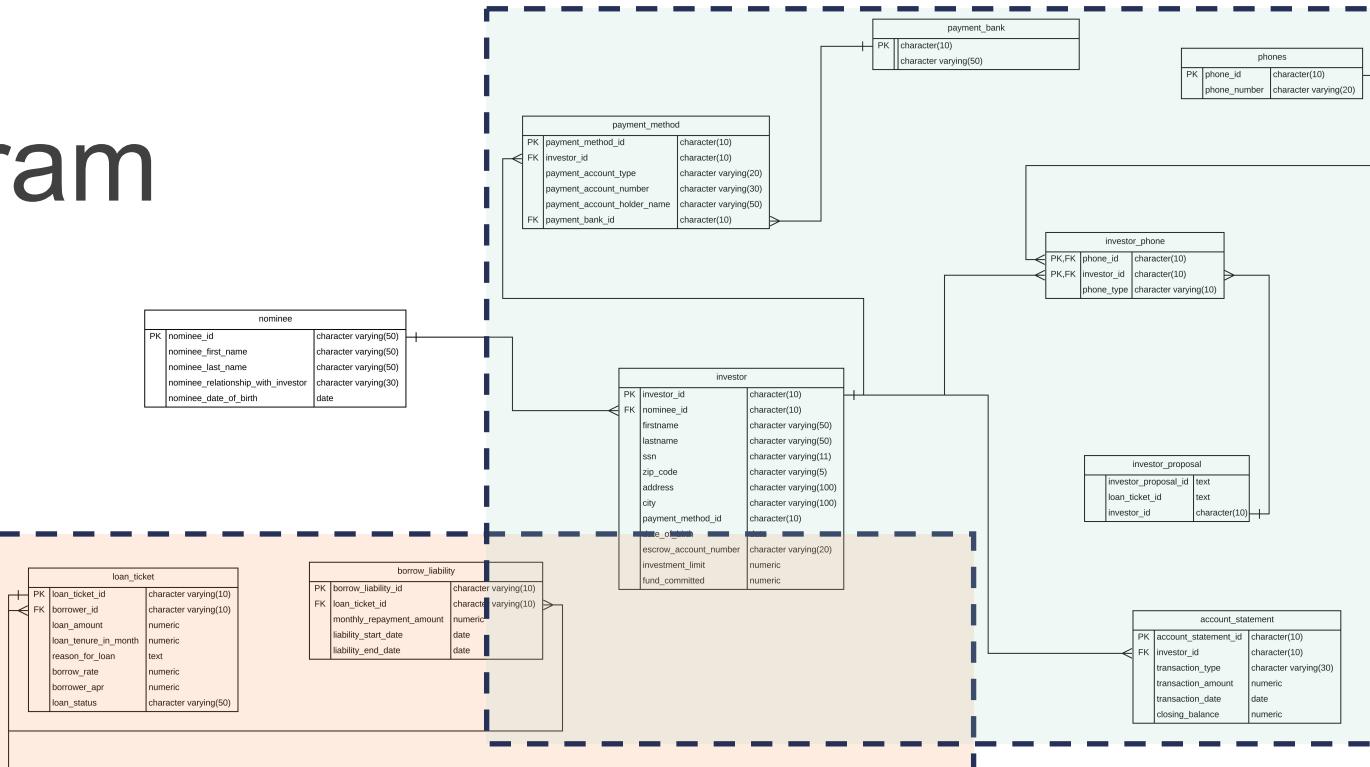
Remove
Transitive
Dependency

3NF

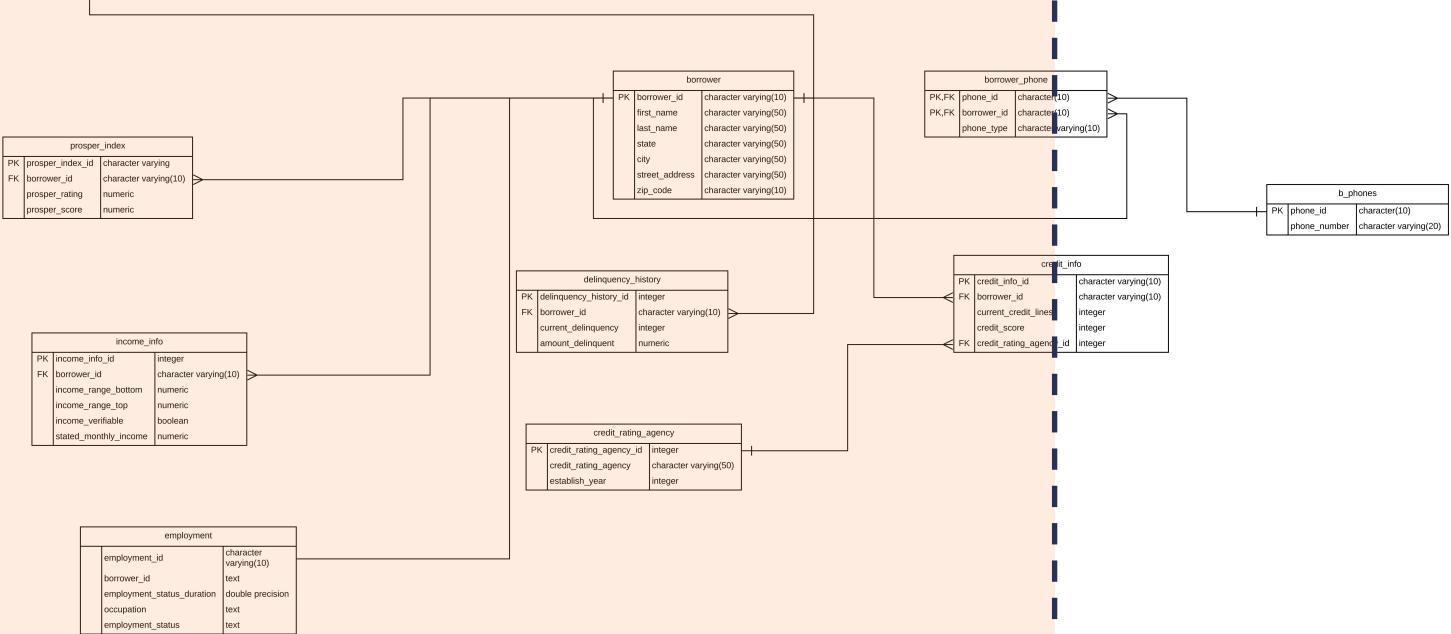
ER Diagram



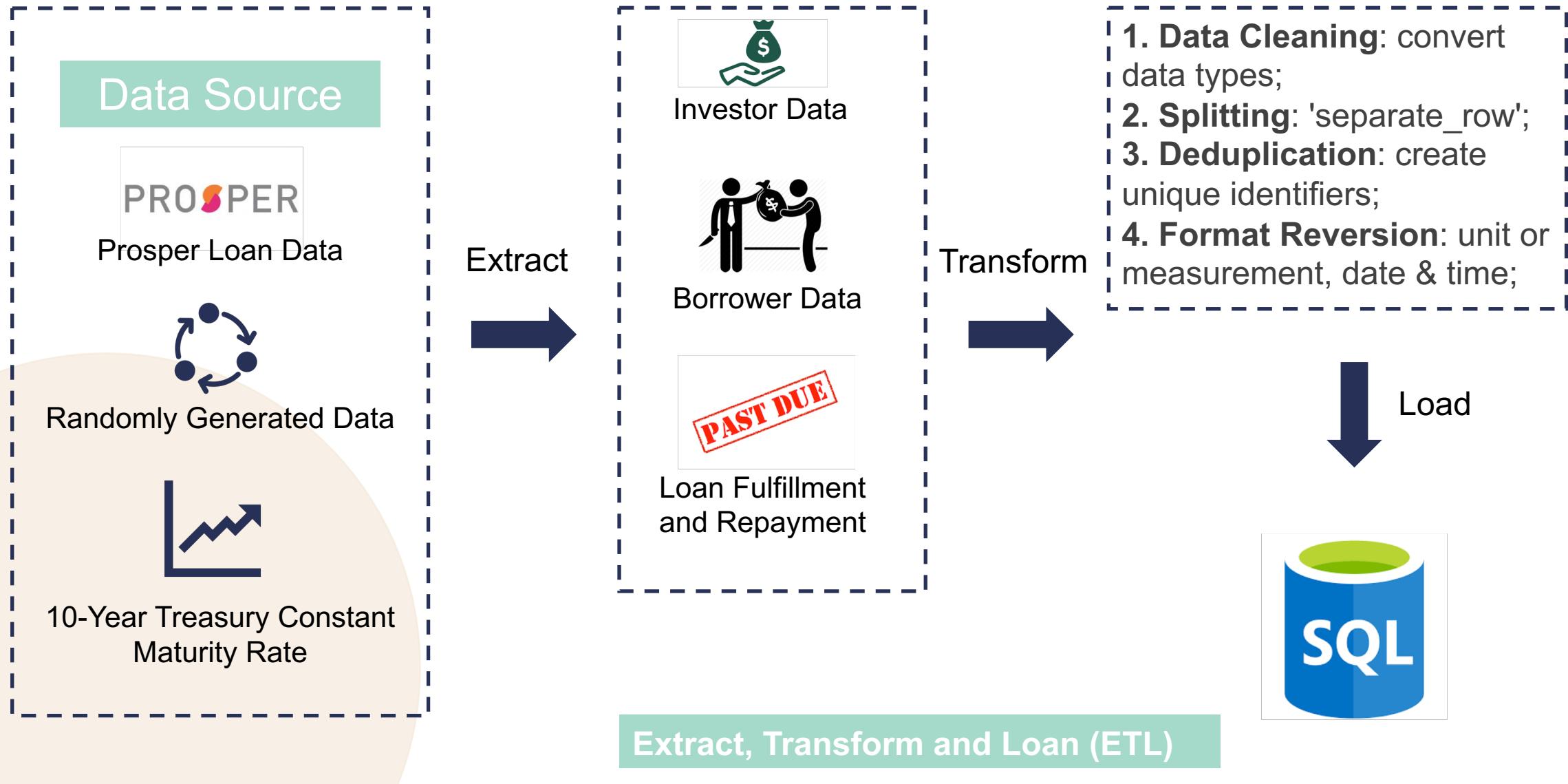
Investor



Borrower



ETL Process



Analytical Procedure

Borrowers with **highest/lowest monthly income**

Average loan amount vs Occupation

Reason for **loan** vs **Delinquent**

Gap between **monthly payment** and **loan amount**

Credit rating scores → **8 levels**, Income → **3 groups**

Locations of most borrowers/highest borrower average monthly income

Average investment limit for investors in different aging ranges

Cities of most numbers of **investors**

Number of investors for each payment bank



Analytical Procedure

Customers' needs that we design for

What insights are our customer looking for

A reliable RDMS contains comprehensive industry data

Interactive dashboard which can automatically update when new data is stored

Data analytics and visualization which are understandable for non-technology people

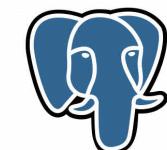
Customer portal of Borrower and Investor

Risk assessment of lender and lending transaction

Healthy and sustainability in cash flow operation



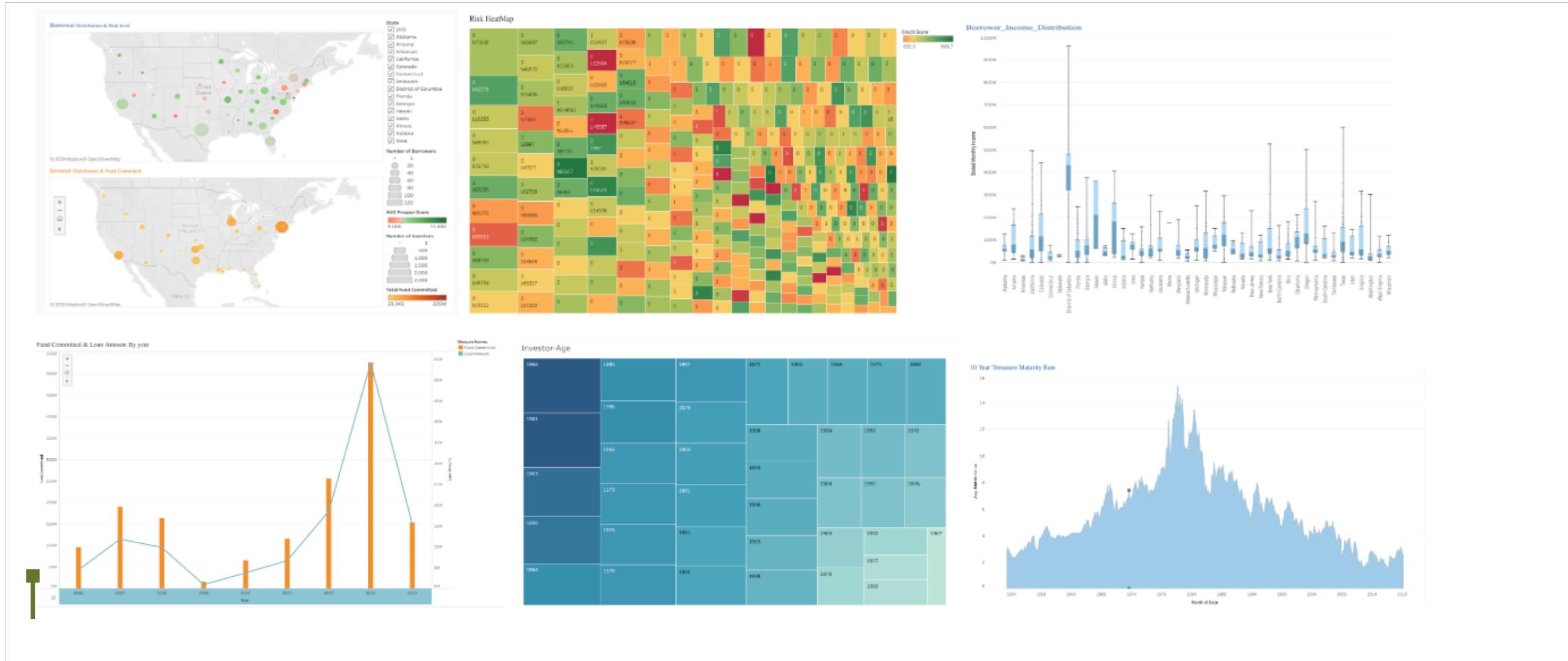
PostgreSQL



Metabase



Interactive Dashboard



Design is not just what
it looks and feels.
**Design is how it
works**

— Steve Jobs

Q & A

