



ML Application

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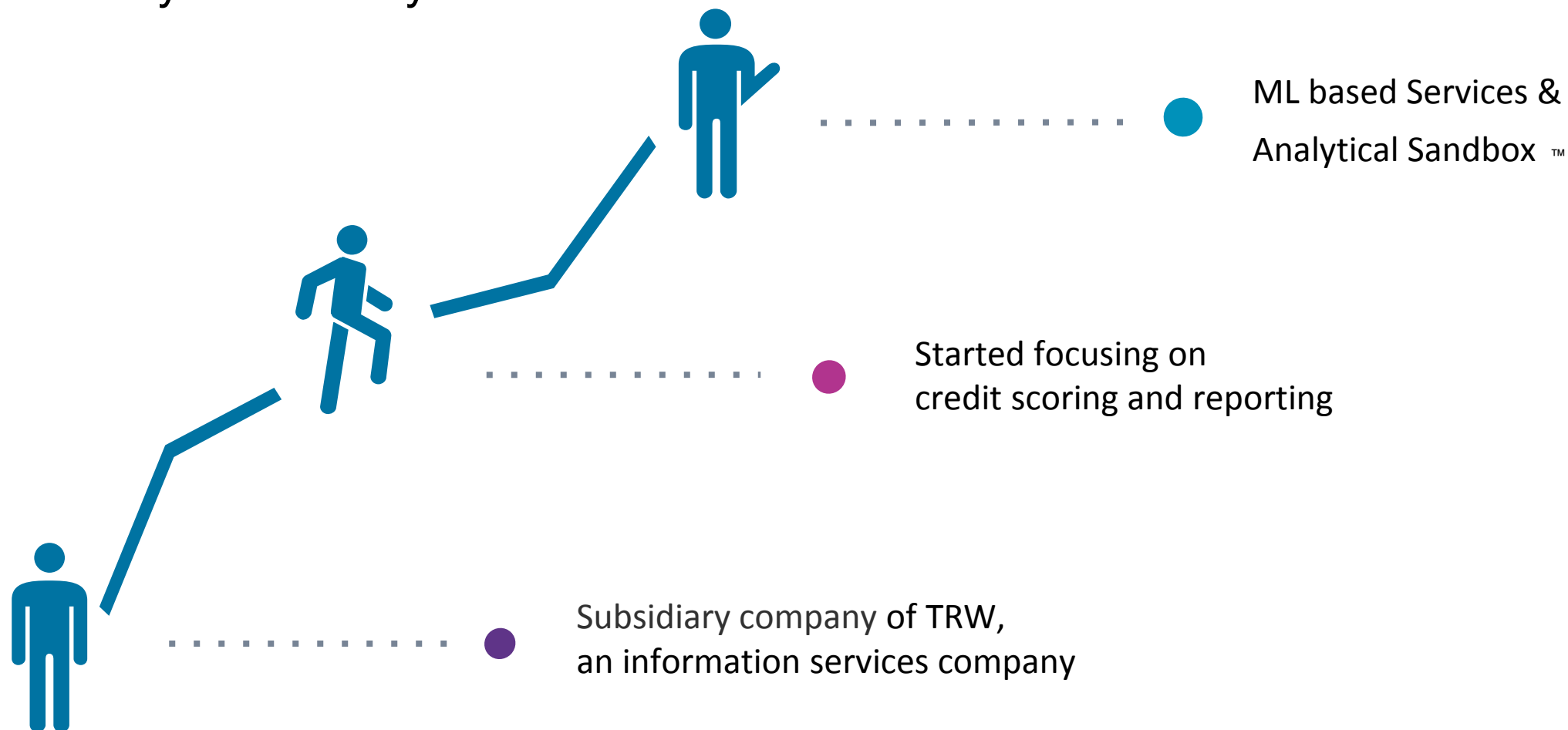
About the Company

Industry introduction | Company origins |
Competitors | General trends

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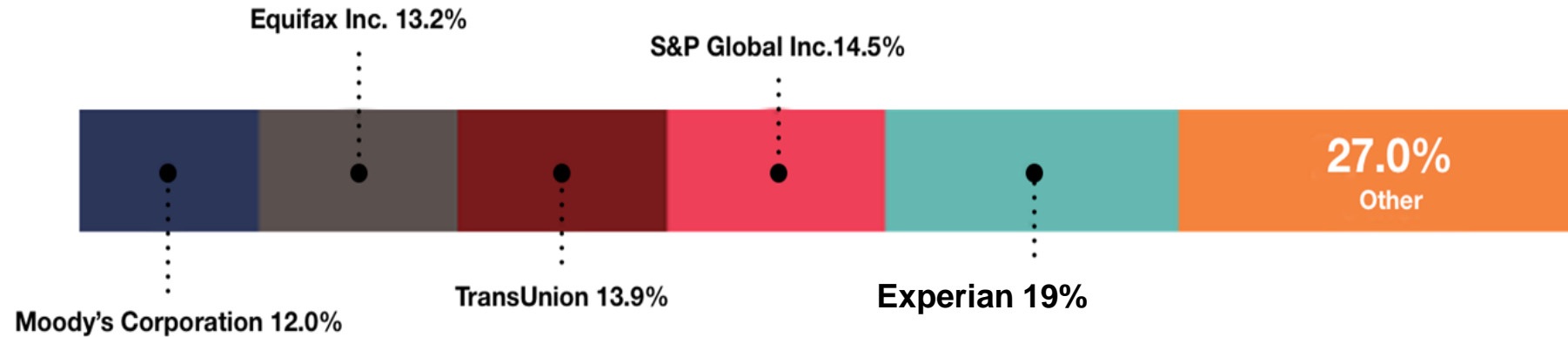
Company Origins

From subsidiary to industry leader



Credit Bureaus & Rating Industry

Main players pay more attention on Machine Learning



x

Analytical Sandbox TM

EQUIFAX

x

NeuroDecision Technology TM

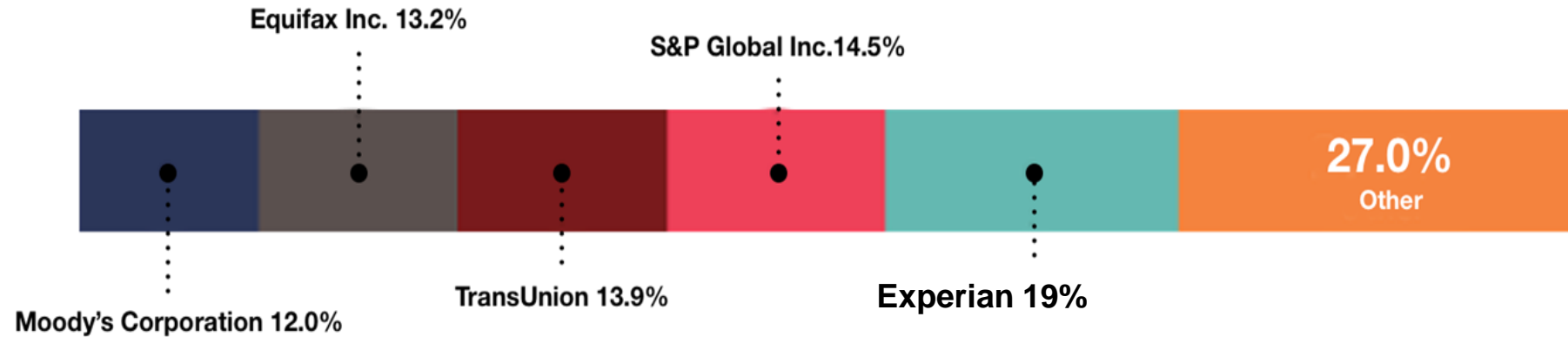
MOODY'S

x

RiskCalc Model TM

Credit Bureaus & Rating Industry

Main players pay more attention on Machine Learning



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Analytical Sandbox TM

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NeuroDecision Technology TM

MOODY'S

x

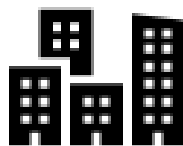
RiskCalc Model TM

ML Applications

Individual Mortgage | Loan Application |
Fraud Management

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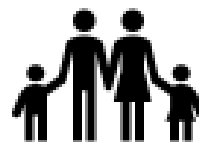
Application Scenerio



Business Loan Application

- Measures of profitability and leverage
- Assess credit risk

Business



Individual Mortgage

- Reduce the time
- Limited credit histories

Individual



Fraud Management

- Detect and reduce fraud
- Prevent money laundry

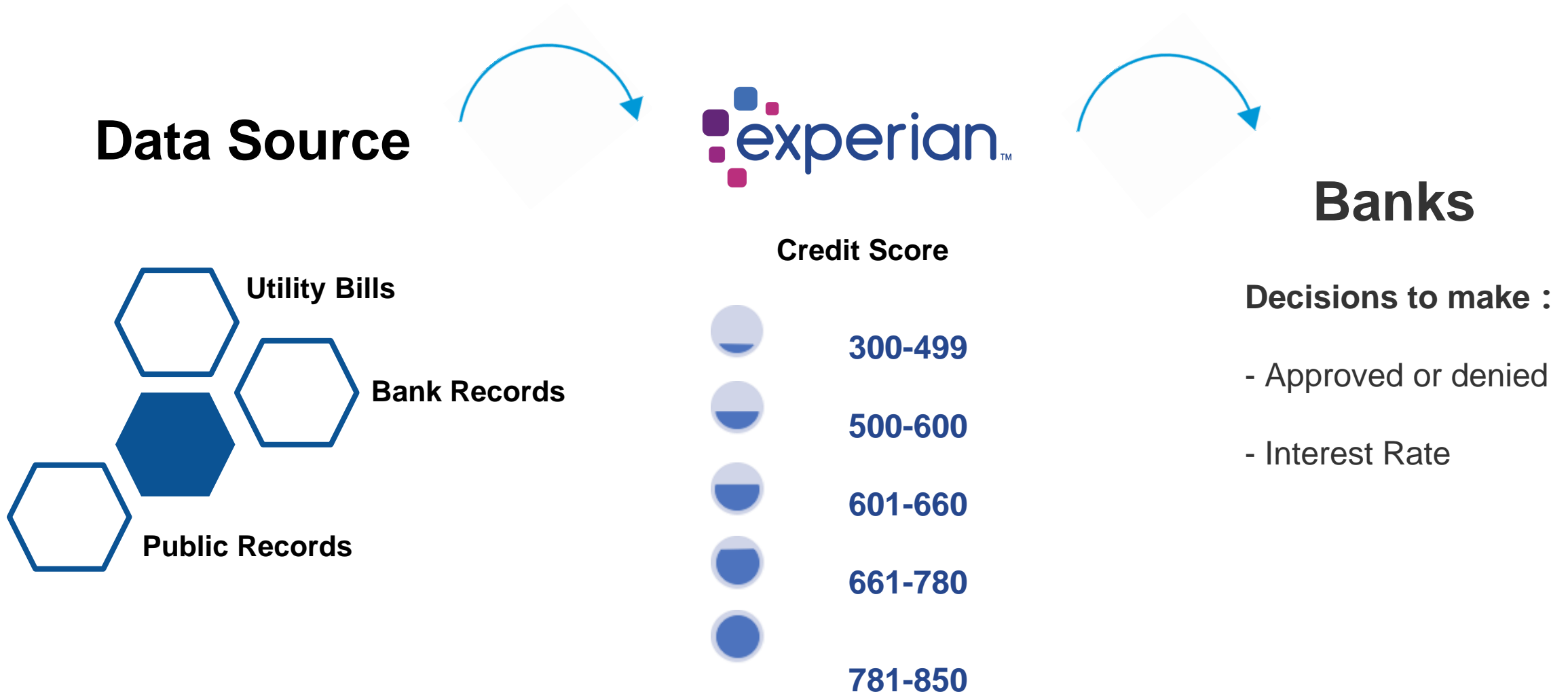
Government

Case in Practice

Simplify the application of individual mortgage by predicting credit score

/03

How does Experian Predict from Data flow



Prediction Model

Most Influential Variables

Ontime Payment
History

Credit
Utilization Rate

Highly Influential Variables

Age of Credit
Accounts

Total Debt

Public
Records

Less Influential Variables

Recently Opened
New Accounts

Number of
Inquiries

Number of Credit
Accounts

**Credit
Score**

Input Variables

Most Influential Variables



On-time Payment History

Description	Type	Example
$\frac{\text{Time of on-time payments}}{\text{Time of Total Payments}}$	float	100%
$\frac{\text{Proportion of the balance}}{\text{Credit line}}$	float	10%

Credit Utilization Rate

Input Variables

Highly Influential Variables

	Description	Type	Example
Age of Credit Accounts	Average age of all activated accounts	int	3 years
Total Debt	Debt owed	float	\$ 1,000
Public Records	Bankruptcy, court records, etc	int	0

Input Variables

Less Influential Variables

	Description	Type	Example
Recently Opened New Accounts	Number of newly opened credit accounts	int	2
Number of Inquiries	Times that credits being inquired within 24 months	int	1
Number of Credit Accounts	Number of credit accounts	int	3

Measurement

Tracking on applicants' behavior of repayment to see whether it matches our prediction.

Rent Payment Schedule

SPREADSHEET123

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Tenancy Term

12 months

[Tenant's Name]

Rent to be Paid

Weekly

[111 Street Name]

Weekly Rent

\$ 100.00

[City, St, Zip]

Deposit

\$ 1,000.00

Rented from and Including:

1/1/17

Rented To:

1/25/18

TOTAL RENT

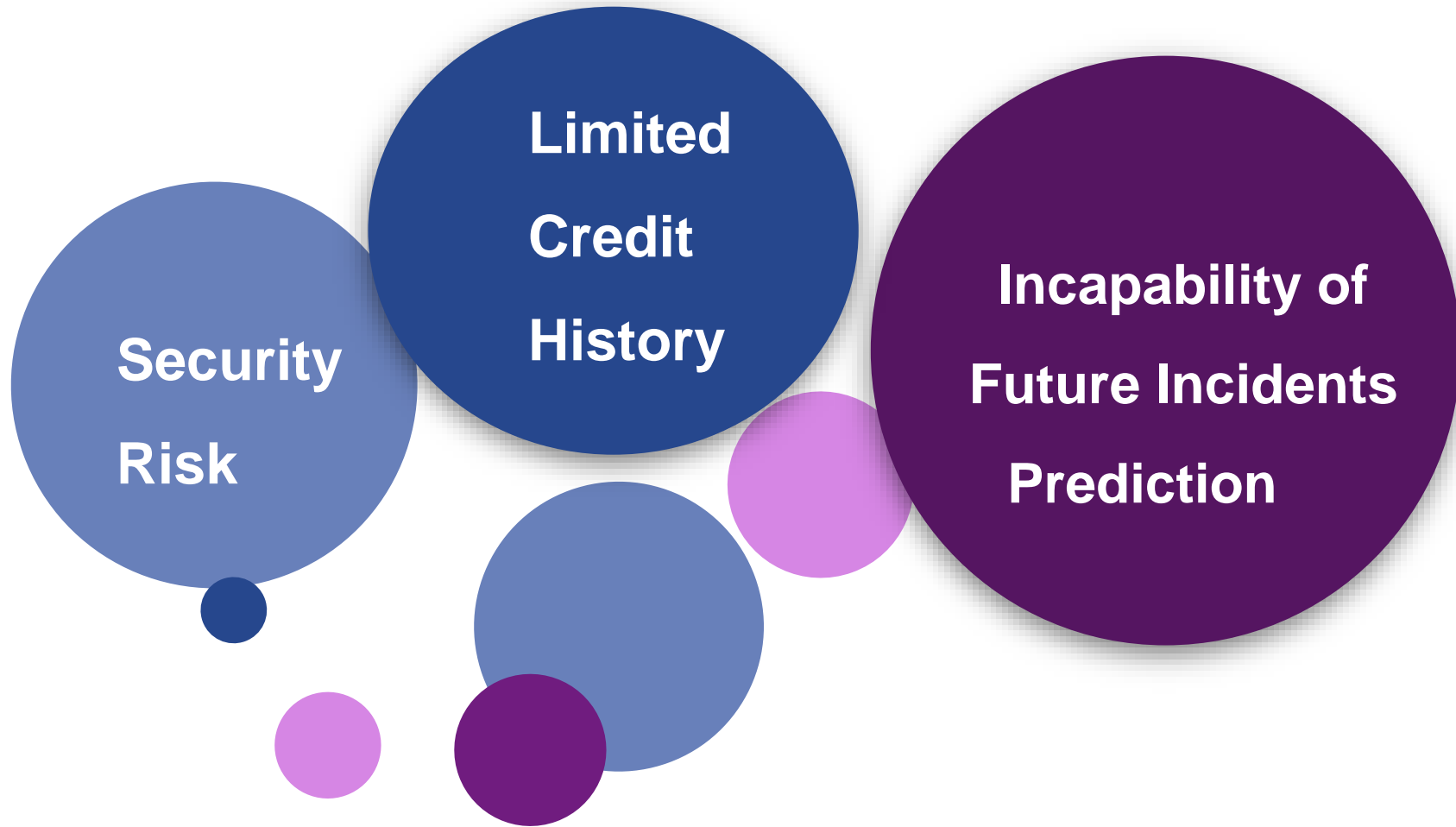
\$ 5,200.00

#	Date Due	Amount Due	Amount Paid	Check #	Receipt #	Balance
1	1/1/17	\$ 100.00	\$ 100.00			\$ 5,100.00
2	1/8/17	\$ 100.00	\$ 95.00			\$ 5,005.00
3	1/15/17	\$ 100.00	\$ 105.00			\$ 4,900.00
4	1/22/17	\$ 100.00	\$ 150.00			\$ 4,750.00
5	1/29/17	\$ 100.00				\$ 4,750.00
6	2/5/17	\$ 100.00				\$ 4,750.00
7	2/12/17	\$ 100.00				\$ 4,750.00
8	2/19/17	\$ 100.00				\$ 4,750.00
9	2/26/17	\$ 100.00				\$ 4,750.00
10	3/5/17	\$ 100.00				\$ 4,750.00
11	3/12/17	\$ 100.00				\$ 4,750.00
12	3/19/17	\$ 100.00				\$ 4,750.00
13	3/26/17	\$ 100.00				\$ 4,750.00
14	4/2/17	\$ 100.00				\$ 4,750.00
15	4/9/17	\$ 100.00				\$ 4,750.00
16	4/16/17	\$ 100.00				\$ 4,750.00
17	4/23/17	\$ 100.00				\$ 4,750.00
18	4/30/17	\$ 100.00				\$ 4,750.00
19	5/7/17	\$ 100.00				\$ 4,750.00
20	5/14/17	\$ 100.00				\$ 4,750.00
21	5/21/17	\$ 100.00				\$ 4,750.00
22	5/28/17	\$ 100.00				\$ 4,750.00
23	6/4/17	\$ 100.00				\$ 4,750.00
24	6/11/17	\$ 100.00				\$ 4,750.00
25	6/18/17	\$ 100.00				\$ 4,750.00
26	6/25/17	\$ 100.00				\$ 4,750.00
27	7/2/17	\$ 100.00				\$ 4,750.00
28	7/9/17	\$ 100.00				\$ 4,750.00
29	7/16/17	\$ 100.00				\$ 4,750.00
30	7/23/17	\$ 100.00				\$ 4,750.00
31	7/30/17	\$ 100.00				\$ 4,750.00
32	8/6/17	\$ 100.00				\$ 4,750.00
33	8/13/17	\$ 100.00				\$ 4,750.00
34	8/20/17	\$ 100.00				\$ 4,750.00
35	8/27/17	\$ 100.00				\$ 4,750.00
36	9/3/17	\$ 100.00				\$ 4,750.00
37	9/10/17	\$ 100.00				\$ 4,750.00
38	9/17/17	\$ 100.00				\$ 4,750.00
39	9/24/17	\$ 100.00				\$ 4,750.00

Repayment Behaviors



Challenges



Reference

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