Driving Performance & Mitigating Risk An Analytical Review of the Loan Application Workflow

Situation & Strategic Priorities

High-Cost Manual Processing

Front-office efficiency is heavily impacted by manual validation tasks, creating significant operational drag

Significant Revenue Leakage

The core "Car Loan" product shows a high failure rate, indicating potential revenue loss and a compromised customer experience

Critical Control Failure

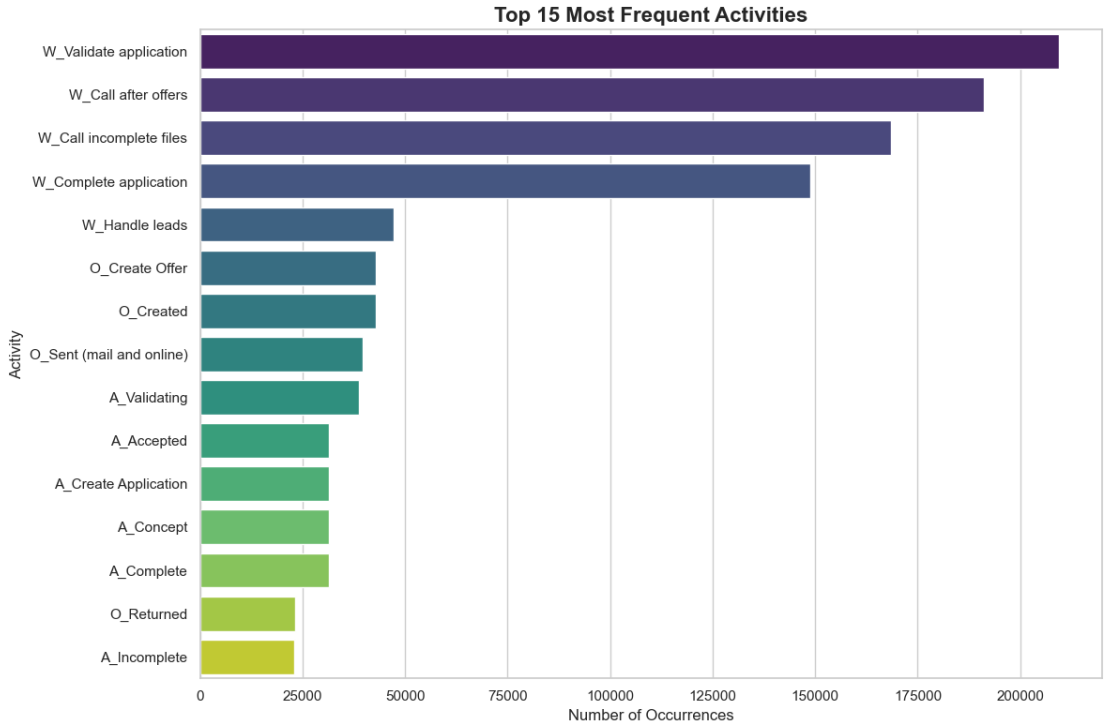
Segregation of Duties (SoD) violations in offer management present a direct pathway for potential fraud or material error.

Our Audit Methodology

- Modeled the business process (BPMN) to identify key controls and data points
- Engineered a data pipeline (SQL) to cleanse and structure 1.2M event logs for analysis
- Executed analytics scripts (Python) to quantify risks and deliver actionable insights.

Tech Stack: MySQL, Python(Pandas, Seaborn), BPMN,...

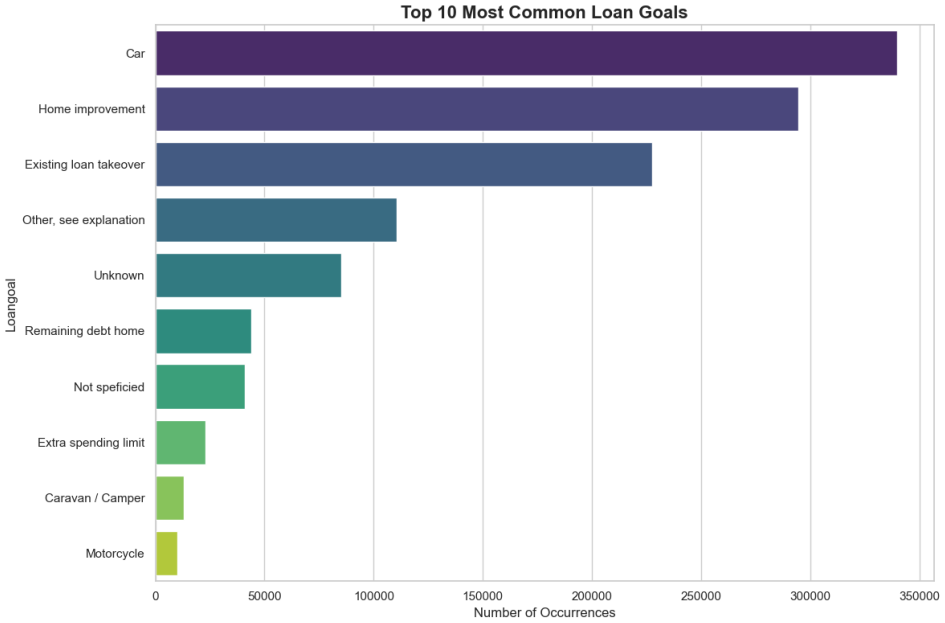
Finding 1: Operational Drag - The Cost of Manual Intervention



The Bottom line

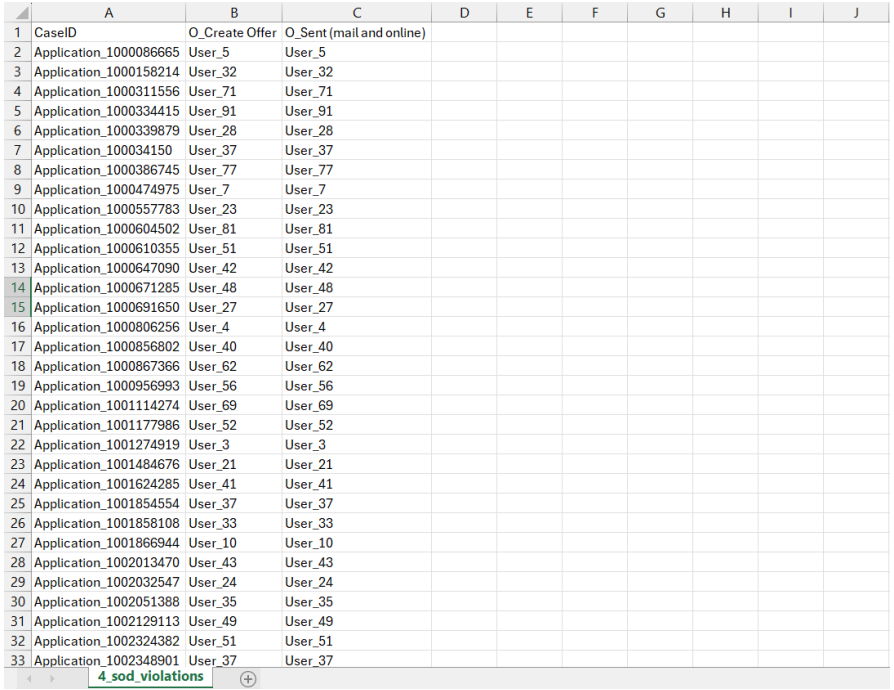
Over 50% of front-office effort is consumed by just three manual validation/calling activities. This is a high-cost operational model and a prime candidate for Robotic Process Automation (RPA)

Finding 2: The 'Car Loan' Paradox - Our Biggest Product is Our Leakiest Bucket



Yet, it has the highest combined rate of cancellations and denials, indicating significant friction in the customer journey or a non-competitive product offering

Finding 3: Critical Control Failure - Segregation of Duties (SoD)



	A	B	C	D	E	F	G	H	I	J
1	CaseID	O_Create Offer	O_Sent (mail and online)							
2	Application_1000086665	User_5	User_5							
3	Application_1000158214	User_32	User_32							
4	Application_1000311556	User_71	User_71							
5	Application_1000334415	User_91	User_91							
6	Application_1000339879	User_28	User_28							
7	Application_100034150	User_37	User_37							
8	Application_1000386745	User_77	User_77							
9	Application_1000474975	User_7	User_7							
10	Application_1000557783	User_23	User_23							
11	Application_1000604502	User_81	User_81							
12	Application_1000610355	User_51	User_51							
13	Application_1000647090	User_42	User_42							
14	Application_1000671285	User_48	User_48							
15	Application_1000691650	User_27	User_27							
16	Application_1000806256	User_4	User_4							
17	Application_1000856802	User_40	User_40							
18	Application_1000867366	User_62	User_62							
19	Application_1000956993	User_56	User_56							
20	Application_1001114274	User_69	User_69							
21	Application_1001177986	User_52	User_52							
22	Application_1001274919	User_3	User_3							
23	Application_1001484676	User_21	User_21							
24	Application_1001624285	User_41	User_41							
25	Application_1001854554	User_37	User_37							
26	Application_1001858108	User_33	User_33							
27	Application_1001866944	User_10	User_10							
28	Application_1002013470	User_43	User_43							
29	Application_1002032547	User_24	User_24							
30	Application_1002051388	User_35	User_35							
31	Application_1002129113	User_49	User_49							
32	Application_1002324382	User_51	User_51							
33	Application_1002348901	User_37	User_37							

4_sod_violations

The Assessment

- Finding: "The same users are authorized to both **create** and **send** financial offers."
- Risk: "This is a textbook SoD violation, bypassing a fundamental control designed to prevent fraud and error."
- Impact: "High potential for financial misstatement, unauthorized disbursements, or employee fraud."
- **Severity: CRITICAL**.

Proposed Action Roadmap

Immediate Remediation (Controls)

- **Action:** Deploy updated user access matrix.
- **Objective:** Eliminate SoD conflict immediately.

Tactical Analysis (Business)

- **Action:** Launch customer journey analysis for 'Car Loan' segment.
- **Objective:** Identify root causes of high failure rate.

Strategic Improvement (Efficiency)

- **Action:** Develop business case for RPA in Front Office.
- **Objective:** Quantify potential cost savings and efficiency gains.

Q&A

Do you have any questions?

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Thank you for the opportunity to discuss how data-driven insights can help build a better, more secure working world