# Billing & Revenue Analytics Case Study

**Focus:** Accounts Receivable Risk, Collections Performance, and Dispute Impact
 **Period:** Jul 2023 – Jun 2025
 **Tools:** Power BI, DAX
 **Data:** Synthetic, modeled to reflect real-world billing and collections behavior

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## 1. Problem Statement

The business generated consistent invoice volume but experienced weak cash conversion. Despite steady invoicing activity, a growing gap between invoiced and collected amounts raised concerns around Accounts Receivable exposure, overdue balances, and operational blockers such as disputes.

The objective of this analysis was to:

- Assess overall billing and collection performance
- Identify where AR risk is concentrated
- Determine whether overdue exposure is driven by specific customers or systemic issues
- Understand the role disputes play in delaying cash recovery

## 2. Analytical Approach

I built a finance-focused Power BI dashboard designed for executive review, centered on three analytical layers:

1. **Revenue vs Cash Flow Timing**
   - Compared invoicing (Invoice Date) with collections (Payment Date) to accurately capture payment delays.
   - Modeled time correctly using separate date relationships to avoid misleading trends.
2. **Accounts Receivable Risk Analysis**
   - Calculated outstanding AR at the invoice level.
   - Segmented overdue balances into aging buckets, with emphasis on severe delinquency (90+ days).
3. **Operational Drivers of AR Risk**
   - Analyzed customer concentration within overdue AR.
   - Assessed open disputes and resolution timelines as blockers to collections.

The dashboard was intentionally limited to one page to force prioritization of decision-relevant insights.

# 3. Key Metrics Tracked

- Total Invoiced: **$1.38M**
- Total Collected: **$995.9K**
- Collection Rate: **72.2%**
- Outstanding AR: **$383.5K**
- AR 90+: **$328.0K**
- Open Disputes: **34**
- Avg Dispute Resolution Time: **29 days**

# 4. Findings & Insights

## Revenue vs Collection Performance

Invoicing and collections follow similar monthly patterns, but collections consistently lag behind invoicing and extend beyond the invoicing period. This confirms that the cash shortfall is driven by delayed customer payments rather than revenue timing mismatches.

The sustained gap between invoiced and collected amounts explains the low collection rate and increasing AR balance.

## Accounts Receivable Aging

Over **90% of overdue AR** sits in the **90+ days** bucket, while early-stage overdue balances (0–90 days) remain relatively small. This indicates that invoices are not being recovered once they pass initial delinquency thresholds, pointing to weaknesses in escalation or enforcement beyond early follow-up.

## Customer Concentration

Overdue AR 90+ is driven primarily by **Enterprise customers** across multiple countries. No single customer dominates the exposure, suggesting that AR risk is systemic rather than attributable to isolated accounts.

This implies that improvements must come from process-level changes rather than one-off recoveries.

## Disputes as a Cash Blocker

A high number of open disputes, combined with long resolution times, continues to block collections on already overdue invoices. Disputes materially contribute to delayed cash recovery and compound AR risk.

# 5. Business Implications

The analysis indicates that the core issue is not revenue generation, but **cash realization**. Without earlier escalation, tighter enterprise follow-up, and faster dispute resolution, overdue invoices are likely to continue aging into high-risk categories, increasing both cash flow pressure and write-off exposure.

# 6. Outcome

This case study demonstrates how finance analytics can:

- Reveal the root causes of weak cash performance
- Separate timing effects from structural collection issues
- Surface operational blockers that directly impact financial outcomes

The resulting dashboard provides leadership with a clear, actionable view of AR risk and its underlying drivers.

# 7. What I'd Do Next

Based on the findings, the next steps would focus on preventing invoices from aging into high-risk categories and unblocking existing overdue balances:

- **Introduce earlier escalation thresholds** by triggering proactive follow-ups before invoices reach 60 days overdue, rather than reacting at 90+.
- **Segment collections efforts by customer size**, with dedicated follow-up workflows for Enterprise accounts where individual balances pose higher cash risk.
- **Prioritize dispute resolution for overdue invoices**, aligning finance and operations teams to close disputes that are actively blocking collections.
- **Track AR recovery KPIs**, such as time-to-collection after 60 days and dispute resolution cycle time, to measure the effectiveness of process changes.
- **Implement targeted customer reviews** for repeat late payers to reassess payment terms or enforce stricter contractual conditions.