

Lens AI: Underwriting for the Economy That Actually Exists

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The Opportunity

Income arrives on a schedule. Bills don't.

For the 67% of Americans living paycheck to paycheck,¹ the problem isn't usually spending too much—it's that rent, car payments, and insurance all hit on the 1st while paychecks arrive on the 8th and 22nd. That timing mismatch creates overdrafts, late fees, and short-term liquidity gaps for otherwise responsible households.

This is a physics problem, not a behavior problem. And it's invisible to traditional credit infrastructure.

The FICO score asks: *How much debt can this person handle?* That's the wrong question. Most financial stress isn't about capacity—it's about timing. A household with \$4,000/month in income and \$3,500 in expenses isn't broke. But when everything hits at once, it looks broke to systems that can't see the rhythm underneath.

Split Pay built **Lens AI** to see that rhythm.

Instead of static, backward-looking bureau scores, Lens AI continuously evaluates real-time cash flow, behavioral patterns, and stability signals to answer a fundamentally different question:

Will this person make this specific payment, given their actual financial rhythm?

Early results validate the thesis: removing reliance on traditional credit scores expanded approvals to previously excluded segments—without increasing loss rates.

The opportunity isn't to build a better credit score. It's to build infrastructure for the economy that actually exists—where income is predictable, bills cluster, and the timing gap is the problem worth solving.



What Traditional Credit Misses

The FICO score was introduced in 1989² for a world of stable salaried employment, long credit histories, and mortgage-centric financial lives. That world is gone—but the infrastructure remains.

Traditional scoring doesn't just fail to keep up. It systematically misses three things that define modern financial life.

Volatility

The economy moved. Credit scoring didn't.

- Over one-third of American workers (approximately 36%) participate in freelance or gig work in some capacity³
- Household income volatility increased approximately 30% between the early 1970s and late 2000s⁴
- Median job tenure fell to 3.9 years in January 2024—the lowest since 2002⁵

Traditional scoring treats income variability as a risk factor. Lens AI treats it as a pattern that requires different models.

Invisibility

Access to credit builds credit history. Credit history determines access to credit. The loop closes before many people can enter it.

An estimated 26 million Americans are “credit invisible” with no credit record⁶

- An additional 19 million have files too thin or stale to generate a score⁷
- Over 80% of 18-19 year olds lack sufficient history to be scored⁸
- One in five consumers has an error on at least one credit report⁹—and complaints about these errors have increased 168% since 2021¹⁰



The system overlooks entire populations: the young, the mobile, the self-employed, gig workers, recent immigrants, new homeowners adjusting to larger obligations, families whose expenses expanded with life stage. These aren't risky populations—they're *invisible* populations the system wasn't designed to see.

Timing

This is the deepest blind spot—because traditional systems only measure capacity, not timing.

More than one-third (34%) of American households experience large year-over-year income changes.¹¹ Bureau scores see the late payment. They don't see the timing mismatch that caused it.

Traditional credit measures capacity. But most financial stress is about timing—and timing is exactly what Lens AI was built to see.



The Lens AI Approach

First-Party Data, First-Class Signals

Lens AI underwrites using data customers provide directly—primarily 12+ months of bank transaction history—rather than third-party bureau data. Our core signals:

Category	What We Measure
Income Patterns	Frequency, consistency, sources, variability
Expense Obligations	Fixed vs. variable, timing, priority ordering
Account Behavior	Balance trends, overdraft frequency, savings velocity
Payment Performance	Bill timing, partial payments, catch-up patterns
Stability Indicators	Primary account detection, deposit consistency

This isn't "alternative data" bolted onto a traditional model. It's a fundamentally different philosophy: observe what people actually do with money, not what a third party infers from credit product usage.

Continuous, Not Static

Traditional credit is a snapshot. Lens AI is a stream.

Monthly re-evaluation: Every active user is re-scored based on current behavior—not a file that updates quarterly.

Dynamic limits: As customers demonstrate stability (consistent deposits, on-time payments, healthy patterns), limits expand automatically. When signals weaken, limits adjust before losses materialize.

Real-time responsiveness: A customer who misses a payment enters a restricted state immediately—no new credit while delinquent. Recovery is fast: demonstrate repayment, restore access. This tight feedback loop is impossible with traditional scoring.



Underwriting the Right Question

Traditional credit asks: “*What is this person’s probability of default on a general credit obligation?*”

Lens AI asks: “*Will this person make this specific payment, given their income timing, expense cadence, and current liquidity?*”

This reframing is crucial. A customer might be a poor candidate for a \$10,000 unsecured line—but an excellent candidate for a \$750 rent split aligned with their paycheck schedule. By matching the underwriting question to the actual product, Lens AI says “yes” more often without increasing risk.

Machine Learning Architecture

Lens AI uses modern ML to identify non-obvious patterns in transaction data:

- **Behavioral clustering:** User archetypes based on cash-flow patterns, not demographics
- **Sequence modeling:** How payment behavior evolves over time
- **Anomaly detection:** Real-time flagging of sudden changes (job loss, income spike, expense shock)
- **Survival analysis:** Predicting not just *if* someone will pay, but *when*—critical for timing-based products

Models train on Split Pay’s own repayment data, creating a proprietary feedback loop that improves with scale.



Who Lens AI Serves

Cash-flow timing stress isn't limited to any income bracket or demographic. It affects anyone whose bills cluster in ways that don't align with when they get paid—from early-career workers to established professionals navigating life transitions.

The Underserved Majority

Young professionals (18-30): Thin credit files, income volatility from early career or gig work, high rent burden—but strong repayment behavior when products fit their rhythm. Workers ages 25 to 34 have median job tenure of just 2.7 years.¹²

Millennials with growing families: Dual incomes stretched by new childcare costs, larger housing, and life insurance premiums. Cash flow is tight not because income is low, but because expenses expanded with life stage. These households often have strong earnings but poor timing alignment.

New homeowners: First-time buyers adjusting to mortgage payments, property taxes, maintenance costs, and utilities that didn't exist when they rented. The transition creates temporary cash-flow stress even for financially stable households.

Credit-invisible populations: Recent immigrants, cash-economy workers, anyone without traditional credit product history—demonstrable ability to pay, no traditional signal to prove it. Approximately 45 million Americans are either credit invisible or have unscorable files.¹³

Gig workers and small businesses: Variable revenue, no collateral, limited business credit history—but strong cash-flow patterns invisible to bureau scoring. In 2024, 27% of all jobs were held by individuals who received either a short-term W-2 or a 1099.¹⁴

Anyone in transition: Job changes, relocations, divorces, career pivots—life events that disrupt cash-flow timing without indicating inability to pay.



**Broader Access,
Same Standards**

Expanding access doesn't mean lowering standards. It means measuring differently.

Lens AI's philosophy: anyone can earn access through demonstrated behavior. No one is permanently excluded, and no one gets a free pass.

- New users start with conservative limits
- Limits expand as positive signals accumulate
- Negative signals trigger immediate, proportionate response
- Recovery paths are clear and achievable

The system reaches more creditworthy borrowers and responds faster to risk signals than traditional credit.



Validation

The Hypothesis

Traditional credit scores exclude many creditworthy users. Removing score-based cutoffs and replacing them with behavioral signals should expand approvals without increasing loss rates.

Results

In internal testing, removing reliance on traditional credit bureau scores:

- **Expanded approvals significantly** among previously declined applicants
- **Maintained loss rates** compared to score-based cohorts
- **Improved early detection** of delinquency risk before first missed payment

These results confirm our thesis: bureau scores were excluding creditworthy users, not protecting against genuine risk.

Signal Performance

Behavioral signals showed stronger predictive power than bureau scores for Split Pay's use case:

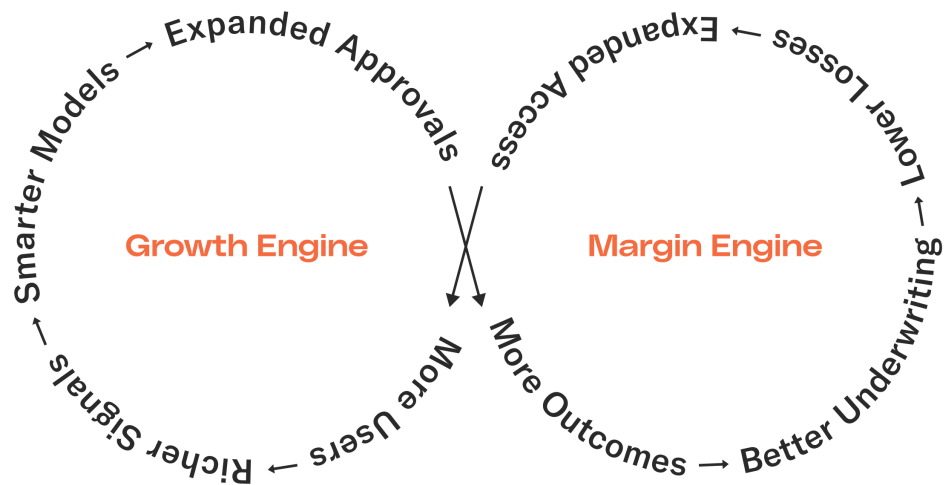
Signal	Predictive Strength
Deposit consistency (30-day)	Strong
Primary account indicator	Strong
Days-to-zero (monthly average)	Strong
Overdraft frequency (90-day)	Moderate
Traditional credit score	Weak-Moderate

For timing-based products, cash-flow signals outperform credit history.



Built to Compound

Split Pay's architecture creates two reinforcing loops. The first drives growth—more users feed smarter models that approve more users. The second drives margin—more repayment data enables precision underwriting that lowers losses and expands access. Each loop accelerates the other. The result isn't linear improvement; it's compounding advantage.


Loop 1: The Growth Engine

More Users	Each connected bank account adds 12+ months of transaction history to the dataset
Richer Signals	Pattern recognition improves—income timing, expense clustering, stress indicators, recovery behaviors
Smarter Models	The system gets better at distinguishing “bad timing” from “bad risk”—seeing what credit bureaus miss
Expanded Approvals	More creditworthy users qualify → better outcomes → reputation spreads → back to more users



Loop 2: The Margin Engine

More Outcomes	Every payment (or miss) becomes labeled training data—ground truth on who actually pays under what conditions
Better Underwriting	Models learn to price risk at the individual level, not broad buckets
Lower Losses	Better predictions mean fewer defaults, faster intervention, tighter loss rates
Expanded Access	Lower losses unlock lower fees → more competitive pricing → serves users traditional lenders can't touch profitably

Every transaction compounds the advantage. Every cycle sharpens the models. The data moat isn't built once—it deepens with scale.



The Platform

From Score to System

Lens AI isn't a credit score replacement. It's infrastructure for a different relationship between financial products and consumers.

Traditional Model	Lens AI Model
Static score	Continuous signal
Binary decision	Dynamic access
Fixed terms	Adaptive limits
Surprise defaults	Early intervention

Platform Applications

Lens AI powers Split Pay's bill-splitting product today. The underwriting platform enables expansion:

- **RenterScore:** Landlord-facing signal for tenant reliability based on cash-flow stability, not credit history
- **Responsible float products:** Short-term liquidity bridges for everyday spending, underwritten to cash-flow timing
- **Partner integrations:** Third-party lenders accessing Lens AI signals (with user consent) to expand their own approval rates

Regulatory Tailwind

The CFPB has signaled increasing skepticism of traditional credit scoring and interest in alternatives that expand access responsibly.¹⁵ Credit reporting complaints now represent nearly 50% of all complaints submitted to the Bureau.¹⁶ Lens AI is positioned for this shift:

- **Transparent signals** users can understand
- **Clear feedback loops** connecting behavior to access in real-time
- **Expanded reach** to populations bureau scores miss
- **Responsible design** with adaptive limits instead of static debt traps



What We're Building

Income arrives on a schedule. Bills don't. That's the problem we're solving.

Not by telling people to budget better. Not by offering them more debt. By building infrastructure that aligns bills with income—so everything doesn't hit at the same time.

Lens AI is the foundation: underwriting that sees what traditional credit misses. It measures stability under timing stress, not just capacity to carry debt. It expands access to people the system overlooked—without increasing risk.

The vision extends beyond underwriting.

Split Pay is building toward a financial operating system for the 67% of Americans living paycheck to paycheck—where bills flex to match pay cycles, everyday spending doesn't create month-end crunches, and the goal isn't optimization but stability.

The credit system was built for an economy that no longer exists. We're building for the one that does.

Split Pay is the infrastructure for financial stability. Lens AI is how we see who's ready for it.



Footnotes

- ¹ PNC Bank's Financial Wellness in the Workplace Report found 67% of workers self-report living paycheck to paycheck (PNC Bank, August 2025).
- ² FICO, Wikipedia, citing company history. The FICO score was first introduced in 1989 by Fair, Isaac and Company (now FICO). See also: "Credit score in the United States," Wikipedia; "The History of the FICO Score," myFICO.
- ³ Estimates vary by methodology. Bureau of Labor Statistics Contingent Worker Supplement (2024) found 10.2% rely on alternative arrangements for their main job. MBO Partners and Upwork surveys using broader definitions (including supplemental work) find 25-43% have engaged in gig work. Approximately 36% of the total American workforce freelances either full-time or as a supplement. Sources: Bureau of Labor Statistics; Gig Economy Data Hub; NorthOne, "18 Telling Gig Economy Stats in 2025."
- ⁴ Dynan, Karen E., Douglas W. Elmendorf, and Daniel E. Sichel, "The Evolution of Household Income Volatility," The B.E. Journal of Economic Analysis & Policy (2012); Federal Reserve working paper; Brookings Institution. The standard deviation of percent changes in household income rose about 30% between the early 1970s and late 2000s.
- ⁵ U.S. Bureau of Labor Statistics, "Employee Tenure in 2024" (September 26, 2024). Median tenure was 3.9 years in January 2024, down from 4.1 years in January 2022.
- ⁶ Consumer Financial Protection Bureau, "Data Point: Credit Invisibles" (May 2015). Note: A June 2025 CFPB correction revised this estimate downward to approximately 7 million (2.7% of adults) as of 2020 due to data methodology improvements.
- ⁷ CFPB, "Data Point: Credit Invisibles" (2015). Approximately 19.4 million Americans have credit records that cannot be scored, split between those with insufficient history (9.9 million) and those with stale records (9.6 million).
- ⁸ CFPB, "Data Point: Credit Invisibles" (2015). More than 80% of 18-19 year olds are credit invisible or have insufficient credit history to generate a score.
- ⁹ Federal Trade Commission, "Report to Congress Under Section 319 of the Fair and Accurate Credit Transactions Act of 2003" (February 2013). The study found that one in five consumers had an error on at least one of their three credit reports.
- ¹⁰ Consumer Reports analysis of CFPB complaint data (February 2024). Complaints about incorrect information on credit reports increased by 168% between 2021 and 2023.
- ¹¹ The Pew Charitable Trusts, "How Income Volatility Interacts With American Families' Financial Security" (March 2017). More than one-third (34%) of households experienced income changes of 25% or more from 2014 to 2015.
- ¹² Bureau of Labor Statistics, "Employee Tenure in 2024."
- ¹³ CFPB estimates combining credit invisible (26 million) and unscorable (19 million) populations from the 2015 Data Point report. Note that updated 2025 CFPB methodology shows lower figures.
- ¹⁴ ADP Research, "The Gig Economy: A Tale of Two Labor Markets" (November 2025). Individuals who received a short-term W-2 or a 1099 accounted for 27% of all jobs held in 2024.
- ¹⁵ CFPB has issued multiple reports on credit invisibility and alternative data, including convening the "Building a Bridge to Credit Visibility" symposium (2018) and ongoing research into credit reporting disparities.
- ¹⁶ Consumer Reports, "Credit Report Error Complaints to CFPB Have Increased More Than 2.5 Times Since 2021" (February 2024). Credit report complaints made up almost 50% of all complaints submitted to the Bureau in 2023.

