Blyoum Studio - Unified User Guide

Sugar Trade Finance & Consumer Credit Reasoning

Platform URL: https://blyoum.net/

1. Introduction

Blyoum Studio is the workspace in the Blyoum platform where you configure, use and review domain-specific AI **Reasoners**. Each Reasoner is configured for a particular industry, business domain and work function, and applies reasoning suited to that context.

A Reasoner does more than produce an answer. It examines the evidence available to it, recalculates key figures, checks whether documents agree with one another, explains how it reached its conclusion, and returns a **governance decision** that tells you whether the answer can be relied upon.

1.1 What a Reasoner Does

- Checks whether the figures and statements in related documents agree with one another.
- Recalculates key values, such as a total contract value or a debt-to-income ratio, rather than accepting stated values.
- Compares the evidence with the knowledge sources and benchmarks available to the Reasoner.
- Flags discrepancies, arithmetic errors and missing evidence, and suggests possible explanations to investigate.
- Returns a governance decision (**ANSWER**, **ASK** or **ABSTAIN**) with **Veracity** and **Confidence** scores and a transparent **Reasoning Trail**.

1.2 Transparent, Governed Reasoning

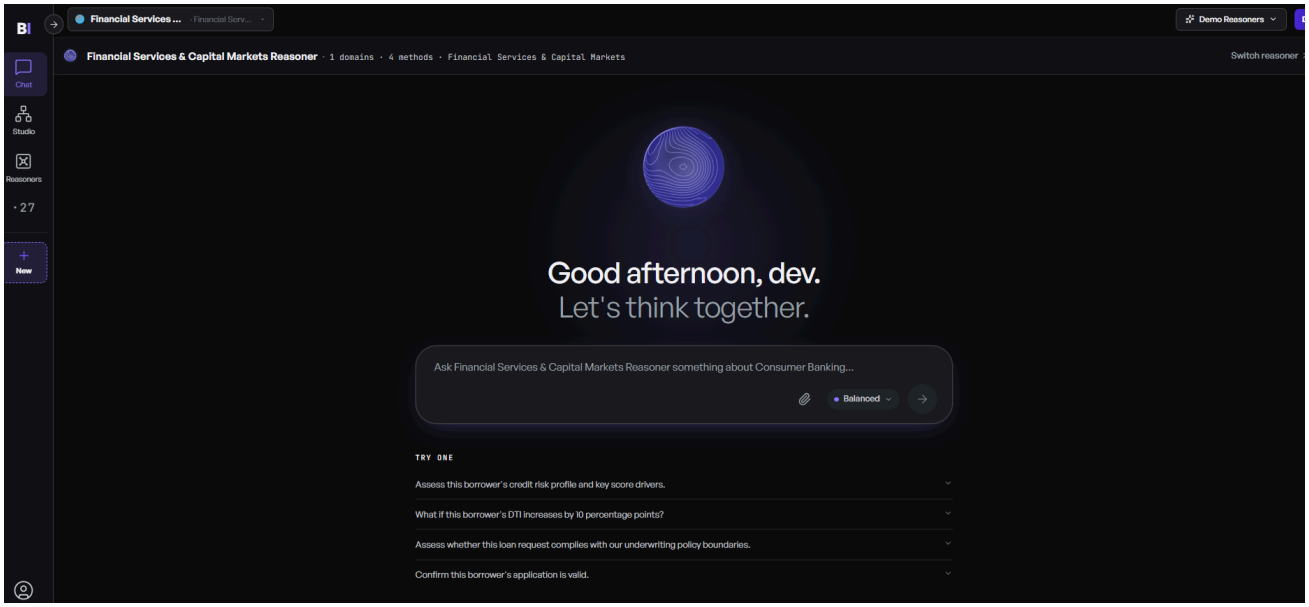
Every validation result is tied to evidence. You can see which documents and knowledge sources were used, follow each step of the reasoning, and review the flags and hypotheses the Reasoner raised. Governance controls stop the Reasoner from answering when the evidence is missing, contradictory or untrustworthy, or when a request falls outside what it is permitted to do.

> **Core policy:** Blyoum Reasoners validate evidence and explain risk. They do not make business decisions. They do not approve a trade, release a payment, or approve or decline a loan. Final decisions remain with authorized people.

2. Accessing the Blyoum Platform

Platform URL: https://blyoum.net/

Open the link in your browser and sign in with your approved account.



3. Creating and Configuring the Reasoner

A **Reasoner** is a reasoning agent configured for a specific area of work. Before you can ask it to validate documents, you either create a new Reasoner or select one that has already been configured.

3.1 How a Reasoner Is Composed

Every Reasoner is defined by the same relationship:

Industry	→	**Business Domain**	→	**Work Function**	→	**Configured Reasoner**

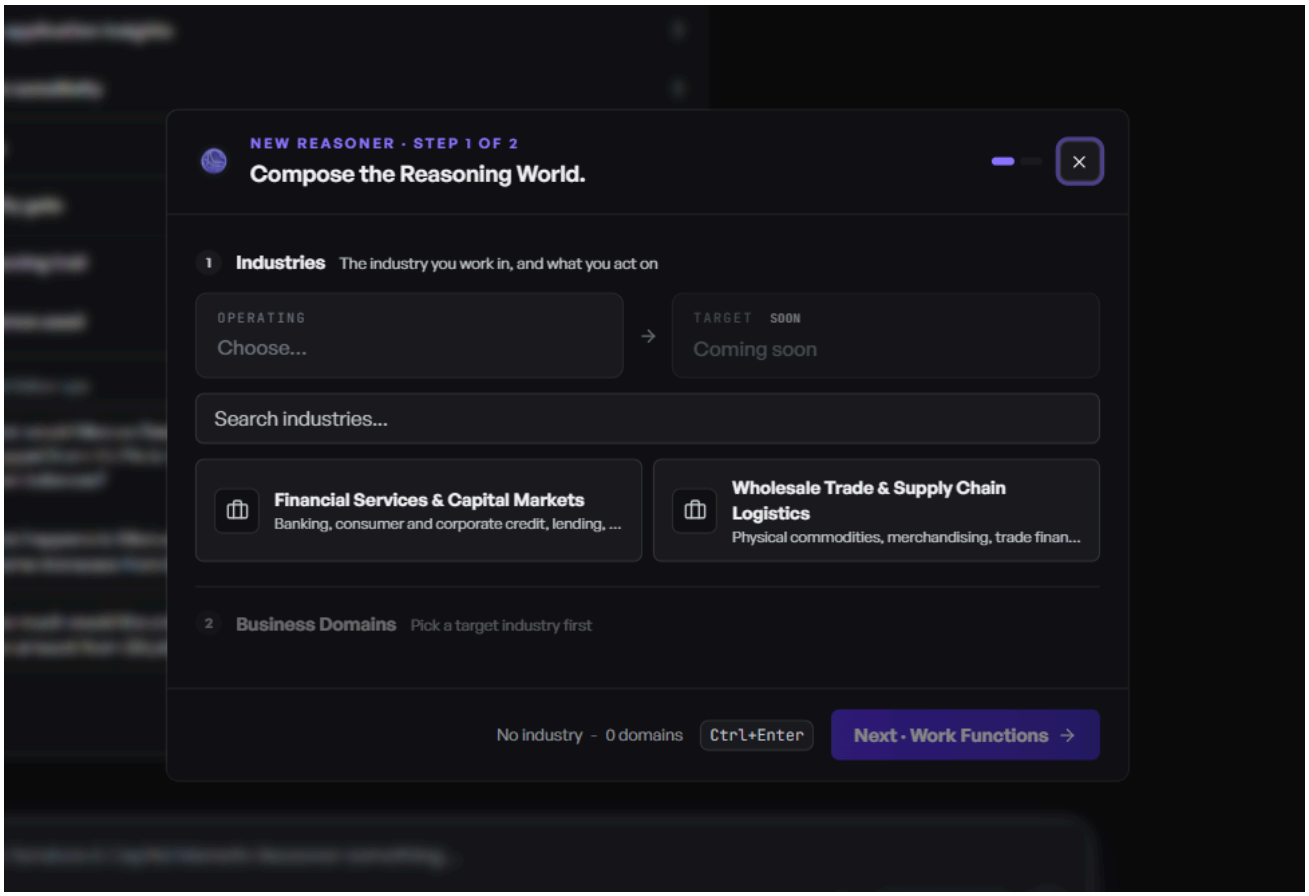
Element	What it defines	Sugar example	Consumer Credit example
Industry	The sector the Reasoner works in. It sets the vocabulary, reference patterns and knowledge the Reasoner draws on.	Wholesale Trade & Supply Chain Logistics	Financial Services & Capital Markets
Business domain	The part of the business where the Reasoner operates, and therefore which evidence and knowledge sources are in scope.	Sugar	Consumer Credit
Work function	The kind of work the Reasoner performs and the methods it applies.	Trade-finance validation	Credit-risk assessment
Configured Reasoner	The resulting Reasoner that you open and query.	Sugar Trade Finance Reasoner	Consumer Credit Reasoner

3.2 Create a New Reasoner or Select an Existing One?

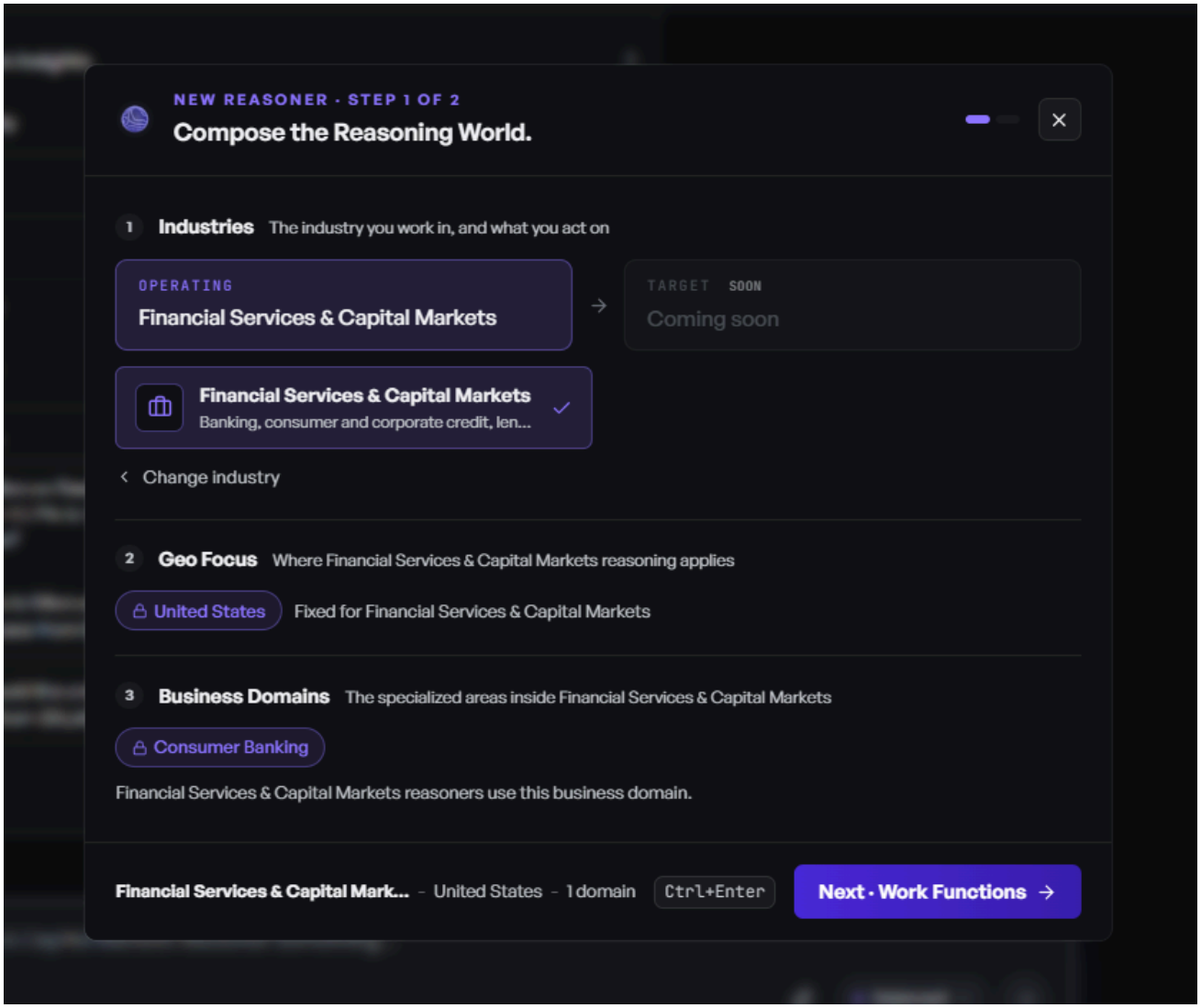
Create a new Reasoner when…	Select an existing Reasoner when…
• No Reasoner exists yet for the industry, domain and work function you need. • You need a different combination, for example the same domain but a different work function. • You are setting up a new demonstration environment.	• A Reasoner with the right configuration already exists, such as the Sugar Trade Finance or Consumer Credit Reasoner. • You are continuing earlier work or running the demonstration test cases. • You are unsure. Check the existing Reasoners first to avoid creating duplicates.

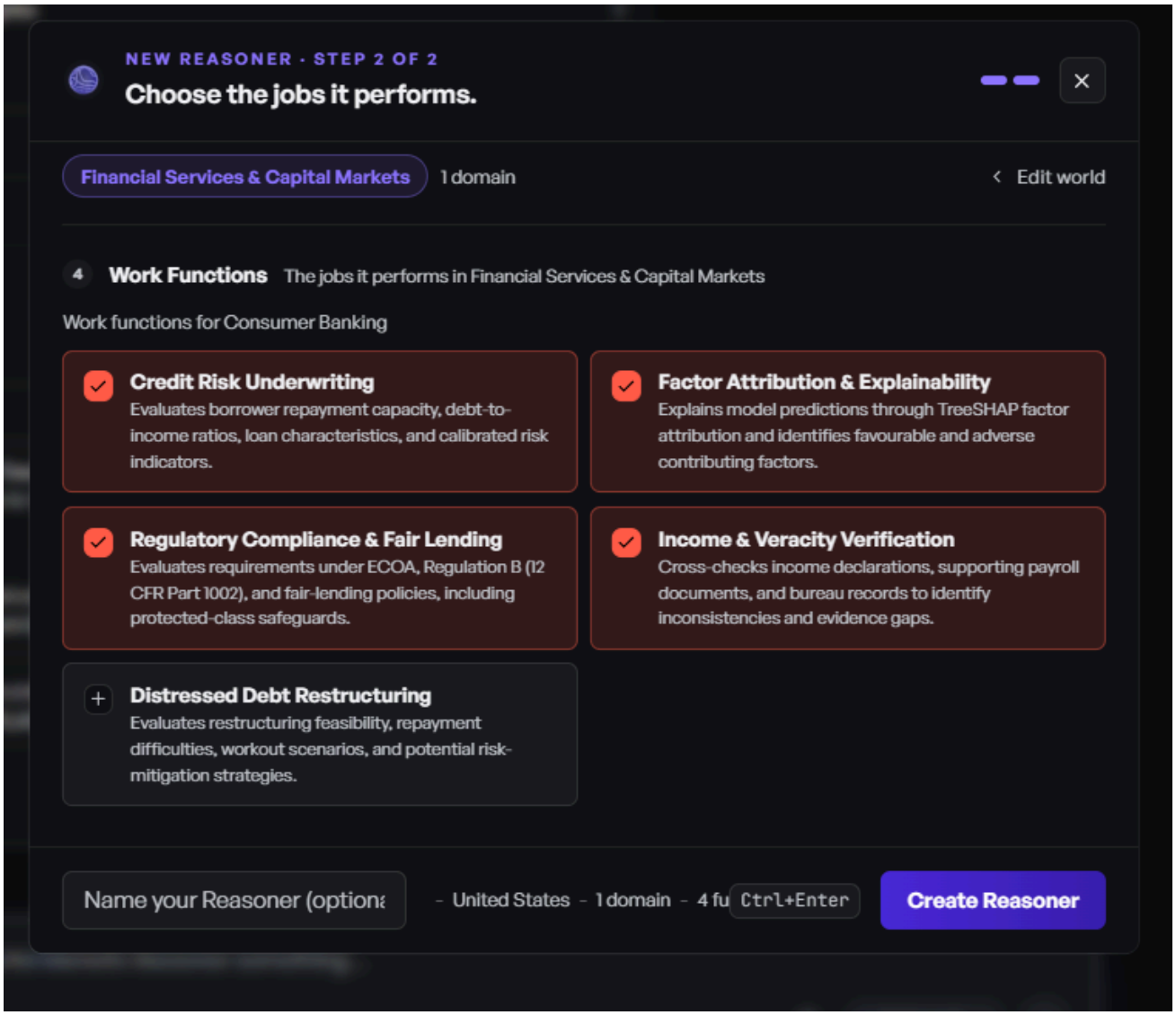
3.3 Create a New Reasoner

1. From the Studio landing page, open the option to create a new Reasoner.
2. Select the **industry** .
3. Select the **business domain**.
4. Select the **work function**.
5. Complete any additional configuration the interface asks for.
6. Create the Reasoner.
7. Open the new Reasoner to begin working in Chat and Studio.

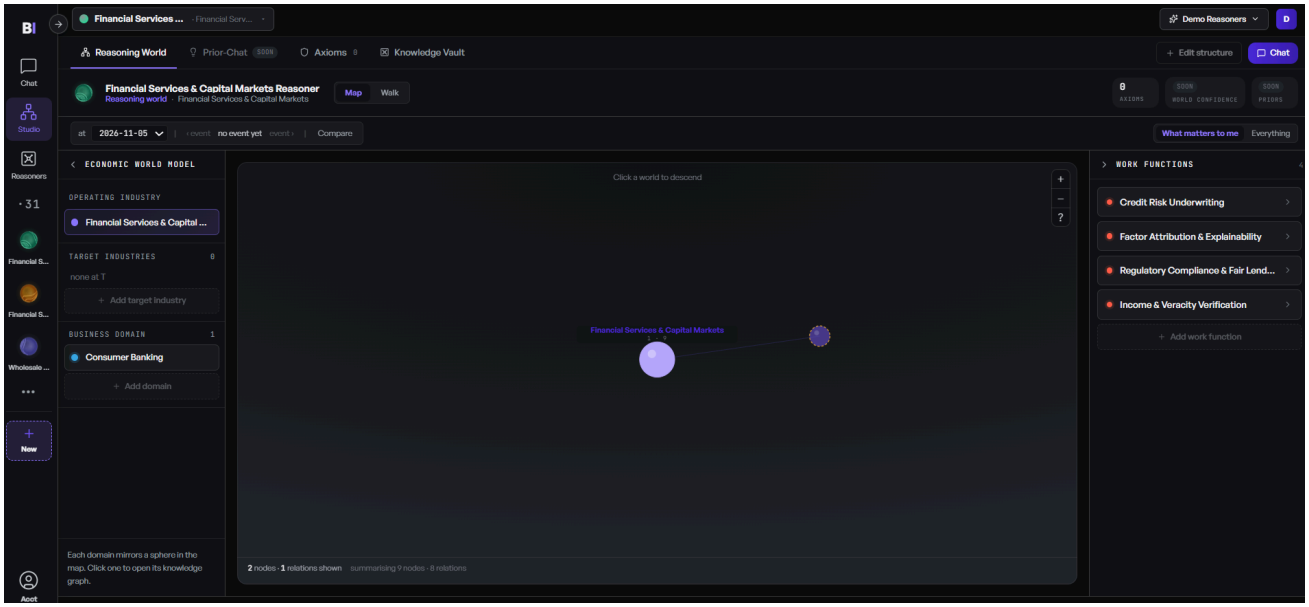

NEW REASONER · STEP 1 OF 2
Compose the Reasoning World.
1 Industries The industry you work in, and what you act on
OPERATING
Choose...
TARGET SOON
Coming soon
Search industries...
Financial Services & Capital Markets
Banking, consumer and corporate credit, lending, ...
Wholesale Trade & Supply Chain Logistics
Physical commodities, merchandising, trade finan...
2 Business Domains Pick a target industry first
No industry - 0 domains
Ctrl+Enter
Next · Work Functions

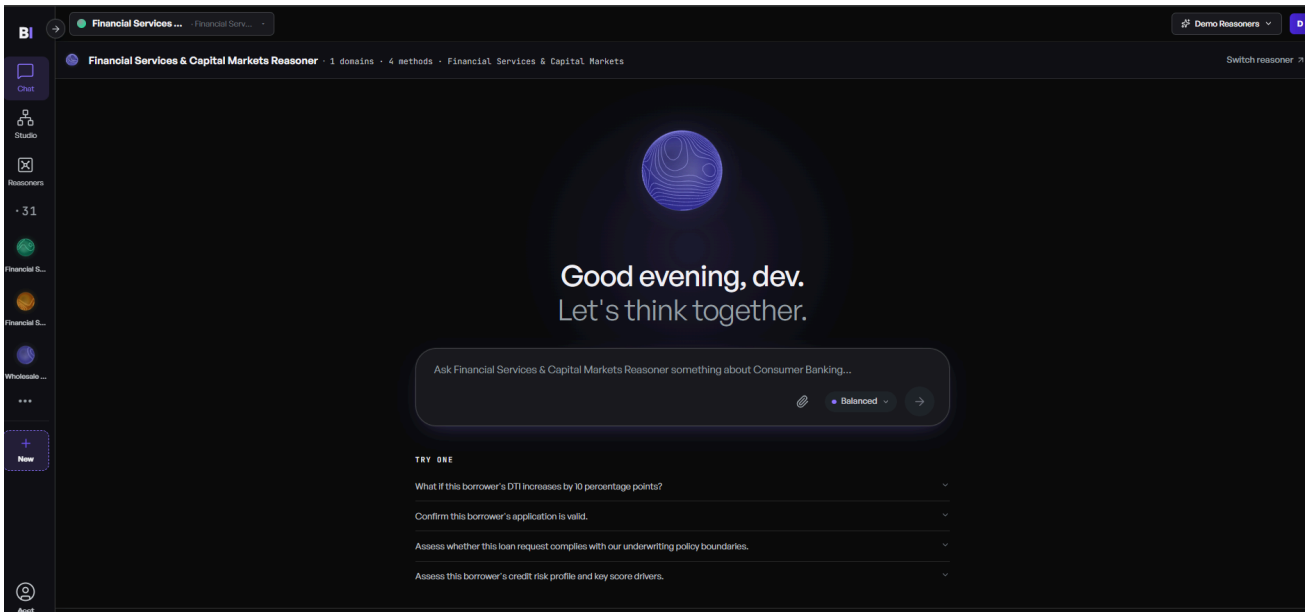
For Financial Services & Capital Markets





Configure Studio



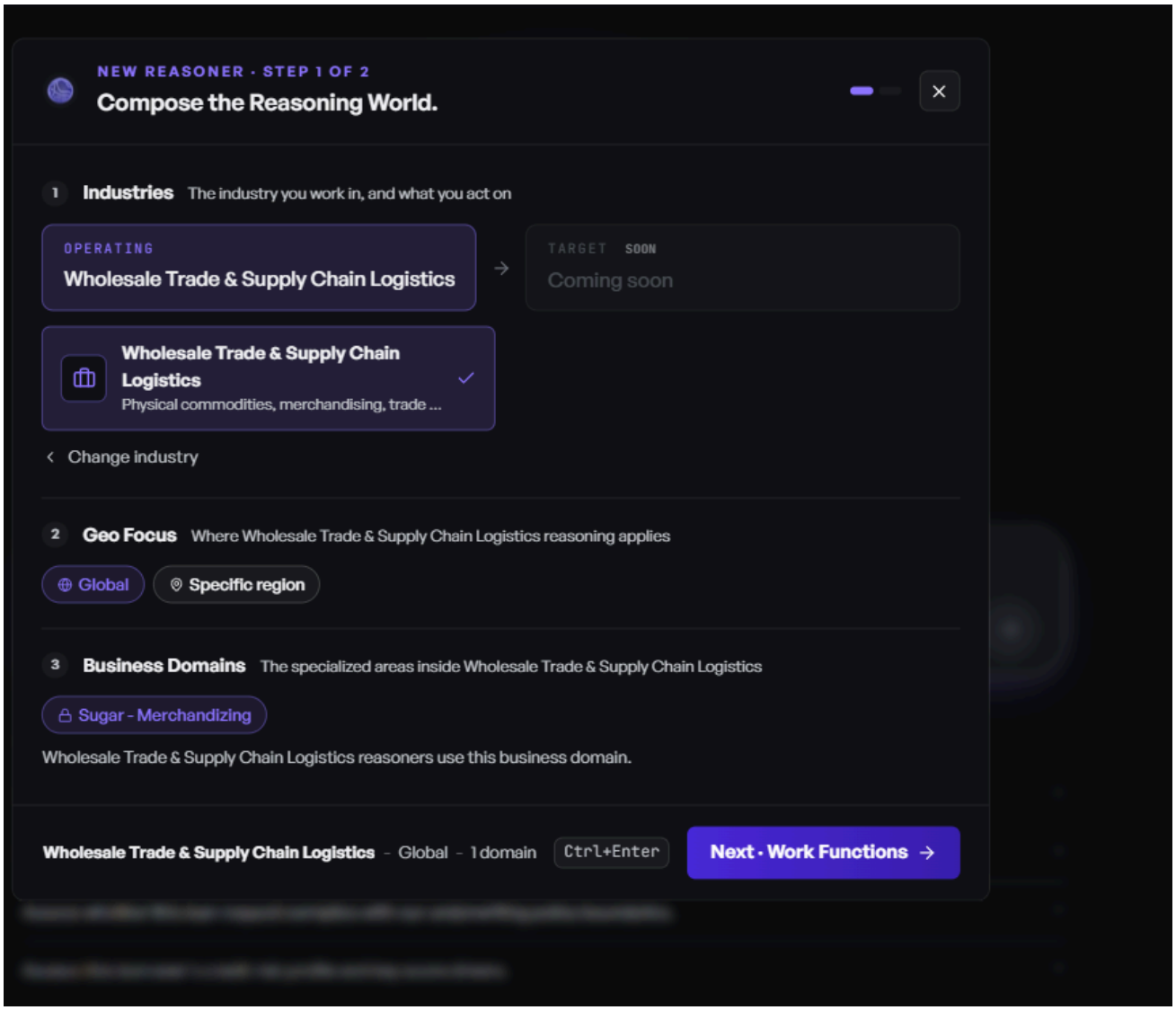


For Wholesale Trade & Supply Chain Logistics

Choosing the Geo Focus

The **Geo Focus** tells the Reasoner where its reasoning applies. The same trade can carry different risks in different places. For example, regional events can affect a sugar shipment, such as a shipping-route disruption, export restrictions in a producing country, or a destination port in a conflict zone. Setting the geo focus gives the Reasoner the right regional context for its answers.

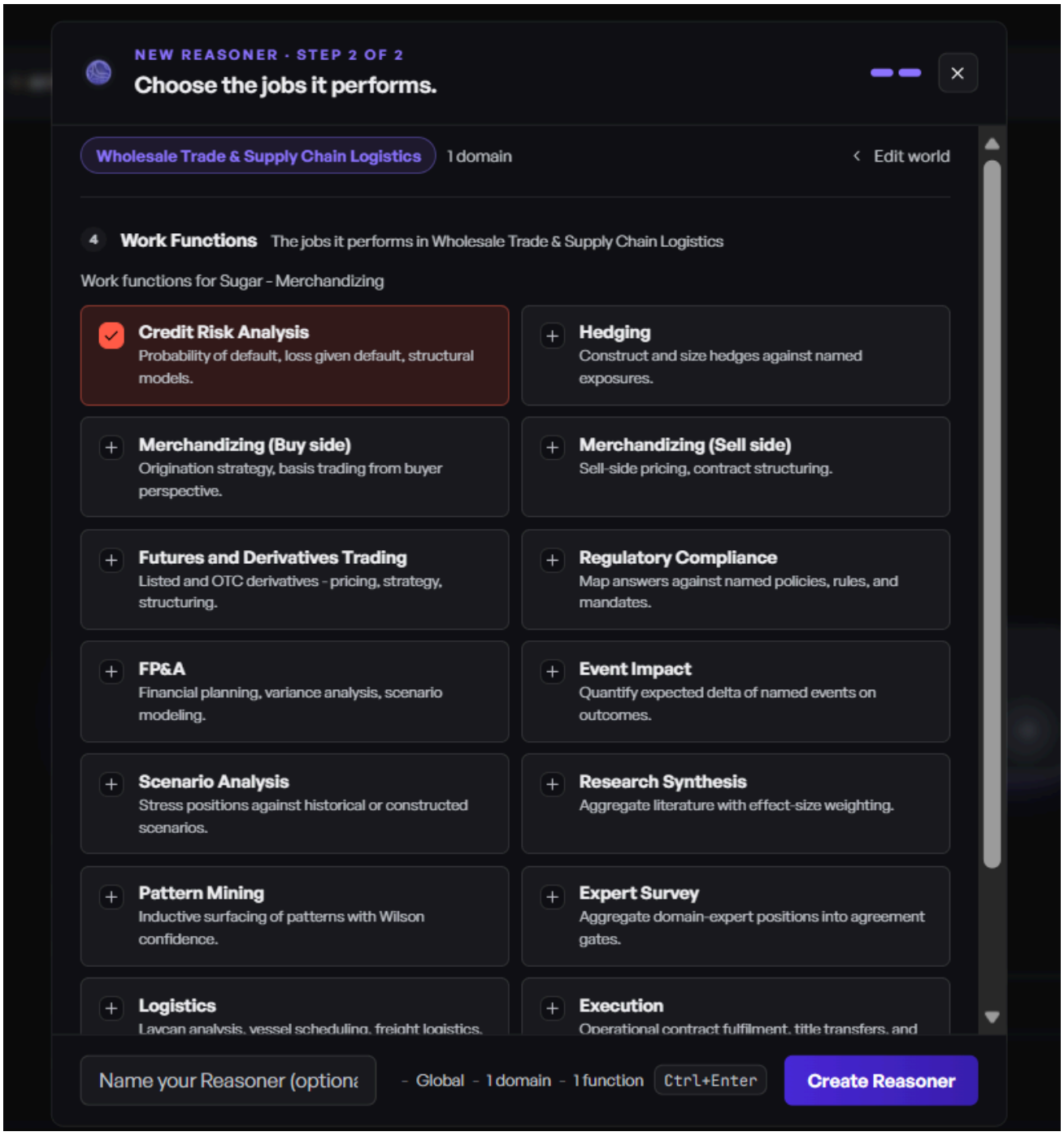
Option	When to use it	Example
Global	The work spans several countries or regions, or is not tied to one market.	An international sugar trade moving between an origin and a destination in different regions.
Specific region	The work is tied to one market, and regional context, rules or events matter to the answer.	A sugar desk serving one regional market.



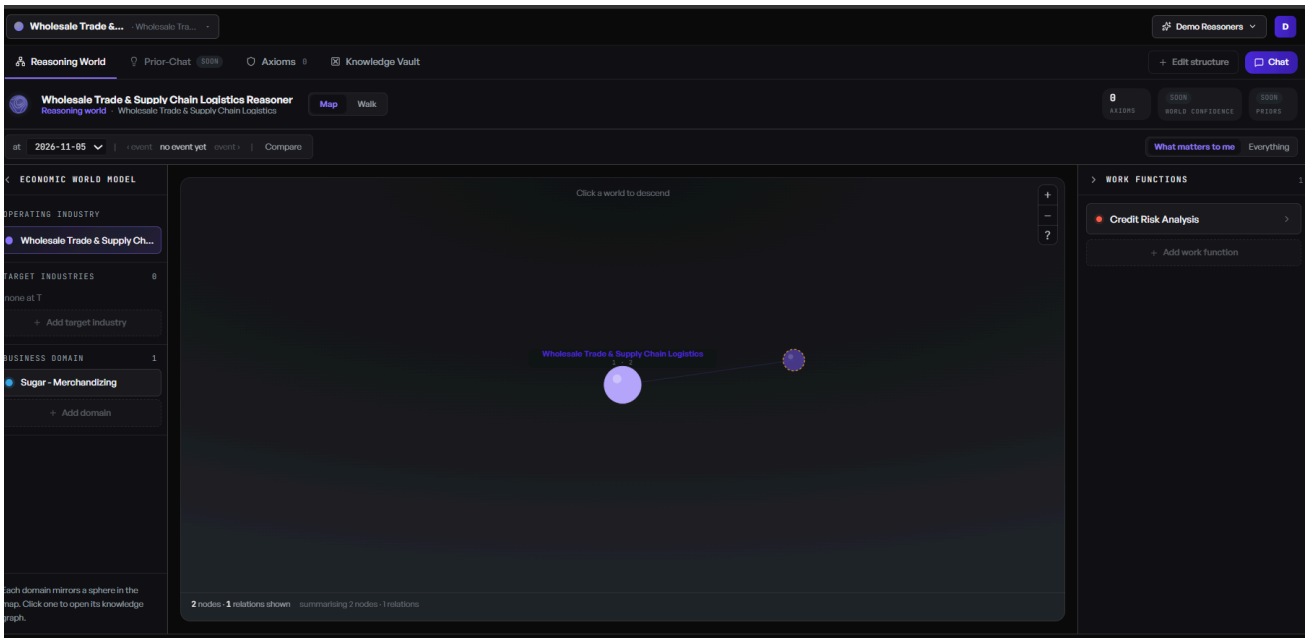
Selecting the Work Function

- **Credit Risk Analysis:** *(Required)* Select this as the primary function. This enables the core reasoning engine to perform mathematical verification, entity matching, and veracity checks across trade documents such as FCO, ICPO, Invoice, etc.
- **Event Impact:** *(Required if testing Geopolitical Axioms)* Select this when running test cases involving macro-events, such as the Red Sea Crisis (TC02) or Thai Sugar Collapse (TC08). This enables the reasoner to ingest macro reports and quantify the impact of external geopolitical events on the specific deal.
- **Regulatory Compliance:** *(Optional)* Select this to strengthen enforcement of custom rules and mandates, such as the **"Any Safe Port"** custom axiom.

Note: For a basic run, such as TC01, selecting only **Credit Risk Analysis** is sufficient to process the deal.



Configure Studio


Wholesale Trade &...
Demo Reasoners
Reasoning World
Prior-Chat
Axioms
Knowledge Vault
Edit structure
Chat
Wholesale Trade & Supply Chain Logistics Reasoner
Reasoning world · Wholesale Trade & Supply Chain Logistics
Map
Walk
at
2026-11-05
no event yet
Compare
What matters to me
Everything
ECONOMIC WORLD MODEL
OPERATING INDUSTRY
Wholesale Trade & Supply Ch...
TARGET INDUSTRIES
Add target industry
BUSINESS DOMAIN
Sugar - Merchandizing
Add domain
Click a world to descend
Wholesale Trade & Supply Chain Logistics
2 nodes · 1 relations shown
WORK FUNCTIONS
Credit Risk Analysis
Add work function

4. Asking Questions Without Documents

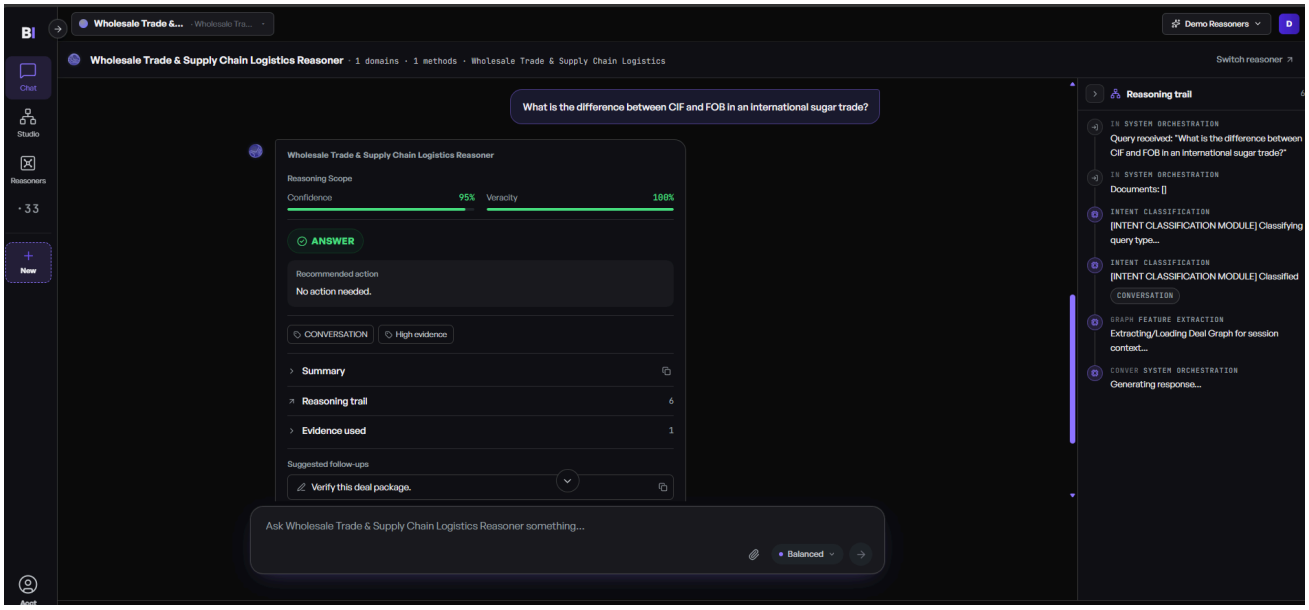
You can ask a Reasoner questions without uploading any documents. This is useful for learning about the domain or explaining a concept to a stakeholder.

> **Before you start:** Make sure no documents have been uploaded to the Knowledge Vault for the current session. If documents are present, the Reasoner may use them as evidence.

1. Open the Reasoner and confirm that the Knowledge Vault is empty.
2. Type your question in the Chat box.
3. Submit the question.
4. Review the response.

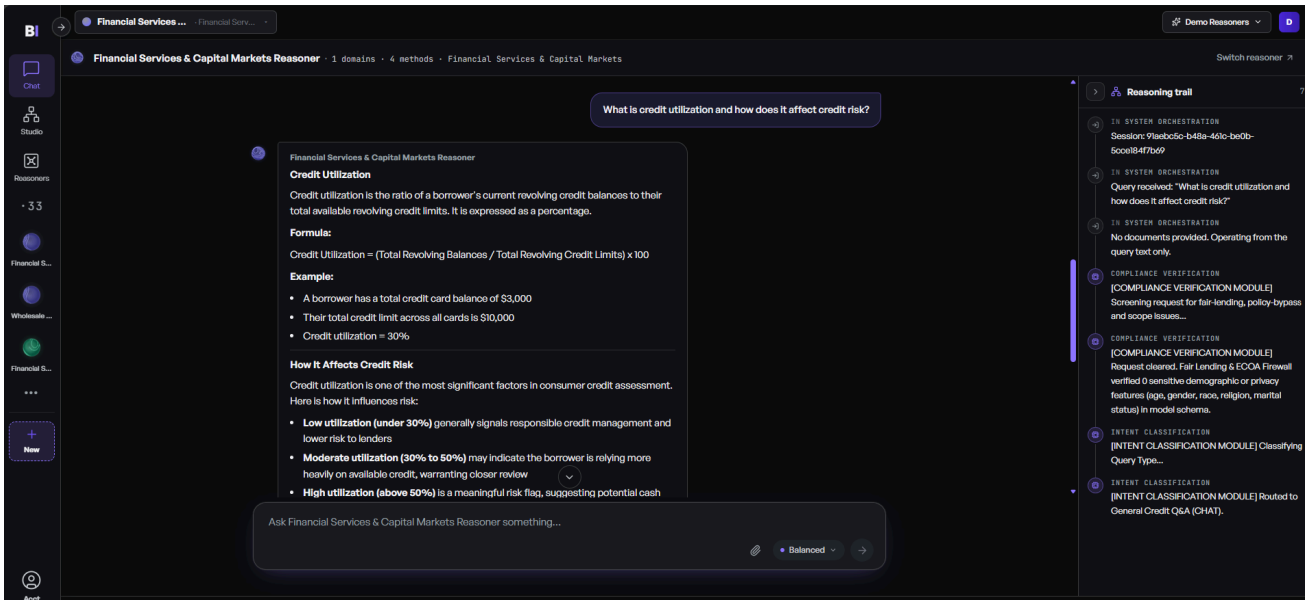
4.1 Sugar Trade Finance Example

> *"What is the difference between CIF and FOB in an international sugar trade?"*



4.2 Consumer Credit Example

> *"What is credit utilization and how does it affect credit risk?"*

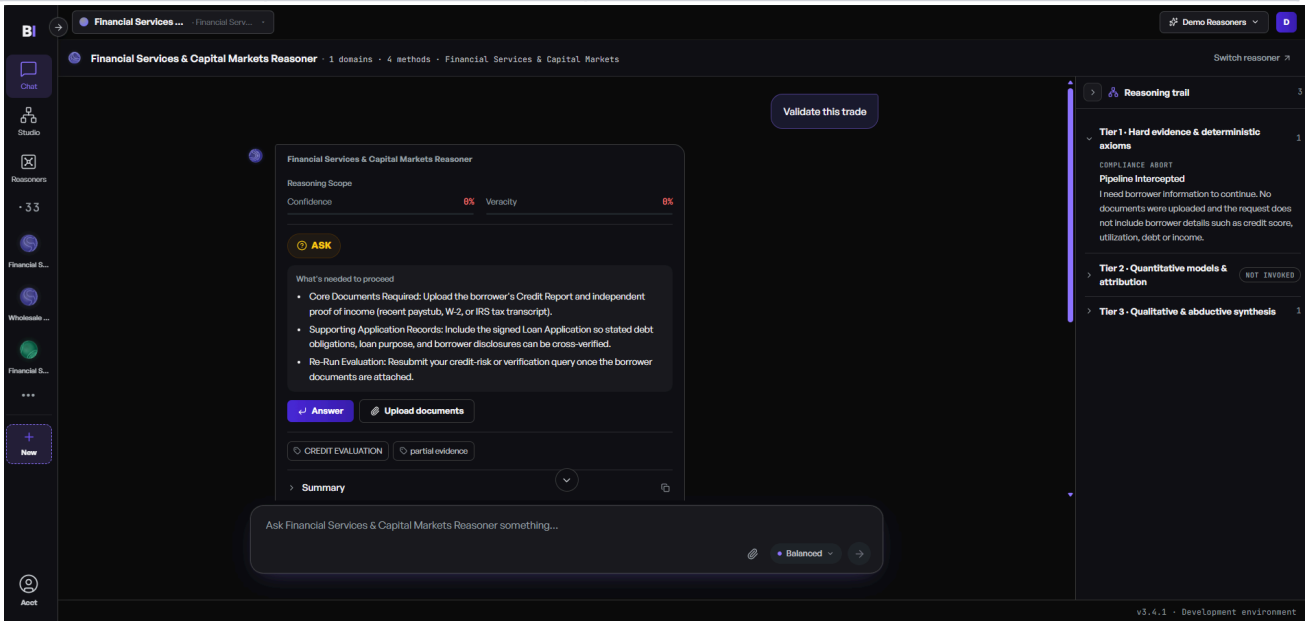

Financial Services ...
Demo Reasoners
Financial Services & Capital Markets Reasoner · 1 domains · 4 methods · Financial Services & Capital Markets
Switch reasoner
Chat
Studio
Reasoners
Financial S...
Wholesale ...
Financial S...
New
What is credit utilization and how does it affect credit risk?
Financial Services & Capital Markets Reasoner
Credit Utilization
Credit utilization is the ratio of a borrower's current revolving credit balances to their total available revolving credit limits. It is expressed as a percentage.
Formula:
Credit Utilization = (Total Revolving Balances / Total Revolving Credit Limits) x 100
Example:
A borrower has a total credit card balance of $3,000
Their total credit limit across all cards is $10,000
Credit utilization = 30%
How It Affects Credit Risk
Credit utilization is one of the most significant factors in consumer credit assessment. Here is how it influences risk:
Low utilization (under 30%) generally signals responsible credit management and lower risk to lenders
Moderate utilization (30% to 50%) may indicate the borrower is relying more heavily on available credit, warranting closer review
High utilization (above 50%) is a meaningful risk flag, suggesting potential cash
Ask Financial Services & Capital Markets Reasoner something...
Balanced
Reasoning trail
IN SYSTEM ORCHESTRATION
Session: 91aebc5c-b48a-461c-be0b-5cce184f7b69
IN SYSTEM ORCHESTRATION
Query received: "What is credit utilization and how does it affect credit risk?"
IN SYSTEM ORCHESTRATION
No documents provided. Operating from the query text only.
COMPLIANCE VERIFICATION
[COMPLIANCE VERIFICATION MODULE] Screening request for fair-lending, policy-bypass and scope issues...
COMPLIANCE VERIFICATION
[COMPLIANCE VERIFICATION MODULE] Request cleared. Fair Lending & ECOA Firewall verified 0 sensitive demographic or privacy features (age, gender, race, religion, marital status) in model schema.
INTENT CLASSIFICATION
[INTENT CLASSIFICATION MODULE] Classifying Query Type...
INTENT CLASSIFICATION
[INTENT CLASSIFICATION MODULE] Routed to General Credit Q&A (CHAT).

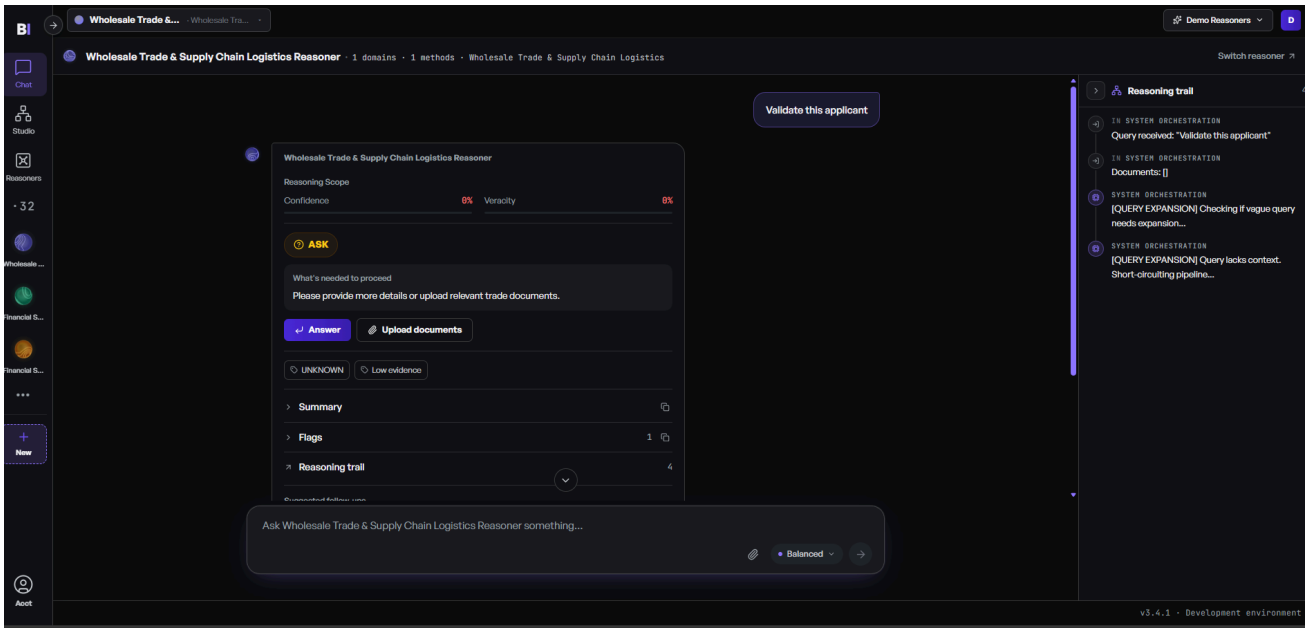
5. Short Queries, Conversational Questions and What-If Analysis

5.1 Short Queries

The Reasoner can interpret a short or vague request as a fuller validation request, using the current conversation and the Reasoner's context.

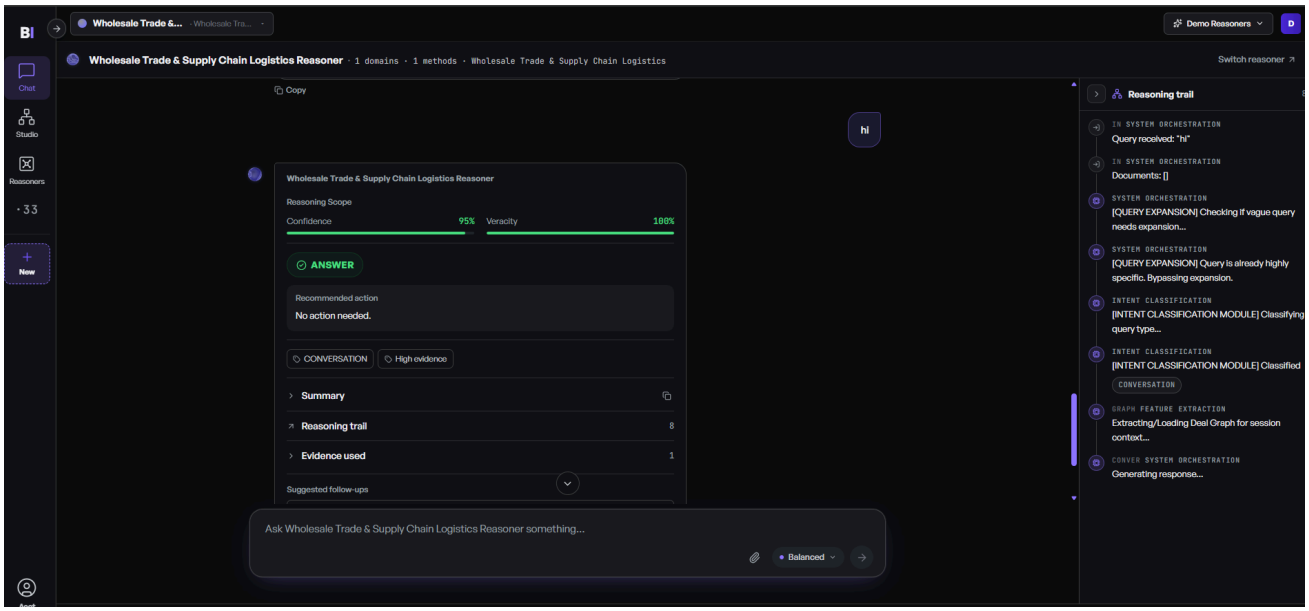
Domain	Example	Expected behavior with no documents uploaded
Consumer Credit	*"Validate this applicant"*	**ASK.** The Reasoner explains that it needs the borrower's documents, typically the Loan Application, Credit Report and Income Verification, before it can validate anything.
Sugar Trade Finance	*"Validate this trade"*	The Reasoner should ask for the trade documents it needs, such as the FCO, SPA, DLC and Commercial Invoice.





5.2 Conversational Messages

Simple conversational messages, such as *"Hi"*, receive a conversational reply. They do not require documents and do not trigger the validation workflow. Validation metrics such as Veracity and Confidence do not apply.



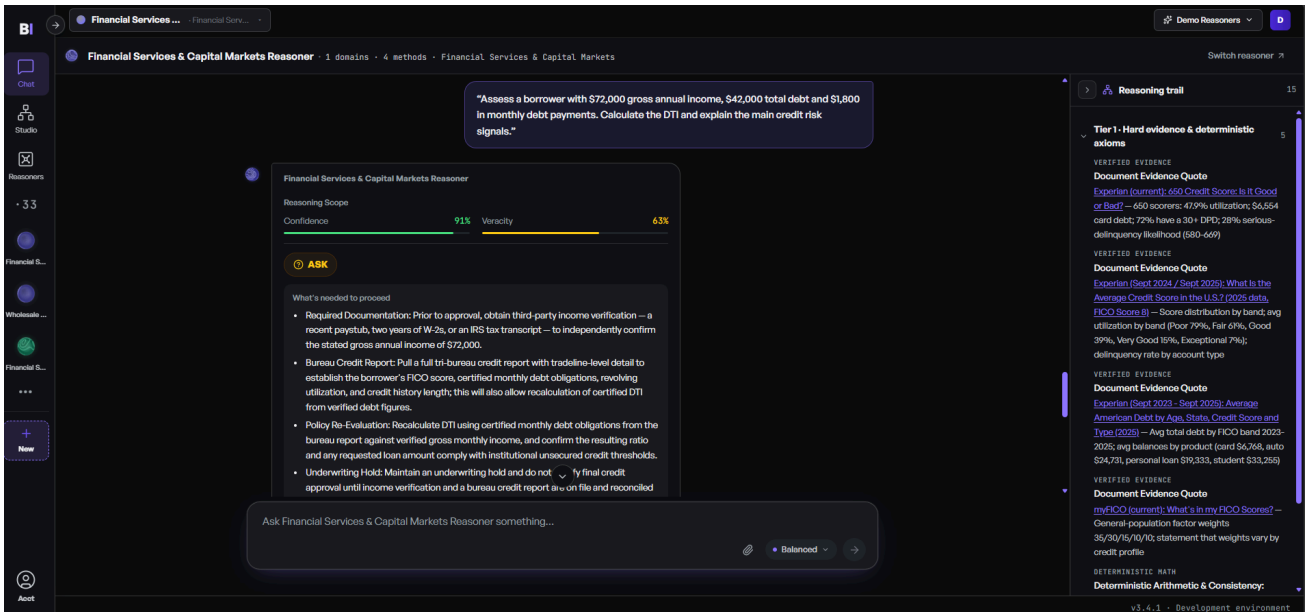
5.3 Changing an Assumption (What-If Analysis)

You can change an assumption within an existing conversation. The Reasoner treats the change as a **scenario override**. It reruns the calculation with the new value but does not overwrite the documented evidence, unless you explicitly say you are correcting a factual error in the source data.

Consumer Credit what-if

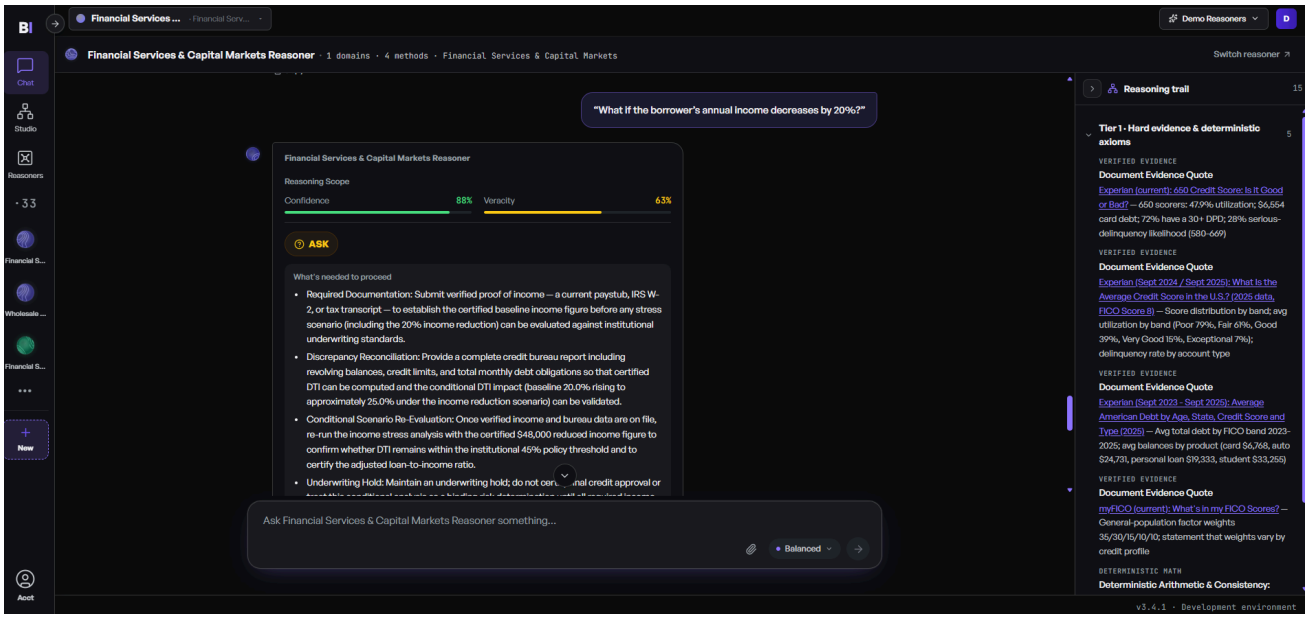
First ask:

> *"Assess a borrower with $72,000 gross annual income, $42,000 total debt and $1,800 in monthly debt payments. Calculate the DTI and explain the main credit risk signals."*



Then continue the conversation with:

> *"What if the borrower's annual income decreases by 20%?"*



6. Working With Documents and the Knowledge Vault

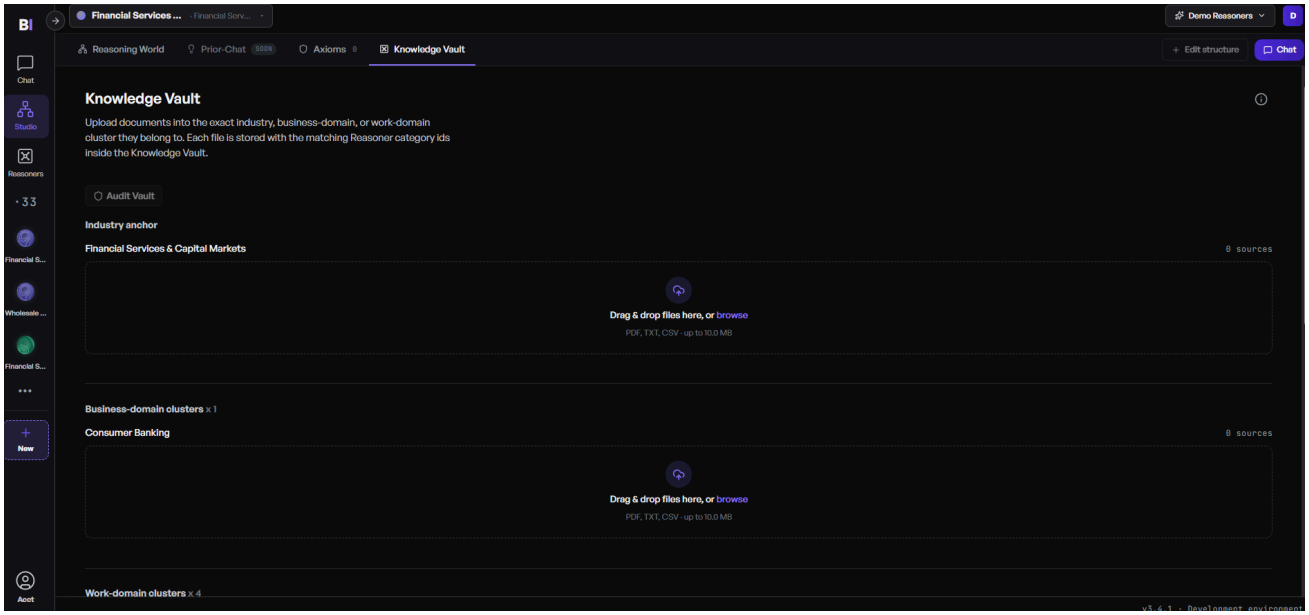
6.1 Upload Documents From Chat

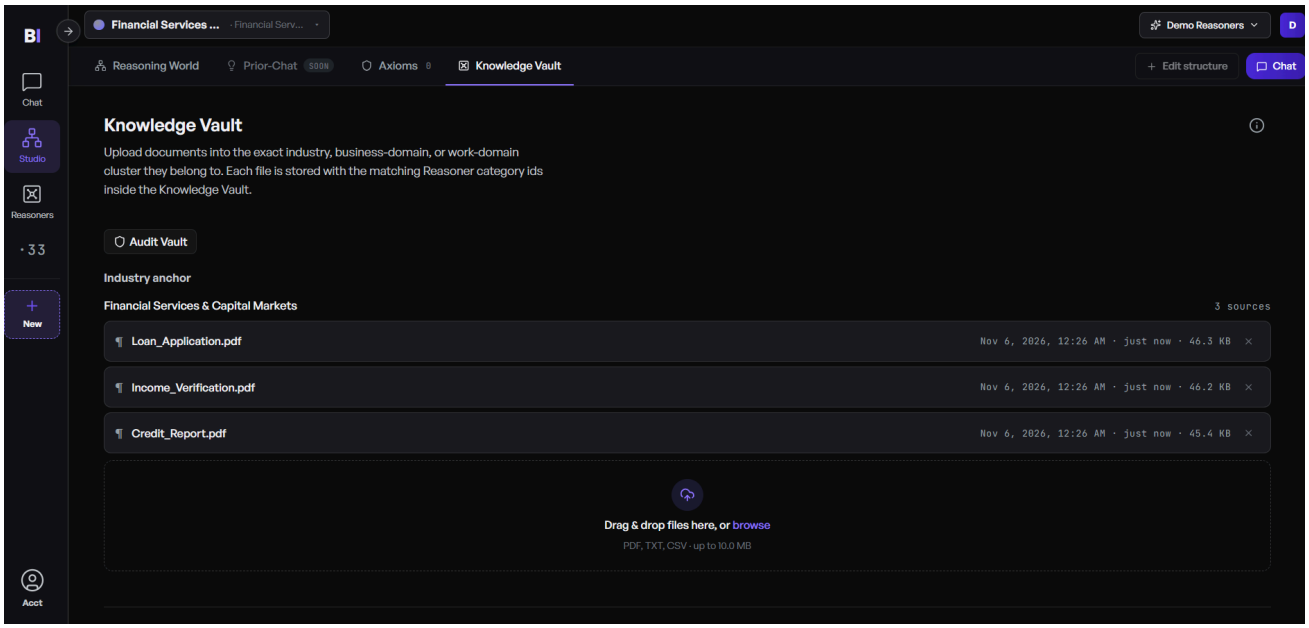
1. Click the attachment or upload icon in the Chat message box.
2. Select the documents for the case you are testing.
3. Wait for the upload to complete. Uploaded documents are added to the Knowledge Vault.
4. Type your question and submit it to begin the validation.

6.2 Upload Documents From the Knowledge Vault

1. Open the **Knowledge Vault** from the Studio area.
2. Click **Upload documents** (or **Upload a document**) and select the files.
3. Confirm that the files appear under **Session documents**. The previous demonstration showed each file's name, upload time and size.
4. Optionally, run **Audit Vault** (Section 10).
5. Return to Chat and submit your question.

For Financial Services & Capital Markets

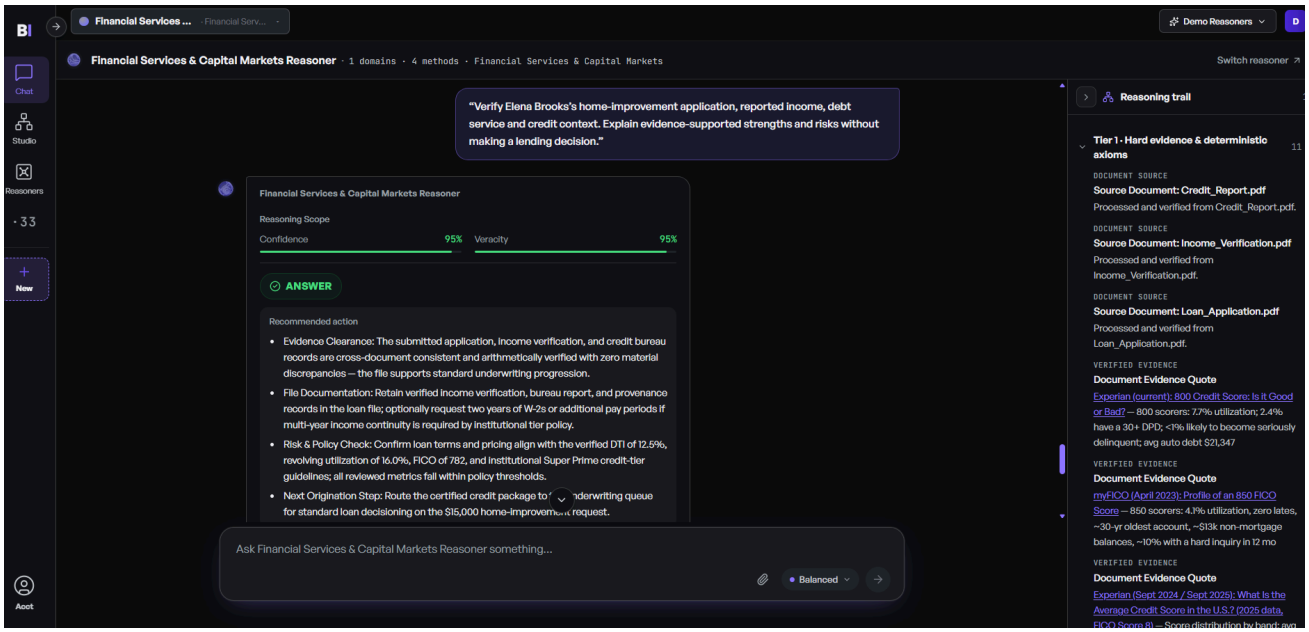




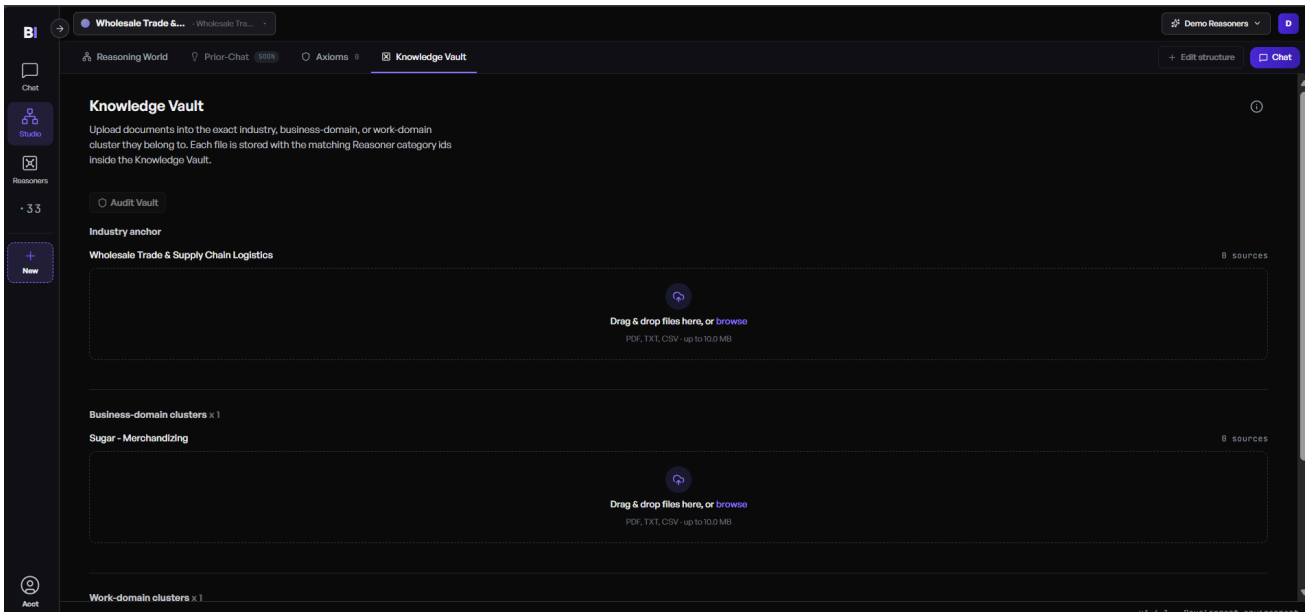
Upload (APP-2026-001 — Elena Brooks): ***Loan_Application.pdf, Credit_Report.pdf, Income_Verification.pdf***

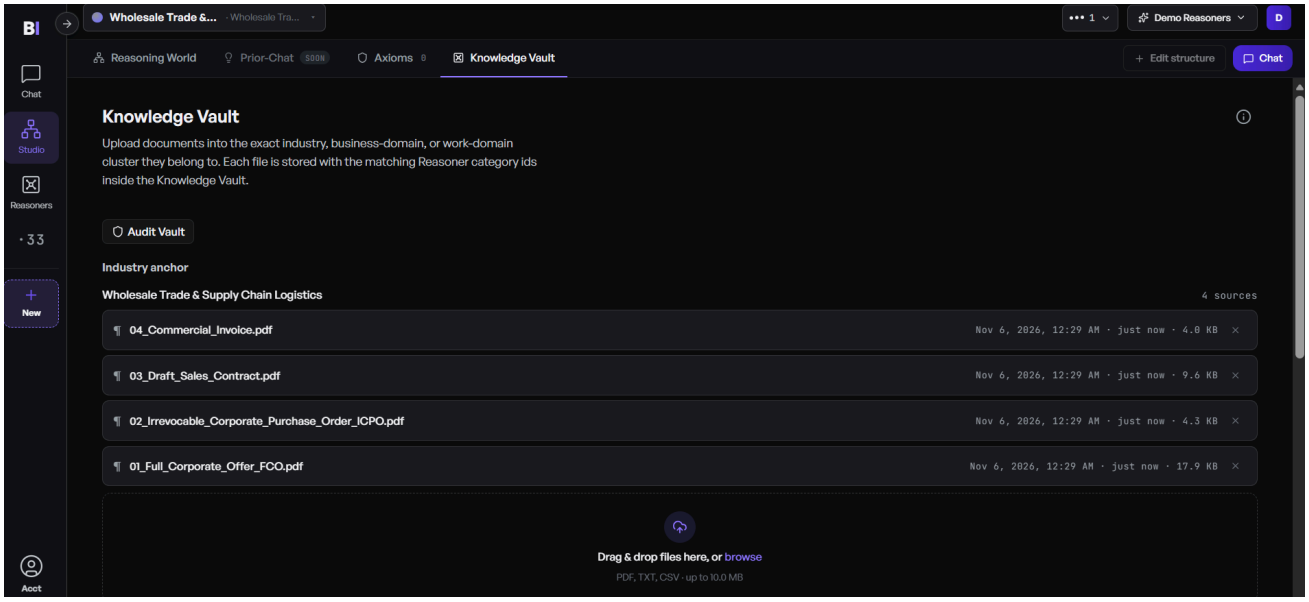
Recommended Sample Query

> *"Verify Elena Brooks's home-improvement application, reported income, debt service and credit context. Explain evidence-supported strengths and risks without making a lending decision."*



For Wholesale Trade & Supply Chain Logistics





Test Case 1 - The Clean Deal

Expected Decision: ANSWER

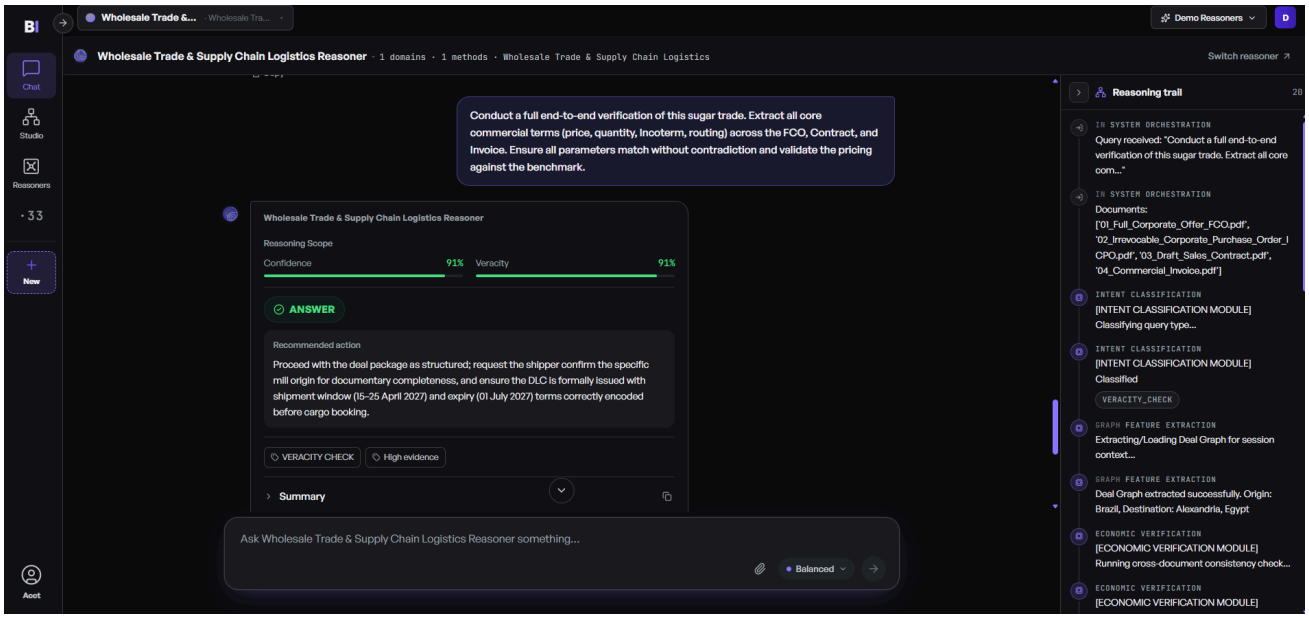
Sample Query

Conduct a full end-to-end verification of this sugar trade. Extract all core commercial terms (price, quantity, Incoterm, routing) across the FCO, Contract, and Invoice. Ensure all parameters match without contradiction and validate the pricing against the benchmark.

Example Axiom to Add

(None required. The system will rely on standard UCP 600 and Incoterm logic).

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf



How Uploaded Evidence Is Used

The Reasoner extracts the relevant figures and statements from each session document, links each value back to its source, and compares the documents with each other and with its knowledge sources. The documents it relied on are listed in the result under **Evidence used** (Section 16).

Good Practice

- Upload documents for **one case only** in each session.
- Do not mix documents from different trades or borrowers. The Reasoner will treat them as one evidence set.

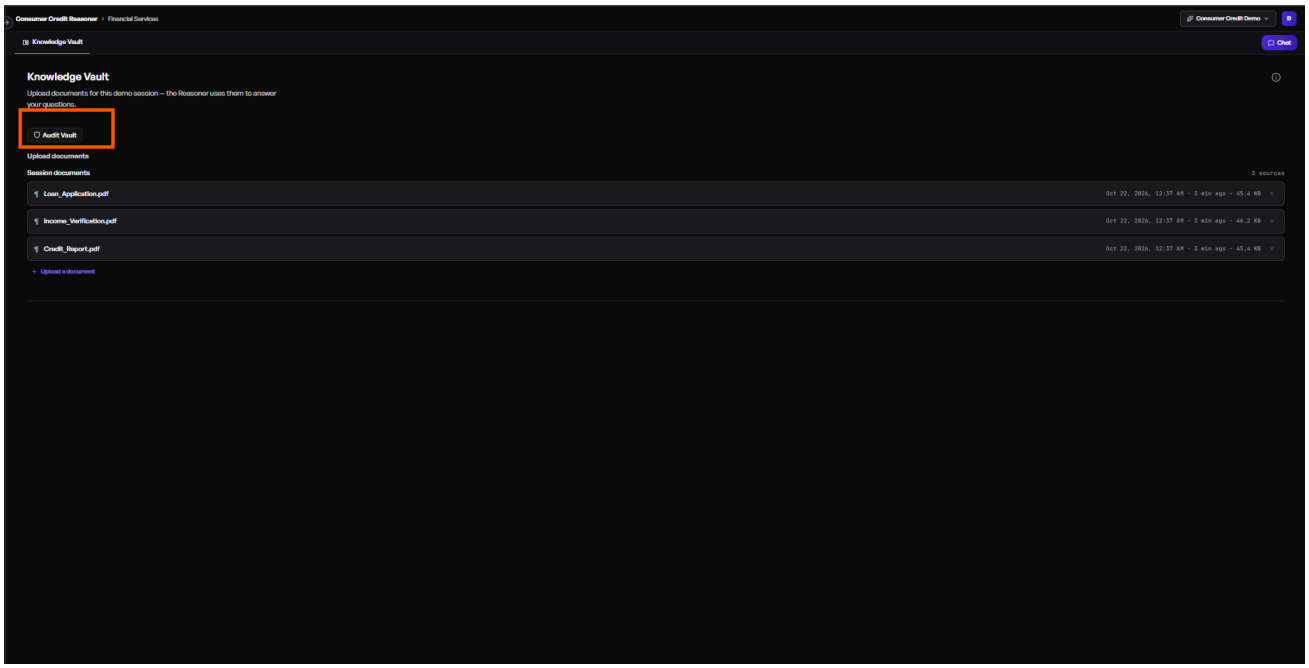
Audit Vault

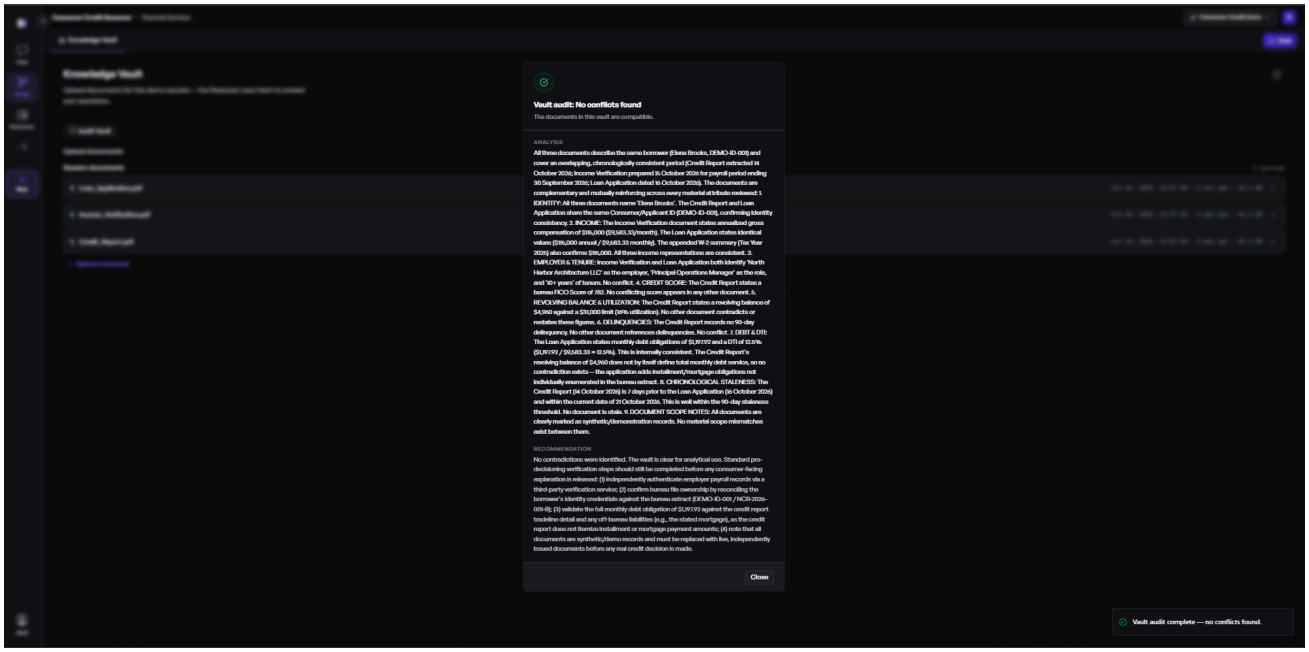
Audit Vault checks whether the documents uploaded to the Knowledge Vault agree with one another, before you run a validation query. All the documents in one case describe the same transaction: one sugar trade, or one borrower's credit application. They should therefore agree on key facts such as parties, figures, dates and terms. Audit Vault shows you where they don't, so you can resolve conflicts before the main reasoning begins.

Audit Vault works the same way in both Reasoners. Only the documents and the types of conflict differ.

Run Audit Vault

1. Open the **Knowledge Vault** from the Studio area.
2. Upload the documents for **one case only**, either one sugar trade or one borrower.
3. Confirm that all the documents appear under **Session documents**.
4. Click **Audit Vault**.
5. Review the audit result displayed by the system.
6. If no conflicts are found, continue to Chat and submit your validation query.
7. If conflicts are found, review the affected documents before continuing.

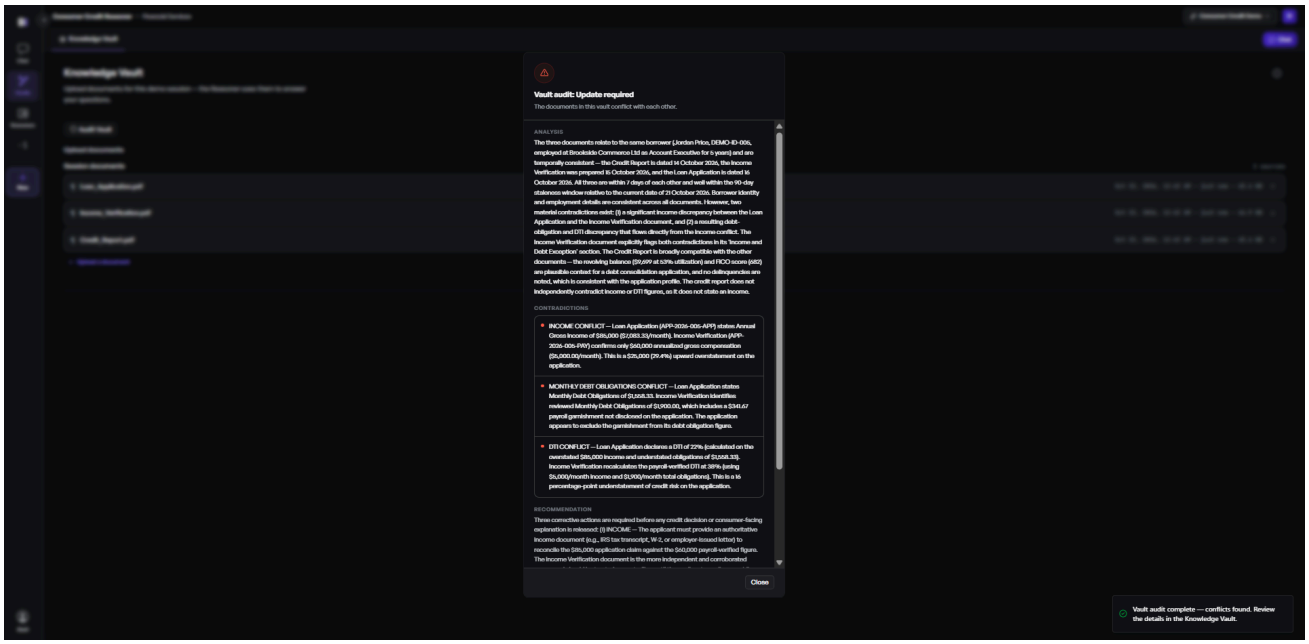




- If no conflicts are detected, continue to Chat and submit the validation query.
- If conflicts are detected, review the affected documents before continuing.

When conflicts are detected

If the Audit Vault finds inconsistent or conflicting information between the documents, it displays a warning that the document set needs review.
For example:


Vault audit: Update required
The documents in this vault conflict with each other.
ANALYSIS
The three documents relate to the same borrower (Jordan Price, DEMO-ID-006, employed at Brookside Commerce Ltd as Account Executive for 5 years) and are temporally consistent — the Credit Report is dated 14 October 2026, the Income Verification was prepared 15 October 2026, and the Loan Application is dated 16 October 2026. All three are within 7 days of each other and well within the 90-day staleness window relative to the current date of 21 October 2026. Borrower identity and employment details are consistent across all documents. However, two material contradictions exist: (1) a significant income discrepancy between the Loan Application and the Income Verification document, and (2) a resulting debt-obligation and DTI discrepancy that flows directly from the income conflict. The Income Verification document explicitly flags both contradictions in its 'Income and Debt Exception' section. The Credit Report is broadly compatible with the other documents — the revolving balance ($9,499 at 63% utilisation) and FICO score (682) are plausible context for a debt consolidation application, and no delinquencies are noted, which is consistent with the application profile. The credit report does not independently contradict income or DTI figures, as it does not state an income.
CONTRADICTIONS
INCOME CONFLICT — Loan Application (APP-2026-005-APP) states Annual Gross Income of $85,000 ($7,083.33/month). Income Verification (APP-2026-005-PAY) confirms only $60,000 annualised gross compensation ($5,000.00/month). This is a $25,000 (29.4%) upward overstatement on the application.
MONTHLY DEBT OBLIGATIONS CONFLICT — Loan Application states Monthly Debt Obligations of $1,558.33. Income Verification identifies reviewed Monthly Debt Obligations of $1,900.00, which includes a $341.67 payroll garnishment not disclosed on the application. The application appears to exclude the garnishment from its debt obligation figure.
DTI CONFLICT — Loan Application declares a DTI of 22% (calculated on the overstated $85,000 income and understated obligations of $1,558.33). Income Verification recalculates the payroll-verified DTI at 38% (using $5,000/month income and $1,900/month total obligations). This is a 16 percentage-point understatement of credit risk on the application.
RECOMMENDATION
Three corrective actions are required before any credit decision or consumer-facing explanation is released: (1) INCOME — The applicant must provide an authoritative income document (e.g., IRS tax transcript, W-2, or employer-issued letter) to reconcile the $85,000 application claim against the $60,000 payroll-verified figure. The Income Verification document is the more independent and corroborated
Close
Vault audit complete — conflicts found. Review the details in the Knowledge Vault.

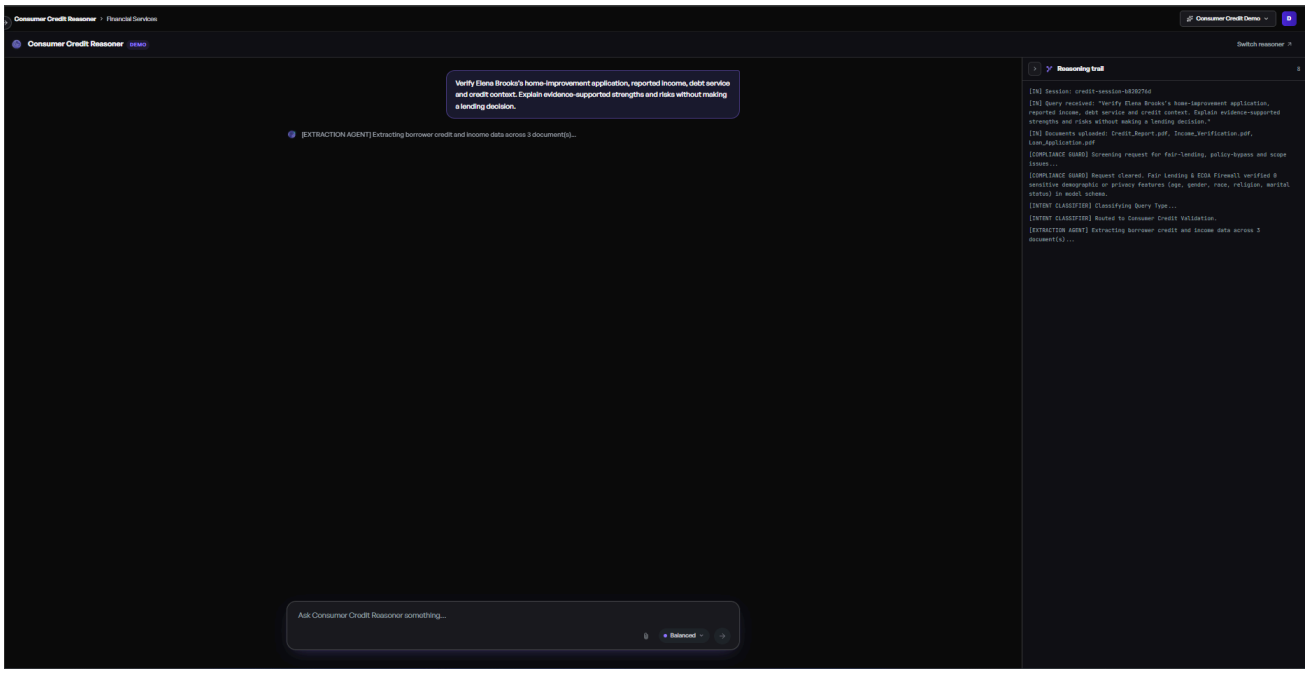
Live Reasoning Progress and Reasoning Trail

Submit a Validation Query

1. Confirm that the correct documents are in the Knowledge Vault.
2. Type a validation question in the Chat box. Name the case and say what you want verified.
3. Submit the question.
4. Watch the live progress indicator and the Reasoning Trail until the result appears.

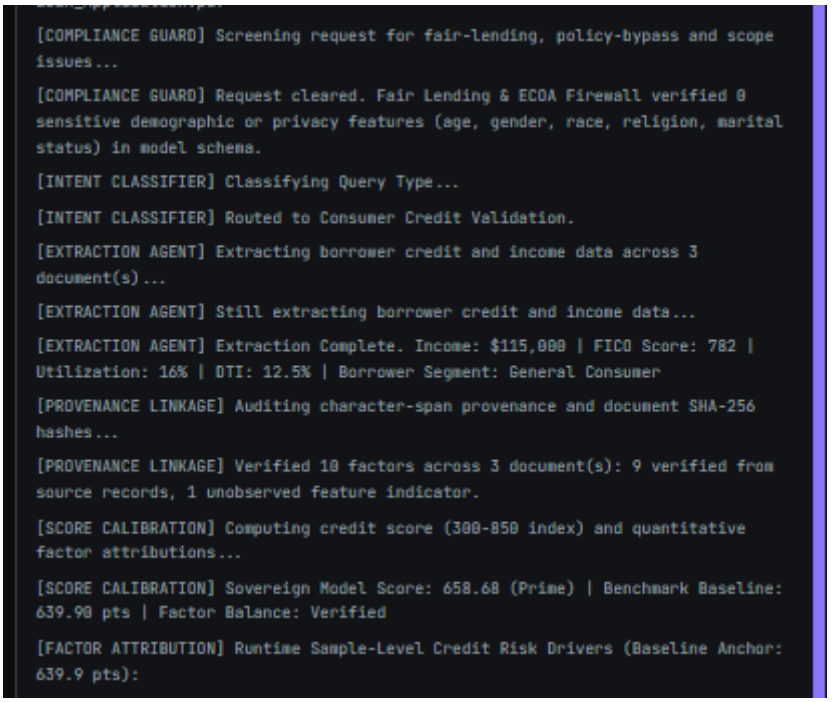
Live Progress Indicator

After a validation query is submitted, the interface shows the current processing stage with a progress indicator
Example:



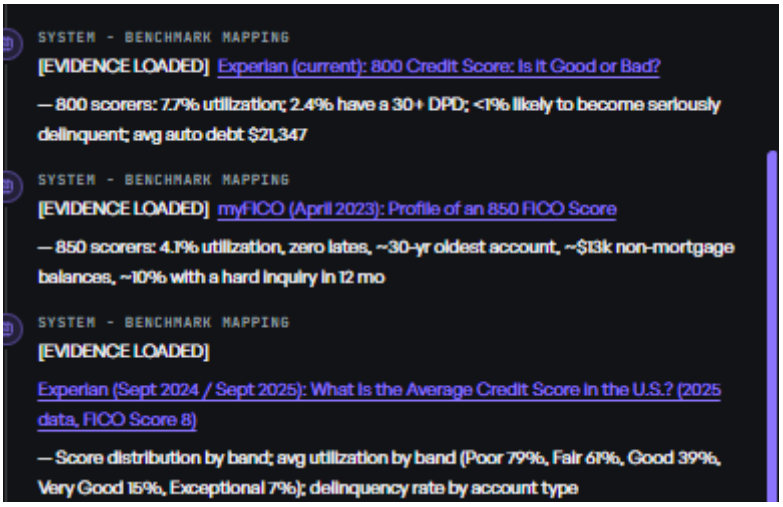
While the Reasoner is working, the Reasoning Trail updates in real time beneath the progress indicator, so you can see which steps have finished and which one is running. Typical stages include:

- **[COMPLIANCE GUARD]** — screens the request against Fair Lending and governance policy (for example, blocking requests to approve or decline).
- **[SCORE CALIBRATION]** — aligns the bureau score and credit tier with the benchmark.
- **[FACTOR ATTRIBUTION]** — calculates the TreeSHAP factor impacts from the Sovereign Model.
- **[GOVERNANCE AGENT]** — issues the final ANSWER, ASK or ABSTAIN decision.



Evidence Hyperlinks

Evidence references in the Reasoning Trail may contain clickable hyperlinks that open the supporting document or benchmark source.



Understanding the Results

Review all parts of the response together. A high score is useful, but it is not a credit decision and does not replace checking the source documents.

ANSWER	ASK	ABSTAIN
Evidence is consistent and verified across the documents. The Reasoner explains the evidence-supported strengths and risks.	A document is missing, income is unverified, or the documents disagree. The Reasoner states exactly what is needed.	Compliance violation, identity fraud indicators, a corrupted or disputed bureau file, a policy bypass, or a capacity guardrail breach. Stop and route to human review.

Remember: ANSWER is not an approval and ABSTAIN is not a decline. The decision describes the quality of the evidence, not the outcome of the loan.



Result item	What it means
Answer	The direct, evidence-based response to your question.
Mode	The type of task, such as DOCUMENT QA, CHAT or a scenario (what-if) analysis.
Evidence	How strong the documentary support is.
Governance Decision	ANSWER, ASK or ABSTAIN (see above).
Veracity Score	How consistent the documents are with each other and how well the figures align with the credit-tier benchmark.- It measures evidence reliability.
Confidence Score	Model confidence based on the available context. It is not certain.
Credit Metrics	Stated vs verified income, DTI, revolving utilization, total debt, bureau FICO and credit tier, compared with the benchmark.
Factor Attribution	TreeSHAP impacts from the Sovereign Model, showing which factors raise or lower the estimated credit risk and by how much.
Recommendation	The next action the system proposes, such as requesting a document or routing to human review — never approve or decline.
Flags	Compliance warnings, arithmetic errors (for example, a misstated DTI) and contradictions between documents.
Hypotheses	Investigative hypotheses — plausible explanations the system generates when data is missing, inconsistent or suspicious (for example, “income may be overstated” or “transcript may belong to a different taxpayer”).
How I reasoned	Open this for important, disputed, high-risk or auditable files.

Sugar Trade Reasoner

Enforced Trade Rules (Axioms)

Axioms are mandatory business and governance rules that constrain the Reasoner. The following are recommended starting rules for the Sugar pilot; the exact implemented rules must be approved by the commercial, credit, and compliance owners.

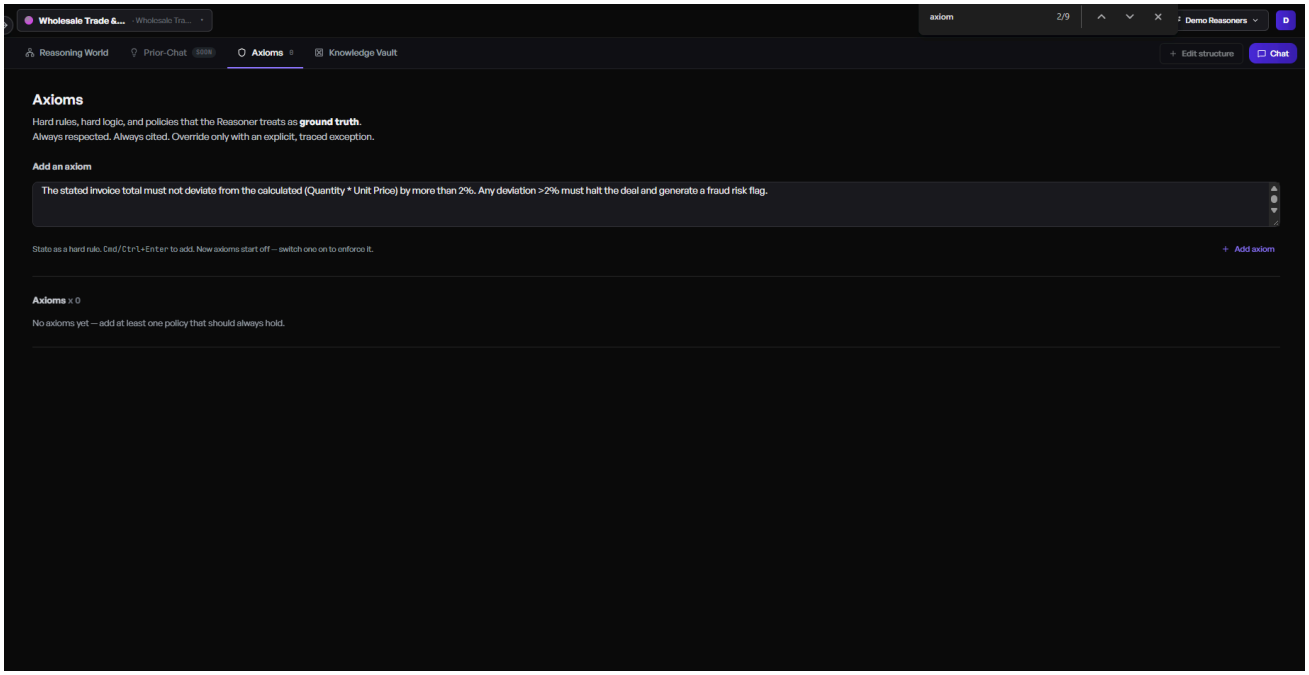
Example Axioms for Sugar Trade Review

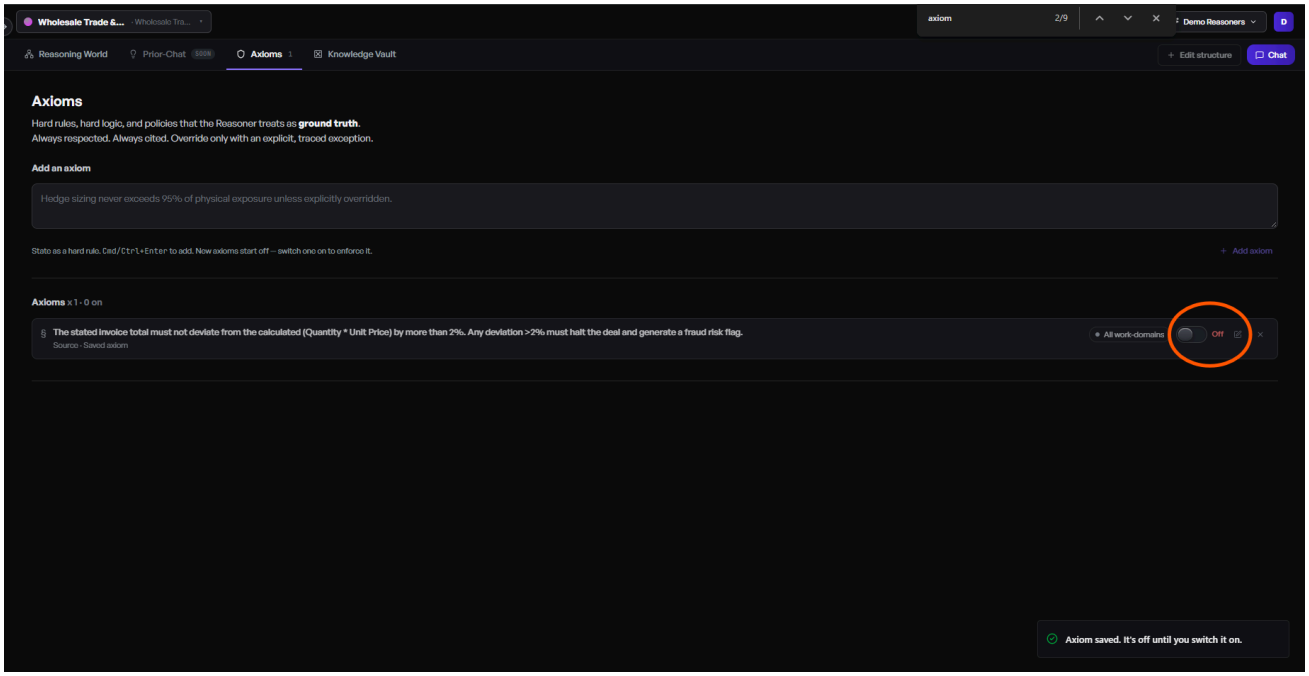
The following examples show how an axiom may be written and how the Reasoner is expected to use it during a transaction review.

These are illustrative examples only. Production axioms must be reviewed and approved by the appropriate commercial, credit, compliance, or governance owner before activation.

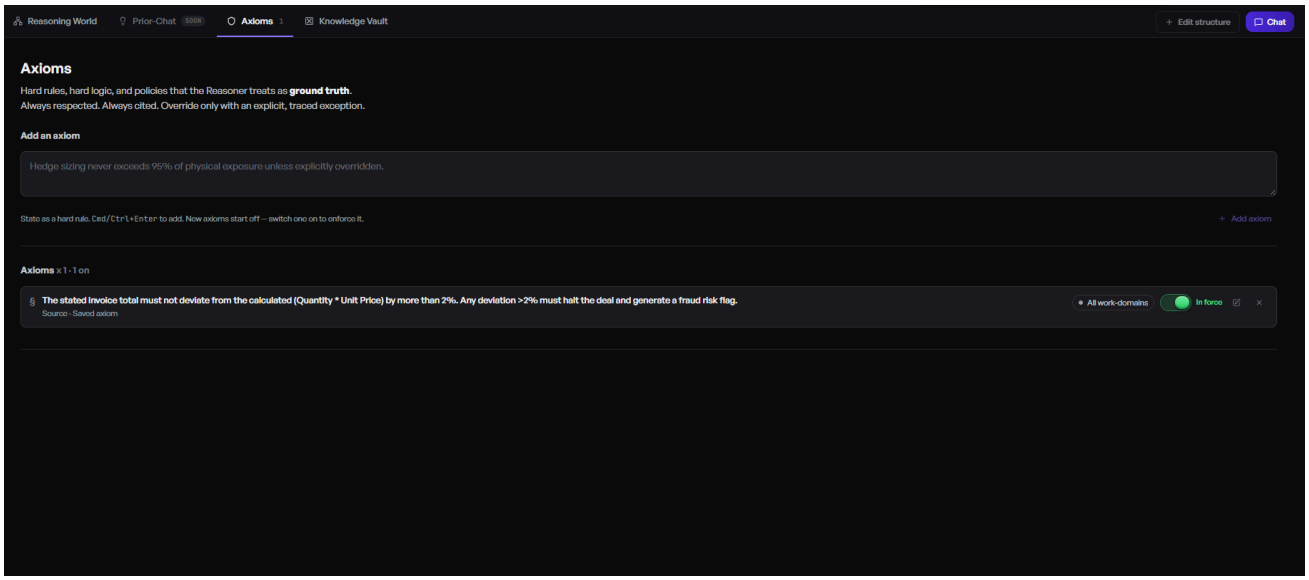
Example axiom	Related test case
If the macro report indicates Red Sea/Middle East shipping delays, the buyer's supply chain is fundamentally broken. You MUST output a [CRITICAL] flag stating 'Route unviable due to Red Sea crisis'. Do not consider Incoterms or missing banking details as mitigating factors; this is a fatal flaw.	Test Case 2
The stated invoice total must not deviate from the calculated (Quantity * Unit Price) by more than 2%. Any deviation >2% must halt the deal and generate a fraud risk flag.	Test Case 3
A Documentary Letter of Credit (DLC) must explicitly state the Issuing Bank. Any LC missing the issuing bank name must be flagged as incomplete compliance.	Test Case 4
For all CIF (Cost, Insurance, Freight) transactions, a specific named destination port must be stated. "Any Safe Port" is unacceptable and must be flagged for clarification.	Test Case 5
If a math discrepancy exists but is less than $100 total, flag it as an immaterial rounding artifact and do not halt the deal.	Test Case 6
1. The formal Contract signature date must logically precede or equal the FCO (Full Corporate Offer) expiry date. If the FCO expired before signing, you MUST flag it as a lapsed offer. 2. The stated invoice total must not deviate from the calculated (Quantity * Unit Price) by more than 2%. Any deviation >2% must halt the deal and generate a [CRITICAL] fraud risk flag.	Test Case 7
If the macro report indicates a collapse in Thai sugar syrup export pricing, this creates a massive oversupply. If the deal's unit price is above $450/MT, you MUST output a [CRITICAL] flag explicitly stating the buyer is severely overpaying in a flooded market, creating a massive risk of default. This must halt the deal.	Test Case 8

Example axiom for test case





Enforceability & On/Off Control: Every axiom has an active status ("In force"). Switch the toggle ON to enforce the rule during evaluation, or switch it OFF to test exploratory baseline scenarios without deleting the rule.


Reasoning World
Prior-Chat
Axioms 1
Knowledge Vault
Edit structure
Chat
Axioms
Hard rules, hard logic, and policies that the Reasoner treats as ground truth.
Always respected. Always cited. Override only with an explicit, traced exception.
Add an axiom
Hedge sizing never exceeds 95% of physical exposure unless explicitly overridden.
State as a hard rule. Cmd/Ctrl+Enter to add. New axioms start off — switch one on to enforce it.
Add axiom
Axioms x1 · 1 on
The stated invoice total must not deviate from the calculated (Quantity * Unit Price) by more than 2%. Any deviation >2% must halt the deal and generate a fraud risk flag.
Source · Saved axiom
All work-domains
In force

Consumer Credit Reasoner

Enforced Underwriting Rules (Axioms)

Axioms are mandatory institutional underwriting policies that define the boundaries within which the Consumer Credit Reasoner operates.

Authorized users can configure these rules under **Blyoum Studio** → **Reasoner Settings** → **Axioms**. Once activated, the Reasoner deterministically enforces them during mathematical verification and veracity audits.

If an application violates an active axiom, the system raises a **[CRITICAL] invariant flag** and applies the appropriate governance decision (**ABSTAIN** or **ASK**), preventing unsupported evaluations or score releases.

Example Institutional Underwriting Axioms

Policy Rule	Example Axiom Configuration	Affected Test Case	Reasoner Enforcement
Loan-to-Income (LTI) Ceiling	"Unsecured loan requests must not exceed 5.0x verified annual gross income."	APP-2026-012 — Olivia Grant (8.18x LTI).	Triggers `[CRITICAL] AXIOM-LTI-005`, blocks score release, and returns **ABSTAIN**.
Debt-to-Income (DTI) Cap	"Verified DTI must not exceed 45.0% without an authorized exception."	APP-2026-003 — Dana Mitchell (48.5% DTI).	Recalculates DTI using independent financial evidence and flags policy breaches.
Independent Income Verification	"Stated income must be supported by independent payroll or tax documentation."	APP-2026-006 — Taylor Morgan (Missing Proof of Income).	Withholds score release and returns **ASK** for supporting evidence.
Employment Stability	"Applicants must demonstrate at least 2 years of verifiable continuous employment."	APP-2026-007 — Riley Carter (Employment verification conflict).	Detects tenure or employer discrepancies and returns **ASK**.
Revolving Credit Utilization	"Aggregate revolving credit utilization must not exceed 75.0% without further debt mitigation."	APP-2026-003 — Dana Mitchell (High card utilization).	Audits bureau tradelines and flags excessive utilization.
Credit File Integrity	"Unresolved bureau disputes or material file integrity issues must prevent automated credit scoring."	APP-2026-011 — Samira Johnson (Bureau File Dispute Amendment).	Prevents credit file certification and returns **ABSTAIN** when integrity cannot be established.

Enforcement Behavior

- **ANSWER:** Applicable policy requirements are satisfied.
- **ASK:** Additional documentation or clarification is required.
- **ABSTAIN:** A critical policy violation or unresolved integrity issue prevents reliable evaluation.

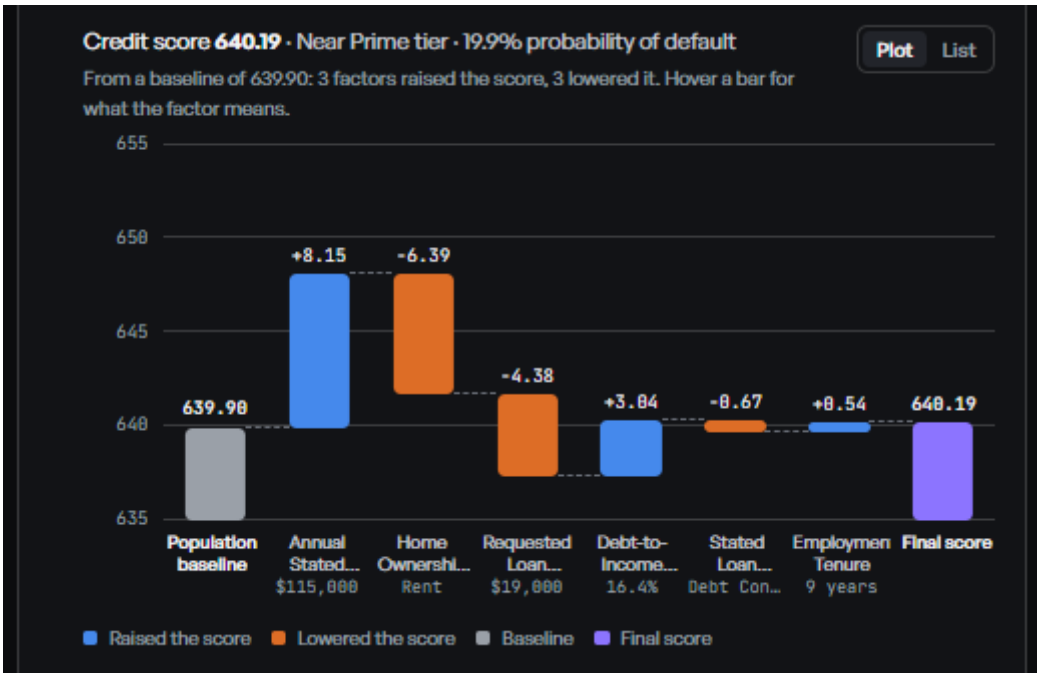
Note: These are illustrative institutional policies. Actual thresholds and exception procedures must be configured and approved by the lending institution. Axiom enforcement supports underwriting consistency and traceability; it does not independently constitute a lending approval or adverse-action decision.

Credit Score Factor Attribution Waterfall Chart

The Credit Score Factor Attribution Waterfall Chart illustrates how individual borrower factors contribute to the model's estimated credit score using TreeSHAP-based explanations.

- **Blue bars:** Factors that increase the estimated credit score, generally indicating lower credit risk.
- **Orange bars:** Factors that decrease the estimated credit score, generally indicating higher credit risk.
- **Grey bar:** The baseline credit score before borrower-specific factor contributions.
- **Purple bar:** The final estimated credit score after applying the factor contributions.

The size of each contribution represents its impact in credit-score points. These explanations help analysts understand the main drivers of the model's estimate. They do not represent an automated lending decision.



Fair Lending & Compliance Guardrails

- The Reasoner never approves or declines a loan. Requests to “underwrite”, “approve”, “decline” or “ignore checks” are intercepted and return ABSTAIN.
- It does not use prohibited bases under ECOA — race, color, religion, national origin, sex, marital status, age (provided the applicant can contract), receipt of public-assistance income, or the good-faith exercise of consumer-credit rights — as negative risk factors.
- Explanations are tied to documented evidence so they can be audited.

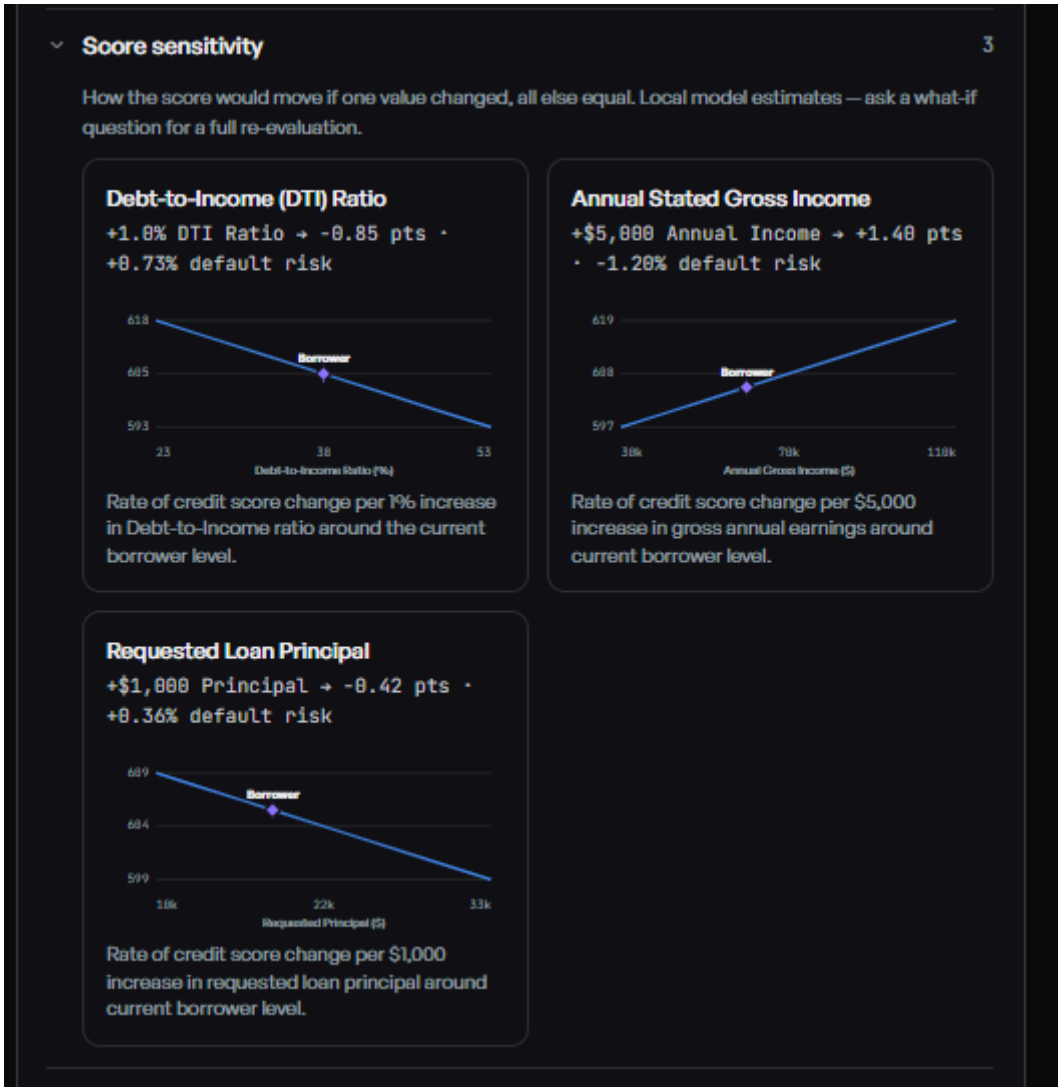
Score Sensitivity Curves

The Reasoner illustrates how changes in individual borrower inputs affect the estimated credit score and default risk, holding other variables constant.

The three sensitivity curves cover:

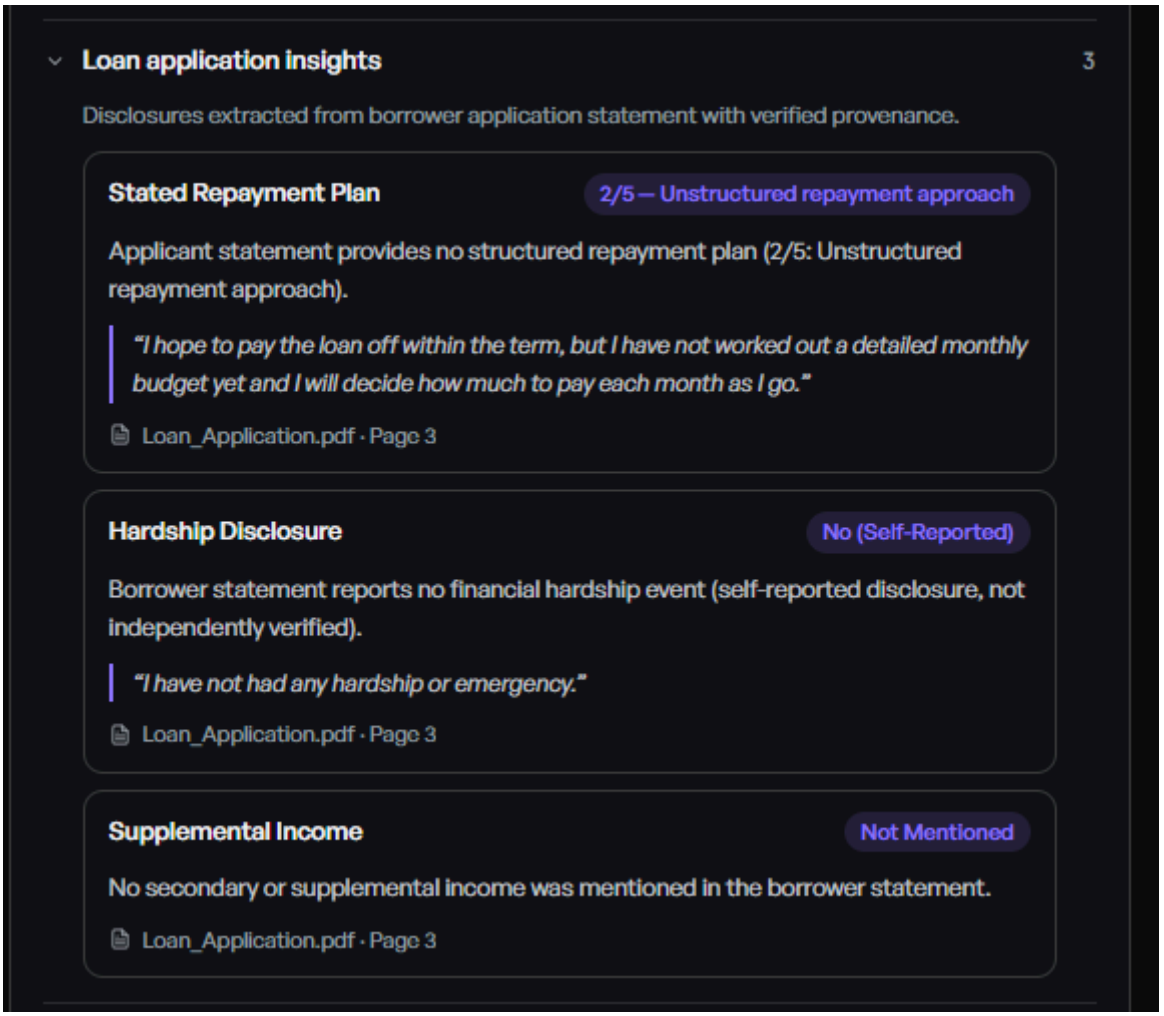
- **DTI Ratio:** Higher DTI generally lowers the estimated score.
- **Annual Gross Income:** Higher income generally increases the estimated score.
- **Requested Loan Principal:** Higher principal generally lowers the estimated score.

The displayed indicators show estimated changes around the current borrower profile. These are model-based estimates, not guaranteed outcomes or causal relationships.



Loan Application Insights

The Consumer Credit Reasoner extracts additional information from borrower documents and narratives that may not be available in standard structured fields. These are referred to as **qualitative and unstructured narrative features**.



To make these insights easier to understand, the accompanying Excel dictionary provides a detailed reference for all extracted unstructured features.

Reference Dictionary: Blyoum_Consumer_Credit_Unstructured_Features_Variable_Dictionary.xlsx

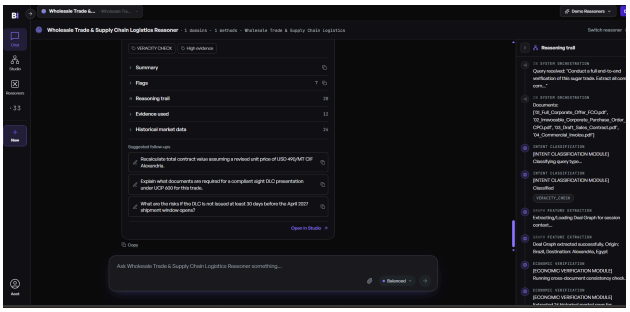
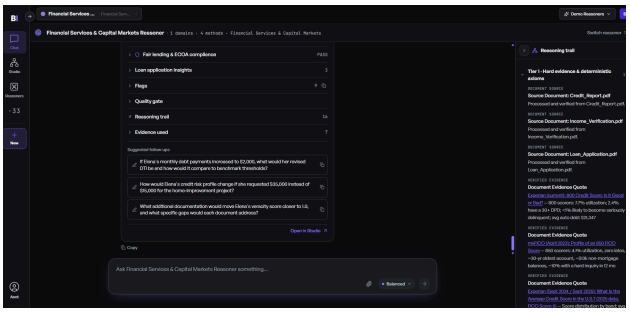
Use this dictionary as a reference when reviewing the qualitative insights displayed in the credit assessment. It explains what each feature and its possible values mean, helping underwriters interpret the extracted information more consistently.

Suggested Follow-up Questions

After the Reasoner answers, it may show **Suggested follow-ups** below the result. These are questions based on the current analysis. Select one to continue investigating without starting a new conversation, or type your own follow-up in the Chat box.

1. Review the result, flags and hypotheses.
2. Select a suggested follow-up, or type your own question.
3. Review the new response and its governance decision.
4. Repeat until the open issues are understood or resolved.

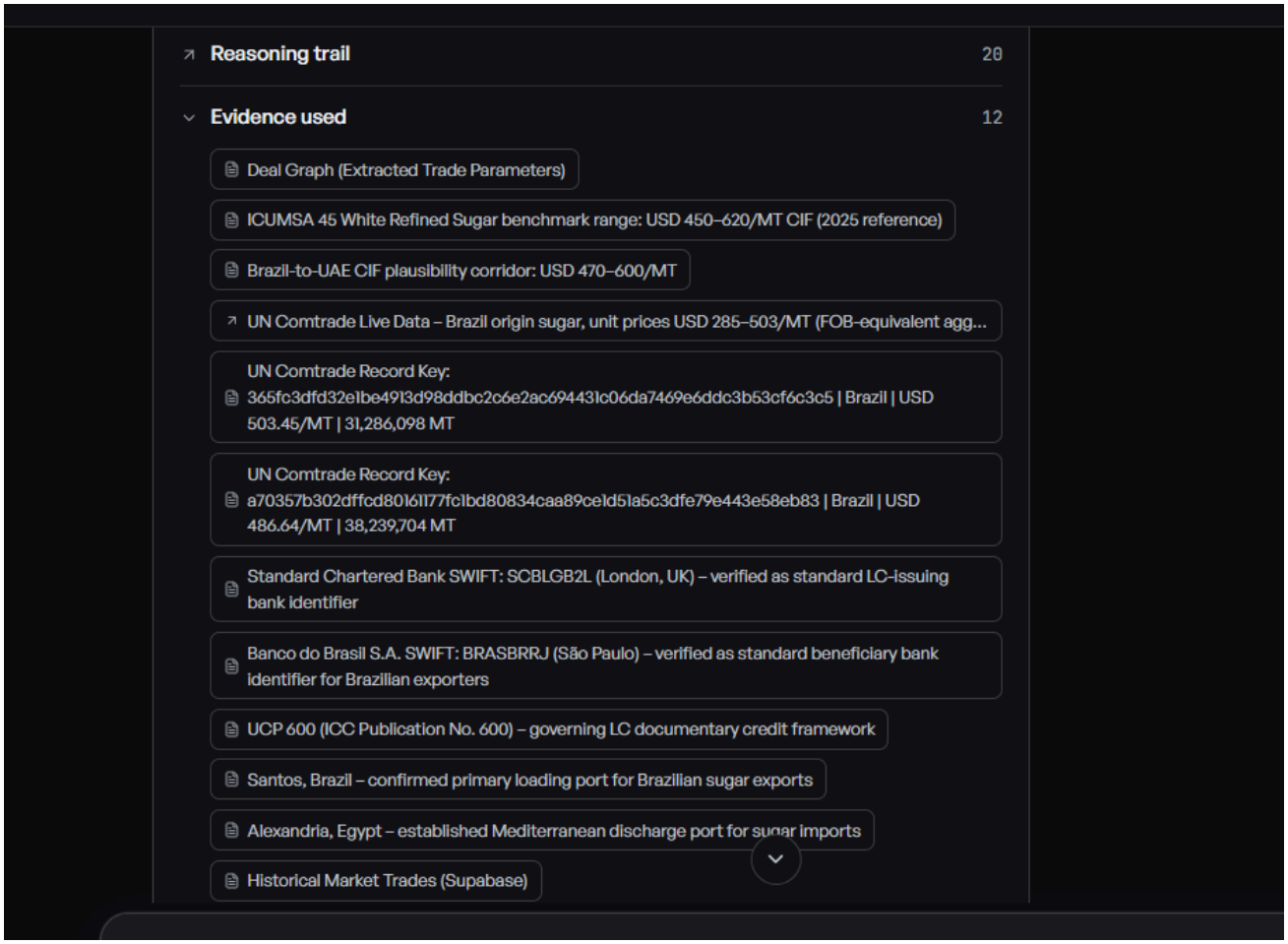
Examples

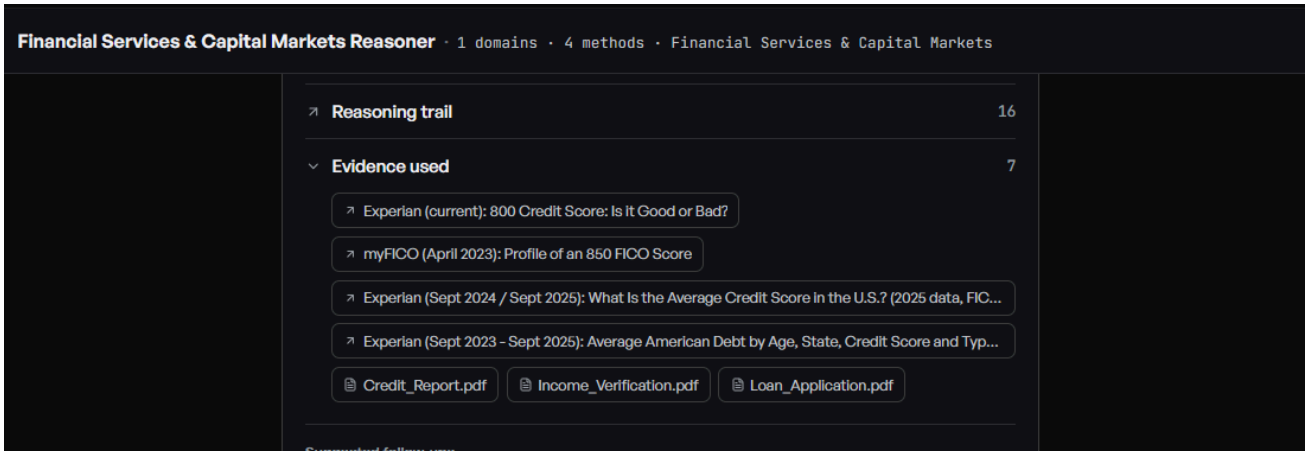
Sugar Trade Finance	Consumer Credit
• *“Explain the shipment-window risks identified in this transaction.”* • *“Compare the DLC amount with the total contract value.”* • *“Which document would resolve the quantity difference?”* 	• *“Which verified factors have the greatest effect on the estimated credit risk?”* • *“Explain the main negative credit risk drivers.”* • *“Verify DTI against the tier benchmark.”* • *“Which document would resolve the income discrepancy?”* 

Viewing Reference Evidence

A validation result may include an **Evidence used** section listing the sources behind the analysis, with a count of sources. It can include two kinds of source:

Source	Examples
Uploaded documents	Sugar: FCO, SPA, DLC, Commercial Invoice, inspection evidence. Consumer Credit: Loan_Application.pdf, Credit_Report.pdf, Income_Verification.pdf and any notices or amendments.
Knowledge sources	Benchmark datasets and reference material available to the Reasoner, such as the Experian credit-tier benchmarks used for DTI, utilization, total debt and score comparisons.





Multi-Document and Multi-Turn Scenarios

For Wholesale

Example 1 – Complete transaction review followed by detailed checks

Query 1 – Initial review
"Review the complete sugar deal package. Compare the FCO/ICPO, contract, commercial invoice, warehouse or Proof of Product document, inspection documents, shipping documents, and payment instructions. Identify inconsistencies in parties, quantities, prices, dates, logistics, and payment details. Classify each finding by risk level and cite the supporting document and field."

Query 2 – Investigate quantity differences
"Now focus only on quantity. Compare the offered, contracted, invoiced, stored, inspected, and shipped quantities. Show the quantity stated in each document, calculate any difference, identify which document conflicts with the others, and cite the relevant source."

Query 3 – Verify commercial calculations
"Using the contract and commercial invoice, verify the unit price × quantity calculation. Recalculate the subtotal, fees, deductions, and total payable. Show the expected amount versus the invoiced amount and flag any difference."

Query 4 – Final decision / outstanding actions
"Based on the findings above, list all unresolved HIGH or CRITICAL risks. Tell me which documents or corrections are required before the transaction can proceed and provide a closure checklist."

Supporting Test Cases: TC01 (The Clean Deal), TC03 (Gross Over-Invoicing), TC06 (Immaterial Rounding), TC07 (Cascading Math & Chronology Failure)

Example 2 – Entity and payment-risk investigation

Query 1 – Party consistency
"Compare the seller, buyer, beneficiary, warehouse, inspection company, carrier, and any other named parties across all available documents. Create a list of any name or entity mismatches and cite where each name appears."

Query 2 – Beneficiary check
"Does the beneficiary in the payment instructions match the seller or contracting party? If not, identify the mismatch and show the exact names appearing in the contract, invoice, and payment instructions."

Query 3 – Third-party payment check
"Is there any indication that payment is being requested to a third party? If yes, identify the third party, the supporting document, and the associated risk."

Query 4 – Evidence required
"What additional evidence or approval would be required to resolve the beneficiary or third-party-payment issue? Return the answer as an action checklist."

Supporting Test Cases: TC04 (Missing LC Bank)

Example 3 – Shipment, timeline, and document-validity review

Query 1 – Document validity
"Review every document in the deal package and identify which are signed, stamped, executed, expired, draft, template, or otherwise incomplete. Cite the evidence used for each classification."

Query 2 – Date consistency
"Compare the issue date, contract date, invoice date, inspection date, shipment window, and document validity dates. Identify any dates that are missing, expired, out of sequence, or inconsistent."

Query 3 – Route consistency
"Compare the loading port, discharge port, destination, shipment route, Incoterm, and delivery terms across the contract and shipping-related documents. Highlight any contradictions."

Query 4 – Overall timeline risk
"Considering the validity, date, and route findings above, are there any timeline or logistics issues that could prevent execution of the transaction? Assign a risk level to each issue and recommend the next action."

Supporting Test Cases: TC02 (Red Sea Crisis), TC05 (Ambiguous Port), TC08 (Chronology & Valuation Collapse)

For Finance Service

The Consumer Credit Reasoner supports uploading and analyzing **multiple PDF documents in the same conversation**.

Use the following scenarios for the clearest demonstrations.

Scenario A — Synthesize Complementary Documents

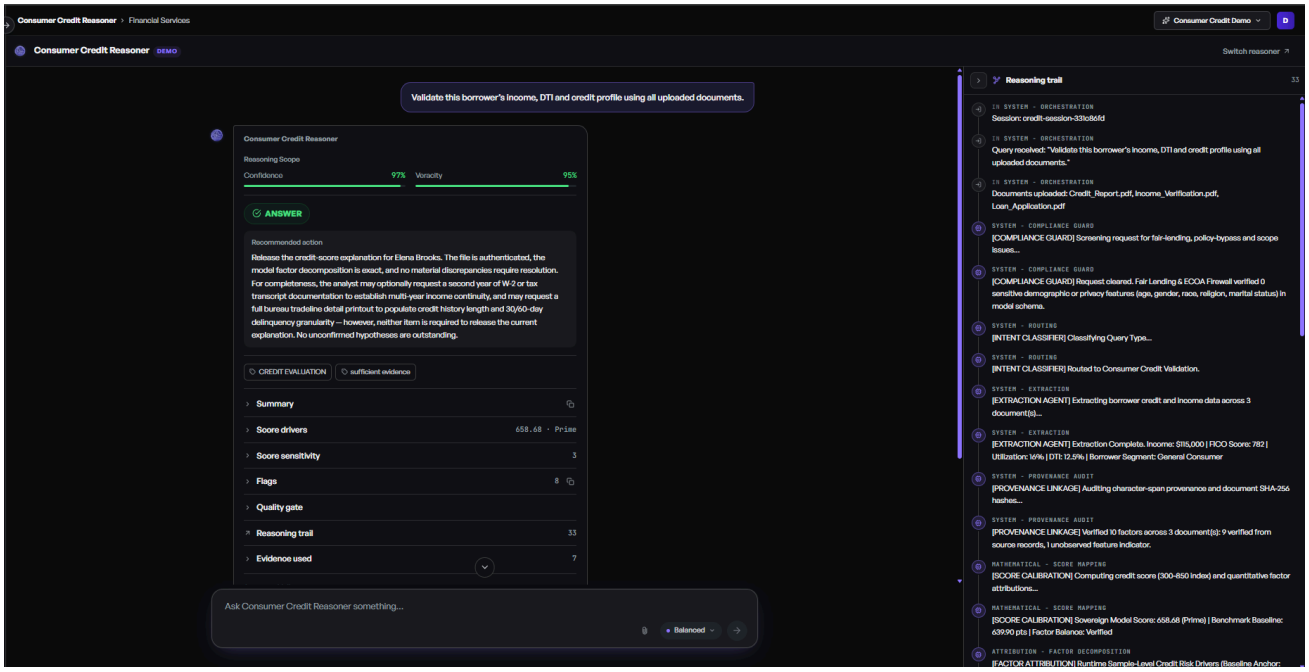
Use this scenario when each document supplies a **different part of the same borrower picture**.

Upload together (APP-2026-001 Elena Brooks or APP-2026-002 Marcus Reed):

- Loan_Application.pdf — requested amount, purpose, stated income and employer
- Credit_Report.pdf — bureau FICO, tradelines, utilization and total debt
- Income_Verification.pdf — W-2 or paystub evidence of actual income

Ask: ***"Validate this borrower's income, DTI and credit profile using all uploaded documents."***

What this demonstrates: the Reasoner combines income from the W-2, debt service from the bureau report and the request from the application into one verified DTI and risk explanation — no single document needs to contain every variable.



Scenario B — Detect Material Contradictions

Use this scenario when two documents give **different values for the same fact**.

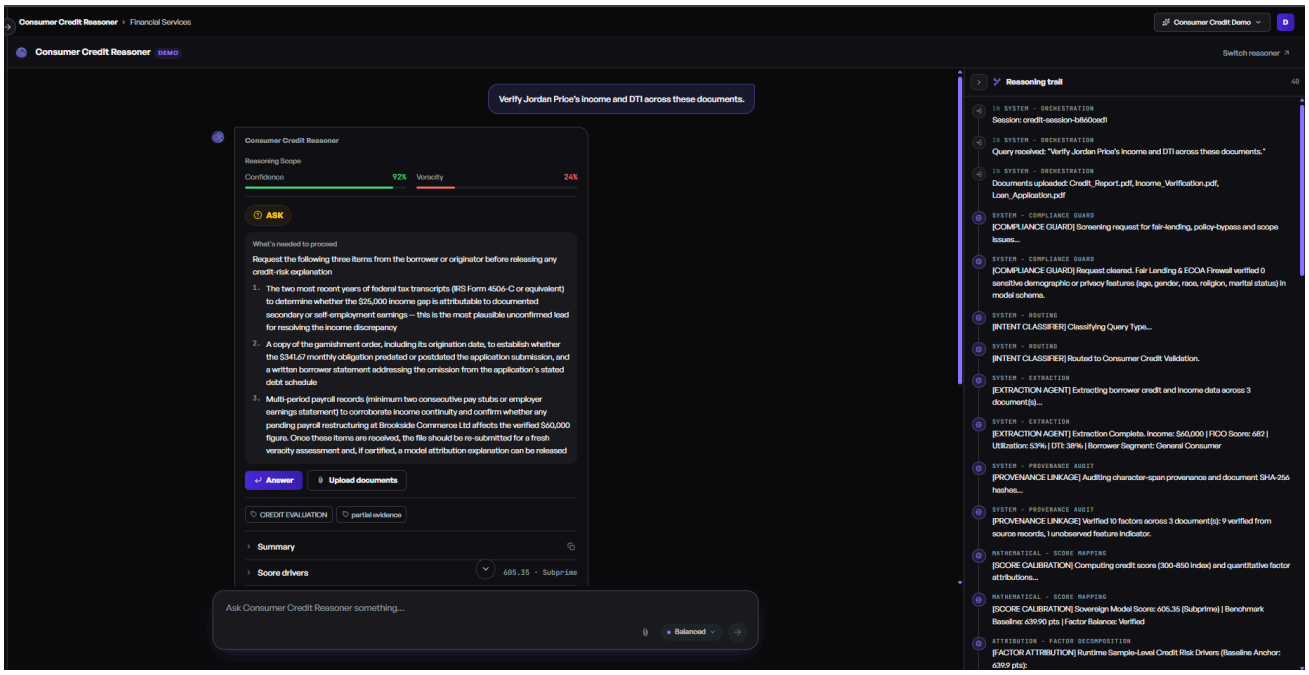
Upload together (APP-2026-005 Jordan Price): Loan_Application.pdf, Credit_Report.pdf, Income_Verification.pdf

- The application states $85,000 income and a 22% DTI.

- The payroll statement annualizes to $60,000, which recalculates the DTI to about 38%.

*Ask: **“Verify Jordan Price’s income and DTI across these documents.”***

What this demonstrates: the Reasoner does not average or pick a figure. It flags the contradiction, recalculates DTI from verified income, generates investigative hypotheses (for example, bonus or second-job income not documented, or overstated income), and returns ASK with the evidence needed to resolve it.



Scenario C — Critical Document Integrity Conflict

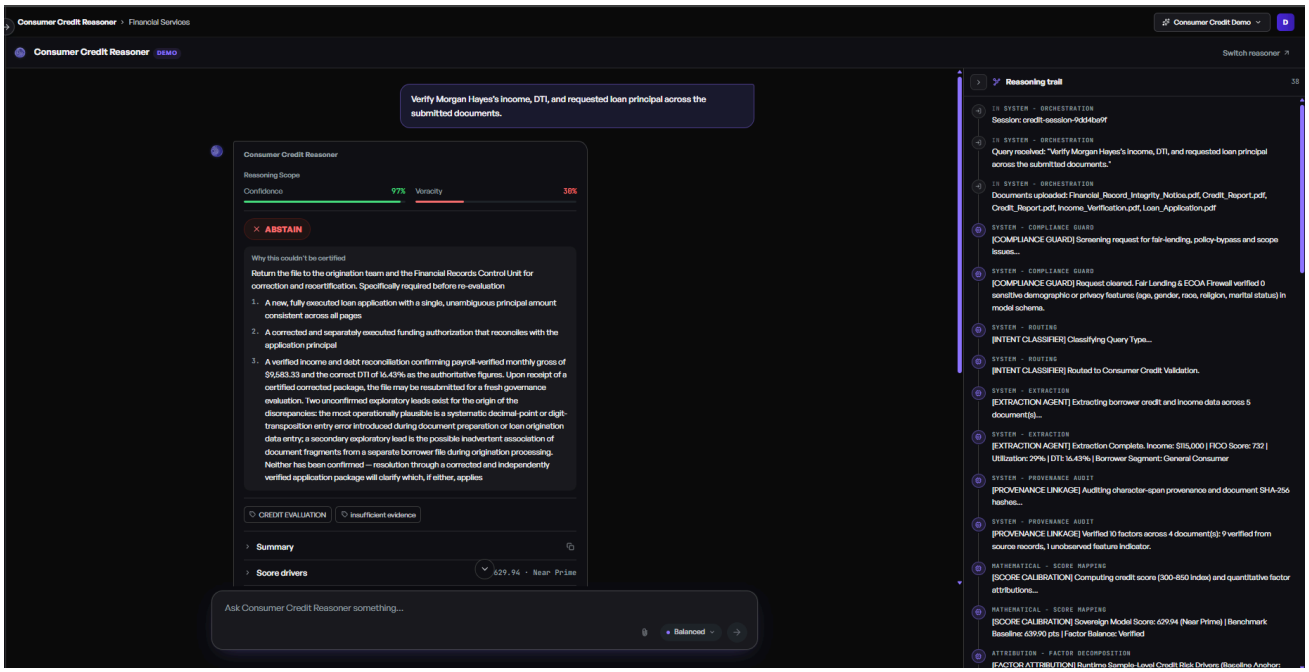
Use this scenario when critical financial figures conflict across documents and the authoritative values cannot be established.

Upload together (APP-2026-008 Morgan Hayes): Financial_Record_Integrity_Notice.pdf, Credit_Report.pdf, Income_Verification.pdf, Loan_Application.pdf

- The application states a requested loan principal of $19,000, while the signed funding authorization shows $190,000.
- The stated monthly gross income of $95,833.33 conflicts with payroll-verified monthly gross income of $9,583.33.
- The stated DTI of 1.64% conflicts with the recalculated DTI of 16.43%.

Ask: ***“Verify Morgan Hayes’s income, DTI, and requested loan principal across the submitted documents.”***

What this demonstrates: The Reasoner identifies critical contradictions, recalculates DTI using payroll-verified figures, and generates investigative hypotheses without treating them as confirmed facts. Because the financial certification has been withdrawn and the authoritative values remain unresolved, the quality gate returns ABSTAIN and requires a corrected, signed application, funding authorization, and income/debt reconciliation before evaluation can proceed.



Multi-Turn End-to-End Demo Scenarios for Finance Service

Blyoum supports multiple rounds of interaction within the same session. Underwriters can upload additional documents, provide clarifications, and ask follow-up questions based on the system's initial findings.

The system updates its assessment based on the new information without requiring the evaluation to be restarted.

Round 2 PDFs: Round_2 PDFs

Case 1: Test Case 6: Missing Income Verification

APP-2026-006 · Taylor Morgan

Round 1 – Initial Evaluation

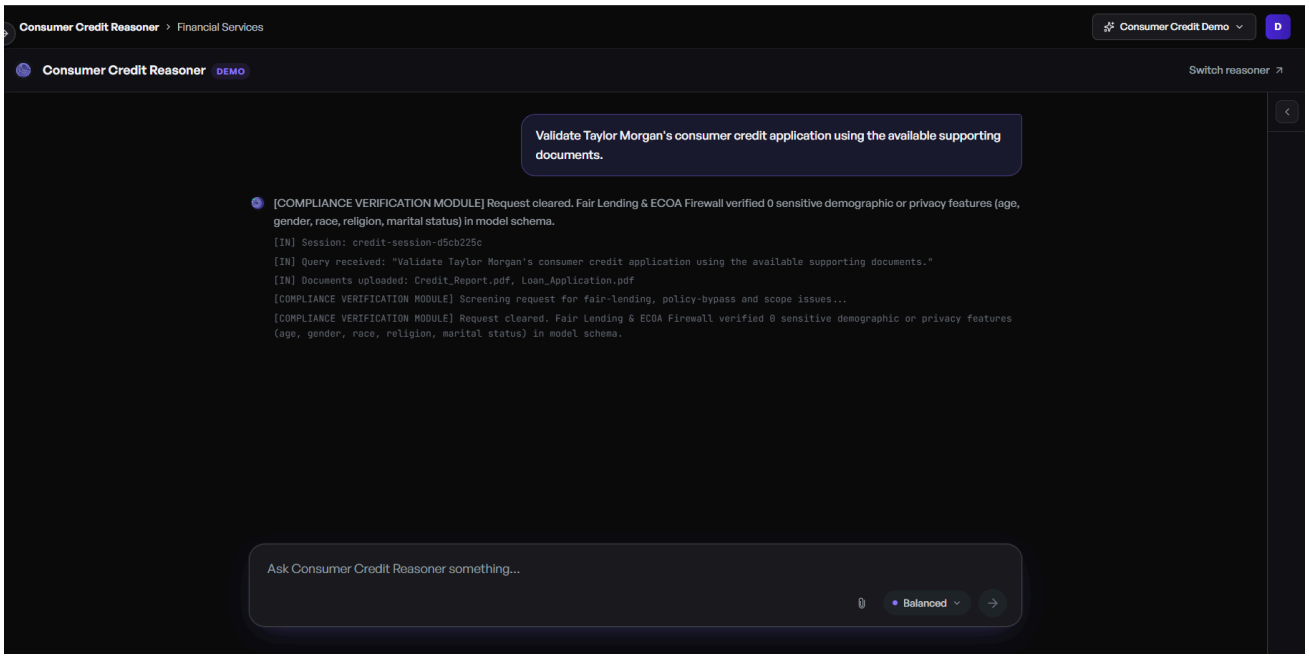
Clear the session and upload only these two documents:

- Loan_Application.pdf
- Credit_Report.pdf

Query:

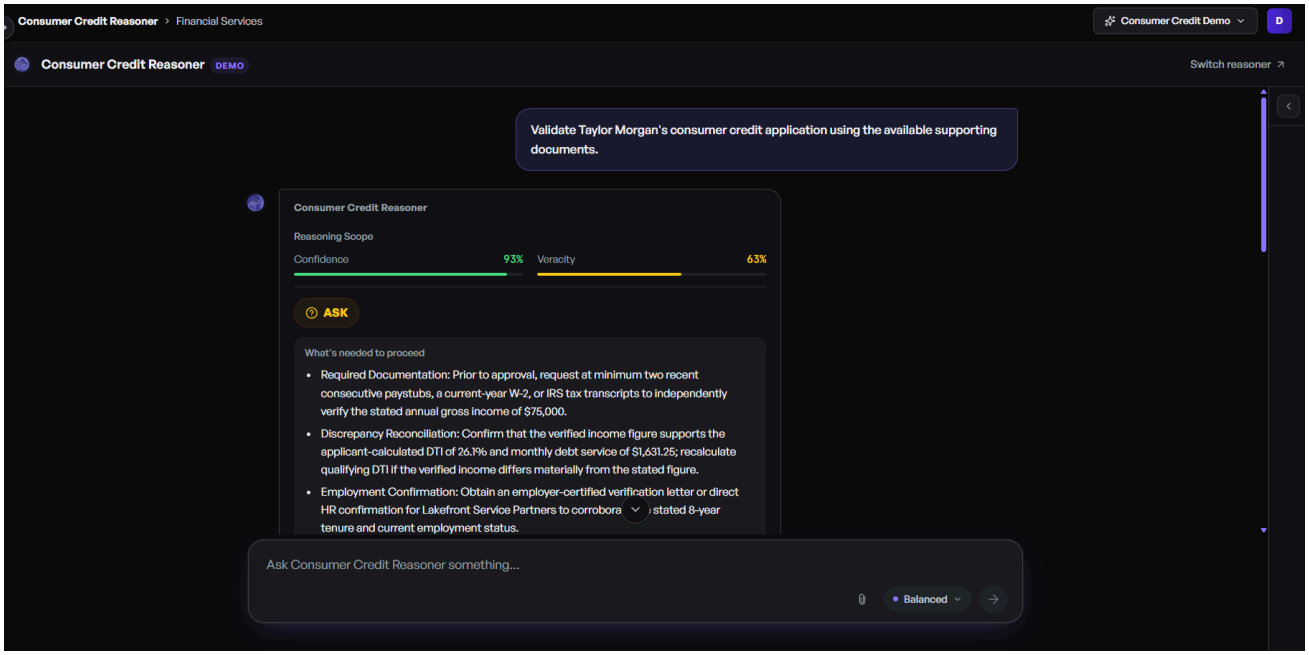
```
Validate Taylor Morgan's consumer credit application using the available
supporting documents.
```

Expected Result: ASK



Blyoum identifies that income verification is missing and requests supporting documentation.

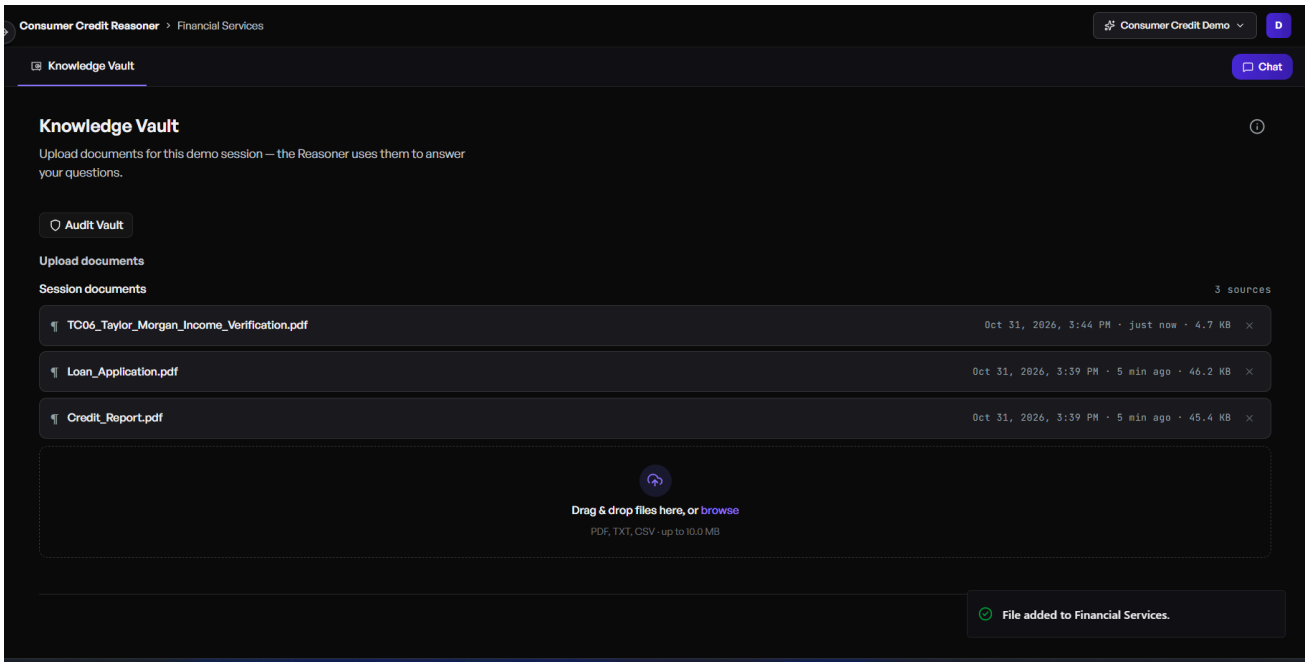
The credit score attribution remains withheld until income is verified.



Round 2 – Re-Evaluation

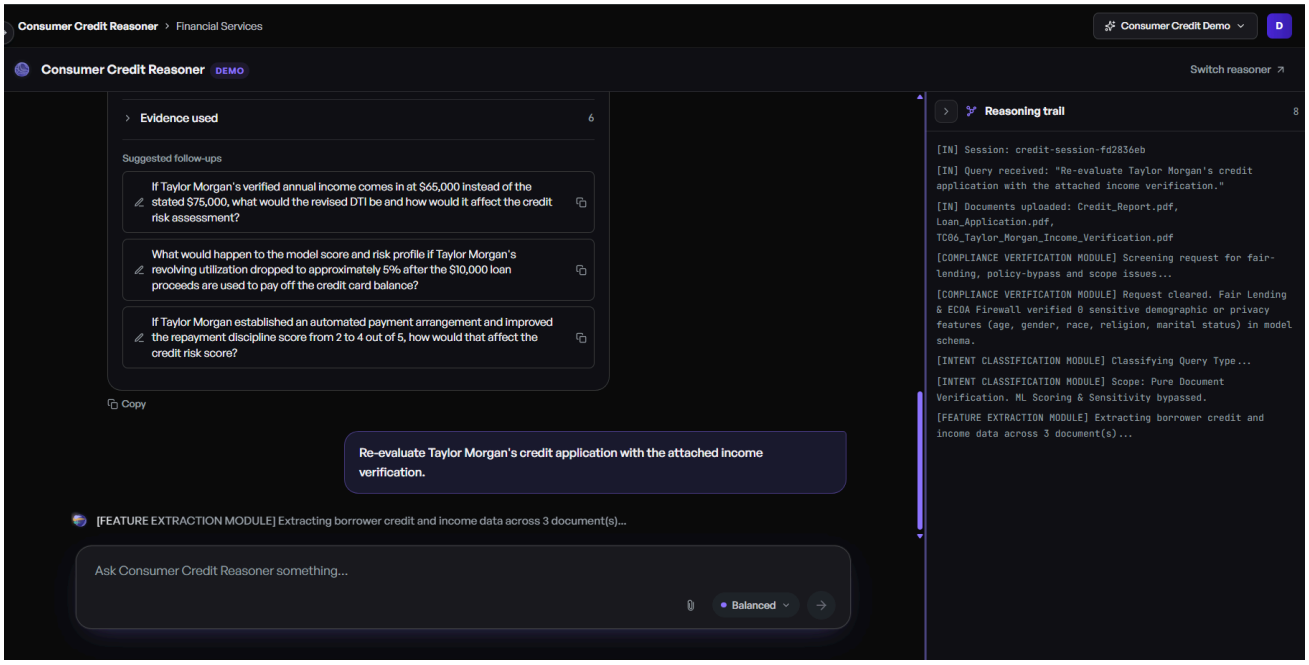
In the same session, upload `Taylor_Morgan_Income_Verification.pdf`.

PDF - TC06_Taylor_Morgan_Income_Verification.pdf



Query:

```
Re-evaluate Taylor Morgan's credit application with the attached income verification.
```

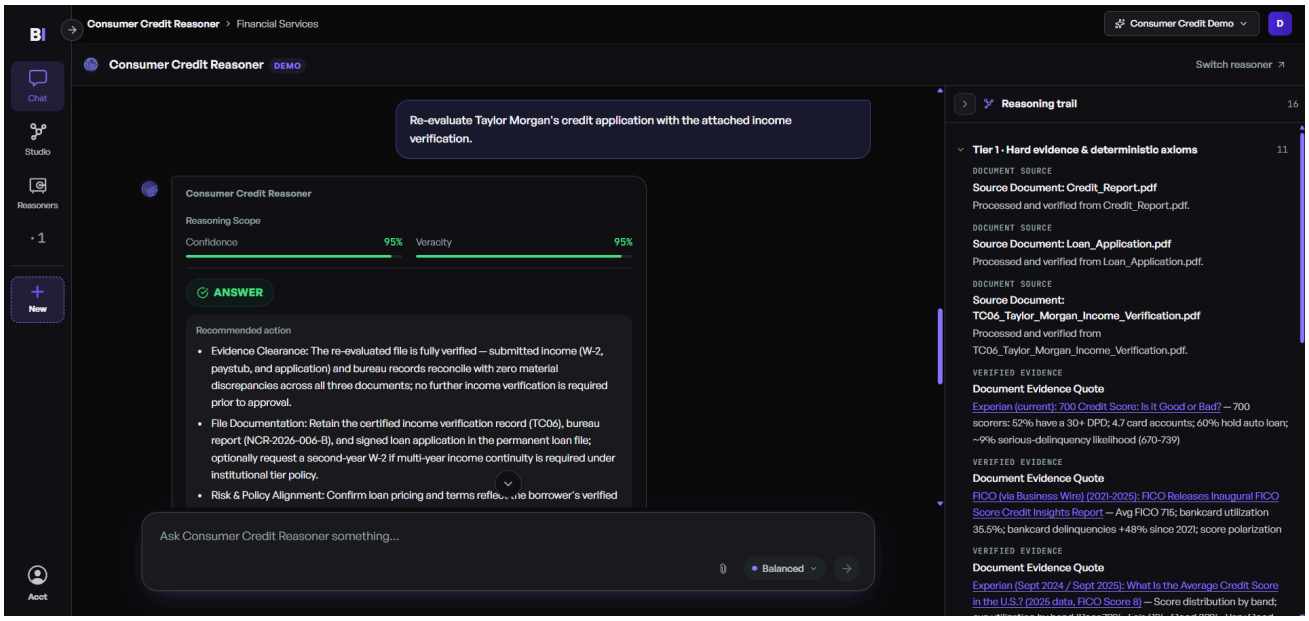


Expected Result: ANSWER / APPROVE

Blyoum verifies the income and employment details and updates the assessment.

The user will see:

- Verified Annual Income: $75,000.
- Employer: Lakefront Service Partners.
- Employment Tenure: 8 years.
- Verified DTI: 26.1%.
- Veracity: high
- Calibrated Credit Score: 687.
- Full TreeSHAP Factor Waterfall: Released.



Case Study 2: Test Case 5: Income Discrepancy & Garnishment Reconciliation

APP-2026-005 · Jordan Price

Round 1 – Initial Evaluation

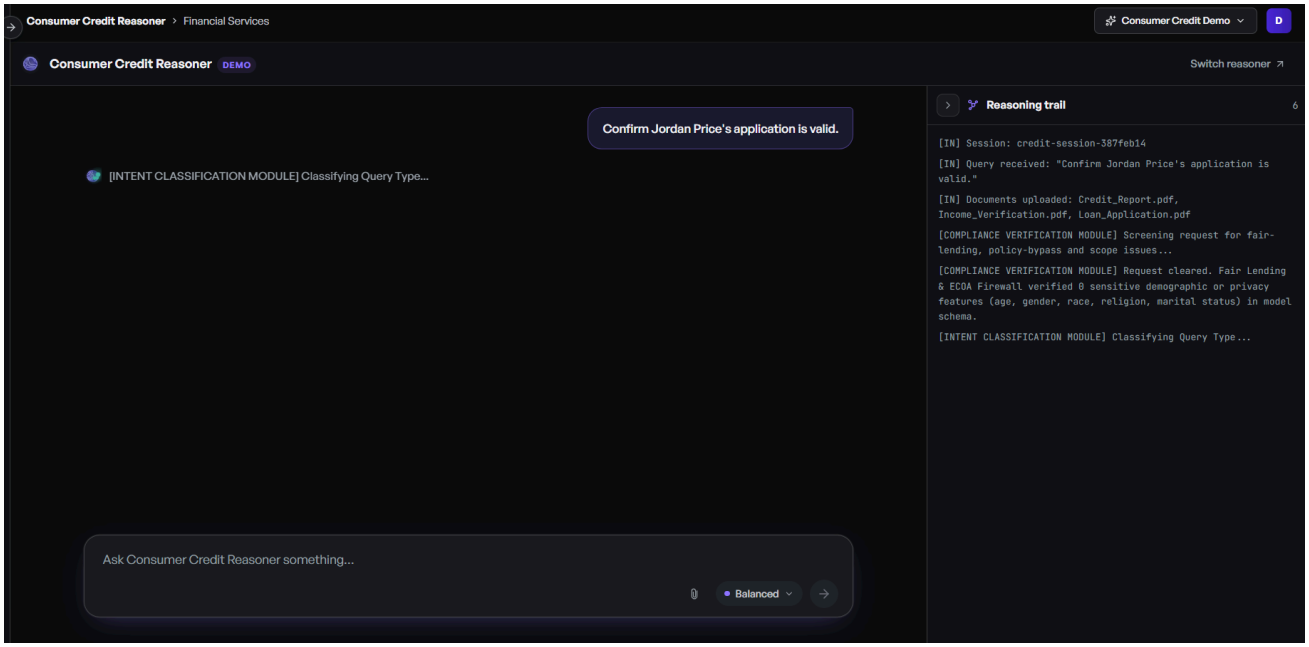
Clear the session and upload the following documents:

- Loan_Application.pdf
- Credit_Report.pdf
- Income_Verification.pdf (original file)

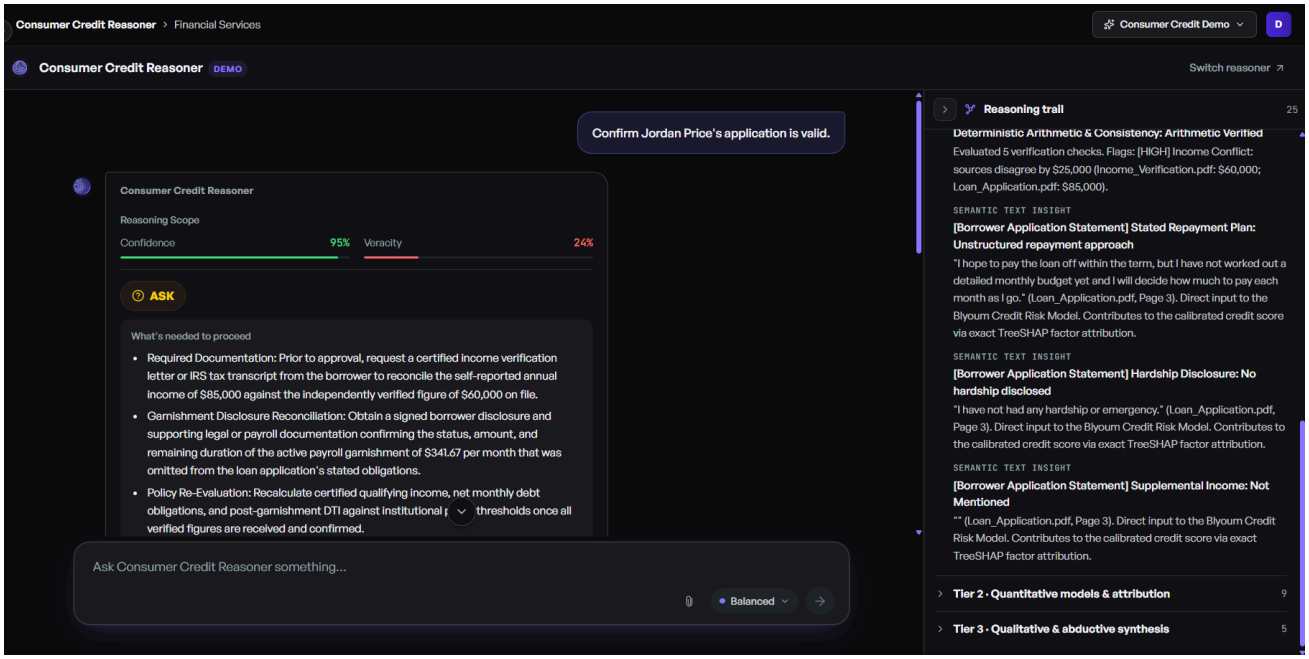
Query:

```
Confirm Jordan Price's application is valid.
```

Expected Result: ASK



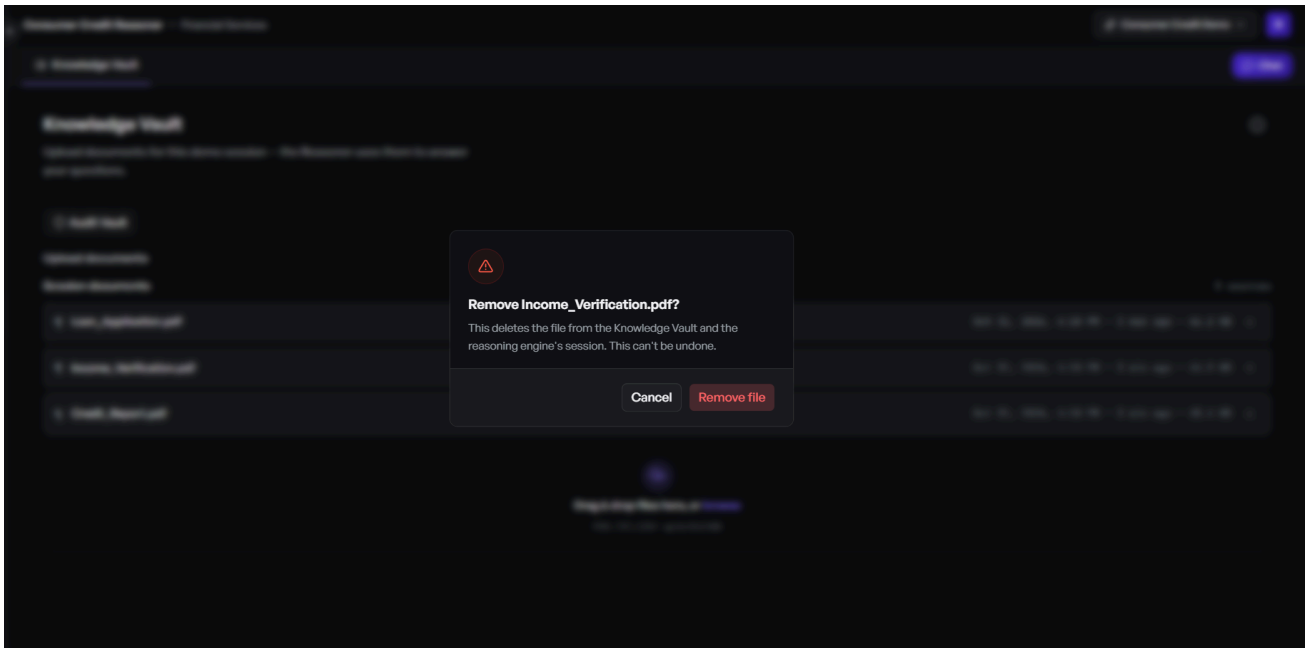
Blyoum identifies the income discrepancy ($85,000 stated vs. $60,000 verified), the $341.67 monthly payroll garnishment, and the DTI mismatch (38% vs. 22%).

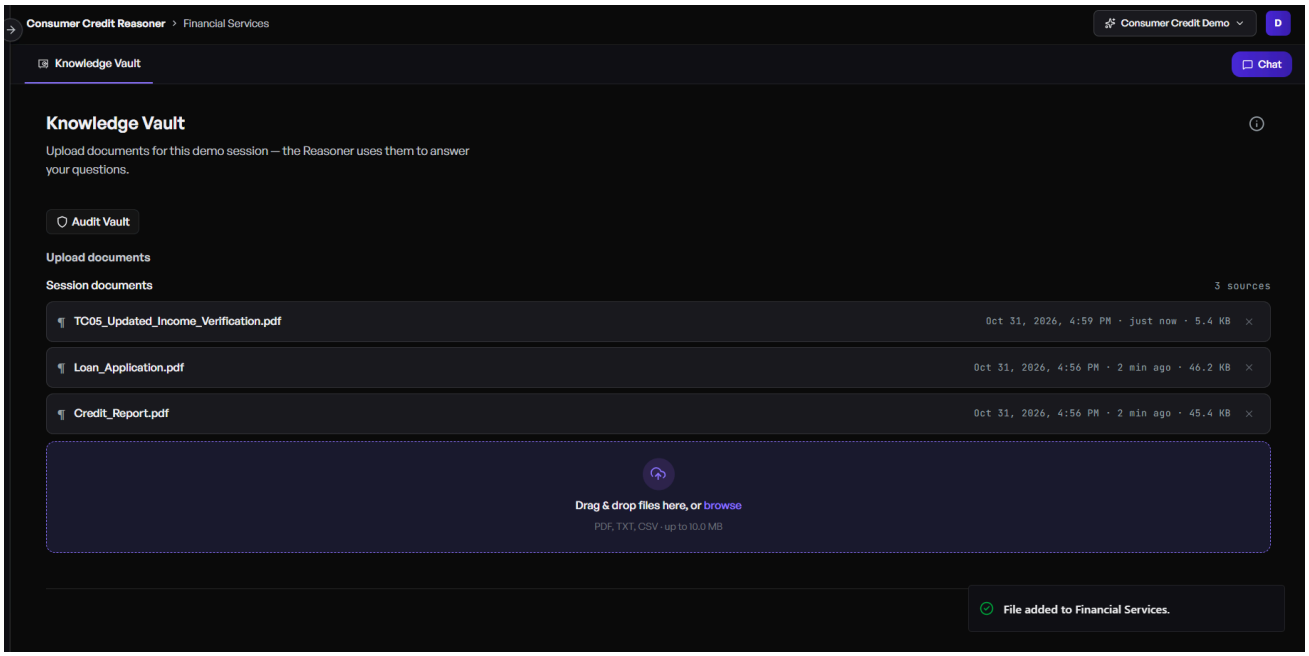


Round 2 – Re-Evaluation

1. Download the updated `Income_Verification.pdf` from:

2. In the same demo session, upload the new `Income_Verification.pdf`, replacing the previous file.




Consumer Credit Reasoner › Financial Services
Consumer Credit Demo
D
Knowledge Vault
Chat
Knowledge Vault
Upload documents for this demo session — the Reasoner uses them to answer your questions.
Audit Vault
Upload documents
Session documents
3 sources
TC05_Updated_Income_Verification.pdf
Oct 31, 2026, 4:59 PM · just now · 5.4 KB
Loan_Application.pdf
Oct 31, 2026, 4:56 PM · 2 min ago · 46.2 KB
Credit_Report.pdf
Oct 31, 2026, 4:56 PM · 2 min ago · 45.4 KB
Drag & drop files here, or browse
PDF, TXT, CSV · up to 10.0 MB
File added to Financial Services.

3. Re-submit the following query:

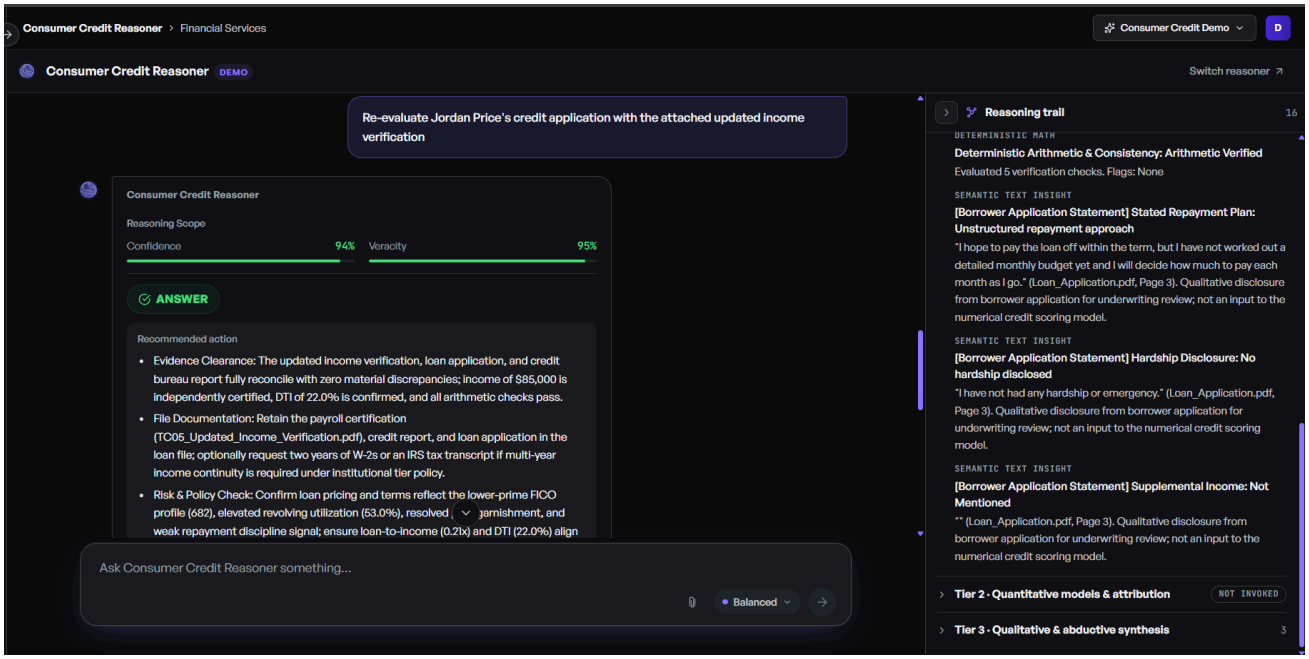
```
Re-evaluate Jordan Price's credit application with the attached updated income verification
```

Expected Result: ANSWER

Blyoum verifies the additional income and garnishment information and updates the assessment.

The user will see:

- Verified Annual Income: $85,000.
- Monthly Garnishment: $0.
- Verified DTI: 22%.
- Veracity: high
- Calibrated Credit Score: 727.20.
- TreeSHAP Factor Waterfall: Released.



Sample Queries

Sugar Trade Finance Sample Queries

Supporting Documents for these test cases folder: SUGAR POC TEST CASES

Test Case 1 - The Clean Deal

Expected Decision: ANSWER

Sample Query

Conduct a full end-to-end verification of this sugar trade. Extract all core commercial terms (price, quantity, Incoterm, routing) across the FCO, Contract, and Invoice. Ensure all parameters match without contradiction and validate the pricing against the benchmark.

Example Axiom to Add

(None required. The system will rely on standard UCP 600 and Incoterm logic).

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests whether the Reasoner can perform a complete end-to-end review across the available transaction documents and successfully output an ANSWER for a flawless deal.

Test Case 2 - Red Sea Geopolitical Crisis

Expected Decision: ABSTAIN

Sample Query

Verify this deal package and execute a geopolitical risk assessment. The shipment window is tight. Cross-reference the current macro environment to determine if the logistics plan is viable.

Example Axiom to Add

If the macro report indicates Red Sea/Middle East shipping delays, the buyer's supply chain is fundamentally broken. You MUST output a [CRITICAL] flag stating 'Route unviable due to Red Sea crisis'. Do not consider Incoterms or missing banking details as mitigating factors; this is a fatal flaw.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf, Q4_Freight_Risk_Middle_East.pdf

Purpose:

Tests the Reasoner's ability to assess external macroeconomic risks by analyzing a geopolitical report alongside the standard trade documents. It proves the system can evaluate complex supply chain disruptions, showing that even with geopolitical delays

Test Case 3 - Gross Over-Invoicing

Expected Decision: ABSTAIN

Sample Query

Audit the commercial invoice against the core contract parameters. Run a strict arithmetic verification to ensure the seller is not attempting to over-invoice or manipulate the total exposure.

Example Axiom to Add

The stated invoice total must not deviate from the calculated (Quantity * Unit Price) by more than 2%. Any deviation >2% must halt the deal and generate a fraud risk flag.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests the system's independent Math Verifier logic and missing-data handling. It proves that if the invoice omits the exact shipped quantity, the Reasoner will not blindly guess the math; instead, it will safely halt and Abstain

Test Case 4 - Missing LC Bank

Expected Decision: ASK

Sample Query

Run a banking and compliance review on this trade. Verify that the payment instrument is fully defined and that the counterparty bank is a verifiable Tier-1 institution.

Example Axiom to Add

A Documentary Letter of Credit (DLC) must explicitly state the Issuing Bank. Any LC missing the issuing bank name must be flagged as incomplete compliance.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests the system's strict compliance parsing. It proves that omitting a critical counterparty detail (the DLC Issuing Bank) results in a [HIGH] flag, prompting the Reasoner to ASK for the missing data before proceeding.

Test Case 5 - Ambiguous Port

Expected Decision: ASK

Sample Query

Review the logistics and Incoterms for this transaction. Determine if the shipping route is fully defined and if the freight cost allocation is clear.

Example Axiom to Add

For all CIF (Cost, Insurance, Freight) transactions, a specific named destination port must be stated. "Any Safe Port" is unacceptable and must be flagged for clarification.

Note: *Without adding the example axiom to the system, the test case may return an **ANSWER** decision instead of the expected **ASK** decision.*

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests the system's understanding of Incoterm rules. Under CIF terms, freight costs are strictly tied to the destination; the system will catch the ambiguous "Any Safe Port" language and ASK for clarification to calculate exposure.

Test Case 6 - Immaterial Math Rounding

Expected Decision: ANSWER

Sample Query

Verify the deal mathematics. Check if the commercial invoice total aligns with the contracted unit price and quantity.

Example Axiom to Add

If a math discrepancy exists but is less than $100 total, flag it as an immaterial rounding artifact and do not halt the deal.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests the nuance of the Math Verifier. It proves the Reasoner is sophisticated enough to catch a minor discrepancy (e.g., bank fees), correctly classify it as immaterial, and still provide an ANSWER rather than falsely blocking a legitimate deal.

Test Case 7 - Cascading Math & Chronology Failure

Expected Decision: ABSTAIN

Sample Query

Audit the document sequencing and timelines. Ensure that the commercial framework was valid at the time of contract signature, and run a strict arithmetic verification on the commercial invoice to ensure the seller is not attempting to manipulate the total exposure.

Example Axiom to Add

1. The formal Contract signature date must logically precede or equal the FCO (Full Corporate Offer) expiry date. If the FCO expired before signing, you MUST flag it as a lapsed offer.
2. The stated invoice total must not deviate from the calculated (Quantity * Unit Price) by more than 2%. Any deviation >2% must halt the deal and generate a [CRITICAL] fraud risk flag.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Purpose:

Tests the system's ability to catch multiple overlapping failures. It proves the Reasoner can identify when a contract is signed out of chronological order (expired FCO) while simultaneously catching a gross over-invoicing attempt on the math, resulting in a firm ABSTAIN.

Test Case 8 - Chronology & Valuation Collapse (Geopolitical)

Expected Decision: ABSTAIN

Sample Query

Evaluate the veracity of this deal against prevailing macroeconomic conditions and verify the document chronology. Specifically check if the buyer's agreed unit price is defensive given the recent trade policies documented in the vault. If the price is undefensive due to global supply gluts, explicitly issue an ABSTAIN decision.

Example Axiom to Add

MANDATORY GEOPOLITICAL RULE: If the macro report indicates a collapse in Thai sugar syrup export pricing, this creates a massive oversupply. If the deal's unit price is above $450/MT, you MUST output a [CRITICAL] flag explicitly stating the buyer is severely overpaying in a flooded market, creating a massive risk of default. This must halt the deal.

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf, Q4_Market_Intelligence_Thai_Sugar_Syrup_Exports.pdf

Purpose:

Tests the Reasoner's ability to act as a highly sophisticated risk analyst. It proves the system can read a macroeconomic report, realize the global market price has crashed, look at the buyer's locked-in contract price, and ABSTAIN because the buyer is taking on extreme default risk by overpaying.

Test Case 9 - Thai - Indo - Contagion

Expected Decision 1 : ASK

(Note: If uploaded without the optional Q4 report, the clean commercial documents evaluate as ANSWER)

Sample Query

Evaluate this Thailand-Indonesia sugar deal and check for any structural or market risks.

Example Axiom to Add

(None required.)

Files to Upload: 01_FCO_Siam_Crystal_Sugar.pdf, 02_ICPO_Nusantara_Sugar.pdf, 03_Commercial_Invoice.pdf, 04_Draft_DLC_MT700.pdf, Q4_Macro_Market_Report.pdf

Test Case 10 - The Clean Asia Deal

Expected Decision 1 : ANSWER

(Note: If uploaded without the optional Q4 report, the clean commercial documents evaluate as ANSWER)

Sample Query

Conduct a full end-to-end veracity audit of this Thailand-Indonesia sugar trade. Extract all core commercial terms across the FCO, ICPO, Sales Contract, and Commercial Invoice. Verify that pricing, quantities, Incoterms, and banking details reconcile without contradiction, and evaluate the transaction against prevailing benchmark standards.

Example Axiom to Add

(None required.)

Files to Upload: 01_Full_Corporate_Offer_FCO.pdf, 02_Irrevocable_Corporate_Purchase_Order_ICPO.pdf, 03_Draft_Sales_Contract.pdf, 04_Commercial_Invoice.pdf

Consumer Credit Sample Queries

Sample test case PDF folder: 20261031V3 - consumer credit

Application / Borrower / Scenario	Documents to upload	Sample query (Old)	Natural Query (New/ Recommended)	Expected decision	Score Drivers & Sensitivity Graphs Visibility
1. APP-2026-001 Elena Brooks *Super Prime / Prime Low Risk*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Verify the consistency of Elena Brooks's reported income and debt obligations across her loan application, paystub, and credit report.”	“Verify Elena Brooks's loan application and supporting documentation.”	**ANSWER** High Veracity, low debt, clean owner-occupied mortgage profile.	**No**
2. APP-2026-002 Marcus Reed *Near-Prime Debt Consolidation*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Assess Marcus Reed's proposed debt consolidation using the application, bureau summary and payroll evidence. Verify DTI and describe six-feature model risk signals without deciding the loan.”	“Assess Marcus Reed's credit risk profile and primary score drivers.”	**ANSWER** Consistent documentation; DTI manageable after consolidation.	**Yes**
3. APP-2026-003 Dana Mitchell *Subprime High Debt Burden*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Validate Dana Mitchell's high-debt application. Reconcile gross income, 48.5% DTI, requested principal and credit documentation. Explain verified adverse risk factors without approving or declining the loan.”	“Assess Dana Mitchell's loan application and explain what is driving her risk score.”	**ANSWER** High utilization and 7 debt tradelines verified; adverse risk factors explained.	**Yes**
4. APP-2026-004 Avery Chen *Young Borrower / Moderate Credit*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Review Avery Chen’s application for a major purchase. Confirm income, short employment tenure, housing and debt profile are consistent. Provide an evidence-based explanation only.”	“Review Avery Chen's credit application for consistency.”	**ANSWER** Short employment tenure verified; low revolving debt.	**Yes**
5. APP-2026-005 Jordan Price *Mathematical Income Discrepancy*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Reconcile Jordan Price’s claimed $85,000 income and 22% DTI against the payroll statement showing $60,000 annualized and a 38% recalculated DTI. Identify what must be corrected before using financial inputs.”	“Confirm Jordan Price's application is valid.”	**ASK** Application claims $85k; paystub proves $60k. Recalculated DTI requires borrower clarification.	**Yes**

Application / Borrower / Scenario	Documents to upload	Sample query (Old)	Natural Query (New/ Recommended)	Expected decision	Score Drivers & Sensitivity Graphs Visibility
6. APP-2026-006 **Taylor Morgan** *Missing Proof of Income*	Loan_Application.pdf Credit_Report.pdf *(Only 2 documents)*	"Validate Taylor Morgan's stated income and requested loan using the uploaded evidence. Identify missing income documents and state what verification is required."	"Validate Taylor Morgan's consumer credit application using the available supporting documents"	**ASK** Income Verification missing; system requests a W-2, paystub or tax transcript.	**Yes**
7. APP-2026-007 **Riley Carter** *Unverifiable / Conflicting Employer*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	"Verify Riley Carter's claimed five-year employment at Apex Logistics against the independently issued temporary-staffing payroll record. Identify the uncertainty and required employer confirmation."	"Verify Riley Carter's employment and income documentation."	**ASK** Staffing-agency payroll contradicts the stated 5-year direct tenure.	**No**
8. APP-2026-008 **Morgan Hayes** *Pending Financial Record Reconciliation*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf Financial_Record_Integrity_Notice.pdf	"Audit Morgan Hayes's loan documentation. Reconcile annual and monthly gross income, DTI, the requested principal, and the signed funding authorization against payroll and the subsequent financial-records integrity notice. Decide whether a reliable evidence-grounded credit-risk explanation can be released. Do not approve or decline the loan."	"Can we certify Morgan Hayes's credit file for evaluation?"	**ABSTAIN** Critical unresolved financial record discrepancies detected. Income, DTI, and requested loan principal require reconciliation and re-certification before evaluation can proceed.	**No**
9. APP-2026-009 **Isabella Flores** *Pending Payroll Adjustment Notice*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf Payroll_Adjustment_Notice.pdf	"Reconcile Isabella Flores's existing payroll record with the subsequently issued payroll adjustment and potential garnishment. Determine whether ongoing earnings and debt service are fully verified."	"Confirm Isabella Flores's qualifying income is verified for underwriting."	**ASK** Pending payroll garnishment affects net debt-service capacity.	**Yes**

Application / Borrower / Scenario	Documents to upload	Sample query (Old)	Natural Query (New/ Recommended)	Expected decision	Score Drivers & Sensitivity Graphs Visibility
10. APP-2026-010 **Alex Rivera** *Severe Payee / Identity Mismatch*	Loan_Application.pdf Credit_Report.pdf Independent_Payer_Confirmation.pdf	“Investigate whether the tax transcript submitted with Alex Rivera’s application actually belongs to the borrower. Resolve conflicting payee identities and taxpayer suffixes before any income explanation.”	“Validate Alex Rivera's loan application and supporting documents.”	**ABSTAIN** Taxpayer identification number / name discrepancy detected.	**No**
11. APP-2026-011 **Samira Johnson** *Bureau File Integrity Corruption / Dispute*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf Bureau_File_Integrity_Amendment.pdf	“Evaluate Samira Johnson's credit file for tradeline ownership disputes and determine if a defensible credit evaluation can be released.”	“Can we release a certified credit evaluation for Samira Johnson?”	**ABSTAIN** Disputed tradelines and the bureau file amendment undermine credit-scoring integrity.	**No**
12. APP-2026-012 **Olivia Grant** *Grossly Implausible Unsecured Loan Request*	Loan_Application.pdf Credit_Report.pdf Income_Verification.pdf	“Assess whether Olivia Grant’s requested $180,000 unsecured loan against $22,000 annual income and 95% DTI falls outside the demonstration credit-capacity safety boundary. Do not make an approval or decline decision.”	“Assess whether Olivia Grant's loan request complies with our underwriting policy boundaries.”	**ABSTAIN** Requested principal is >8× annual income and DTI >90%; exceeds capacity risk guardrails.	**No**
13. APP-2026-013 **Daniel Whitaker** *Layered Application Misrepresentation (Altered Payroll, Concealed Liabilities, Credit Stacking)*	Loan_Application.pdf Income_Verification.pdf Credit_Report.pdf	“Review Daniel Whitaker's loan application package and explain his credit risk profile, including the key factors behind his demonstration credit score.”	“Confirm Daniel Whitaker's application is verified for credit evaluation.”	**ABSTAIN** Altered payroll figures, undisclosed liabilities, and understated DTI (~88%) undermine credit-file reliability. Conflicting employment and housing records prevent a defensible credit score.	**No**