# 📑 SHAP Documentation Report – Template

## 1. Overview of Prediction

Prediction Result: [Approved / Rejected / Flagged]

Customer/Case ID: [Internal reference only]

Prediction Probability: [0.00 – 1.00 value, with business threshold applied]

## 2. Feature Contributions (SHAP Values)

|  |  |  |
| --- | --- | --- |
| Feature | SHAP Value | Impact on Prediction |
| [Feature A] | [+/-0.xx] | Positive/Negative |
| [Feature B] | [+/-0.xx] | Positive/Negative |
| [Feature C] | [+/-0.xx] | Positive/Negative |

## 3. Plain Language Explanation

[Business-friendly explanation of which features had the largest influence on the decision.]

## 4. Compliance Notes

- Aligned with [regulator/standard e.g., MAS FEAT, FCA, EU AI Act]

- Stored in Explainability Register

- Reviewed by Compliance (✔)

## 📌 Explanatory Note: Understanding SHAP Values

SHAP values explain how much each input (feature) contributed to a model’s prediction compared to a baseline.  
  
• Baseline Prediction: The model’s average prediction if no feature information is known.  
• Feature Contribution (SHAP Value): The amount a feature shifts the prediction away from the baseline.  
 - Positive SHAP value → increases likelihood of the predicted outcome.  
 - Negative SHAP value → decreases likelihood of the predicted outcome.  
• Model & Dataset Specific: SHAP values depend on the model design, dataset, and data transformations (e.g., scaling). They are not fixed thresholds across industries.  
  
Example:  
Baseline loan approval probability = 0.55 (55%)  
Final model prediction = 0.80 (80%)  
Contributions:  
 - Income (+0.25)  
 - Stable Employment (+0.10)  
 - High Debt Ratio (–0.05)  
 - Credit Score (–0.05)  
  
0.55 + 0.25 + 0.10 – 0.05 – 0.05 = 0.80 (final prediction)  
  
This ensures regulators, auditors, and business teams understand which features drove the decision and whether it aligns with fairness, transparency, and compliance.

## 5. Next Review

Scheduled model explainability review: [DD/MM/YYYY]

Reviewer: [Role / Department]