An **Asset Liability Management (ALM) System** typically involves managing financial risks that arise due to mismatches between assets and liabilities. While the exact database schema can vary depending on the institution (e.g., bank, insurance company), here's a general overview of the **core database tables** commonly found in such systems:

Core Tables in an ALM System

1. Assets Table

Stores details about financial assets.

Column Name	Data Type	Description	
asset_id	INT / UUID	Unique identifier	
asset_type	VARCHAR	Type (e.g., bond, loan, equity)	
asset_value	DECIMAL	Current value	
maturity_date	DATE	Date of maturity	
interest_rate	t_rate DECIMAL Applicable interest rate		
currency	VARCHAR	Currency of the asset	
acquisition_date	DATE	Date asset was acquired	

2. Liabilities Table

Stores details about financial liabilities.

Column Name	Data Type	Description
liability_id	INT / UUID	Unique identifier
liability_type	VARCHAR	Type (e.g., deposit, loan)
liability_value	DECIMAL	Current value
maturity_date	DATE	Date of maturity
interest_rate	DECIMAL	Applicable interest rate
currency	VARCHAR	Currency of the liability
issue_date	DATE	Date liability was issued

3. Cash Flow Table

Tracks expected cash flows from assets and liabilities.

Column Name	Data Type	Description
flow_id	INT / UUID	Unique identifier
source_type	VARCHAR	'Asset' or 'Liability'

Column Name	Data Type	Description	
source_id	INT / UUID	Foreign key to asset/liability	
flow_date	DATE	Date of cash flow	
amount	DECIMAL	Amount of cash flow	
currency	VARCHAR	Currency of the cash flow	

4. Interest Rate Table

Stores historical and projected interest rates.

Column Name	Data Type	Description
rate_id	INT / UUID	Unique identifier
rate_type	VARCHAR	Type (e.g., LIBOR, repo rate)
rate_value	DECIMAL	Interest rate value
effective_date	DATE	Date the rate is effective

5. Currency Exchange Table

Tracks exchange rates for multi-currency ALM.

Column Name	Data Type	Description	
exchange_id	INT / UUID	Unique identifier	
from_currency	VARCHAR	Source currency	
to_currency	VARCHAR	Target currency	
rate	DECIMAL	Exchange rate	
date	DATE	Date of the rate	

6. Scenario Table

Used for stress testing and simulations.

Column Name	Data Type	Description
scenario_id	INT / UUID	Unique identifier
name	VARCHAR	Scenario name
description	TEXT	Details of the scenario
impact_factor	DECIMAL	Multiplier or adjustment factor