

Pausing mechanism

- Pausing is applied to:
 - Forges' functions, which could be from the most general (all forges), to the specific yield contract (with a forged, underlyingAsset, and expiry)
 - Markets, which could be from the most general (all markets), to the specific market
 - LiquidityMining contracts
- There will be 3 states:
 - Normal: everything works per normal
 - Paused:
 - For an affected yield contract: all functions will stop working, until unpaused
 - For an affected market: all functions will stop working, until unpaused
 - Emergency mode (a.k.a locked)
 - For an affected yield contract: users can only call a function to withdraw **their reasonable fund left** in the contract
 - For an affected market: users can only call a function to withdraw **their reasonable fund left** in the contract
- There will be a **PausingManager** contract to manage the pausing mechanism
 - In the PausingManager, there will be 2 addresses for two contracts:
 - **ForgeEmergencyHandler**: takes over the logic for how users could withdraw their fund from a forge, if its in emergency
 - **MarketEmergencyHandler**: takes over the logic for how users could withdraw their fund from a market, if its in emergency
 - **LiquidityMiningHandler**: takes over the logic for how users could withdraw their fund from a liquidity mining contract, if its in emergency

- These 3 addresses could be changed by the Governance Multisig (meaning we could change the strategy for distributing the funds), with a timelock of 7 days to take into effect.
- Initially, we will use multisig accounts
- Before doing any action, the router, the forge, market and liqMining contracts will check the PausingManager if the action is:
 - Normal: just do it
 - Paused: just revert
 - For XYT and OT, the transfer function will also revert
 - Emergency state:
 - The forge/market/liqMining contract will approve the respective EmergencyHandler to withdraw all the funds from the respective yield contract/market.
 - From now on, the users can ping the EmergencyHandler to get back their funds.
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- In the **PausingManager**:
 - There are pausing admins, who could trigger "paused" state for specific market/yield contract
 - Only the Governance role could unpause or trigger the emergency state for specific market/yield contract
 - The Governance role could set/unset the pausing admins
 - The Governance role could change the ForgeEmergencyHandler, MarketEmergencyHandler and LiqMiningEmergencyHandler addresses, which would have a 7 day timelock
 - The Governance role could turn off the feature to pause/put into emergency **forever**
 - The Governance role could lock the addresses of **ForgeEmergencyHandler** and **MarketEmergencyHandler**, and

LiqMiningEmergencyHandler