

ICMA / ISDA REPO WORKSHOP

16 March 2020 – Modelling of Repo Lifecycle Events



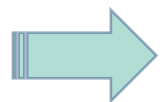
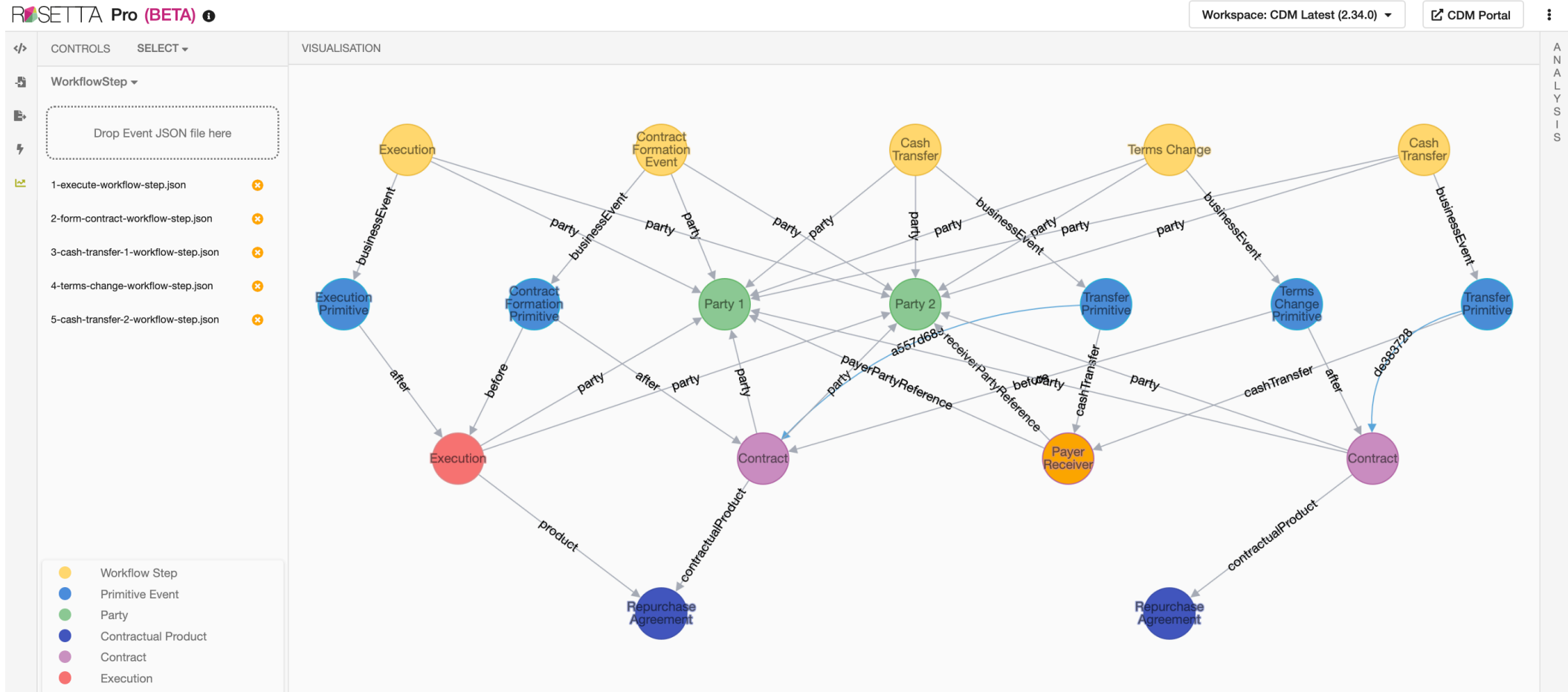
1. “Show and Tell” of latest CDM changes for Repo Lifecycle Events

- a. How the initial / final settlements are handled in CDM
- b. Example #1: term repo
- c. Deep-dive: interest rate representation as price
- d. Example #2: open repo

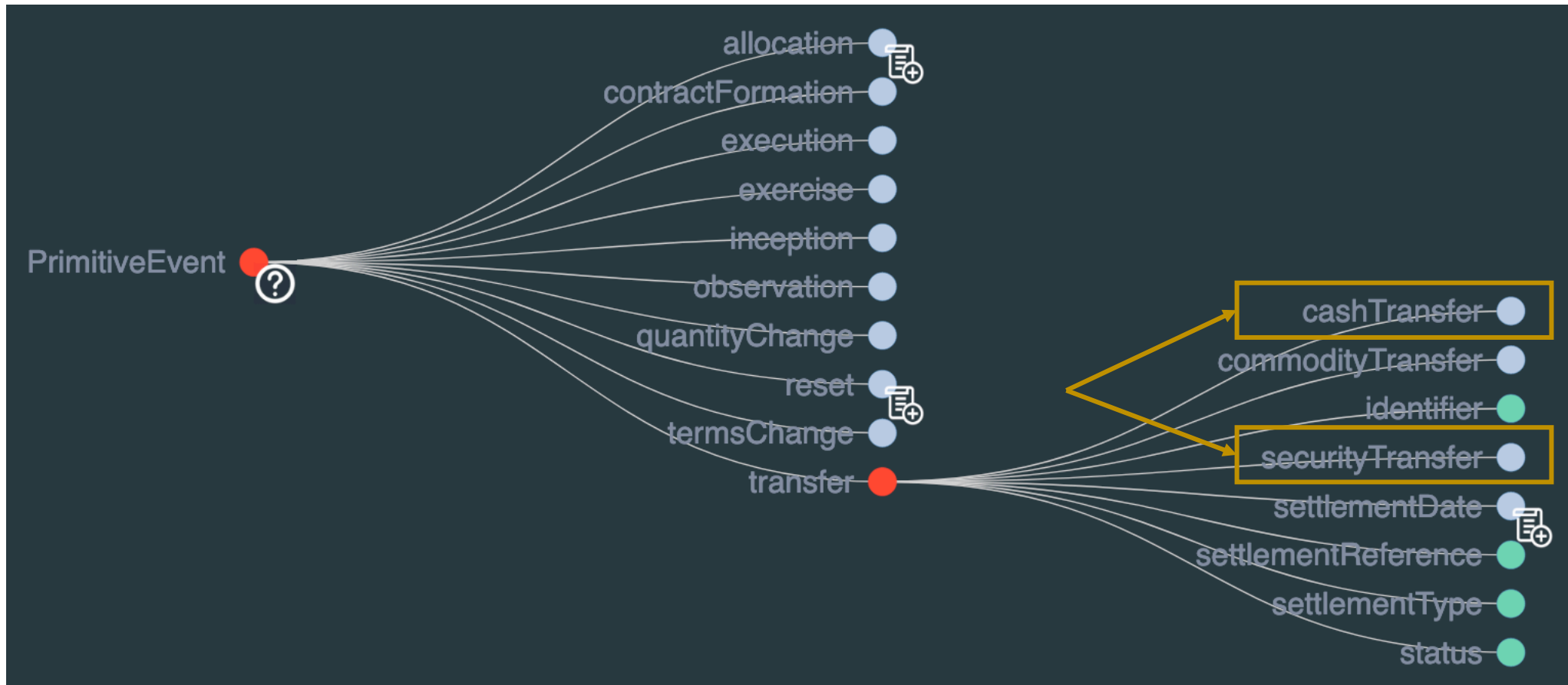
2. Next steps

- a. Price refactoring and re-rate implementation
- b. Further next steps TBD

- We focused on open repo and modelled some of the lifecycle events: interest payment, re-rate...

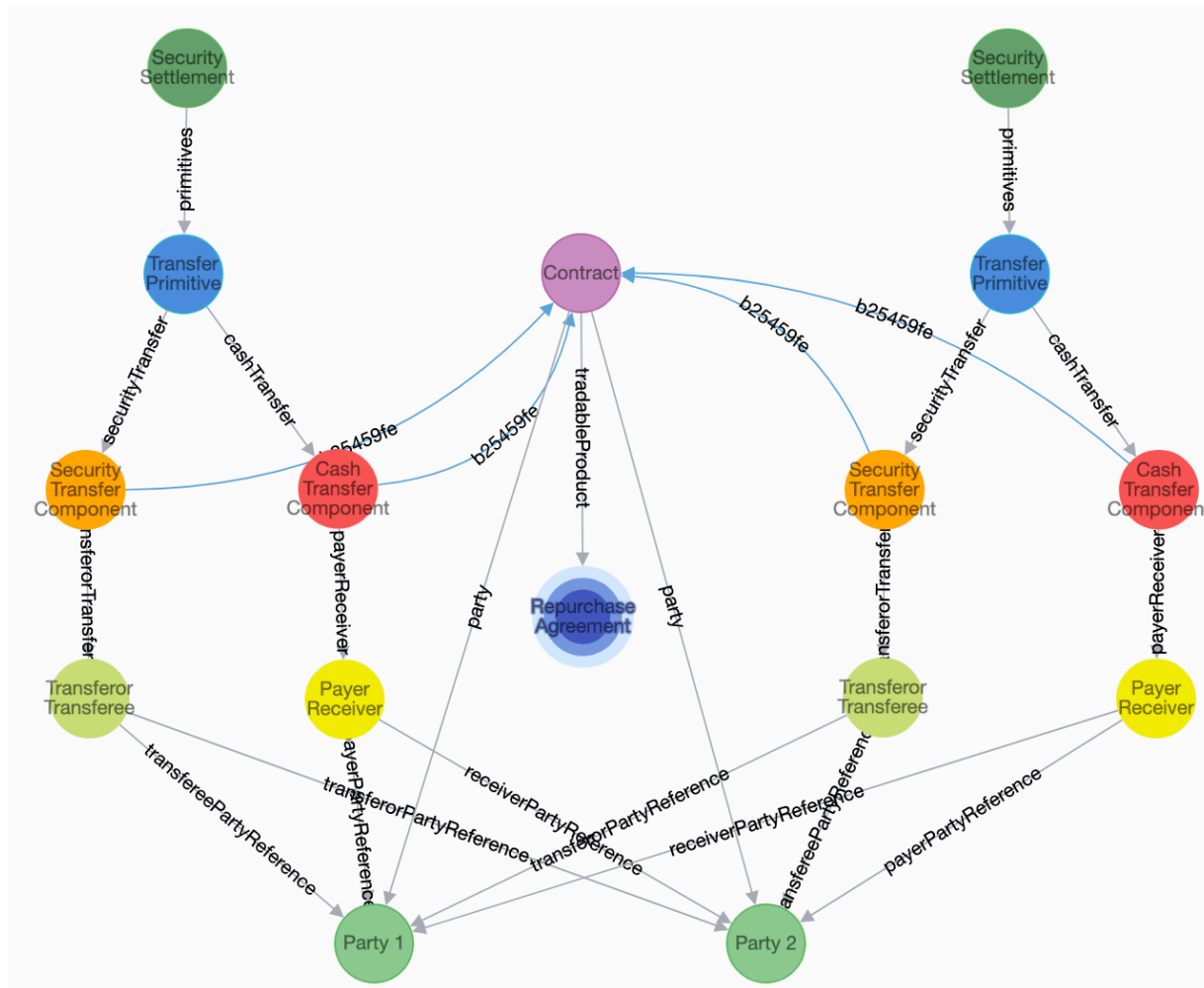


But what about the initial and final settlements?



- The same “Transfer” primitive event used for interest payments can represent any type of settlement
- A single primitive can include both a “security” and a “cash” transfer to represent a DvP scenario

WORKING EXAMPLE #1: SIMPLE TERM REPO



Collapse All Expand All

- ✓ CashTransferComponent
 - > transferCalculation
 - cashflowType
 - PRINCIPAL_EXCHANGE

1292748.3
USD
- > payerReceiver

Collapse All Expand All

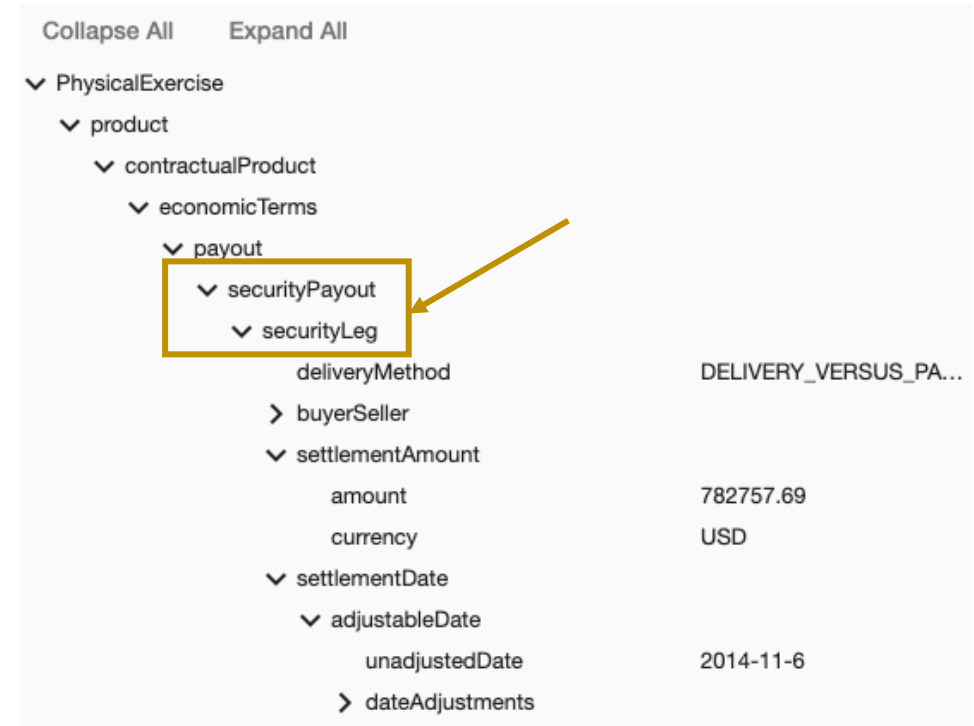
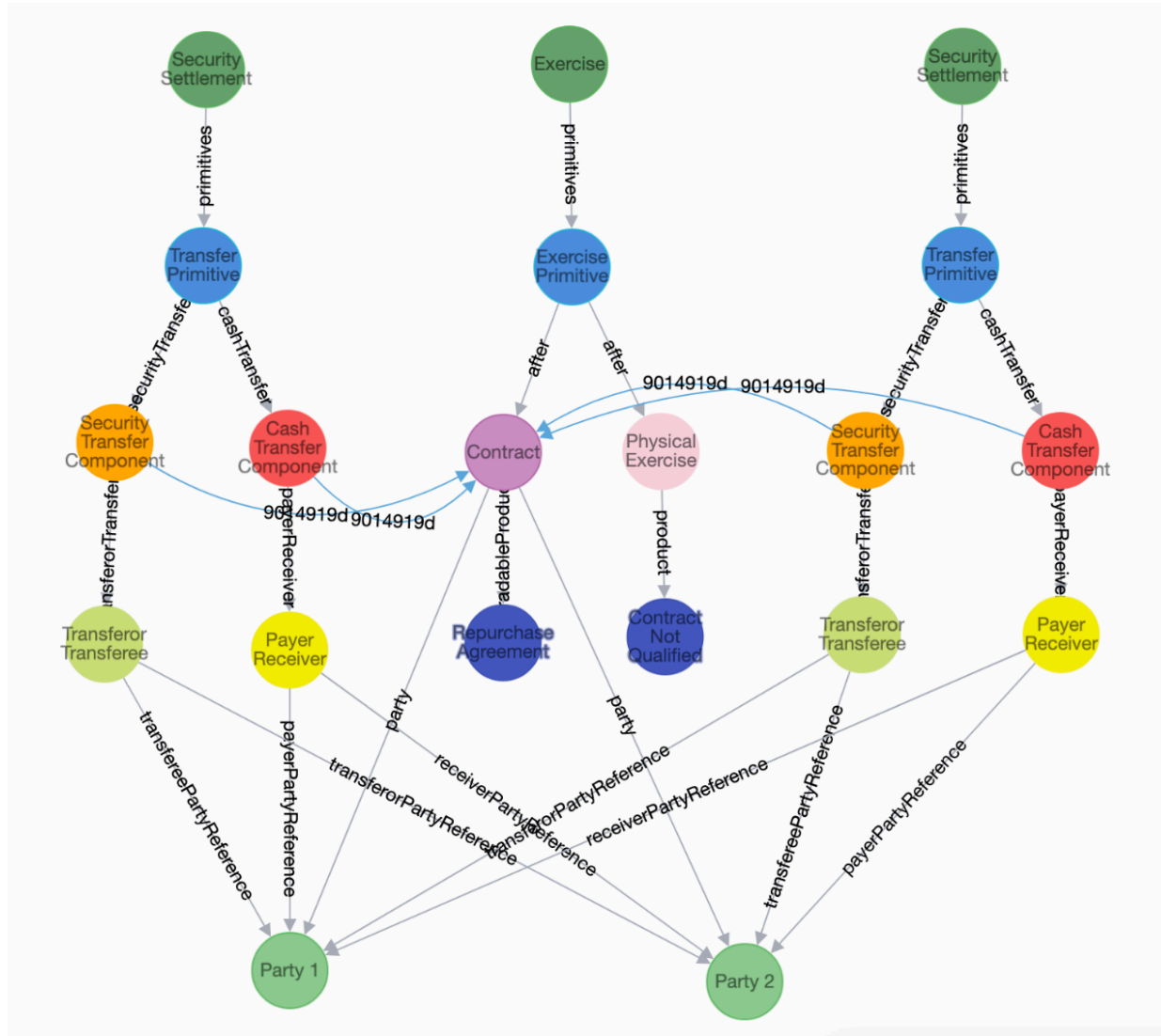
- ✓ ContractualProduct
 - ✓ economicTerms
 - ✓ payout
 - > interestRatePayout
 - ✓ securityPayout
 - repoDuration
 - TERM
 - > initialMargin
 - ✓ securityLeg
 - deliveryMethod
 - DELIVERY_VERSUS_PA...
 - > buyerSeller
 - ✓ settlementAmount
 - amount
 - 1292748.3
 - currency
 - USD

• We can generate initial and final cash + security transfer components, in line with the product definition

Collapse All Expand All

▼ Contract	
> contractIdentifier	
documentation	
> party	
> party	
▼ tradableProduct	
▼ priceNotation	
▼ price	
▼ fixedInterestRate	
rate	-0.75
▼ product	
▼ contractualProduct	
> economicTerms	
▼ productIdentification	
productQualifier	RepurchaseAgreement
▼ quantityNotation	
▼ assetIdentifier	
currency	USD
▼ quantity	
amount	1292748.3
> tradeDate	

- The price (interest rate) has now been extracted out of the product definition – same as the quantity
- TO-DO:
 - Represent the re-rate event as a “PriceChange” rather than “TermsChange” primitive
 - Position haircut as part of the price



- The call option needs to be exercise first
- TO-DO:
 - Currently: exercises into a “product” – Should generate direct flows...
 - ...Referenced by final DvP transfer

- Implement those lifecycle events as CDM functions – Currently those samples are “manufactured”
- Include those functions as part of the continuous CDM integration-testing framework
- Develop the “PriceChange” primitive, and test it in the open repo re-rate case
- More work needed on the Exercise primitive and the cash / security flow generation

AS BEFORE WE NEED:

- To start working with a few firms who can provide sample data!
- Resourcing: proper development takes time and effort, and needs to be prioritised accordingly