

# Would Like to Use a Model to Project Specified Pools Pay-ups?

**PoolKinetics (PoolK)** is powered by OAS Subroutine and LoanDynamics Model (LDM) with a modern delivery technology. It can analyze hundreds or even thousands specified pools featuring various degrees of prepayment protection and priced at various pay-up levels. LDM quantifies those prepayment deterrents (low loan size, high LTV, low FICO, slow geography, newness) and PoolK derives valuation pay-ups over TBAs and numerous risk measures.

**PoolKinetics (PoolK)** is our new modular offering on the Kinetics platform.

## Analytical Process

- A user creates a flat file of TBAs characteristics and another file of specified pools.
- PoolK will match pools with same-coupon TBAs. It will analyze them together to derive...
  - **Theoretical pay-up:** Same-OAS difference between pool's price and TBA price.
  - **Practical (lower) pay-up:** Same-OAS difference between pool's price and TBA price assuming that the pool is held for a limited holding period and sold back to the market at a TBA price (i.e. with a loss of potential pay-up).

## Greeks, Risk-Neutrality, Portfolio Aggregation, Cash Flow Files and Charts

- Much as with other OAS-based analyses, PoolK computes and reports multiple Greeks including effective duration and convexity.
- One can use LDM in its risk-neutral form thereby accounting for prepay-model risk.
- Automatic portfolio aggregation of all analytical measures.
- Projected cash flow outputs are available, with flexible charts and a flat-file storage.

Kinetics

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POOLKINETICS

Analysis Editor - PoolK Demo Analysis

Inputs Calculations Results

Value and Risk  Summary  Pool-Level  \$

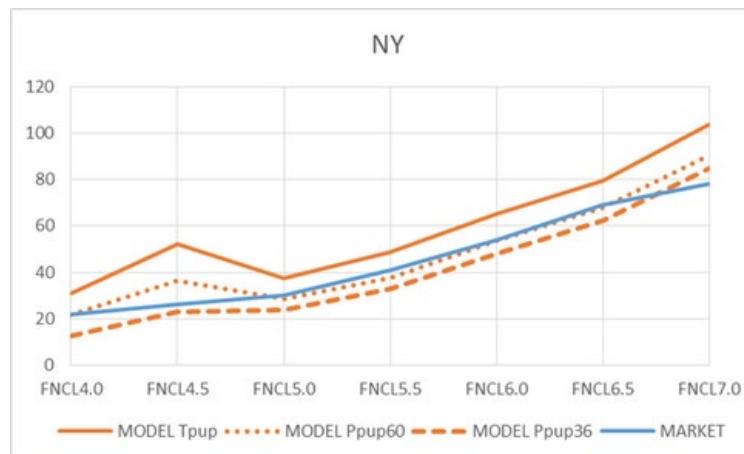
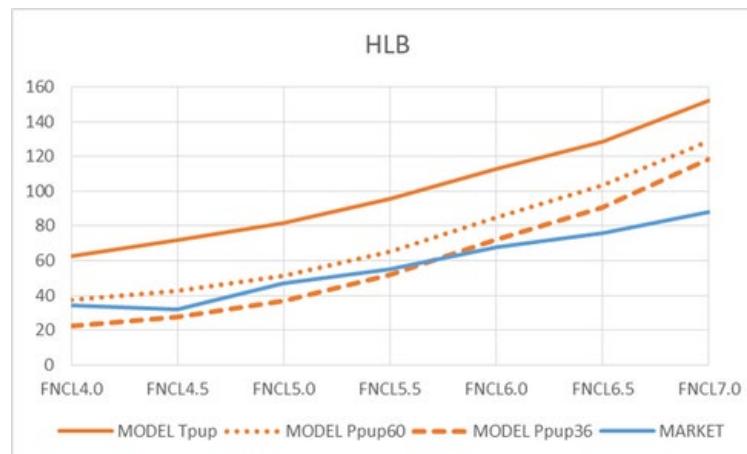
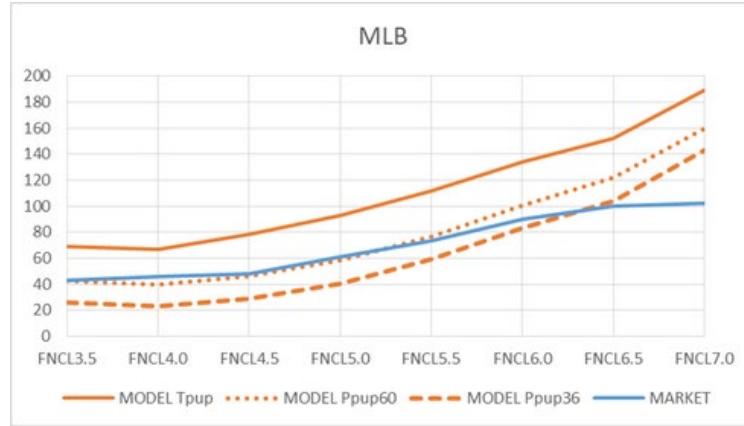
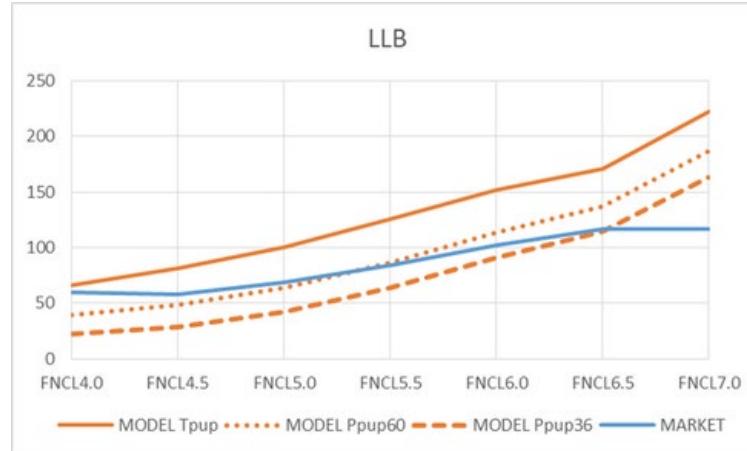
Records 1 - 8 of 8

Pool ID	Current Balance	Price	OAS	OAS Duration	Yield (FC)	Spread (FC)	WAL (FC)	CPR (FC)	Option Cost	Effective Duration	Effective Convexity	Practical Payup	Theoretical Payup
FNCL 5.0 LLB	\$1,000,000.00	100.9280	19	5.85	4.76	58.33	7.76	9.66	39.49	5.63	-0.85	1.44	2.41
FNCL 5.0 MLB	\$1,000,000.00	100.7607	19	5.79	4.81	63.35	7.81	9.57	44.51	5.41	-1.09	1.33	2.23
FNCL 5.0 HLB	\$1,000,000.00	100.4913	19	5.73	4.87	68.89	7.87	9.47	50.05	5.20	-1.31	1.17	1.96
FNCL 5.0 175K	\$1,000,000.00	100.2126	19	5.68	4.92	73.77	7.93	9.37	54.92	5.04	-1.48	1.01	1.67
FNCL 5.0 200K	\$1,000,000.00	100.0036	19	5.64	4.95	77.18	7.98	9.29	58.34	4.94	-1.58	0.88	1.46
FNCL 5.0 225K	\$1,000,000.00	99.8171	19	5.61	4.99	80.51	8.03	9.20	61.67	4.86	-1.67	0.76	1.27
FNCL 5.0 250K	\$1,000,000.00	99.6403	19	5.59	5.02	83.63	8.09	9.11	64.79	4.80	-1.74	0.65	1.10
FNCL 5.0 NY	\$1,000,000.00	99.0727	19	6.40	5.09	86.62	10.16	6.29	67.78	5.45	-1.76	0.47	0.51
<b>Total</b>	<b>\$8,000,000.00</b>	<b>100.1158</b>	<b>19</b>	<b>5.79</b>	<b>4.93</b>	<b>74.56</b>	<b>8.20</b>	<b>9.00</b>	<b>55.72</b>	<b>5.17</b>	<b>-1.43</b>	<b>0.97</b>	<b>1.58</b>

## Practical Pay-up Method Approximates Market Levels

- Theoretical pay-ups are good-to-know results typically exceeding market's levels.
- Practical pay-ups computed for a 36 to 60 months holding-period assumption replicate market levels reasonably well.
- As one would expect, prepayment protection features lead to longer effective durations and lesser negative convexity in comparison to the coupon-matching TBA.

Pay-up (1/32nds) examples from the use of PoolK v1.11 powered by OAS 9.2, LDM 3.1 (as of 8/2/2024)



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