



# MORTGAGE PIPELINE HEDGING 201

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Your Trusted Capital Markets Partner

## MORTGAGE PIPELINE HEDGING 201

### BACKGROUND AND RECOMMENDED PRIOR READING

The previous whitepaper in this series, [Mortgage Pipeline Hedging 101](#), covered the fundamentals of pipeline hedging, explaining the methods used to mitigate interest rate risk throughout the mortgage loan origination cycle as market prices and rates fluctuate. Examples and a detailed overview of the overall hedging process were provided, highlighting benefits such as improved execution, enhanced salability, reduced counterparty risk, increased competitiveness, better operational control, and efficiencies gained through scalability.

Mortgage professionals may also be interested in reading [Introduction to Mandatory Loan Sale Delivery](#) or [Pipeline Pull-through Rate Analysis Explained](#) in order to build foundational knowledge prior to investigating the more advanced concepts to follow in this whitepaper.

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### SUMMARY AND INTRODUCTION

Building on the foundation of *Mortgage Pipeline Hedging 101*, this whitepaper delves deeper into hedging practices that enhance mortgage lender profitability, efficiency, and execution related to pipeline hedging. Various hedging instruments will be explored, baseline inputs used in mortgage pipeline hedging will be examined, and recent industry advancements that have reshaped the hedging landscape will be discussed. Data integrity remains crucial to maximizing opportunities in hedging, and its importance will be emphasized throughout the discussion.

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### HEDGING INSTRUMENTS EXPLAINED

Even though there are a variety of instruments that can be used to hedge mortgage loans, using to-be-announced mortgage-backed securities (referred to as TBAs moving forward) ranks among the most commonly used instruments. TBAs represent commitments to deliver or receive agency mortgage-backed security pools (UMBS), following delivery rules and a settlement calendar established by the Securities Industry and Financial Markets Association (SIFMA), an industry trade group. These commitments are traded in an over-the-counter market, with liquidity provided by both primary and smaller regional broker dealers. TBA markets exist for 30- and 15-year commitments for all three federal

mortgage market agencies: Fannie Mae and Freddie Mac in terms of UMBS, and Ginnie Mae in terms of Ginnies (the Government National Mortgage Association). This provides associated fixed-rate hedge coverage that correlates closely to agency conventional and government fixed production.

TBAs are widely used as a pipeline hedge vehicle for several reasons. TBA and loan prices have a high rate of correlation. Additionally, TBA monthly settlements are easily managed with commitments scheduled to settle regularly through the month. If the settlement date for a TBA is reached before associated loans close, TBAs can be extended, giving TBAs flexibility to essentially “re-use” coverage that is in place. Lenders might also use 15-year TBAs (mainly on the Uniform MBS or UMBS) for their adjustable-rate (ARM) pipelines, as the two sectors have similar durations.

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Pipeline Hedging*  
 by Ben Itkin, MCT

### Matching TBA Settlement Dates with Lock Expirations

TBAs can be committed over various months, which provides an opportunity to match active hedge populations with similar lock expirations that can be matched to the available settlement dates. These months are often referred to as “Front”, “Mid”, and “Back” month. MCT has also partnered with several [Agile broker dealers](#) to create a groundbreaking opportunity to take coverage down or receive indications in a “Fourth” month. This provides an opportunity to secure hedge coverage further out in time, especially for longer-term locks like construction-based loans. Once the current month settlement date is reached and passed, TBA offerings will move to the next available settlement month, shifting all months outward by one month.

First Month

Mid Month

Back Month

Fourth Month

Con 30 Monthly Breakdown																				
Buffer	0					0					0					0				
Month	06/11/2024					07/11/2024					08/09/2024					09/12/2024				
Coupon	Volume	Hedge Position	Optimal	Coverage	Long/Short \$	Volume	Hedge Position	Optimal	Coverage	Long/Short \$	Volume	Hedge Position	Optimal	Coverage	Long/Short \$	Volume	Hedge Position	Optimal	Coverage	Long/Short \$
2.5	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
3.0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
3.5	\$0	\$4,000,000	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
4.0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
4.5	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
5.0	\$0	\$0	0.00%	0.00%	\$0	\$311,250	\$0	89.05%	0.00%	\$277,168	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
5.5	\$1,427,875	\$0	88.13%	0.00%	\$1,258,308	\$2,058,398	\$1,250,000	86.25%	80.73%	\$526,387	\$184,225	\$0	88.85%	0.00%	\$168,884	\$0	\$0	0.00%	0.00%	\$0
6.0	\$5,486,060	\$22,000,000	85.30%	400.97%	-\$17,319,617	\$8,521,799	\$0	80.83%	0.00%	\$5,256,850	\$517,500	\$0	84.90%	0.00%	\$438,358	\$0	\$0	0.00%	0.00%	\$0
6.5	\$3,851,210	\$5,000,000	82.78%	136.84%	-\$1,978,161	\$1,108,650	\$0	80.48%	0.00%	\$880,596	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
7.0	\$483,920	\$0	82.38%	0.00%	\$382,160	\$100,088	\$0	80.16%	0.00%	\$80,251	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
7.5	\$0	\$0	0.00%	0.00%	\$0	\$398,200	\$0	74.00%	0.00%	\$296,408	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	0.00%	0.00%	\$0
<b>Total</b>	<b>\$11,029,698</b>	<b>\$31,000,000</b>	<b>84.70%</b>	<b>339.12%</b>	<b>-\$28,061,435</b>	<b>\$10,487,385</b>	<b>\$1,250,000</b>	<b>81.71%</b>	<b>14.75%</b>	<b>\$7,029,565</b>	<b>\$711,725</b>	<b>\$0</b>	<b>86.43%</b>	<b>0.00%</b>	<b>\$688,042</b>	<b>\$0</b>	<b>\$0</b>	<b>0.00%</b>	<b>0.00%</b>	<b>\$0</b>

*Mortgage Pipeline Hedging Breakdown by Settlement Date within MCTlive!*

### Hedging Using Forward Commitments

While MCT primarily recommends using TBAs, other hedge instruments are available for use. For example, forward commitments can be taken down directly with the GSEs or an investor. These commitments are fulfilled by assigning loans against a committed trade amount for a specific group of loans slotting into a given coupon and product type. They are managed similarly to TBAs. Forward commitments can be beneficial in some situations but can be limiting when it comes to ensuring coverage at all coupons being originated, especially within a volatile moving market. When loans fall out, substitutes must be found or a pair off fee is typically incurred when delivery is outside a given tolerance of the forward commitment amount.

## Additional Hedging Instruments

Treasury futures, treasury futures options, and swap futures might also be used as hedging instruments in some situations. These instruments are used for various reasons. Lenders may look to find hedge instruments that provide lower carry costs than TBAs. This becomes more common when hedging pipelines of adjustable-rate products that intrinsically have shorter durations and don't necessarily match the availability of TBAs. Some mortgage lenders may also use combinations of put and call options to enhance their hedged pipeline's risk profile and mitigate risks associated with changing pull-through forecasts. A higher rate environment may also open up the use of non-QM and other non-conforming originated production. Depending on volumes and the type of production, alternative hedge instruments could be a good fit for this type of production.



**Key Point >>** Hedging your mortgage pipeline using TBAs has a high rate of correlation with loan prices and are used most frequently for this reason.

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## TYPICAL INPUTS OF A HEDGE MODEL

In order to manage a successful hedge of your mortgage pipeline, it is crucial to understand key inputs associated with the hedge model. Let's outline a few important definitions that will be helpful to understand before we walk through a typical hedge recommendation. Having a firm understanding of these inputs will provide you with greater transparency and increased efficiencies related to hedging a pipeline.

### Key Terms and Inputs of a Hedge Model

**Pipeline Data:** Most hedge models rely primarily on mortgage lender data that is typically housed in the loan origination system, or LOS. The importance of good data cannot be stressed enough. The adage of bad data in bad data out holds true. It's important to think through the fields and operational usage of those fields within the lender's LOS. Pipeline data can be integrated in a variety of ways and technology continues to improve the methods to integrate data necessary to hedge a mortgage pipeline. Pipeline data typically includes loans that are locked, funded, and purchased, allowing for the ability to track loans through the origination cycle until they become ready for sale and are typically investor purchased or held for investment. It is also a best practice to define "Can't Go" or "Must Go" rules from your loan level data, in reference to investor eligibility for particular loans. While most hedge platforms have investor guidelines loaded, there may be less common soft guidelines or instances that investors decide to overlay beyond their standard eligibility grids. These rules can be programmed from a lender's pipeline data to ensure an efficient and timely delivery post-closing while limiting costly resale activity.

**Zero Market Pull Through Assumptions:** It is important to understand your pipeline-specific pull through assumptions. Pull through assumptions are used to establish the likelihood of a given loan to reach funding as it makes its way through the various origination statuses, typically starting with Locked and finishing with a Funded status where the loan is typically committed to an investor. As a loan makes its way through the origination process, the pull through rate of the loan increases as there is a higher likelihood that the loan will fund. A "zero market" pull through is typically applied to a loan program, purpose, and status bucket, however there are a multitude of ways to apply pull through given the ability to track and maintain results based on the underlying data. A zero market pull through assumption implies that per a given bucket of loan parameters (program, purpose, status, or other parameters), that loan will pull



within a less volatile market coupon as opposed to trying to cover “cuspy” coupons that attempt to cover rates that are at the fringes of current production, i.e. the lowest and highest note rates. In relation to program where duration is higher, or wider bid/ask spreads persist, a lender may choose to simply use UMBS to cover government-based production. As an alternative to cross hedging, it's also important to consider the use of [bid tape AOTs](#) as an option to reduce TBA expense that can be magnified as bid/ask spreads widen.

Now that we've reviewed definitions for the inputs and terms of a hedge model, let's look at how to calculate hedge recommendations based on pipeline data.



**Key Point >>** Understanding the fundamental inputs of a hedge model is crucial to ensuring you're reducing the risk in your pipeline and leveraging data to make strategic decisions to improve your profitability.

## CALCULATING HEDGE COVERAGE BASED ON PIPELINE DATA

Now that we've outlined some of the inputs to a typical hedge model, let's look at how to leverage these inputs to create a hedge recommendation. In the example below, we will look at how we arrive at a pull-through and duration-weighted coverage ratio that, when compared to an optimal coverage ratio, provides a current long or short percentage or dollar amount that can be used to maintain an overall hedge.

Security Partitioned Pipeline Coverage									
Security	Volume	Hedge Position	Nominal	Forecasted PT	Theta	Optimal	Coverage	Long/Short %	Long/Short \$
UM30	\$49,744,292	\$38,034,302	76.46%	86.62%	3.39%	83.23%	75.90%	7.33%	\$3,648,241
UM15	\$3,217,237	\$0	0.00%	85.18%	3.24%	81.94%	0.00%	81.94%	\$2,636,164
GNSF	\$1,195,075	\$0	0.00%	85.66%	5.23%	80.43%	0.00%	80.43%	\$961,246
G2SF	\$14,720,707	\$11,950,000	81.18%	86.83%	5.44%	81.39%	103.66%	(22.26%)	(\$3,277,343)
Combined Gov	\$15,915,782	\$11,950,000	75.08%	86.74%	5.42%	81.32%	95.23%	(13.91%)	(\$2,213,387)
UM15 ARM	\$0	\$0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	\$0
<b>Total</b>	<b>\$68,877,311</b>	<b>\$49,984,302</b>	<b>72.57%</b>	<b>86.58%</b>	<b>3.85%</b>	<b>82.73%</b>	<b>76.17%</b>	<b>6.56%</b>	<b>\$4,519,911</b>

Sample View of Security Pipeline Coverage Screen in MCTlive!

Here are the additional inputs we will use to calculate our hedge recommendation:

- **Volume** – the current dollar amount of active mortgage loans in your hedge pipeline.
- **Hedge Position** – the dollar amount of TBA coverage that is active.
- **Nominal** – calculated by taking your Hedge Position divided by your Volume.
- **Forecasted Pull-Through (PT)** - the aggregated percentage value based on the zero market pull through and betas being applied to any given security or program bucket.
- **Optimal Coverage** – equal to Forecasted Pull Through minus Theta.

For this example, let's review the calculation of our coverage for loans in our Ginnie II Single Family (G2SF) Program. In this example, we will use information from the Duration Analysis tab in MCTlive!

**Step I - Calculate Duration Factor**

*Weighted-Average Hedge Duration (WAHD) / Weighted-Average Loan Duration (WALD) = Duration Factor*

**3.909 / 3.061 = 1.277**

Duration Analysis							
Program	WALD	WAHD	Duration Factor	Pipe WAC	Hedge WAC	Long/(Short)	Coupon Analysis
UM30	5.003	4.966	0.993	2.492	2.500	\$3,648,241	Coupon Breakdown
UM15	3.535	0.000	0.000	2.003	0.000	\$2,636,164	Coupon Breakdown
GNSF	3.341	0.000	0.000	2.739	0.000	\$961,246	Coupon Breakdown
G2SF	3.061	3.909	1.277	2.847	2.554	(\$3,277,343)	Coupon Breakdown
<b>Total</b>	<b>4.491</b>	<b>4.714</b>	<b>1.050</b>	<b>2.550</b>	<b>2.513</b>	<b>\$4,519,911</b>	Coupon Breakdown

Next, we will use the Duration Factor calculated above (1.277) to help calculate our Coverage Percentage. To do this, we will use the Pipeline Coverage tab in MCTlive! to pull Volume and Hedge Position inputs which are needed to calculate Coverage Percentage.

Security Partitioned Pipeline Coverage									
Security	Volume	Hedge Position	Nominal	Forecasted PT	Theta	Optimal	Coverage	Long/Short %	Long/Short \$
UM30	\$49,744,292	\$38,034,302	76.46%	86.62%	3.39%	83.23%	75.90%	7.33%	\$3,648,241
UM15	\$3,217,237	\$0	0.00%	85.18%	3.24%	81.94%	0.00%	81.94%	\$2,636,164
GNSF	\$1,195,075	\$0	0.00%	85.66%	5.23%	80.43%	0.00%	80.43%	\$961,246
G2SF	\$14,720,707	\$11,950,000	81.18%	86.83%	5.44%	81.39%	103.66%	(22.26%)	(\$3,277,343)
Combined Gov	\$15,915,782	\$11,950,000	75.08%	86.74%	5.42%	81.32%	95.23%	(13.91%)	(\$2,213,387)
UM15 ARM	\$0	\$0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	\$0
<b>Total</b>	<b>\$68,877,311</b>	<b>\$49,984,302</b>	<b>72.57%</b>	<b>86.58%</b>	<b>3.85%</b>	<b>82.73%</b>	<b>76.17%</b>	<b>6.56%</b>	<b>\$4,519,911</b>

**Step 2 - Calculate Duration-Adjusted Coverage**

*Duration Factor x Hedge Position = Duration Adjusted Coverage*

1.277 x 11,950,000 = 15,260,552

**Step 3 - Calculate Coverage Percentage**

*Duration Adjusted Coverage / Lock Volume = Coverage Percentage*

15,260,552 / 14,720,707 = 103.66%

From these calculations, we can understand why our Coverage Percentage for our Ginnie II Single Family program is 103.66%. This coverage is short 22.26% or \$3.28MM compared to Optimal, which subtracts Theta from Forecasted Pull Through for G2SF production. Calculating and closing that coverage gap will be covered in the upcoming sections.



**Key Point >>** While MCTlive! does assist capital markets professionals in calculating and managing the hedge of a mortgage pipeline, understanding the inputs and the math is crucial, especially when managing a hedged mortgage pipeline over time.

## MANAGING A HEDGED MORTGAGE PIPELINE OVER TIME

Now that we've calculated our hedge coverage, let's walk through how to best manage a hedge over time. Beyond the model inputs we've discussed in more detail, the active hedge pipeline can fluctuate over time resulting in a need for more or less coverage from a hedge perspective. It's important to remember that the hedge continually changes due to market movement and production, which is why having a current updated hedge recommendation accessible throughout the day is important, especially on days where there is increased market volatility.

**New Locks:** Without any other changes being considered, new locks will be received over time, increasing the active hedge pipeline and potentially requiring additional hedge coverage to offset.

**Committed Production:** Without any other changes being considered, loans will fund and be committed within the active hedge pipeline requiring a reduction in hedge coverage. Once loans are committed and set for delivery to an investor, the hedge is no longer needed for these loans and they are removed from the active hedge pipeline.

**Fallout:** Without any other changes being considered, loans may reach lock expiration without funding and will fallout, reducing the volume of loans needing coverage. Loans may also "exit" the hedge early (before lock expiration) as they are adversely. A variety of adverse options exist where the borrower (due to lack of response) or lender (as a result of review) must determine the viability of a loan. Loans may be declined, withdrawn, approved but not accepted, or closed for incompleteness. Since every loan will either fund or fallout, fallout is a vital measure to track, as it directly correlates to pull through over time, which is a primary input for most hedge models.

While we've talked about these changes impacting the hedge independently, they are actually in play simultaneously at any given time. For example, we may see a group of locks reach lock expiration and fallout, a handful of loans adverse, a group of new locks enter the hedge, and a handful exit via a loan sale with those loans being committed.

This leaves us with a net change in active hedge volume that could result in a net change in hedge recommendation to maintain a consistent hedge. When using MCTlive!, users may reference the Pipeline Activity Summary to track these changes over the course of the day. The components are broken down in the example screenshot at right, 'Pipeline Activity Summary.' The summary is broken out into New Production (New Locks), Committed Production, and Fallout Production.

In this example, we can see that we have three new locks in the hedge today, increasing the active hedge volume by \$895,450. We've also committed 11 loans totaling \$2,382,168 and have seen 6 loans hit Fallout in the amount of \$2,119,527. If we sum those values where new locks are positive (increasing the hedge volume) and committed and fallout are negative (decreasing the hedge volume) we are left with a net impact to the hedge pipeline of negative \$3,606,245.

Pipeline Activity Summary		
<b>New Production</b>		
Category	Units	Volume
Today's Locks	3	\$895,450.00
Last Import	1	\$399,200.00
<b>Committed Production</b>		
Category	Units	Volume
Today's Commitments	11	\$2,382,168.00
New Commitments	0	\$0.00
<b>Fallout Production</b>		
Category	Units	Volume
Today's Fallout	6	\$2,119,527.00
New Fallout	0	\$0.00
Historical Fallout	8	\$2,560,527.00
Exception Fallout	0	\$0.00
Expiration Matrix		Status Stagnation

Our hedge volume has been reduced by that amount which in turn will likely require less hedge coverage to be in place. We would look to the hedge recommendation along with our outstanding program and interest rate mix present in the active hedge pipeline to make our decision to bring the hedge back in line.



**Key Point >>** Reviewing your hedged mortgage pipeline consistently will help ensure your coverage is optimal. On any given day, new loans may lock, fallout, or be committed, so adjusting your hedge coverage will need to be managed closely.

## PREDICTING CHANGES IN MORTGAGE PIPELINE HEDGE COVERAGE

Over time, secondary marketing personnel may become familiar enough with pipeline dynamics to make educated decisions ahead of potential changes in active hedge volume. They may see an average amount of locks per day, have relatively consistent fallout, or can review expiring locks daily and can foresee when loans will be committed. This gives secondary an advantage to position themselves ahead of those daily happenings.

Leveraging technology, such as tools within MCTlive!, helps traders run through potential scenarios and review resulting changes in hedge coverage after potential scenarios are input. While we discussed the nominal changes to a hedge pipeline above, it's important to also realize that the additional model inputs discussed earlier in this whitepaper have an impact on the underlying hedge recommendation as well. The average note rate of a group of loans exiting the hedge may have a specific duration applied that can vary relative to new locked production that is entering the hedge. This can skew the impacts of the overall hedge recommendation relative to the nominal values at play. By using the Hedge Advisor tab within MCTlive!, these additional elements are factored into the hedge recommendation.

In the example below, we are anticipating a loan sale of \$2 million all within the 6.5 CPN UM30 program. Based on historical lock trends we are averaging new locks of \$4 million a day in the same program and coupon for simplicity. We can also see that we are currently under-covered on this coupon and would like to look at getting the bid on \$0.5 million of UM30 6.5 CPN TBA coverage. We can input all those options as noted below and click apply.

UM30 Breakdown									
Coupon	Volume	Sold Volume	Locked Volume	Hedge Position	Bid Amt	Offer Amt	Optimal	Coverage	Long/Short \$
2.5	\$0			\$0			0.00%	0.00%	\$0
3.0	\$0			\$0			0.00%	0.00%	\$0
3.5	\$0			\$2,000,000			0.00%	0.00%	\$0
4.0	\$0			\$0			0.00%	0.00%	\$0
4.5	\$0			\$0			0.00%	0.00%	\$0
5.0	\$426,950			\$0			88.20%	0.00%	\$376,557
5.5	\$3,895,383			\$0			83.73%	0.00%	\$3,261,521
6.0	\$13,307,870			\$23,750,000			80.96%	129.62%	-\$6,475,381
6.5	\$5,013,360	\$0	\$40	\$5,500,000	\$500,000		79.81%	69.81%	\$501,123
7.0	\$733,008			\$0			78.74%	0.00%	\$577,172
7.5	\$399,200			\$0			74.00%	0.00%	\$295,408
5 Year	\$0			\$0			0.00%	0.00%	\$0
10 Year	\$0			\$0			0.00%	0.00%	\$0
<b>Total</b>	<b>\$23,775,771</b>			<b>\$31,250,000</b>			<b>81.12%</b>	<b>84.83%</b>	<b>-\$882,309</b>

*Hedge Advisor Tool within MCTlive!*

The pipeline coverage will update with the scenario at the top of the screen based on the scenario as noted. We can see in this case that coverage was 84.38% before these potential changes to volume. With the anticipated lock volume of \$4 million and sold volume of \$2 million and the added \$0.5 million in additional coverage our net coverage drops to 81.18% compared to optimal at 81.12%, bringing the overall hedge on the UM30 production inline.

Security Partitioned Pipeline Coverage														
Security	Volume	Scenario	Hedge Position	Scenario	Nominal	Forecasted PT	Theta	Optimal	Coverage	Scenario	Long/Short %	Scenario	Long/Short \$	Scenario
UM30	\$23,775,771	\$25,775,771	\$31,250,000	\$31,750,000	131.44%	88.75%	7.83%	81.12%	84.83%	81.18%	(3.71%)	(0.06%)	(\$882,309)	(\$15,042)

*Pipeline Scenario Results from Hedge Advisory Tool in MCTlive!*



**Key Point >>** The average note rate of a group of loans exiting the hedge may have a specific duration applied that can vary relative to new locked production that is entering the hedge. This can skew the impacts of the overall hedge recommendation relative to the nominal values at play. Forecasting tools allow these additional elements to be factored into the hedge recommendation.

## THE CHANGING LANDSCAPE OF PIPELINE HEDGING

Hedging has undoubtedly changed over the years. Technology has provided greater efficiency in hedging, increasing the amount of data that can be managed quickly and efficiently to allow for better decisions in short order.

### Technology Improvements Call for Security Fortification

Hedging models used to be somewhat limited in scope due to computing power and the ability to programmatically solve to a technical workflow. A best execution can now be run on hundreds of loans in a matter of minutes across a variety of execution opportunities. A bid tape can be assembled and distributed in mass to a marketplace of investors for bid pricing. APIs have created even greater efficiencies in retrieving and sending data in repeatable pings, limiting human error. The fax machine has traded place with a digital based efax.

With all these changes, confidentiality and protection of PII (personally identifiable information) have become forefront in recent years, calling many to review their policies and ensure protection of borrower information in their processes. MCT has been at the forefront of technological capital markets innovation that provides lenders with a full suite of services that are centered around a confidential and secure data exchange.

## The Evolution of Assignment of Trade (AOT) Transactions

[AOTs, or assignments of trade](#) have been a capital markets staple for years. AOTs provide the opportunity to deliver loans into existing TBA coverage and assign the TBA over to a given investor. The TBA pricing acts as the basis for loan pricing. AOTs reduce hedge costs by avoiding the realization of the bid/ask spread in a typical TBA settlement process. AOTs “draw down” existing hedge coverage and allow for delivery of loans in a shorter time window. This dynamic improves cash flow as the TBA would have settled out in terms of cash at a given settlement date in the future. The AOT allows a lender to deliver loans in a shorter time window allowing for quicker purchase, moving up the cash event associated with purchasing loans that have been assigned.

AOTs have gained even greater ground in recent years due to the ease of execution and increased investor eligibility related to the execution type. The once arduous process of standing at a fax machine with a handwritten tri-party agreement to send to the purchasing investor has sunsetted. The angst of filling out the forms and following up with faxed paperwork gave many pause when considering AOTs.

Within MCTlive!, lenders can use AOTs with ease. Automated triparty documentation is electronically filled out and sent to the necessary parties in the transaction. The improved investor eligibility surrounding AOTs has also made it more attractive to sell at a minimum one or two loans totaling as little as \$250k in some cases. Using both Ginnie and UMBS TBAs for hedge coverage allows lenders to assign government and agency conventional production with associated settlement date and coupon coverage. Investors also allow for over and under delivery with different commitment amounts that might align with existing TBA amounts. There is great flexibility in assigning partial TBA coverage or blocks of loans in different increments. Once assigned, the hedge position is drawn down by the assigned loans creating greater hedge correlation and less need to lift or add coverage after a loan sale. MCT provides AOT execution as a leading market differentiator capable of saving clients thousands of dollars a month if utilized fully. If you are interested in learning more about AOTs, [reach out to MCT](#) for more details. MCT can help ensure your broker dealer set and investor mix are aligned and maximized for AOT execution.



**Key Point >>** Improvements in technology are helping mortgage lenders become more efficient and profitable, while also requiring an increased need for data security.

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## SUMMARY OF MORTGAGE PIPELINE HEDGING 201

Hedging mortgage pipelines using TBAs (To-Be-Announced securities) is highly correlated with loan prices, making them a frequent choice for risk management. A thorough understanding of the fundamental inputs of a hedge model is essential for minimizing pipeline risk and leveraging data to enhance profitability. While tools like MCTlive! aid traders in managing and calculating hedge positions, it is imperative to comprehend the underlying math and inputs, especially for long-term management of a hedged mortgage pipeline.

Regular reviews of the hedged mortgage pipeline is necessary to ensure optimal coverage, as daily changes such as new loan locks, fallouts, or commitments require close adjustment of hedge positions. Additionally, the average note rate of

exiting loans can vary in duration compared to new locked production, affecting the overall hedge recommendation. Forecasting tools that incorporate these variables improve hedge accuracy. Technological advancements are driving efficiency and profitability in mortgage lending, alongside an increased emphasis on data security.



### Key Points

- Hedging your mortgage pipeline using TBAs have a high rate of correlation with loan prices and are used most frequently for this reason.
- Understanding the fundamental inputs of a hedge model is crucial to ensuring you're reducing the risk in your pipeline and leveraging data to make strategic decisions to improve your profitability.
- While MCTlive! does assist traders in calculating and managing the hedge of a mortgage pipeline, understanding the inputs and the math is crucial, especially when managing a hedged mortgage pipeline over time.
- Reviewing your hedged mortgage pipeline consistently will help ensure your coverage is optimal. On any given day, new loans may lock, fallout, or be committed, so adjusting your hedge coverage will need to be managed closely.
- The average note rate of a group of loans exiting the hedge may have a specific duration applied that can vary relative to new locked production that is entering the hedge. This can skew the impacts of the overall hedge recommendation relative to the nominal values at play. Forecasting tools allow these additional elements to be factored into the hedge recommendation.
- Improvements in technology are helping mortgage lenders become more efficient and profitable, while also requiring an increased need for data security.

For inquiries, discussions, or further guidance, we welcome you to [connect with MCT's team](#). Together, we can forge a path towards a future characterized by resilient and prosperous lending practices through the mastery of mortgage pipeline hedging strategies.

## ABOUT THE AUTHOR



### Cody Echols, Sr. Capital Markets Technology Advisor, MCT

In his role as Senior Capital Markets Technology Advisor, Cody Echols leverages his years of capital markets, leadership, and coaching experience to help MCT clients exceed their goals. His demonstrated capabilities in mortgage operations and technology ensure a successful onboarding experience for new clients, as well as a hands-on approach to ensuring current users are able to conquer new market challenges as they arise. Mr. Echols is also experienced in managing integrations, product and pricing development, hedging strategy, and compliance requirements. This has enabled him to create educational material such as training guides as well as author the daily market commentary.

## ABOUT MORTGAGE CAPITAL TRADING

For over two decades, MCT has been a leading source of innovation for the mortgage secondary market. Melding deep subject matter expertise with a passion for emerging technologies and clients, MCT is the de facto leader in innovative mortgage capital markets technology. From architecting modern best execution loan sales to launching the most successful and advanced marketplace for mortgage-related assets, lenders, investors, and network partners all benefit from MCT's stewardship. MCT's technology and know-how continues to revolutionize how mortgage assets are priced, locked, protected, valued, and exchanged – offering clients the tools to thrive under any market condition.

For more information, visit <https://mct-trading.com/> or call (619) 543-5111.

<p><b>MCT</b> hedge advisory</p> <ul style="list-style-type: none"> <li>✓ HALO - Traditional Full Service Hedge Advisory</li> <li>✓ MCTlive! - Capital Markets Software Platform</li> <li>✓ MCT Marketplace Mortgage Asset Exchange</li> <li>✓ Best Execution Analysis &amp; Loan Sales</li> </ul>	<p><b>MCT</b> MSR services</p> <ul style="list-style-type: none"> <li>✓ MSRlive! Cloud-based Portfolio Valuation Platform</li> <li>✓ Customized grids</li> <li>✓ Quarterly Servicing Portfolio Valuation Reports</li> <li>✓ One-on-one Servicing Strategy Consulting</li> <li>✓ Enhanced Retain/Release Analyses</li> </ul>	<p><b>MCT</b> lock central</p> <ul style="list-style-type: none"> <li>✓ Outsourced Lock Desk Services</li> <li>✓ From Initial Locks Only to Full Service</li> <li>✓ Works with all LOS &amp; PPE Systems</li> <li>✓ Best Practices - Lock Desk Policy and Procedures</li> </ul>	<p><b>MCT</b> PRODUCT &amp; PRICING</p> <ul style="list-style-type: none"> <li>✓ Proprietary Pricing &amp; Eligibility Engine</li> <li>✓ Real-Time Pricing for ALL Delivery Channels</li> <li>✓ Loan Sale Best Executions</li> <li>✓ Rate Sheet Generation Services</li> </ul>	<p><b>MCT</b> BUSINESS intelligence</p> <ul style="list-style-type: none"> <li>✓ Actionable Secondary Market Analytics Platform</li> <li>✓ Proprietary Loan Sale Best Execution Database</li> <li>✓ Investor Report Cards</li> <li>✓ Price Competitiveness</li> <li>✓ Client Opportunity Curves</li> <li>✓ Capital Markets Consulting</li> </ul>
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