

Analysis of Financial Messaging to Mitigate Trade Breaks: Report of Findings

Strategy 1: Goals	1.1 Predictive Model Results	1.2 Top 10 Custodians	1.3 Top 10 Executing Brokers	1.4 Comparison of Reason Codes ALBM v..	1.5 Top 10 Exchanges
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Strategy 1: Reduce Frequency of MT548

- Identify predictors of high-frequency failure trades
- Targeted recommendations to fix upstream issues
- Decrease the frequency of MT548 messages at the source

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Top Custodians by Permutation Importance

Custodian	Permutation Importance	Trade Count	High Frequency Failure (HFF)	Percentage
oortB	0.080285968	42170	8871	0.210362
d3S2	0.045501897	5240	2788	0.532061
ze	0.037258211	11196	2370	0.211682
h99	0.029989778	11254	955	0.1858
nmueB	0.024906007	17001	2182	0.126422
ogieHC	0.023099130	6318	1448	0.479116
opsye	0.019630567	2292	1237	0.549323
d3S	0.014562790	2127	907	0.068861
o3IHk	0.010281210	1676	803	0.152555
g6wmDbl3m	0.006851423	1034	568	0.152555
BNP3	0.004795644	265	255	0.095188
C5tlxC	0.003491906	1867	212	0.068861

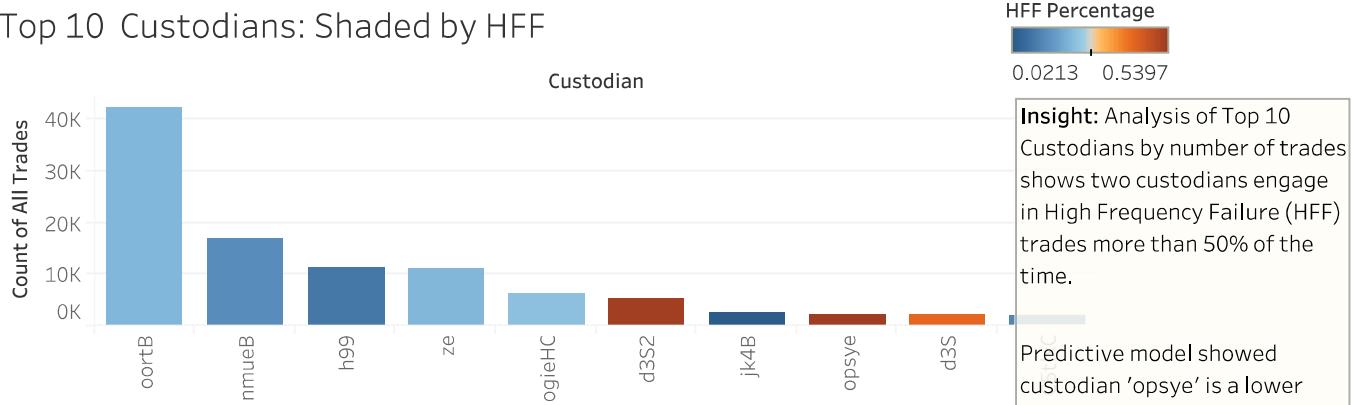
Top Executing Brokers by Permutation Importance

Executing B..	Permutation Importance	Trade Count	High Frequency F..	Percentage HFF	from process improvement.
WDRL	0.022708800	8795	1831	0.208186470	3952
JEFF	0.022451063	14471	3133	0.216501969	6841
MSCO	0.017886698	12838	2703	0.210546814	5838
MORG	0.016306296	12298	3168	0.257602862	5894
LQNF	0.014801710	8443	1602	0.189742982	3605
MOTC	0.010073616	10453	1594	0.152492108	4203
All	0.006033945	7779	1132	0.106110106	3503

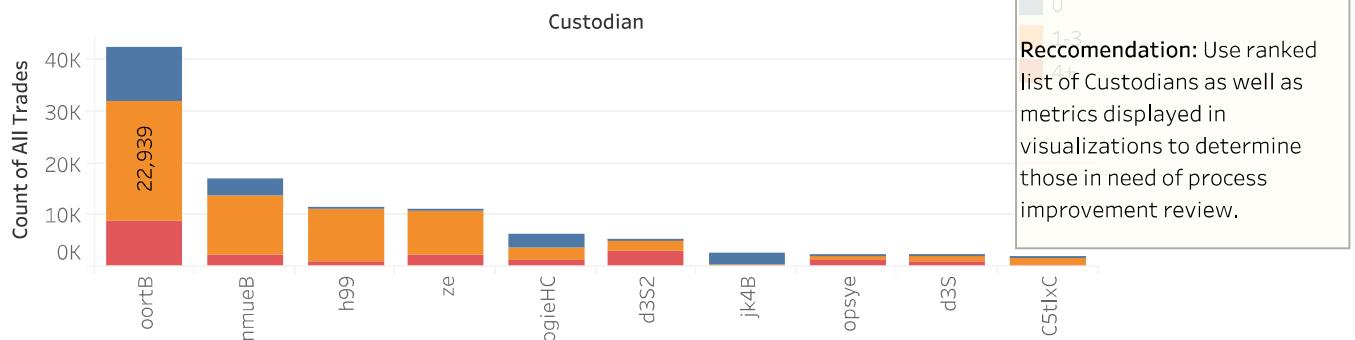
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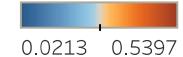
Top 10 Custodians: Shaded by HFF



Top 10 Custodians: MT548 Bin Distribution



HFF Percentage



Insight: Analysis of Top 10 Custodians by number of trades shows two custodians engage in High Frequency Failure (HFF) trades more than 50% of the time.

Predictive model showed custodian 'opsye' is a lower driver of HFF trades (i.e. HFF due to other attributes of the trades).

Reccomendation: Use ranked list of Custodians as well as metrics displayed in visualizations to determine those in need of process improvement review.

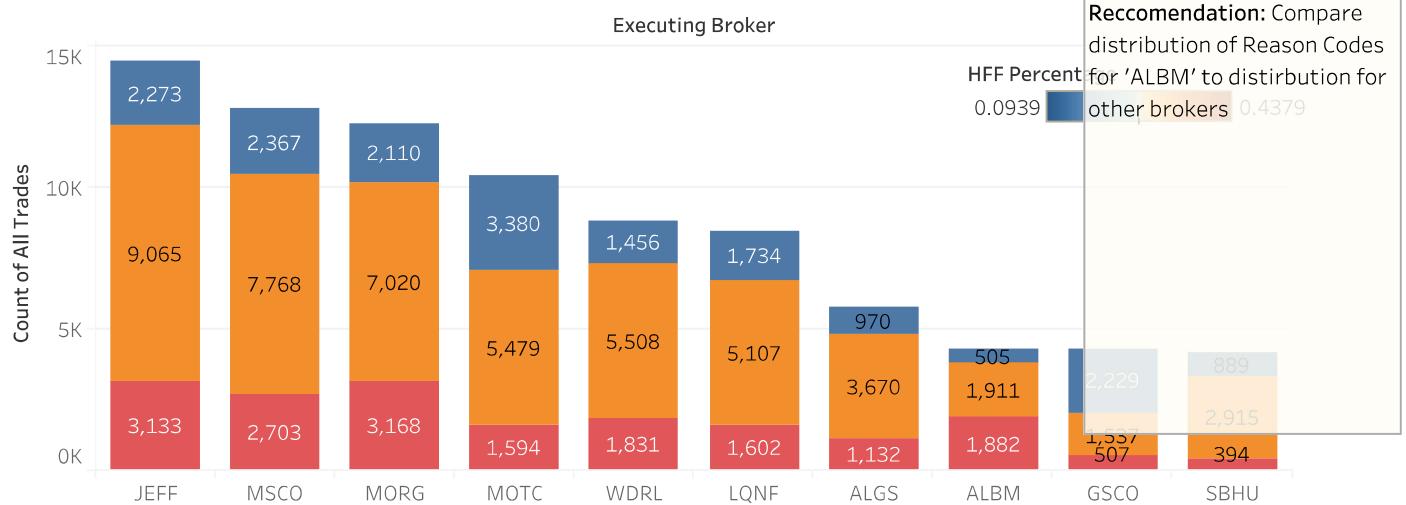
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Top 10 Brokers: Shaded by HFF

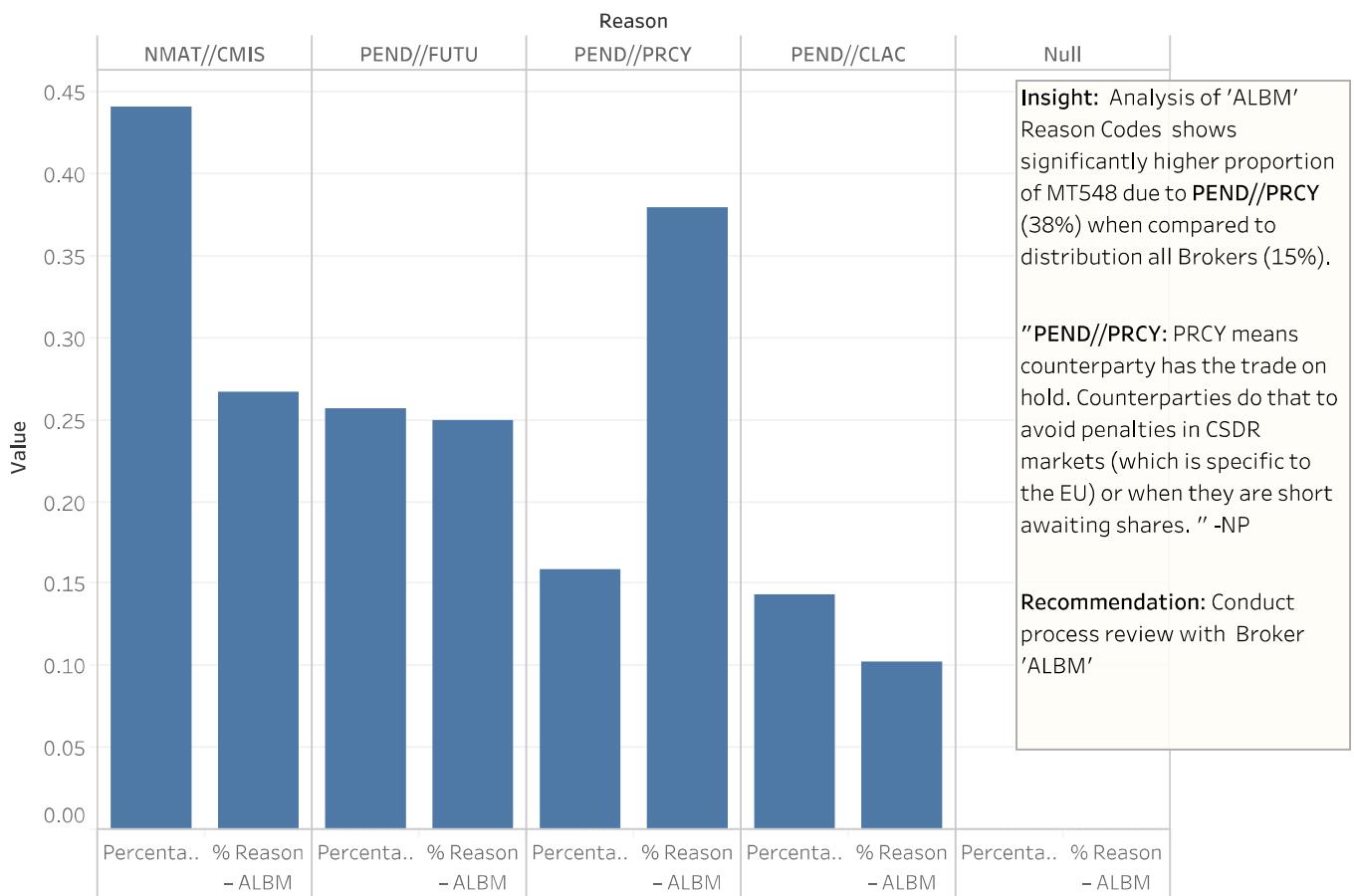


Top 10 Brokers: MT548 Bin Distribution



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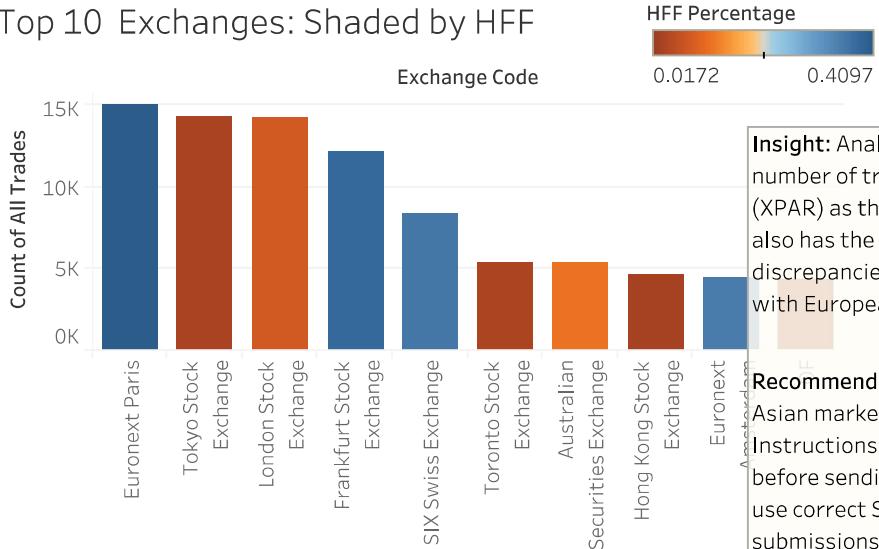
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1.2 To..	1.3 Top 10 Executing Brokers	1.4 Comparison of Reason Codes ALBM v..	1.5 Top 10 Exchanges	Strategy 2: Goals	2.1 Distribution of MT548 Messages	2.2 MT5..
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Top 10 Exchanges: Shaded by HFF



HFF Percentage

0.0172 0.4097

Insight: Analysis of Top 10 Exchange Codes by number of trades shows Euronext Paris (XPAR) as the most frequented exchange. It also has the highest HFF percentage. Large discrepancies in HFF noted between regions with European exchanges higher than Asian.

Recommendation: Align with the practices of Asian markets: Standard Settlement Instructions (SSI) with automated validation before sending to broker. Require brokers to use correct SSI. Schedule trade instruction submissions to align with the exchange and custodian cutoff windows.

Top 10 Exchanges: MT548 Bin Distribution



Exchange Code

MT548 Count Bin

0
1-3
4+

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1.3 To..	1.4 Comparison of Reason Codes ALBM v..	1.5 Top 10 Exchanges	Strategy 2: Goals	2.1 Distribution of MT548 Messages	2.2 MT548 Peaks	2.3 Da shbo..
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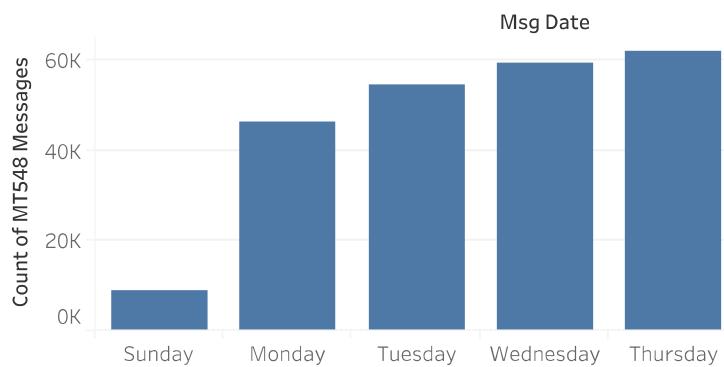
Strategy 2: Mitigate Cost of Managing Failure

- Identify patterns in MT548 occurrence -> Staffing
- Dashboard: prioritize MT548 alerts
- Reduce Cost of Managing MT548

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1.4 Co..	1.5 Top 10 Exchanges	Strategy 2: Goals	2.1 Distribution of MT548 Messages	2.2 MT548 Peaks	2.3 Dashboard of MT548 Peaks	3. Add ition..
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MT548 Distribution by Day of Week



Insight:

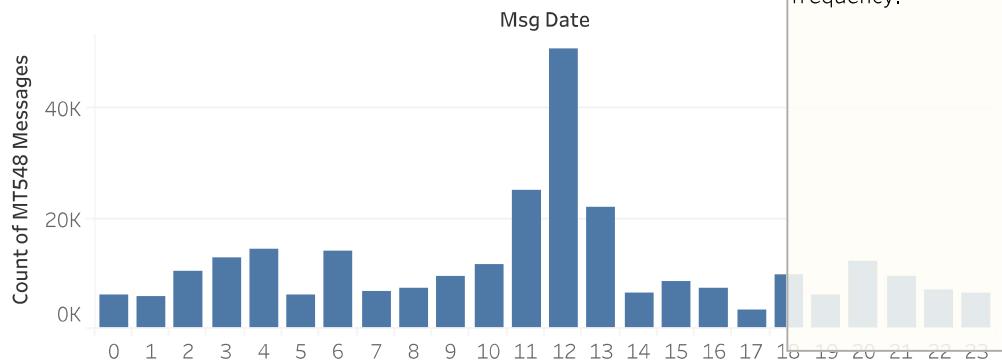
Analysis of MT548 messages by Day of Week shows highest frequency Monday- Friday.

Analysis of MT548 messages by Hour of Day shows highest frequency between 11:00-13:00 UTC. Time conversion to EST is 6:00-8:00am.

Recommendation:

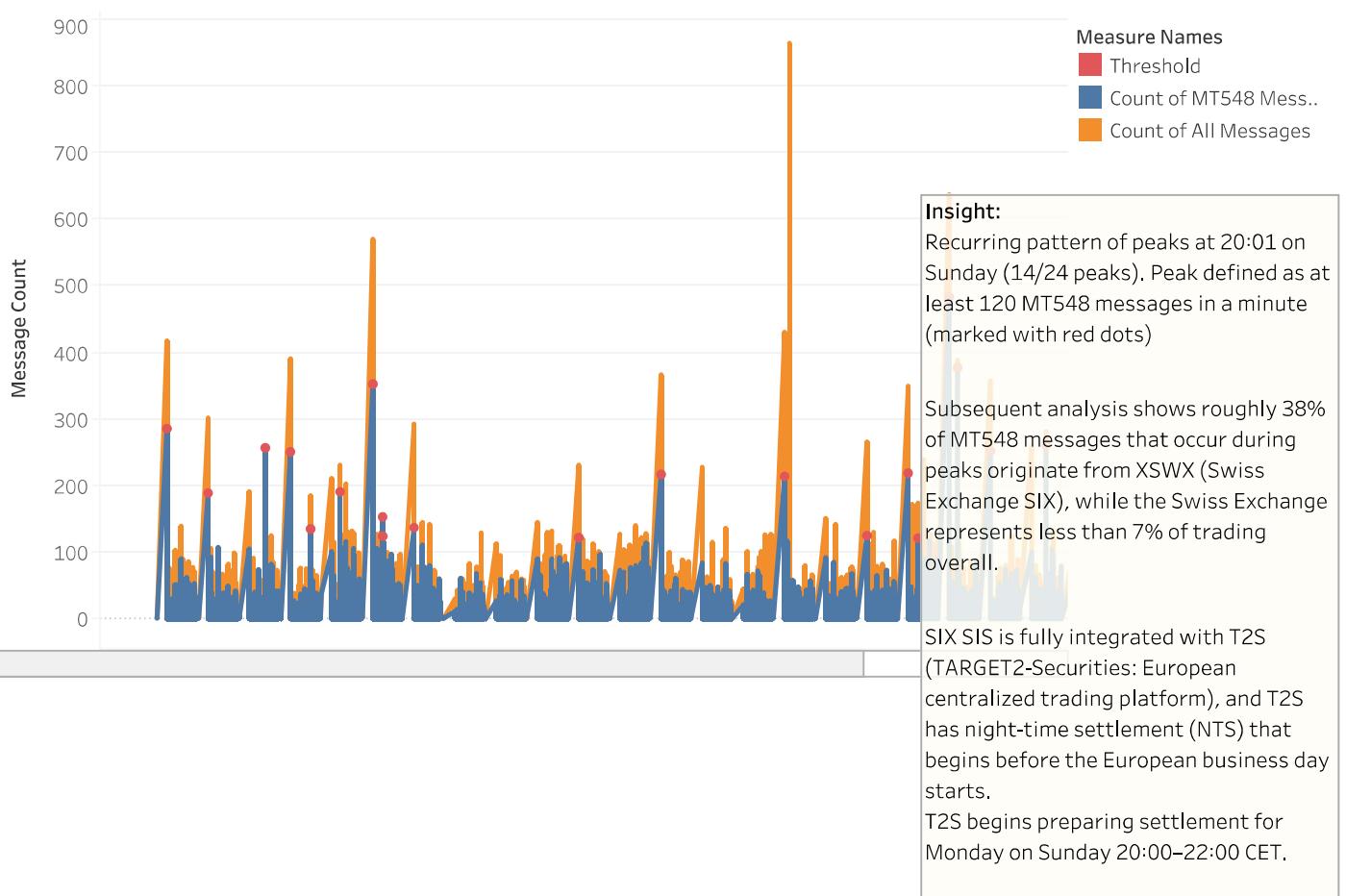
Client operations teams are staffed 6-8am, M-F to handle large MT548 frequency.

MT548 Distribution by Hour of Day



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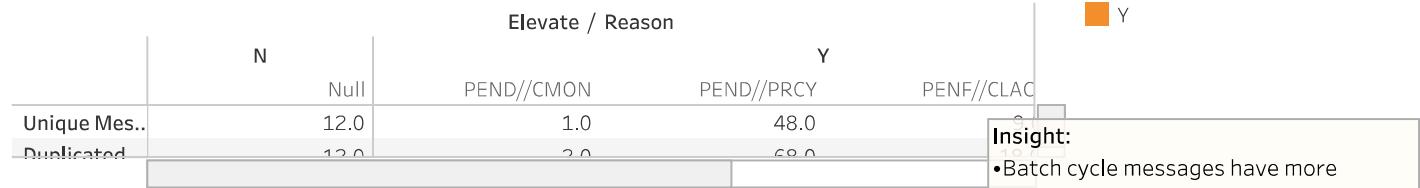
1.5 To..	Strategy 2: Goals	2.1 Distribution of MT548 Messages	2.2 MT548 Peaks	2.3 Dashboard of MT548 Peaks	3. Additional Insights	Top 10 Portf..
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Message Distribution



Filtered MT548 Messages

Group ID	Portfolio co..	Custodian	Executing B..	Minute of ..	Msg Type	Reason	Op
35002048	kjldsf5tlx6e..	oortB	MORG	March 2, 2025 at 8:00..	MT548	Null	MT
						PENF//PREA	SE
35002049	kl00wsu	oortB	MORG	March 2, 20..	MT548	PENF//PREA	SETT//P
35002050	ll22opsyeV	oortB	MORG	March 2, 20..	MT548	PENF//PREA	SETT//P
35002051	125dopsye..	oortB	MORG	March 2, 20..	MT548	PENF//PREA	SETT//P
35002052	5tlxdsdse	oortB	MORG	March 2, 20..	MT548	PENF//PREA	SETT//P
35002087	kl00wsu	oortB	ALOP	March 2, 2025 at 8:00..	MT548	Null	MT
						PENF//PREA	SE
35002088	ll22opsyeV	oortB	ALOP	March 2, 2025 at 8:00..	MT548	Null	MT
						PENF//PREA	SE
35002111	125dopsye..	oortB	BCLA	March 2, 20..	MT548	PENF//PREA	SETT//P
35002201	ll22lsx	oortB	ALBM	March 2, 20..	MT548	PEND//PRCY	SETT//P
35002202	x01opsyeV	oortB	ALBM	March 2, 20..	MT548	PEND//PRCY	SETT//P
35002207	ll22lsx	oortB	ALGS	March 2, 20..	MT548	PENF//CLAC	SETT//P

Elevate

- N
- Y

Insight:

- Batch cycle messages have more "noise"
- Occur when off-shore teams are monitoring settlement failure

Recommendation:

- Volume and timing make it difficult to identify actionable issues, increasing the operational burden.
- Implement dashboard to filter duplicates, prioritize Reason Codes, and highlight actionable MT548 messages, enabling teams to focus resources more efficiently and reduce the overall cost of managing settlement failures.

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2.1
Distributio..

2.2 MT548 Peaks

2.3 Dashboard of
MT548 Peaks

3. Additional Insights

Top 10 Portfolio Codes

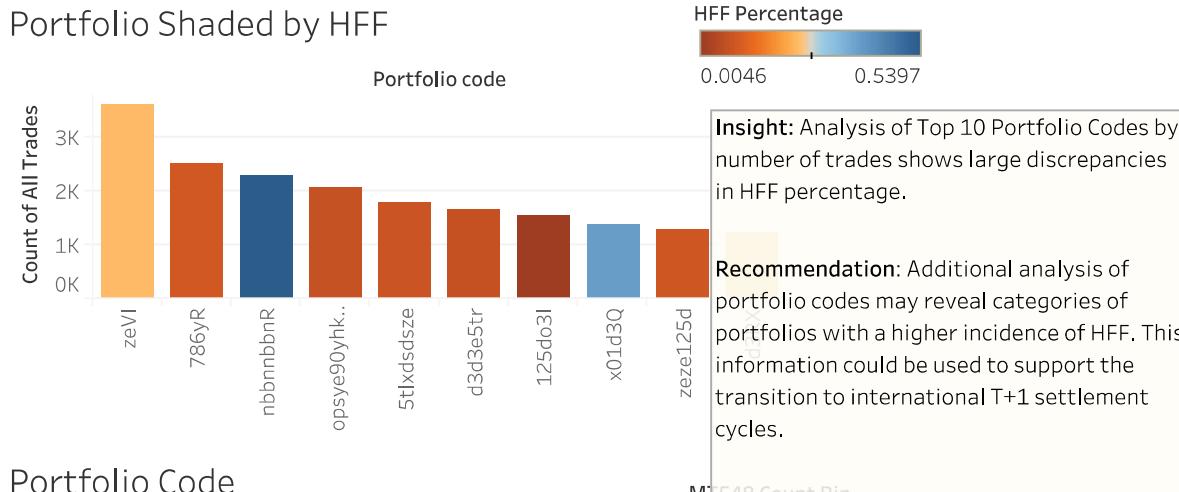
Reason Codes

Additional Insights

Sifting through the data yielded interesting insights that are included in this section. While they do not further the strategic goals of this project, they identify areas that may benefit from additional analysis.

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