

# Stage 0 144A TRACE Daily Data Report

Open Source Bond Asset Pricing

2025-12-06

## Abstract

This document presents the data processing pipeline for 144A Trade Reporting and Compliance Engine (TRACE) data, converting intraday transaction-level data to a daily format. We apply new error filters by Dickerson et al. (2024) which are more conservative than Rossi (2014). The new filters first attempt to correct for decimal shift errors and then apply a rules-based approach to eliminate data entry errors. As a result, less data is discarded, and the potential for false-positive data entry errors is reduced. In addition, for each and every bond `cusip_id` that is impacted by *any* of the Dickerson et al. (2024) filters, the time-series of its transaction-level price series is plotted and retained in this report. The data processing pipeline is part of the Open Source Bond Asset Pricing initiative (Dickerson et al., 2024), which aims to provide transparent and reproducible methods for corporate bond research.

## 1 Configured Filters and Parameters

Table 1: Error-Correction Filters and Module Parameters

Parameter	Value
<b>Panel A: Error-Correction and Filtering Toggles</b>	
dick_nielsen	0n
decimal_shift_corrector	0n
trading_time	Off
trading_calendar	0n
price_filters	0n
volume_filter_toggle	Off
bounce_back_filter	0n
yld_price_filter	0n
amtout_volume_filter	0n
trd_exe_mat_filter	0n
flag_initial_price_errors	0n
<b>Panel B: Decimal-Shift Parameters</b>	
factors	(0.1, 0.01, 10, 100)
tol_pct_good	0.02
tol_abs_good	8
tol_pct_bad	0.05
low_pr	5
high_pr	300
anchor	rolling
window	5
improvement_frac	0.2
par_snap	0n
par_band	15
output_type	cleaned
<b>Panel C: Bounce-Back Parameters</b>	
threshold_abs	35
lookahead	5
max_span	5
window	5
back_to_anchor_tol	0.25
candidate_slack_abs	1
reassignment_margin_abs	5
use_unique_trailing_median	0n
par_spike_heuristic	0n
par_level	100
par_equal_tol	1e-08
par_min_run	3
par_cooldown_after_flag	2
<b>Panel D: Initial Price Error Parameters</b>	
abs_change	50
n_transactions	3

This table provides user-defined inputs related to the error correction functionality designed by Dickerson et al. (2024). Panel A lists overall options for correcting the TRACE transaction data for potential errors, Panel B lists decimal-shift corrector settings, Panel C the bounce-back filter settings, and Panel D the initial price error filter settings, all described in Dickerson et al. (2024). Additional information can be found on the `trace-data-pipeline` GitHub repository.

## 2 Filter Tables

Table 2: FISD Parameter Settings

FISD Parameters	Value
<code>currency_usd_only</code>	0n
<code>fixed_rate_only</code>	0n
<code>non_convertible_only</code>	0n
<code>non_asset_backed_only</code>	0n
<code>exclude_bond_types</code>	0n
<code>valid_coupon_frequency_only</code>	0n
<code>require_accrual_fields</code>	0n
<code>principal_amt_eq_1000_only</code>	0n
<code>exclude_equity_index_linked</code>	0n
<code>enforce_tenor_min</code>	0n
<code>invalid_coupon_freq</code>	[-1, 13, 14, 15, 16]
<code>excluded_bond_types</code>	[TXMU, CCOV, CPAS, MBS, FGOV, USSTC, USBD, USNT, USSP, USSI, FGS, USBL, ABS, 030Y, 010Y, 05Y, 03Y, 04W, 013W, 026W, 052W, CCUR, ADEB, AMTN, ASPZ, EMTN, ADNT, ARNT, TPCS, CPIK, PS, PSTK]
<code>tenor_min_years</code>	1

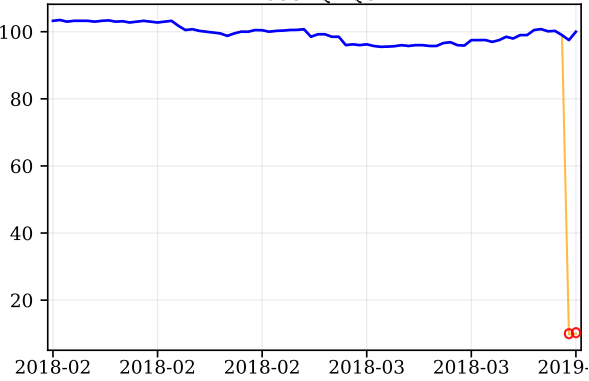
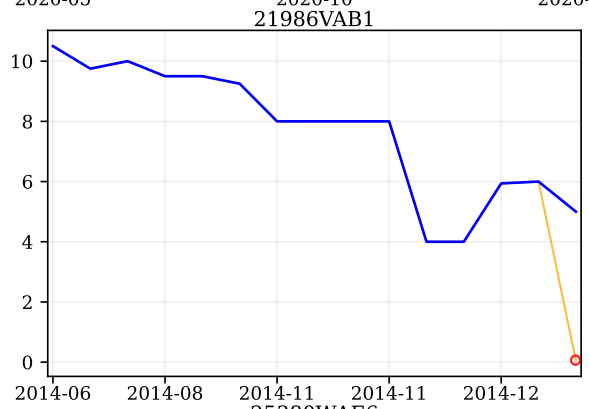
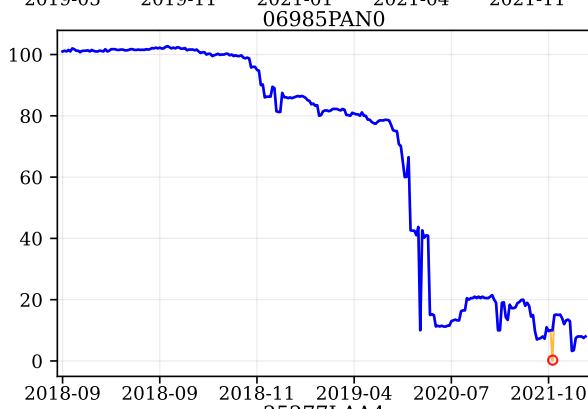
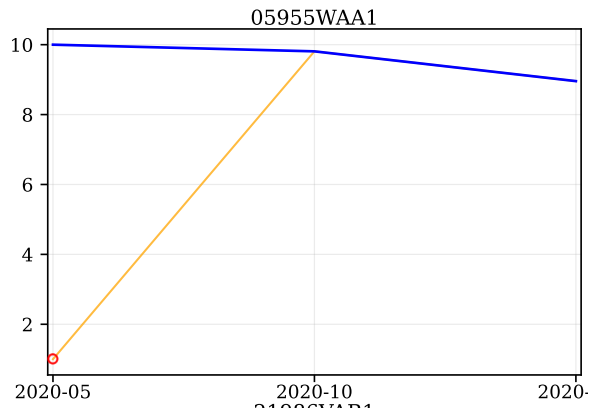
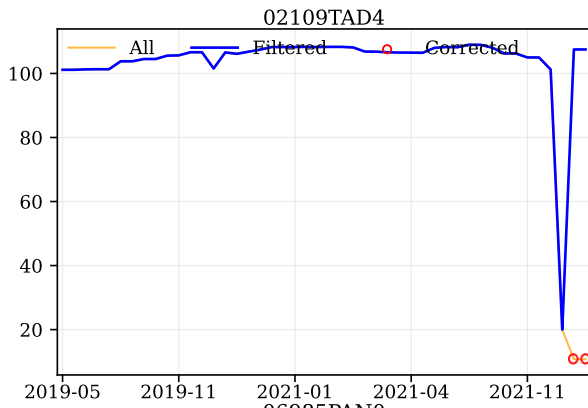
This table summarises the FISD universe-construction filters and their values. These values are set in the `_trace_settings.py` Python script in the `FISD_PARAMS` dictionary input. Additional information can be found on the `trace-data-pipeline` GitHub repository.

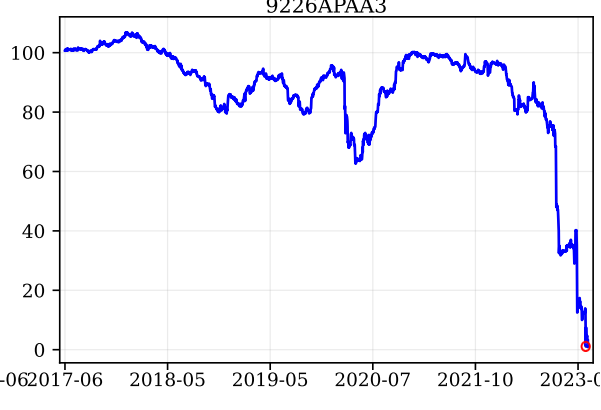
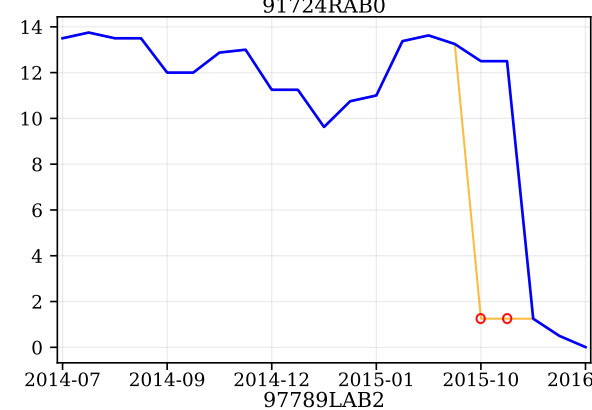
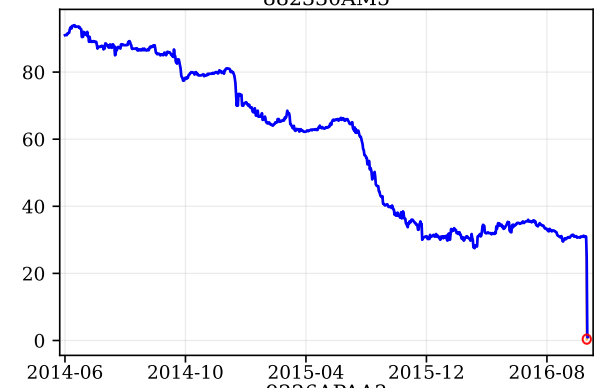
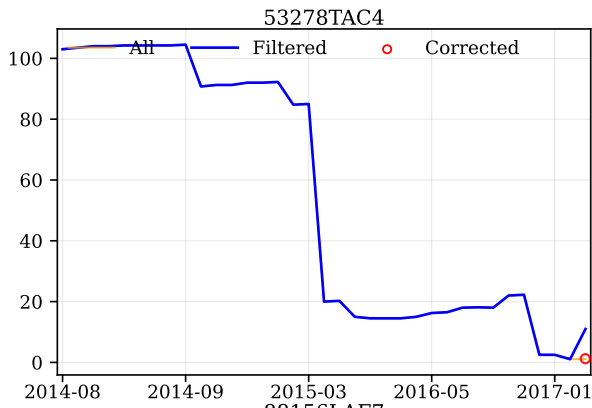
Table 3: TRACE Transaction-Level Filter Records

Filter	$N_{pre}$	$N_{post}$	Removed	% Removed
<b>Panel A: FISD Universe Construction Filters</b>				
start	710,098	710,098	0	0.000
USD currency	710,098	702,973	7,125	1.003
fixed rate	702,973	485,017	217,956	30.694
non convertible	485,017	478,033	6,984	0.984
non asset backed	478,033	476,974	1,059	0.149
exclude gov muni ABS types	476,974	286,623	190,351	26.806
valid coupon frequency	286,623	285,764	859	0.121
complete accrual fields	285,764	281,809	3,955	0.557
principal_amt == 1,000	281,809	251,182	30,627	4.313
exclude equity and index linked	251,182	114,566	136,616	19.239
tenor >= 1.0 year(s)	114,566	111,727	2,839	0.400
Only keep 144A bonds	111,727	18,734	92,993	13.096
<b>Panel B: Dickerson–Rossetti–Robotti Filters</b>				
Filter	$N_{pre}$	$N_{post}$	Removed/Corrected	% Removed
dick_nielsen_filter	14,596,673	13,999,058	597,615	4.094
decimal_shift	13,999,058	13,999,058	22	0.000
trading_time_filter (skipped)	13,999,058	13,999,058	0	0.000
calendar_filter	13,999,058	13,993,553	5,505	0.038
neg_price_filter	13,993,553	13,993,552	1	0.000
large_price_filter	13,993,552	13,993,551	1	0.000
volume_filter (skipped)	13,993,551	13,993,551	0	0.000
bounce_back_filter	13,993,551	13,993,436	115	0.001
price_yld_filter	13,993,436	13,993,435	1	0.000
volume_offamt_filter	13,993,435	13,989,148	4,287	0.029
exctn_mat_dt_filter	13,989,148	13,988,437	711	0.005
init_price_error_filter	13,988,437	13,988,427	10	0.000
overall	14,596,673	13,988,427	608,268	4.167
<b>Panel C: van Binsbergen et al. and Dick–Nielsen Cleaning Steps</b>				
Filter	$N_{pre}$	$N_{post}$	Removed	% Removed
remove_cancellations	14,596,673	14,014,997	581,676	3.985
remove_corrections	14,014,997	14,014,990	7	0.000
remove_reversals	14,014,990	13,999,061	15,929	0.109
agency_fill_side	13,999,061	13,999,061	0	0.000
overall	14,596,673	13,999,061	597,612	4.094

This table presents the sequential application of data filters to the TRACE enhanced dataset. Panel A shows the FISD corporate bond universe-construction filters. Panel B shows filters from Dickerson et al. (2024), DRR. Panel C shows cleaning steps from van Binsbergen et al. (2025), BNS and Dick-Nielsen (2009, 2014), DN, which breaks down the detailed steps in the `dick_nielsen_filter` filter in the first row of Panel B. The filters `pre_settle_<=2d` to `pre_exclude_special_cond` are from BNS, the remainder are from DN.  $N_{pre}$  and  $N_{post}$  indicate row counts before and after each filter. % Removed is always recorded as the number of transactions removed divided by the total number of transactions. Additional information can be found on the `trace-data-pipeline` GitHub repository.

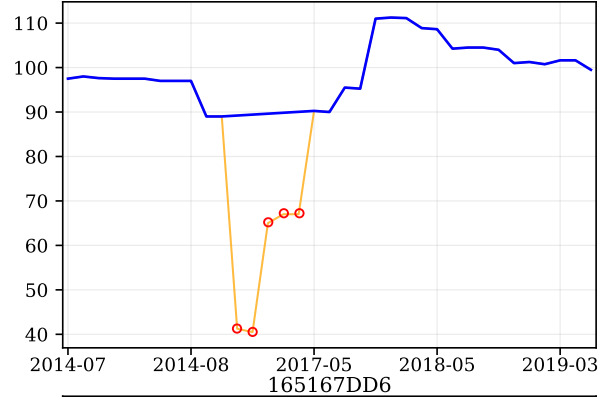
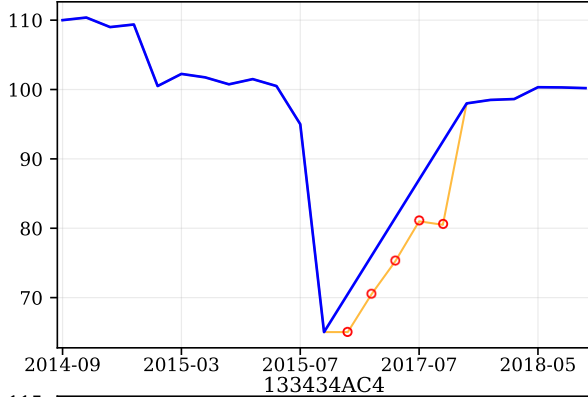
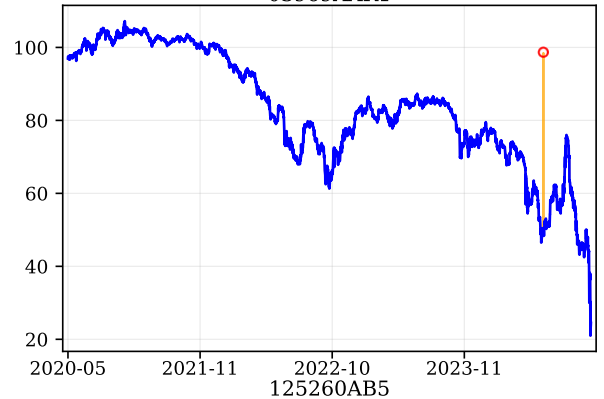
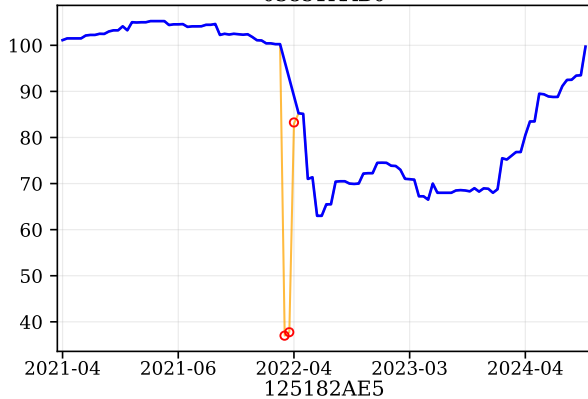
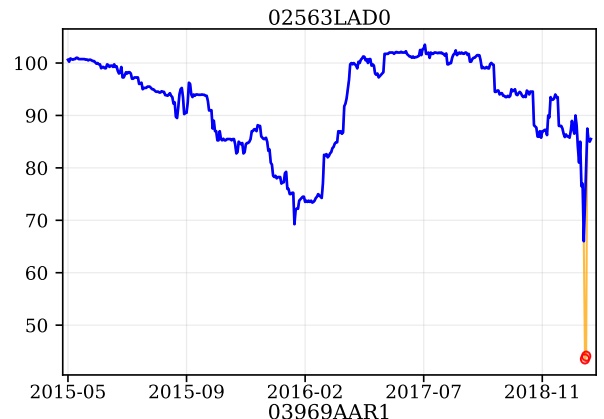
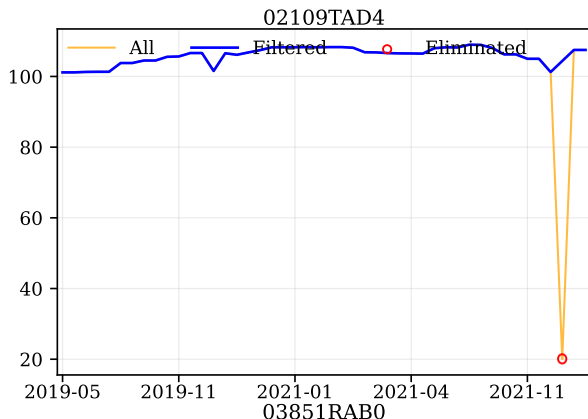
### 3 Decimal Shift Corrections

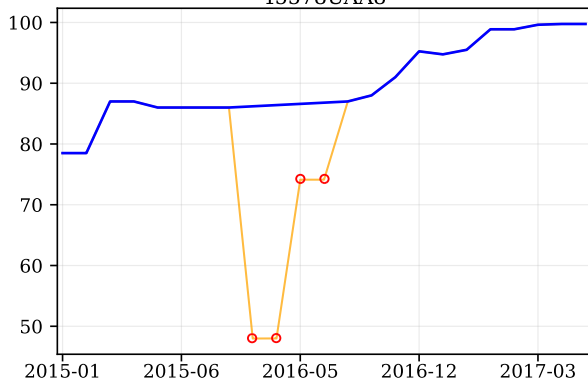
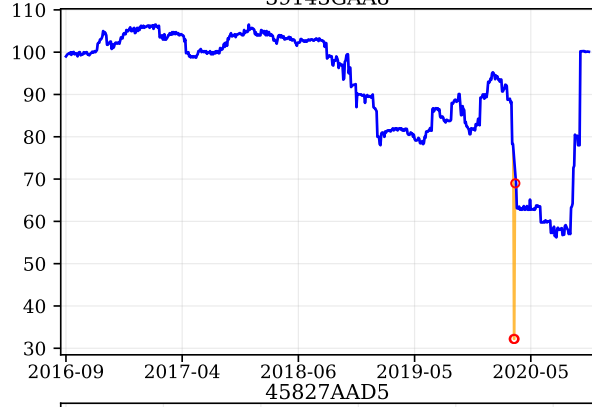
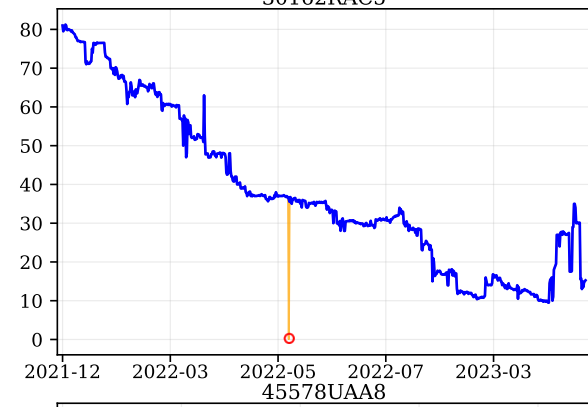
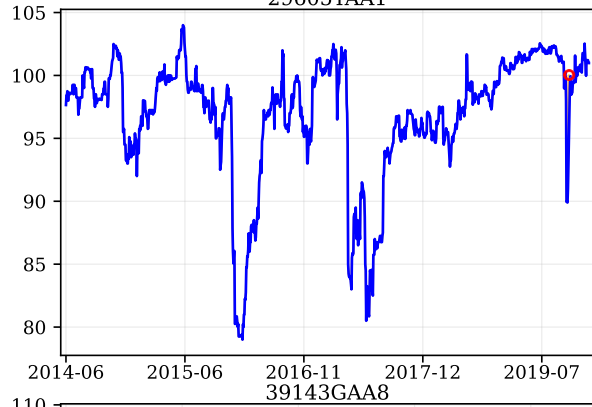
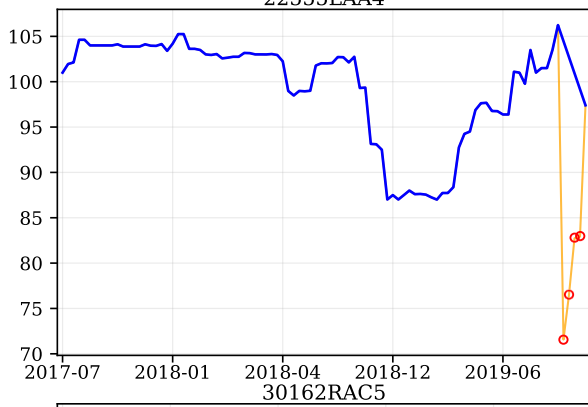
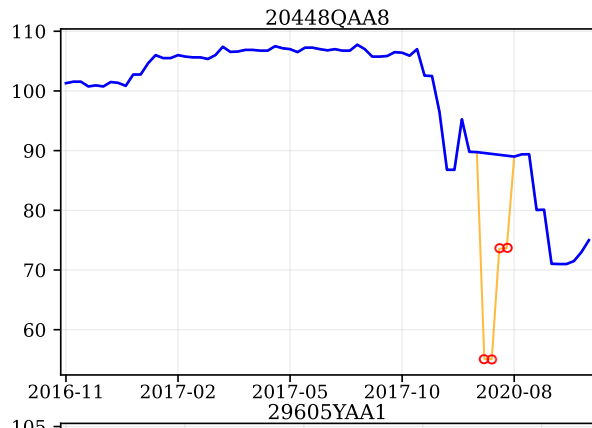
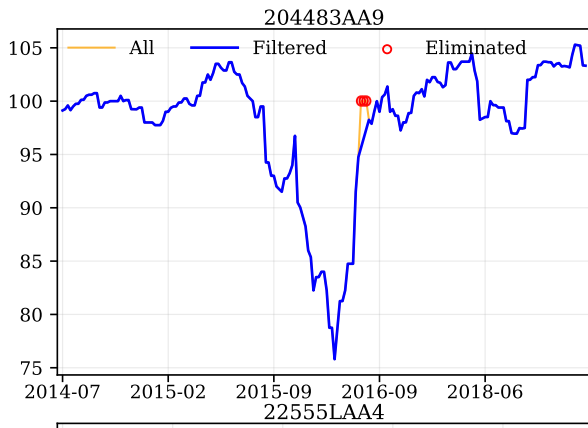


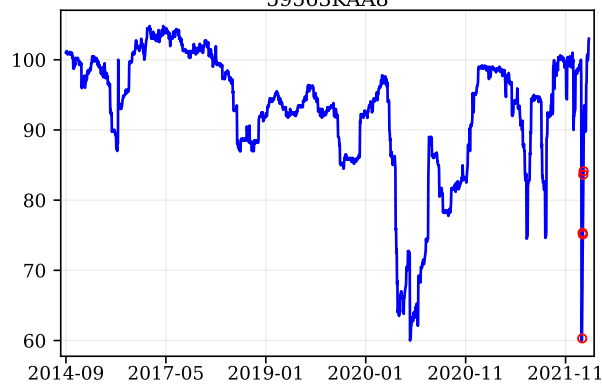
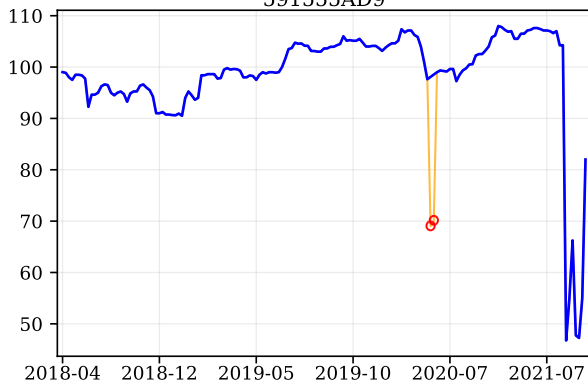
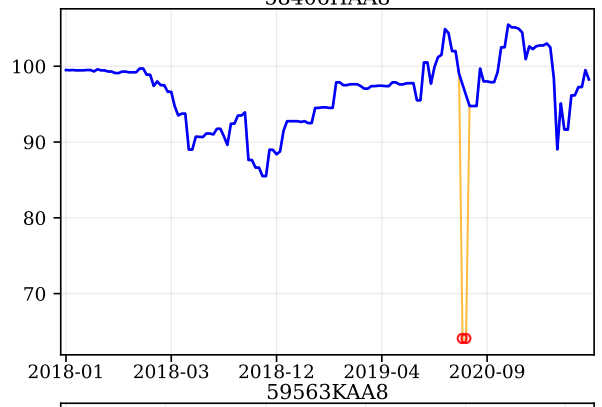
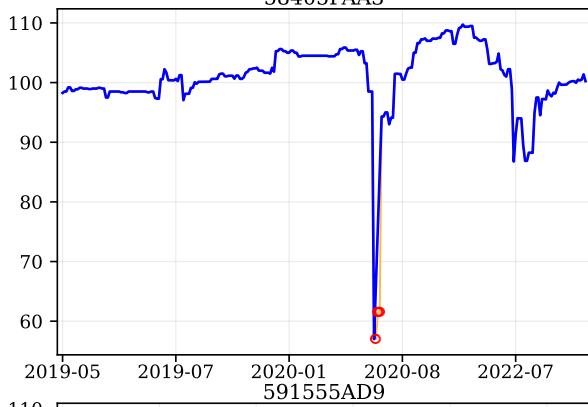
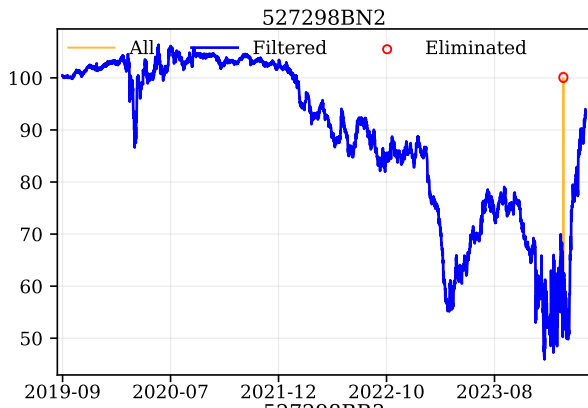


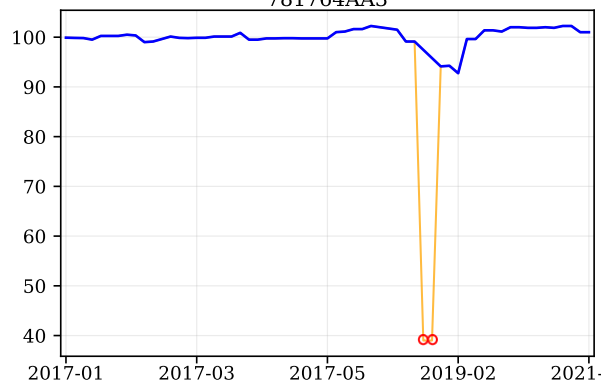
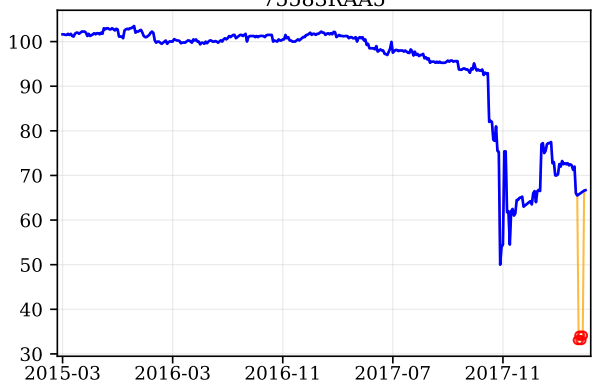
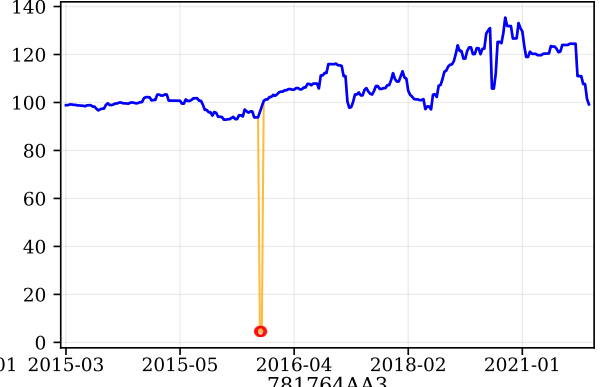
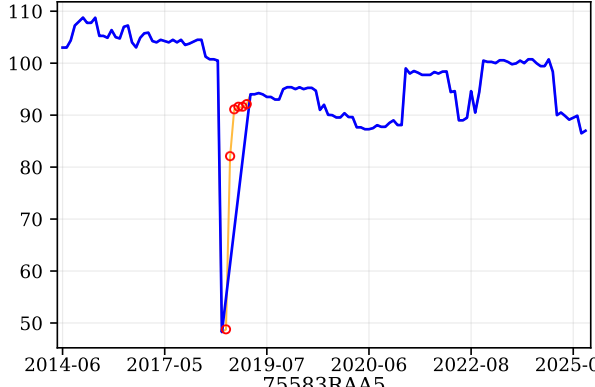
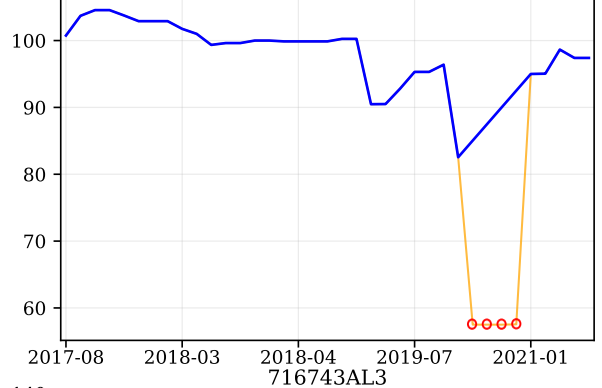
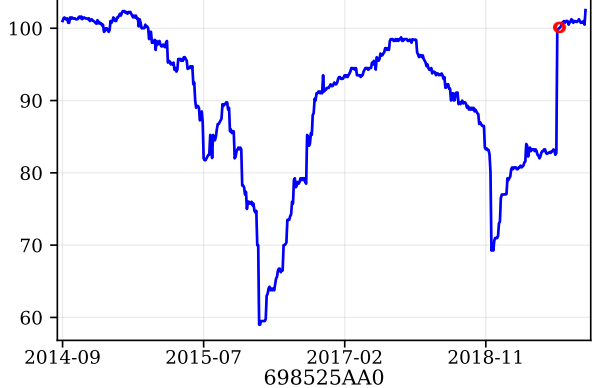
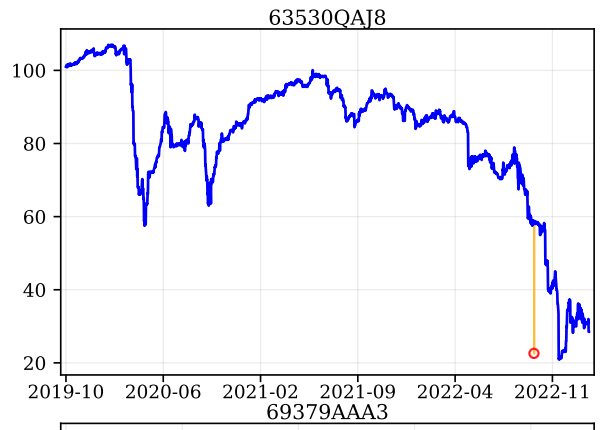
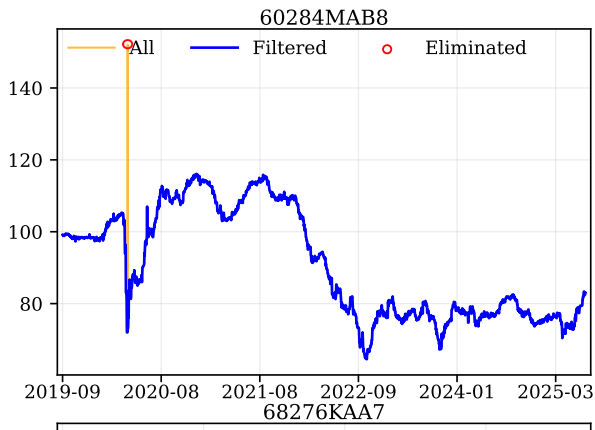
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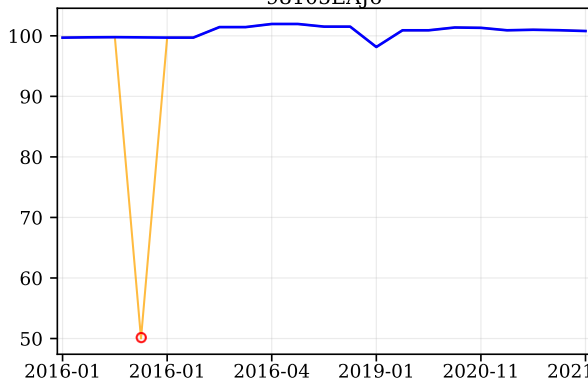
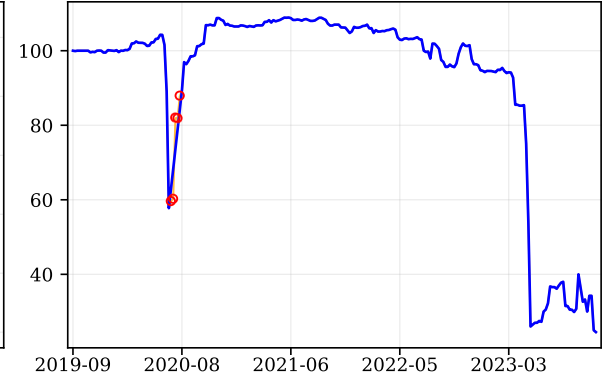
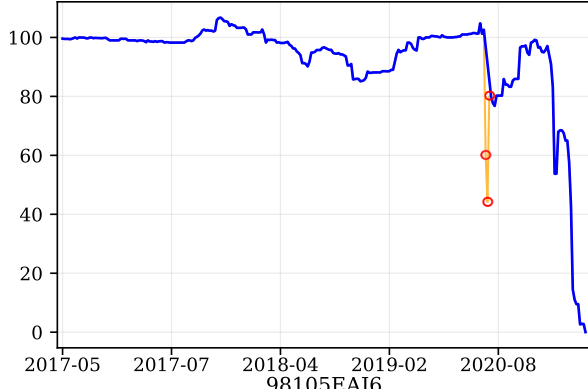
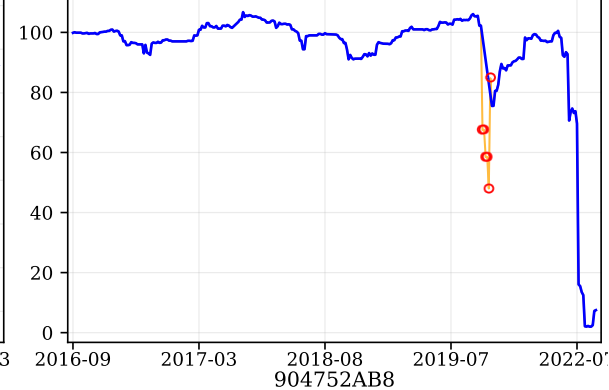
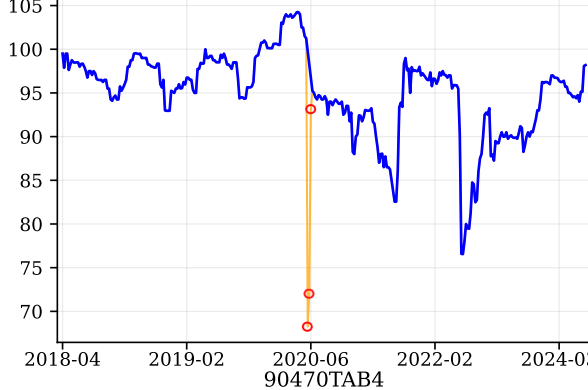
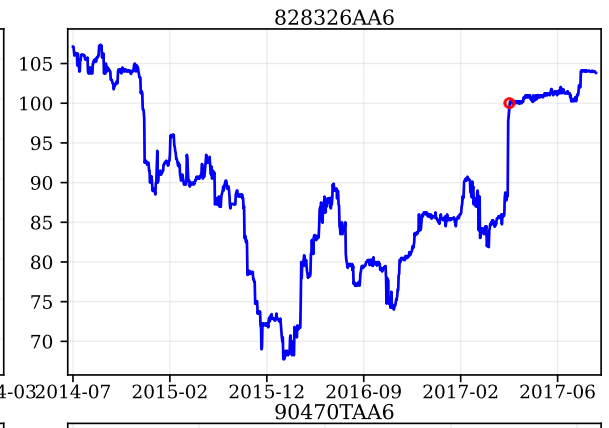
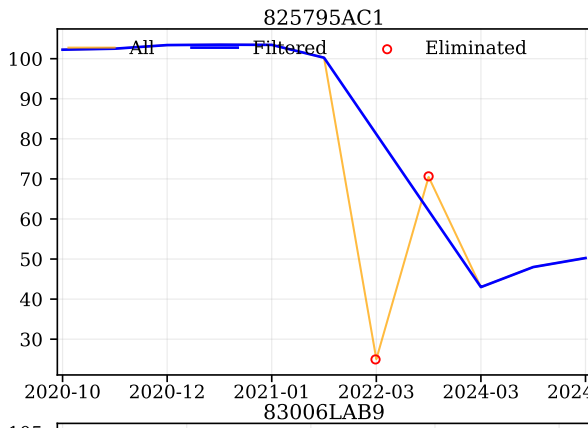
## 4 Bounce Back Corrections





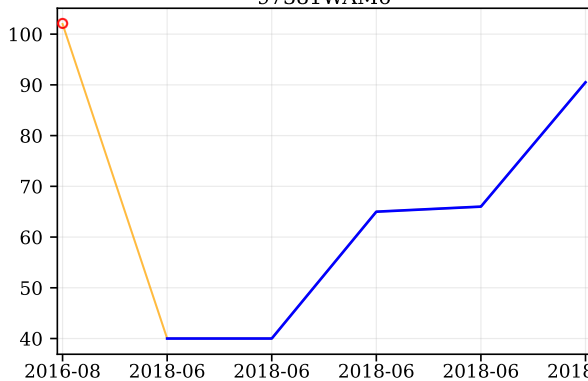
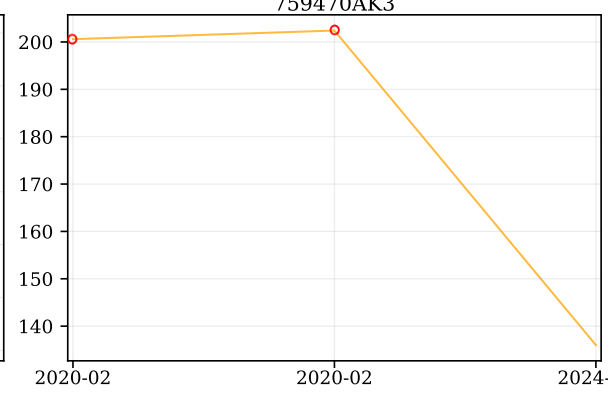
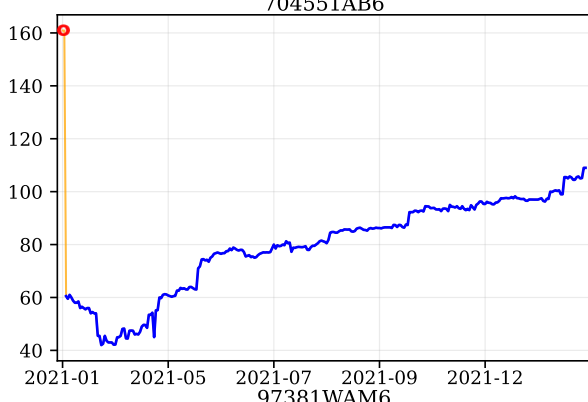
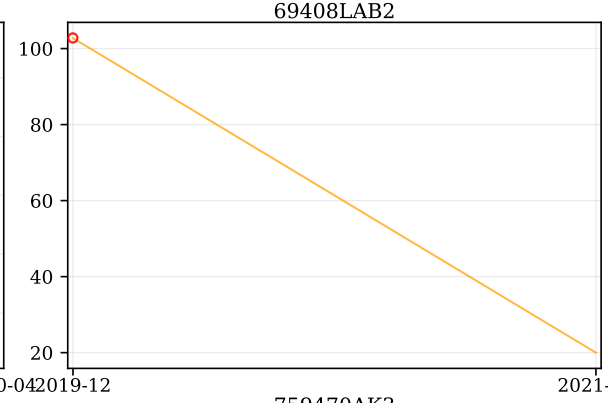
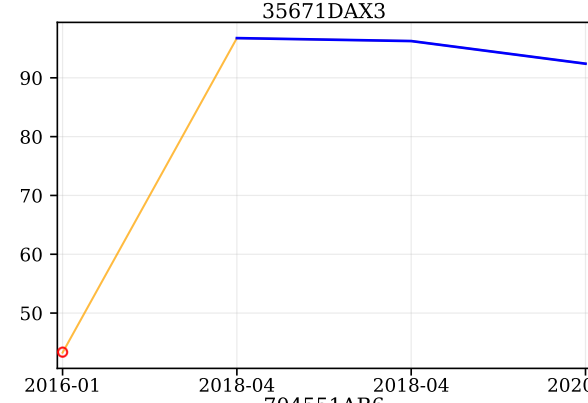
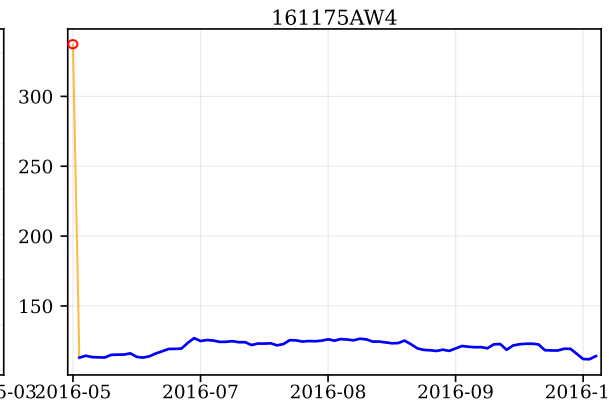
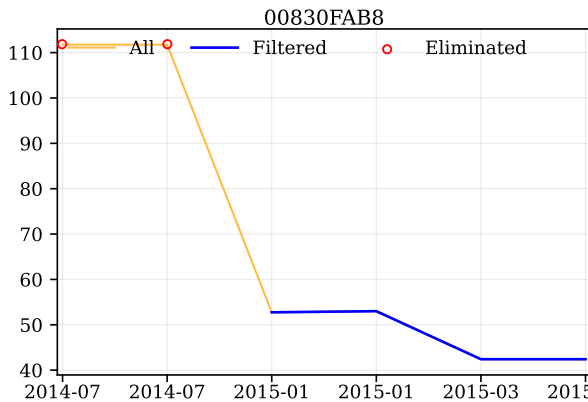






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## 5 Initial Price Error Corrections



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## References

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