ppsynth (R package) certification report

Compiled and pure-R engines vs. the Python engines of PPSYNTH v2.6.1

14 October 2026

```
Date: 2026-10-14 17:21 CDT
R: R version 4.3.3 (2024-02-29)
Rcpp: 1.0.12
Compiler: g++ (Ubuntu 13.3.0), -O2
BLAS: /usr/lib/x86_64-linux-gnu/blas/libblas.so.3.12.0
LAPACK: /usr/lib/x86_64-linux-gnu/lapack/liblapack.so.3.12.0
Platform: x86_64-pc-linux-gnu (64-bit)
OS: Ubuntu 24.04.5 LTS
CPU cores: 2
CPU: Intel(R) Xeon(R) Processor @ 2.80GHz
Python reference engines: ppsynth_core.py and ppsynth_fast.py, PPSYNTH v2.6.1 (git 42a9ab7), numpy 2.5.3,
ppsynth R package: 0.2.0 (engines: cpp = src/solvers.cpp, r = R/engine.R)
```

What was compared

The package has two engines running the same algorithm with the same solver settings (corner solves 8000 iterations / tol 1e-12; block-coordinate outer loop 300 / 1e-11; inner FISTA 800 / 1e-9; warm start along the grid; eta = 1/(2 x mean LOO loss); first-crossing pooling quartiles): `engine = "r"`, a line-by-line port of `ppsynth_core.py`, and `engine = "cpp"`, a compiled inner solver mirroring `fast_core.py` (the numba engine). The Python engines were run once on each design by `tools/make_fixtures.py` and `tools/make_fixture_germany_inference.py`, which wrote every returned quantity to JSON with shortest round-trip doubles. `tools/gate.R` then ran each R-package engine on the same inputs and recorded, for every returned quantity, the maximum absolute deviation from the Python result; text fields (caution messages) were compared for exact identity and integer fields (selected grid index, flagged outcomes, violation periods) exactly. `tools/engines_compare.R` compared the two R-package engines with each other directly, and the compiled engine at `cores = 1` against `cores = 2`.

Designs: the German reunification panel (T0 = 20, 15 post, 20 donors, 5 outcomes) under aggregation, CV (default holdout and holdout = 3), four fixed lambdas (0, 0.3, 3, Inf), and whole-pipeline placebo inference under both p-value conventions (numba engine reference); the shipped 9-unit test panel (T0 = 10, 8 donors, 3 outcomes) under aggregation and CV with placebo inference under aggregation (both conventions), CV and fixed lambda = 1; and the three self-test designs of `ppsynth_setup`.

Standard (KG ruling, 14 Oct 2026): 1e-8 absolute on every numeric field; exact identity on every text, integer and NULL field. The package tests enforce this (`CERT_TOL` in `tests/testthat/helper-fixtures.R`).

Headline

engine = "cpp" (vs Python): 499 fields compared; 0 structural mismatches; 0 text fields differing; largest numeric deviation 1.64e-09 (`realized_pooling`, fixture `selftest_toy`, fit `aggregate`); largest deviation in any weight 6.54e-13; largest deviation in any p-value 4.44e-16.

engine = "r" (vs Python): 424 fields compared; 0 structural mismatches; 0 text fields differing; largest numeric deviation 1.82e-09 (`placebo_gaps`, fixture `testpanel`, fit `aggregate_ps`); largest deviation in any weight 9.03e-14; largest deviation in any p-value 3.33e-16.

cpp vs r directly (same inputs, same R session): 206 fields; largest deviation 1.82e-09; structural mismatches 0.

cores = 1 vs cores = 2 (compiled engine): 206 fields; largest deviation 0 (results are bit-identical, as designed: each fold and each placebo unit is computed by the same code whichever core runs it).

Fails against the 1e-8 standard: 0.

None of the engines is bit-identical to another: they call different BLAS kernels (or none) and reduce sums in different orders, so the last bit of every floating-point operation can differ, and the solvers run hundreds of thousands of such operations. On the direct fits that amounts to agreement at the 1e-14 to 1e-12 level end to end. The handful of larger numbers (up to 1.8e-9 on two placebo gap paths of the test panel for the pure-R engine, and 1.6e-9 on the toy design's realized pooling for the compiled engine) are the size of the inner solver tolerance (1e-9), which is consistent with a convergence test flipping on a last-bit difference so that one engine stops a solve one iteration earlier than the other; both answers are then within the solver's own tolerance of each other. This mechanism was not traced iteration by iteration and is stated as the likely explanation, not a verified one. Every p-value, under every convention, on every design, agrees to machine precision: the placebo ranks are identical.

Maximum deviation by field, each engine vs Python

field	engine = cpp	engine = r
placebo_gaps	1.18e-12	1.82e-09
realized_pooling	1.64e-09	2.10e-12
stats_placebo	2.90e-12	4.78e-10
agg_mass	6.34e-11	4.01e-14
eta	1.47e-11	2.44e-14
cv_curve	6.00e-12	5.75e-12
pooling_grid	4.75e-12	4.88e-12
pooling_q25	1.83e-12	2.40e-12
pooling_q75	1.74e-12	1.19e-12
att_path	1.32e-12	3.98e-13
stats_treated	7.90e-13	8.22e-13
tau	6.74e-13	1.20e-13
gamma	6.54e-13	9.03e-14
gamma_common	3.62e-13	3.15e-14
pre_rmspe	2.46e-13	3.74e-14
gamma_path	1.33e-13	9.03e-14
fits	2.89e-15	3.39e-15
p_joint_mean	4.44e-16	2.22e-16
p_outcome	4.44e-16	3.33e-16
p_joint_max	2.22e-16	2.22e-16
support_outside_share	1.11e-16	1.11e-16
lam	0	0
lam_grid	0	0
pooling_degenerate	0	0
poor_fit_outcomes	0	0
support_outside_periods	0	0

Timings

Wall-clock seconds on the machine above. Each measurement was taken while another job occupied the second core, so these are pessimistic by up to a factor of two. For scale, the numba engine's own placebo run on the Germany panel (21 full-pipeline re-estimations) took 378 s on this machine under the same conditions, and the PPSYNTH README quotes 1-5 minutes for it on a laptop.

fixture	fit	engine	cores	seconds
germany_inference	aggregate_fast	cpp	2	5.44
germany_inference	aggregate_ps	cpp	2	128.87
germany_inference	aggregate_strict	cpp	2	128.72
germany_fits	aggregate	cpp	1	5.45
germany_fits	cv	cpp	1	0.66
germany_fits	cv_holdout3	cpp	1	0.58
germany_fits	lam_0.0	cpp	1	0.25
germany_fits	lam_0.3	cpp	1	0.27
germany_fits	lam_3.0	cpp	1	0.25
germany_fits	lam_inf	cpp	1	0.27
selftest_guardrail	aggregate	cpp	1	0.06
selftest_guardrail	cv	cpp	1	0.01
selftest_support	main	cpp	1	0.26
selftest_support	boundary	cpp	1	0.33
selftest_support	single	cpp	1	0.03
selftest_toy	aggregate	cpp	1	0.04
testpanel	aggregate	cpp	1	0.25
testpanel	cv	cpp	1	0.04
testpanel	aggregate_ps	cpp	1	2.62
testpanel	aggregate_strict	cpp	1	2.46
testpanel	cv_ps	cpp	1	0.41
testpanel	lam_1_ps	cpp	1	0.22
germany_fits	aggregate	r	1	820.83
germany_fits	cv	r	1	81.04
germany_fits	cv_holdout3	r	1	67.44
germany_fits	lam_0.0	r	1	31.18
germany_fits	lam_0.3	r	1	32.21
germany_fits	lam_3.0	r	1	34.35
germany_fits	lam_inf	r	1	33.76
selftest_guardrail	aggregate	r	1	36.18
selftest_guardrail	cv	r	1	4.98
selftest_support	main	r	1	141.35
selftest_support	boundary	r	1	175.71
selftest_support	single	r	1	16.51
selftest_toy	aggregate	r	1	23.03
testpanel	aggregate	r	1	92.23
testpanel	cv	r	1	15.27
testpanel	aggregate_ps	r	1	971.71
testpanel	aggregate_strict	r	1	926.08
testpanel	cv_ps	r	1	150.54
testpanel	lam_1_ps	r	1	77.24

Direct comparison runs (`engines_compare.R`), seconds per fit:

fixture	fit	cpp seconds	r seconds	speedup x
selftest_toy	aggregate	0.07	21.1	285
selftest_guardrail	aggregate	0.10	39.2	400
selftest_guardrail	cv	0.02	6.5	309
selftest_support	main	0.25	145.0	583
testpanel	aggregate	0.24	84.4	359
testpanel	cv	0.05	17.7	386
germany_fits	aggregate	5.80	619.4	107

fixture	fit	cpp seconds	r seconds	speedup x
germany_fits	cv	0.68	75.0	111
germany_fits	lam_0.3	0.31	27.6	89
germany_fits	lam_inf	0.30	28.7	96
testpanel	aggregate_ps	2.29	914.6	400

Full table, both engines vs Python

engine	fixture	fit	field	max abs dev	note
cpp	germany_inference	aggregate_fast	gamma	5.56e-14	n=100
cpp	germany_inference	aggregate_fast	gamma_common	1.70e-14	n=20
cpp	germany_inference	aggregate_fast	tau	3.35e-14	n=5
cpp	germany_inference	aggregate_fast	att_path	7.19e-14	n=175
cpp	germany_inference	aggregate_fast	lam	0	n=1
cpp	germany_inference	aggregate_fast	lam_grid	0	n=10
cpp	germany_inference	aggregate_fast	agg_mass	7.51e-14	n=10
cpp	germany_inference	aggregate_fast	eta	1.20e-15	n=1
cpp	germany_inference	aggregate_fast	cv_curve	0	both NULL
cpp	germany_inference	aggregate_fast	gamma_path	1.33e-13	n=1000
cpp	germany_inference	aggregate_fast	pre_rmspe	3.55e-15	n=5
cpp	germany_inference	aggregate_fast	poor_fit_outcomes	0	n=2
cpp	germany_inference	aggregate_fast	cv_warning	0	both NULL
cpp	germany_inference	aggregate_fast	support_outside_share	0	n=5
cpp	germany_inference	aggregate_fast	support_outside_periods	0	n=15
cpp	germany_inference	aggregate_fast	support_warning	0	identical text
cpp	germany_inference	aggregate_fast	realized_pooling	1.47e-12	n=1
cpp	germany_inference	aggregate_fast	pooling_grid	3.06e-12	n=10
cpp	germany_inference	aggregate_fast	pooling_q25	1.01e-12	n=1
cpp	germany_inference	aggregate_fast	pooling_q75	1.74e-12	n=1
cpp	germany_inference	aggregate_fast	pooling_degenerate	0	n=1
cpp	germany_inference	aggregate_ps	p_outcome	4.44e-16	n=5
cpp	germany_inference	aggregate_ps	p_joint_max	1.11e-16	n=1
cpp	germany_inference	aggregate_ps	p_joint_mean	1.67e-16	n=1
cpp	germany_inference	aggregate_ps	stats_treated	3.10e-13	n=5
cpp	germany_inference	aggregate_ps	stats_placebo	2.90e-12	n=100
cpp	germany_inference	aggregate_ps	placebo_gaps	6.78e-14	n=3500
cpp	germany_inference	aggregate_ps:treated_fit	gamma	5.56e-14	n=100
cpp	germany_inference	aggregate_ps:treated_fit	gamma_common	1.70e-14	n=20
cpp	germany_inference	aggregate_ps:treated_fit	tau	3.35e-14	n=5
cpp	germany_inference	aggregate_ps:treated_fit	att_path	7.19e-14	n=175
cpp	germany_inference	aggregate_ps:treated_fit	lam	0	n=1
cpp	germany_inference	aggregate_ps:treated_fit	lam_grid	0	n=10
cpp	germany_inference	aggregate_ps:treated_fit	agg_mass	7.51e-14	n=10
cpp	germany_inference	aggregate_ps:treated_fit	eta	1.20e-15	n=1
cpp	germany_inference	aggregate_ps:treated_fit	cv_curve	0	both NULL
cpp	germany_inference	aggregate_ps:treated_fit	gamma_path	1.33e-13	n=1000
cpp	germany_inference	aggregate_ps:treated_fit	pre_rmspe	3.55e-15	n=5
cpp	germany_inference	aggregate_ps:treated_fit	poor_fit_outcomes	0	n=2
cpp	germany_inference	aggregate_ps:treated_fit	cv_warning	0	both NULL
cpp	germany_inference	aggregate_ps:treated_fit	support_outside_share	0	n=5
cpp	germany_inference	aggregate_ps:treated_fit	support_outside_periods	0	n=15
cpp	germany_inference	aggregate_ps:treated_fit	support_warning	0	identical text

engine	fixture	fit	field	max abs dev	note
cpp	germany_inference	aggregate_ps:treated_fit	realized_pooling	1.47e-12	n=1
cpp	germany_inference	aggregate_ps:treated_fit	pooling_grid	3.06e-12	n=10
cpp	germany_inference	aggregate_ps:treated_fit	pooling_q25	1.01e-12	n=1
cpp	germany_inference	aggregate_ps:treated_fit	pooling_q75	1.74e-12	n=1
cpp	germany_inference	aggregate_ps:treated_fit	pooling_degenerate	0	n=1
cpp	germany_inference	aggregate_strict	p_outcome	4.44e-16	n=5
cpp	germany_inference	aggregate_strict	p_joint_max	1.67e-16	n=1
cpp	germany_inference	aggregate_strict	p_joint_mean	4.44e-16	n=1
cpp	germany_inference	aggregate_strict	stats_treated	3.10e-13	n=5
cpp	germany_inference	aggregate_strict	stats_placebo	2.90e-12	n=100
cpp	germany_inference	aggregate_strict	placebo_gaps	6.78e-14	n=3500
cpp	germany_inference	aggregate_strict:treated_fit	gamma	5.56e-14	n=100
cpp	germany_inference	aggregate_strict:treated_fit	gamma_common	1.70e-14	n=20
cpp	germany_inference	aggregate_strict:treated_fit	tau	3.35e-14	n=5
cpp	germany_inference	aggregate_strict:treated_fit	att_path	7.19e-14	n=175
cpp	germany_inference	aggregate_strict:treated_fit	lam	0	n=1
cpp	germany_inference	aggregate_strict:treated_fit	lam_grid	0	n=10
cpp	germany_inference	aggregate_strict:treated_fit	agg_mass	7.51e-14	n=10
cpp	germany_inference	aggregate_strict:treated_fit	eta	1.20e-15	n=1
cpp	germany_inference	aggregate_strict:treated_fit	cv_curve	0	both NULL
cpp	germany_inference	aggregate_strict:treated_fit	gamma_path	1.33e-13	n=1000
cpp	germany_inference	aggregate_strict:treated_fit	pre_rmspe	3.55e-15	n=5
cpp	germany_inference	aggregate_strict:treated_fit	poor_fit_outcomes	0	n=2
cpp	germany_inference	aggregate_strict:treated_fit	cv_warning	0	both NULL
cpp	germany_inference	aggregate_strict:treated_fit	support_outside_share	0	n=5
cpp	germany_inference	aggregate_strict:treated_fit	support_outside_periods	0	n=15
cpp	germany_inference	aggregate_strict:treated_fit	support_warning	0	identical text
cpp	germany_inference	aggregate_strict:treated_fit	realized_pooling	1.47e-12	n=1
cpp	germany_inference	aggregate_strict:treated_fit	pooling_grid	3.06e-12	n=10
cpp	germany_inference	aggregate_strict:treated_fit	pooling_q25	1.01e-12	n=1
cpp	germany_inference	aggregate_strict:treated_fit	pooling_q75	1.74e-12	n=1
cpp	germany_inference	aggregate_strict:treated_fit	pooling_degenerate	0	n=1
cpp	germany_fits	aggregate	gamma	5.56e-14	n=100
cpp	germany_fits	aggregate	gamma_common	1.70e-14	n=20
cpp	germany_fits	aggregate	tau	3.35e-14	n=5
cpp	germany_fits	aggregate	att_path	7.19e-14	n=175
cpp	germany_fits	aggregate	lam	0	n=1
cpp	germany_fits	aggregate	lam_grid	0	n=10
cpp	germany_fits	aggregate	agg_mass	7.51e-14	n=10
cpp	germany_fits	aggregate	eta	1.20e-15	n=1
cpp	germany_fits	aggregate	cv_curve	0	both NULL
cpp	germany_fits	aggregate	gamma_path	1.33e-13	n=1000
cpp	germany_fits	aggregate	pre_rmspe	3.55e-15	n=5
cpp	germany_fits	aggregate	poor_fit_outcomes	0	n=2
cpp	germany_fits	aggregate	cv_warning	0	both NULL
cpp	germany_fits	aggregate	support_outside_share	0	n=5
cpp	germany_fits	aggregate	support_outside_periods	0	n=15
cpp	germany_fits	aggregate	support_warning	0	identical text
cpp	germany_fits	aggregate	realized_pooling	1.47e-12	n=1
cpp	germany_fits	aggregate	pooling_grid	3.06e-12	n=10
cpp	germany_fits	aggregate	pooling_q25	1.01e-12	n=1
cpp	germany_fits	aggregate	pooling_q75	1.74e-12	n=1
cpp	germany_fits	aggregate	pooling_degenerate	0	n=1

engine	fixture	fit	field	max abs dev	note
cpp	germany_fits	cv	gamma	4.54e-14	n=100
cpp	germany_fits	cv	gamma_common	1.21e-14	n=20
cpp	germany_fits	cv	tau	3.30e-15	n=5
cpp	germany_fits	cv	att_path	1.42e-14	n=175
cpp	germany_fits	cv	lam	0	n=1
cpp	germany_fits	cv	lam_grid	0	n=10
cpp	germany_fits	cv	agg_mass	0	both NULL
cpp	germany_fits	cv	eta	0	both NULL
cpp	germany_fits	cv	cv_curve	6.00e-12	n=10
cpp	germany_fits	cv	gamma_path	1.33e-13	n=1000
cpp	germany_fits	cv	pre_rmspe	2.14e-15	n=5
cpp	germany_fits	cv	poor_fit_outcomes	0	n=2
cpp	germany_fits	cv	cv_warning	0	identical text
cpp	germany_fits	cv	support_outside_share	0	n=5
cpp	germany_fits	cv	support_outside_periods	0	n=15
cpp	germany_fits	cv	support_warning	0	identical text
cpp	germany_fits	cv	realized_pooling	1.74e-12	n=1
cpp	germany_fits	cv	pooling_grid	3.06e-12	n=10
cpp	germany_fits	cv	pooling_q25	0	both NULL
cpp	germany_fits	cv	pooling_q75	0	both NULL
cpp	germany_fits	cv	pooling_degenerate	0	n=1
cpp	germany_fits	cv_holdout3	gamma	4.54e-14	n=100
cpp	germany_fits	cv_holdout3	gamma_common	1.21e-14	n=20
cpp	germany_fits	cv_holdout3	tau	3.30e-15	n=5
cpp	germany_fits	cv_holdout3	att_path	1.42e-14	n=175
cpp	germany_fits	cv_holdout3	lam	0	n=1
cpp	germany_fits	cv_holdout3	lam_grid	0	n=10
cpp	germany_fits	cv_holdout3	agg_mass	0	both NULL
cpp	germany_fits	cv_holdout3	eta	0	both NULL
cpp	germany_fits	cv_holdout3	cv_curve	4.17e-12	n=10
cpp	germany_fits	cv_holdout3	gamma_path	1.33e-13	n=1000
cpp	germany_fits	cv_holdout3	pre_rmspe	2.14e-15	n=5
cpp	germany_fits	cv_holdout3	poor_fit_outcomes	0	n=2
cpp	germany_fits	cv_holdout3	cv_warning	0	identical text
cpp	germany_fits	cv_holdout3	support_outside_share	0	n=5
cpp	germany_fits	cv_holdout3	support_outside_periods	0	n=15
cpp	germany_fits	cv_holdout3	support_warning	0	identical text
cpp	germany_fits	cv_holdout3	realized_pooling	1.74e-12	n=1
cpp	germany_fits	cv_holdout3	pooling_grid	3.06e-12	n=10
cpp	germany_fits	cv_holdout3	pooling_q25	0	both NULL
cpp	germany_fits	cv_holdout3	pooling_q75	0	both NULL
cpp	germany_fits	cv_holdout3	pooling_degenerate	0	n=1
cpp	germany_fits	lam_0.0	gamma	1.33e-13	n=100
cpp	germany_fits	lam_0.0	gamma_common	2.66e-14	n=20
cpp	germany_fits	lam_0.0	tau	1.13e-14	n=5
cpp	germany_fits	lam_0.0	att_path	2.31e-14	n=175
cpp	germany_fits	lam_0.0	lam	0	n=1
cpp	germany_fits	lam_0.0	lam_grid	0	n=10
cpp	germany_fits	lam_0.0	agg_mass	0	both NULL
cpp	germany_fits	lam_0.0	eta	0	both NULL
cpp	germany_fits	lam_0.0	cv_curve	0	both NULL
cpp	germany_fits	lam_0.0	gamma_path	1.33e-13	n=1000
cpp	germany_fits	lam_0.0	pre_rmspe	1.16e-15	n=5

engine	fixture	fit	field	max abs dev	note
cpp	germany_fits	lam_0.0	poor_fit_outcomes	0	n=2
cpp	germany_fits	lam_0.0	cv_warning	0	both NULL
cpp	germany_fits	lam_0.0	support_outside_share	0	n=5
cpp	germany_fits	lam_0.0	support_outside_periods	0	n=15
cpp	germany_fits	lam_0.0	support_warning	0	identical text
cpp	germany_fits	lam_0.0	realized_pooling	0	n=1
cpp	germany_fits	lam_0.0	pooling_grid	3.06e-12	n=10
cpp	germany_fits	lam_0.0	pooling_q25	0	both NULL
cpp	germany_fits	lam_0.0	pooling_q75	0	both NULL
cpp	germany_fits	lam_0.0	pooling_degenerate	0	n=1
cpp	germany_fits	lam_0.3	gamma	5.60e-14	n=100
cpp	germany_fits	lam_0.3	gamma_common	1.28e-14	n=20
cpp	germany_fits	lam_0.3	tau	5.83e-15	n=5
cpp	germany_fits	lam_0.3	att_path	1.99e-14	n=175
cpp	germany_fits	lam_0.3	lam	0	n=1
cpp	germany_fits	lam_0.3	lam_grid	0	n=10
cpp	germany_fits	lam_0.3	agg_mass	0	both NULL
cpp	germany_fits	lam_0.3	eta	0	both NULL
cpp	germany_fits	lam_0.3	cv_curve	0	both NULL
cpp	germany_fits	lam_0.3	gamma_path	1.33e-13	n=1000
cpp	germany_fits	lam_0.3	pre_rmspe	9.09e-16	n=5
cpp	germany_fits	lam_0.3	poor_fit_outcomes	0	n=2
cpp	germany_fits	lam_0.3	cv_warning	0	both NULL
cpp	germany_fits	lam_0.3	support_outside_share	0	n=5
cpp	germany_fits	lam_0.3	support_outside_periods	0	n=15
cpp	germany_fits	lam_0.3	support_warning	0	identical text
cpp	germany_fits	lam_0.3	realized_pooling	1.18e-12	n=1
cpp	germany_fits	lam_0.3	pooling_grid	3.06e-12	n=10
cpp	germany_fits	lam_0.3	pooling_q25	0	both NULL
cpp	germany_fits	lam_0.3	pooling_q75	0	both NULL
cpp	germany_fits	lam_0.3	pooling_degenerate	0	n=1
cpp	germany_fits	lam_3.0	gamma	9.99e-15	n=100
cpp	germany_fits	lam_3.0	gamma_common	2.69e-15	n=20
cpp	germany_fits	lam_3.0	tau	1.73e-15	n=5
cpp	germany_fits	lam_3.0	att_path	9.10e-15	n=175
cpp	germany_fits	lam_3.0	lam	0	n=1
cpp	germany_fits	lam_3.0	lam_grid	0	n=10
cpp	germany_fits	lam_3.0	agg_mass	0	both NULL
cpp	germany_fits	lam_3.0	eta	0	both NULL
cpp	germany_fits	lam_3.0	cv_curve	0	both NULL
cpp	germany_fits	lam_3.0	gamma_path	1.33e-13	n=1000
cpp	germany_fits	lam_3.0	pre_rmspe	1.69e-15	n=5
cpp	germany_fits	lam_3.0	poor_fit_outcomes	0	n=2
cpp	germany_fits	lam_3.0	cv_warning	0	both NULL
cpp	germany_fits	lam_3.0	support_outside_share	0	n=5
cpp	germany_fits	lam_3.0	support_outside_periods	0	n=15
cpp	germany_fits	lam_3.0	support_warning	0	identical text
cpp	germany_fits	lam_3.0	realized_pooling	1.41e-12	n=1
cpp	germany_fits	lam_3.0	pooling_grid	3.06e-12	n=10
cpp	germany_fits	lam_3.0	pooling_q25	0	both NULL
cpp	germany_fits	lam_3.0	pooling_q75	0	both NULL
cpp	germany_fits	lam_3.0	pooling_degenerate	0	n=1
cpp	germany_fits	lam_inf	gamma	2.70e-14	n=100

engine	fixture	fit	field	max abs dev	note
cpp	germany_fits	lam_inf	gamma_common	2.70e-14	n=20
cpp	germany_fits	lam_inf	tau	4.36e-14	n=5
cpp	germany_fits	lam_inf	att_path	7.03e-14	n=175
cpp	germany_fits	lam_inf	lam	0	n=1
cpp	germany_fits	lam_inf	lam_grid	0	n=10
cpp	germany_fits	lam_inf	agg_mass	0	both NULL
cpp	germany_fits	lam_inf	eta	0	both NULL
cpp	germany_fits	lam_inf	cv_curve	0	both NULL
cpp	germany_fits	lam_inf	gamma_path	1.33e-13	n=1000
cpp	germany_fits	lam_inf	pre_rmspe	3.18e-14	n=5
cpp	germany_fits	lam_inf	poor_fit_outcomes	0	n=4
cpp	germany_fits	lam_inf	cv_warning	0	both NULL
cpp	germany_fits	lam_inf	support_outside_share	0	n=5
cpp	germany_fits	lam_inf	support_outside_periods	0	n=15
cpp	germany_fits	lam_inf	support_warning	0	identical text
cpp	germany_fits	lam_inf	realized_pooling	0	n=1
cpp	germany_fits	lam_inf	pooling_grid	3.06e-12	n=10
cpp	germany_fits	lam_inf	pooling_q25	0	both NULL
cpp	germany_fits	lam_inf	pooling_q75	0	both NULL
cpp	germany_fits	lam_inf	pooling_degenerate	0	n=1
cpp	selftest_guardrail	aggregate	gamma	3.72e-16	n=10
cpp	selftest_guardrail	aggregate	gamma_common	5.55e-16	n=5
cpp	selftest_guardrail	aggregate	tau	8.88e-16	n=2
cpp	selftest_guardrail	aggregate	att_path	7.99e-15	n=40
cpp	selftest_guardrail	aggregate	lam	0	n=1
cpp	selftest_guardrail	aggregate	lam_grid	0	n=10
cpp	selftest_guardrail	aggregate	agg_mass	5.27e-16	n=10
cpp	selftest_guardrail	aggregate	eta	2.22e-16	n=1
cpp	selftest_guardrail	aggregate	cv_curve	0	both NULL
cpp	selftest_guardrail	aggregate	gamma_path	2.05e-15	n=100
cpp	selftest_guardrail	aggregate	pre_rmspe	1.78e-15	n=2
cpp	selftest_guardrail	aggregate	poor_fit_outcomes	0	n=1
cpp	selftest_guardrail	aggregate	cv_warning	0	both NULL
cpp	selftest_guardrail	aggregate	support_outside_share	1.11e-16	n=2
cpp	selftest_guardrail	aggregate	support_outside_periods	0	n=12
cpp	selftest_guardrail	aggregate	support_warning	0	identical text
cpp	selftest_guardrail	aggregate	realized_pooling	3.55e-14	n=1
cpp	selftest_guardrail	aggregate	pooling_grid	4.26e-14	n=10
cpp	selftest_guardrail	aggregate	pooling_q25	1.11e-14	n=1
cpp	selftest_guardrail	aggregate	pooling_q75	1.42e-14	n=1
cpp	selftest_guardrail	aggregate	pooling_degenerate	0	n=1
cpp	selftest_guardrail	cv	gamma	5.83e-16	n=10
cpp	selftest_guardrail	cv	gamma_common	3.05e-16	n=5
cpp	selftest_guardrail	cv	tau	1.55e-15	n=2
cpp	selftest_guardrail	cv	att_path	3.20e-14	n=40
cpp	selftest_guardrail	cv	lam	0	n=1
cpp	selftest_guardrail	cv	lam_grid	0	n=10
cpp	selftest_guardrail	cv	agg_mass	0	both NULL
cpp	selftest_guardrail	cv	eta	0	both NULL
cpp	selftest_guardrail	cv	cv_curve	5.55e-15	n=10
cpp	selftest_guardrail	cv	gamma_path	2.05e-15	n=100
cpp	selftest_guardrail	cv	pre_rmspe	3.55e-15	n=2
cpp	selftest_guardrail	cv	poor_fit_outcomes	0	n=1

engine	fixture	fit	field	max abs dev	note
cpp	selftest_guardrail	cv	cv_warning	0	identical text
cpp	selftest_guardrail	cv	support_outside_share	1.11e-16	n=2
cpp	selftest_guardrail	cv	support_outside_periods	0	n=12
cpp	selftest_guardrail	cv	support_warning	0	identical text
cpp	selftest_guardrail	cv	realized_pooling	1.10e-14	n=1
cpp	selftest_guardrail	cv	pooling_grid	4.26e-14	n=10
cpp	selftest_guardrail	cv	pooling_q25	0	both NULL
cpp	selftest_guardrail	cv	pooling_q75	0	both NULL
cpp	selftest_guardrail	cv	pooling_degenerate	0	n=1
cpp	selftest_support	main	gamma	2.54e-15	n=12
cpp	selftest_support	main	gamma_common	1.50e-15	n=6
cpp	selftest_support	main	tau	3.02e-15	n=2
cpp	selftest_support	main	att_path	1.29e-14	n=50
cpp	selftest_support	main	lam	0	n=1
cpp	selftest_support	main	lam_grid	0	n=10
cpp	selftest_support	main	agg_mass	2.18e-15	n=10
cpp	selftest_support	main	eta	8.33e-16	n=1
cpp	selftest_support	main	cv_curve	0	both NULL
cpp	selftest_support	main	gamma_path	5.54e-15	n=120
cpp	selftest_support	main	pre_rmspe	4.44e-15	n=2
cpp	selftest_support	main	poor_fit_outcomes	0	n=1
cpp	selftest_support	main	cv_warning	0	both NULL
cpp	selftest_support	main	support_outside_share	0	n=2
cpp	selftest_support	main	support_outside_periods	0	n=4
cpp	selftest_support	main	support_warning	0	identical text
cpp	selftest_support	main	realized_pooling	5.83e-13	n=1
cpp	selftest_support	main	pooling_grid	3.53e-13	n=10
cpp	selftest_support	main	pooling_q25	3.35e-13	n=1
cpp	selftest_support	main	pooling_q75	1.42e-14	n=1
cpp	selftest_support	main	pooling_degenerate	0	n=1
cpp	selftest_support	boundary	gamma	1.80e-15	n=12
cpp	selftest_support	boundary	gamma_common	1.33e-15	n=6
cpp	selftest_support	boundary	tau	2.35e-15	n=2
cpp	selftest_support	boundary	att_path	1.37e-14	n=50
cpp	selftest_support	boundary	lam	0	n=1
cpp	selftest_support	boundary	lam_grid	0	n=10
cpp	selftest_support	boundary	agg_mass	8.60e-16	n=10
cpp	selftest_support	boundary	eta	8.88e-16	n=1
cpp	selftest_support	boundary	cv_curve	0	both NULL
cpp	selftest_support	boundary	gamma_path	3.50e-15	n=120
cpp	selftest_support	boundary	pre_rmspe	1.27e-15	n=2
cpp	selftest_support	boundary	poor_fit_outcomes	-Inf	n=0
cpp	selftest_support	boundary	cv_warning	0	both NULL
cpp	selftest_support	boundary	support_outside_share	0	n=2
cpp	selftest_support	boundary	support_outside_periods	-Inf	n=0
cpp	selftest_support	boundary	support_warning	0	both NULL
cpp	selftest_support	boundary	realized_pooling	8.88e-14	n=1
cpp	selftest_support	boundary	pooling_grid	2.04e-13	n=10
cpp	selftest_support	boundary	pooling_q25	0	n=1
cpp	selftest_support	boundary	pooling_q75	1.71e-13	n=1
cpp	selftest_support	boundary	pooling_degenerate	0	n=1
cpp	selftest_support	single	gamma	2.50e-15	n=6
cpp	selftest_support	single	gamma_common	2.50e-15	n=6

engine	fixture	fit	field	max abs dev	note
cpp	selftest_support	single	tau	3.61e-15	n=1
cpp	selftest_support	single	att_path	8.22e-15	n=25
cpp	selftest_support	single	lam	0	n=1
cpp	selftest_support	single	lam_grid	0	n=10
cpp	selftest_support	single	agg_mass	5.97e-16	n=10
cpp	selftest_support	single	eta	3.77e-15	n=1
cpp	selftest_support	single	cv_curve	0	both NULL
cpp	selftest_support	single	gamma_path	3.00e-15	n=60
cpp	selftest_support	single	pre_rmspe	5.55e-17	n=1
cpp	selftest_support	single	poor_fit_outcomes	-Inf	n=0
cpp	selftest_support	single	cv_warning	0	both NULL
cpp	selftest_support	single	support_outside_share	0	n=1
cpp	selftest_support	single	support_outside_periods	0	n=1
cpp	selftest_support	single	support_warning	0	identical text
cpp	selftest_support	single	realized_pooling	0	both NULL
cpp	selftest_support	single	pooling_grid	0	both NULL
cpp	selftest_support	single	pooling_q25	0	both NULL
cpp	selftest_support	single	pooling_q75	0	both NULL
cpp	selftest_support	single	pooling_degenerate	0	n=1
cpp	selftest_toy	aggregate	gamma	6.54e-13	n=10
cpp	selftest_toy	aggregate	gamma_common	3.62e-13	n=5
cpp	selftest_toy	aggregate	tau	6.74e-13	n=2
cpp	selftest_toy	aggregate	att_path	1.32e-12	n=28
cpp	selftest_toy	aggregate	lam	0	n=1
cpp	selftest_toy	aggregate	lam_grid	0	n=10
cpp	selftest_toy	aggregate	agg_mass	6.34e-11	n=10
cpp	selftest_toy	aggregate	eta	1.47e-11	n=1
cpp	selftest_toy	aggregate	cv_curve	0	both NULL
cpp	selftest_toy	aggregate	gamma_path	2.89e-15	n=100
cpp	selftest_toy	aggregate	pre_rmspe	2.46e-13	n=2
cpp	selftest_toy	aggregate	poor_fit_outcomes	-Inf	n=0
cpp	selftest_toy	aggregate	cv_warning	0	both NULL
cpp	selftest_toy	aggregate	support_outside_share	0	n=2
cpp	selftest_toy	aggregate	support_outside_periods	-Inf	n=0
cpp	selftest_toy	aggregate	support_warning	0	both NULL
cpp	selftest_toy	aggregate	realized_pooling	1.64e-09	n=1
cpp	selftest_toy	aggregate	pooling_grid	2.14e-12	n=10
cpp	selftest_toy	aggregate	pooling_q25	1.83e-12	n=1
cpp	selftest_toy	aggregate	pooling_q75	2.56e-13	n=1
cpp	selftest_toy	aggregate	pooling_degenerate	0	n=1
cpp	selftest_toy	monotone	fits	2.89e-15	n=30
cpp	testpanel	aggregate	gamma	2.58e-14	n=24
cpp	testpanel	aggregate	gamma_common	1.90e-14	n=8
cpp	testpanel	aggregate	tau	5.02e-14	n=3
cpp	testpanel	aggregate	att_path	3.84e-13	n=48
cpp	testpanel	aggregate	lam	0	n=1
cpp	testpanel	aggregate	lam_grid	0	n=10
cpp	testpanel	aggregate	agg_mass	1.94e-14	n=10
cpp	testpanel	aggregate	eta	2.72e-15	n=1
cpp	testpanel	aggregate	cv_curve	0	both NULL
cpp	testpanel	aggregate	gamma_path	6.65e-14	n=240
cpp	testpanel	aggregate	pre_rmspe	5.33e-15	n=3
cpp	testpanel	aggregate	poor_fit_outcomes	0	n=1

engine	fixture	fit	field	max abs dev	note
cpp	testpanel	aggregate	cv_warning	0	both NULL
cpp	testpanel	aggregate	support_outside_share	0	n=3
cpp	testpanel	aggregate	support_outside_periods	0	n=9
cpp	testpanel	aggregate	support_warning	0	identical text
cpp	testpanel	aggregate	realized_pooling	2.02e-12	n=1
cpp	testpanel	aggregate	pooling_grid	4.75e-12	n=10
cpp	testpanel	aggregate	pooling_q25	1.61e-12	n=1
cpp	testpanel	aggregate	pooling_q75	1.15e-12	n=1
cpp	testpanel	aggregate	pooling_degenerate	0	n=1
cpp	testpanel	cv	gamma	5.84e-14	n=24
cpp	testpanel	cv	gamma_common	1.95e-14	n=8
cpp	testpanel	cv	tau	1.01e-13	n=3
cpp	testpanel	cv	att_path	3.98e-13	n=48
cpp	testpanel	cv	lam	0	n=1
cpp	testpanel	cv	lam_grid	0	n=10
cpp	testpanel	cv	agg_mass	0	both NULL
cpp	testpanel	cv	eta	0	both NULL
cpp	testpanel	cv	cv_curve	1.03e-12	n=10
cpp	testpanel	cv	gamma_path	6.65e-14	n=240
cpp	testpanel	cv	pre_rmspe	8.88e-15	n=3
cpp	testpanel	cv	poor_fit_outcomes	0	n=1
cpp	testpanel	cv	cv_warning	0	identical text
cpp	testpanel	cv	support_outside_share	0	n=3
cpp	testpanel	cv	support_outside_periods	0	n=9
cpp	testpanel	cv	support_warning	0	identical text
cpp	testpanel	cv	realized_pooling	0	n=1
cpp	testpanel	cv	pooling_grid	4.75e-12	n=10
cpp	testpanel	cv	pooling_q25	0	both NULL
cpp	testpanel	cv	pooling_q75	0	both NULL
cpp	testpanel	cv	pooling_degenerate	0	n=1
cpp	testpanel	aggregate_ps	p_outcome	3.33e-16	n=3
cpp	testpanel	aggregate_ps	p_joint_max	1.11e-16	n=1
cpp	testpanel	aggregate_ps	p_joint_mean	1.11e-16	n=1
cpp	testpanel	aggregate_ps	stats_treated	6.93e-14	n=3
cpp	testpanel	aggregate_ps	stats_placebo	3.62e-13	n=24
cpp	testpanel	aggregate_ps	placebo_gaps	7.82e-13	n=384
cpp	testpanel	aggregate_ps:treated_fit	gamma	2.58e-14	n=24
cpp	testpanel	aggregate_ps:treated_fit	gamma_common	1.90e-14	n=8
cpp	testpanel	aggregate_ps:treated_fit	tau	5.02e-14	n=3
cpp	testpanel	aggregate_ps:treated_fit	att_path	3.84e-13	n=48
cpp	testpanel	aggregate_ps:treated_fit	lam	0	n=1
cpp	testpanel	aggregate_ps:treated_fit	lam_grid	0	n=10
cpp	testpanel	aggregate_ps:treated_fit	agg_mass	1.94e-14	n=10
cpp	testpanel	aggregate_ps:treated_fit	eta	2.72e-15	n=1
cpp	testpanel	aggregate_ps:treated_fit	cv_curve	0	both NULL
cpp	testpanel	aggregate_ps:treated_fit	gamma_path	6.65e-14	n=240
cpp	testpanel	aggregate_ps:treated_fit	pre_rmspe	5.33e-15	n=3
cpp	testpanel	aggregate_ps:treated_fit	poor_fit_outcomes	0	n=1
cpp	testpanel	aggregate_ps:treated_fit	cv_warning	0	both NULL
cpp	testpanel	aggregate_ps:treated_fit	support_outside_share	0	n=3
cpp	testpanel	aggregate_ps:treated_fit	support_outside_periods	0	n=9
cpp	testpanel	aggregate_ps:treated_fit	support_warning	0	identical text
cpp	testpanel	aggregate_ps:treated_fit	realized_pooling	2.02e-12	n=1

engine	fixture	fit	field	max abs dev	note
cpp	testpanel	aggregate_ps:treated_fit	pooling_grid	4.75e-12	n=10
cpp	testpanel	aggregate_ps:treated_fit	pooling_q25	1.61e-12	n=1
cpp	testpanel	aggregate_ps:treated_fit	pooling_q75	1.15e-12	n=1
cpp	testpanel	aggregate_ps:treated_fit	pooling_degenerate	0	n=1
cpp	testpanel	aggregate_strict	p_outcome	2.22e-16	n=3
cpp	testpanel	aggregate_strict	p_joint_max	0	n=1
cpp	testpanel	aggregate_strict	p_joint_mean	0	n=1
cpp	testpanel	aggregate_strict	stats_treated	6.93e-14	n=3
cpp	testpanel	aggregate_strict	stats_placebo	3.62e-13	n=24
cpp	testpanel	aggregate_strict	placebo_gaps	7.82e-13	n=384
cpp	testpanel	aggregate_strict:treated_fit	gamma	2.58e-14	n=24
cpp	testpanel	aggregate_strict:treated_fit	gamma_common	1.90e-14	n=8
cpp	testpanel	aggregate_strict:treated_fit	tau	5.02e-14	n=3
cpp	testpanel	aggregate_strict:treated_fit	att_path	3.84e-13	n=48
cpp	testpanel	aggregate_strict:treated_fit	lam	0	n=1
cpp	testpanel	aggregate_strict:treated_fit	lam_grid	0	n=10
cpp	testpanel	aggregate_strict:treated_fit	agg_mass	1.94e-14	n=10
cpp	testpanel	aggregate_strict:treated_fit	eta	2.72e-15	n=1
cpp	testpanel	aggregate_strict:treated_fit	cv_curve	0	both NULL
cpp	testpanel	aggregate_strict:treated_fit	gamma_path	6.65e-14	n=240
cpp	testpanel	aggregate_strict:treated_fit	pre_rmspe	5.33e-15	n=3
cpp	testpanel	aggregate_strict:treated_fit	poor_fit_outcomes	0	n=1
cpp	testpanel	aggregate_strict:treated_fit	cv_warning	0	both NULL
cpp	testpanel	aggregate_strict:treated_fit	support_outside_share	0	n=3
cpp	testpanel	aggregate_strict:treated_fit	support_outside_periods	0	n=9
cpp	testpanel	aggregate_strict:treated_fit	support_warning	0	identical text
cpp	testpanel	aggregate_strict:treated_fit	realized_pooling	2.02e-12	n=1
cpp	testpanel	aggregate_strict:treated_fit	pooling_grid	4.75e-12	n=10
cpp	testpanel	aggregate_strict:treated_fit	pooling_q25	1.61e-12	n=1
cpp	testpanel	aggregate_strict:treated_fit	pooling_q75	1.15e-12	n=1
cpp	testpanel	aggregate_strict:treated_fit	pooling_degenerate	0	n=1
cpp	testpanel	cv_ps	p_outcome	2.22e-16	n=3
cpp	testpanel	cv_ps	p_joint_max	2.22e-16	n=1
cpp	testpanel	cv_ps	p_joint_mean	2.22e-16	n=1
cpp	testpanel	cv_ps	stats_treated	7.90e-13	n=3
cpp	testpanel	cv_ps	stats_placebo	5.85e-13	n=24
cpp	testpanel	cv_ps	placebo_gaps	1.18e-12	n=384
cpp	testpanel	cv_ps:treated_fit	gamma	5.84e-14	n=24
cpp	testpanel	cv_ps:treated_fit	gamma_common	1.95e-14	n=8
cpp	testpanel	cv_ps:treated_fit	tau	1.01e-13	n=3
cpp	testpanel	cv_ps:treated_fit	att_path	3.98e-13	n=48
cpp	testpanel	cv_ps:treated_fit	lam	0	n=1
cpp	testpanel	cv_ps:treated_fit	lam_grid	0	n=10
cpp	testpanel	cv_ps:treated_fit	agg_mass	0	both NULL
cpp	testpanel	cv_ps:treated_fit	eta	0	both NULL
cpp	testpanel	cv_ps:treated_fit	cv_curve	1.03e-12	n=10
cpp	testpanel	cv_ps:treated_fit	gamma_path	6.65e-14	n=240
cpp	testpanel	cv_ps:treated_fit	pre_rmspe	8.88e-15	n=3
cpp	testpanel	cv_ps:treated_fit	poor_fit_outcomes	0	n=1
cpp	testpanel	cv_ps:treated_fit	cv_warning	0	identical text
cpp	testpanel	cv_ps:treated_fit	support_outside_share	0	n=3
cpp	testpanel	cv_ps:treated_fit	support_outside_periods	0	n=9
cpp	testpanel	cv_ps:treated_fit	support_warning	0	identical text

engine	fixture	fit	field	max abs dev	note
cpp	testpanel	cv_ps:treated_fit	realized_pooling	0	n=1
cpp	testpanel	cv_ps:treated_fit	pooling_grid	4.75e-12	n=10
cpp	testpanel	cv_ps:treated_fit	pooling_q25	0	both NULL
cpp	testpanel	cv_ps:treated_fit	pooling_q75	0	both NULL
cpp	testpanel	cv_ps:treated_fit	pooling_degenerate	0	n=1
cpp	testpanel	lam_1_ps	p_outcome	3.33e-16	n=3
cpp	testpanel	lam_1_ps	p_joint_max	1.11e-16	n=1
cpp	testpanel	lam_1_ps	p_joint_mean	2.22e-16	n=1
cpp	testpanel	lam_1_ps	stats_treated	3.21e-13	n=3
cpp	testpanel	lam_1_ps	stats_placebo	2.46e-13	n=24
cpp	testpanel	lam_1_ps	placebo_gaps	7.39e-13	n=384
cpp	testpanel	lam_1_ps:treated_fit	gamma	1.52e-14	n=24
cpp	testpanel	lam_1_ps:treated_fit	gamma_common	1.24e-14	n=8
cpp	testpanel	lam_1_ps:treated_fit	tau	1.27e-13	n=3
cpp	testpanel	lam_1_ps:treated_fit	att_path	3.88e-13	n=48
cpp	testpanel	lam_1_ps:treated_fit	lam	0	n=1
cpp	testpanel	lam_1_ps:treated_fit	lam_grid	0	n=10
cpp	testpanel	lam_1_ps:treated_fit	agg_mass	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	eta	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	cv_curve	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	gamma_path	6.65e-14	n=240
cpp	testpanel	lam_1_ps:treated_fit	pre_rmspe	7.11e-15	n=3
cpp	testpanel	lam_1_ps:treated_fit	poor_fit_outcomes	0	n=1
cpp	testpanel	lam_1_ps:treated_fit	cv_warning	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	support_outside_share	0	n=3
cpp	testpanel	lam_1_ps:treated_fit	support_outside_periods	0	n=9
cpp	testpanel	lam_1_ps:treated_fit	support_warning	0	identical text
cpp	testpanel	lam_1_ps:treated_fit	realized_pooling	1.15e-12	n=1
cpp	testpanel	lam_1_ps:treated_fit	pooling_grid	4.75e-12	n=10
cpp	testpanel	lam_1_ps:treated_fit	pooling_q25	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	pooling_q75	0	both NULL
cpp	testpanel	lam_1_ps:treated_fit	pooling_degenerate	0	n=1
r	germany_fits	aggregate	gamma	4.37e-14	n=100
r	germany_fits	aggregate	gamma_common	1.23e-14	n=20
r	germany_fits	aggregate	tau	1.39e-14	n=5
r	germany_fits	aggregate	att_path	3.29e-14	n=175
r	germany_fits	aggregate	lam	0	n=1
r	germany_fits	aggregate	lam_grid	0	n=10
r	germany_fits	aggregate	agg_mass	4.01e-14	n=10
r	germany_fits	aggregate	eta	8.53e-16	n=1
r	germany_fits	aggregate	cv_curve	0	both NULL
r	germany_fits	aggregate	gamma_path	9.03e-14	n=1000
r	germany_fits	aggregate	pre_rmspe	2.37e-15	n=5
r	germany_fits	aggregate	poor_fit_outcomes	0	n=2
r	germany_fits	aggregate	cv_warning	0	both NULL
r	germany_fits	aggregate	support_outside_share	0	n=5
r	germany_fits	aggregate	support_outside_periods	0	n=15
r	germany_fits	aggregate	support_warning	0	identical text
r	germany_fits	aggregate	realized_pooling	8.78e-13	n=1
r	germany_fits	aggregate	pooling_grid	1.85e-12	n=10
r	germany_fits	aggregate	pooling_q25	2.63e-13	n=1
r	germany_fits	aggregate	pooling_q75	1.00e-12	n=1
r	germany_fits	aggregate	pooling_degenerate	0	n=1

engine	fixture	fit	field	max abs dev	note
r	germany_fits	cv	gamma	3.85e-14	n=100
r	germany_fits	cv	gamma_common	1.06e-14	n=20
r	germany_fits	cv	tau	2.18e-15	n=5
r	germany_fits	cv	att_path	1.24e-14	n=175
r	germany_fits	cv	lam	0	n=1
r	germany_fits	cv	lam_grid	0	n=10
r	germany_fits	cv	agg_mass	0	both NULL
r	germany_fits	cv	eta	0	both NULL
r	germany_fits	cv	cv_curve	5.24e-12	n=10
r	germany_fits	cv	gamma_path	9.03e-14	n=1000
r	germany_fits	cv	pre_rmspe	2.53e-15	n=5
r	germany_fits	cv	poor_fit_outcomes	0	n=2
r	germany_fits	cv	cv_warning	0	identical text
r	germany_fits	cv	support_outside_share	0	n=5
r	germany_fits	cv	support_outside_periods	0	n=15
r	germany_fits	cv	support_warning	0	identical text
r	germany_fits	cv	realized_pooling	1.00e-12	n=1
r	germany_fits	cv	pooling_grid	1.85e-12	n=10
r	germany_fits	cv	pooling_q25	0	both NULL
r	germany_fits	cv	pooling_q75	0	both NULL
r	germany_fits	cv	pooling_degenerate	0	n=1
r	germany_fits	cv_holdout3	gamma	3.85e-14	n=100
r	germany_fits	cv_holdout3	gamma_common	1.06e-14	n=20
r	germany_fits	cv_holdout3	tau	2.18e-15	n=5
r	germany_fits	cv_holdout3	att_path	1.24e-14	n=175
r	germany_fits	cv_holdout3	lam	0	n=1
r	germany_fits	cv_holdout3	lam_grid	0	n=10
r	germany_fits	cv_holdout3	agg_mass	0	both NULL
r	germany_fits	cv_holdout3	eta	0	both NULL
r	germany_fits	cv_holdout3	cv_curve	5.75e-12	n=10
r	germany_fits	cv_holdout3	gamma_path	9.03e-14	n=1000
r	germany_fits	cv_holdout3	pre_rmspe	2.53e-15	n=5
r	germany_fits	cv_holdout3	poor_fit_outcomes	0	n=2
r	germany_fits	cv_holdout3	cv_warning	0	identical text
r	germany_fits	cv_holdout3	support_outside_share	0	n=5
r	germany_fits	cv_holdout3	support_outside_periods	0	n=15
r	germany_fits	cv_holdout3	support_warning	0	identical text
r	germany_fits	cv_holdout3	realized_pooling	1.00e-12	n=1
r	germany_fits	cv_holdout3	pooling_grid	1.85e-12	n=10
r	germany_fits	cv_holdout3	pooling_q25	0	both NULL
r	germany_fits	cv_holdout3	pooling_q75	0	both NULL
r	germany_fits	cv_holdout3	pooling_degenerate	0	n=1
r	germany_fits	lam_0.0	gamma	9.03e-14	n=100
r	germany_fits	lam_0.0	gamma_common	1.81e-14	n=20
r	germany_fits	lam_0.0	tau	8.26e-15	n=5
r	germany_fits	lam_0.0	att_path	1.47e-14	n=175
r	germany_fits	lam_0.0	lam	0	n=1
r	germany_fits	lam_0.0	lam_grid	0	n=10
r	germany_fits	lam_0.0	agg_mass	0	both NULL
r	germany_fits	lam_0.0	eta	0	both NULL
r	germany_fits	lam_0.0	cv_curve	0	both NULL
r	germany_fits	lam_0.0	gamma_path	9.03e-14	n=1000
r	germany_fits	lam_0.0	pre_rmspe	1.28e-15	n=5

engine	fixture	fit	field	max abs dev	note
r	germany_fits	lam_0.0	poor_fit_outcomes	0	n=2
r	germany_fits	lam_0.0	cv_warning	0	both NULL
r	germany_fits	lam_0.0	support_outside_share	0	n=5
r	germany_fits	lam_0.0	support_outside_periods	0	n=15
r	germany_fits	lam_0.0	support_warning	0	identical text
r	germany_fits	lam_0.0	realized_pooling	0	n=1
r	germany_fits	lam_0.0	pooling_grid	1.85e-12	n=10
r	germany_fits	lam_0.0	pooling_q25	0	both NULL
r	germany_fits	lam_0.0	pooling_q75	0	both NULL
r	germany_fits	lam_0.0	pooling_degenerate	0	n=1
r	germany_fits	lam_0.3	gamma	2.76e-14	n=100
r	germany_fits	lam_0.3	gamma_common	6.36e-15	n=20
r	germany_fits	lam_0.3	tau	3.28e-15	n=5
r	germany_fits	lam_0.3	att_path	1.46e-14	n=175
r	germany_fits	lam_0.3	lam	0	n=1
r	germany_fits	lam_0.3	lam_grid	0	n=10
r	germany_fits	lam_0.3	agg_mass	0	both NULL
r	germany_fits	lam_0.3	eta	0	both NULL
r	germany_fits	lam_0.3	cv_curve	0	both NULL
r	germany_fits	lam_0.3	gamma_path	9.03e-14	n=1000
r	germany_fits	lam_0.3	pre_rmspe	1.17e-15	n=5
r	germany_fits	lam_0.3	poor_fit_outcomes	0	n=2
r	germany_fits	lam_0.3	cv_warning	0	both NULL
r	germany_fits	lam_0.3	support_outside_share	0	n=5
r	germany_fits	lam_0.3	support_outside_periods	0	n=15
r	germany_fits	lam_0.3	support_warning	0	identical text
r	germany_fits	lam_0.3	realized_pooling	4.16e-13	n=1
r	germany_fits	lam_0.3	pooling_grid	1.85e-12	n=10
r	germany_fits	lam_0.3	pooling_q25	0	both NULL
r	germany_fits	lam_0.3	pooling_q75	0	both NULL
r	germany_fits	lam_0.3	pooling_degenerate	0	n=1
r	germany_fits	lam_3.0	gamma	1.02e-14	n=100
r	germany_fits	lam_3.0	gamma_common	2.40e-15	n=20
r	germany_fits	lam_3.0	tau	1.28e-15	n=5
r	germany_fits	lam_3.0	att_path	8.90e-15	n=175
r	germany_fits	lam_3.0	lam	0	n=1
r	germany_fits	lam_3.0	lam_grid	0	n=10
r	germany_fits	lam_3.0	agg_mass	0	both NULL
r	germany_fits	lam_3.0	eta	0	both NULL
r	germany_fits	lam_3.0	cv_curve	0	both NULL
r	germany_fits	lam_3.0	gamma_path	9.03e-14	n=1000
r	germany_fits	lam_3.0	pre_rmspe	1.30e-15	n=5
r	germany_fits	lam_3.0	poor_fit_outcomes	0	n=2
r	germany_fits	lam_3.0	cv_warning	0	both NULL
r	germany_fits	lam_3.0	support_outside_share	0	n=5
r	germany_fits	lam_3.0	support_outside_periods	0	n=15
r	germany_fits	lam_3.0	support_warning	0	identical text
r	germany_fits	lam_3.0	realized_pooling	8.17e-13	n=1
r	germany_fits	lam_3.0	pooling_grid	1.85e-12	n=10
r	germany_fits	lam_3.0	pooling_q25	0	both NULL
r	germany_fits	lam_3.0	pooling_q75	0	both NULL
r	germany_fits	lam_3.0	pooling_degenerate	0	n=1
r	germany_fits	lam_inf	gamma	3.15e-14	n=100

engine	fixture	fit	field	max abs dev	note
r	germany_fits	lam_inf	gamma_common	3.15e-14	n=20
r	germany_fits	lam_inf	tau	5.14e-14	n=5
r	germany_fits	lam_inf	att_path	8.27e-14	n=175
r	germany_fits	lam_inf	lam	0	n=1
r	germany_fits	lam_inf	lam_grid	0	n=10
r	germany_fits	lam_inf	agg_mass	0	both NULL
r	germany_fits	lam_inf	eta	0	both NULL
r	germany_fits	lam_inf	cv_curve	0	both NULL
r	germany_fits	lam_inf	gamma_path	9.03e-14	n=1000
r	germany_fits	lam_inf	pre_rmspe	3.74e-14	n=5
r	germany_fits	lam_inf	poor_fit_outcomes	0	n=4
r	germany_fits	lam_inf	cv_warning	0	both NULL
r	germany_fits	lam_inf	support_outside_share	0	n=5
r	germany_fits	lam_inf	support_outside_periods	0	n=15
r	germany_fits	lam_inf	support_warning	0	identical text
r	germany_fits	lam_inf	realized_pooling	0	n=1
r	germany_fits	lam_inf	pooling_grid	1.85e-12	n=10
r	germany_fits	lam_inf	pooling_q25	0	both NULL
r	germany_fits	lam_inf	pooling_q75	0	both NULL
r	germany_fits	lam_inf	pooling_degenerate	0	n=1
r	selftest_guardrail	aggregate	gamma	4.03e-16	n=10
r	selftest_guardrail	aggregate	gamma_common	5.55e-16	n=5
r	selftest_guardrail	aggregate	tau	6.66e-16	n=2
r	selftest_guardrail	aggregate	att_path	7.99e-15	n=40
r	selftest_guardrail	aggregate	lam	0	n=1
r	selftest_guardrail	aggregate	lam_grid	0	n=10
r	selftest_guardrail	aggregate	agg_mass	4.72e-16	n=10
r	selftest_guardrail	aggregate	eta	2.78e-16	n=1
r	selftest_guardrail	aggregate	cv_curve	0	both NULL
r	selftest_guardrail	aggregate	gamma_path	1.61e-15	n=100
r	selftest_guardrail	aggregate	pre_rmspe	1.78e-15	n=2
r	selftest_guardrail	aggregate	poor_fit_outcomes	0	n=1
r	selftest_guardrail	aggregate	cv_warning	0	both NULL
r	selftest_guardrail	aggregate	support_outside_share	1.11e-16	n=2
r	selftest_guardrail	aggregate	support_outside_periods	0	n=12
r	selftest_guardrail	aggregate	support_warning	0	identical text
r	selftest_guardrail	aggregate	realized_pooling	3.55e-14	n=1
r	selftest_guardrail	aggregate	pooling_grid	4.26e-14	n=10
r	selftest_guardrail	aggregate	pooling_q25	1.11e-14	n=1
r	selftest_guardrail	aggregate	pooling_q75	1.42e-14	n=1
r	selftest_guardrail	aggregate	pooling_degenerate	0	n=1
r	selftest_guardrail	cv	gamma	6.11e-16	n=10
r	selftest_guardrail	cv	gamma_common	3.61e-16	n=5
r	selftest_guardrail	cv	tau	1.55e-15	n=2
r	selftest_guardrail	cv	att_path	3.20e-14	n=40
r	selftest_guardrail	cv	lam	0	n=1
r	selftest_guardrail	cv	lam_grid	0	n=10
r	selftest_guardrail	cv	agg_mass	0	both NULL
r	selftest_guardrail	cv	eta	0	both NULL
r	selftest_guardrail	cv	cv_curve	5.55e-15	n=10
r	selftest_guardrail	cv	gamma_path	1.61e-15	n=100
r	selftest_guardrail	cv	pre_rmspe	3.55e-15	n=2
r	selftest_guardrail	cv	poor_fit_outcomes	0	n=1

engine	fixture	fit	field	max abs dev	note
r	selftest_guardrail	cv	cv_warning	0	identical text
r	selftest_guardrail	cv	support_outside_share	1.11e-16	n=2
r	selftest_guardrail	cv	support_outside_periods	0	n=12
r	selftest_guardrail	cv	support_warning	0	identical text
r	selftest_guardrail	cv	realized_pooling	2.23e-14	n=1
r	selftest_guardrail	cv	pooling_grid	4.26e-14	n=10
r	selftest_guardrail	cv	pooling_q25	0	both NULL
r	selftest_guardrail	cv	pooling_q75	0	both NULL
r	selftest_guardrail	cv	pooling_degenerate	0	n=1
r	selftest_support	main	gamma	2.58e-15	n=12
r	selftest_support	main	gamma_common	1.53e-15	n=6
r	selftest_support	main	tau	2.75e-15	n=2
r	selftest_support	main	att_path	1.20e-14	n=50
r	selftest_support	main	lam	0	n=1
r	selftest_support	main	lam_grid	0	n=10
r	selftest_support	main	agg_mass	1.71e-15	n=10
r	selftest_support	main	eta	8.33e-16	n=1
r	selftest_support	main	cv_curve	0	both NULL
r	selftest_support	main	gamma_path	6.57e-15	n=120
r	selftest_support	main	pre_rmspe	4.88e-15	n=2
r	selftest_support	main	poor_fit_outcomes	0	n=1
r	selftest_support	main	cv_warning	0	both NULL
r	selftest_support	main	support_outside_share	0	n=2
r	selftest_support	main	support_outside_periods	0	n=4
r	selftest_support	main	support_warning	0	identical text
r	selftest_support	main	realized_pooling	5.12e-13	n=1
r	selftest_support	main	pooling_grid	3.55e-13	n=10
r	selftest_support	main	pooling_q25	3.35e-13	n=1
r	selftest_support	main	pooling_q75	4.26e-14	n=1
r	selftest_support	main	pooling_degenerate	0	n=1
r	selftest_support	boundary	gamma	1.86e-15	n=12
r	selftest_support	boundary	gamma_common	1.35e-15	n=6
r	selftest_support	boundary	tau	2.98e-15	n=2
r	selftest_support	boundary	att_path	1.37e-14	n=50
r	selftest_support	boundary	lam	0	n=1
r	selftest_support	boundary	lam_grid	0	n=10
r	selftest_support	boundary	agg_mass	8.05e-16	n=10
r	selftest_support	boundary	eta	8.88e-16	n=1
r	selftest_support	boundary	cv_curve	0	both NULL
r	selftest_support	boundary	gamma_path	7.58e-15	n=120
r	selftest_support	boundary	pre_rmspe	1.14e-15	n=2
r	selftest_support	boundary	poor_fit_outcomes	-Inf	n=0
r	selftest_support	boundary	cv_warning	0	both NULL
r	selftest_support	boundary	support_outside_share	0	n=2
r	selftest_support	boundary	support_outside_periods	-Inf	n=0
r	selftest_support	boundary	support_warning	0	both NULL
r	selftest_support	boundary	realized_pooling	8.88e-14	n=1
r	selftest_support	boundary	pooling_grid	2.17e-13	n=10
r	selftest_support	boundary	pooling_q25	0	n=1
r	selftest_support	boundary	pooling_q75	2.17e-13	n=1
r	selftest_support	boundary	pooling_degenerate	0	n=1
r	selftest_support	single	gamma	2.72e-15	n=6
r	selftest_support	single	gamma_common	2.72e-15	n=6

engine	fixture	fit	field	max abs dev	note
r	selftest_support	single	tau	2.61e-15	n=1
r	selftest_support	single	att_path	6.88e-15	n=25
r	selftest_support	single	lam	0	n=1
r	selftest_support	single	lam_grid	0	n=10
r	selftest_support	single	agg_mass	4.16e-16	n=10
r	selftest_support	single	eta	3.11e-15	n=1
r	selftest_support	single	cv_curve	0	both NULL
r	selftest_support	single	gamma_path	3.14e-15	n=60
r	selftest_support	single	pre_rmspe	0	n=1
r	selftest_support	single	poor_fit_outcomes	-Inf	n=0
r	selftest_support	single	cv_warning	0	both NULL
r	selftest_support	single	support_outside_share	0	n=1
r	selftest_support	single	support_outside_periods	0	n=1
r	selftest_support	single	support_warning	0	identical text
r	selftest_support	single	realized_pooling	0	both NULL
r	selftest_support	single	pooling_grid	0	both NULL
r	selftest_support	single	pooling_q25	0	both NULL
r	selftest_support	single	pooling_q75	0	both NULL
r	selftest_support	single	pooling_degenerate	0	n=1
r	selftest_toy	aggregate	gamma	2.16e-15	n=10
r	selftest_toy	aggregate	gamma_common	1.50e-15	n=5
r	selftest_toy	aggregate	tau	1.44e-15	n=2
r	selftest_toy	aggregate	att_path	7.80e-15	n=28
r	selftest_toy	aggregate	lam	0	n=1
r	selftest_toy	aggregate	lam_grid	0	n=10
r	selftest_toy	aggregate	agg_mass	8.40e-16	n=10
r	selftest_toy	aggregate	eta	2.44e-14	n=1
r	selftest_toy	aggregate	cv_curve	0	both NULL
r	selftest_toy	aggregate	gamma_path	3.39e-15	n=100
r	selftest_toy	aggregate	pre_rmspe	1.01e-15	n=2
r	selftest_toy	aggregate	poor_fit_outcomes	-Inf	n=0
r	selftest_toy	aggregate	cv_warning	0	both NULL
r	selftest_toy	aggregate	support_outside_share	0	n=2
r	selftest_toy	aggregate	support_outside_periods	-Inf	n=0
r	selftest_toy	aggregate	support_warning	0	both NULL
r	selftest_toy	aggregate	realized_pooling	1.02e-12	n=1
r	selftest_toy	aggregate	pooling_grid	4.52e-12	n=10
r	selftest_toy	aggregate	pooling_q25	2.40e-12	n=1
r	selftest_toy	aggregate	pooling_q75	2.70e-13	n=1
r	selftest_toy	aggregate	pooling_degenerate	0	n=1
r	selftest_toy	monotone	fits	3.39e-15	n=30
r	testpanel	aggregate	gamma	2.62e-14	n=24
r	testpanel	aggregate	gamma_common	1.93e-14	n=8
r	testpanel	aggregate	tau	6.17e-14	n=3
r	testpanel	aggregate	att_path	3.84e-13	n=48
r	testpanel	aggregate	lam	0	n=1
r	testpanel	aggregate	lam_grid	0	n=10
r	testpanel	aggregate	agg_mass	1.92e-14	n=10
r	testpanel	aggregate	eta	2.72e-15	n=1
r	testpanel	aggregate	cv_curve	0	both NULL
r	testpanel	aggregate	gamma_path	6.66e-14	n=240
r	testpanel	aggregate	pre_rmspe	3.55e-15	n=3
r	testpanel	aggregate	poor_fit_outcomes	0	n=1

engine	fixture	fit	field	max abs dev	note
r	testpanel	aggregate	cv_warning	0	both NULL
r	testpanel	aggregate	support_outside_share	0	n=3
r	testpanel	aggregate	support_outside_periods	0	n=9
r	testpanel	aggregate	support_warning	0	identical text
r	testpanel	aggregate	realized_pooling	2.10e-12	n=1
r	testpanel	aggregate	pooling_grid	4.88e-12	n=10
r	testpanel	aggregate	pooling_q25	1.72e-12	n=1
r	testpanel	aggregate	pooling_q75	1.19e-12	n=1
r	testpanel	aggregate	pooling_degenerate	0	n=1
r	testpanel	cv	gamma	5.87e-14	n=24
r	testpanel	cv	gamma_common	1.96e-14	n=8
r	testpanel	cv	tau	1.13e-13	n=3
r	testpanel	cv	att_path	3.98e-13	n=48
r	testpanel	cv	lam	0	n=1
r	testpanel	cv	lam_grid	0	n=10
r	testpanel	cv	agg_mass	0	both NULL
r	testpanel	cv	eta	0	both NULL
r	testpanel	cv	cv_curve	1.03e-12	n=10
r	testpanel	cv	gamma_path	6.66e-14	n=240
r	testpanel	cv	pre_rmspe	8.88e-15	n=3
r	testpanel	cv	poor_fit_outcomes	0	n=1
r	testpanel	cv	cv_warning	0	identical text
r	testpanel	cv	support_outside_share	0	n=3
r	testpanel	cv	support_outside_periods	0	n=9
r	testpanel	cv	support_warning	0	identical text
r	testpanel	cv	realized_pooling	0	n=1
r	testpanel	cv	pooling_grid	4.88e-12	n=10
r	testpanel	cv	pooling_q25	0	both NULL
r	testpanel	cv	pooling_q75	0	both NULL
r	testpanel	cv	pooling_degenerate	0	n=1
r	testpanel	aggregate_ps	p_outcome	3.33e-16	n=3
r	testpanel	aggregate_ps	p_joint_max	1.11e-16	n=1
r	testpanel	aggregate_ps	p_joint_mean	1.11e-16	n=1
r	testpanel	aggregate_ps	stats_treated	1.17e-13	n=3
r	testpanel	aggregate_ps	stats_placebo	4.78e-10	n=24
r	testpanel	aggregate_ps	placebo_gaps	1.82e-09	n=384
r	testpanel	aggregate_ps:treated_fit	gamma	2.62e-14	n=24
r	testpanel	aggregate_ps:treated_fit	gamma_common	1.93e-14	n=8
r	testpanel	aggregate_ps:treated_fit	tau	6.17e-14	n=3
r	testpanel	aggregate_ps:treated_fit	att_path	3.84e-13	n=48
r	testpanel	aggregate_ps:treated_fit	lam	0	n=1
r	testpanel	aggregate_ps:treated_fit	lam_grid	0	n=10
r	testpanel	aggregate_ps:treated_fit	agg_mass	1.92e-14	n=10
r	testpanel	aggregate_ps:treated_fit	eta	2.72e-15	n=1
r	testpanel	aggregate_ps:treated_fit	cv_curve	0	both NULL
r	testpanel	aggregate_ps:treated_fit	gamma_path	6.66e-14	n=240
r	testpanel	aggregate_ps:treated_fit	pre_rmspe	3.55e-15	n=3
r	testpanel	aggregate_ps:treated_fit	poor_fit_outcomes	0	n=1
r	testpanel	aggregate_ps:treated_fit	cv_warning	0	both NULL
r	testpanel	aggregate_ps:treated_fit	support_outside_share	0	n=3
r	testpanel	aggregate_ps:treated_fit	support_outside_periods	0	n=9
r	testpanel	aggregate_ps:treated_fit	support_warning	0	identical text
r	testpanel	aggregate_ps:treated_fit	realized_pooling	2.10e-12	n=1

engine	fixture	fit	field	max abs dev	note
r	testpanel	aggregate_ps:treated_fit	pooling_grid	4.88e-12	n=10
r	testpanel	aggregate_ps:treated_fit	pooling_q25	1.72e-12	n=1
r	testpanel	aggregate_ps:treated_fit	pooling_q75	1.19e-12	n=1
r	testpanel	aggregate_ps:treated_fit	pooling_degenerate	0	n=1
r	testpanel	aggregate_strict	p_outcome	2.22e-16	n=3
r	testpanel	aggregate_strict	p_joint_max	0	n=1
r	testpanel	aggregate_strict	p_joint_mean	0	n=1
r	testpanel	aggregate_strict	stats_treated	1.17e-13	n=3
r	testpanel	aggregate_strict	stats_placebo	4.78e-10	n=24
r	testpanel	aggregate_strict	placebo_gaps	1.82e-09	n=384
r	testpanel	aggregate_strict:treated_fit	gamma	2.62e-14	n=24
r	testpanel	aggregate_strict:treated_fit	gamma_common	1.93e-14	n=8
r	testpanel	aggregate_strict:treated_fit	tau	6.17e-14	n=3
r	testpanel	aggregate_strict:treated_fit	att_path	3.84e-13	n=48
r	testpanel	aggregate_strict:treated_fit	lam	0	n=1
r	testpanel	aggregate_strict:treated_fit	lam_grid	0	n=10
r	testpanel	aggregate_strict:treated_fit	agg_mass	1.92e-14	n=10
r	testpanel	aggregate_strict:treated_fit	eta	2.72e-15	n=1
r	testpanel	aggregate_strict:treated_fit	cv_curve	0	both NULL
r	testpanel	aggregate_strict:treated_fit	gamma_path	6.66e-14	n=240
r	testpanel	aggregate_strict:treated_fit	pre_rmspe	3.55e-15	n=3
r	testpanel	aggregate_strict:treated_fit	poor_fit_outcomes	0	n=1
r	testpanel	aggregate_strict:treated_fit	cv_warning	0	both NULL
r	testpanel	aggregate_strict:treated_fit	support_outside_share	0	n=3
r	testpanel	aggregate_strict:treated_fit	support_outside_periods	0	n=9
r	testpanel	aggregate_strict:treated_fit	support_warning	0	identical text
r	testpanel	aggregate_strict:treated_fit	realized_pooling	2.10e-12	n=1
r	testpanel	aggregate_strict:treated_fit	pooling_grid	4.88e-12	n=10
r	testpanel	aggregate_strict:treated_fit	pooling_q25	1.72e-12	n=1
r	testpanel	aggregate_strict:treated_fit	pooling_q75	1.19e-12	n=1
r	testpanel	aggregate_strict:treated_fit	pooling_degenerate	0	n=1
r	testpanel	cv_ps	p_outcome	2.22e-16	n=3
r	testpanel	cv_ps	p_joint_max	2.22e-16	n=1
r	testpanel	cv_ps	p_joint_mean	2.22e-16	n=1
r	testpanel	cv_ps	stats_treated	8.22e-13	n=3
r	testpanel	cv_ps	stats_placebo	5.83e-13	n=24
r	testpanel	cv_ps	placebo_gaps	1.17e-12	n=384
r	testpanel	cv_ps:treated_fit	gamma	5.87e-14	n=24
r	testpanel	cv_ps:treated_fit	gamma_common	1.96e-14	n=8
r	testpanel	cv_ps:treated_fit	tau	1.13e-13	n=3
r	testpanel	cv_ps:treated_fit	att_path	3.98e-13	n=48
r	testpanel	cv_ps:treated_fit	lam	0	n=1
r	testpanel	cv_ps:treated_fit	lam_grid	0	n=10
r	testpanel	cv_ps:treated_fit	agg_mass	0	both NULL
r	testpanel	cv_ps:treated_fit	eta	0	both NULL
r	testpanel	cv_ps:treated_fit	cv_curve	1.03e-12	n=10
r	testpanel	cv_ps:treated_fit	gamma_path	6.66e-14	n=240
r	testpanel	cv_ps:treated_fit	pre_rmspe	8.88e-15	n=3
r	testpanel	cv_ps:treated_fit	poor_fit_outcomes	0	n=1
r	testpanel	cv_ps:treated_fit	cv_warning	0	identical text
r	testpanel	cv_ps:treated_fit	support_outside_share	0	n=3
r	testpanel	cv_ps:treated_fit	support_outside_periods	0	n=9
r	testpanel	cv_ps:treated_fit	support_warning	0	identical text

engine	fixture	fit	field	max abs dev	note
r	testpanel	cv_ps:treated_fit	realized_pooling	0	n=1
r	testpanel	cv_ps:treated_fit	pooling_grid	4.88e-12	n=10
r	testpanel	cv_ps:treated_fit	pooling_q25	0	both NULL
r	testpanel	cv_ps:treated_fit	pooling_q75	0	both NULL
r	testpanel	cv_ps:treated_fit	pooling_degenerate	0	n=1
r	testpanel	lam_1_ps	p_outcome	3.33e-16	n=3
r	testpanel	lam_1_ps	p_joint_max	1.11e-16	n=1
r	testpanel	lam_1_ps	p_joint_mean	2.22e-16	n=1
r	testpanel	lam_1_ps	stats_treated	3.89e-13	n=3
r	testpanel	lam_1_ps	stats_placebo	2.42e-13	n=24
r	testpanel	lam_1_ps	placebo_gaps	7.10e-13	n=384
r	testpanel	lam_1_ps:treated_fit	gamma	1.53e-14	n=24
r	testpanel	lam_1_ps:treated_fit	gamma_common	1.25e-14	n=8
r	testpanel	lam_1_ps:treated_fit	tau	1.20e-13	n=3
r	testpanel	lam_1_ps:treated_fit	att_path	3.88e-13	n=48
r	testpanel	lam_1_ps:treated_fit	lam	0	n=1
r	testpanel	lam_1_ps:treated_fit	lam_grid	0	n=10
r	testpanel	lam_1_ps:treated_fit	agg_mass	0	both NULL
r	testpanel	lam_1_ps:treated_fit	eta	0	both NULL
r	testpanel	lam_1_ps:treated_fit	cv_curve	0	both NULL
r	testpanel	lam_1_ps:treated_fit	gamma_path	6.66e-14	n=240
r	testpanel	lam_1_ps:treated_fit	pre_rmspe	7.11e-15	n=3
r	testpanel	lam_1_ps:treated_fit	poor_fit_outcomes	0	n=1
r	testpanel	lam_1_ps:treated_fit	cv_warning	0	both NULL
r	testpanel	lam_1_ps:treated_fit	support_outside_share	0	n=3
r	testpanel	lam_1_ps:treated_fit	support_outside_periods	0	n=9
r	testpanel	lam_1_ps:treated_fit	support_warning	0	identical text
r	testpanel	lam_1_ps:treated_fit	realized_pooling	1.19e-12	n=1
r	testpanel	lam_1_ps:treated_fit	pooling_grid	4.88e-12	n=10
r	testpanel	lam_1_ps:treated_fit	pooling_q25	0	both NULL
r	testpanel	lam_1_ps:treated_fit	pooling_q75	0	both NULL
r	testpanel	lam_1_ps:treated_fit	pooling_degenerate	0	n=1