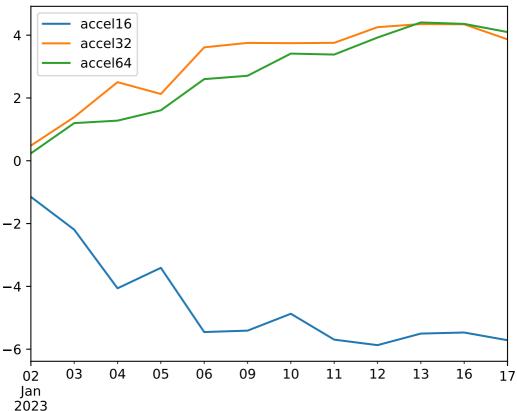
Total Trading Rule P&L for period 'YTD' ann. mean {'accel16': -121.901, 'accel32': 82.487, 'accel64': 87.443} ann. std {'accel16': 14.46, 'accel32': 9.538, 'accel64': 6.453} ann. SR {'accel16': -8.43, 'accel32': 8.65, 'accel64': 13.55}

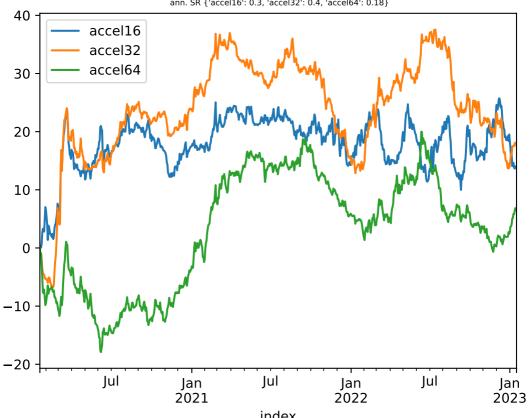


Total Trading Rule P&L for period '1Y' ann. mean {'iaccel16': -5.075, 'accel32': 3.248, 'accel64': 1.847} ann. std {'accel16': 16.179, 'accel32': 14.664, 'accel64': 11.712} ann. SR {'accel16': -0.31, 'accel32': 0.22, 'accel64': 0.16}

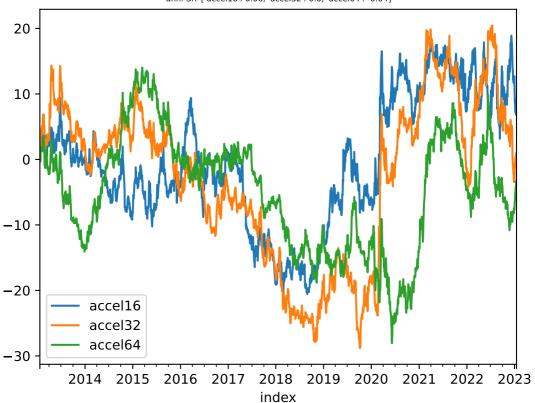


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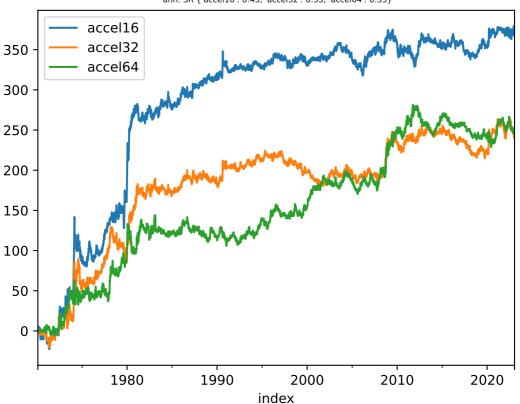
Total Trading Rule P&L for period '3Y'
ann. mean {'accel16': 4.519, 'accel32': 5.768, 'accel64': 2.141}
ann. std ('accel16': 15.043, 'accel32': 14.319, 'accel64': 11.67}
ann. SR {'accel16': 0.3, 'accel32': 0.4, 'accel64': 0.18}

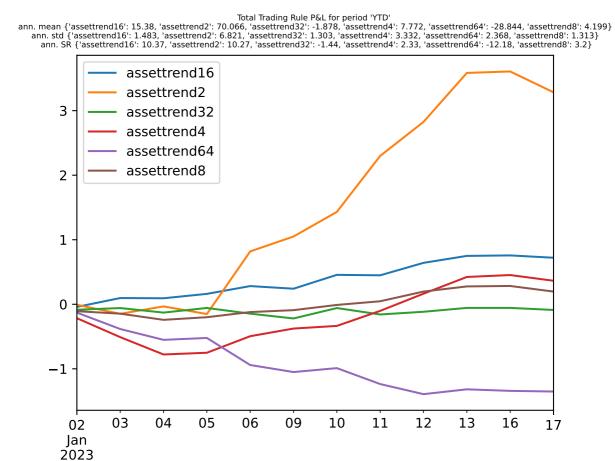


Total Trading Rule P&L for period '10Y'
ann. mean {'iaccel16': 0.685, 'accel32': 0.049, 'accel64': -0.354}
ann. std {'accel16': 11.961, 'accel32': 11.225, 'accel64': 9.589}
ann. SR {'accel16': 0.06, 'accel32': 0.0, 'accel64': -0.04}



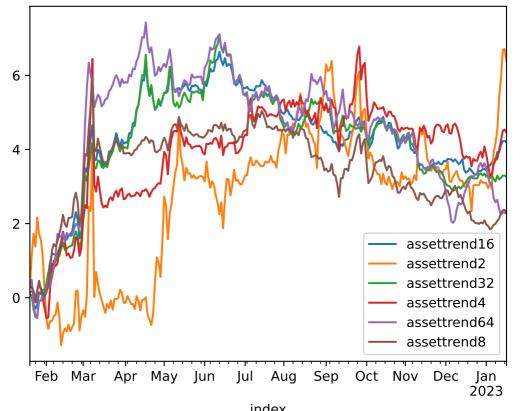
Total Trading Rule P&L for period '99Y'
ann. mean {'accel16': 6.801, 'accel32': 4.524, 'accel64': 4.693}
ann. std {'accel16': 15.73, 'accel32': 13.799, 'accel64': 13.324}
ann. SR {'accel16': 0.43, 'accel32': 0.33, 'accel64': 0.35}





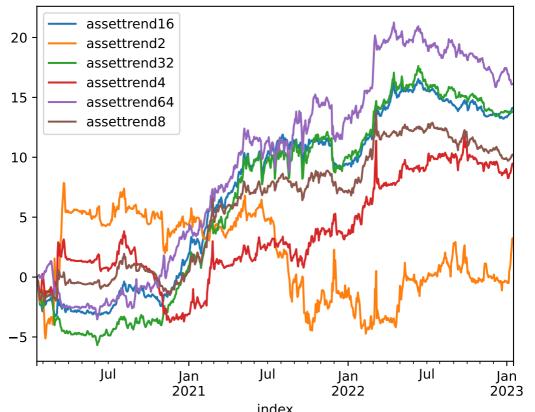
Total Trading Rule P&L for period '1Y'

ann. mean { 'assettrend16': 4.131, 'assettrend2': 6.29, 'assettrend32': 3.215, 'assettrend4': 4.38, 'assettrend64': 2.243, 'assettrend8': 2.247} ann. std { 'assettrend16': 2.992, 'assettrend2': 7.766, 'assettrend32': 3.262, 'assettrend4': 5.65, 'assettrend64': 3.923, 'assettrend8': 3.66} ann. SR { 'assettrend16': 1.38, 'assettrend2': 0.81, 'assettrend32': 0.99, 'assettrend4': 0.78, 'assettrend64': 0.57, 'assettrend8': 0.61}



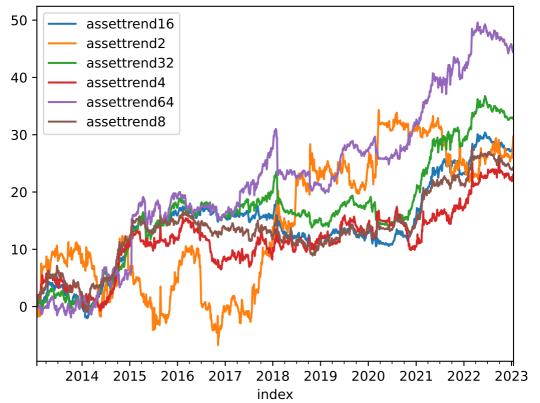
Total Trading Rule P&L for period '3Y'

ann. mean {'assettrend16': 4.614, 'assettrend2': 0.96, 'assettrend32': 4.513, 'assettrend4': 3.075, 'assettrend64': 5.273, 'assettrend8': 3.319} ann. std {'assettrend16': 3.602, 'assettrend2': 7.808, 'assettrend32': 4.419, 'assettrend4': 5.366, 'assettrend64': 5.136, 'assettrend64': 3.74} ann. SR {'assettrend16': 1.28, 'assettrend2': 0.12, 'assettrend32': 1.02, 'assettrend4': 0.57, 'assettrend64': 1.03, 'assettrend8': 0.89}



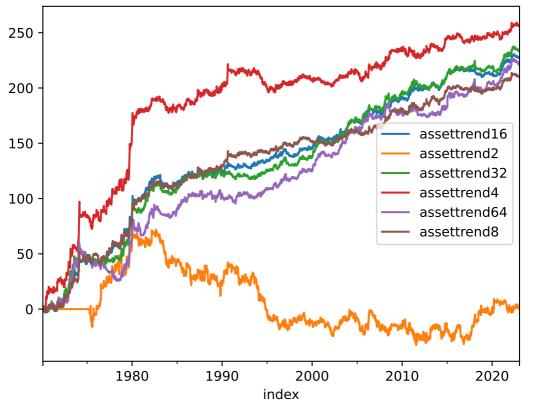
Total Trading Rule P&L for period '10Y'

ann. mean {'assettrend16': 2.746, 'assettrend2': 2.887, 'assettrend32': 3.235, 'assettrend4': 2.259, 'assettrend64': 4.365, 'assettrend8': 2.383} ann. std {'assettrend16': 3.266, 'assettrend2': 8.41, 'assettrend32': 3.743, 'assettrend4': 5.006, 'assettrend64': 5.301, 'assettrend8': 3.562} ann. SR {'assettrend16': 0.84, 'assettrend2': 0.34, 'assettrend32': 0.86, 'assettrend4': 0.45, 'assettrend64': 0.82, 'assettrend8': 0.67}



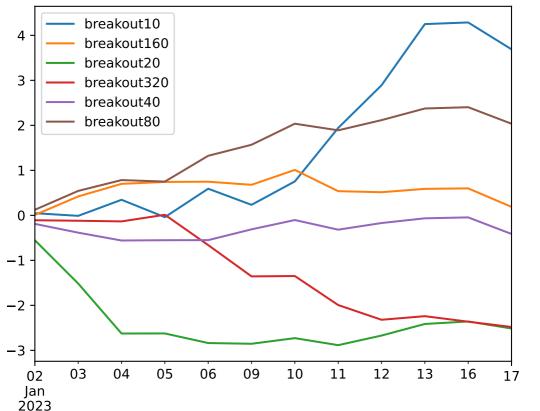
Total Trading Rule P&L for period '99Y'

ann. mean {'assettrend16': 4.226, 'assettrend2': 0.081, 'assettrend32': 4.333, 'assettrend4': 4.761, 'assettrend64': 4.1, 'assettrend8': 3.893} ann. std {'assettrend16': 4.66, 'assettrend2': 10.049, 'assettrend32': 4.894, 'assettrend4': 7.348, 'assettrend64': 5.469, 'assettrend8': 5.034} ann. SR {'assettrend16': 0.91, 'assettrend2': 0.01, 'assettrend32': 0.89, 'assettrend4': 0.65, 'assettrend64': 0.75, 'assettrend8': 0.77}



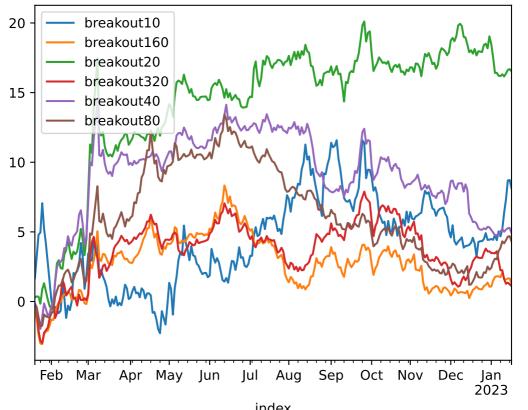
Total Trading Rule P&L for period 'YTD'

ann. mean {'breakout10': 78.705, 'breakout160': 4.021, 'breakout20': -53.638, 'breakout320': -52.932, 'breakout40': -8.822, 'breakout80': 43.43} ann. std {'breakout10': 10.193, 'breakout160': 4.201, 'breakout20': 7.094, 'breakout320': 4.864, 'breakout40': 3.07, 'breakout80': 4.281} ann. SR {'breakout10': 7.72, 'breakout160': 0.96, 'breakout20': -7.56, 'breakout320': -10.88, 'breakout40': -2.87, 'breakout80': 10.15}



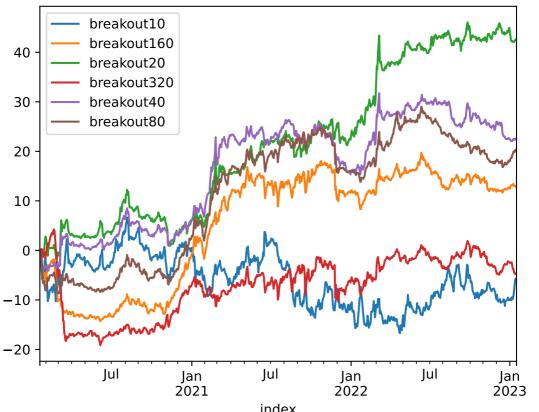
Total Trading Rule P&L for period '1Y'

ann. mean {'breakout10': 8.006, 'breakout160': 1.236, 'breakout20': 16.276, 'breakout320': 1.097, 'breakout40': 4.84, 'breakout80': 4.257} ann. std {'breakout10': 13.409, 'breakout160': 7.069, 'breakout20': 11.803, 'breakout320': 7.358, 'breakout40': 9.532, 'breakout80': 7.951} ann. SR {'breakout10': 0.6, 'breakout160': 0.17, 'breakout20': 1.38, 'breakout320': 0.15, 'breakout40': 0.51, 'breakout80': 0.54}



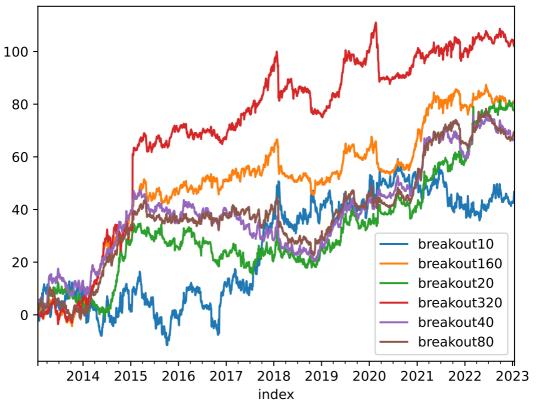
Total Trading Rule P&L for period '3Y'

ann. mean {'breakout10': -2.065, 'breakout160': 4.14, 'breakout20': 13.895, 'breakout320': -1.595, 'breakout40': 7.274, 'breakout80': 6.533} ann. std {'breakout10': 14.503, 'breakout160': 9.672, 'breakout20': 11.494, 'breakout320': 10.65, 'breakout40': 9.953, 'breakout80': 9.482} ann. SR {'breakout10': -0.14, 'breakout160': 0.43, 'breakout20': 1.21, 'breakout320': -0.15, 'breakout40': 0.73, 'breakout80': 0.69}



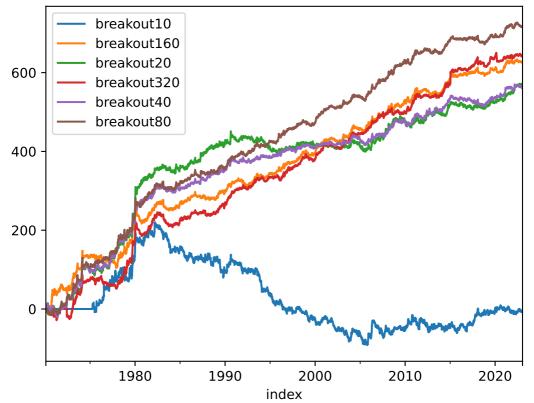
Total Trading Rule P&L for period '10Y'

ann. mean {'breakout10': 4.54, 'breakout160': 7.888, 'breakout20': 7.662, 'breakout320': 10.006, 'breakout40': 6.52, 'breakout80': 6.795} ann. std {'breakout10': 15.689, 'breakout160': 9.111, 'breakout20': 11.187, 'breakout320': 13.334, 'breakout40': 9.806, 'breakout80': 9.018} ann. SR {'breakout10': 0.29, 'breakout160': 0.87, 'breakout20': 0.68, 'breakout320': 0.75, 'breakout40': 0.66, 'breakout80': 0.75}



Total Trading Rule P&L for period '99Y'

ann. mean {'breakout10': -0.06, 'breakout160': 11.614, 'breakout20': 10.533, 'breakout320': 11.882, 'breakout40': 10.387, 'breakout80': 13.31} ann. std {'breakout10': 20.831, 'breakout160': 12.493, 'breakout20': 16.099, 'breakout320': 13.047, 'breakout40': 13.231, 'breakout80': 12.753} ann. SR {'breakout10': -0.0, 'breakout160': 0.93, 'breakout20': 0.65, 'breakout320': 0.91, 'breakout40': 0.79, 'breakout80': 1.04}

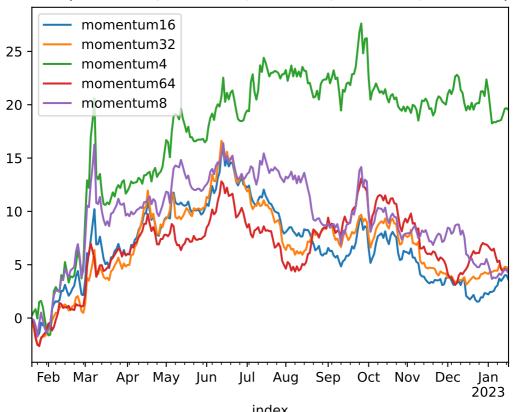


Total Trading Rule P&L for period 'YTD' ann. mean {'momentum16': 27.402, 'momentum32': 2.486, 'momentum4': -60.942, 'momentum64': -56.88, 'momentum8': -28.874} ann. std {'momentum16': 4.561, 'momentum32': 4.125, 'momentum4': 11.594, 'momentum64': 5.408, 'momentum8': 5.876} ann. SR {'momentum16': 6.01, 'momentum32': 0.6, 'momentum4': -5.26, 'momentum64': -10.52, 'momentum8': -4.91} 1 0 -1**-**2 momentum16 -3 momentum32 momentum4 momentum64 -4 momentum8 03 04 05 06 09 10 11 12 13 16 02 17 Jan

2023

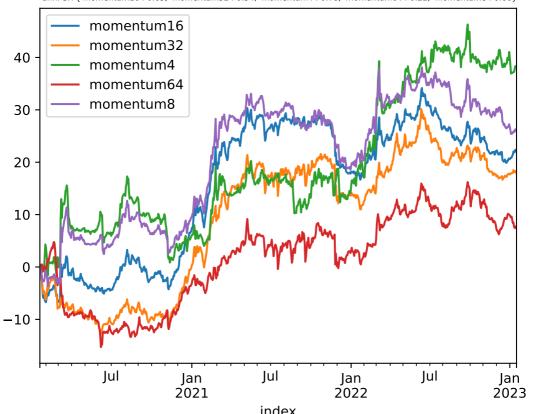
Total Trading Rule P&L for period '1Y'

ann. mean {'momentum16': 3.531, 'momentum32': 4.265, 'momentum4': 19.218, 'momentum64': 4.165, 'momentum8': 4.12} ann. std {'momentum16': 10.078, 'momentum32': 9.609, 'momentum4': 17.17, 'momentum64': 9.337, 'momentum8': 13.028} ann. SR {'momentum16': 0.35, 'momentum8': 0.32, 'momentum4': 11.2, 'momentum64': 0.45, 'momentum8': 0.32}



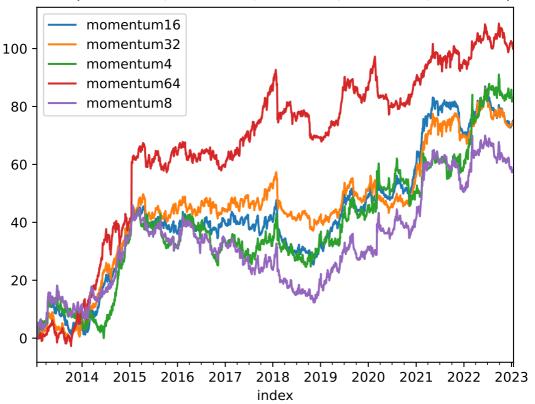
Total Trading Rule P&L for period '3Y'

ann. mean {'momentum16': 7.183, 'momentum32': 5.845, 'momentum4': 12.504, 'momentum64': 2.407, 'momentum8': 8.48} ann. std {'momentum16': 1.0.97, 'momentum32': 10.801, 'momentum4': 16.102, 'momentum64': 10.871, 'momentum8: 12.775} ann. SR {'momentum16': 0.65, 'momentum32': 0.54, 'momentum4': 0.78, 'momentum64': 0.22, 'momentum8': 0.66}



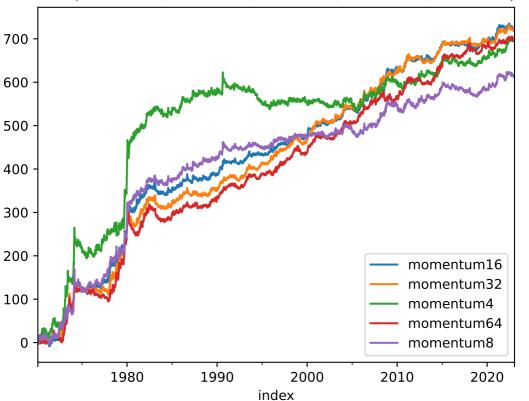
Total Trading Rule P&L for period '10Y'

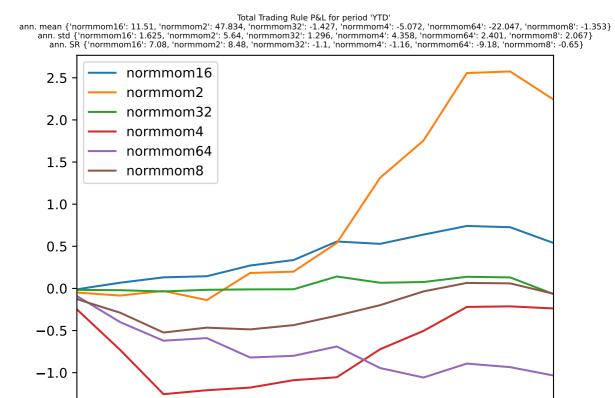
ann. mean {'momentum16': 7.339, 'momentum32': 7.263, 'momentum4': 8.147, 'momentum64': 9.802, 'momentum8': 5.673} ann. std {'momentum16': 9.946, 'momentum32': 9.488, 'momentum4': 13.701, 'momentum64': 12.006, 'momentum8': 11.307} ann. SR {'momentum16': 0.74, 'momentum32': 0.77, 'momentum4': 0.59, 'momentum64': 0.82, 'momentum8': 0.5}



Total Trading Rule P&L for period '99Y'

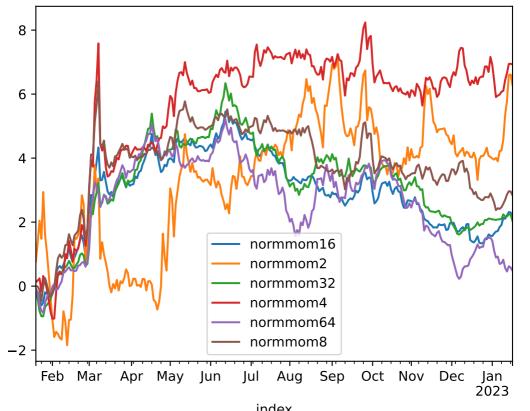
ann. mean {'momentum16': 13.401, 'momentum32': 13.329, 'momentum4': 12.882, 'momentum64': 12.912, 'momentum8': 11.333} ann. std {'momentum16': 14.22, 'momentum32': 13.85, 'momentum4': 20.075, 'momentum64': 13.488, 'momentum8': 15.869} ann. SR {'momentum16': 0.94, 'momentum32': 0.96, 'momentum4': 0.64, 'momentum64': 0.96, 'momentum8': 0.71





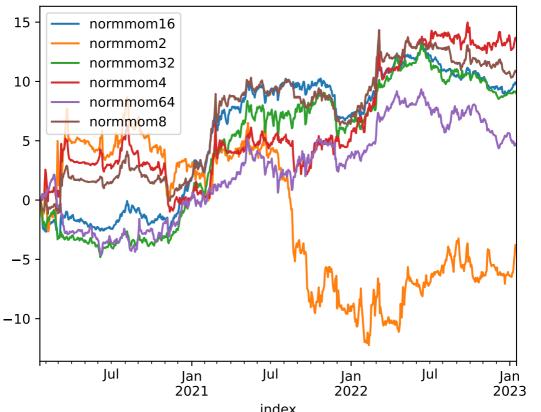
Jan Total Trading Rule P&L for period '1Y'

ann. mean {'normmom16': 2.082, 'normmom2': 6.183, 'normmom32': 2.004, 'normmom4': 6.817, 'normmom64': 0.473, 'normmom8': 2.792} ann. std {'normmom16': 3.115, 'normmom2': 8.023, 'normmom32': 3.11, 'normmom4': 5.95, 'normmom64': 3.407, 'normmom8': 4.181} ann. SR {'normmom16': 0.67, 'normmom2': 0.77, 'normmom32': 0.64, 'normmom4': 1.15, 'normmom64': 0.14, 'normmom8': 0.67}



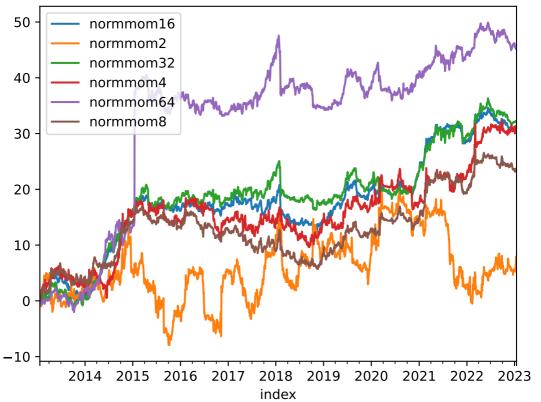
Total Trading Rule P&L for period '3Y'

ann. mean {'normmom16': 3.185, 'normmom2': -1.345, 'normmom32': 2.932, 'normmom4': 4.472, 'normmom64': 1.51, 'normmom8': 3.529} ann. std {'normmom16': 3.688, 'normmom2': 8.484, 'normmom32': 4.024, 'normmom4': 5.837, 'normmom64': 4.294, 'normmom8': 4.24} ann. SR {'normmom16': 0.86, 'normmom2': -0.16, 'normmom32': 0.73, 'normmom4': 0.77, 'normmom64': 0.35, 'normmom8': 0.83}



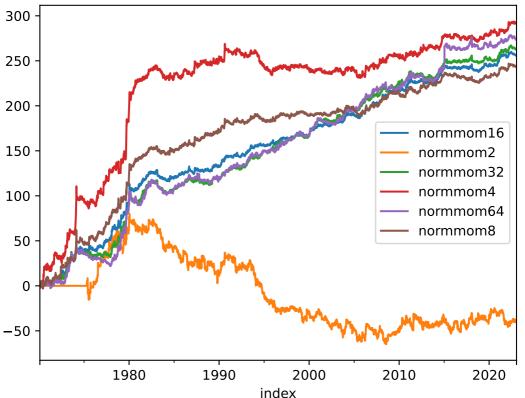
Total Trading Rule P&L for period '10Y'

ann. mean {'normmom16': 3.067, 'normmom2': 0.749, 'normmom32': 3.146, 'normmom4': 3.048, 'normmom64': 4.437, 'normmom8': 2.32} ann. std {'normmom16': 3.575, 'normmom2': 9.056, 'normmom32': 3.726, 'normmom4': 5.498, 'normmom64': 8.562, 'normmom8': 4.041} ann. SR {'normmom16': 0.86, 'normmom2': 0.08, 'normmom32': 0.84, 'normmom4': 0.55, 'normmom64': 0.52, 'normmom8': 0.57}



Total Trading Rule P&L for period '99Y'

ann. mean {'normmom16': 4.755, 'normmom2': -0.695, 'normmom32': 4.872, 'normmom4': 5.418, 'normmom64': 5.073, 'normmom8': 4.51} ann. std {'normmom16': 4.922, 'normmom2': 11.198, 'normmom32': 4.99, 'normmom4': 8.321, 'normmom64': 6.309, 'normmom8': 5.931} ann. SR {'normmom16': 0.97, 'normmom2': -0.06, 'normmom32': 0.98, 'normmom4': 0.65, 'normmom64': 0.8, 'normmom8': 0.76}



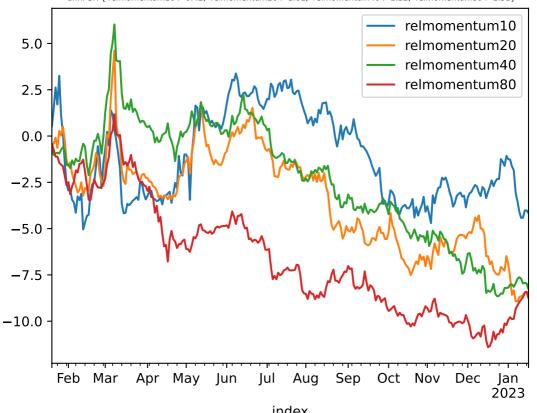
Total Trading Rule P&L for period 'YTD'

ann. mean {'relmomentum10': -66.042, 'relmomentum20': -47.255, 'relmomentum40': -1.448, 'relmomentum80': 31.015} ann. std {'relmomentum10': 6.246, 'relmomentum20': 3.449} ann. SR {'relmomentum10': -10.57, 'relmomentum20': -0.53, 'relmomentum30': 8.99}



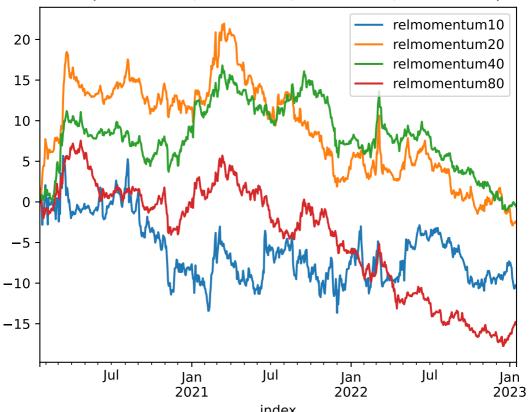
Total Trading Rule P&L for period '1Y'
relmomentum10': -4.099. 'relmomentum20': -8.563. 'relmomentum40': -8.143. 'relr

ann. mean {'relmomentum10': -4.099, 'relmomentum20': -8.563, 'relmomentum40': -8.143, 'relmomentum80': -8.616} ann. std {'relmomentum10': 9.749, 'relmomentum20': 8.513, 'relmomentum40': 6.671, 'relmomentum80': 5.725} ann. SR {'relmomentum10': -0.42, 'relmomentum20': -1.01, 'relmomentum40': -1.22, 'relmomentum80': -1.51}



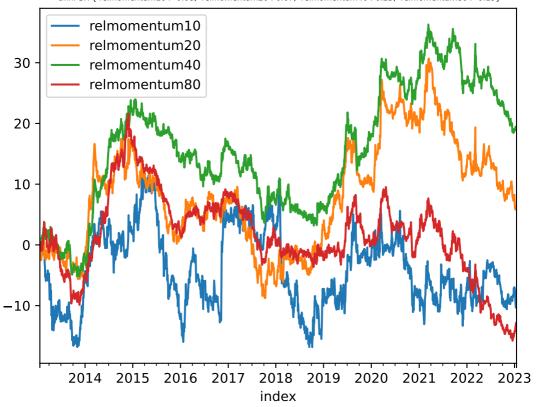
Total Trading Rule P&L for period '3Y'

ann. mean {'relmomentum10': -3.407, 'relmomentum20': -0.872, 'relmomentum40': -0.219, 'relmomentum80': -4.946} ann. std {'relmomentum10': 12.683, 'relmomentum20': 9.071, 'relmomentum40': 7.449, 'relmomentum80': 6.927} ann. SR {'relmomentum10': -0.27, 'relmomentum40': -0.03, 'relmomentum80': -0.71}



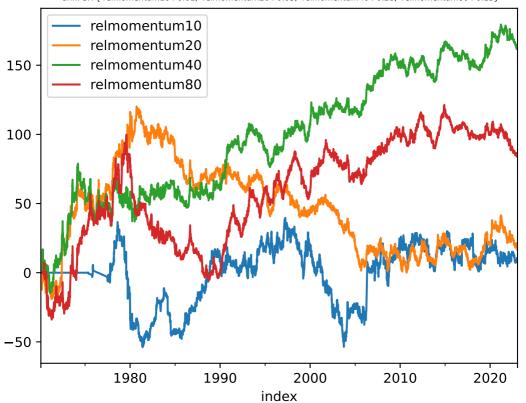
Total Trading Rule P&L for period '10Y'

ann. mean {'relmomentum10': -0.988, 'relmomentum20': 0.595, 'relmomentum40': 1.848, 'relmomentum80': -1.29} ann. std {'relmomentum10': 12.867, 'relmomentum20': 8.951, 'relmomentum40': 7.342, 'relmomentum80': 6.789} ann. SR {'relmomentum10': -0.08, 'relmomentum20': 0.07, 'relmomentum40': 0.25, 'relmomentum80': -0.19}

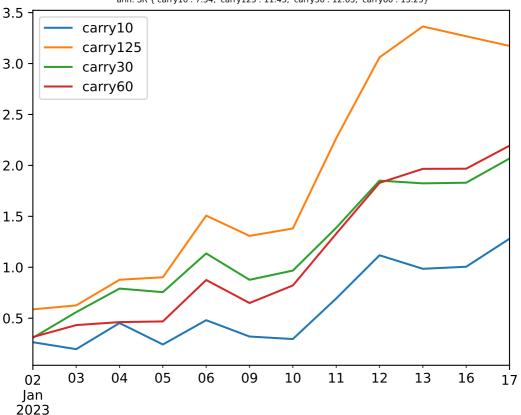


Total Trading Rule P&L for period '99Y'

ann. mean {'relmomentum10': 0.143, 'relmomentum20': 0.313, 'relmomentum40': 3.002, 'relmomentum80': 1.604} ann. std {'relmomentum10': 13.32, 'relmomentum20': 1.1.523, 'relmomentum40': 10.791, 'relmomentum80': 10.159} ann. SR {'relmomentum10': 0.01, 'relmomentum20': 0.03, 'relmomentum40': 0.28, 'relmomentum80': 0.15}



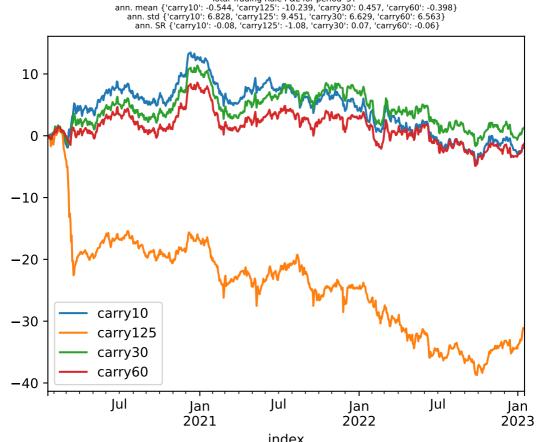
Total Trading Rule P&L for period 'YTD' ann. mean {'carry10': 27.314, 'carry125': 67.698, 'carry30': 44.113, 'carry60': 46.793} ann. std {'carry10': 3.621, 'carry125': 5.923, 'carry30': 3.494, 'carry60': 3.532} ann. SR {'carry10': 7.54, 'carry125': 11.43, 'carry30': 12.63, 'carry60': 13.25}



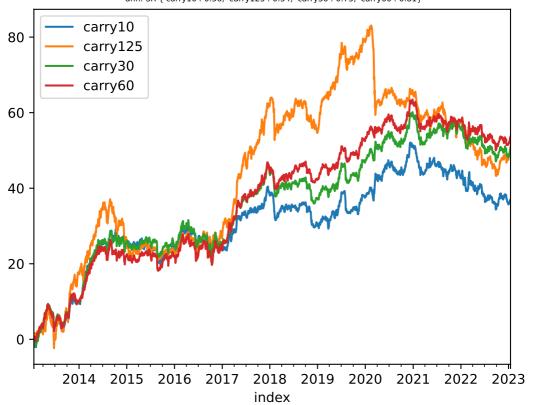
Total Trading Rule P&L for period '1Y'
ann. mean {'carry10': -5.66, 'carry125': -5.934, 'carry30': -4.608, 'carry60': -3.592}
ann. std {'carry10': 6.946, 'carry125': 7.703, 'carry30': 6.661, 'carry60': 6.754}
ann. SR {'carry10': -0.81, 'carry125': -0.77, 'carry30': -0.69, 'carry60': -0.53}



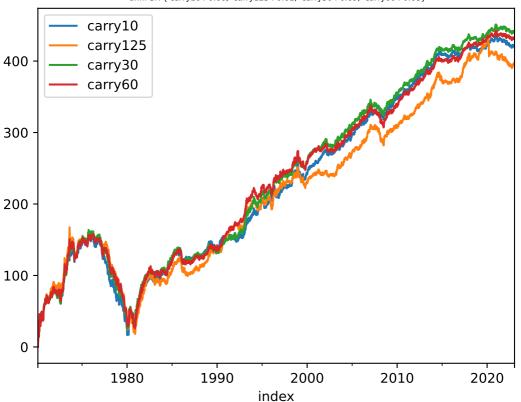
Total Trading Rule P&L for period '3Y'



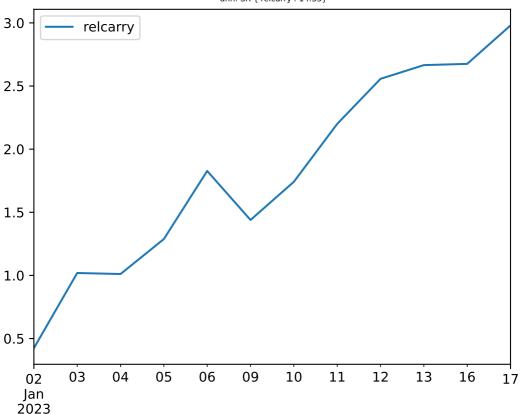
Total Trading Rule P&L for period '10Y' ann. mean {'carry10': 3.63, 'carry125': 4.978, 'carry30': 4.926, 'carry60': 5.271} ann. std {'carry10': 6.445, 'carry125': 9.135, 'carry30': 6.544, 'carry60': 6.507} ann. SR {'carry10': 0.56, 'carry125': 0.54, 'carry30': 0.75, 'carry60': 0.81}



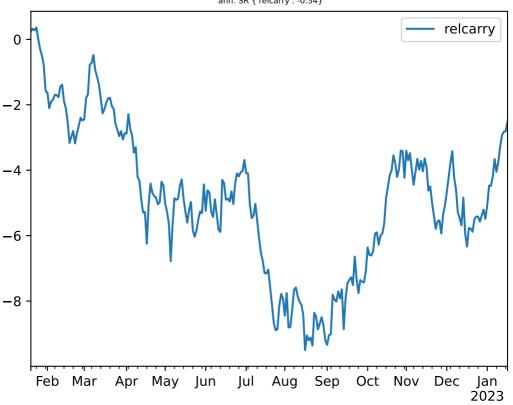
Total Trading Rule P&L for period '99Y'
ann. mean {'carry10': 7.802, 'carry125': 7.37, 'carry30': 8.176, 'carry60': 8.022}
ann. std {'carry10': 11.855, 'carry125': 12.097, 'carry30': 11.867, 'carry60': 11.817}
ann. SR {'carry10': 0.66, 'carry125': 0.61, 'carry30': 0.69, 'carry60': 0.68}



Total Trading Rule P&L for period 'YTD' ann. mean {'relcarry': 63.568} ann. std {'relcarry': 4.437} ann. SR {'relcarry': 14.33}

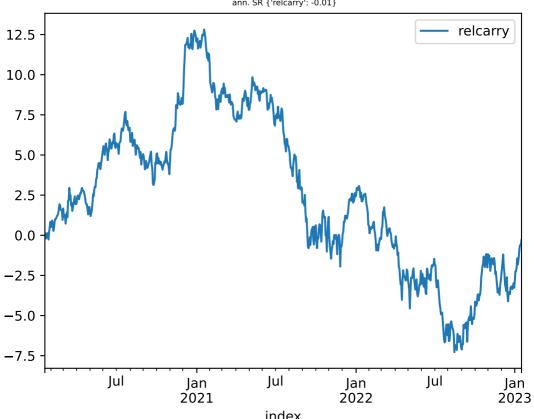


Total Trading Rule P&L for period '1Y' ann. mean {'relcarry': -2.47} ann. std {'relcarry': 7.225} ann. SR {'relcarry': -0.34}

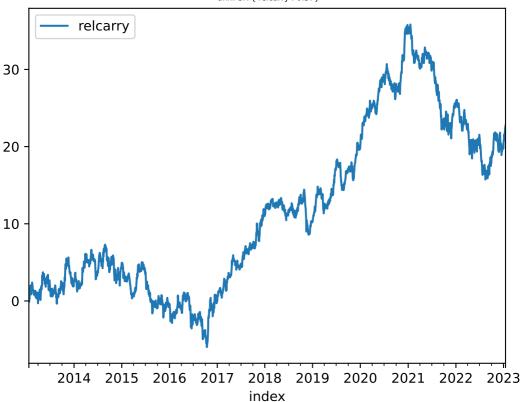


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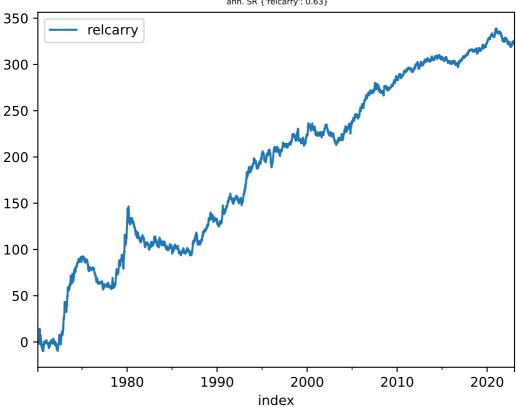
Total Trading Rule P&L for period '3Y' ann. mean {'relcarry': -0.093} ann. std {'relcarry': 6.836} ann. SR {'relcarry': -0.01}



Total Trading Rule P&L for period '10Y' ann. mean {'relcarry': 2.232} ann. std {'relcarry': 6.027} ann. SR {'relcarry': 0.37}

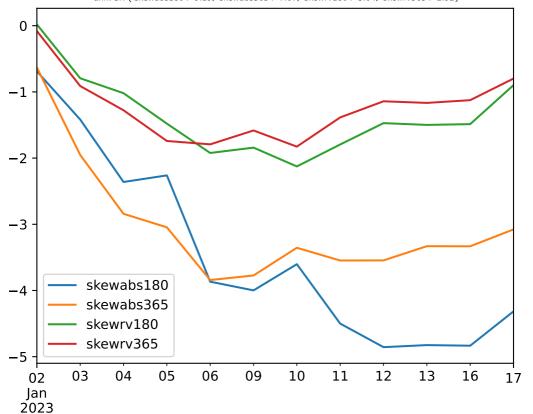


Total Trading Rule P&L for period '99Y' ann. mean {'relcarry': 6.037} ann. std {'relcarry': 9.555} ann. SR {'relcarry': 0.63}

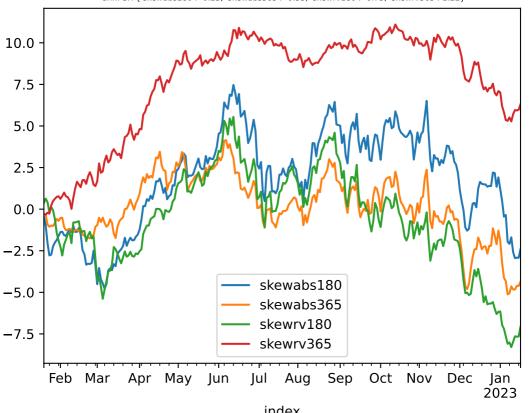


 $\label{thm:continuous} Total\ Trading\ Rule\ P\&L\ for\ period\ 'YTD'\ ann.\ mean\ \{'skewabs180': -92.072, 'skewabs365': -65.653, 'skewrv180': -19.16, 'skewrv365': -17.029\}$

nn. mean {'skewabs180': +92.072, 'skewabs365': -b3.053, 'skewrV180': -19.16, 'skewrV365': -17.029 ann. std {'skewabs180': 10.013, 'skewabs365': 8.562, 'skewrV180': 6.293, 'skewrV365': 5.833} ann. SR {'skewabs180': -9.19, 'skewabs365': 7.67, 'skewrV180': -3.04, 'skewrV365': -2.92}



Total Trading Rule P&L for period '1Y' ann. mean {'skewabs180': -2.368, 'skewabs365': -4.292, 'skewrv180': -6.959, 'skewrv365': 6.205} ann. std {'skewabs180': 10.13, 'skewabs365': 8.143, 'skewrv180': 9.225, 'skewrv365': 5.075} ann. SR {'skewabs180': -0.23, 'skewabs365': -0.53, 'skewrv180': -0.75, 'skewrv365': 1.22}

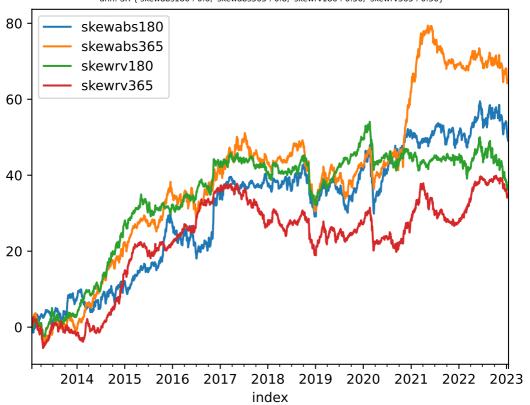


Total Trading Rule P&L for period '3Y' ann. mean {'skewabs180': 1.057, 'skewabs365': 6.403, 'skewrv180': -5.078, 'skewrv365': 1.639}

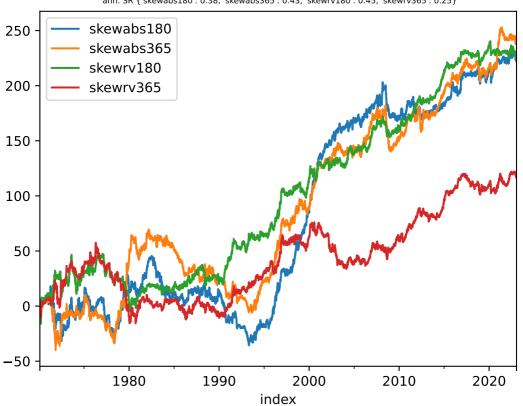
inn. hedri { skewabs160': 1.037, skewabs365': 6.405, skewrv180': 7.076, skewrv365': 1.039; ann. std {'skewabs180': 9.654, 'skewabs365': 8.848, 'skewrv180': 7.782, 'skewrv365': 6.603} ann. SR {'skewabs180': 0.11, 'skewabs365': 0.72, 'skewrv180': -0.65, 'skewrv365': 0.25}



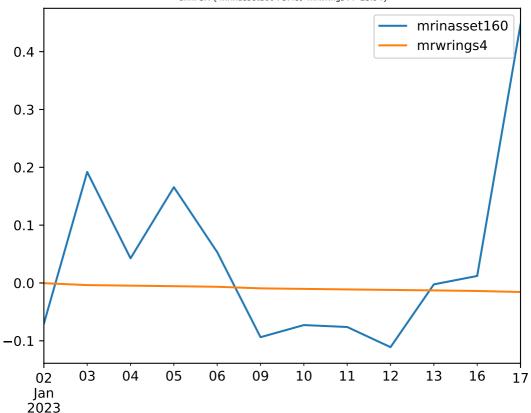
Total Trading Rule P&L for period '10Y'
ann. mean {'skewabs180': 4.873, 'skewabs365': 6.377, 'skewrv180': 3.672, 'skewrv365': 3.448}
ann. std {'skewabs180': 8.056, 'skewabs365': 7.999, 'skewrv180': 6.577, 'skewrv365': 6.177}
ann. SR {'skewabs180': 0.6, 'skewabs365': 0.8, 'skewrv180': 0.56, 'skewrv365': 0.56}



Total Trading Rule P&L for period '99Y' ann. mean {'skewabs180': 4.12, 'skewabs365': 4.417, 'skewrv180': 4.146, 'skewrv365': 2.175} ann. std {'skewabs180': 10.792, 'skewabs365': 10.297, 'skewrv180': 9.306, 'skewrv365': 8.6} ann. SR {'skewabs180': 0.38, 'skewabs365': 0.43, 'skewrv180': 0.45, 'skewrv365': 0.25}



Total Trading Rule P&L for period 'YTD' ann. mean {'mrinasset160': 9.537, 'mrwrings4': -0.333} ann. std {'mrinasset160': 2.779, 'mrwrings4': 0.014} ann. SR {'mrinasset160': 3.43, 'mrwrings4': -23.94}



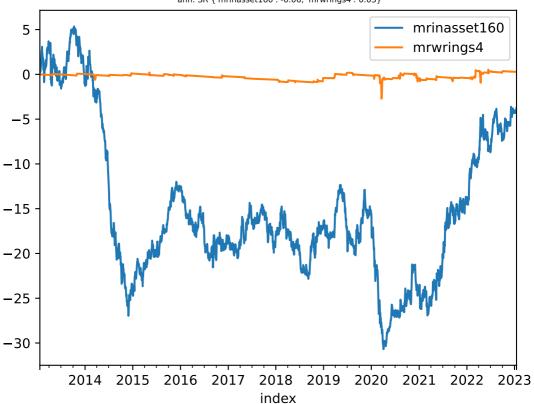
Total Trading Rule P&L for period '1Y' ann. mean {'mrinasset160': 9.496, 'mrwrings4': 0.691} ann. std {'mrinasset160': 6.094, 'mrwrings4': 1.481} ann. SR {'mrinasset160': 1.56, 'mrwrings4': 0.47}



Total Trading Rule P&L for period '3Y' ann. mean { 'mrinasset160': 4.974, 'mrwrings4': 0.14} ann. std { 'mrinasset160': 6.883, 'mrwrings4': 1.536} ann. SR { 'mrinasset160': 0.72, 'mrwrings4': 0.09}



Total Trading Rule P&L for period '10Y' ann. mean {'mrinasset160': -0.369, 'mrwrings4': 0.027} ann. std {'mrinasset160': 6.601, 'mrwrings4': 0.897} ann. SR {'mrinasset160': -0.06, 'mrwrings4': 0.03}



Total Trading Rule P&L for period '99Y' ann. mean { mrinasset160': -3.343, 'mrwrings4': -1.173} ann. std { 'mrinasset160': 10.916, 'mrwrings4': 2.63} ann. SR { 'mrinasset160': -0.31, 'mrwrings4': -0.45}

