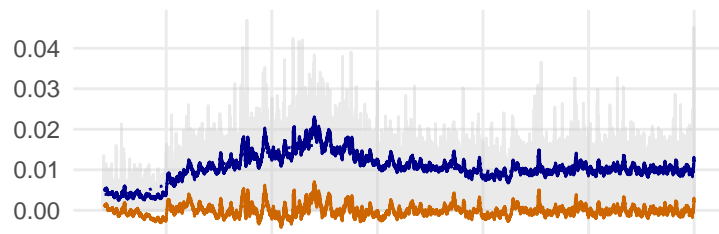


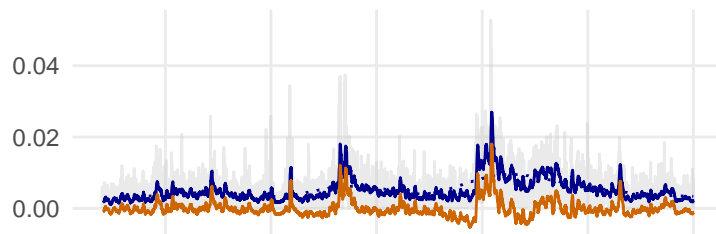
# Transformation of topics series

— original — smoothed ···· filtered — final

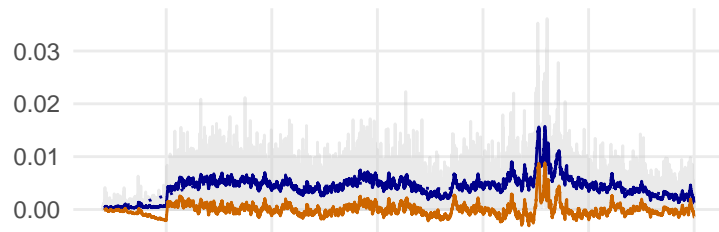
T2



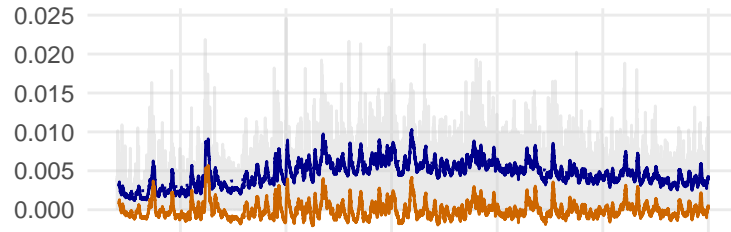
T23



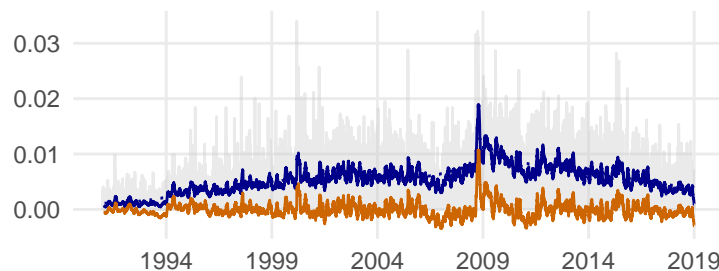
T27



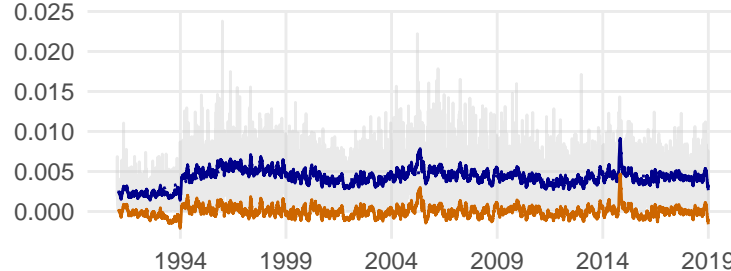
T28



T29



T9



smoothed = 30 day trailing moving average, filtered = biweight filter with bandwidth 1200, final = smoothed minus filtered series.