Tayla’s original:

To date some quantile-based risk measures have been looked into. Namely "Value-at-Risk (VaR), coherent risk measures, spectral risk measures, and distortion risk measures" \citep{dowd2006after}.

\cite{dowd2006after} believe that VaR is an imperfect measure. It may well still be reasonable to look into VaR as it is a well known measure and is not particularly complicated for someone in the relevant field of work to understand. Looking further into VaR, \cite{dowd2006after} feel that there are some positive aspects. Namely that VaR can be used to compare portfolios that are not restricted to a certain type of asset; VaR takes into account the portfolios internal correlations in turn allowing a consideration of number of variables changing at once and lastly it's result is easy to understand and has a linked probability. \cite{dowd2006after} believe a significant limitation of VaR is that it gives no information about what happens if that worst case lower tail end occurs and they feel that this makes this particular measure a poor measure to be used as a risk target measure. \cite{ACERBI20021505} believe VaR is not a good measure because it does not meet the axioms of coherence.

The next group of risk measures looked into were coherent risk measures and in particular Expected Shortfall \citep{ACERBI20021505}. \cite{dowd2006after} feel that this is still a measure that is easy to generate. They do, however, draw attention to the fact that this particular measure suggests the investor is risk-neutral past that lower tail, this may be seen as problematic. Expected Shortfall will ideally be looked into in much greater detain before starting back-testing.

This progressed to looking into spectral risk measures as these measures align with coherence and risk aversion theory \citep{dowd2006after}. Here \cite{dowd2006after} highlight a number of issues with risk aversion theory, which will not be expanded on at this point but it is worthwhile to keep in mind that risk aversion theory is not a perfect or universally accepted idea. Ideally spectral risk measures will be looked into in much greater detail going forward.

Lastly Distortion measures were briefly looked into, in particular the Wang Transform and a generalisation of it \citep{dowd2006after}. \cite{dowd2006after} believed that a strength of this measure is its ability to recover the Capital Asset Pricing Model as well as Black-Scholes and that it is a superior measure compared to expected shortfall.

It is worth mentioning that \cite{dowd2006after} state in their paper that with regards to risk measures it may often be a case of the best measure for a particular application and not a case of there being a certain risk measure that is better than all the others.

A justification for replacing VaR with one of these other measures provided by \cite{dowd2006after} is that it would require very little extra work.