Combining a babel of models

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In a situation where many assets are available to a fund, the question of how to allocate capital to those assets is a perennial and important one. The issues of estimating the means and covariances of returns are very well known, and there seems still no good solution if we take all the assets at once. If we choose to decompose the set of all assets into smaller subsets, we expect to find it much easier to estimate means and covariances, but then the question remains how to combine these smaller studies. The smaller models will typically be talking about sets of assets that overlap but do not coincide, and the question we would really like to understand is how we might go about combining the wisdom gained from studying small subsamples of the assets into some useable statement about all the assets. This talk offers a few very preliminary ideas about how this could be approached.