Pricing CDO Tranches of Bespoke Portfolios

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We present a robust and practical CDO valuation framework based on weighted Monte Carlo techniques used in option pricing. The methodology can be used to value consistently CDOs of bespoke portfolios, CDO-squared and cash CDOs. Under a multi-factor conditionally independent credit modeling framework, we use prices of liquid credit portfolio instruments to imply the "risk neutral" distributions for the underlying set of systematic factors driving joint obligor defaults. The methodology can be seen as an extension to the implied copula methodology (Hull and White 2006), where sector concentration risk of bespoke portfolios is modeled explicitly using a multi-factor credit model. The technique is illustrated by computing implied factor distributions for a Gaussian copula model using prices of standard tranches on CDS indexes. Extensions to other static factor models and dynamic credit portfolio models are also discussed.