Abstract: We model business relationships exemplified for a (re)insurance market by a bipartite graph which determines the sharing of severe losses. Using Pareto-tailed claims and multivariate regular variation we obtain asymptotic results for the Value-at-Risk and the Conditional Tail Expectation. We show that the dependence on the network structure plays a fundamental role in their asymptotic behaviour. As is well-known, if the Pareto exponent is larger than 1, then for the individual agent (re-insurance company) diversification is beneficial, whereas when it is less than 1, concentration on a few objects is the better strategy. The situation changes, however, when systemic risk comes into play. The random network structure has a strong influence on diversification effects, which destroys this simple individual agent’s diversification rule. It turns out that diversification is always beneficial from a macro-prudential point of view creating a conflicting situation between the incentives of individual agents and the interest of some superior entity to keep overall risk small. We explain the influence of the network structure on diversification effects in different network scenarios.

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