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A proposal for impact-adjusted valuation: Critical leverage and execution risk

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The practice of valuation by marking-to-market with current trading prices is seriously flawed. Under leverage the problem is particularly dramatic: due to the concave form of market impact, selling always initially causes the expected leverage to increase. There is a critical leverage above which it is impossible to exit a portfolio without leverage going to infinity and bankruptcy becoming likely. Standard risk-management methods give no warning of this problem, which easily occurs for aggressively leveraged positions in illiquid markets. We propose an alternative accounting procedure based on the estimated market impact of liquidation that removes the illusion of profit. This should curb the leverage cycle and contribute to an enhanced stability of financial markets.

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