Let $A$ be an $n \times n$ random matrix with independent entries such that $\mathcal{L}(a_{ij}, 1) \leq b$ for some $b \in (0,1)$, and $\mathbb{E}\|A\|_{HS}^2 \leq Kn^2$ for $K \geq 1$. We show that the smallest singular value $\sigma_n(A)$ of $A$ satisfies

$$\mathbb{P}\{\sigma_n(A) \leq \frac{\varepsilon}{\sqrt{n}} \} \leq C\varepsilon + 2e^{-cn}, \quad \varepsilon \geq 0,$$

where $c, C > 0$ may only depend on $b$ and $K$. (Received September 17, 2019)