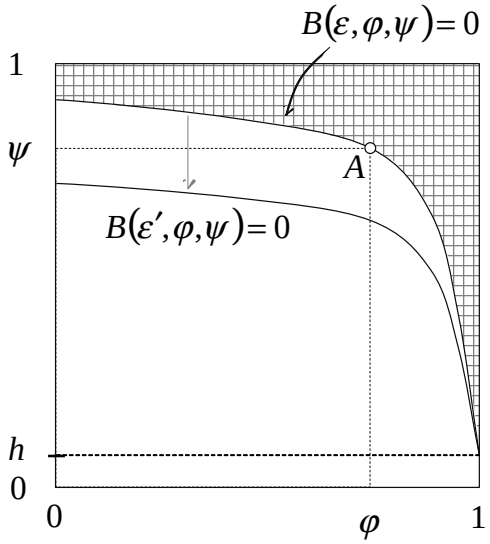

Figure 10. **Risk capacity of global banking system.** This figure shows the impact of increased default risk from ε to ε' on the leverage of global and regional banks.

of the US dollar, the global banking system moves on to a lower iso-risk curve, so that either global banks deleverage, or local banks deleverage or both. The following result states the property formally. Figure 10 illustrates the result.

Proposition 4 *There is a function* $B(\varepsilon,\varphi,\psi)$ *which is increasing in all three arguments such that* $B(\varepsilon,\varphi,\psi)=0$ *for any solution* $(\varepsilon,\varphi,\psi)$.

The function $B(\varepsilon,\varphi,\psi)$ establishes bounds on φ and ψ for any given level of fundamental risk ε, and hence we could dub the indifference curves generated by the B function as "iso-risk curves". Since B is increasing in all three arguments, the boundary $B(\varepsilon,\varphi,\psi)=0$ is negatively sloped in (φ,ψ)-space as shown in Figure 10.

The B function is defined as follows. Equation (18) gives the default probability α of the regional banks as an increasing function of ε and φ, which we can denote as $A(\varepsilon,\varphi)$. This function is increasing in both components. Meanwhile, Lemma 2 guarantees a unique solution to the global bank's incentive compatibility constraint $\Delta\pi(\psi)=h$, which can be written as

$$\int_0^{\psi}\Phi\left(\frac{\Phi^{-1}(\alpha+h)+\sqrt{1-\beta}\Phi^{-1}(s)}{\sqrt{\beta}}\right)ds=h \tag{35}$$