

Theorem 2.7 (Security of Nakamoto [PSS16]). *For any $\delta > 0$, any $\lambda > 1$, any $p(\cdot)$, any superlogarithmic function $T_0(\cdot)$, $(\Pi_{Nak}^p, \text{extract}_{nak}^p)$ satisfies:*

- T_0 -consistency;
- chain growth rate $(T_0, g_0^{p,\delta}, g_1^{p,\delta})$ where

$$g_0^{p,\delta}(\kappa, n, \rho, \Delta) = (1 - \delta)\gamma$$

$$g_1^{p,\delta}(\kappa, n, \rho, \Delta) = (1 + \delta)np$$

- chain quality $T_0, \mu_\delta^p(\kappa, n, \rho, \Delta)$ where

$$\mu_\delta^p(\kappa, n, \rho, \Delta) = 1 - (1 + \delta)\frac{\beta}{\gamma};$$

in Γ_λ^p environments.