Analytic functions in a domain $\Omega$ are uniquely determined by their values on any curve $\Gamma$ lying in the interior (or on the boundary) of $\Omega$. We are interested in a sharp quantitative version of this statement. Given $f$ analytic and of order one in $\Omega$, assume that it is small on $\Gamma$ (say, of order $\epsilon$), how large can $f$ be at a point $z$ away from the curve? When the sizes of $f$ are measured in Hilbert space norms we give a sharp bound on $|f(z)|$ in terms of a linear integral equation of Fredholm type. We show that the bound behaves like a power law $\epsilon^\gamma$ for some $\gamma = \gamma(z) \in (0, 1)$. In special geometries (such as the annulus, ellipse or upper half-plane) the solution of the integral equation and the corresponding exponent can be found explicitly. (Received August 16, 2020)