Let $f : X \rightarrow X$ be a dominant meromorphic self-map, where $X$ is a compact connected Hermitian manifold of dimension $n > 1$. Suppose there is an embedded copy of $\mathbb{P}^1$ that is invariant under $f$, with $f$ holomorphic and transversally superattracting with degree $a$ in some neighborhood. Suppose also that $f$ restricted to this line is given by $z \rightarrow z^b$, with resulting invariant circle $S$. The regularity of the local stable manifold $W^s_{\text{loc}}(S)$ is dependent on $a$ and $b$. Specifically, I will show that when $a \geq b$, $W^s_{\text{loc}}(S)$ is real analytic, and the condition $a \geq b$ cannot be relaxed without adding additional hypotheses. (Received September 08, 2012)