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Posted to the Gilder forum - January 4, 2001

## Chip Makers

Ed:

Interesting in deed! But what does it tell you?

It tells me, if what Geoffrey Moore says in "Living in the Fault Line" is correct, that there are two totally separate businesses. The IP business and the chip making business. The people in IP (Intellectual Property) are Qualcomm and ARM Holdings and a few others. The people in the foundry business are a bunch of Japanese, Taiwanese, Korean and other companies that are seldom heard from.

In the old industrial era, you could NOT separate the IP of steel from the making of the stuff. US Steel had both the patents and the ovens. Intel is the modern version of US Steel, they have the IP of the Pentium chip and the foundries to make them. So does RF Microdevices which has specialized foundries for making chips from "exotic" materials.

Customers like to have more than one source of supply. For Intel this means that they have to license other fabs to make Pentium chips which then compete with Intel's own fabs. Is it in Intel's best interests to license the best fabs which will then take business away from Intel's own fabs? At best, this is a conflict of interest in the making.

Qualcomm and ARM Holdings have none of these problems. They design as best they can and then they let the merchant fabs do the manufacturing. Their customers can chose to make the chips in house or to hire one or several merchant fabs to do the work. The competition among the merchant fabs drives the price down but this does NOT reduce the bottom line for QCOM and ARMHY. On the contrary, the price elasticity helps their bottom line by pumping up the volume.

RF Microdevices is in a bit of a special position because they manufacture chips made out of "exotic" materials. When the exotic becomes the common place, they too will lose any advantage they have from owning their own fabs.

To use Moore's terminology, IP (Intellectual Property) is the CORE business of

chip designers while fabs are the CONTEXT for chip designers and should be farmed out to third parties. This makes a good argument for selling INTC and buying QCOM and ARMHY.

Denny

"Demand creates queues. Supply gets rid of them."