

## Mercedes-Benz USA

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It's the first day of your summer internship at Mercedes-Benz USA. You are thrilled by the opportunity to market Mercedes to American consumers — and perhaps to get one to drive yourself — but somewhat nervous about your new job. Your boss enters your office with your first assignment: (i) summarize the likely cyclical sensitivity of US Mercedes sales and (ii) describe how current macroeconomic conditions are likely to affect them.

She explains that a formal macroeconomic analysis typically guides their decisions on production, pricing, and product positioning. Your overview is the first input into that analysis.

You check with your friends and collect the following information while you think about what to tell your boss.

### 1 GDP growth and car sales

Automobiles — and other durable goods — are more sensitive to economic fluctuations than nondurable goods and services. You can see that in the growth rates over the last few years: as GDP growth fell, consumption of durables and sales of cars fell sharply. The following numbers are from the Bureau of Economic Analysis and the Federal Reserve.

	2008	2009	2010	2011	2012	2013
Real GDP	−0.3	−2.8	2.5	1.8	2.8	1.9
Real consumption (total)	−0.4	−1.6	2.0	2.5	2.2	2.0
Real consumption (durables)	−5.1	−5.5	6.1	6.6	7.7	6.9
Real consumption (motor vehicles)	−19.3	−11.5	7.9	10.9	12.0	4.0

**Table 1.** Annual growth rates of GDP and consumption categories (percentages).

### 2 Major product lines

Mercedes-Benz USA sells a broad range of automobiles designed to appeal to a similarly broad range of income segments. Sedans include the C-Class (starting at \$29,900), the C-Class (\$40,400), the E-Class (\$51,400), and the CL-Class (\$94,400). This information and more is available on the MB USA [website](#).

### 3 Cyclical sensitivity of consumption by income group

Just as we saw that some products are more cyclical than others, so the consumption of some consumers is more cyclical than that of others. Curiously enough, the consumption expenditures of the rich are more cyclically sensitive than the consumption expenditures of the poor. Their consumption expenditures are high — they're the rich, after all — but respond more in both directions to fluctuations in the economy.

The numbers below summarize this sensitivity. If the sensitivity is 1.0, then the income group has the same sensitivity as the average consumer: if average consumption rises by 1%, so does the consumption of the group. A number greater than 1.0 indicates greater sensitivity. Thus we see, for example, that when average consumption rises by 1%, the consumption of the richest 5% rises by 2.52%.

These numbers are reported by Jonathan Parker and Annette Vissing-Jorgensen (*American Economic Review*, 2009). Their rationale seems to be that the rich have significantly more sensitive incomes, which translates into more sensitive consumption.

	Income Group			
	Bottom 80%	Top 20%	Top 10%	Top 5%
Consumption sensitivity	0.79	1.83	2.15	2.52

**Table 2.** Cyclical sensitivity of consumption by income group.

### 4 Questions

- How cyclical are Mercedes' product lines?
- How would you suggest they deal with that?
- More concretely: How does it affect decisions on production, pricing, and product positioning?