



THE  
DUKE MBA  
CONSULTING CLUB

### Case #1

**Company:** N/A

**Topic:** Market Estimation

**Industry:** Misc/Small Business

### About the Case

*This is a market estimation case. The case is based off estimations and the candidate's ability to work with those estimations. While there are no right/wrong answers in market estimation cases, the interviewer usually has a range of 'correctness', if you will. Your answer should fall within interviewer's estimate to the extent that your assumptions are realistic.*

### Defining the Problem

How many piano tuners are there in Chicago?

**Prompt: Solution approach** – Ask the candidate to walk you through his thought process – top-down, bottom-up. Once his /her structure is in place, ask him/her to compute the calculation. Various methods may be used to estimate the answer; one approach is outlined below.

### Suggested Answer

- Assume 3 million households in the Chicago area
- Make an estimate of how many people have pianos. Break the income of the households into four quarters (750,000 each).
  - 20% of highest income quartile has pianos
  - 10% of second quarter
  - 5% of third
  - 0% of fourth

- Estimate how often these pianos are tuned:
  - Highest income quarter tunes pianos once a year
  - Second quarter once every five years
  - Third quarter once every 10 years
  - Fourth quarter doesn't tune at all
- Estimate a piano tuner can tune five pianos a day, 250 days a year, therefore  $112,500/250 = 450$  pianos a day to tune  $450/5 = 90$  pianos tuners needed.
- Sanity Check: The yellow pages would be a credible source to check the actual number of piano turners in Chicago. Also it is fair to add another 50% to that figure assuming that some piano turners might rely on word-of-mouth advertising. By the way there are 51 piano tuners listed in the Chicago Yellow Pages.

### Author's Commentary/Notes

*Market estimation cases have no right or wrong answer, rather the interviewer is looking for a logical approach and structure to the candidate's problem-solving skills. Always clarify the assumptions that you make. The above solution is just one of many ways to answer this question.*