

Case Interview

These interviews will give you an opportunity to exercise your conceptual, quantitative and analytical reasoning skills, and usually include the use of mathematics to arrive at the best solution. But solid quantitative skills aren't the only thing we're looking for -- we're interested in your leadership experience, communication skills, creativity and flexibility, as well.

Interested?

If so, then try out our online case interview. Keep in mind that a case interview at Capital One would be a one-on-one problem solving session with you and your interviewer -- not a series of screens on your PC -- but we've done the best we can to simulate the experience for you.

A case interview is not part of the interview process for all positions at the Capital One group, but at a minimum, all on-campus recruiting and management applicants should expect to encounter one or more along the way. Note that the mathematical complexity of the case interview will vary depending on the specific position for which you are being considered.



Scenario

You have just been appointed the manager of the Cross Sells team at Capital One, which evaluates opportunities to market non-credit card products to our credit card customers. These cross sells usually involve building relationships with outside vendors who sell us products that we, in turn, can sell to our customers at a premium.

One potential cross sell opportunity that is sitting on your desk right now is the Prepaid Phone Card - a piece of plastic you can use to pay for long distance telephone calls. You use the card by calling in to a 0800 number, entering the card's PIN number, and then entering the destination telephone number. The minutes left on the card are kept track of by the outside vendor - your only responsibility is to market the product in a way that maximizes profit for Capital One.

Take a few moments to consider some of the most important factors that will influence your decision on whether to pursue the Phone Card cross sell. When you've come up with some ideas.



Below is a list of some of the most important questions you should consider. Please take a moment to compare your list with the one below. Hopefully, you'll find a few of your answers on the list, plus a few more that you hadn't thought of.

- How much does each Phone Card cost Capital One?
- Are there any other costs involved, such as a set-up fee?
- Are there any constraints on how many minutes each Phone Card has?
- Are there any constraints on how much we can sell the cards for?
- How much do competitors charge for the Phone Cards?
- How much do our cross sell products usually sell for?
- How many customers usually buy our cross sell products?
- What distribution channels are available for marketing the Phone Cards to our customers?
- How much would this marketing cost?

Here are some other questions you might have thought of, but for simplicity's sake, we will not consider their implications during the remainder of the case.

- How does the Phone Card opportunity compare with other cross sells we are considering? Maybe the product is profitable, but there's another, even more profitable product we could offer instead.
- How do our customers feel about receiving cross sell offers? Are there any who have told us that they do not want to receive these offers? If so, our market size maybe somewhat limited.
- Does offering a Phone Card to a credit card customer have any impact on their profitability as a credit card customer? If they buy the Phone Card, we will charge the fee to their Capital One credit card, and if they carry a balance (i.e. don't pay off their bill every month), then we can earn interest on the price of the Phone Card.
- If a customer purchases a Phone Card, might that purchase indicate something about the customer's credit risk that we wouldn't otherwise have known? Maybe the customers who would want to buy Phone Cards are the ones whose phones have recently been turned off for non-payment! If this is true, then offering this cross-sell would be even MORE attractive, since it would help us to identify these customers before they "charge off" (i.e. default on their credit card debt).

Luckily, the vendor who wants to sell us the Phone Cards has already provided a lot of the information you need in an introductory e-mail. The e-mail has several key points:

- The card may be sold at any price, and other companies have sold the cards for up to £0.75 per minute.
- The card may be sold with any number of minutes on it.
- Capital One must pay £0.20 per minute sold.
- Capital One must pay £2.00 per card sold for account set-up, which includes card materials, the vendor's system programming, and postage.
- The vendor notes that the Phone Card could be a good addition to Capital One's cross sell program, which ordinarily offers products in the £5 to £30 price range.

Let's assume that Capital One has decided to sell 60-minute Phone Cards at a price of £30 each. How much profit do we make on each card sold?



Capital One's profit per card is £16. For your reference, the equation is shown below.

$X = \text{Profit per card sold}$

$X = (\text{Revenue per card}) - (\text{Expense per card})$

$X = £30 - ((£0.20 \times 60) + £2.00)$

$X = £16$

But does anything big seem missing from this equation?

The thing that we haven't considered yet is marketing costs. (In reality, we haven't considered several things, but the lack of marketing expense has the biggest impact by far.) Basically, it will cost Capital One some money to tell our customers about the Phone Card offer, but we didn't include any of that expense in the equation on the previous page.

But how should we market this product? There are several different distribution channels we could use.

Statement Inserts

- Little slips of paper we put inside customers' monthly statements, which they return to us when they send us their payments.

'Bangtails'

- Slips of paper that are attached to the backs of the envelopes that customers use to send in their payments. If they are interested in buying the product, they can rip off the stubs and put them inside the envelopes.

Statement Messages

- A line or two of text typed on the remittance stub of each statement (the part a customer rips off and mails back with the check). It might say something like, "Tick this box if you would like to purchase a Capital One Phone Card: 60 minutes of long distance calling, for only £30!"



Direct Mail

- We could send our customers a letter - separate from their monthly statement - describing the Phone Cards in detail.

Outbound Telemarketing

- We could place telephone calls to our customers describing the cards and asking them if they would like to purchase one.

Please take a few moments to think about the distribution channels above. How are they similar? How are they different?

What factors would be most important in determining which distribution channel you should use? In other words, what additional information would you need to know about each channel to decide which is best? For the purposes of this case, you do not need to think about all the variables for every distribution channel - just try to think of the two main variables that apply to all of them.

The two most important factors you need to consider are cost and response rate.

Cost

It is easy to see that cost will vary a lot depending on what distribution channel you decide to use. For example, with outbound telemarketing, you have to pay the salary of the telemarketer plus the cost of the call (or outsource the job to a professional telemarketing firm, which isn't cheap, either).

If you decide to use direct mail, you will need to pay the cost of printing the letter and other marketing materials, plus the envelope, plus the postage. On the other extreme, if you decide to go with statement questions, then it costs us nothing - we already print statements anyway, and we have automated scanners to capture the responses.

Response Rate

The percentage of customers you solicit who decide to purchase the Phone Card will vary considerably as well. And as you might suspect, cost and response rate are often inversely related - the more a marketing effort costs, the more people respond to it, and vice versa. For example, a lot of people might respond to a direct mail solicitation, but far fewer would respond to the statement question. After all, it's hard to miss a letter in your letterbox, but you could easily overlook a line or two at the bottom of your statement.

Plus, if we send out a letter, we have a lot of room to include persuasive text and beautiful photos discussing the benefits of the Phone Card, but if we decide to go with a statement question, we have only two short lines of text to make the sale. Having more space and flexibility to promote the product would have a big impact on what percent of people choose to buy it.

There are lots of other factors you might have thought of that also deserve consideration. A few are outlined briefly below:

Time to Market

- It takes a lot more time to use some of these channels than others. If we thought a lot of other companies were going to increase their marketing of Phone Cards in the near future, we might decide to use a channel that gets us to market fastest.

Operational Impact

- Going with one channel might take a few hours of a single person's time, whereas another channel might require us to mobilize an entire department for a week. Although this sort of implication can be included in the "cost" consideration above, it is also valuable to consider it separately.

Customer Perception and Preference

- Some customers don't like receiving telemarketing calls from us, so we need to consider this when formulating our marketing campaigns. The decision of which distribution channel to use is a very interesting one, but it is too lengthy to consider here. Let's assume that you decide to use the statement insert channel.

Break Even

Each insert will cost you £0.04, which includes everything - all the way from the graphic designer's time to the cost of printing them to the cost of stuffing them in the envelopes. And don't worry - our postage costs won't go up. We already send all of our customers statements anyway, and since we are very careful to make the inserts extremely lightweight, we won't incur any incremental postage costs from marketing this product.

Assuming that we must sell 60-minute cards for £30, what response rate would be required to break even on the insert?

Hint: "Breaking even" means that you neither gain money nor lose money on a project - your total profit is £0. The break-even point for a given variable is a very useful figure in business, since it tells you the point when you start making (or losing!) money.

There are a number of different ways you could have chosen to solve this problem, but the answer is the same no matter which way you do it.

Here are two of them:

Method 1

Assume that you mail 100 inserts, and then determine how many people would have to respond for the profit to equal zero.

Let R = the number of responders

(Revenue per card sold) - (Expense per card sold) = 0

$\text{£}30R - [(\text{£}0.20 \times 60)R + \text{£}2.00R + (100 \times \text{£}0.04)] = 0$

$30R - 12R - 2R - 4 = 0$

$16R = 4$

$R = 0.25$ people per hundred

$R = 0.25\%$

Method 2

Same as Method 1, except you don't assume a certain number of customers.

Let R = response rate

(Revenue per card sold) - (Expense per card sold) = 0

$\text{£}30 - [(\text{£}0.20 \times 60) + \text{£}2 + (\text{£}0.04/R)] = 0$

$30 - 12 - 2 - (0.04/R) = 0$

$(0.04/R) = 16$

$16R = 0.04$

$R = 0.25\%$

Method Summary

Any way you look at it, the answer is the same - if more than 0.25% customers who receive the Phone Card offer decide to purchase a card, then we will make a profit. If fewer than 0.25% of customers respond, then we will lose money.

Does 0.25% sound like a reasonable expectation? Although it's impossible to tell in advance what the actual response rate would be, 0.25% sounds achievable, so the Phone Card cross sell is definitely worth testing.

Congratulations! You've finished Capital One's online case.



Case Summary

**We hope that you have found this practice case interesting and informative.
Now for a few final words . . .**

Actual case interviews are dynamic, one-on-one interactions with an interviewer - not just some problems laid out on paper. You are encouraged to ask intelligent questions and engage in discussion around the problem. We're not just looking for great analytical skills -- communication counts, too.

Most candidates who interview with us can expect one or two, but up to a maximum of five case interviews during the course of their interview process. However, the number of this type of interview, and the mathematical difficulty of each case, will vary depending on the position (some positions do not require a case interview).

You may find that Capital One's case interviews have a more quantitative focus than the cases given by other firms. This is intentional -- our cases are examples of the sort of work people do at Capital One every day. By discussing actual problems taken from our work, our candidates get a taste of what working at Capital One is really like.