FEDERAL TRADE COMMISSION

BUREAU OF ECONOMICS

GROCERY STORY ANTITRUST: HISTORICAL RETROSPECTIVE AND CURRENT DEVELOPMENTS

Thursday, May 24, 2007

9:00 a.m.

FTC Conference Center

Conference Rooms B & C

601 New Jersey Avenue, N.W.

Washington, D.C. 20001

A G E N D A

P R O C E E D I N G S

- - - - -

MR. SALINGER: Good morning. I'm Michael Salinger. I'm the director of the Bureau of Economics here at the Federal Trade Commission.

I have to begin with some security announcements. So item No. 1, please do not use cell phones in this room. I'm told it's not just a courtesy issue, but that it's also a security issue. So you can have your phones on vibrate, but if you need to talk on the phone, please go out into the hallway.

Second, if you leave the building, you're going to -- okay. I'll just speak louder. If you need to leave the building, you're going to have to come back through security. So you might want to consider that when you step outside.

And then finally, in the unlikely event that alarms, fire alarms go off, then we are to go across the street. There'll be lots of people who know precisely where you're going to go, so just follow the apparently knowledgeable people.

So with the security stuff out of the way, I would like to welcome everyone and thank you for coming to this conference. We are going to be talking about merger review in the grocery store industry. But the

idea behind this conference is much bigger than grocery store antitrust, important as that might be. We're holding this conference to ask the big picture question of whether merger analysis asks the right questions. We cannot answer that in the abstract. We can only do so by looking at evidence.

The Bureau of Economics tries to assess merger review in a variety of ways. One important way is to do retrospective analysis on individual mergers. Bureau of Economics staff have been particularly active in reviewing consummated mergers in the hospital and oil and gas industries. The Bureau's retrospective on the merger between the Evanston, Northwestern, and Highland Park hospitals arguably played a key role in the Commission's judgment that there is reason to believe that the merger may have reduced competition.

In oil and gas, just yesterday I testified before the Joint Economic Committee of Congress about whether consolidation in the industry caused the price increases we have recently seen. I was able to testify that consolidation has not caused the recent price increases, in part based on three oil merger retrospectives performed by Bureau of Economics staff.

Another way in which we assess past performance is to publish data about it. Bureau economists Malcolm

Coate and Shawn Ulrick published their statistical results about the factors that assist in predicting FTC actions. Of course, that analysis cannot say whether merger enforcement is appropriate or inappropriate. But establishing what in fact gives rise to merger enforcement as opposed to reading what we say about what gives rise to merger enforcement is an important step.

Today's conference represents a different approach to assessing merger enforcement. By looking at an entire industry in which there is a long history of merger and merger review, we can try to put FTC enforcement into a perspective that is broader than the review of a single merger.

The design of today's conference has three major pieces. The first session is the 50,000-foot perspective. Paul Ellickson, a professor at the Fuqua School of Business at Duke and someone who's done substantial research on the grocery store industry, is going to talk about his data analysis of how the grocery store industry in the United States has changed over time and what role mergers seem to have played in that change. That will give us some historical perspective.

Another way to get some perspective on the industry is to compare the grocery store industry in the United States to the industry in other countries. We're

privileged today to have Benoit Durand from the U.K. Competition Commission and David Parker from Frontier Economics to discuss the grocery store sector in the U.K.

So that's part one. Then part two, after we get the 50,000-foot overview under our belts: The second session will dig into the trenches. We're going to explore what goes on in the trenches from both sides. We have two attorneys with extensive experience representing grocery store clients before the FTC. Deborah Feinstein from Arnold & Porter will make a presentation on behalf of Kroger. And then we also have Chris MacAvoy from Howrey talking about what he believes several of his clients were trying to accomplish with their deals.

After Debbie and Chris present the grocer's perspective, Jim Fishkin, who had extensive experience with grocery store mergers when he worked at the FTC, will talk about the general approach the FTC took to reviewing deals when he was here.

The decision on the part of a company to undertake a merger, and the decision by the FTC about whether to take any action against it, both entail forecasting what effects the merger will have. To comment on the contrast between those forecasts, we have one of my eminent predecessors as bureau director, Dave Scheffman, to see whether there's any -- or to comment on

whether there's any connect between the two.

The afternoon will be devoted to recent academic research on the grocery store industry. We will have two sessions, each covering topics central to antitrust enforcement in the industry. The first will be on pricing strategies, with papers by David Bell and Jon Seaton, and the second will be on industry dynamics, with papers by Tom Holmes and Arie Beresteanu.

These will set up a discussion in the concluding panel that will both revisit the topic from the morning panel of whether merger review is appropriately focused and then comment on whether modern research provides insights that can improve merger review.

That panel includes a distinguished group of antitrust scholars and practitioners. Giving them full introductions will take more time than I have for these comments. But just briefly, we've have Tim Brennan, a former holder of the MacDonald Chair at the Canadian Competition Commission; Joe Simons, a former director of the Bureau of Competition here at the FTC; and Dennis Carlton, the deputy assistant attorney general for economics in the Antitrust Division.

Now, I said the conference is organized into three main pieces. But really, it's four. At lunch,

we're very fortunate to have Bill Kovacic, one of the current FTC commissioners, giving the keynote address. Bill has been a vocal proponent of how important it is for antitrust agencies to devote substantial effort to asking the question of whether they're doing things right. Without that encouragement, I doubt that today's conference would have happened.

Before we get on with the conference, I would also like to thank Chairman Majoras and her office, most notably Brian Kuzman, for their support and encouragement for this conference. I'd also like to thank my fellow bureau director, Jeff Schmidt, both for supporting the general idea of holding the conference and for helping me contact people in the grocery store industry to solicit their participation.

Finally, I owe a huge debt of thanks to Chris Adams, who fleshed out this conference. I've been pushing to do this conference for nearly two years now, and it was really his hard work that made it happen.

So again, thank you all for coming, and I hope you find it to be a stimulating and productive day. And with that, if we can have the panelists from the first session come up.

Our first speaker is Paul Ellickson. As I mentioned, he's an assistant professor of economics at --

ooh, I got you wrong in the beginning.

MR. ELLICKSON: Yes. I'm in the econ department.

MR. SALINGER: You're in the econ department.

MR. ELLICKSON: I used to be in the business school. I decided I didn't like money that much.

(Laughter.)

MR. SALINGER: He's an assistant professor of economics at Duke. He received his PhD in economics from MIT in 2000. He previously taught at Rochester. And his research interests are industrial organization of applied micro-econometrics and marketing. And he's done a lot of work on the retail industry.

MR. ELLICKSON: So do I have slides up here?

Okay. Thank you for having me out. I am Paul Ellickson from Duke. And I'm going to talk about the evolution of the supermarket industry and a little bit about mergers, the roles of mergers and acquisitions, although I'll leave a lot of that detail to people who know it better than I.

So to just give you a quick highlight of what I'm going to talk about, I'm going to try to walk you through the major eras in the grocery/supermarket industry in the past hundred years. And the executive summary of that is that there are basically four things

that you want to have in mind.

First, a hundred years ago was the chain store revolution, more or less, led by A&P, which was in every respect the Wal-Mart of its time. Then in the '30s you got the introduction of the supermarket format, which changed the scale, the store-level scale of the industry quite a lot and had a lasting impact.

Then the next big innovation was actually not for another 50 years, but was the explosion of products that happened in the 1980s and the introduction of sophisticated information technology at the back end in the growth of super-stores.

And then the last important development that's happened has been the entry of Wal-Mart into the supermarket industry and the grocery industry, the proliferation of supercenters. And the last thing I want to mention is a recent phenomenon, which is the growth of what people are calling extreme value stores, which are, at one end, companies like Save-A-Lot and Aldi that are the dollar stores of the supermarket industry, and at the other end firms like Whole Food and Wild Oats. And these are a couple of the fastest-growing segments of the market. So that's kind of the broad points that I'm going to hit through here.

So just to walk you through the history, circa

1890, a hundred years ago, people had to go -- if they wanted groceries, they pretty much had to go every day. They had to walk there. And they had to go to a lot of different types of specialty stores. Right? So you'd go to the fishmonger for your fish. You'd go to the meatcutter for your meat and the produce guy for your produce.

You had tons, like 500,000, of these types of stores spread all over the place. They were tiny. They were run in a pretty haphazard manner. Pretty much no accounting was being done in a lot of those places.

And one of the things that was very costly for them was that the early grocery stores before A&P would deliver stuff to you. You could call them up and they would bring it to you. And they also sold a lot of stuff on credit, which really added to the cost for those guys.

And so what happened around the 1910s or starting a little bit earlier than that was the Hartford brothers at A&P completely changed the game. They came in and said, look, I'm going to pull a page out of Henry Ford's book, and I'm going to introduce standardization and scale to this industry, and I'm going to build a giant network of stores.

I'm going to apply scientific management principles. I'm going to take logistics serious. I'm

going to take site selection serious. And I'm going to introduce a new type of a format, which was called the economy format, which was cash and carry. So they got rid of -- the first big innovations they did were to get rid of the delivery and the credit, which was very nice for them.

And so to give you an idea of what kind of revenue these guys were doing, the per-store revenue of a typical A&P in the 1920s was something like $40,000 a year, which is like $500,000 a year now, so a small convenience store. That's kind of what you picture that object as being.

A&P also integrated into both distribution and mfg. So they operated their own warehouses, their own distribution networks, and they also produced a lot of their own products. So private labels in some sense were their game back then. And of course, they were relying on introducing volume to the industry. So volume and "low margins," where low margins is relative, obviously, to what the margins are now.

So what were the big advantages of the chain stores and why did they grow so rapidly? So you'll see on the next slide that these guys just exploded. A&P went from a few hundred stores in 1900 to 13,000 stores in the late '30s. And the other names that you see up

there are names that we recognize today.

So Kroger really ramped up their number of stores. American Stores, which was in existence until just a few years ago. Safeway, of course, still a top three firm. And First National has since disappeared. But you can see that these things were growing really rapidly.

And so why was it? Well, again, fewer services, and basically price. Right? These guys were 20 percent cheaper than the existing "independent grocer." And why were they so much cheaper? Well, they offered fewer services, so they didn't deliver. They didn't have these trading stamp things that people were emphasizing back then. They didn't sell on credit; it was cash and carry.

They took site selection very seriously; they had people standing on street corners counting the number of people that would come by. And they also did -- when you see Tom Holmes later talk about the rollout of Wal-Mart, the rollout of A&P was actually quite a bit different because they were rolling out stores at a similarly breakneck pace, but they were also rolling them back all the time.

So they built like 3,000 stores over the course of a few years and shut down like half of them because

they were trial and error, trying to figure out which places worked and which places didn't. And their scale is what would allow them to do that.

Obviously, their scale allowed them to specialize things, take accounting seriously -- that's another angle in which they were able to undercut people. They focused a lot on logistics and distribution. So again, very Wal-Mart-esque activities, just a hundred years ago.

Integrating into manufacturing allowed them to control their quality of product relative to a lot of their complaints. And of course, they took inventory management and stocking very seriously as well, managing their stocks of goods and their turnover.

And I think one of the things that I emphasize, that helps offering my thinking about what is going on with big chains, is that what the big advantage is is something about coordination, something about getting the individual stores to do what the big machine in central wants it to do. And I think that's what was driving their advantages back then. I think that's what's driving the advantages of the big chains now.

Other people obviously would emphasize buying power, but I think if you go back and you read stuff by Morris Adelman, who did a lot of work in A&P during the

times that they were being litigated, he would make the case that maybe buying power was something like 15 percent of their advantage. That wasn't really what was driving it, was squeezing manufacturers. It was more kind of efficiencies all over the map from all sorts of angles.

So you can see that this happened. These guys rolled out stores like crazy. They sucked up an amazing amount of share of the industry. So they went from a C5 of like 4 percent of firm concentration ratio to having a quarter of total grocery sales. And of course, they attracted, not unlike Wal-Mart, a lot of unwanted attention.

So the Robinson-Pattman Act was more or less a shot across the bow of A&P in particular. And Wright Pattman was clearly a guy with real populist sensibilities because the other thing he championed was something called the chain store death tax, which was supposed to do something like charge 75 percent tax on the revenues of the firms. So he was just adamant about putting A&P out of business.

And of course, that was coming from the little guy, the little guy saying, oh, he's come to town and killing me off. You've got to help me out. That sounds familiar today; there's other people making similar

claims.

And it's a little bit hard to know how board all the attention that they got was in terms of performance, like A&P crashed and burned in the '60s and '70s, but it probably didn't have that much to do with antitrust activities. It was just poor management on the part of the firm.

So something that was happening contemporaneous to the chain store revolution was big demographic changes in the United States. So at the same time this diffusion was going on, you were also getting big structural changes like urbanization; like people moving to the cities; incomes going way up; incomes coming down, of course, in the Great Depression; refrigerators being introduced into the home, but also into the establishments selling stuff. And of course, the automobile was diffusing a lot in this period as well.

So what did that mean? It meant people didn't have to go to the store every day, and they didn't have to walk there. And so it changed the technology right under the feet of A&P. They built this beautiful network of tiny little stores, and all of a sudden they were out of date within a ten-year period business. Now all of a sudden it really made sense to build your store farther away and bigger and allow people to go there less often,

and move the scale from the warehouse to the individual store itself.

And another thing that helped that along was the rise in mass media, radio in particular and national brands. So there was a shift away from the private label vertical integration style to national brands.

So the supermarket was a product of these types of changes that were going on contemporaneously. And this is a King Kullen, which was started by the guy that basically gets credit for creating the supermarket industry, Michael Kullen.

Various people will lay claim to this; the Piggly Wiggly guy will lay some claims, and there's a bunch of things that look like supermarkets out on the West Coast. But by and large, Michael Kullen is the guy that gets the credit for inventing the supermarket in 1933. He was a Kroger employee. And he came to them and he said, I got this great idea.

I'm going to build stores that are ten times the size of our typical store. I'm going to stock national brands. I'm going to price aggressively. He was kind of a megalomaniac, so he said all this stuff and kind of exaggerated terms.

But I'm going to advertise like crazy, and we're just going to kill the competition, and this is the

wave of the future. And the guys at Kroger said, no, thanks. We like what we're doing already. And so he took off and built his own store. And of course, that wiped out the old model within 20 years or so.

The thing that's interesting to realize is that the thing that I'm calling a supermarket circa 1933 is not something you'd really recognize as a supermarket today. It's really more like a club store or like a club store crossed with a dollar store. So they were called cheapies because they were cheap in terms of price, but also cheap in terms of how they looked, the ambiance.

So they'd be located in old abandoned warehouses or factories, surprisingly, in old abandoned warehouse and factory districts, so not in a suburb. They had very primitive wood shelving, and of course they emphasized self-service, is the other big introduction that they put in, was if you went into an A&P or a Kroger in that time, you would been helped by a clerk, who would have been suggesting some stuff to you and trying to upsell you on various things.

And these guys just said, look. You're going to go around and pick out your own stuff. A few years later, some smart guy is going to come along and invent the shopping cart, and make that a little bit easier on you. But that was one of their big innovations as well.

And they were cheap. They were like 13 percent cheaper than the chain stores, which themselves had been 13 percent cheaper than the little independent grocer back then.

So that's giving you an idea these things were really not like what you think about as like a Kroger or a Safeway today. They were really more like kind of Dollar General crossed with a club store, but in a really bad area.

And they also sold a lot more than just groceries. So King Kullen sold tires and vacuum cleaners. Big Bear, which is another one of these big guys back then, was a lot more like a Wal-Mart Supercenter. Only 34 percent of their business -- or, sorry, 56 percent of their business was coming from groceries. Today Wal-Mart probably gets 40 percent of their business from groceries.

And these guys did a lot more business than the typical chain store, like ten to twenty times as much. So in their first year in operation, King Kullen made about a million dollars a store, which is about $14 million a store today, which puts them right at the mean in terms of the typical grocery store now.

Big Bear, on the other hand, made 3.8 million, which puts them square in the middle of Wal-Mart

territory today in terms of sales. So these guys were doing a very similar model of what you have today, but on a bit of a smaller scale in terms of number of products.

So the supermarket took a little while to take off, partly because World War II got in the way, and we get price controls and labor problems and everything that happens when you have a war. But after the war, they took off like crazy. So they went from 386 supermarkets to something like 5500 by 1948. Doubled again by '54.

By '63, they're up at 21,000, and by the '70s, you've got about the same number of supermarkets that you have today. This is 25,000 or so. If you're inflating the cutoff with inflation for what it takes to be called a supermarket, which in the '70s was about a million dollars a year -- now it's probably like four or five million, if you use that rule -- then you'd end up with about 25,000 supermarkets today.

And you'd get about the same share of groceries. So they ramped up their share of groceries pretty much steadily until they hit the steady state here, about 75 percent, which is the same basic ballpark as it is today.

So what happened after the war? You got a period of steady growth. You got suburbanization. You got small chains; really, the power shifted to the little

guy because now the store was kind of like a warehouse itself. So it was really the smaller guys that led the way in terms of building supermarkets that -- you know, the Michael Kullens of the world. But even A&P started converting to supermarkets by the '30s, and A&P was even a bit faster than Kroger and Safeway, firms a little bit slower to pick up on that. But they did.

Sometimes they rolled out a second line, which was typical of this industry. So Kroger initially opened things called Pay n' Takits back then, as opposed to Krogers when they were making supermarkets. And the other thing that happened is that it changed from being a cheapie to being what we would recognize as a supermarket today.

So now we're building in the suburbs. Now we're building them in shopping centers. Now we've got delis and bakeries in them. And now they look, circa 1950, like something if you're at least over 30 you would recognize fondly from your childhood as being something quite recognizable. So this is a Safeway in 1955 or '58 in Lodi, California. And these black and whites are some of their flagship stores from the '50s.

So then what happened in terms of postwar growth, so you've got rising incomes and the growth of suburbs. You've got a steady supply of new locations

opening up out West, and so forth, and building new stores. A lot of little chains are building stores and becoming bigger chains, mostly led by regional chains. But the big guys were coming on as well.

And then there was actually a lot of acquisition as markets got saturated, kind of got over-stored. A lot of the little guys turned to doing acquisitions in order to be able to amass stores, increase their storing outright. So you got a lot of merger activity in the '50s and early '60s, and you can see some of that happening here.

One interesting thing is that it wasn't everybody that was doing this. It was the Winn Dixies and the Grand Unions, and the American Stores and the Krogers were smaller chains at that point unless -- A&P didn't merge much at all or use acquisition much at all, and neither did Safeway.

So like I said, merger was basically a tool for mid-sized chains to grow. It started in the '60s. And it attracted attention, so the FTC kind of put the kibosh on these guys by saying, look. Any firm that's got $500 million or more of assets, we're going to look very closely at you if you try to acquire anything but very small stores.

And they took action against National Tea and

Kroger in the '60s. The key case here was probably DOJ v. Vons in '66 in L.A. Vons was a No. 3 firm. Shop & Bag or Bag & Shop, or something that I forget the name of, was the No. 6 firm. They wanted to merge, and the DOJ said, no dice. That would be too much concentration there.

And I think late in the '60s was when the first food distribution merger guidelines were established as well. And that pretty much put the brakes on a lot of acquisition activity in the '60s and '70s.

So the next big thing to happen was recession and saturation kind of hitting together, and supermarkets looking for a new way or losing money for the first time. And it was at this point that you got some of the explosion in formats that you see today. So all the big interesting formats that are arising today, a lot of them got their start in this period.

So club stores maybe started in the '70s and '80s. Limited assortment stores, which are again these Dollar General type stores that cater to people that are below the Wal-Mart demographic, so people for whom Wal-Mart is sort of expensive, mainly because they carry national brands. These guys tend to carry private label stuff, cheap stuff.

And of course, being the '70s, at the other end

of the spectrum you also got natural food stuff starting up as well. And you might keep your eyes on those because those guys are going to come back later. But this is really where this movement started as well.

This is also the heyday of the small to medium-sized chain. So if you look at what chains look like in this period, the national Safeways, Krogers, and A&Ps were sort of treading water or losing share from the '40s even though the '80s, whereas local chains, like single MSA chains, were growing a lot, and sectional and regional chains were growing a lot. So this was the era of the 20- to 40-store chain having a lot of impact.

And so then the next big thing to happen was the information age. So in the '70s, you got this explosion in format. But probably the most important and significant thing that happened there was the introduction of the UPC code and scanning registers.

So the first bar code was installed in '74 in a Marsh supermarket in Troy, Ohio. And by '86, 50 percent of the stores had them. And this was big because this gave retailers, first of all, a lot more power. It gave them access to the same information about product movement that the manufacturers had. It gave something to trade with firms like IRI and Nielsen in order to give access to more data and more data analysis.

And so you got the beginning of test marketing and consumer panels, which of course eventually laid the groundwork for product proliferation, lots of additional products coming out, and also gave people the beginnings of what they would need to take logistics into the next stage, computerize it and stuff.

So what happened, from '74 to '90 you got a tripling of the number of products carried per store, both because things were coming out in different sizes and people were adding different stuff to the store, et cetera, et cetera. Store size was growing steadily throughout this entire period at a thousand square feet a year. So you can see there's going to be some pressure on these guys to figure out a way to manage all this stuff.

And so there was a greater need for coordination, a great need for more advanced back end stuff, so electronic data interchange and best in time delivery and this type of stuff. That was beginning to be a pressure in the '80s.

You also got the supercenter and the extended format in order to be able to pack all this stuff in. So if you look at what's happening to store formats from the '80s through the '90s, you see the conventional supermarket, the one I showed you the picture of, dying

out and these extended formats, like superstores and food and drug combos, coming up. So Wal-Mart would be like a hypermarket, and that didn't really take off until after this period. And you also got your warehouse and limited assortment stuff happening as a result of the recession and so forth.

So here's what was happening to square footage. And that's pretty much a constant upwards trend, pretty much going back even to the introduction of the supermarket format. It would have been about 3,000 or 6,000 square feet. That's probably pretty much a linear trend. And products per store, you got something closer to something much more exponential due to computerization and test marketing and all this type of stuff that is happening at that point.

So what was the next big thing? The next big thing that happened in the '90s, of course, was the entry of Wal-Mart. And so Wal-Mart has been rolling out supercenters at a breakneck pace since 1988. Tom Holmes will tell us a lot more about that. They also triggered a wave of mega-mergers right around 2000. So you got Kroger buying Fred Meyer, and you got Albertsons buying American Stores, and you got, very recently, Supervalu buying Albertsons, and a bunch of other mergers, and the other guys like this, basically triggered, as far as I

can tell, by the fear of Wal-Mart steadily encroaching on the grocery business.

There was also a wave of merger in the '80s that I've got less of an understanding of what those were about. Some of that was just about downsizing and getting rid of the bad stores.

So Wal-Mart has certainly quickly shot up the ranks. But I think its impact is overstated a lot. And part of the reason is because -- so the data that everybody uses to say, okay, what share of the supermarket industry does Wal-Mart have, is the progressive grocer trade dimensions A.C. Nielsen data, which I use a lot in my own research.

And they seem to have made a decision around 2000 or 2001 when I think Wal-Mart stopped cooperating with A.C. Nielsen to start reporting Wal-Mart sales as total/total sales, sales in groceries and the rest of the stuff, the bikes and the shotguns and the polyester shirts.

And so by that token, they're getting credit basically for everything they're selling. And that's getting plopped into the supermarket business. And so if you take their numbers seriously, it looks like Wal-Mart controls almost 23 percent of the supermarket. And that's just not right. That's just flat-out incorrect.

More like 9 percent.

And that's still a lot. But where am I getting this claim? Well, first of all, they don't have much of a presence in the major cities, so the top eight cities are essentially nothing. The next two cities, you get a couple Texas cities where they quote unquote have 30 percent of the market.

Only 62 percent of their supercenters are in MSAs; 48 percent of them are sitting in -- or, sorry, 38 percent -- are sitting in non-MSAs, so more rural areas. And I would bet you -- and this is something I'm looking into, but I would bet you that even a lot of these stores are peripheral. They're not central city.

Their market share, however you want to calculate it, is twice as big in small markets as it is in large markets. They've also got a pretty big threat coming from these limited assortment guys because their business model is aimed at lower income people. And at least in the cities, Aldi and Save-A-Lot really are giving those guys a better deal because they're undercutting Wal-Mart by offering private label stuff.

Why do I think I'm not making crazy claims here? Well, look at the stock price. Wal-Mart stock price is flat in the past five years. Kroger, Safeway, and even Supervalu are actually doing quite well. A

couple of them are even outperforming the S&P 500.

Of course, given my economic department salary, I don't want to bet against Wal-Mart with my money. You can do it with yours. But again, just to back up these claims, so you look at the number of stores that are in MSAs for Wal-Mart versus the other major firms, and Wal-Mart is at 62 percent and most everybody else is above 80.

I mean, obviously I'd be scared if I was a more rural chain like Lowes or Winn Dixie. I'd be pretty scared. Or Food Lion, maybe. But I'm not so scared if I'm one of the major firms or if I'm a firm like Wegmans. To Wal-Mart, I say, bring it on. You're not doing anything that hasn't been done in this industry for a long time. It's a mature industry.

So here's the market share information on these guys. Like I said, they're basically a nonentity in the top eight markets, and after that you see some pretty big share. But I think these numbers are doubled. They're inflated by 50 percent. If you deflate them down to like 40 percent, you say they're doing 40 percent of the reported stuff in the trade dimension data, then Wal-Mart looks like what you think they should have been able to do.

So when I was writing my thesis ten years ago

and I was thinking about Wal-Mart, I was saying, you know what these guys are going to do? They're going to come in and they're going to kill off the fringe. They're going to kill off all these little stores that are out in between MSAs and so forth. And as far as I can tell, that's pretty close to what they're actually doing.

And there's a lot of money to be made there. That's a nice business to be in. But it's not city money. And I don't think they have a shot at getting into the cities, personally.

So another interesting trend, just to cap this off because I'm almost out of time, is the other big thing that's happened in the past ten years is like the growth of what people are calling the extreme value segment. So look at the rapid growth in Aldi and Save-A-Lot. Save-A-Lot is actually owned by Supervalu, but they do a lot of franchising.

So on the bottom end, think about the middle 70 of the grocery business being the stuff that's fought over by the Safeways and the Krogers and the Wal-Marts of the world. The outer ends of this thing that is the fringe is now being carved up by these super low-end guys, who are eating up that market and really catering as well to minority groups and to the Hispanic population. That's what's happening here.

And on the top end, you've got people coming in and serving the people that are sort of too rich for the typical store. So this should be interesting to watch develop. I don't know what's going to happen with this, but that's an interesting trend.

So I'm out of time, but the last thing I want to leave you with is this quote that I pulled from a paper. And it says, essentially, that you've got all these choices in the cities, and it looks like the industry is tending to return to discount operations at low margin, one-stop shopping centers. But even now, the quality supermarkets are continuing to prosper and grow.

This could have been written last week. It was actually written in 1972. And if you go back to 1950, you'd see something similar to this as well. So one of the things that's interesting about the supermarket industry is that it is a developed and relatively simple business, and the things that you'd emphasize about it 40 years ago are the same types of things that you would conclude today.

So anyway, that's my 50,000 foot perspective on the historic evolution. Hopefully that sets the stage a bit for people to talk in more detail.

MR. SALINGER: Great. Thank you very much. That was terrific.

(Applause.)

MR. SALINGER: Well, to give us some international perspective, we have Andrew Taylor initially. He's the inquiry director at the U.K. Competition Commission, where he directs inquiries into merger transactions as well as the effectiveness of competition in markets more generally.

Currently he's leading the Competition Commission's investigation into the U.K. groceries industry. Prior to joining the Competition Commission in 2005, Andrew was a consultant in the utilities sector, primarily water, and previously worked for the Australian government. So Andrew.

MR. TAYLOR: Thank you. Well, good morning. Thanks very much for having me here to talk to you today. Benoit is also working with me on this inquiry back in London, along with a number of other people. But if you've got any difficult questions, I'll get Benoit to answer them later.

What we are doing is a market investigation into the groceries industry in the U.K. And before I tell you a little bit more about it, I just thought it would be useful to give you just a before sense of what a market investigation is for us.

It's a general investigation by the Competition

Commission. We're asked to carry these out by the Office of Fair Trading, the other competition authority in the U.K. We have the power to order remedies. So these could be structural or behavioral remedies.

So if you want to put it in the context of the grocery industry, we could, for example, require them to divest stores, for example. So that kind of gives you a sense of what we can do with these inquiries.

So having heard the first presentation, which is all about mergers and so on, and perhaps this isn't as relevant to your thinking about merger control, but it probably is a little bit interesting in terms of just giving you a sense of where we've been in the U.K. in terms of grocery retailing investigations in recent years and where we are at the moment.

So this investigation, the current one, started in May last year. We've published some initial thinking in January this year, and we've got some provisional findings due in September, with a final report early next year.

We've got quite a history of investigating the grocery retail business in the U.K. The CC held another market investigation back in 1999/2000, and since then we've also had a couple of merger inquiries. So in 2003, the U.K.'s fourth largest grocery retailer, Safeway, was

being bid for by the three largest U.K. grocery retailers. That's Tesco, Sainsbury's, and Asda. Asda which is owned by Wal-Mart, and one other, Morrisons. And as a result of that inquiry, Morrisons was allowed to acquire Safeway and other three were prohibited from making that acquisition.

And then in 2005, we had another look at supermarkets. As a function of that 2003 transaction, Morrisons acquired the Safeway chain and it started divesting all the small stores, and it developed really into one of the larger stores.

And so in one of the transactions, it decided to sell 112 stores off to Somerfield. And that transaction was referred to us to have a look at as well. And so we allowed most of that to happen, but we prohibited a few of those store acquisitions.

So we've got quite a lot of history in the sense of looking at the industry, a little bit different from having precedent in the sense that when we make decisions, they're administrative decisions and they don't have precedent value for us. But, in a sense, obviously they give us some guidance when we come to a new inquiry and we want to look at the industry again.

So what I thought I'd do is quickly just take you through a few of the issues for this current inquiry,

and then refer you on to some further reading or further documents that you might want to take a look at.

So here's a market definition. The approach that we've taken in the U.K. is in past cases, it has been to find what's known as two markets. It's the two markets approach. We've got a separate market for one-stop shopping, which is defined as stores -- or has been defined as stores larger than 1400 square meters, which is around 15,000 square feet.

And at the time, they were considered sufficiently large for shoppers to carry out a single weekly shop. I guess the Commission in previous inquiries had looked a shopping behavior and how people went about doing their shopping, and based this on a view that most people did a single weekly shop.

And then they did secondary and top-up shopping during the week, but they did a single weekly shop. That was their most important shop. And in order to service that, you needed a store that was sufficiently large, and they drew a threshold of 1400 square meters.

So they defined the market in terms of store size, and they also defined it in terms of, if you look, fascia. And this gets back to the point that Paul was making earlier about the conversational supermarkets and the high end and the low end people, where the approach

taken in the U.K. was to list those conversational supermarkets and say, yes, these are the people competing in the product market.

But the hard discounters, the people like Aldi and Lidl and Netto, they're not competing with the conventional supermarkets, and neither are the people at the top end, like Marks & Spencer.

So that was kind of the history that we inherited when we started this inquiry last year. So we're still looking at market definition, and David Parker, who's going to talk next, will I'm sure tell you why the market as a whole is bigger than we perhaps think it is at the moment.

But we have published some more thinking just yesterday which said, well, this 1400 square meter threshold which has historically been in place in the U.K., we're not really sure how significant that is any more. We're not sure whether there's any real magic about that number in terms of stores above it and stores below it.

We still think that, in a sense, large stores constrain each other more than small stores constrain large stores. But we don't think that you can really draw a line, a hard line, in there around store size.

And part of that, we think, is probably -- or

in terms of the dollar analysis we've done, part of that, I think, is being driven by changes in shopping habits. Certainly we've seen a decline in the popularity of the one-stop weekly shop in the past -- even within the last ten years.

The number of households who are conducting one-stop shops has fallen, and people are doing more frequent shopping and small basket sizes. And we're being told that a lot of that is being driven by popularity of chilled food and ready meal type products.

We've also looked at the competitor set again. But the analysis that we've conducted to date is still showing that the hard discounters, the Aldis and so on of this world, are not really providing that much competition to the conventional supermarkets.

On the geographic market, just before I move on, we've in the past generally viewed the market as quite local, and saying that the catchment area for a supermarket is around ten to fifteen minutes of that supermarket. And that continues to be our view at the moment.

So one of the big issues that we are really looking at in this inquiry is the extent of local concentration in the supermarkets. In the U.K. we have four big chains and perhaps another 16 or so other chains

with a national presence of some sort or another, and then lots and lots of, of course, independent convenience stores and so on.

And this was identified as a concern back in 2000 as well. But since 2000, what we've seen is Tesco and Sainsbury's in particular have acquired large numbers of convenience stores.

And so what you're seeing is the rise of what's known in the media in the United Kingdom as the "Tesco town," towns like Cambridge or Inverness where there are huge numbers of Tesco stores. Some of them are large, and many of them are small, and that's a function of having acquired a number of convenience store chains.

So that's, I guess, if you like, some of the noise surrounding our inquiry, and one of the things that we've been asked to take a look at and to see whether that really is a cause for concern or not.

And then it was interesting to hear Paul talk about the complaints of convenience store owners here in the U.S. Certainly that's a large part of the noise surrounding our inquiry as well. We have the Association of Convenience Stores, which represents the 50,000 or so convenience store operators in the U.K., and they're very concerned about the future of their business and say that they're basically being pushed out of business due to

unfair competition.

So we're very much interested in barriers to entry into local markets. If we think there's a concentration problem, are there barriers to entry? And so a big aspect of what we're looking at is focused around planning, the planning system in the U.K. We have very much, I think, a type of controlled system of development.

If you want to open up a store, you must get the permission of the local authorities. The local authorities will have a development plan in place, which will define where you can cite supermarkets and other commercial developments. And within those plans that each local authority develops, there is an overarching policy that the government sets which is called the "town center first" policy.

And that came into place in the early 1990s. And that really means that if you want to open up a supermarket in the center of town, that's pretty easy. It's pretty easy, but it's difficult to get the land. So they tend to open up small stores. If you want to open up an out-of-center or out-of-town development, it's much more difficult.

And they have what's known as the need test at the moment. The government announced it was going to

abolish it just a few days ago, partly based on an intent to replace it with something similar, I think. And the need test effectively says -- or allows the local authority to come to a view on whether there's sufficient retail floor space in the area or not. If they don't think there is, well, then they'll let you build a supermarket. If they think there's enough, well, I'm afraid you can't.

So that's something that we're looking at, how important these planning requirements have been in terms of restricting that entry, and how is that interplaying with local concentration of supermarkets.

The other thing that's been brought to our attention and we've been asked to look at is what's commonly called land banks. And these are the substantial land holdings owned by a number of supermarket chains, and whether they really just represent a pipeline of future store development or whether some of those land holdings are really strategic holdings which are being held as a means of blocking entries by competitors into local markets. So we're taking a look at that as well.

And we get a lot of complaints about manipulation of the planning system, too, objecting to a competitor's planning applications, bullying of local

authorities. This is all very high profile in the U.K. and all things that we are being asked to take a look at.

The scope of inquiry is pretty wide. We're also looking at upstream issues. Back in 2000, there were concerns being expressed about the treatment of suppliers, and this led to a code of practice being introduced for grocery and retailers.

And it covers all sorts of things, like retrospective discounts, financing of promotions, those types of activities. It doesn't actually prohibit any of them, or only maybe one or two, but it asks the supermarkets to be reasonable in their application of them.

Since 2000, we don't think it's really changed at all in terms of supermarkets' behavior. And we are being -- and we need to come to a view whether we think that's a problem or not. So we have to look at that code of practice again and decide what we want to do about it.

And then there's another item, which is concerns by the smaller store operators about a waterbed effect, where it's saying, well, suppliers are having to charge very low prices to the big retailers, and to make that up, they're having to charge much higher prices to the smaller retailers. That's putting us out of business, it's unfair, and we want something done about

it.

Well, first we have to decide whether there's any real legs to that argument. If the suppliers -- why wouldn't the suppliers be price maximizing towards the smaller retailers anyway? So we're looking at that. And whether really, when you look at the pricing data, whether that is the reality of the situation. So we've gone and collected a lot of data from suppliers in terms of what they charge various retailers, and we're taking a look at the extent to which the big retailers really are getting systematically better prices than smaller retailers. To date, it's not clear that they actually are.

So I'm not going to really talk much more. I just thought I'd give you -- I've finished my time, but I will repeat that website. We've got a lot of evidence there. You can see the various papers that have been submitted to us by people, both erudite research papers as well as lots of letters from farmers who are very upset the way they're being treated by the supermarkets.

You can also see the various working papers which we've published to date. And we continue to put more and more material up there until such time as we publish our provisional findings in September.

Thank you.

(Applause.)

MR. SALINGER: Well, thank you.

To get a perspective on this from outside the government, we have David Parker, who's a manager at Frontier Economics in London. He's worked on a wide variety of E.U. and U.K. antitrust cases, including the GE/Honeywell merger and the removal of resale price maintenance on U.K. medications.

David.

MR. PARKER: Good morning. Thank you for inviting me. My reason for being here is that I work for Tesco, the largest U.K. grocery retailer. That name has come up once or twice already.

What I wanted to do was talk about one of the issues that has come up in the grocery inquiry, not particularly because I want to have a debate about what's right or wrong, but I want to talk about an empirical technique that we've used that may be interesting, not just in the context of market definition in market inquiry, but also in potentially merger inquiries in other retail industries.

The theoretical framework in the U.K. is basically the same SSNIP test, demand and supply side substitution as used in the U.S.

There was an important merger inquiry -- the

Safeway case -- a few years ago which defined the local market primarily based on local customer shopping distances, on average 10 minutes. The CC proposed a set of rules about which firm could acquire which stores. Many firms wanted to acquire Safeway, but that would have led to a lot of overlaps in certain catchments. And the idea of the rules was that each firm would have to divest those if they had four to three fascia or fewer in those local markets.

This led to arguments about Geographic Information Systems. Is this store 10 minutes away from that store, or is it 10.2 minutes away, or is 9.8 minutes away? And how fast do you drive along this road, and how long do you stop at that junction, and so on.

The current Groceries inquiry has seen similar suggestions made about should you have a similar restriction on organic growth designed to encourage choice in local markets. In other words, if a store has already got a position in a local market, should you be allowed to buy more stores or acquire more land?

As a bit of context is -- I'm sure you're all aware of this -- Great Britain is crowded compared to the U.S. The overall population density in the U.K. is about eight times that of the U.S. And urban population density in particular, which is defined here as areas of

500,000 people, is about three times as large. So towns in the U.K. don't spread out as much as they do in the U.S. And what that leads you to is something of potential interest for the arguments about geographic market definition, which is the chain of substitution. So I'll just take a bit of time to try to explain this diagram because there's a lot of information on it.

This diagram shows part of South London. The red and yellow circles are grocery stores. The red stores are Tesco stores above 1400 square meters in size. The yellow stores are rival stores above 1400 square meters. The concentric not quite circles are isochrones. So an isochrone, I'm sure you know, is 10 minutes drive time (or whatever type of journey you're employing) or 5 minutes drive time, say, in every direction. So it's not quite a circle because you go faster down some roads than others. But isochrones are broadly circular.

The little red quasi-circle is 5 minutes around the store at the center. The blue is 10, and 15, 20, 25. These show you the distances you can travel in South London.

The black dots, which look like they've been scattered like confetti all over the diagram, that's where people live. These are our Census Output Areas. This is the smallest aggregation for which census data is

published in the U.K. It's about 110 households per dot. So in the U.K., that's quite a small area. It's half a street or a street, depending on how big your streets are.

If we think about the market definition test, what we're saying is our potential market is a 10-minute isochrone in an urban area, which is the indigo circle. The hypothetical monopolist is assumed to be able to raise prices in that 10-minute area by 5 percent.

Now, that may or may not be right. The constraint on the hypothetical monopolist is that if it raises prices at the stores inside; people within the market could switch to stores outside that local market. So you can see there's lots of dots -- where the customers are -- close to the edge of the 10 minute market (but inside it). And there's quite a few stores in the 10- to 15-minute isochrone, where in principle you could start switching to.

To give us a sense of whether we can say that switching is sufficient to constrain the hypothetical monopolist? Can we say that 10 minutes is a local market? What we've done is tried to use the fact that we've got very detailed geographic information to try and get a sense of what size should the local markets be if you think that all these local markets are somehow

different.

So we have a very simple theoretical framework. Let's say you take your 10-minute isochrone, so your indigo circle, and you say that all the customers there travel to their nearest store. This is very simple, Hotelling-type approach. All stores in that market raise their prices by 5 percent. That's our SSNIP. All those customers that are inside the market they face a choice.

On the one hand, they can remain at their current store, but they pay 5 percent more on that basket. On the other hand, they could go to the nearest store outside that market which hasn't raised its price, and they incur an extra transport cost instead. And you could switch if one is greater than the other.

If enough customers switch away because they've got these options outside and they're prepared to switch to them, that wouldn't be a market. But if not many customers slip away, then that seems like a reasonable definition of the market. If it fails, you widen and then you try again, and try again.

To implement this, you need four types of data. The first thing you need is good data on locations -- locations of stores and you need locations of customers. Well, the client has got a very good store database; that's quite an important part of its competitive armory,

knowing where everyone's stores are. There are also publicly available similar types of store data.

The customer locations, as I said before, are from the U.K. census. So you use these census output areas, half a street. You then have pretty accurate information on where the customers are and where the stores are.

You can use Geographic Information Systems with drive time assumptions to calculate the distance from home to store for each combination of customer and store, in this case, it uses the client's software because they spend a lot of time thinking about this because it's important for sales forecasting and so on. But off-the-shelf packages exist. You've probably come across them -- MapInfo is one example.

The second thing that you need to operationalize this is the cost of travel time. So you need to know how much customers value savings on travel time in order to know whether they'd pay the extra 5 percent. We derive this econometrically. We take TNS Worldpanel data. This is a panel of customers who scan in all their grocery purchases over a period of time. And this panel refreshes. As far as I can tell from the description, it's the same type of data that Jerry Hausman used in his paper on Wal-Mart pricing effects, if

you've seen that recently.

You've got the panel of customers -- I think it's about 10,000 -- who scan in all their purchases. And you can see which stores they went to and so on. So it's potentially quite accurate. It's certainly the best that we've got.

What you can do with that data is see what customers did -- you see where they chose to shop. What you don't see is where they could have shopped but didn't. And that's what we're really interested in. I could have shopped at this low priced but far away store, but I chose to shop at this high priced but close store, in order to get some sense of the tradeoffs between, in this case, price and distance.

What the client managed to do was ask TNS to link the choices back to the customers and then use their data to identify which other stores they could have shopped at and the characteristics of those stores, and then take out the customer data again so that it remained anonymous.

And what you now have is customer X, and we know that they shopped here and they spent this amount. But they also could have shopped at all these other places with these characteristics, and decided not to do so. You can do a conditional logit model to try and

identify all the different tradeoffs. And that gives you a price/distance tradeoff.

The third thing is you need to have some sense of a basket distribution because if you use an average basket size, that potentially underestimates switching because it's large basket people who would be more prepared to switch. It makes sense. You face a higher cost from the price increase. If I'm spending $100, then it's an extra $5. If I'm spending $10, that's an extra 50 cents. But the extra distance I travel is the same either way because I've got the same choices. So large basket customers are more likely to switch.

In previous inquiries, Andrew was mentioning that they talked about this weekly one-stop shop market. Now, it's not quite clear what a one-stop shop is. It's clearly something like a trip that accounts for a large proportion of your average weekly grocery shopping. But quite what proportion that should be is not entirely clear. That's, I think, a common-sense interpretation.

One of the issues is that a customer’s one-stop shop will vary depending on who you are. So someone who is single and has no kids will have a very different one-stop shop in terms of basket size to someone who's got four kids ravenously chomping their way through groceries.

So you want to try and calculate one-stop shops for each of these customers, on an individual basis for each customer, and form a distribution of the one-stop shops trips. And then as a way of operationalizing this, you have to assume that this distribution is the same in each census output area. Otherwise it just gets extremely complicated (if not impossible) because we don't have any information on how these distributions should vary by census output area.

The last thing you need is an estimate of store margins because that determines the profitability. When customers switch the store loses sales, but they don't lose all the profit associated with the revenue from the sales because they save some cost as well.

So you look for costs that could be saved for sales loss over the relevant time period under the SSNIP framework. Think about maybe a year.

For instance, consider the cost of goods sold. If you lose 10 percent of sales, you just don't buy 10 percent of goods in. So you save all of that. You probably spend a bit less on promotions. Staff, well, you can save some on staff, but there are staff-level fixed costs. Distribution again, you can probably save some, but this may also have some fixed costs. Property costs, unlikely to be able to save very much for a

reduction in sales. We use the assumptions that the client used in its internal business.

To show you what happens, then what you have to do is just to turn the handle. You calculate this through -- across all customers and stores. And this is a very mechanical but quite big exercise.

This diagram shows you hopefully that it's doing the sort of thing that you'd expect. This is a place called Holbeach, which is a fairly rural area. The bit out to the northeast is the sea. What you've got is you've got a store in the middle, which is Holbeach. You've got another store over to the left, which is marked R, which is just inside this market -- in this case, a 15-minute isochrone because this is a rural area.

Then you've got a store that's just outside, marked J, which is a possible place that people can switch to. You'll see up at the top there's a couple of stores marked A and E in the town called Boston. There's another town called Wisbech just down to the southeast. All of those are places that people could switch to outside the isochrone if the people inside the isochrone raised their prices.

What we've done is we've showed every census output area to say how big is the basket size for which you'd switch? The darker the area, the more likely you

are to switch -- the lower the basket threshold that gets you to switch.

What we find is this potentially can widen these markets if we do this again and again -- and by quite a lot. In fact, pretty much all markets are larger than we previously identified, because actually 10 minutes is pretty small. Also, lots of customers are closer to the edge. In 10 minutes, if you think about just simple pi R squared -- 10 minutes is four times as big as 5 minutes. So given a constant population density, three-quarters of the people are closer to the edge than they are to the store at the middle. So there's lots of switching possibilities potentially going on, which may well be relevant for all sorts of merger-type analyses and calculating competitive constraints in any kind of retail industry, we believe. I should say this is a matter of some dispute at this stage.

What I'm trying to illustrate is an empirical way of investigating some quite simple, I think, theoretical concepts that stores outside any arbitrarily defined catchment area will constrain stores inside to some extent. The question is how much, and does this chain actually end?

I think it's relevant to merger analysis even if you don't have a market definition stage because

implicitly you have some kind of market definition stage by saying, what's the 1/0? What's the overall leave of what's in and out when you're doing an analysis? What's in the outside option? So even if you do a full-blown competitive effects at the first stage and you don't split things out, you're still making some kind of decision.

And then the advantage, I think, certainly in the U.K., and I don't know how this reads over to the States, is that we've got lots and lots of data. So we've got lots of locational data and customer data. So you can actually tone down your theory, up-weight your data and have a very simple theory, and then it's just a turning the handle exercise.

Thank you very much.

MR. SALINGER: Great. Thank you.

(Applause.)

MR. SALINGER: Well, we have just three minutes. And I feel that if I open it up to questions, there are going to be many more questions than we have time for. So I'll just pose one question for all the panelists.

I think one of the themes that's going to emerge today is that when we do grocery store merger analysis, that market definition plays a central role.

And the question is, is it capturing the effects of mergers accurately?

And so if we compare the U.K. sector and the U.S. sector, are there major differences where you might say that there are aspects of the other country's sector that you think should be emulated? Or is there -- is public policy standing in the way of the development of the industry, and is the analysis we're doing part of that problem?

MR. PARKER: I'll pass this to the authority in the first instance.

MR. SALINGER: Benoit?

MR. DURAND: Well, thank you. That's a great question. Well, as Andrew presented, the history in the U.K. of merger controlling in groceries has developed rather rapidly over the last decade or so. And we have devised some simple rules for market definition.

And often the reason for that was that the Office of Fair Trading, which is looking at merger in phase one, would have a quick and dirty, so to speak, type of rule of thumbs to apply when they will look at merger and decide whether they will send this to us.

Now, obviously, when we look at this in the phase two, in the more in-depth investigation, I like to think that we are not doing something too badly so that

we prevent actually the emergence of the good efficiency or benefits to consumers. We are trying to essentially determine to which extent the two merging parties will constrain each other.

And obviously, we are developing and refining our analysis every time, in every inquiry. We're trying to learn from what we've done in the past. And we also obviously are acquiring more and more data because more and more data is available. So hopefully, that is informing us on what we are doing.

MR. SALINGER: You were kind to say that it was a good question, but it came out pretty garbled.

But let me try to focus it more with David, which is: Your presentation I'll take as being in some ways critical of how the agencies are approaching the analysis of the industry. But what you're doing is you're not being critical in the large; you're being critical in the details. You're saying, okay, really if you just do market definition right, then you'll get the right answer.

But I guess the broader question is: Should we be so focused on market definition, or should there be some broader sorts of questions we should be asking?

MR. PARKER: I think for me one of the key questions that needs to be asked is the nature of price

variation on a geographic basis. So certainly in the U.K. there's a view amongst the academic community that store-by-store pricing has to be the right way to go. Their view is that there must be benefits to store-by-store pricing, and so why wouldn't you?

But I think empirically in the U.K., that certainly isn't the case. I don't know what the situation is in the U.S. My understanding is there is price variation, but it's on a sort of zonal basis. This suggests if you think of things on a law of one price basis as defining a market, maybe that's the dimensionality we should be looking at. Perhaps at a national in the U.K., a zonal level in the U.S., not a highly micro-level approach. If we're asking the question "Is something within 10 minutes or is it 10.2 minutes or is it 9.8 minutes" I wonder whether that's missing the real driver of competition.

MR. SALINGER: I'll give each of the panelists -- do you have any final words you want to say before we break?

MR. ELLICKSON: Well, I guess when I was doing the work in my thesis on explaining market structure, I started out at a much more desegregated level in looking at MSAs as markets. And for the questions that I was interested in asking, those were exactly the wrong

markets, that the markets that I was interested in were much bigger, that I used the markets that -- basically based on distribution areas.

And I still think that's something that people need to pay a little bit more attention to. These guys that are operating distribution centers with 200-mile-radius throw areas are potential competitors everywhere in that radius. And that to me is the more interesting set of firms, is the people that can put a store into an area from a relevant distribution area. And that's something I guess I'd like to see thought about a little bit more.

MR. SALINGER: Well, the idea behind this conference was to have us think a lot more about that.

With that, we will break for 15 minutes.

(A brief recess was taken.)

MR. SALINGER: Well, this is our "get down into the trenches" section of the day.

We are going to start out with Deborah Feinstein. She's here on behalf of Kroger. When we were organizing this conference, I talked with Paul Heldman, who's the general counsel of Kroger. He was supportive of the idea of having the conference, and said that Kroger wanted to participate. So we're grateful to them for that.

For personal reasons, he was not able to be here today, so Debbie is pitching in. She is a leading antitrust lawyer, principally focusing on merger and acquisition matters before the FTC and the DOJ. She is named to the best Lawyers in America 2007 for antitrust law, and Global Competition Review named her on its international list of the top 100 women in antitrust.

So Debbie, take it away.

MS. FEINSTEIN: Right. Thanks. I am doing this without slides.

MR. SALINGER: You can choose whether you want to be there or --

MS. FEINSTEIN: No. I think people can't see me there so I'm happy being here.

Well, thanks for inviting me to speak. I am making these remarks on behalf of and with the assistance of Kroger, who's been a client of mine for over a decade. And I want to talk a little bit about their perspectives on the supermarket industry and our collective perspectives on how the FTC has looked at transactions over a number of years.

A few facts about Kroger. It has over 2,000 combination food and drug stores under a wide range of banners. Some of the familiar names are Kroger, Ralphs, Dillons, Smith's, and Fry's. It operates 145 warehouse

stores under the Food4Less and FoodsCo banners. It also has multi-department stores, convenience stores, and supermarket fuel centers. Its revenues last year were $66 billion with $1.1 billion in earnings.

A few significant trends about customer shopping habits are worth noting because I think it gives some big picture perspectives on what the grocery industry is facing. Customers now shop for groceries 1.9 times a week, on average. The one-stop shop that people used to talk about is long gone, I think, and people typically now have one store for perishables and another for the center store items, the dry goods, that sort of thing. That's according to the Food Marketing Institute.

Supermarkets are rapidly losing their shares of the food dollars to every format every year. According to Nielsen data, shoppers choose to visit grocery stores 57 percent of the time for their purchases. They choose to visit mass merchants 27 percent of the time, drugstores 11 percent, dollar stores 7 percent, and club stores and C stores each 5 percent of the time. So it's clear customers are shopping multiple locations to find what they want at the best prices.

The supermarket business always has been and continues to be a very competitive industry. And it really has to be. According to a recent FMI study, price

is the overriding reason that customers select a supermarket. Did you hear that? Price. It doesn't say distance or location. I think that's a really important fact.

It's also a really vibrant industry. You saw that of the list of supermarkets that were in the first presentation, half of those names or more don't exist today. But as old stores go and new stores come, there's a lot of turnover in this industry.

I'm going to discuss in a minute in more detail Tesco, which is Britain's largest grocery operator, which you heard a bit about from our European colleagues. It's actually planning to enter into the United States later this year. So there is still fertile ground for new entry in this country.

Now, you can't talk about supermarket competition without talking about supercenters. These are the large combination food and mass stores operated by Wal-Mart and Kmart and Target and Meijer. A recent UBS report found that consumers are increasing the number of trips they take to supercenters, but are decreasing the number of trips they take to traditional supermarkets.

For these reasons, the FTC has properly for many years recognized that supercenters are part of the

relevant market. I'm going to talk a little bit more about their effect with respect to competitive effects analysis in a minute.

Now I want to turn to other formats, which I think haven't been properly recognized as being part of the competitive landscape. Club stores: Club stores have recently, and only recently, been included in the competitive set for some of the transactions that have been analyzed. In earlier deals, certainly the ones I did, it was just decreed that club stores couldn't possibly be a competitive alternative and weren't part of the market.

Kroger sees club stores as very real competitors. They price check them. They look to them for ideas. The traditional supermarkets have increasingly started carrying larger sized packages to compete with club stores. I think you can't overlook their effect on supermarket competition.

Mass merchandisers: These have never been thought of as being part of the relevant competitive set. But mass merchandisers, such as the traditional Target and Wal-Mart and Kmart, are increasing the amount of food that they have. I don't know if you've walked through one lately.

The new Target up on Rockville Pike is worth a

walk-through some time. It has aisle after aisle in its refrigerated section. It has everything that you would want to buy in a grocery store, with the possible exception of fresh produce, fresh meat and fresh deli.

But most of the things that you buy, 80 percent of what you're putting in your grocery shopping basket, you can now find in a traditional Wal-Mart mass merchandiser, a Target, that sort of thing. And I think people have to increasingly think about the effect they have on the marketplace.

Mass merchants also typically stock a significant number of household goods. Indeed, according to a Citigroup report -- no, this is FMI -- 54 percent of all dollars spent on laundry supplies, 25 percent of all dollars spent on snack items, and 20 percent of all dollars spent on carbonated beverages, are sold at mass merchants.

Every dollar spent at a mass merchant is a dollar that, for these types of items, could have been spent at a supermarket. They're very real competitors to supermarkets. And if you were to go through the files of Kroger, you would find lots and lots of references to the effect that mass merchandisers have on their business.

Indeed, mass merchandisers are increasing the amount of food that they sell. Target has plans to move

to the self-distribution of food items, which is certain to fuel even more growth of their food sales.

And then there's drugstores. These, too, are increasing the amount of food, both shelf-stable and refrigerated, that are offered in these stores. And again, they're taking sales away from the traditional supermarkets.

So all of these are formats that Kroger is paying a lot of attention to and has for some time now. To ignore them is to ignore a very real element of supermarket competition.

Dave Dillon, who is the chairman and CEO of Kroger, probably said it best in a recent speech at the Lehman Brothers retail conference. "As the retail food industry evolves, one certainty remains. The environment in which we operate continues to be intensely competitive, and we believe it would be even more competitive in the future.

"Kroger faces a wide variety of competition for the customer's food dollar. In addition to traditional supermarkets and supercenters, we also compete with a variety of nontraditional formats, including natural foods retailers, drugstores, convenience stores, dollar stores, warehouse clubs, even restaurants." So that's what the CEO of Kroger was telling investors. And if he

were here today, he would certainly be telling you the same thing.

And for an industry that has existed for hundreds of years, it is hardly stagnant. For instance, Tesco, Britain's largest supermarket, has plans to open a number of stores on the West Coast beginning later this year. The thought is that they're going to bring to the U.S. their "express store" concept. It combines the convenience of a C store with many of the typical items available in a grocery store, such as fresh produce, and it aimed to be both near where people work and where they live.

Tesco has a number of other formats as well, ranging from 10,000 square feet to as large as supercenters. If Tesco is successful here, these other formats could follow as well.

Now I want to turn to Wal-Mart. You cannot have a conversation about supermarket competition without spending a fair amount of time talking about them. We all understand that supercenters are now part of the product market. But the important thing is to think about how they fit into the competitive effects analysis as well.

The numbers alone are staggering. Wal-Mart opened its first supercenter in Washington, Missouri in

1988. Within ten years, it had 544 supercenters. Today it has almost 2,000 supercenters nationwide. Most traditional Wal-Marts that are being built, the mass-only stores, are being constructed in a way that there's a wall that you can quickly knock through to expand into a supercenter if that's something that they want to do. And they have in fact expanded a number of their traditional mass merchandisers into supercenters.

Everyone knows its stated objective is low, low pricing. And it can offer such pricing because of its incredible economies of scale. They derive from a couple of factors. First, they get incredible volume discounts from vendors, and have amazing partnerships to make sure that they get the newest products at the best prices.

They have an amazing automatic replenishment inventory management system that helps it manage its inventory, and a distribution system that is unparalleled. Finally, it has a huge amount of data to manage exactly what it's going to do to figure out exactly what customers are buying and exactly how they should be selling the products.

Their database is so extensive it was once described as being second in size only to that of the U.S. government, and only second in capacity to that of the Pentagon. These guys know what they're doing.

Furthermore, and this is important to think about with respect to the competitive effects analysis, Wal-Mart typically prices its supermarket items as loss leaders to draw people into the store to purchase the higher margin durable products. So their supermarket prices are always going to be low.

Kroger doesn't attempt to meet Wal-Mart's prices. It simply can't. What it tries to do is make sure that the range is not so high that it loses an undue amount of customers to them. That's really important point to think about.

Its employees are non-union. They have lower wages and lower health care costs. This, combined with the use of part-time employees, gives it significantly lower costs.

Once Wal-Mart enters into a market, it's never quite the same. Certainly the smaller, less efficient stores go out of business. That's inevitable. But the ones who remain figure out a way to compete better. They do it by offering better services and better prices.

This happens even before Wal-Mart actually shows up on the scene. And they give people plenty of warning. I remember in Phoenix, they actually sent videotapes to consumers' homes saying that they opened were coming well in advance of the time that they opened

their first store in Phoenix to get people excited about the Wal-Mart concept and what it was going to mean to them.

So as soon as it gets word that Wal-Mart is going to come into a particular market, Kroger starts beginning to take steps. It begins to lower its prices because it doesn't want consumers to suddenly feel, when Wal-Mart enters, that there's this big difference in price. It does it in anticipation of Wal-Mart entry. So even if it's going to take two years for a store to be built, actual impact of that entry occurs at the time that Kroger learns about it.

They often upgrade their stores. They remodel them. They enlarge them. They improve the service. They do all of the things they need to do to make sure that when that Wal-Mart does come, they're prepared. They come up with specific action plans to figure out what will work best in that particular city to make sure that they can combat or at least have a chance of surviving the threat of Wal-Mart entry.

And it's not just Wal-Mart. Target has 180 supercenters. Meijer has 170 supercenters, largely across the Midwest, and Kmart has approximately 55. It's a very real element of competition and a very important part of the competitive story that you have to tell in

thinking about whether or not a supermarket transaction is likely to have an anticompetitive effect.

Wal-Mart hasn't stopped at supercenters. It has also introduced the Wal-Mart Neighborhood Market. First introduced in 1999, these are smaller stores. They're more likely to be in cities than in the suburbs. They capitalize on the same distribution system, economies of scale, low prices and low costs that all of the other Wal-Marts have. Currently there are more than 95 Neighborhood Markets nationwide, and Wal-Mart has plans to open another 12 to 20 new Neighborhood Markets in the next year. Obviously, this is something that will continue.

A couple of other points to mention about Wal-Mart. Often you see that the shares that they are noted for having in a city aren't as significant as maybe some of the more established retailers like, say, a Safeway. This isn't surprising if you think about it. A dollar spent at a Wal-Mart goes a lot farther than a dollar spent at Safeway.

I think you can't just simply say, oh, well, Wal-Mart's only number three in the market; therefore, it's not particularly significant when you're looking at the numbers based on the revenue data because those same -- if you translated the same goods that are being

sold, they would cost more at Safeway. That doesn't mean that Safeway is more of a competitive threat in that market than is the Wal-Mart. You just need to think about what those numbers in fact mean.

How many of you have ever been in a Wal-Mart supercenter? To call them a supermarket is not understanding the reality of these, particularly out in the suburbs. They are in fact Main Street, USA. You are going to find your bank. You are going to sign your kid up for Little League there. There's virtually nothing you can't do in some of these supercenters when you're in the middle of a small town. And so people drive long distances to go to them.

This isn't a situation where people think of the Wal-Mart Supercenter as someplace that they are just going to run down to the grocery store to get a jug of milk. And of course you're only going to drive a couple of miles for that.

In fact, the data show that people routinely drive nine, ten, or more miles to go to a supercenter, more the way you think about driving to the mall. And I think that's important in thinking about both the geographic dimension and the impact that a supercenter can have on a market, even if geographically looking at it on a map, it's more on the fringe rather than in the

middle of the town.

I want to turn for a minute to the acquisitions that Kroger has made to give you a little perspective on why they've done them and how they saw supermarket competition at the time they entered into those transactions.

In 1999, Kroger responded to the increasing threat of Wal-Mart, which operated over 500 supercenters already, and entered into an agreement to acquire Fred Meyer. At that time, Fred Meyer had 800 supermarkets and multi-department stores.

The transaction was almost exclusively complementary. I think that tells you something about why they were doing it. They weren't doing it because they wanted to increase market size in a particular area. They are simply looking to get scale whenever they do a supermarket transaction. So it was largely complementary.

There were a few overlaps in small towns that were problematic. Those were readily dealt with. The battle ground was over Phoenix and Tucson. There was a second request issued, and it took probably about seven months for the transaction to go through the entire analysis.

After an extensive investigation, the

Commission determined that there were no problems in Phoenix and Tucson. The reason? I previously mentioned those tapes that Wal-Mart had sent to everybody saying they were coming. In fact, there were clear plans. We were able to take clear pictures of sites under construction. We were able to get information from local zoning boards that had approved them. The evidence was quite clear that Wal-Mart was coming. And for that reason, the Commission properly concluded that there weren't any issues with the transaction.

At the time, Kroger anticipated merger-related synergies eventually totaling $225 million by year four. Of the merger-related synergies, Kroger anticipated that $115 million would come from better purchasing of food, drugs, and general merchandise. They also planned to coordinate volume purchasing of various operating supplies, capital equipment, and raw materials for manufacturing.

The balance of the efficiencies were to come from lower costs due to integration of production facilities, distribution, manufacturing, advertising, and rationalization of various general and administrative expenses.

Kroger realized these efficiencies and then some. For the combination of Fred Meyer and Kroger

alone, not taking into account synergies from previous Fred Meyer transactions, it achieved aggregate synergies of $75 million by year one, $150 million by year two, and $225 million by year three.

Taking into account the ongoing synergies that Fred Meyer was already projected to get, it got synergies of over $260 million by fiscal 2000, $345 million by fiscal 2001, and $360 million by fiscal 2002. This was in a press release. It actually looked at what the synergies had anticipated and the synergies that it actually got, and told the investment community that it delivered on its promise.

Two years later, Kroger entered into an agreement to acquire the Dallas/Fort Worth operations of Winn Dixie. This was motivated by the poor performance of both sets of stores. The Kroger stores were well underperforming Kroger stores in other cities, and the Winn Dixie stores were on their last legs.

The deal would have allowed Kroger to expand its store base, spread its overhead among stores, and lower its prices. Among the traditional supermarket competitors, putting aside Wal-Mart, Kroger was the lowest priced in the market.

The synergies expected were $40 million yearly as of year three: from consolidation of advertising,

reducing administrative overhead, consolidating warehouses and transportation, cost savings from increased private label purchases, and a reduction in overhead at Kroger's manufacturing facilities. It had far more private label than did Winn Dixie. Kroger also projected a one-time savings of approximately $20 million from the reduction of inventory that would have occurred from the closing of Winn Dixie's Fort Worth warehouse.

And there was every reason to believe that these synergies were real. Kroger achieved $3.8 million in cost savings when it had merged the administrative function of its Houston and Dallas operations and put them under one umbrella. And I've just told you the incredible experience they had with Fred Meyer. So they certainly believed that these efficiencies were real.

Now, what did the competitive landscape in Dallas/Fort Worth look like? There was Albertsons. There was Safeway. There was Kroger. There was Wal-Mart. You also had a number of smaller chains. Minyards, Brookshire, and Whole Foods, along with other smaller and independent operators, all competed.

And if that weren't enough competition, Wal-Mart had plans to add up to 15 supercenters, five Sam's Club stores, and it was bringing its neighborhood concept to Dallas/Fort Worth. Super Target had begun

construction on five sites in Dallas/Fort Worth, and H-E-B, another Texas chain, had also announced plans to build stores in Dallas/Fort Worth as well.

Kroger's plans were to acquire 73 stores and operate virtually of them. It had plans to close down maybe three or four that were right near where it was either going to upgrade into the Winn Dixie store or it simply didn't need both stores.

The market shares were in the 30 percent range. Yet the government decided to block the transaction. They said that combining the second and third largest players in Fort Worth -- they defined the market as limited to Fort Worth -- would create a dominant competitor. That assertion came despite the presence of Safeway, Albertsons, Wal-Mart expansion, H-E-B entry, and Super Target entry.

We believe history has shown that blocking that transaction did not benefit consumers. What would have happened if the deal had gone through is that Kroger would have immediately changed the banner on those Winn Dixie stores and made them Kroger stores.

And the evidence showed quite clearly that Kroger priced lower than its other competitors in the market, most notably Winn Dixie. So if it immediately just put into place the Kroger banner and the Kroger

pricing, every single one of those Winn Dixie stores would have had lower pricing than they had beforehand.

More importantly, we argued that in the face of all this competition Winn Dixie not likely survive. In fact, it didn't. Within two years, Winn Dixie had announced plans to exit the market entirely. Of those 73 stores, Kroger ended up being allowed to buy quite a number of them, all of the ones that it in fact most wanted. Many stores were bought by other competitors, but many stores went dark. These were stores that otherwise would have been operated by Kroger at low prices but instead simply don't exist any more.

I think that's one worth taking a look at to see why the predictions of what was likely to happen turned out to be different than what did, at least in terms of the staff's perception.

I think the government has gotten better at recognizing the importance of changing conditions in the supermarket industry. Chris will probably tell you a little bit about the American Stores experience. We kind of followed on one of those.

In 2002, Kroger sought to acquire Raley's stores in Las Vegas in a transaction that was so small it was not reportable. Staff was extremely concerned about that transaction when it was first announced. This,

after all, was a market that in the American Stores/ Albertsons investigation had been found to have high entry barriers and was problematic. And for that reason, staff threatened an injunction if we didn't give them a little time to look at it.

We argued that there should be a way to make sure that this investigation went quickly. We were afraid that we were going to lose the deal altogether, and who knows what would happen to those stores. It's really important in thinking about investigating these transactions what happens when these stores are out there for too long.

One of the things that happened in the Winn Dixie transaction was that as the investigation dragged on and everybody knew that Winn Dixie was getting out, shoppers stopped going to the stores. Employees started leaving the stores despite significant stay bonuses. Winn Dixie wasn't interested in investing even before the transaction, but especially not after. The mere fact of the lengthy investigation, helped bring about how quickly Winn Dixie plummeted.

So we urged the Commission to find a way to work quickly with us to determine whether there really was a problem in Las Vegas. And they did so, to good effect. We were able to demonstrate that while in 1998,

they had said that barriers were high, by 2002, Wal-Mart had come in a big way for Las Vegas. It had entered with five stores, and had a share higher than Raley's at the time of the acquisition. It planned five more supercenters -- again, we had the pictures of where they had the "Wal-Mart Coming" signs -- and planned four neighborhood markets. This time, after a quick investigation, the Commission allowed the transactions to proceed.

Now, what kinds of transactions are you likely to see in the future? There may be another couple of big transactions. You know what you have going on at the agency right now. But I think, from Kroger, you're also going to see smaller transactions. You're going to see particular cities where a competitor is unable to deal with the onslaught of competition and is looking to sell.

The only company who's going to be interested in buying in a number of these markets is one who's already there, who already has the distribution facility, who already has the scale economies to bring advertising to market. And so people are often going to go to Kroger to see if they want to pick up some of the stores.

Kroger is going to be interested in doing this again, for the scale reasons. It has no additional costs to add another couple of stores on its advertising with

newspapers. It's not going to cost them much more to serve from a distribution center. So there are real efficiencies to this. And of course, the purchasing scale economies from the large manufacturers are going to bring them the ability to lower prices to compete more with Wal-Mart and other supercenters and the new entry that they're facing.

So I think you're going to see that these transactions are going to raise questions in your mind if you look only at market shares. But I think you need to look beyond that to the whole picture.

I think FTC analysis of supermarkets could be refined in a couple of areas. And in fairness, I haven't seen what they've done over the last couple of years. There may have been investigations that are closed. It's hard to tell because there have rarely been closing statements in the supermarket transactions to know exactly what the FTC is doing and why they're doing it. But a couple of things, I think, are worth thinking about.

First, I think the day of calling a traditional supermarket the only kind that can be in the market is gone. I think you really need to think harder about the impact of other nontraditional forms -- the mass merchandisers, the club stores, and the like, especially

as they increasingly have the kinds of products in them that you used to find only in traditional supermarkets.

Second, I think you need to think hard about what geographic markets look like. The FTC's case in Winn Dixie was premised on the notion that Dallas and Fort Worth were actually separate geographic markets based only on documents that sometimes listed Dallas entry and Fort Worth entry, or Dallas store list and Fort Worth store list.

Those documents were meaningless in looking at how competition actually worked. How competition actually worked is that there was one price zone in that city. The exception was that for a few areas in Hispanic parts of town, there were different price lists created to deal with the fact that there were different produce products in that store.

Otherwise, how much you paid for a pound of hamburger, a head of lettuce, a box of cereal, was the same at the farthest end of Dallas as it was at the other end of Fort Worth. They for all intents and purposes thought about competition in that holistic way. So that's one thing to think about.

We have heard in some of the investigations that we've done more recently in some of the smaller deals that the government has looked only at what's

within three miles, even though consumers travel farther, especially for supercenters. And it's been kind of almost ignoring the idea of the concentric overlapping circles. Maybe I'm not going to travel six miles, but maybe the guy who lives on the outer boundary can easily travel half a mile to go to the next circle. And it wasn't clear to us at all how they were looking at geographic market in at least one investigation they conducted of a Kroger acquisition.

It turned out fine because there was so much competition it didn't matter in that particular investigation. But I think more transparency in how you're thinking about geographic markets and looking at how does competition actually work rather than where a particular individual is likely to drive is going to be really important.

Third, entry and expansion continue to occur. It's true that you're going to find some smaller operators being forced out of business. But others are expanding. Every city is incredibly dynamic. I mean, look at the Washington, D.C. metro area, an area I thought might never actually get additional supermarket competition. And the number of new competitors into this MSA in recent years has been pretty impressive. And of course, you've got Tesco coming, and who knows what

effect that will have on U.S. supermarket competition.

Just a couple of quick points. Increased concentration doesn't mean increased prices. We've actually heard some on the staff express the concern that Wal-Mart has been bad for supermarket competition because it's forced some of the smaller players out, so that's meant the market has become more concentrated, and concentration is bad.

That completely ignores the fact that what it's getting rid of is small, inefficient competitors that it's replacing with low, low pricing. The mere equation of "increased concentration because of new entry is bad" simply cannot be a credible economic theory of harm from the entry of Wal-Mart. In fact, Wal-Mart has led to lower prices. It has forced other people to respond to that. And that trend is going to continue.

Finally, you have to think about whether price increases as a result of acquisitions in fact are sensible given the state of the economy. I think the place that you really need to think hard is in the competitive effects analysis. You know, is coordination really likely where Wal-Mart is part of the picture? It's the ultimate maverick.

Not only are its prices considerably lower, but it's going to stay that way because it uses these

groceries as a loss leader to get people to bring in the higher margin products. So it's unclear to me that you can ever tell a credible story of coordination with them.

Nor is it likely that you can tell a credible story of unilateral anticompetitive effects in many of these transactions given the rationale for them, what the documents show, and how people are thinking about it. In fact, in not one of the supermarket deals I've ever done has there been even a hint that there's a single document that suggests in any way that the transaction was motivated by anything other than the desire to get efficiencies and be able to pass them on to consumers so that they could compete more effectively. As I mentioned, those efficiencies are real, and they need to be considered in the analysis.

Thanks very much for your time.

(Applause.)

MR. SALINGER: Our next speaker is Chris MacAvoy. He's a partner at Howrey. He's done a lot of supermarket deals.

MR. MACAVOY: Bear with me while I attempt to open this PowerPoint. Thanks for coming up and helping with this. I'll just say, by way of introduction, I'm going to start -- really, thank you very much -- really where Debbie left off, which is talking about what

things, at least in my personal opinion, the Commission and the staff could be doing differently in the way it looks at supermarket mergers. And some of the ground I'll cover will be familiar because you've heard about some of it from Debbie already. But these are my own views, and so I will try not to be duplicative.

I really think that these are the keynotes, recognizing how dynamic retail grocery markets really are. If you've spent your whole career or a big part of your life inside the Washington area, for many, many years, as Debbie said, your choices primarily if not exclusively were Giant and Safeway. And even Washington is no longer like that. And certainly outside of Washington, that's just not the case. Retail grocery markets really are dynamic.

The second point: We -- and I mean all of us inside and outside the agency -- we shouldn't be constantly trying to force supermarket deals into these two Procrustean beds, either the one-stop shopping market definition or trying to make everything the next Staples case.

My use of the word "Procrustean," this is kind of an homage to Jim Brill, who loves this word. I'm quite sure that the first time I ever heard him use that word was at a meeting at the Commission in the mid-'80s

on a supermarket transaction. And I'll bet anything he was flinging that word at Steve Newborn.

Procrustes, in Greek mythology, was a bad actor who would force travelers to fit into a bed. If you were too tall, he'd cut your legs off. If you were too short, he would stretch you. And so Jim loved to use that word as applied to the traditional view of supermarkets, especially market definition on the product side.

Third, we should be applying a consistent, or at least transparent, approach to geographic market definition. I think you've heard some very useful things already here this morning about that. Before the break, the very interesting presentation on the chaining and critical loss effect is, I think, maybe part of the direction that I personally would like to see. And I'll come back to that.

Next, we should not be presuming that store closings are anticompetitive. In most large transactions, there are going to be some mentions in the companies documents of what is the slate of stores going to look like post-transaction. And there will be some stores that are at least discussed as, gee, maybe we ought to close that store because it's just not going to be performing well. It's not performing well now, and we don't expect it to improve any after the acquisition.

Traditionally, the staff has looked very, very unkindly at that, and there's been almost a presumption that that is "taking capacity out of the market." And those become immediately red flags, really, for divestiture. And I want to suggest that that is a position, to the extent that it's still the position, that should be revisited.

And finally, and again you've heard about this in, I think, some detail already from Debbie, efficiencies need to be revisited. And I'll come at that perhaps slightly differently. But it's certainly a point that I think we are in agreement on.

Now, on the dynamism of retail grocery markets, some of the recent developments -- the Kroger/ Raley's transaction, which Debbie was involved in representing Kroger. I was in the unhappy position of having represented Albertsons just three year earlier where our client was blocked from acquiring the very same stores. We divested them -- Albertsons divested them to Raley's, and now just a few years later Raley's is selling them to Kroger.

Well, essentially Kroger -- when you look at where the shares line up, Kroger was being allowed in 2002 to do the very same deal that Albertsons had not been allowed to do.

Now, I can't prevent you from making unkind comparisons because Debbie's capabilities and mine. I wish you wouldn't. But to be fair to the agency and to the staff, this was not some arbitrary decision. The closing statement there in 2002 does articulate why the different result -- unanticipated entry and expansion since 1999; the rapid growth of the market.

Now, one could, though, quibble a little bit about this. And I guess I'm the one who must. In 1999, we certainly were making these arguments on behalf of Albertsons. Las Vegas was already in the cross hairs of Wal-Mart. They were, as I recall, building or had built a new distribution in Las Lunas, New Mexico. Everybody knew how far they were going to supply stores and how many from that distribution center.

But we did not have the stores already under construction. So we were not able to convince the staff and the commissioners, ultimately, that this was a market that Albertsons should be allowed to make the acquisition in.

2002, the changes had not arguably been all that dramatic. There were five Wal-Marts in by that time. That was some expansion, entry and expansion, by a smaller operator called King Ranch. Nevertheless, I'm certainly not arguing at all that the Commission made the

wrong decision in 2002 when Debbie came along. They absolutely made the right decision, in my opinion.

If you look today, there are more stores, not just these more Wal-Mart supercenters but everybody, just about, has expanded. I've got 2005 data. I think there are about 13 Wal-Mart supercenters in that MSA as I speak here today. So I do think that the Kroger/ Raley's approach, and really fully crediting the dynamism of the market, is the way to go.

Wal-Mart/Amigo: This is the transaction in the same year, in 2002, in Puerto Rico where for the first time recently -- and I'll come back to the "recently" part -- for the first time recently, the Commission explicitly included club stores in the market.

Now, in the papers, the Commission was careful to limit it to the facts of this case. In Puerto Rico, in Puerto Rico. But nevertheless, I think that the acknowledgment here of the fact that consumers in this market were using and are using the club stores to do their one-stop shopping for groceries is an important breakthrough -- although again, it's not maybe so much of a breakthrough as maybe people might think. If you really want an eye-opener, go back and look at the Grand Union decision of the Commission from 1983.

That was from the Grand Union/Colonial Stores

transaction, where there was a pretty extensive discussion there by the Commission. This is on a full record. In fact, if you want to know when was the last time the Commission fully litigated a supermarket merger, that's it.

And on a full record, the chairman writing the decision said that the product market in this supermarket deal includes all retail grocery stores, club stores, and all these other kind of limited assortment stores, which were really just emerging in the early '80s, are in the market. So history is perhaps coming back around.

I won't belabor the Kroger/Winn Dixie experience in Dallas/Fort Worth in 2000, the transaction that was -- well, I won't say blocked; the Commission moved to block it, then it was abandoned. But this is an excellent example of how dynamic a major market can be.

At the time of the FTC investigation, there were just 14 Wal-Mart supercenters in the Dallas/Fort Worth metro area. Actually, some were supercenters; some were neighborhood markets. The preliminary injunction brief said, basically, should what? Scroll forward a few years later, after the deal has now fallen apart: 41 supercenters. Last year, 88. And there's certainly -- it's probably around a hundred today.

And it's not just the supercenters and the

neighborhood markets. Everybody has been adding stores there. I would have to say that looking back at that merger challenge decision of 2000, it is one that didn't go the right way.

I do think that the Commission should continue to follow the trend that the Kroger/Raley's non-challenge really suggests that it's started to take, and that is dig in and take a hard look at some of these long-held assumptions about retail markets, grocery retail markets, being static and unchanging, and hey, it's the same people year after year.

You would get that picture perhaps if you had spent your life in Washington, for year after year, Giant and Safeway, Giant and Safeway. It's certainly not true in most markets. It's not even true in this market any more.

Getting beyond what I think had been a traditional acceptance of the notion that you have to have large-scale entry or you have to have "critical mass" to be successful. Yes, it can help, and yes, that's often an important driver of transactions.

But there are many examples of operators who have expanded from smaller toeholds, or have done very well in a market with a relatively small footprint -- not just done well for themselves, but also done well in

terms of having a pretty dramatic effect on competition without having some massive store base.

The third point here is that increasingly you're seeing retailers operating sort of a portfolio of formats, and experimenting and re-juggling with it all the time. So it's not just, I've got my traditional store. There are a lot of people, Kroger being just one of them, that have different things that they're fooling around with. Well, I've got a price impact store. I've got a small footprint store for their urban areas.

These boxes are very flexible. A 40,000 square foot box, there's lots of different things you can do with it. There are departments you can pull in or out. You can decide, I'm going to have a pharmacy. You can decide, I'm going to have a bakery. You can say, no, no, no, I'm just really going to focus on the center store and go kind of not so heavy up on these peripheral departments.

On the Procrustean beds, Jim's favorite term, one of his favorite terms, we've already heard, I think, some things today that suggest lots of data points that we should be looking at that indicate that this notion of the typical one-stop shopping experience is maybe something of the past. And I'd like to come at that in a couple of ways.

One that's already been mentioned is that there really is no longer some unique core of grocery products that's available already only at supermarkets or almost exclusively at supermarkets. The entire package, if you will, has been disaggregated and is available. If not in total at some other formats, it's certainly available in very large overlaps at other formats. Some Debbie mentioned, some are listed here, club stores being one; supercenters, conventional mass merchandisers, drugstores being other formats that are very much a part of the mix.

So already -- and I apologize for the tiny print -- already at current prices, this disaggregation has occurred. The median size of a supermarket transaction last year, the ring, as they put it, was $29. So that's not a whole -- that's my son buying a bag of Slim Jims. I mean, that's not a big stock-up. already -- and that's just supermarkets. Already people are using supermarkets for pretty much quick hit shopping very frequently. Yes, a lot of it is a big stock-up. But $29.

Debbie mentioned as well people visit 1.9 supermarket trips a week. And in some of the same recent survey data -- this is coming from Food Marketing Institute; you can get at this on their website -- when asked, where have you shopped in the last 30 days, 87

percent identified a supermarket.

That's been declining steadily. Forty-four percent mentioned a supercenter. I believe when they asked people, what is your primary food store, it was in the high 60s people identified a supermarket. And supercenters was in the 24 or 25 percent range, I believe.

Consumer, what drives your choice of stores? Number one, low prices, 31 percent. Convenience, high quality produce, high quality meat, important but down quite a bit below low prices. There's no inherent advantage that the conventional supermarket has.

Wal-Mart/Amigo, the Puerto Rico case, also suggests that the FTC has started recently, in the last five years, to move away from this notion that we're just going to look at what is the number of SKUs that is in a supermarket, and we're going to match up the SKU overlap with these other formats; or we're going to ask, where do you price check, and limit the market to where you price check. There seems to be a broader look.

The Commission, in the Wal-Mart/Amigo papers, referred glancingly to consumer survey evidence, similar to the kind of evidence I just mentioned, asking people, where do you shop. More telling would be the question, and I'm not sure whether it was addressed there, is where

would you shop if prices went up. Well, that's a question that has been asked in merger investigations, grocery merger investigations, before.

Mike Hunter, who I'm glad to see here from CRA, will probably recognize these last bullet points.

This is from some survey work that he and his colleagues did with us on a transaction in the '90s, where they were asking -- through a survey, they were asking consumers, where would you shop if prices went up? And there were some interesting results. These were presented to the Commission staff in that investigation. And people were saying, yes, we will shop more at club stores if prices go up and club stores are convenient to us.

Econometric evidence has been presented in the past. When we ask, well, why not more, and I have to say I do think of this a little bit like -- it's like shopping for a car. I mean, there's the base price of the car, but then if you want these add-on packages, it's more.

Well, if you're in merger investigation where the base price already of the second request is 5 million and your client is already giving a $3-1/2 million check to the company that's imaging the documents, all right, how much does the econometric package add in terms of

both cost and time, and then how much does the efficiencies package cost? Well, these are not trivial considerations. So that may be just one reason why you don't see more heavy-duty econometrics.

Another reason, though, I have to say, is that in the past when we've done this, there just -- I would never say it's fallen on deaf ears because that's not the image I'm -- that's not been my experience. But let's just say that the interaction, the follow-up with the staff, has been less than satisfactory, which is to say we've never really in the end been sure did it make any difference or even what did the staff think about these results.

We did present one multi-market study that looked at club stores, among other things, presented to the staff that showed that club stores really did exert a significant downward effect on supermarket prices. I don't know what the staff thought of that. In fairness to the staff, they would say, well, you presented that perhaps a little too late in the investigation; you've got yourselves to blame. I do want to acknowledge that viewpoint, which you do run into from time to time.

But I do think, in fairness to everybody, that we can say that with the tools that are at, I'd say, its disposal -- at our disposal, outside counsel, economists,

and people on the inside of the agency -- I don't think that it's any excuse any longer to just ride along on this one-stop shopping notion. Certainly that's not the approach the Commission is now taking in department store mergers, and the closing statement in the Federated/May matter more recently is certainly worth a read in that regard.

Another Procrustean bed I'd like to stay away from is the attempt to jam every deal into the Staples mold. I personally, having lived through the Kroger/ Winn Dixie matter in Dallas/Fort Worth, found that to be an especially frustrating aspect of that investigation, where the theory, or at least one of the theories, that the staff argued and prevailed, five-zip, before the Commission on was that Kroger and Winn Dixie uniquely constrained each other, which just went against everything I thought I knew about groceries and about that market in particular, when you had a number of other very much mainstream competitors in the form of Albertsons, Safeway, Minyards, and others, let alone Wal-Mart Supercenters.

And I did have the impression that that was perhaps an -- not perhaps, I really did think that that was an over-extension of a unilateral effects analysis and an effort to emulate the outcome in Staples in a way

that I did not think was appropriate to the facts.

Geographic market: At one time -- I mean, if you go back and look at the consent orders from the Commission, the '80s and really into around the 1994 time frame, you will see that many of the complaints define the geographic market as an MSA. And occasionally they'll say the MSA and smaller markets contained therein, without being specific about it.

And there does seem to have been an acceptance back at that time of the kind of chaining effect that you heard about in the interesting presentation before the break, that you've got -- yes, the primary trade area of an individual store may be about three miles; 70 percent of the sales are probably going to be within three miles in a typical area. But in an MSA, you've got this overlapping grid of trade areas. And absent some physical barrier, a major rail yard or a river or something like that, you're typically going to get this chaining effect.

That approach seemed to fall into some disfavor in the last ten years, although I don't know what the approach really has been since. There has been, at least to my view, a bit of arbitrariness about it. I'd like to see that black box opened up somewhat.

Debbie has mentioned this: Sometimes you're in

there with maps where you're going literally block by block, and that's what the staff is interested in. Other times you're looking at very broad areas and you're not really sure why these two things are different, especially when you've got a situation, as we did, in Dallas/Fort Worth where the prices, the merging parties' prices, are the same across this entire wide area, and where they've got one warehouse that is serving the whole area, and they're advertising in the same newspaper. So going street by street, block by block, seems puzzling and incorrect. There hasn't been much guidance on this issue in the consent orders in the last ten or so years.

I've mentioned store closings already, and I won't -- I just want to suggest that this is a -- when the documents of a company talk about maybe some stores should be closed, that that ought not to be automatically a red flag. Let's look at those stores. I mean, in other industries, you would expect and think it was healthy that, post-merger, some of the inefficient assets get consolidated. And that doesn't seem to be the approach that's taken when supermarket mergers are looked at.

And part of that is that -- perhaps part of that is that closed stores are widely viewed as blights. I mean, that's something that clearly local officials

complain to the Commission about or complain to Capitol Hill about. We don't want closed, dark stores. That's not a trivial issue for local officials. But as an antitrust issue, that's really not the question that this agency addresses, of course.

This is the kind of heartrending statement that greeted Debbie and me when we got the Commission's PI brief in the Kroger/Winn Dixie matter ten days or so before our clients abandoned it, where the efficiencies claims were dismissed. And why then haven't we seen more diligent efforts by people in grocery mergers to push the efficiencies?

Well, results such as that, some of the very -- "scorched earth" is my term; I don't know why I put it in quotes -- but what arguably have been kind of a scorched earth treatment of efficiencies in other distribution mergers -- Staples, Cardinal Health, and Heinz -- that's pretty daunting when you see that.

But that's not to say that we and others and Jim have not been in here talking a lot about efficiencies. I think part of the problem, though, is that there just hasn't been very much of a constructive dialogue. You make the presentation, and then what happens to it? It doesn't really seem that it plays out, and you don't get much reaction to it.

Yes, in fairness to the staff, often that gets overtaken by other events. You're on to the consent order discussions. You're on to investigational hearings. Maybe you put the efficiencies paper in too late. Recognize, if you're outside counsel, that you're doing yourself a disservice if you do put it in too late.

But the efficiencies are real. I'm happy to see that these are largely the same types of categories that Debbie has identified. These are the types of efficiencies, significant efficiencies, that we have articulated and presented on behalf of our clients, Albertsons being one, in some of their acquisitions in the past. And I'm not here on behalf of any client, but I understand that in many if not most of the mergers, these have played out.

Now, Albertsons' very large acquisition of American Stores had problems in the integration. Arguably, some of those problems may have had something to do with the number of stores they had to divest, 144 divestitures. Many of the efficiencies perhaps -- I'll say this is not based on any inside knowledge; this is just my intuition that perhaps some of the efficiencies in that transaction may have been divested away. That's perhaps a hunch.

But that transaction aside, mostly these things

have borne out. And we feel comfortable that if I came in tomorrow, that these are the things that we would want to be talking about.

One thing, though, that I'll close on, though, about efficiencies, and that -- not unique to grocery retailing, but something that can be difficult for practitioners, it seems to me that in the documents, more maybe than in other industries, there's a lot of talk of best practices and what kind of best practices we're going to apply to the merged store base.

I don't know why that is. Perhaps it's because in this industry there is a big guy out there that is sort of the -- everybody knows, here's the best practitioner. And so there's been a tremendous angst over the last 15 years to identify what are those folks doing and what should we be doing.

But you do see the language of best practices in the documents a lot. Well, then you get people in investigational hearings, and they're being asked questions the gist of which is, why do you need to acquire somebody to do those best practices? Why can't you just hire different people?

And I've walked out of investigational hearings -- not during them, but at the end -- not often -- and had clients look at me, senior executives

look at me, and say, with a little bit of ire, golly, I've been in this industry 30 years and here I've just learned from somebody in this hearing that all I had to do was think harder and we'd be Wal-Mart. A little bit of an over-exaggeration at the end of a long day, but you get the picture.

Everybody understands what merger specificity means. But I think perhaps that when you see the word "best practice," we should not leap to the conclusion that oh, therefore it's not merger specific because you could just hire people. You don't have to acquire somebody.

So those are my personal thoughts on what has been done and what could be done in grocery mergers. And I'll turn it over to Jim Fishkin, who I'm sure will tell me that I've missed a few things. Thank you very much.

(Applause.)

MR. SALINGER: Thanks. The idea behind this morning was to take a historical view of merger enforcement, and so we wanted to have a presentation about how, in the past, the Commission has looked at grocery store merger.

So we're very happy to welcome Jim Fishkin back. Jim was at the Commission for 15 years, where he did a lot of grocery store mergers. He's

currently at Dechert. When he was at the Commission, he won the Paul Rand Dixon award, which is a very prestigious award within the Commission. So Jim.

MR. FISHKIN: I just want to say thank you very much to the folks at the FTC for inviting me to come to this conference. I think it's a great idea to have a conference on grocery and supermarket retailing. It was a very significant and substantial portion of the FTC's merger enforcement during the late 1990s. It probably represented 10 to 15 percent of all of the Commission's merger enforcement, just one industry.

Part of that was due, in fact, to a large amount of consolidation that was going on. But before I go into all the details, I just want to set out a few points regarding what I'm going to say.

I talked to the general counsel's office when I was asked about making this presentation because I'm here to talk about my knowledge of the FTC supermarket merger cases during about a five-year period from 1997 through 2001 when I worked at the FTC as lead attorney on many of these cases. And as everybody who practices antitrust knows, 99 percent of that information is nonpublic.

So I can't say anything that's nonpublic. For example, in the Kroger/Winn Dixie matter, all of the Commission's documents and exhibits that were presented

as evidence are, to the best of my knowledge, still filed under seal, under protective order, in fact, to protect Kroger and Winn Dixie from their documents and testimony being released to the public. So I'm sort of here with one arm tied behind my back.

And in the introduction, I was introduced as a guy who did a lot of supermarket deals. And I should just say in all fairness, in private practice I do represent supermarket chains and supermarket wholesalers, and I have a lot of contacts and discussions with people in the industry.

In fact, late Friday afternoon, I got an e-mail from the general counsel of a client of mine who said, hey, I see you're going to speak at the FTC conference. And I said, well, how did you find out about this? And he said, well, we saw it on their web page, or the trade association sent an e-mail around to everybody. And that's how he found out. So he actually found out a little more about today's program than, in fact, I did.

So anyway, just with those caveats -- and I'm not speaking on behalf of any of my clients or Dechert LLP. This is similar to what Chris said. These are just my thoughts. And I'll try to run through and give a little summary of what happened in the 1997 to 2001 time period. And some of those cases Debbie and Chris have

already talked about. But I'll throw them in there because there were quite a few.

What I did was I went through and I thought, well, let's just find out what were all those supermarket merger actions. There were a total of twelve supermarket merger actions, and I listed them by period. And again, this was all as a result of a much, much larger set of supermarket acquisitions that were occurring during this time frame.

And Debbie had said, well, at least for Kroger, they were in response to maybe certain actions by Wal-Mart and what they were doing. And I'm sure there were quite a few reasons for why they took place, some of which obviously I can't say based on what I learned when I worked at the FTC.

So you can see on the side there were quite a few. They varied all over the place in terms of their size and scope and to what extent certain firms were overlapping. Some were what I call total in-market acquisitions, where acquiring the firm was not entering a single area where they didn't already have a store -- to the exact opposite, where over 90 percent of the deal, there was no overlap of any kind. The overlap was just a very, very small percentage of the deal.

And some deals were very large in size, over

$10 billion -- there were a couple of those -- down to, obviously, all of these were -- to much smaller sizes. So I just wanted to go through these cases with you. Those were the twelve cases. So what I'm going to try to talk about based on what I can say from the general counsel's office statement is sort of an aggregation across a dozen or so cases.

And of course, these were just the supermarket merger matters where the FTC sought and obtained enforcement. They're not the ones where obviously there were filings coming in all the time, people came in and talked about deals, and they didn't result in any enforcement.

I think what's very important, which hasn't really been addressed today particularly -- I know we have a lot of people here from the U.K. and elsewhere -- is that the states played a significant role. This all resulted from the California v. American Stores case, which gave the states the ability to conduct their own investigations, either with the FTC or separate from the FTC and obtain enforcement under the Clayton Act or a state could investigate under its own antitrust law.

And so you can see the list on the side -- and this was to the best of my memory. I don't want to make any state feel left out. There may have been other

states that participated on other matters. This is what I could remember basically the other night. And for at least five of the cases, those states had very significant participation.

There were other cases where the states, in essence, took more of a minor role, where they sort of thought, well, if the FTC is doing their work and everything is going fine, they'll just sit back and wait and they won't exercise any authority if they were going to be happy with the outcome. So I definitely want to mention that states have played a role and certainly could play a role in any matter that the FTC also could pursue.

I told Dan Hosken that I would try to discuss the primary issues that were common across the cases. And the first issue, obviously, and this is following the Merger Guidelines, was the product market.

And the question is: Are supermarkets a relevant product market under the Horizontal Merger Guidelines, the 1992 Merger Guidelines, where you look at the merging parties' products and then you see whether the hypothetical monopolist -- that is whether, for example, all those supermarkets, hypothetically if one guy bought every single supermarket in the city, could they raise their prices a small but significant amount,

and whether that would be profitable or not. So that's really the question.

And one of the things in terms of supermarkets, and I thought -- one of the things I just want to throw in here, is last month at about the time of the ABA Spring Meeting, the FTC was handing out these brochures called "Competition Counts." So I picked one up, and I noticed a picture, it appeared to be the aisle of a supermarket. I don't know which one the FTC went in and took a picture of and reproduced it; quite often, it's also on their website.

And the FTC, which obviously covers many industries, as you know, in merger work and non-merger work and all kinds of antitrust activity, said in the brochure, “What if there's only one grocery store in your community? Without competition, the grocer may have no incentive to lower prices.” And then they've got some other references and things like that in the brochure.

So our whole issue was, are stores like this a relevant product market? Are they sufficiently different from other food retailers? So that was a key question that the FTC faced in all twelve of those investigations. And I can assure you those investigations covered multiple bureau directors and different commissioners over the five-year time periods.

And the same issues were always reinvestigated over and over again. It wasn't just because in case number one supermarkets were a product market, then all of a sudden they're a product market for case number two and three and four and five. In fact, that's why the second requests went out, the boxes came in, the investigational hearings were done, et cetera, et cetera.

The next issue -- and this is following the Guidelines; this is consistent with all those cases -- is which retailers should be counted in the product market? Who are the other supermarket operators? And we've heard today lots of discussion about other retailers and things like that. But that was always a key issue.

I'll quickly go through the rest. The other issue was what's the geographic market and how big is it. We've had some discussions here about MSAs and local areas and areas within MSAs and things like that, and that was always a key issue.

Then, of course, once the market participants in the markets were identified, the FTC, as usual, the staff did go through and determine market concentration. And I'm going to show you some of the HHI data from what the FTC publicly released. But the FTC always also looked at -- in addition to the market concentration the number of significant remaining competitors. Is it a

market of four to three, or is it a market of ten to nine? How many players are left? I have some other slides on that from the publicly released information.

Then, of course, the staff analyzed competitive effects. I mean, obviously that's the big issue for these merger cases, whether it's a supermarket merger case or any other merger case. And the key issues are, can the merged firm unilaterally raise prices or reduce services? That's a big issue. And prices could be in the form of not just shelf prices, but discounts, double coupons, triple coupons, length of sales, a whole host of things. Services could mean store hours, staffing, issues like that.

And also under competitive effects, the issue is whether the merged firm and the remaining firms can coordinate in some way, that's just the coordinated behavior section of the Guidelines, to either raise prices or reduce services in some way?

And I know there's been a lot of discussion on entry, and obviously entry is a very serious issue in retail cases. And the key questions were: Were other firms planning entry that would have a market impact? And would other firms enter in response to a price increase? And of course, following the Guidelines, would the entry be timely, likely and sufficient to defeat a

price increase? So these were the common issues that fell across all of those cases.

I want to discuss -- and again, this is sort of combining product market discussion over a large number of cases into a slide or two. So what was the evidence that, in my view, the FTC relied on to support a supermarket product market?

And the actual product market definition, if you look in all these public complaints, was the retail sale of food and grocery items at supermarkets. And then it's sort of, what's a supermarket? And I know Debbie said this earlier, but I want to make emphasize one part in particular.

And it's the only point I put in bold in the entire slide show. The FTC had followed -- or at least when I was at the FTC, I can remember, about when the very first Wal-Mart Supercenter opened up. And the FTC followed the development of those Wal-Mart Supercenters from when they had a handful of stores to many, many stores to the 2,000-plus supercenters that they have now.

And I know, and I'm partly saying this because there are a lot of people in the industry and on Wall Street, maybe at the FTC itself, I don't know, who have what I think is a poor understanding of the supercenter issue. The FTC staff always, always included Wal-Mart

supercenters in the same product market as supermarkets.

Since all supercenters, by definition, contain a full line supermarket within the supercenter, I don't think there was ever a time when they were not included in the product market. But I can say I remember reading in the last few weeks an analyst trade report saying the FTC has never included supercenters in the product market. And that's just a mistake.

And the other issue, though, is whether you include the total sales at the Wal-Mart Supercenter or just the supermarket section of the Wal-Mart Supercenter. And this morning, Paul Ellickson from Duke had some very nice slides on this issue. So I refer people back to his slides on this issue.

But essentially, a Wal-Mart Supercenter has, let's say, 180,000 square feet; 40- or 50,000 may be your full line supermarket section. So there is a way for the government to learn what are those sales, and those are the sales that were included in the market concentration analysis rather than total store sales, which would include kids' clothes, things like that; auto parts; sporting goods; those types of products, which Wal-Mart sells quite a few of.

And the other issue was -- and again, this is all information that was based on company documents and

testimony from company executives and other sources that the government used in their investigation. So the first thing is: What are the characteristics of a supermarket? Why are they different? In what way?

Well, there is a distinct set of products and services for consumers who desire to one-stop shop. And I know Debbie gave the one-stop shop statistics, most recently of, what, 1.9 shopping trips per week. During this time period, I remember the FTC folks looking at stuff very carefully, and at that time they were in the very low 2s, maybe 2.1, 2.2. Someone can check the historic data. So even at that time, a one-stop shop wasn't based on a consumer only shopping once a week. The average consumer at that time was shopping about twice a week.

Supermarkets carry a large variety of products. I know there was a discussion earlier today about the total number of SKUs, stockkeeping units. And during this time period, based on the trade data and other sources, they were typically around 30,000 in a typical supermarket. Obviously there were a lot of supermarkets that were very large, that had upwards of 50,000 stockkeeping units. And you obviously need a big box to put all those products in.

So there was never this absolute fine line

discussion based on the size of the store that defines a supermarket. But of those chain stores merging and other supermarkets, there was rarely a store lower than 20,000 square feet. And that included, for example, independents and other chain stores, operators. I don't want to say there were never supermarket less than 20,000 square feet, but the average sizes were way above 20,000 square feet. So these supermarkets are pretty large stores.

And I'd already mentioned earlier the last bullet in the slide about documents and testimony supporting these facts.

So then the other issue that the FTC spent a lot of time on was pricing because that's really what merger analysis is about. It's not about -- there's this whole world, obviously, in the marketing world and things like that and the business field about competition. But antitrust is really about who else would price constrain the supermarkets. So the first thing you have to figure out is how do they set their prices.

So there are certain things that the supermarkets generally did, and this isn't specific to any one firm. But supermarkets regularly conducted, at that time at least, price checking at competing supermarkets. These were usually weekly price checks,

where they would go in with the bar code scanners, run the scanners across bar codes, and a supermarket chain could tell to within 1/100th of a percent whether their competitor has moved up or down on price. And that's pretty easy to do if you're looking at 10,000 different products a week and you're averaging them by department or category.

And then what the FTC looked at was, well, who else do they price check, and the frequency of the price checks. So it would be sort of case in and case out. The supermarket chains usually price checked each other every single week, and sometimes more than once a week.

And then, well, who else sells food? Well, obviously there are lots of other retailers who sell food. Then you look at the frequency and the depth of the price checks at the nonsupermarket food retailers. And suffice it to say that the facts showed they were not price checked by supermarkets anywhere near the depth and level and frequency that supermarkets price checked each other.

And then the other issue was how frequently did supermarkets change their prices and why did they change their prices. How frequently did they change their prices because their competitor ran a sale or moved their pricing format in one way or another versus how often did

they change their prices in response to a nonsupermarket retailer selling food? So these were all factors that were very important in establishing factual evidence using the Guidelines analysis to support a supermarket product market.

Supermarket chains also used price zones to charge different prices. And I know Debbie had mentioned -- she had brought up price zones for Kroger, at least, saying that Kroger had one price zone for the, I guess, Dallas and Fort Worth combined metropolitan area at the time of the Kroger/Winn Dixie investigation.

But generally, the idea was that there were price zones. Supermarkets could easily change their price zones. They frequently did. And then the question was: Were they changing them and the stores within the price zones based on other supermarkets, or were they doing it in response to any other retailers?

And the evidence generally was pretty strong that at least at that time -- and again, this is the time period of basically the late 1990s -- that it was in response to other supermarkets, not other types of food stores.

And that's why I should go back. Of those twelve cases, all twelve were unanimous votes by the Commission. So in essence, it was sort of like a 60 to

nothing vote on the supermarket product market. And I can assure you that each commissioner examined the product market issue separately, based on the number of meetings I had. So those were the Commission's views at that time.

In terms of geographic markets -- and Chris had brought up some very good issues about geographic markets because that was always a very challenging issue.

So the first step was how do you establish geographic markets. And I've had a lot of people talk to me about this over the last few years. And some of the issues were basically looking at how far away do consumers shop for groceries. And I noticed, when Paul was talking about the U.K. examples, it was based on drive time and things like that. That was one issue. And were the limitations on driving further based on the perishability of the food products and other issues. And consumers' time is valuable, which also constrain how far people will shop for groceries. So those were issues.

And the FTC generally got some pretty good detailed data for the customer draw areas for the various stores. And based on that information, it was pretty easy to identify overlaps. And overlaps, I can certainly say, weren't based on just drawing three-mile or five-mile or any particular distance around particular stores.

They were based on looking at where the consumers actually shopped.

And I only put in information for one slide. And this is following up exactly on what Chris was saying earlier. The staff did look at -- demographics were very important in areas. People only drive in certain neighborhoods, and even if other areas are pretty close by, when you look at those customer draw areas, they were usually anything but concentric circles.

There were also natural and manmade barriers to consider. There were low density population breaks between areas. And basically, the FTC looked at all these draw areas and overlapped them, and that's how these areas generally grew into somewhat larger areas than just neighborhoods, for example, an MSA or something similar to a metropolitan statistical area. An MSA is just a U.S. Office of Management and Budget figure. It's not necessarily designed to reflect consumer shopping for groceries, an exact duplicate of what could be a relevant geographic market under the Merger Guidelines.

And of course there are examples. I didn't go through them because there are 129 different geographic markets in those twelve cases. Some of those had smaller markets. There were other ones with larger markets -- so they do vary, and they varied by the facts.

One of the things I wanted to point out to you, in 2004, I think it was Malcolm Coate of the Bureau of Economics who did a lot of work on putting this data together. They put together these market concentration tables. And there was a table specifically for supermarket merger cases. I picked the one that was closest in the fiscal years to the time period I'm discussing.

And so these were the released information. And as you can see, the FTC never brought a supermarket merger case with an HHI post-acquisition below 2,000. So that's not skirting 1800. Even at 2,000, there was never a single case during this time period. The number below 2400, out of 129 markets, was slightly under 10 percent. It was twelve markets.

Then you can see the escalation up. Most of these were -- and everyone has got their different opinion on how do you characterize something as a 3,000 or greater HHI. But I think most people would say that's a fairly highly concentrated market. So that's the distribution that came out of these.

And of course, I'm a firm believer in it's not just HHIs, but it's actually the number of significant competitors. And as an aside, when the FTC first released this information, they just released HHI data.

And so I talked to Malcolm and I said, why don't you release the number of significant competitors because that's very important? So I'm not taking credit because he probably would have done the work anyway. But I thought that's more revealing in looking at FTC enforcement.

So as you can see, this was the breakout. Now, I'm not -- when I reread last night what's the definition of significant competitor in the FTC report on Horizontal Merger investigation data, frankly, I couldn't understand it. So this is somebody else rereading memos, probably, from a few years ago and looking at what's a significant competitor.

So clearly, 15 of those 129 markets were merger to monopoly, where I guess what the FTC "Competition Counts" brochure would say, "what if there were only one grocery store in your community." So 85 percent of the 129 markets(109 markets) had only three or fewer significant competitors. And then there were 15 percent(20 markets) that had more than three remaining significant competitors. And I'll be the first to admit the Kroger/Winn Dixie case, if those numbers are included in this, would have been one of those 20 markets, or at least for the Fort Worth area.

So I thought that was pretty revealing. And I

should say the FTC came out earlier this year with a similar table for FY 2001 to 2003, so there's a little bit of overlap, not too many additional FTC supermarket merger cases. And they had eight markets, and seven of the eight were four to three. So that would be 87-1/2 percent. So it's a very similar number in the more recent years.

Unilateral effects: What was going on? These were supermarket chains. They were head-to-head competitors. They were generally very close to each other spatially. That is, they're within a short distance of each other -- they're across the street. A mile away. They're basically competing to get the exact same customers.

They also had a lot of very similar store formats. Earlier today there was a discussion regarding all food retailers, not just supermarkets. You could have -- at least if you just look at all retailers who sell food, you can go on one end of the spectrum to these extreme value stores up to value stores, stores that sell a lot of value-added products that aren't necessarily trying to be the lowest player in the market because they have a lot of extra products and services for consumers; up to, for example, membership club stores, where you pay your membership fee and you buy a 144-ounce can rather

than a smaller size.

So within that, generally these merging firms were very close in format. That is, if you're looking at closeness, that's where they were coming out. And how did the FTC learn this? It wasn't that the FTC went out and talked to consumers or conducted their own customer surveys. They relied on surveys that the chains produced regarding their own customer base.

And it's very common in the industry for chains to want to know, how many of our customers primarily shop us, and where do they do their secondary shopping? And back and forth, and things like that. So a lot of these surveys were showing that as a significant percentage of the customers at each of the merging chains were listing the other chains as their first or second choices.

And in some respect, and I just want to follow up a little bit on what Chris said about store closings. In some of these cases the closeness of these merging firms, which was defined as both physical proximity and store format, was used to support company plans to close competing stores or, in fact, to raise prices, or at least plans to raise prices after the acquisition.

So, in clarifying the store closing issue that Chris talked about, at least from what I can say without going over the line from the general counsel's guidance,

is that it wasn't just a store is poorly performing and the selling firm probably would have closed it down anyway because it was old or there was only a year left on the lease, and the acquiring firm doesn't want to go out and renew it, so they just plan to close it down.

That's a different scenario than the acquiring firm planning to close a profitable store because they're very close and competing for the exact same customers. In essence, it's like, well, we don't have to close it. We could just raise the prices at that competing store, and X percent of the customers would be diverted to the acquiring firm's store. So there's a little difference I just want to point out to people on that issue.

I'll move on to, real briefly, coordinated behavior.

MR. SALINGER: Jim, can I encourage the "real briefly" thing? I have let us slip a little bit. But I want to give Dave 15 minutes.

MR. FISHKIN: I'll just run through -- these are just basic dynamics about coordinated behavior on the slide. The one thing I want to say that was maybe unique not just to supermarkets but to retail is that unlike a lot of industries where competitors don't know each other's prices and they don't know what their sales volume is, everything in retail is public in one form or

another. So it's very easy for competitors to know these facts generally. And there were market conditions that could facilitate coordinated behavior -- I put down in one of the bullets about signaling price changes and things like that. So I'll just leave it at that.

We're at the very end. I think this is the last slide, the slide on entry -- there are a lot of questions because some legitimate entry issues have been raised by both Debbie and Chris.

So what the FTC was looking at on entry under the Guidelines. Look at timely. How long does it take to plan, build, and open a new supermarket? And that includes time to find a suitable site, going through the internal company approval process, negotiating terms for the lease, getting regulatory approval, and construction time.

And it's one thing for the FTC to find out how long it takes everybody else to open a new store. But the FTC always asked the parties to state how much time they took to open each of their new stores from the planning stage. And I can say across these cases, it was rare to find a supermarket firm able to open up a new store from time of planning to opening in under two years. Likely -- and this is slightly off the Guidelines if you look at the Guidelines literally -- but it was

more used as, will a competitor enter in response to a price increase? Sufficiency of entry was whether a new entry was likely to attain sufficient scale to defeat a price increase.

And I think the last bullet is pretty important. In every merger, obviously there are competitors, and the question is what are they planning to do regarding the opening of new stores in the next several years? And I'll just leave it at one line here: The FTC did send out civil investigative demands to third parties, and or the companies had to respond to the CIDs about what they were planning regarding new stores. And I think the FTC relied on these third party responses at that time, relying on what competitors told the FTC under oath.

That's it.

(Applause.)

MR. SALINGER: Thank you.

Well, I think the real question is whether this is the Procrustean bed or whether it's getting it right. And there's no one better able to comment on it than my predecessor as bureau director and the person who first brought me to the Commission, Dave Scheffman.

MR. SCHEFFMAN: I don't know about "better," but as you know, I will comment. I'll be brief; we're

going over. But I'll try and be pithy. I think I do have some things that you might find interesting.

I was there at the beginning. One of my messages -- I'm going to talk about the long history, like back when Paul and I did -- I can't remember whether you did the supermarket mergers, Paul. But supermarket merger analysis was begun in the '80s when I was at the Commission. Jim certainly advanced the art, but the basic analysis was put in place there.

There's two industries which haven't changed from the '80s, in comparison to every other industry, the agency's review, and that's supermarkets and oil. Both of them are investigated and largely treated exactly the same way as the '80s, although there has been some Herfindahl creep.

But the approach to market definition, the reliance on market definition, et cetera, in those two industries is dramatically different from the practice in every other industry now. And there's reasons for that. These are political industries that are of concern to people.

So I was there in the '80s when we did this stuff. I'm going to tell a little bit about the history. I then went on to Vanderbilt and business school, and started the business strategy program there. And for

years I've studied Wal-Mart because it happened to be nearby, and retailing, and taught retailing and things. And I may have some things to say about that, about Wal-Mart and its impact on this industry.

The history: Grand Union came down in 2003. You need to remember, the Commission horizontal merger statement didn't adopt the guidelines, the merger guidelines, as promulgated by Bill Baxter. The Commission horizontal merger statement advocated a very non-structural approach.

So Grand Union came down with a very non-structural approach. The merger guidelines were issued. Despite the Miller Commission not adopting the guidelines, Tim Muris did adopt the guidelines from the beginning. And that's the sort of analysis we had in the beginning in the '80s.

And what we see in supermarkets is the artifact of really what we did in product market back in those days, which in most cases has dramatically changed. And that's why we still have supermarkets is the market and that's really the deciding factor, as opposed to any sort of in-depth competitive effects analysis.

So what happened? Shortly after, in about -- I forget -- '84 or '85, we were presented with a merger. Furr's bought Safeway. And what we were presented with

was a merger monopoly in a couple small towns in New Mexico.

Well, what were we going to do? There was clearly a problem. So we challenged those. There was no dispute by anyone in the Commission that those transactions shouldn't be allowed to proceed. And on its heels, within a year, I think -- Bruce Springer probably remembers; I think he worked on one of those deals -- we had two big supermarket mergers in California. And that all of a sudden set -- first Safeway opened the gates and California merger analysis was supermarkets are the market. Local markets, we look at the same sort of things -- driving distance, are there natural barriers, all the sort of stuff Jim was looking at.

And we had a lot of divestitures, and then very importantly, the state AG came in afterwards and got even more divestitures. So that really upped the political ante in the Commission in how it treated supermarket mergers.

Nothing has really changed in the basic analysis of supermarkets, which is, much more than any other areas other than the oil industry, market definition and concentration is the answer in supermarkets. And that's not what we do in virtually any other industry. It's an input. We've gone far beyond

that in other areas.

It's very odd when you think about it: This is a very dynamic industry. I know we say a very dynamic industry, and we've made a lot of good comments on behalf of our client. But it is. We're doing the same basic analysis and the same enforcement decision now that we were in the 1980s, where we had no supercenters. We had no real club stores. High T was just beginning. Supermarket pricing has fundamentally changed. Product merchandising has changed. Formats have changed.

The players have changed dramatically. None of the players are the same that they were before. Most of them are gone, for the top ten, or have been bought by someone, or the management has fundamentally changed and the strategy has fundamentally changed, like Kroger.

So this is an industry that's had dramatic change, and we're still doing the same analysis and the same approach that we did in the '80s, which is that supermarkets -- even though there's clubs, there's supercenters which are in the market, and there's all this other information about how consumer shopping patterns have changed, how IT is important, et cetera, we're still doing the same sort of analysis that we did in the 1980s.

Now, another thing I learned early when I first

came to the Commission -- I can't remember; maybe Paul would remember this. There used to be these yellow booklets. There used to be data collected on the supermarket industry which is at the local level. I think the Commission may have required that. And the Commission was very busy in the supermarket area when I got there in '79.

And I looked at the data in there, and what was very interesting was true, was interesting data. What it showed is -- I'm not sure you can get those data now, but you can get it by company -- is that margins at the local level were quite small, that margins were quite small, a few percentage points, across all areas. So the margins were small and the range was small.

Now, you have to be careful interpreting margins and trying to make some inferences. But what that showed is that in this industry, you could just see -- well, clearly across areas, the structure, industry structure, varied a lot, and lots of other things varied a lot. But what you see overwhelmingly is the margins are really small.

So one of the things I think the Commission realized -- I remember making some intemperate remarks during that time: Why are we looking at this industry, given these margins? But I don't agree with that;

there's certainly a reason to look at supermarket mergers generally if we look at them in the right way.

But you have to realize the reality of what we're talking about in supermarket mergers. Dave Parker talked about the hypothetical 5 percent price increase after a merger. A hypothetical 5 percent price increase for a supermarket would lead it to being the most profitable supermarket in history.

Their margins are tiny. You would have a multiple of any existing margins if you had that big a price increase. And I don't know what Jim thought, but I don't think -- and I think when I was back, none of us ever thought the price increase would ever be that large.

That's not to say we shouldn't worry about supermarket mergers. The usual argument is 1 percent of people's savings of their expenditures on grocery products is a lot of money, so we should care about it. And that's sort of the same argument that's made in oil, where it's not really a belief that there be a 5 percent price increase in most cases.

So you have to understand that context. And let me briefly talk about retailing economics, which is in antitrust we focus on pricing and on margin. Retailing, and supermarkets in particular, margins are quite important. But really, what's important is turns,

sales per square feet because you have -- the reason why supermarkets make very little money on each sale on net margins, the way you make money is sell a lot.

What do you do to that? You have a lot of traffic, and you try and have transactions values as high as they can be. That's part of the Wal-Mart magic. Remember, Wal-Mart has significantly lower operating costs than any competitor in any industry that it competes with, supermarkets or Target or anyone. It gives away a significant part of that operating cost advantage in terms of lower prices. It has lower margins than anyone, not for loss leading reasons; I'm saying across the board, its margins are lower.

Why? Because it's part of its overall model of dramatically increasing sales per square feet. That's a little bit too simplistic, because the real -- how do you make money? You make money on return on assets. You don't make money on the margin; you make money on the investment, on the amount you're making on your investment.

So the whole idea is turns, asset utilization, which is get more traffic. Get average transaction sizes up. So that's not to say margins aren't important because margins are so small, if you could increase margins some, even a little bit, that would significantly

increase margins. The issue is where the rubber really meets the road.

And this is particularly important for how food retailing has evolved, because the one thing the Commission really never does and the parties never really do is actually implement the guidelines; if not fight about market definition, at least fight about competitive effects.

And what is the tool? It's critical loss analysis. What would the loss in sales be if you raised the price? And in that sort of analysis, you cannot ignore the non-supermarket competitors. Remember, as the data Debbie talked about indicated and is well known, think about the market definition we have here.

The average person is -- many of the average people are buying exactly the same products in different stores, supermarkets and non-supermarkets. They're buying exactly the same products. It just depends on where they choose to show at that particular time.

So in that situation, you necessarily have to ask the question: If you did elevate prices, what would you elevate prices for? Which is something I don't know -- during Jim's time they probably worried about it, but certainly in the '80s, when the economists were wrestling because they were all coordinated action cases,

if you had a supermarket coordinated action case, what were the specific things you were going to raise the price for, given that a lot of things were available in other venues? And that's even much more true than it is today.

So there's really a lack of actually performing the basic critical loss analysis and trying to see how much sales would be, trying to get a handle on how much sales would be lost. It's not about one-stop shopping.

A very substantial percentage of supermarket sales are very small transactions. They're top-up. Those same people that are going there for one-stop shopping are going there for top-up, and they're going to other places and buying the same thing. So that has to come into the analysis.

Now, I'm not saying that you would never worry about supermarket mergers. Of course you would, in certain circumstances. And it might be circumstances even when there were clubs and Super Wal-Marts. It would depend on the situation. Put differently, the Grand Union Commission, if it had been presented with a merger at that time of Giant and Safeway, of course would have blocked it.

So even though under its analysis there were other competitors in food retailing, it depends on the

situation. It depends on the environment. It depends on, in those markets, who the non-supermarket retailers are, what people buy from them, et cetera, things like that.

So product market: The problem with supermarkets is the same problem the Commission has generally on retail, which is they look at formats. I am a marketing professor, in part. Formats are meaningful from a business point of view. There is a match between formats and what the retailer's core customer base is trying to be.

Yes, a supermarket is trying to be a one-stop shopping. That's one thing it does offer. But a very substantial percentage of their sales are not those core customers, or the transactions are not that. So there's a difference between format.

It's a fundamental problem of not using critical loss, which is, when looking at format, you're looking at what the inframarginal customer is. Of course, in critical loss in the guidelines, the issue is what's the marginal customer going to do? What's the one who would switch, and how much of those are there?

Now, we know that, as the data Debbie indicated and are well-known, a lot of shopping is outside the supermarkets for buying exactly the same things that you

can buy in supermarkets. So it goes back to you need to do critical loss. You need to do some actual analysis beyond maps.

Let me turn now to geographic market. What has advanced, and it's lucrative for all of us that do this, is generating maps. It's real expensive. It's neat. What's the point?

Look, I was interested in the U.K. I remember I visited the commission, U.K. commission, at the time they were looking at, I think, the Safeway transaction. And they said the major chains all price -- they price the same at all their stores in England.

I said, that's not possible. You'd be underwater. Given the difference in operating costs, you'd be underwater in London and you'd be making money in the hinterlands. But the fact is that they do, and they did. They still do.

So what's the point of looking at local markets unless it's part of some -- local markets are of some interest if you think about, well, what the competitive effects analysis would be in the broader market. We've seen the same thing happen in the U.S., which is, in the '80s when we first started doing this, you had very localized pricing. And as most retailing, the zones have gotten bigger and bigger as the biggest cities are

larger.

Okay. Let me make two more comments. Paul Ellickson gave a very nice presentation, but he couldn't be more wrong about Wal-Mart. It's just shockingly wrong. Wal-Mart has had the most profound effect on retailing in the world of anybody, ever, including in supermarkets.

Look at the California supermarket strike. What was that about? They could compete with one another. The reality was that everybody realizes that Wal-Mart, or others who figure out how they can somehow do the Wal-Mart model, which is actually very hard to do, are actually going to have significantly lower costs than any of the supermarkets do today. And that's what they see as the bogey, is they're chasing that Wal-Mart efficiency.

Whether Wal-Mart is in the market that they compete with when it does have a dramatic effect, or even if it's not, any sensible supermarket realizes it's a long way from a cost structure which is going to be competitive, given that someone is going to figure out how to better match Wal-Mart in the supermarket industry, and it better be then.

So finally, to go with Mike's question in the first panel today, which I'd paraphrase to say, we're

doing all this stuff on market definition. Is that right? And I think the answer is no. But we need to think seriously about the competitive effects analysis.

There are supermarket mergers, I'm sure, that I would agree to challenge. I had no problems with Furr's/Safeway, and I don't think anyone would. But I can conceive of much less dramatic situations where I might think there's a problem after the analysis. But it's got to be based on a competitive analysis. And we have to start actually with the guidelines, which is fundamentally based, as you know, on critical loss.

Thanks a lot.

(Applause.)

MR. SALINGER: Thank you.

Well, I'm sitting here trying to make the tradeoff between lunch and discussion, and then I realize that there really doesn't have to be any tradeoff because we can have discussions during lunch. So for those of you who ordered lunch, it's available out here. For those of you who didn't order lunch, there are a variety of eateries around. You will have to come back through the security, I remind you.

We're going to resume in here at a quarter of 1:00.

(Whereupon, at 12:20 p.m., the conference

adjourned, to reconvene at 1:00 p.m.)

L U N C H E O N S E S S I O N

- - - - -

MR. SALINGER: We are very privileged today to have as our luncheon speaker Bill Kovacic. Commissioner Kovacic was sworn in as a commissioner on January 4, 2006. Before that, he was the E.K. Gubin Professor of Government Contracts Law at G.W. Law School, where he'd been teaching since 1999.

He is a recidivist at the Commission, having been the general counsel from 2001 through 2004, and previously he worked at the Commission from 1979 to 1983, first with the Bureau of Competition's planning office and later as an attorney advisor to former Commissioner George Douglas.

After leaving the FTC in 1983, Commissioner Kovacic was an associate with the Washington, D.C. office of Bryan Cave, where he practiced in the firm's antitrust and government contracts departments until joining the George Mason University School of Law in 1986.

Earlier in his career he spent a year on the majority staff of the Subcommittee on Antitrust and Monopoly at the U.S. Senate Committee on the Judiciary. He also clerked for the Honorable Roszel Thomsen, U.S. District Judge for the District of Maryland.

So with no further ado, Mr. Kovacic.

COMMISSIONER KOVACIC: Thank you, Michael. And my gratitude to the Bureau of Economics for organizing what I'll identify as being a hallmark of what the agency has done particularly well, and what it's done especially well during Michael's tenure as head of the Bureau.

I'd like to relate today's proceedings to a larger theme about what competition agencies should do, and to underscore what I think is the importance of convening proceedings of this type and others that involve an examination of more fundamental trends in individual sectors and specific types of commercial phenomena, and to underscore that this type of proceeding and activity is critical to what a good competition agency does.

A basic question that runs throughout the literature on public administration, and I know there are many students of that literature in the room today, is how to define good performance. When we talk about the work of a competition agency over time or any public institution, a basic question is, is it doing a good job or not?

To attempt to ask that requires a fundamental effort to define what we mean by good performance. What exactly is it that we ought to be measuring? What means should we use for conducting the assessment? Why does it

matter?

Well, having a concept of what an agency ought to do, the type of work it ought to perform is vital to making future policy choices, forming a view about what works and what doesn't, what has an impact and what has no impact or what has a bad impact, is indispensable to forming judgments about how resources should be allocated and to a basic assessment of the soundness of the underlying regulatory scheme that's entrusted to the agency's enforcement.

And it also has a basic impact on the agency's reputation. And the fact of having a good reputation or a bad one or an indifferent one matters in ways that simply go beyond the sense of personal pride and satisfaction that incumbent managers and the professional staff of the agency have at any single time.

It's critical to one's ability to go into court and get good results. I'm convinced that there is, in effect, a fictional supermarket on which public institutions trade, and if your stock is trading at a premium, you get the benefit of the doubt from judicial overseers who review your work. It's the equivalent of having a hall of fame-like reputation in professional baseball as a pitcher. And the benefit there is that you get the pitch that's around the plate.

The famous story told of Rogers Hornsby standing and watching pitches from a rookie pitcher that seemed to be going across the plate, and the catcher turned in dismay and said, "What's wrong with that one?" And the umpire said, "When your pitcher has thrown a strike, Mr. Hornsby will let you know."

Having the benefit of the doubt in close matters counts a lot in litigation. It counts in the view of consumers about the legitimacy of what the agency is doing in the eyes of companies that are subject to its controls, where even if they dislike specific interventions, they respect the general process by which those interventions are taken.

The ability to recruit the kind of professional staff that you need to excel. And increasingly, and this is a point that I wish to emphasize, gaining the respect of competition agencies and regulators in other jurisdictions.

You're all aware of how our field has become one of extraordinary complexity and multiplicity. I remember 30 years ago finishing school in law school and talking to one of my instructors, who said, "What do you aspire to do with a law degree over time?" And I said, "I'm interested in working in the field of international competition policy."

And my instructor, a very thoughtful scholar, long experience, said, "That's intellectually interesting, but I could never recommend that you enter a field that will have little practical significance during the course of your professional lifetime."

That wasn't a foolish assessment in 1978. Yet today we know it's a world of over 100 jurisdictions that have competition laws. By my rough guess, at least a third of those are applied with a degree of emphasis, seriousness, that business managers must take them utterly seriously.

And in a world of shared authority, one does not gain respect or acquiescence simply by turning up the volume. You have no more effect as a competition official than talking to someone in a foreign tongue and thinking you will be understood simply by speaking more loudly and slowly. There's no substitute in the world of shared authority, diverse authorities, to persuade except by leadership, intellectual leadership that generates the better idea that compels attention over time.

What I'd like to do is to talk a bit about the conventional report card by which I think competition authorities have been evaluated during my professional career, and then to emphasize investments of this kind, alternative criteria that don't dismiss the importance of

litigation and prosecution as a measure of what the agency does, but underscores the indispensability of investments and knowledge, the capital budget that builds intellectual leadership. In doing this, I'm giving you my views, not necessarily those of my colleagues or my institution.

What I want to do is to underscore how institutional design and capability shape policy results. There are a lot of academics in this room or folks who, though it's not your full-time career, have spent lots of time in classrooms.

When I teach subjects like competition law, when I give presentations to other audiences, the keenest matter of concern tends to be matters of doctrine, substantive policy developments. What did the Supreme Court do in Twombley? What's it going to do in Legion?

The moment you begin talking about the institutional factors that generate policy, you begin to see -- certainly at a convention -- you get to read the back of the newspaper, or you see the attendees nervously looking through the brochure to see if there's a parallel session they might be able to skip out to.

Yet the institutional arrangements and the manner in which they're shaped provides the infrastructure over which policy travels. As one of my

colleagues at G.W. has put it, "Policy is the content that travels through the pipes." And if you aspire to do broadband-like policy content, you can't do it with a DSL infrastructure of institutions. You have to have conduits that match the policy demands that you want to place on them.

And I want to promote acceptance of a norm over time that we judge agencies by their willingness to invest in exactly the kind of activity that's taking place today and related types of work, by which the Bureau of Economics and other elements of the FTC, independently or collaboratively, have increased the base of knowledge on which judgments about policy, in this field and others, ought to be based.

What counts in the conventional report card, if you were to ask, how are we measured? New regulatory interventions are, simply stated, cases, cases, and cases. Special credit to the big high-profile matter that captures the first page of the business section in the New York Times and the Washington Post, or makes it to the front part of the paper in the Wall Street Journal.

The question is how to count or classify matters. But the emphasis is on how many cases have you brought. And that is overwhelmingly the matter of

concern by those who grade us over time. Relatively little emphasis on the following: smaller matters that can make big law.

If you'd gone back to 1978 and you'd seen the day when Indiana Federation of Dentists was filed during Mike Pertschuk's chairmanship, you would have said, how quaint. A bunch of dentists in Indiana. Not a very big state. Not a lot of dentists. How amusing. Yet that's the case that, as much as any in the 1980s, really shaped the development of the law coming from this agency, a powerful case, a small matter that made huge law.

And non-litigation activities get brushed aside casually. Studies, who cares? Interesting study. Interesting paper. Interesting research. And least of all is there emphasis on making capital investments. It's all on consumption, not investment. Production, not R&D. And what kind of incentives does this create for agency leadership, like me, the political appointees?

The first is the emphasis on inputs rather than outcomes. If we were an airline and you looked at the incentive structure, it is an airline that gets evaluated by the total number of departures. And if you ask, have the planes come down? What about the arrivals? Oh, we don't pay attention to arrivals at this airline. We just pay attention to how many planes we send up in the air.

The mere fact of lots of activity tends to be confused with accomplishment because when you're doing things that are relatively risky or difficult, there's always the hope that by the time it comes to ground, especially if it's a smash-up, you can say, not on my watch. Things were going pretty well while I was still in charge. The landing was the result of a succession of others who came behind. We were doing a good job when it was in my hands.

And non-litigation strategies tend to be de-emphasized. Advocacy before other public institutions. Studies and reports that quite often can identify first best solutions. And I point to the work that the FTC has done with patent reform as being an example.

In so many areas involving IP, my interpretation is the U.S. competition policy system and the European competition policy system has handled matters that get tossed into the wake of a patent system that is not often enough rigorously evaluating the qualification of potential claims for rights to be granted. And the impact of challenging private restraints: that is, to examine in great detail through studies the actual effects of what we've been doing tends to be diminished.

And the consequence is too few investments in capital. A budget that tends to emphasize production of cases. Too little investment in capital.

And why might that happen and what are the effects? There's a danger there that your commitments can outrun your capabilities because your base of knowledge is being diminished over time and you're not restoring it. The real causes of problems, again, tend to be overlooked.

And in the course of handling cases, you don't ask, why are we seeing lots of cases of this type? Whether it's bid rigging involving public procurement, where the fundamental cause might be deficiencies in the procurement bidding system itself; and a short-term credit claiming impulse is a voice like a siren that beckons at the ears of public officials like me all the time.

And what does the voice say? It says things like, pick the low-hanging fruit, one of Washington's beguiling idiotic aphorisms. Why is it idiotic? Well, unless someone is whispering to you, plant some trees as well, you have a lot of fruit gatherers running around. Indeed, the larger message is, don't just pick the fruit. Chop down the wood, too, to light a fire when it's cold outside. And all of a sudden there's no orchard left.

Someone has to be not just picking the fruit but planting the trees.

And why is capital investment important? It involves a commitment -- and the projects I've seen bear this out -- it involves a commitment to make investments today that will not be appropriable until well after you're gone.

The rough rule of thumb, I think, for any incumbent set of managers is that to an extraordinary degree, the success of what you do depends on investments that were made by your predecessors. There's success in recruiting. There's success in making investments in knowledge and building it. Often, long-lead-time projects that will not come to fruition until well after incumbent managers are gone.

What you need is a norm that emphasizes this cumulative, sustained effort as being the key ingredient to doing good work over time. And by norms, I mean formulating a consensus view about how members of a group ought to act.

And why do I raise this message with this audience? You're the audience that helps create the sense that the norm matters. It's got to be a norm absorbed internally in the agency, but it's got to be pressed upon the agency by outsiders, experienced

observers of what the agency does. The question that's posed in academic journals and in conferences is not simply, how many cases did you bring this year, but what investments did you make today that will make the agency better off later on?

Tim Muris and Bob Pitofsky, in a conversation I heard them have long ago, defined their job as making the life of their successors easier. What did you do now that made their work and their life better later on? Good advice not simply for agency leadership but for the managers who run the key operating offices.

Some of the larger lessons that ought to be taken to heart is that policy development tends to be cumulative rather than sharply discontinuous. The real model is a relay rather than an individual race. And you know how relays work. Where do they fall apart? Bad exchanges in the zone where the baton is passed from one runner to another.

It's a collaborative process in which it's the success of the whole team over time that determines the effectiveness of the team compared to others. It's a process of prototyping and experimentation where individual techniques are evaluated, tried. Experiments that involve perhaps enforcing too much sometimes or enforcing too little, but with humility to recognize that

what we're engaged in in many instances is a continuous process of testing what works.

And far more often than not, the cumulative process of policy-making involves an evolutionary process of change featuring some fairly sharp departures from past practice. But the general trend of good policy development is evolution rather than simply revolution.

And the aim ought to be to make sure the capabilities are well matched to commitments. And the story that I've told to some in this audience that I'll repeat again was told to me by one of my colleagues at G.W. years ago.

He used to say, "Suppose that I told you tonight I've got tickets to see Beethoven's Ninth Symphony. Do you want to go? And the answer you might give me is, 'Who's playing?' And if I told you it's an enormously enthusiastic middle school ensemble -- they're thin on experience; truthfully, they're awful, but they try very hard; they play with enormous vigor -- you'll find any other number of possible uses for your time. But if I tell you it's the Vienna Philharmonic there at the Kennedy Center, you say, 'When do we meet?'"

And the point of the story is that judgments about what an agency ought to do can't possibly be taken out assessments of the quality of the people who will

perform the compositions to be judged. And this underscores the need to build capability and knowledge over time.

Avoid being trapped in the wrong model, which my agency was in the 1970s after it made beg-your-agency commitments on the Kellogg case and the Exxon case. You might decide that you do one of them, but to continue to double your bets in the face of a basic change in the literature that suggested your model was wrong was the real vice of the policy-making at the time, not the pursuit of the cases in and of themselves.

It wasn't having the over-the-horizon radar that told you to be cautious in the face of a fundamental change in the analytical model; to respond to new industry learning and developments, and to assess the wisdom of the regulatory status quo, which means that part of the capital budget every year ought to include some increment for the assessment of what you've done in the past. And to some extent, a means to doing that is precisely this type of conference.

What are some of the techniques for doing this? The first is to have a research agenda by which you're tearing out within your own walls, a process of examining industry developments and matters of theory, to perform studies by which your economists in particular build the

equivalent of what Pauline Ippolito of this agency has so wisely called economic precedents.

What are economic precedents? They're not the equivalent of the doctrine that appears in the Federal Reporter, doctrine that binds the decisions, or at least influences the decisions, of other tribunals. These are precedents that inform our judgment about how to treat identical or different circumstances in the future.

One cannot point to a better example of this, I think, than the work that this agency did and inspired in the 1970s dealing with the health care field: the examination of the effect of restrictions at the state level on the sale of eyeglasses and optometric services.

What happened as a result of that work? It became possible to say, you can formulate whatever judgments you wish about the efficiency and significance of these restrictions, but here's good empirical work that tells you what happens, and this kind of work replicated in other areas.

Much of it has been generated by this agency, by the bureau that hosts this event. These become economic precedents, if their work is done well, that informs our judgment about similar circumstances, an enormously valuable capital that's based on good research.

Public consultations are a key element of this. I think the genius of Bob Pitofsky's chairmanship in many ways does not so much reside simply in the successful pursuit of cases, but is recognition of the unique comparative advantage of this institution, one that could only come from someone who had spent their studying the FTC day in and day out.

And Bob's intuition was the capacity to do research, the ability to gather evidence, both through voluntary or compulsory means, to do empirical studies, to act as an advocate for competition, was a unique resource of this agency. And it was foolhardy to allow that assembly line to atrophy.

And Bob breathed enormous life back into it through a large set of public consultations. And much of the most successful work the agency has done has not come from forcing individuals to provide data, although we do that now and then, with great success, too; but it's come by inviting them to come and tell us what they know.

And the little secret that we've discovered is that if you hold an event like that and you have a limited number of days, you could auction off the right to talk. They would pay you. You have to chase them away. There's nothing so alluring to human beings to have an event and say, we have a limited number of seats

at the table. They won't ask you at the discussions about it; they'll just say, I've got to have one. I must attend.

And the FTC has found in a repeated set of proceedings that having a good eye for a topic, inviting the right people, can be an enormously valuable approach to generating discussion, debate, and collecting information that people have about individual topics. Today's event, I think, is a perfect illustration of that at work.

Ex post assessments: One of my favorite topics, going back to my time as general counsel. Some allocation in the budget every year to look back, notwithstanding enormous methodological difficulties, but at least to try to creep up on the answer to the question: How did it all turn out?

What were the landings, not just the departures? Where did the plane come down? In what shape? Did it land in the destination that you expected it to achieve when you sent the plane into the air, or were there surprises along the way that placed it someplace else?

And to build good internal think tanks, this means a conscious effort by a competition policy agency to establish the equivalent of university-quality

research teams inside its own borders. And the real test over time of whether you're doing this well is whether the universities and think tanks in fact are coming to poach your people away.

And a good test for me is the group that Susan Dasantie ran during my time as the general counsel of the FTC. When I take the six people in that office, three of them are teaching now and another two had officers to do so.

I didn't see that office as being a recruiting ground for academics, but that's the kind of intellectual fire power you want to draw to this process and have in the agency because to do the studies and not have the very best, to not have the measure of success being have we taught the world something it did not know before we did this, is the real test of what you're doing. To launch these initiatives without hitting that target of performance is not a successful endeavor.

To have links to other public agencies so that the work we do, work that related agencies do, is tied in to our own work, to have a collaborative process of work with others, and I think to have more robust links to academics and think tanks on the outside.

Some of the best experiments I see taking place are occurring in other jurisdictions, where the

competition agency is developed a deliberate and periodic process of consultation: with academics with an interest in law, economics, and public administration; where a conscious part of what they do is to engage them in the agency's work; to create a two-way flow of information by which the academics tell the agency on a regular basis what they're learning; and the agencies have an opportunity to encourage academics to do applications of their work that is useful to what the agency does, not by happenstance but by a conscious design of continuous interaction.

Some examples that I think are well-known to this office of the enormous payoff of doing this kind of work that goes well beyond informing judgments about the prosecution of cases, cases that I do regard as being the anchor tenants in the mall of competition policy. But they're not the only retail outlets, and you don't have a good mall without an ensemble of others.

What might those others be? Good reports and studies. I've had the opportunity since 2003, when the FTC's patent study was published, to go to many jurisdictions outside this country, most recently a week ago. It was a conference in Brussels on patent policy and the reform of patent systems.

And as I began to talk about the FTC's report

in 2003, the report "Innovation," I saw throughout the office people pulling out their dog-eared, yellow-colored, tabbed copies of that document. And the head of one association said, "We printed out a thousand copies of that document and circulated it to all of our members." And representatives of the European Patent Administration said, "We've all read that document." And with our own country, you have a process of reconsideration of the appropriate operation of the patent system taking place.

Not a case, but there is the possibility here that that report, which was the result of this kind of dedicated investment and effort that goes back to Bob Pitofsky's chairmanship, that really goes back to earlier efforts at the FTC reaching back to the 1960s, with its first cases involving the pharmaceutical sector and licensing and patent office issues, could quite possibly have the biggest effect of anything this agency has done in its modern era.

In the era of health care, I mentioned the economic precedents generated in the 1970s on eyewear, the remarkable work that Pauline Ippolito and her colleagues have done on nutrition and advertising, the extraordinary influence of the FTC'S study in 2004 on health care, which has had the same ripple across

jurisdictions -- not by force, not by compulsion, but because of the compelling intellectual vision presented in the document.

And yes indeed, even though it doesn't seem to have a really active audience these days, as Michael and I have discovered just this week, I'm convinced that when the story of this agency is told decades from now, people will look back and say, the work that was done on petroleum was simply its finest hour; an incredible documentation of how the market responded to Katrina; an OECD meeting of five months ago where I saw -- no honor in one's own country -- but external observers saying, this is the best thing we've seen on how markets operate.

Perfect in all its respects it couldn't possibly be. But this is a remarkable documentation of how markets respond in a very concrete way in the face of economic crisis. And many academics at that meeting say, "I teach this document now. I have my students in basic economic courses study it."

The role of the agency as a convener of the extraordinary program that the Commission hosted, again through Michael's leadership and that of his colleagues, on behavioral economics. The IO roundtable that David Scheffman put together. Tragic day, September 11, 2001. Perhaps it was simply because people could not leave our

building. There was nowhere to go. But we proceeded with a program that generated a remarkable transcript, where some of the best industrial organization economists in the country reflected on their work and what needed to be learned.

What should the report card look like? Well, of course you have to articulate your goals and strategy carefully. You do have to take account of the types of cases and measure outcomes. What are you doing on the advocacy front? But to me, terribly important and part of today's proceedings, investments in capability, in knowledge.

Investments in the infrastructure that have a long capital life and outlive the tenure of individual management. The revelation of results, and a continuing questioning process that takes place every year. How well are we doing is a matter of process and outcome.

So what's the essence of good leadership? What does it mean to have a good agency? As Bob and Tim would have put it, you maximize positive externalities for the agency and new leaders in the future. You develop a norm of critical self-assessment. You promote public debate about issues of keen concern. You have regular public consultations in which you engage those outside your borders, outside your own building, in what an agency

ought to do.

I never liked the phrase "best practices." Best practices, to me, always suggested that's the final destination. You're there. It's the best. It changes all the time. It's really the pursuit of better practices. And yes, if the U.S. agencies want to have influence overseas, the way they will do it is by the better intellectual vision. It's by putting out the 1982 merger guidelines, which no jurisdiction was compelled to follow.

But you can go everywhere you want in the world today, whether it's Ulan Bator, Singapore, Cape Town, and you will hear people talk about the SSNIP test, something you would never have heard 25 years ago. Simply the consequence.

How did it work? It was a compelling intellectual vision. Nobody was forced to do it. It's looking at the patent report and saying, that's the best thing I've ever seen. And in a world of multiple decision-makers, shared authority, parallel authority, the way to develop over time is to have the investment in intellectual leadership.

And to finish with a caution: Many of our counterparts overseas understand this now. They're increasing their investments in this area. And to stay

abreast of them, one has to double and expand one's own area, one's own efforts. That's a competition worth having.

Thank you.

(Applause.)

MR. SALINGER: Well, thank you very much. In my opening comments today, I said that Bill was one of the biggest advocates for doing this sort of activity that we're doing today. So I think from that speech we all see the passion that we've brought to it. And I thank you again for the tremendous support you've given to this kind of activity.

COMMISSIONER KOVACIC: A pleasure. Thank you.

MR. SALINGER: And with that, we're going to move on to the first afternoon panel. And Chris Adams is going to take over as the moderator.

MR. HOSKEN: I think we're ready to start again. We have two, I think, pretty interesting papers here to talk about today, so I'm not going to spend any time talking so we could have more time listening to the papers.

First David Bell is going to talk about some internet grocery research he's been doing, and then Catherine Tucker will discuss his work. Then John Seaton will talk about pricing in the U.K. and some pretty

interesting changes that have taken place recently, and Raphael Thomadsen will talk about that.

So please go ahead.

MR. BELL: All right. Let me just start by way of introduction. My name is David Bell. I'm an academic at the Wharton School. Can you guys all hear me okay? Oh, by the mike? So I've got to go back there. All right.

So I'm here to talk about some work that I've been doing recently in the area of the internet. And this is actually a little bit of a departure for me because my early academic career involved analyzing scanner panel data from Nielsen Information Resources, looking at a lot of consumer switching behavior and what goes on in the supermarket industry, issues of everyday low pricing, high/low pricing, and so forth.

So what I'm doing today is a departure. But it's kind of a new direction for me that I hope to continue in. And one of my colleagues at the Wharton School always prefaces any discussion of the internet with a very funny quote, so I'm going to take that from him.

The proportion of groceries that are bought on the internet -- we're spending a lot of time this morning discovering a lot of interesting facts about the

institutional reality of grocery retailing. The proportion of groceries bought on the internet in 2007 is roughly what it was in 1707, with rounding. So it's pretty close to zero.

But I'm hoping -- and again, I looked at some FTC data before I came along here, and it turns out -- the internet is a big phenomenon. Internet retailing is one of the biggest growth areas. The paper I'm going to focus on is going to be specifically about a grocery retailer. And there's really interesting stuff that came up from David earlier this morning. Also, Chris mentioned some things about the industry in terms of the frequency of shopping, and also how do we define these market areas.

Well, I'm going to deal with an internet retailer, a grocery retailer, for whom the spatial area is really the entire contiguous United States, and how does that essentially change what goes on in terms of competition.

I don't have any slides on this today, but another business that I'm analyzing now is a business called 1800Diapers.com. So a bunch of MBA students at the Wharton School are quite enterprising not only in studying but also, it seems, in producing babies during their tenure in the executive program out in San

Francisco.

So one of my students, he and his wife had a baby, and he decided, and as a process of going to the grocery store in the Bay area, that the diaper market was really underserved. And so he started 1800Diapers.com, and he now has about 130,000 customers all throughout the United States. And he has a very interesting system of referral.

So if I buy diapers and I give my code to David and David buys diapers, then I get a $1 credit to my account. And I've actually mapped out his entire referral network, and it turns out that 10,000 customers that engage in such referral bring in 40,000 additional customers. And the top 100 super-customers are connected to about 10,000 other people spatially distributed around the United States.

So what I'm going to talk about today is density, but it's more about the issue of customer density as opposed to retail density because there is just one retailer, but the customers are potentially feeding into that retailer from all around the U.S.

So let me start by just sort of outlining the talk. And again, this is really back to the future. Most of my academic talks I like to use -- get away from PowerPoint because in MBA school, I think as was

discussed earlier, MBA school makes you use PowerPoint. So normally I'll use acetates. That's why they don't fit exactly on the screen here.

But I'm going to start out just with a little bit of motivation. I'll spend maybe five or ten minutes on the model. And then I want to show you guys the data. I think that's the most interesting part of the talk.

What I'm really trying to isolate here: Is it the case that when customers try grocery retailing alternatives on the internet, is it the case that there's some kind of mechanism whereby they're emulating other people in spatially proximate areas? So either by direct word of mouth; I enter into my apartment building in New York City and I see NetGrocer.com on a box that sends me to a website.

So what I'm going to try and isolate: Is there any effect of social contagion or word of mouth or customer density in explaining the space/time evolution of the store?

So with that in mind, let me just show you first of all a little bit of background here. So this is a quote that I got from our friends north of the border. I notice, actually, the whole conference seems to be taken over by people from the Antipodes. We've got Australians running around. I'm from New Zealand, so I

thought I'd better get someone else in from the Commonwealth. Here's the Canadian quote.

The Canadian quote is all about in traditional retailing, the essence of retailing is really location. Now, we saw some interesting data this morning that said price is important. Assortment is important. But of course, location and where you put that store determines in some sense the trading areas. Right?

And we had David and others show with the concentric circles how one might define trading areas in terms of driving district and so forth. But what I'm going to argue, at least on the internet, is the notion of location really goes out the window. And what may be important is not the location of your store but the location of your customers to existing or potential other customers.

So two things that are different about internet grocery retailing. One is the geographical boundary is really defined by your shipping area. It's no longer defined by your trading area or people driving, but it's defined by where it is that you can ship.

And it turns out in the 1800Diapers.com data, they have two warehouses, one in California -- one in Reno, sorry, and one in Connecticut. And depending on where you live in the country, there's a differential in

terms of how many expected days it takes for the product to ship. So we're actually in the process now of trying to decide where they should place the third warehouse in order to generate the most sales of diapers.

So Chicago is a very, very large area, but it's really under-represented in the data because the shipping time from either Reno or Connecticut is too long. So we're thinking about locating another warehouse in New Jersey -- sorry, in Illinois.

It turned out at the time of these data for NetGrocer that everything was shipped from New Jersey via Federal Express for a fee of about $6.99 throughout the United States. And what's interesting also is not only is your customer base unconstrained, but now you potentially take on hundreds if not thousands of additional competitors. So it's not just Safeway competing against the local Lucky. If I'm NetGrocer, I'm competing against different kinds of alternatives in different spatially dispersed markets.

Just very briefly, I want to show you some data here right at the end, if I can pull it up. I just want to show you this map here. So what I've done here is I've basically just plotted the cumulative distribution of sales for NetGrocer.com from the period when they opened -- they actually opened ten years ago, in May

1997, and they've been in continuous operation ever since. These data go through January 2001.

And so what we have here is the darker areas indicate higher cumulative total sales for NetGrocer. The lighter areas indicate less sales. And so two things are pretty obvious here. One is clearly there's a big spatial variation in terms of where it is that they get their sales.

And then secondly, you can see that it's probably related, at least in some sense, to observable characteristics of the region. And regions with higher population and regions where people are more savvy about the internet and regions where you have dense urban centers, they tend to have more sales of NetGrocer products.

If you then look at the average basket size -- so we learned this morning, I think, from Debbie, either Debbie or Chris, that the average basket size is about $29 in the United States, which is completely consistent with the data I've looked at from Information Resources. It turns out, on the internet, the average basket size is about double that.

And there's all sorts of interesting perhaps psychological and behavioral models about how people are amortizing the cost of shipping and how that is different

in some sense to travel distance. So what you see here, when you look at the average basket size, this is much larger in the interior regions, presumably where people have less access to retail services.

So what I'm going to try and do is explain the spatial variation in the sales of NetGrocer from the day they opened the doors in May 1997 through 2001.

So now I'll just show a little bit of the research questions. I think I'm going to, in the interest of time, skip over some of the literature review. But basically, what I'm going to do here, for those of you interested in the model, is I'm going to use a hazard model. I'm going to try and predict the timing of adoption at the level of the zip code.

So it turns out there are about 29,000 residential zip codes in the United States. And what I want to do is I want to see what's the probability that a zip code that has not yet seen orders at time period T minus 1, what's the probability at time period T they took over and have an order.

So let's say Jim lives in California, 90210. At time period June 2000, 90210 has seen no orders at NetGrocer. However, the contiguous neighbors around Jim's area have seen orders. And so what I want to do is I want to model the probability that an order takes

place, given that one hasn't taken place yet, as a function of characteristics of the region and also what's going on in the surrounding areas.

I'm going to define three units of analysis here. This turns out to be a data issue. And again, it's sort of interesting that I'm here at the FTC. Some of the best data that I got, at least on the internet, was obtained from the FTC.

So one thing I'll obviously have to control for, but if you're looking at internet grocery sales, you need to know in each region how many people actually have access to the internet because what you don't want to model is just the diffusion of high speed access itself.

So the observational units we have here are essentially individuals like Jim ordering groceries on the internet. Jim lives in 90210, and he engages in certain behaviors at time period T, May '97, June '97 through January 2001.

Now, what I'm going to do here is define something called the risk set. This is just more of a technical issue. What I'd like to be able to do is model the probability that all of us as individuals use NetGrocer.

Now, computationally, that's not really going to be possible because I don't have individual-level

information. I don't know how old Jim is, how much income he makes, et cetera, et cetera. But what I do know -- and this ties in to what David showed with GIS -- what I do know is at the zip code level, a lot of stuff about how many people in that zip code have access to automobiles, what the average income is, what the ethnic composition is. I know how many supermarkets are there, drugstores. At the level of zip code, the code area information is actually very, very good.

So what I'm going to do is I'm going to model the probability that an order takes place at the level of the zip code, assuming that when a zip code has an order, it was because somebody in that order felt inclined to do so. So that's the basic structure of the model.

There's some academic research that kind of ties into this. One of the big areas that people are talking a lot about now is social contagion, social networks, the way people emulate other people, and how this is kind of playing out on the internet and other environments.

There's also traditional economic work. So Ann Case, for example, showed that investing in public schools, schooling infrastructure, was highly correlated with what was going on in contiguous neighbors. So if my continuous neighboring districts put another dollar into

the local schools, I put in another 70 cents.

Austin Goolsbee had a very interesting paper, where he looked at the diffusion of the PC. And he found that the probability that people adopted PCs was highly correlated with the proportion of people in their social area also using PCs. So the idea that spatial processes operate is a pretty old idea in economics, and that's really where the theory for this is going to come from.

One of my favorite studies here -- let me just mention this briefly -- for those of you who want something to talk about at a cocktail party, you can talk about the Oyen and DeFleur 1953 article. This was a study that was done in Washington state in the '50s, where what they did was they flew planes over Washington state and they dropped leaflets, paper leaflets onto people's home.

And so Jim picks up this leaflet, and there's some description: We're going to be invaded by some other country. Some terrible calamity is going to take place. And they wanted to see how quickly that information diffused.

And what they found was the further somebody was from the drop area of the leaflet, the higher the probability that they learned about the message through social contact. So if I live right under the drop, I

pick up the message and I read it. But Michael, if you live a long way away, you're less likely to find the information but you still get the information because it propagates through these social networks. So that's kind of the background and motivation.

In terms of the research questions, what I'm going to try and look at here: Is there any structure to the way sales for this internet grocery retailer take place? And in particular, can I find something called a neighborhood effect, which means the probability that I do something is increasing, and the probability that it's happening around me and other people are also doing it. That's what I'm going to try and identify here.

And the way it's going to be done in terms of the model is I'm just going to link the theory of utility. So the reason I do something is because I get utility out of doing it. When my utility crosses a certain threshold, I'm going to link that to the hazard rate. So this is something that's been known for many years in the economics literature. I think it was Madala that showed this in the '80s.

Basically, random utility theory, the theory that underlies the logit model, is the same theory of a discrete time hazard model. So the only difference is in the discrete time hazard model, your utility is for, do I

try NetGrocer now or not? If I do, then you observe trial. That means my utility threshold has been crossed. So it's essentially the same model.

So I'm going to look at somebody like Jim over time, and I'm going to track him through a series of binary decisions: No, he doesn't use NetGrocer. No, he didn't use it again. Oops, then he used it. And then I'm going to truncate the data from that point onwards.

So there's a lot of other things that could be done with this data in terms of: Does he repeat? Does he buy a certain order quantity? I'm going to ignore all of that and just focus on the initial trial. That's the key idea here.

So maybe in terms of the -- since we've had lunch, after lunch we probably don't like to see formulas of the logit model and things like that. But let me just get to one issue here that's maybe somewhat interesting or important.

What I'm assuming is Jim, individual Jim living in 90210 in January 2000, has a certain utility that depends -- so based on his own preferences for shopping, he gets a certain utility out of using the NetGrocer option or not. And I can explain this as a function of his characteristics -- his income, his occupation, his opportunity, cost of time, how many regular supermarkets

he can have access to. And then there's a random component that I can't explain.

Now, for the reasons I said earlier, I'd like to model this at the individual level. But I can't because I don't have data on the 300 million people that live in the United States. But I have very, very good data on the 29,701 residential zip codes.

So this is what I'm going to assume. I'll just say it in words. I'm going to assume that the probability that the zip code -- notice now the probability expression has Z. There's no I there any more. So the probability that 90210 sees an order is the probability that the maximum utility person -- let's imagine we all live in 90210, this group here, and we all have our own utilities. But if one of us, the maximum utility person, crossed the threshold, then an order is observed. That's the assumption that I'm making.

And if you do that, you end up with this nice little expression, which I'm going to focus on right here. This is the probability that 90210 has an order at a certain time period, as given by this nice closed form expression that's called the complimentary log/log.

And notice what goes on in here is there's an adjustment that's based on the number of people that live in Jim's zip code. So just imagine Jim lives in 90210.

He has 10,000 neighbors. Okay? Let's imagine Chris lives in 19123, in Philadelphia. He only has a thousand neighbors. Obviously, the probability that NetGrocer sees an order is going to be greater in areas where there are more people. All right?

And so what this expression does explicitly is it controls for the fact that different regions have different numbers of people. And it puts them all on the same scale. This is why you have the log of the number of people that live there.

So this is basically the setup. What I want to do is show you the results. But before I do, let me show you by way of a graph, and then I'm going to give the last five minutes to Catherine to discuss.

So let me show the graph here. I'm going to start with this one here. And what I've done at the level of the zip code -- I'm just going to wander away from the mike for a moment -- what I've done here is I've plotted zip codes that have had orders six months after NetGrocer has been going.

Now, for the sake of this map, I haven't controlled for the size of the zip codes. Those of you who do this kind of analysis, as you move from east to west, zip codes get larger and so forth. But if you just look at the time snap, what you can see -- here's one

year after operation. Here's a year and a half. Here's two years. Two and a half. Three years.

So it's almost like a disease, spreading throughout the United States. And what's interesting to me as an academic, at least, or from a person who's interested in retailing and consumer behavior, is I don't know of any other store, any other physical supermarket in the United States, that draws customers from 18,000 zip codes.

But here's a store that does draw customers from 18,000 zip codes. And yes, at the moment they only have about a half a million people involved. But let's imagine the future is going towards internet retailing. What is it that we can learn about this phenomenon?

So that's how it spreads through the United States in aggregate. There are 29,000 zip codes. They have about a 60 percent trial rate four and a half years in.

Now, in terms of the specific phenomenon that I'm trying to model, the question is: Is this growth just random through space and time? So when the new customers appear on the map, do they just appear somewhere randomly, or is there structure to the way they appear on the map?

And so the next chart that I'm going to show

you indicates, without a model -- I'm going to show you the model-based results -- that there is some structure. So what I've done here is I've taken a snapshot of the East Coast and the West Coast of the United States. The dark areas are areas that had orders in 1997 in May. The website had only been open for three weeks. Notice most of their customers are coming either from New Jersey/tri-state area, and then some early adopters out there in California.

Now, if you do the time snap here, what you can see or potentially see is the probability of trial in a zip code that hasn't yet tried is a function of what's going on in the contiguous neighborhood. So new trials are more likely to appear in areas contiguous with areas that already have trial. It's basically the pattern that you can see here in the closer snapshot of the zip codes. And if you continue on, you can see how it's kind of filling out.

It actually turned out -- I checked this before I came down -- I forget the number, but the zip code that is the most receptive to the NetGrocer offering is a zip code in Washington, D.C. I don't know why that is the case. But for whatever reason, Washington, D.C. seems to like NetGrocer.com. So the thing just sort of keeps going, keeps filling out and filling out, et cetera.

So how did I analyze this more formally? If I go back to the notes over here, what I did then with this particular model is took the model to the data. This is just some technical stuff that's in the paper about why this is an appropriate statistical model, why it has economic rationality behind it, and so forth.

So I took this model to the data. These were the data that I had. I had about almost 400,000 individual-level transactions. I broke the data into 45 discrete time periods, so from May 1997 through January 2001.

I then went to the census and I collected a bunch of information at the zip code level about intrinsic characteristics. So how many people in the zip code are working? How many single mothers are there? How many people own a car? What's the population density? How big are the housing units? Et cetera, et cetera.

Then there's a company now, ESRI, who I've just obtained some more data from, located here in Virginia. What they do is they collect, for every zip code in the United States, how many supermarkets there are, how many convenience stores, how many drugstores. So what I was able to do was proxy for how convenient supermarkets and drugstores were for any individual, like Jim living in

90210. What's his expected travel distance? What's the density of retail per population, and so forth.

And then a few -- go on and look at a little bit of descriptives. You find that on average, the NetGrocer orders are about twice the size, approximately, of what you see in a traditional supermarket. This maybe has something to do with the way people amortize the shipping cost. So in some other research I've done, people are very, very sensitive to the shipping cost.

You think about a traditional supermarket, you incur two kinds of costs as a customer to go there: You incur the fixed cost of the time and the travel, and then you incur the variable cost of what you buy. So one thing we know about supercenters and Wal-Marts and so forth, what people are willing to do: They're willing to travel further to go to those stores because they can amortize the fixed cost of inconvenience over a larger basket of savings. It's the whole idea of big basket shopping and fixed and variables costs.

Here, on the internet, what's interesting is you as the firm can control the fixed cost by the shipping fee that you give people. And so what I've found, for example, looking at Amazon data, when Amazon lowered their threshold for free shipping from $50 to $25, what people do is they ordered more frequently from

the website and the average order size was quite a lot smaller.

So by changing the shipping threshold and imposing different levels of fixed cost on the customer, you can really influence the basket size.

MR. SALINGER: David, you have about five minutes.

MR. BELL: Five minutes? Yes. I will be done in five minutes.

So the space/time and the local space/time, those were the pictures that I just showed you. So now let me get to the main empirical results here. Since I only have five minutes, I'll just summarize the main kind of results.

So what happens is after controlling for all kinds of things at the local level, so access to the internet, age of the population, education, income levels, ethnicity, et cetera, et cetera -- what you find is after controlling for all of that, also including fixed effects and random effects in the model, that the coefficient that picks out the probability that I do something in my neighborhood as a function of how many people around me have already done it is positive and significant.

And what I've shown here is at the zip code

level, what it implies is if all of my contiguous neighbors -- so each zip code in the United States has 5.6, on average, contiguous zip code neighbors -- if they're of average size and a reasonably large fraction of them start to use NetGrocer, then the probability that that zip code has an order goes up from about 2 percent to about 14 percent.

So this seems to be a pretty economically important effect. But what's interesting here is it only operates on trial. So after I've tried NetGrocer, I have my own utility cost/benefit comparison. I don't care what what Eric thought about it. But before I try it, I take a cue from his behavior, potentially. That's what that's saying here.

The other empirical findings were very much in line with what you would expect. So you see evidence of the digital divide, so conditioned along demographics. You find people who live in higher areas with minorities are slower to adopt this service. You find the kinds of effects relating to traditional competition that you would expect.

If I live a long way from a warehouse club, I'm much more likely to buy my nonperishable groceries from NetGrocer.com. If I live a long way from a supermarket, however, I'm less likely to use this service. And the

reason is this service only offers perishables.

So if I eat nonperishables, I've got to go to the supermarket anyway. Given that I've got to go anyway, I might as well buy my nonperishables as well. Therefore, there's a negative effect of supermarkets but a positive effect of warehouse clubs here.

And the last minute, in terms of where I would take this research: One thing I'm looking on now is how people sort of agglomerate on the internet based on socio-demographic characteristics. So people who live in very different parts of the country start doing the same thing at the same time because they're somehow demographically similar even though they're spatially distant.

And then the final thing I'm working on now is this idea of preference minorities, which says if I'm somebody with a lot of kids who lives in a zip code where everybody is old, I'm much more likely to buy my diapers on the internet because I'm locally isolated.

So what's, I think, really interesting about the internet is the interaction between something that's roughly uniform across space, across the whole country. We can all go to Amazon. But our local options vary substantially. And it's the interaction between the local option and the ubiquitous option that's basically

driving the sales process here.

So I think I took an extra 15 seconds, but we're good to go. So that's what I've been doing. And I think even though it's a small number at the moment in terms of the proportion of the whole grocery industry, there's a lot of interesting things that are happening here. And I think this is going to be the future.

You certain see in the U.K., Tesco and Sainsbury's and so forth, their internet businesses are very, very successful and something I think we want to pay more attention to.

Thanks, guys.

(Applause.)

MS. TUCKER: Great, well, I'm Catherine Tucker. I'm also a marketing professor at MIT Sloan. And I'm very glad to get to discuss this paper.

So what's the basic question? The basic question is, well, if someone tries an online grocer, does that make their neighbors more likely to try it? And we got really quite a substantial result, which David discussed, which is that if we add 20,000 people to the neighboring zip code, then this increases the probability of trial in that zip code from 2.7 percent to 14 percent. So it's quite a positive neighborhood effect.

Now, what I liked about this is that it's a

really interesting question, which is: Does neighborhood effects still have a role with our brave new internet world? And I also think it's got quite a bit of applicability to antitrust considerations because what it suggests is that if there are these big neighborhood effects, that you have to have some kind of critical mass of customers before you can obtain trial, then that's a form of value to entry which is going to affect entry dynamics in the evolution of the grocery industry.

The authors should be commended for their unique data. We've been hearing today that while there's data, widespread data, on entry decisions by grocery stores, it's far more difficult to get transaction-level data. And that's what these authors have. And though David skipped through it in the presentation, there's a lot of technical sophistication in terms of what they're doing, and thinking carefully about how to use a hazard model at a zip code level.

Now, the last thing I should notice -- and this is a paper which is actually in print; it's got the ultimate accolades from our profession -- and so as a discussant, I'm not going to quibble with the paper as it stands. It's got all the kudos it can. Instead, I'm going to suggest three new papers that I think that David should be thinking about writing in the future.

So the first new paper is really thinking hard about what this neighborhood effect means because if you think -- David mentioned various things it could be. And I think it would be actually very important to try and understand exactly what this neighborhood effect is.

Is it, for example, that I see someone purchasing from NetGrocer and I'm suddenly -- I didn't realize NetGrocer existed before, and now I'm informed, and as a result I go out to buy from them? Or is it some kind of quality inference? I see someone buy food from that grocer, and then they don't die, and then that's quite good, and so I end up deciding there aren't health risks involved with it and purchase it, too?

And the reason this might be important from an antitrust perspective is that if it's just about awareness, then there are some ways we can compensate for that through extensive advertising. However, if it's really a quality inference story, then that's going to be in some ways a far more difficult barrier to overcome the dynamics of the industry evolution.

I was thinking about, well, how might you actually do this? And I was thinking, well, there are various models which have been proposed by your colleague weren't much help tease apart these effects.

Another alternative is to use some actual

transaction-level data, and perhaps distinguish between people who are abandoning their shopping carts and seeing whether or not that in neighborhoods where there aren't that many people, there's a difference -- there aren't that many other people using the service, that people tend to be abandoning their shopping carts more, i.e., that they're more unsure about the quality of the service, and compare this to just whether or not they're ever getting to the shopping cart stage. And you might be able to tease out whether people are nervous about quality.

The next thing is really thinking a little bit more about the question of cause or fact. Now, there's obviously a large economics thinking about how you can never tease out a social effect, given that everyone in a zip code tends to be very similar. And what the authors do here is that basically we have -- they say it was a helicopter drop of 20,000 people in the period before, and we're going to see how people react to that in the next period.

I was thinking, well, I mean, that's the data they have, and so that's why they do that. But maybe it might be nice to get some other data, perhaps exploiting some of David's contacts from Wharton, and persuading and using the use of exclusive invitations in testing phases

for websites, and perhaps having some randomization in terms of that to actually tease out these causal effects. Go back to the 1950s cocktail world where we can actually do our own helicopter drops, although perhaps not of terrifying leaflets.

The last paper I want to suggest is really thinking a little bit harder about whether or not -- it's always going to be a positive effect from having your neighbors using this grocery store. And I was thinking in particular of, say, a Whole Foods and a Kroger comparison.

So if we have a more mass market grocery store, then perhaps there's always going to be a positive effect. But maybe with a store such as Whole Foods, where there's an exclusivity, a certain chi-chi-ness -- you want to be unique; you want to feel special by shopping there -- it's not so clear, perhaps there's always going to be a positive neighborhood effect. Instead, people might want instead to feel a little bit unique, a little bit fashionable. So it might be interesting to tease that out.

So to summarize, I enjoyed the paper very much, and it is in print. And so to try and say something substantial, I made three suggestions of other papers that perhaps they might consider writing next: first of

all, teasing apart this social influence mechanism, what it is exactly that's going on behind it; secondly, maybe doing some actual field experiments to think about the causality issue again; and lastly, teasing apart competing social effects, perhaps comparing different kinds of retailers and seeing if we always have a positive social influence story.

So thank you.

(Applause.)

MR. HOSKEN: Jon?

MR. SEATON: Right. Hello, I'm Jon Seaton from Loughborough University in the U.K. Everyone has a bit of difficulty with that name; sorry for it. I was once introduced as Jon Seaton from Lowbrow University.

(Laughter.)

It has improved since then. And we're sort of in the top ten, according to newspaper tables.

My co-authors are Paul Dobson, a lot of people here will know him. He's a retail professor at Loughborough Business School. Ratula is our PhD student, so she won't get much credit but she did all the work. So that's just how it goes.

Well, the material I'll cover today is familiar to the people who attended the morning session. What I'm going to do is go through the U.K. experience of the top

four supermarkets in terms of their pricing behavior.

These figures tell you roughly what it's like. It's quite a big and lucrative industry. The top supermarkets are Tesco, who you will be experiencing soon in the U.S., although things might be different over here; Sainsbury's, Asda, which is Wal-Mart, and Safeway.

But Safeway was merged with Morrison not so long ago, and a lot of people have discussed that. We've also heard a lot of people talking about is merger a good thing? Does merger lower prices or raise prices? The typical view is that with concentration going up, you should get increasing prices in the industry. On a lighter note, I was interviewed yesterday by your officials at the airport and was asked, "What are you doing here?" And I said, "I'm going to talk to people about grocery retailing." "What does an English professor -- what are you going to tell the Americans about this?" Well, I couldn't answer that question. But I hope I can today.

The next thing I have to talk about is definitions, so I'm going to briefly talk about definitions. We're talking about stores in excess of 1400 square meters, 15,000 square feet, in some of these slides.

What we noticed over the three-year period that

we're looking at is that -- well, typically the industry was polarized between high/low and EDLP. And it seems to have shifted with the merger to more kind of value-led behavior by all the four supermarkets, which is really quite interesting.

You've seen the regulatory background already. But again, the Competition Commission looked at the bids by most of the supermarket chains to go after Safeway, and it was Morrison who won, given that there were some excellent divestments, which they did.

I should also say the Competition Commission are reviewing the area as we talk about it -- in fact, he's here in the audience reviewing it -- and as you can see, the results will be out in 2008. So hopefully, what we say here might be taken on board. I don't know, but I think it should be interesting.

This is just a summary of the size of the market for the different size stores. And you can see that there does seem to be quite a lot of concentration in the industry in terms of the 1,400 square meters and 2,300 square meters. Of course, it's mainly Tesco that seems to be winning on that front.

If we take a slight time dimension, there are better, more up-to-date about the reasonableness that we can function at the moment. I think Tesco is now up to

about 34 percent. Sainsbury's is down to 16, Asda 16, and Safeway is about 11 and Morrison's about 11 on this one. So they have come down a bit, some of them.

Now the paper. What are we going to do about the paper? About the paper, this is the form it's going to take and I'm going to have to go through it fairly quickly. It is mostly pretty pictures. In an earlier version that we gave in Berlin, we had quite a lot of econometrics in there. And unfortunately, the econometrics take up about four slides for each regression. So we're not going to do that today, you'll be thankful for.

Initially I'm going to talk about modeling issues, the data selection, and then we'll go through the pretty pictures. And hopefully you'll see that there's some interesting results there in terms of the conversions of prices.

Well, this is the way we look at the data. And I'll talk more about the data later. But essentially, it is just the data on prices of supermarket goods for all the four supermarkets.

And in a sense, there's nothing much you can do with that sort of data because essentially, you're tracking along with Heinz baked beans and the price is pretty much the same. And then suddenly, oh, the price

goes up. And then you wait a few more weeks, and maybe it drops down again.

So there's not really much happening in the data. So we wanted to look at the price change event, but then we wanted to look at the issues behind whether the price change was dropping the price, raising the price, and by how much.

Now, you can do this with sophisticated econometric analysis, which we're not going to do today. We're just going to look at the basics. This is the part about the data. The nice thing about this data is that it's actually produced for us by one of the supermarkets. They actually finance an independent company to put supermarket price data on the web for all the four supermarkets -- Tesco, Sainsbury's, Safeway, Morrisons, and also Wal-Mart.

There are initially about 4,000 products put on the web when it first started up in 2003. This has now progressed to 10,000 prices, 10,000 goods. So it's quite a lot of data, and we've got this for three years. One disappointing thing about the data is that it doesn't include the multi-buys, the bog-offs, or these sorts of offers. It is just the day-to-day prices.

This means overall when we filter the data for missing observations, which there are quite a lot of

because sometimes they don't find the products in the supermarkets, we ended up with 129 weeks of collected data and we were able to get a nice clean panel of 539 products. So it is fairly selective from the original sample. We're hoping to use sample selection techniques later to examine it in much more detail at another time.

We split the data up into three periods relating to pre-merger, the merger time, and then post-merger to analyze what happens. I'll move on to this one now.

Essentially, using the diagram we have before, we can see that, as I said, there isn't much happening in the data. Price changes don't happen very often. So if you've got a Heinz tin of baked beans, they've got a 4 percent chance of moving in any one week.

There's more likelihood that the price will be lowered than raised. The other thing is that if the price is lowered, it's more likely to be 1p; if it's raised, it's more likely to be about 10p.

This is summary statistics of the data by aisle. This is how the data actually comes across, by aisle, so it can take quite a lot of time to download it. But as you can see, there is quite a lot of variation between the products, and also quite a lot of variation in the number of items we have per aisle, grocery being

the largest, and I think it's bakery where we only have eleven items.

We're able to split it up, obviously, by the types of goods, whether it's own brand or -- sorry, own label or whatever. And you can see there all of the different prices. The mode price for the whole sample comes out as about 98 pence, but you can see from the aisles that there doesn't seem to be a single kind of price band. There isn't a $1 product that you mostly get around. It seems to jump around a bit, depending on the aisle that you're in. And we'll see that when we look at some of the diagrams.

Another thing to note is there's a lot of variation in the prices. The higher price is £26, well over $50. And that's alcohol. Alcohol is -- that's the extreme observation in our sample, as we'll see.

This is a time plot showing the average prices measured in different ways -- means, quartiles, medians, modes, over the whole time period. Now, there was inflation over that time period of about 2 to 3 percent, depending on how you measure it. But as you can see, there's very little chain in the mean. That's the purple line there. Nothing really seems to happen that much. A few dips around about Christmas when there's a lot of discounting for the alcohol in particular.

The mode skips around a lot. That's the starred purple line that bobs around a lot. And again, it shows that there isn't really a standard modal price that you get that's commonly produced.

Now, this is the real important diagram. This is average prices, where I've looked at each supermarket separately and scaled it by the base price of Tesco in the first week of our data set. So Tesco price at 100 in the first week, as you can see, as to Wal-Mart a bit low. But they tend to have pretty much the same prices most of the time there. Their hovering around, yes, as to Wal-Mart, is pretty much below. But interestingly enough, they are very close together.

The important one, though, is Morrison, the black line, which, as you can see, that big drop is when the merger happened. So we did get a drop in average prices. Also, you can see that Sainsbury's, the orange line, has also dropped because of the merger. And it seems to have stayed dropped; it bumped up a little bit, but then later came down. So it does seem like we have, to some extent, falling prices with merger.

We're now looking at price changes. And there's quite a lot of variation there. The important line I'm supposed to look at is the red one. That's a moving average of price change. And there does seem a

dip post-merger. Very few price changes there; that's price rises and falls. But it kind of goes back up to a plateau later on, about the same level it was at.

Here we desegregate by price rise and price fall. And there you can see that -- well, there are more falls than rises, as we suggested earlier. But they seem to both increase and decrease during the same time. They're both down during the merger time, and then crawled up after the merger. So it isn't as though one is always coming down and one is always going up. They're actually following each other.

In terms of the retailers who does it the most, well, strangely enough, it's Tesco that's moving the prices around a lot. Asda, as you might expect, is quite low in moving prices because it's everyday low price so it doesn't have to shift them about a great deal. But it's Tesco that's moving them around a lot.

If we desegregate by retailer for net falls -- this is falls minus rises -- then you can see that yes, there is some dissimilarity between the supermarkets, but there are some similarities as well. And they do tend to track each other a bit. But it's hard to absorb such a complex diagram.

Magnitude of price change: Well, the penny price change is the most common. Probably the most

expensive to do, but it's the most common. Tesco does this the most, followed by Sainsbury's and Safeway-Morrison's, then Asda. Oh, Asda is, sorry, the same as Sainsbury's. Ten p, as we've said before, is the most common price rise. But you do get, of course, 50p price rises, pound price rises, that sort of thing. The price change intensity also varies a bit between the retailers as well.

All right. This is the cumulative frequencies of the price falls. Now, the Safeway-Morrison is a bit odd. They're very strange. They didn't really have the 1p price falls that the others had. But that has changed post-merger. But you can see Tesco, the red line, a lot of 1p price falls relative to the other supermarkets.

Price rises: Very few 1p price rises. It jumps at 10. But again, another thing to note here is that Safeway-Morrison's holds off their big price rises to much greater numbers than 50 pence. It's about a dollar.

This is net price falls, falls minus rises, for 10p or more changes and 9p or less changes. And you can see there's quite a lot of difference, depending on the range of price movement. The big price movements, the net price falls of 10p, they tend to be rises because they're negative. Remember, this is net falls. So when

you get a negative result, it's rises.

So you tend to get a lot of those post-merger. There is a move up in October/November '05 which follows the net price falls for the smaller price changes. So there are some similarities, but for the most part, when you get a big price change, it's a rise.

Now, this is probably a quite controversial bit. This is where we talk about price alignments between the supermarkets. And I'll get quickly onto the diagrams here.

This is looking at all the supermarkets, looking for -- for example, with the black line at the bottom that's traced along, that's where they share the same price with the black line. There's no price difference. They have the same price on up to 30 percent of the products towards the end, and hardly any of the products at the beginning.

And it is this period where we get the merger happening where we get a move towards closer price tracking by these supermarkets. So again, a very, very interesting result.

We can desegregate this by the supermarket relationships and see what happens between them. So the result between Tesco and Sainsbury's, again a big discontinuity at the merger. A lot more price tracking

by both of them. They share about 40 percent of the prices. And that seems to be increasing towards the end.

Tesco/Morrison took a bit of time, but eventually we get a lot more prices that they have in common, 50 percent now towards the end.

Sainsbury's/Morrison, much more of a change at the beginning, up to 25 percent at the start post-merger, up to 50 percent afterwards.

But that's the big one, isn't it? Tesco and Asda are really chasing each other and always have done. About 80 percent of the prices are exactly the same.

Now, we can look at product types and, very briefly, I think here you can see the probability of a price change is more likely in off-license. The British are very attracted to low price alcohol -- I'm sure it isn't so over here -- pet foods as well, if they remember to feed the pet once they've drunk so much; and beverages.

Percentage of price changes as rises were less likely in health and beauty, but pretty much the same elsewhere. Bakery is a bit of an oddity because we've only got eleven of those. That's why that's a bit extreme.

These are the types of variables we can look at. But I'll jump quickly from that because we're not

going to look at it. We're going to look at leader/ follower behavior. And I think this is possibly the most controversial out of all of the results that we find.

Here we're looking for who's chasing who, and it's very interesting. There is asymmetric behavior. They're not all following each other. Some people are leaders and others are followers.

This chart is very complex to explain. But essentially, the figure in the third column is looking at price falls. And what I do is it's like an event study. We pick a price change and track three weeks back and see if the other supermarkets have changed their price given, say, Tesco has changed their price. And we track forward three weeks and see if they've changed the price afterwards.

And we do a percentage calculation, and we find out whether it was a leader or a follower. Obviously, it's a follower if everyone has changed the price or most have changed their price beforehand. It's a leader if everyone changes the price afterwards.

And we get a rough statistic there. Obviously, minus 100 means it's a follower, a perfect follower. We don't really have any minus 100s there. We don't have any plus 100s, which means a perfect leader. But we do seem to have some indication that this is happening.

Now, we do need to have some sort of statistical test of this, and we use a chi squared test to test the uniformity of price rises before the even and price rises, price changes, after the event. So the numbers in red are statistically significant.

So, for example, Sainsbury's is at the top, the second line, second row. They are a price follower on falls, and they're a follower on rises. We'll summarize some of that data later.

But we also desegregated the data pre-merger, which is the 1s, merger the 2s, and the third period is where that all merged. And you can see that the behavior seems to have changed a bit.

In general, for a price rise, we find that Tesco is a leader in price rising behavior. Sainsbury's is a follower; that's why I've got an arrow pointing to Sainsbury's from the fee rising. And Asda is a price follower with rises, a very strong follower with price rises. Morrison's doesn't seem to do anything.

In terms of price falls, Asda seems to be the one who provokes that, and people tend to follow behind. Sainsbury's is a follower in terms of price falls.

We can desegregate that further and see who follows who. In terms of price rises, Tesco is leading everyone. So it's leading Sainsbury's, but Sainsbury's

is leading Asda/Wal-Mart, Tesco leads Wal-Mart, and Morrison's is led by Tesco and also leads Wal-Mart. So Tesco seemed to have a prominent position, according to this data, in leading the other supermarkets.

In terms of price falls, we can see Tesco has an effect in lowering prices on Sainsbury's, but is itself affected by Asda. Now, the thickness of the arrows, I should say, shows the strength of the relationship. So it's a much smaller, thinner relationship, Asda affecting Tesco, but Tesco certainly has a dominating effect on Sainsbury's. And Sainsbury's has a small effect in making Morrison's lower prices.

I think this is my last slide, probably well timed. Here I've plotted the follower on the lower half of each of these graphs, and the upper part then is the leader. The lighter colored purple is for raising prices.

What we can see there, as we track through time, Tesco appears to be a very strong leader in raising prices. It sort of was a follower in prices until fairly recently, and now it seems to be leading the price reductions as well.

Sainsbury's, on the right-hand side, doesn't really seem to be doing anything apart from following. Morrison's, pretty much a follower in raising prices, but

now it looks like it may actually be having some impact on lowering them. But that doesn't look so out of kilter, that later date.

Most interestingly, Asda was always a very strong follower in raising prices, and that still seems to be true. It was also a very strong lowerer in prices. It was a leader in lowering prices. And as you can see, that strength of relationship seems to be dying through time.

So it does seem to us from this data, a tentative analysis that we don't want quoted anywhere else for the moment, that Tesco seems to be really having a powerful impact post-merger despite the fact that the consumer has enjoyed dramatically reduced prices.

Okay. That's the end of it.

(Applause.)

MR. THOMADSEN: My slides don't seem to have gotten on the computer, so I'll just talk from my notes. I'm Raphael Thomadsen from UCLA.

This is a very interesting paper. It uses a very interesting and creative data set, which is a data set of price comparisons between Britain's top four grocers. And basically, it's hundreds and hundreds, or even more, thousands of items. So it's a very nice data set.

The main question that they're asking is a question that, if you're here at an FTC conference, you're probably interested in, which is: What happens to prices after a merger? That's pretty much the key question.

And they note prices could go up or down. You might think prices will go up after a merger because higher market power means higher prices. But on the other hand, there's significant economies of scale in the grocery industry. Maybe prices will go down.

And in fact, what they find is they find that the prices do go down. They decrease, and they decrease and stay down for at least three years. So it's not some sort of temporary decrease. It lasts at least three years.

Now, the decrease happens mostly with Safeway-Morrison's. So the company that merged is the one that has the decrease in prices. It would be nice to actually separate out Safeway and Morrison's to see a little bit more of that interplay. But that's suggestive that maybe the economies of scale are dominating.

I would be remiss not to note I have a paper in the Rand 2005 that also notes that there's another reason prices could go up after a merger that might apply here. If you have two weaker firms which, by combining, become

a stronger firm, there can also be a demand effect, where being a stronger competitor can pull down prices, too. So there is a question whether it's a demand or a supply effect.

But what is clear from the data is that prices go down, and not only down in terms of average prices, but they can look at item by item. And when I look at these graphs, and I spent a lot of time poring through these graphs, what you see is that around the time of the merger, there are a lot of decreases in prices, large decreases in prices for Morrison's. And then afterwards, there's a pattern that pretty much lasts for three years.

And if you look at the differences in prices item by item, it's really true that prices are dropping, and they're dropping on the same items. It's not that they're segmenting the market, where some people discount beans, other people discount paper towels, and you get about the same average prices. They're really matching category by category. So that's a nice sort of a result that they have.

They also talk about and find that in terms of pricing patterns, you tend to have many, many small price drops and relatively few but larger increases in prices. I have a few comments on that.

The first thing is, I'm not sure if this is

related to the merger or not. It's something to keep in mind. If you believe it's related to the merger, tie in maybe more how it is. If it's not, maybe this should be a separate paper. But it is an interesting question: Why is it that prices are decreasing slowly but increase quickly?

And you could imagine it's either a cycle of promotions. There's many papers on gasoline that talk about these similar sorts of effects in terms of cycles. So there's a lot of places to look at where that is. The big question in my mind is: Is it merger or is it just actually a second paper on promotions?

Overall, this is still very preliminary work. My biggest comments would be there's a lot of information there, a lot of small details. I think the big thing to tie together is what do we make of all of these details? Maybe pull together a tighter story that's easier to take away.

But overall, I like the paper. It's a good paper. Thank you.

(Applause.)

MR. HOSKEN: So we'll take a ten-minute or so break.

(A brief recess was taken.)

MR. ADAMS: I'm Chris Adams. I just want to

thank a couple of people. Marissa Crawford, who's working out there. Chrystal Meadows, for helping organize this. Dan Hosken, for giving me help and advice.

So what we're going to do in this session is talk about Wal-Mart, which Dave told us was pretty important. And then we're also going to talk about some interesting -- what I think are really interesting models about how to analyze the grocery industry in a dynamic context.

You might not see it, but I think these models are going to have a pretty important role in the future, or that's my guess. I think there's a long way to go, but I think it's an interesting exercise.

So why don't we start off with Professor Holmes from Minnesota.

MR. HOLMES: All right. So talk about Wal-Mart. So it's already come up today. Wal-Mart has revolutionized the process of getting goods from the factory into people's homes. McKinsey, just a little while back, in a study was giving them a big chunk of the credit for -- you can see Wal-Mart in the productivity numbers for the whole country, or at least for the retail sector.

Hausman and Leibtag show some recent evidence

how this is getting passed along to consumers in the form of supercenter food prices being 15 to 25 percent lower than supermarkets.

Today I want to look at one aspect of Wal-Mart's formula, that is, economies of density. And what are they? Well, just cost savings from having density, stores close each other saving the store money.

What are the sources? I think this has come up already, this discussion today about logistics. But it's obviously a lot easier to get the goods into the store if they're right next to each other than if they're really far apart. But they're also easier to manage if they're closer together.

Now, what I want to -- the first thing I want to hammer home to you is that Wal-Mart has always chosen density in the United States, except for like Store No. 1. In 1962, it wasn't a very dense operation. They had one store; that's the only one. But after that, they always chose density.

So let me just show you the diffusion of Wal-Marts beginning in 1962. Let's see. So the blue things are a distribution center. The red means a fresh new store; then it turns into pink. They're always picking density. They're always picking a store location near where they've already got a base.

They don't just jump -- well, okay. They had to jump a little bit over these states. Well, they had to put a couple stores in. But there are hardly any people who live in these states. But pretty much, to the maximum extent possible, they always chose high density.

So what I want to show you is -- I'm going to replay this whole thing. Starting in 1988, when we start putting the first supercenter, which back then they were basically just converting the old Wal-Marts and adding the grocery store to it. More recently, they just are building these things from scratch.

But we're going to replay the tape. Let's see. And again, the distribution centers you see here are dedicated supercenter distribution centers. But the same thing. Again, you never put a distribution center far from where you have a base if you already have distribution -- you never put a supercenter far from where you don't have -- from your other stores. So that's what they did. They always chose density.

Now, what am I going to make of it? Well, how do we quantify the benefits from density? Ideally, it would be great to do some sort of thing where I got data on the trucks' delivering to each store, drivers' time, all that sort of thing. Wal-Mart is not going to give that to me unless we bring in some sort of court order.

You can think a little bit -- I am a special sworn employee for the census for some other project, and I was sitting there with the census of retail trade. I had all this information. And I was thinking, I would be pretty tough-pressed even with all that information to do anything to look at these benefits from density because I wouldn't be picking up the movement of the trucks if I'm looking at the information for a particular store. And in any case, I would never be allowed to use it because it would be disclosing information about Wal-Mart.

So I'm going to try a different approach that's going to look at what Wal-Mart did and try to infer something about what density might have been worth to them.

So the idea is that there's a tradeoff between benefits of density on the cost side and costs from cannibalization of sales. So we can think about it. Suppose you have two stores and they're 100 miles apart. And you say, let's put them closer together. They'll be easier to replenish.

Yes, put them together and together and together. How about putting them right next door to each other? They're going to be really easy to replenish. Right? But of course they're going to steal sales from each other.

So that's the idea. Now, what am I going to do with this? Well, the first thing I'm going to do is I'm going to estimate a demand model for Wal-Mart stores. All right? I'm going to try to predict for any configuration of where Wal-Marts are what their sales would be and what the operating profits would be.

(Pause)

I'm going to estimate a model of demand. So I could feed this model wherever Wal-Mart wants to put its stores, and I can predict what the sales are going to be and operating profit. And I'm going to provide some evidence of significant diminishing return for cannibalization.

Wal-Mart is just jamming these stores next to each other, and they're stealing sales from each other. I'm going to put forth a dynamic model of Wal-Mart's site selection problem and use some perturbation techniques to put a lower bound on what the density economies are. All right?

Basically, there's going to be a tradeoff. Wal-Mart can put another store where it's already got a bunch and steal some sales from existing stores, or go out in California where it's not going to be there for 20 more years and have no cannibalization but be very far from its base of density. All right?

And it's sometimes choosing to have the cannibalized sales when it could go out there, and I'm going to be backing out -- I'm going to be calling that density economies. So basically what I'm doing is I'm backing out a residual and I'm putting a label on it and calling it density economies.

Now, other interpretations. All right? Well, I've been talking about logistics, but you could also point to some advertising, so forth. Fine. Let's fold those things in. They're all economies.

Now, what's another thing, you might say? Well, what about some sort of preemption motive, all right, that I need to put an extra store in there and keep Target or Kmart or something out. That's fine. All right? I am well aware of that issue, and I'm thinking hard about it. And future work, I want to get going on that.

It's not obvious that it would cut this way. Right? I mean, sure, Wal-Mart wants preemption benefits and put where they already have. Or maybe they want to extend their reach and prevent Kmart and Target from getting to California first. All right?

So I would have been very concerned if, when I looked at this map, I also plotted a map of Wal-Mart and Kmart and Target. So Kmart started out of Michigan,

Target out of Minnesota. But they all have their little fiefdoms. And when Wal-Mart got to the Minnesota border, they stopped, and when they got to the Michigan border, they stopped, because -- that's not what happened. All right?

So the way I'm going to tackle this problem is -- it might remind you of those economists at John Rust's paper -- I think he's in our audience today -- about Harold Zurcher replacing his bus engines. It's a famous paper in econometrics. And that's basically the problem I'm looking at here. It's a decision theoretic. Sam Walton is sitting there. Where to put his stores? And that's what we're going to do today.

So here's the model. I'm going to have discrete points on the plane. And what these little points are, these little blue dots, they will be census blockgroups. So I'm going to have a fine level of geographic detail. And that's a very fine geographic unit. There's about a thousand people in a census blockgroup.

And there are going to be Wal-Marts over the landscape. In this little example here, we've got three Wal-Marts. And they're going to be competing with themselves and with other retailers.

Besides this geography, the model is going to

have four key ingredients. The first of all will be a model of sales. So I need for any configuration about where I put these -- if you don't mind, I'm going to point over here -- for any configuration about where the Wal-Marts are, I need to be able to predict what sales will be.

And the sales in this Wal-Mart, of course, are going to depend on whether this Wal-Mart is in existence or not. Right? Because if this Wal-Mart wasn't there, then maybe a big chunk of the customers would be coming over here. But once there's a Wal-Mart there, then that's not going to happen.

So I'm going to be front and center. The other people working in this area, the economists, are looking at a county and they're just assuming the county is the market, and there's the one Wal-Mart and one Kmart and they compete with each other but they don't compete with the neighboring counties. But what will be front and center on my analysis is the Wal-Marts are going to be competing with other Wal-Marts. So that's the first thing I need, is my model of sales.

Two, I'm going to have density economies. And costs will be lower at a Wal-Mart if there are more Wal-Mart stores nearby. So I'm just going to have some measure of density at a particular location. So right

here, what's the density of Wal-Marts? Well, there's one Wal-Mart there, but this one's not too far. This one is maybe a little bit further. So I'm going to cook up some measure of density that's going to take into account how many Wal-Marts are nearby and how far they are.

I'm going to have some model of variable inputs that we'll just skip now. I'm also going to have another cost that's going to vary with population density. So more dense areas are going to be good because you're going to get more customers. And maybe you're going to be near more Wal-Mart stores, which is good.

But there's also a bad part. Sam Walton wasn't too keen about the labor markets in big cities. Right? So Sam Walton is big on enough -- whatever, the Sam Walton cheer, give me the W, give me an A, et cetera. That went over in Arkansas and the Ozarks. You try to bring that into New York City, it just doesn't work.

So I'm also having to model that population density is kind of bad. So you want to be near stores, other Wal-Mart stores, because on the cost side that's good. But the actual people on the cost side is bad, but of course selling to them on the demand side is good.

The problem that Wal-Mart is going to be solving is pretty complicated. There's really four pieces. Number one: How many new Wal-Marts and how many

new supercenters to open? Two: Where to put the Wal-Marts? Where to put the supercenters? I've got no exit here. That would really complicate my life if I had to deal with exit. But fortunately for me, for my studying Wal-Mart, they don't exit. I mean, there's never been an exit of a supercenter, and there's maybe one a year regular store shutdown.

Now, there are these empty carcass Wal-Marts. What are they? They are just -- you build down the street a bigger one. All right? What I mean by no exit is they never leave a market. But they very frequently upgrade and just walk down the street.

I just went through that: two, where to put them. Three: How many distribution centers to open? Four: Where to put them? My approach is I'm just going to solve problem two, taking as given what they're doing for the others.

So there's interesting things going on with the capital markets for why Sam Walton in 1962 opened up one store and it took two more years to open another one. All right? We all understand the capital market stuff going on there. I'm not going to try to explain why Wal-Mart didn't just go out all at once, and why didn't they just open 3,000 stores in 1962. All right? I'm going to just take as given that they have a certain number of

stores to open, and my question is: Where do they put them?

All right. Let's just skip all this technical stuff.

The data that I'm going to bring to this question is I've bought store-level data from Trade Dimensions, which is an estimate of Wal-Mart's sales at each store, all right, for a couple recent years. I have the opening dates. I have this from Wal-Mart themselves.

November 2005 they're posting an Excel spreadsheet on the web with the opening date of every store. Grabbed it off there. A couple weeks later, they deleted the last column. They still had the Excel sheet on there, but the opening date of the store is gone. Anyway, I got it.

(Laughter.)

The detailed demographic data. So you're going to need to know that -- you saw the little blue dots. Well, how many people are in each of those blue dots, and what's their income and their demographics and so forth? I'm using the rich census data.

Look, this exercise I'm doing, I'm going to be solving basically Wal-Mart's problem from 1962, the entire future expansion of the stores. I'm going to need census data from many decades. So I'm going back to the

'80s, '90s, et cetera.

I'm going to bring in wages. I get estimates of that. So location decision. Some locations are going to have higher costs because of wages. I'm going to have some estimates of property values, and so forth.

And here's a little tidbit I get from the annual reports. All right? So fundamentally, this analysis is I have to convince you that I have good estimates of cannibalization. So I have this piece of information from Wal-Mart that as they continue to add new stores in the United States, "We do so with an understanding that additional stores may take sales away from existing units. We estimate that competitive store sales in fiscal years 2004, 2003, 2002 were negatively impacted by the opening of new stores by approximately 1 percent." All right. That's an estimate of cannibalization. And my demand model better be consistent with that if we're going to take at face value what they're saying in these forms.

Particulars of demand: Consumers are spread over these discrete locations, and they're going to allocate spending to the general merchandise and groceries and so forth. I'm going to have a model of how we're going to allocate these across retail alternatives, including an outside good, which would be shopping at

Target, Kmart, et cetera, and all the Wal-Marts that are within, say, 25 miles.

And I've got my consumers. They are like crows in terms of the way they get to the store. So I know earlier the speaker had the time distance. I'm actually going back to 1962, and even that might have changed over time as they change roads. And it gets pretty complicated. So the way the crows have been flying has been pretty consistent since '62 in the United States. So that's what I'm doing.

And I'm going to fit the parameters to store-level sales. So it's a little different. The home scan data that was discussed earlier is pretty good stuff. So that's fitting the consumer-level stuff. I'm investigating, trying to get that. But to do what I'm doing, I need to know exactly what blockgroup these consumers are in, and I believe Hausman and these others guys who've been using this data have it more in a metro area. I don't even know if it would be able to be used for my purpose; in any case, I don't have it.

It fits pretty well, this demand model. What I'm going to show here is just the cannibalization rates. So say I have a demand model. Right? What do I mean by that? I can put any configuration of Wal-Mart stores that I want, and I can predict what the sales would be at

each Wal-Mart.

So in particular, I can say, well, let's just take the stores that were there in year 2004 and see what their sales would be, and then add stores that were going to be added in 2005, and ask how the existing stores were negatively affected, and then take that as a percent.

I will call that the cannibalization percent. Now, when I just estimate my model, I get pretty close to what Wal-Mart actually reported. I get numbers like 1.5 or something. Wal-Mart is saying 1. So you might think -- I mean, in the scheme of things, if you round those numbers to 1, it's just about what Wal-Mart was saying. But it's coming out a little bit higher. So what I do is I re-estimate the model, constrain it so that it exactly matches the report that the cannibalization percent is 1 percent.

Now, that doesn't sound like a big number, but it is a big number. If on average the cannibalization was 1 percent, remember, in a given year, Wal-Mart is not opening everywhere. They're opening in some parts, not others. And so if their average is 1 percent across all of their stores, that means that some of the stores that are actually opening, it actually could be quite a big number. And that's what I'm finding.

So let me just give you a table that

encapsulates the big idea, and we're going to skip all the technical stuff. What I'm going to do here is I'm just going to do this hypothetical. I'm going to take every Wal-Mart store and I'm going to look at when it opened, and I'm going to calculate what its profits would have been if it were a stand-alone store. I'm just talking about the profits of the store in terms of the sales and variable costs of labor, et cetera, not taking into account the distribution.

And then what I'm going to do is I'm going to take -- there are 3,000 Wal-Marts. I'm going to break the stores up into how long Wal-Mart has been in that state when they come in. Are they one of the early stores in the state or are they coming in when Wal-Mart has already been there 20 years?

And the point I'm going to make with this table is that when Wal-Mart is entering states that they've been in there for 20 years, there is significant cannibalization going on. So let's just see how we're going to do this.

I'm finding that with my demand model, that if you look at stores coming in, the first row here -- if that's okay, I'm going to put come over here -- the first row are stores that are the first stores in the state. All right? And let me see. I'm making a correction here

for -- obviously, Wal-Mart's scope of products has expanded since 1962. So I'm holding these things hypothetically in 2005 -- not just 2005 dollars, but also 2005 product line, the fact that Wal-Mart sells a lot more stuff now than they did in 1962, to try to make things comparable.

So taking the demand model as it stands for 2006 and taking into account Wal-Mart's product mix as of 2006, the average -- and throwing out groceries now, so we're just going into the general merchandise stuff -- the average store when it's a brand-new store in the state, for those stores that were brand-new stores in the state, the incremental sales were about $40 million, $38 million. And the incremental operating profit I'm calculating at about $3.55 million.

Now, if you look at stores that are entering when Wal-Mart has already been there more than 20 years in the state, I'm calculating incremental sales of only $30 million as opposed to 38, and incremental operating profit is 2.44, so almost a million dollars less in operating profit.

Now, it might be that Wal-Mart just -- when it's entering these later states, it's just picking really crummy locations. But that's not what's going on because if you just were to look at the stand-alone

operating profit, you ask a hypothetical question, is what if this were the only Wal-Mart, and so it's not -- nobody is stealing any of its sales. You would see that the stand-alone and operating profit would be almost the same, even for this bottom row.

Again, what is this? These are the first stores in the state. Stores here include all the stores that were opened in Arkansas after 1983. So this is when Wal-Mart has already been in Arkansas for more than 20 years.

And what can we say about these kinds of stores? Well, they make lower operating profit, but they're closer to a distribution center. So I can ask, when that store comes in, how close are you to a distribution center? The first stores in the state are 350 miles away from a distribution center; the last stores in the state are on the order of 90 miles.

So that's the game. The cost is you're giving up operating problem, and here's the problem or here's what's going on. Wal-Mart is actually sometimes choosing this when they could do this. They're adding more stores in Arkansas in the mid-'80s when they haven't even got to California yet.

MR. ADAMS: Tom, you have about five minutes.

MR. HOLMES: Good. So from my method, I'm

inferring they were getting something for it. They must have been saving -- the cost of running these operations must have been so much lower to make it worth it for them to do this.

So I do a similar thing -- this is a grocery conference, right, so I'm supposed to be talking about groceries. You can do the same kind of analysis just for thinking of opening up the supercenter as a stand-alone type of grocery operation, and you get very similar numbers. When Wal-Mart has been there more than 16 years, the operating profit is substantially lower, on the order of a million per store, but they are much closer to the distribution centers, much closer to other stores.

Now, I do some technical things with this, basically trying to estimate a lower bound on how important these savings must be. Let me just do some experiments. I know no one is really talking about busting up Wal-Mart right now. That's probably a good thing. But we can just get some idea of the magnitudes by doing some experiments.

And so what I'm going to do is I'm going to do a couple kinds of experiments here. I'm going to be splitting Wal-Mart into separate companies so that they no longer can get the density benefits. And I'm also

just going to be pumping up density in certain areas, and just to see how this affects their cost. And then I'm going to take a ratio of these things to 1.3 percent of sales, which is some estimate of Wal-Mart's distribution cost.

So just to preview what's going to happen, my bigger number is going to come from the groceries than from the general merchandise. And the thing is, I'm allowing for some diminishing returns of density. So Wal-Mart is so dense that you could cut it in half and it's still dense.

So I don't get that big of numbers. So this is the percent of distribution costs, how it would be adversely affected. Cutting Wal-Mart in half so that every store is half as dense would only -- this is a lower bound, but it's only 6.4 percent. That's because it is so dense.

But of course, certain areas like North Dakota, it's not very dense to begin with, and then these things would be big numbers. Like 25 percent is a big number. But most of the country, the numbers aren't big.

Let me just do the same experiment now with groceries. And again, of course cutting density in North Dakota is going to give you big numbers because it's not very dense to begin with. But California -- and this was

data that was current as of January 2006; of course, it's already out of date because Wal-Mart has already thrown some more stores in there, more supercenters there -- but as of January 2006, cutting density in California would have pretty -- you'd get big numbers because it's not that dense to begin with.

Given my estimates of how important density must be, I get in terms of the distribution costs that costs would be 20 percent higher if you cut it in half. Or, alternatively, if California would get as dense as Georgia, I'm estimating that distribution costs would fall in the order of 50 percent in California -- or, excuse me, 36 percent, this number right here.

So big numbers. But because they're -- people may find it hard to believe, but Wal-Mart as of January 2006 still had room to grow. I mean, California was under Wal-Mart, at least in terms of grocery stores.

That's all I have.

MR. ADAMS: Great. Thanks, Tom.

(Applause.)

MR. ADAMS: We have Brett Wendling, one of FTC's Bureau of Economics new hires. Are you still new?

MR. WENDLING: Hi. I'm Brett Wendling, and I'm going to discuss the paper that you just heard about, "The Diffusion of Wal-Mart and Economies of Density," by

John Holmes.

MR. HOLMES: Tom.

(Laughter.)

MR. WENDLING: So the question that he's looking at is he's trying to explain, well, how does Wal-Mart choose the location of their stores when they're facing these competing effects of cannibalization and density economies, where the cannibalization is, if I locate my stores close to another, they're likely to cannibalize the sales. And therefore, I want to spread my stores out. And the density economies are these economies of scale of putting all the stores close to one another. So that effect makes you want to put all the stores close together.

He has store-level sales data for every Wal-Mart in the country since '62 all the way up through 2005, where he knows the revenues at each store, the cost of each store, and the location of all the stores.

And what he does is he uses the profits at each store level to estimate the size of these density economies. And that's what he's trying to get at. And his basic finding is that these density economies are important in determining store location. And he mentions that, as an example, a specific store could save $220,000 if they move closer to a regional distribution center of

100 miles.

So in the discussion of this paper, I think that he could tie this literature to the urban literature because one of the strengths of this paper is that these agglomeration economies are important in many different contexts. And in the urban literature in particular, they're very interested in how location choice of different individuals affects city formation.

And in that context, they have these agglomeration economies, which are similar to his density economies, that compete with property rents that are analogous to his cannibalization, cannibalization effects that compete with each other and explain city formation.

And they used similar mathematical techniques. And he could relate his discussion to why the estimation of these density economies are so important, not just in his literature but for a long time in older urban literature.

And in the estimation part of the paper, the model, I believe, is a very impressive modeling technique, and completely appropriate for the type of analysis that he's performing. So I'm not going to spend any time on it. Rather, I'm going to spend some time on the data and some limitations of the data that I think he could address.

So one aspect is that his location choice that he's modeling is not fully observed. So Wal-Mart has four different types of stores, and he's only observing two of the store types. He doesn't observe Sam's Clubs or Neighborhood Stores. And these types of stores may be affecting his cannibalization or density economies. They may not affect them. I don't think that they're -- there's a possibility. But I believe that you could have some discussion about how the omission of those types of stores affect your results.

What I think is a slightly more serious problem is that the choice of Wal-Mart has a lot of product heterogeneity, and that the products offered at each of the stores are going to be related to the location choice that he's interested in. And moreover, it's going to affect the size of the profits, which again he's using to estimate the size of these density economies and the size of these cannibalization effects.

So, for example, Wal-Mart's choice of whether to offer a snow blower may depend on whether the store is in Minnesota or Florida. And the margins on snow blowers may affect the profit results.

One way you could test whether this product heterogeneity matters is maybe use a data set where there's a lot less product heterogeneity at the store. I

thought potentially fast food firms, such as Raphael Thomadsen used -- I think it was Burger King or MacDonald's data in one of his papers.

Starbucks is another product that has -- these stores have very similar location decisions as Wal-Mart in that the cannibalization effect is fighting with these distribution economies of locating close to one another. But they're not going to suffer from the fact that there's this endogenous product choice. Every Starbucks I've walked into has the same product offering.

So in conclusion, I thought that the estimation of the size and the effect of agglomeration economies, or what he calls density economies, are important and actually undersold because they're important in many contexts, even beyond the ones that he described.

I think that the model that he provides is really the workhorse of this paper, and it is very impressively articulated throughout the paper. And it provides a reasonable exposition for how the firm-specific agglomeration economies are formed.

However, I'm concerned that the product heterogeneity at Wal-Marts may be affecting his profits measure. And he could possibly test whether this is important in his results by using a more homogenous firm.

All right. I hope that helps. Thank you.

MR. ADAMS: Great, Brett.

(Applause.)

MR. ADAMS: Next we have Arie Beresteanu from Duke University.

MR. BERESTEANU: Thank you. This is a joint work with Paul Ellickson from Duke. I think the challenge of presenting a pretty technical paper in 20 minutes for a diverse audience, what I will doing in the presentation, I will talk less about technical things as much as I can, of course, and try to give you the big picture of what we are trying to achieve, and talk a lot about the technique that we are using, which is relatively new, and the kind of use that you can make of that technique and the kind of use that we are making for that technique for our specific purposes.

So I probably should not talk about what's in this slide much because I don't need to convince you that retail is important, and retail has changed quite dramatically in recent years, and then definitely in the last few decades.

And what's more interesting for us, apart from the fact that it's a very dynamic industry, is that it presents several challenges for empirical work. And to list a few of those challenges, here are the three that came to our mind, is that they sell a vast array of

differentiated products; they operate multiple stores in multiple locations in multiple markets; and they evolve incrementally with population growth. So in the model that we'll employ, we'll have to take into account those considerations and many others as well.

We focus on supermarkets. And again, supermarkets are a great example for retail for several reasons, and present challenges as well. They sell a reasonably well-defined basket of goods. They are mostly regional in scope. They are arguably not so spatially differentiated; and they compete in what we call natural oligopolies.

The supermarket industry has always been dominated by big box chains. And there is always a constant tension between building a big store and having to locate it far relatively to the center of population, and doing the opposite, building relatively small stores and being able to locate them close to the center of the city or the MSA.

So another thing that we need to take into account is that those existing incumbents in each market face the threat of entry, even if that entry doesn't actually happen, the first entry of bigger box chains and supercenters, those potential entrants in many cases.

So what we do, we propose a dynamic structural

model of retail competition in which the following four points are -- we take into account the following four points.

So first of all, firms are chains with multiple stores. So the entity, the decision-making entity, is a chain of stores in a certain geographic market.

Market structure and chain size evolve over time, so it's a dynamic model.

Firms are one of two types. So one of the things that we'd like to look at or the focus of our research here is the impact of supercenters on the grocery or the supermarket industry. So there can be two types of players in this model, in this game, and the first one being the supermarket, the regular supermarket, and the second one being the supercenters.

And firms compete in store density. So they build more stores, trying to capture a bigger share of the market, making higher profits, of course.

So we have an eleven-year panel of various characteristics of those supermarkets and supercenters, their market shares, and also we obtained prices for a small subset of the supermarkets for a certain period of time.

And what we do next is we estimate a dynamic model of supermarket competition, and we evaluate

policies aimed at eliminating supercenters. So there are several places suggesting to pass laws that will not allow building the big box stores, and by that, restricting entry of stores like Wal-Mart and supercenters.

And another type of regulation that have been discussed is increasing the cost of supercenters or chains that operate supercenters. And that can be done through making them pay health benefits for their workers, and by that incurring higher cost and changing the face of competition in that market.

Another thing that we are not thinking about at the moment but potentially can be done or can be thought about using the technique that I will talk about is some merger analysis or post-merger analysis and things of that sort. I'll try to point that out in some slides to come.

So again, without getting into too much technical details, what we do here, we propose a dynamic oligopoly model that include differentiated products, the products being a supermarket chain in a certain MSA; its simultaneous entry and exit, or again that includes simultaneous entry and exit. There is a continuous but incremental investment or de-investment in your capacity, meaning you can open stores. You can close stores. You

can, of course, do nothing.

And firm-specific cost and profit shocks are also incorporated into the model. And another extremely important aspect of retail competition is to take account of population growth. And we know that population growth is perhaps the most important thing that drives the increase of number of -- total number of stores in a certain market.

So we estimate a model, and I will talk about it in some more details in a minute, using a two-step technique. And for some reasons that I will not get into, that technique is very well suited for the type of model and the complexity of the model that we are facing here.

So what we do here is that we look at a discrete time model with infinite horizon. So the time passes, one period, and then a second one, and a third one, and so on and so forth to the infinite.

There are M geographic markets. Those will be MSAs. In each market, there are several firms. There don't have to be the same number of firms, of course, in each market. And there are two type of players that I was mentioning before. And there will be in each time period two potential entrants, one of each type.

So the game will be played the following. In a

certain time period, the existing incumbents, existing chains, can do one of the following things. They can increase the number of stores -- one store, two stores, three stores, and so on. They can do nothing. They can reduce the number of stores -- close one store, two stores, and so on. Or they can exit altogether from the market. So that's the set of choices faced by incumbents.

Also, there are potential entrants. Potential entrants can decide to enter, and if they decide to enter, they can open one store, two stores, three stores. They decide on their initial number of stores. And they can decide not to enter, of course.

So each player, each chain, is characterized by the following three variables. First of all is the number of stores that they operate, or the number of stores per capita, if you want to take into account population; the type, meaning are they a supermarket or a supercenter, and that is fixed -- they don't switch from one type to another; and the third variable describes their perceived quality.

Now, without getting into too much details again how we calculate or estimate the perceived quality, we start by doing a demand estimation. And from that demand estimation step, we extract that variable. Now,

what the firms are interested is to maximize, of course, their present value of the stream of profits.

Now, this equation one is perhaps the one that describes or summarizes the core of the technique. But let me take a step aside from the slide and describe what we are doing.

So what we are doing is we are utilizing a device which proceeds in three steps, actually. The first step will be to lay down the foundation of this device, which will include demand estimation. Second would be profit estimation, profit function estimation. And the third element of that first step will be the reaction function.

What is a reaction function? So one of the players is looking at the market in which he or she -- they operate, and to see how many players they are playing against. What are the number of the stores? What are the type? What are the perceived quality, and so on and so forth.

And based on what they observe and the knowledge that there are potential entrants and so on and so forth, they make a decision what to do next. Should I close stores? Should I open stores? Should I exit altogether? Should I do nothing? So they basically form a reaction function. Tell me what I'm facing. I'll tell

you what is the choice that I am going to make. That's that first step of this operation.

Having that first step, we are able to basically simulate forward what will the market be next step. So we start from some starting point. We have that many players, that quality, that quantities. So we know what each player is going to do. We make them do that, the optimal thing that they chose to do. And then we can move to the second step, knowing again, each one, how many stores they will have if they exit, if they enter, and so on and so forth. And we can continue that forward.

Now, let's say -- so the missing parts of what I described is what are the costs that they are paying in order to do what they are deciding to do? What is the cost of opening a store? What is the amount of money that you potentially get by selling off one of the stores that you are closing? What is the cost of entering the market? What is the payback for shutting down the operation and exiting?

Those costs we need to somehow get from the second step of that operation. And that step relies on this equation No. 1. That equation says the following: They are playing the optimal thing. So if all my competitors are going to play their current strategies --

they will react the way I estimated they are going to react -- and I'm the only one who's going to deviate from that optimal strategy, I have to extract less profit in the future because I'm doing something which is sub-optimal, at least weakly.

So what I'm going to do in the -- what we are going to do in the second step is to make use of that equation and see what are the cost parameters that rationalize this equation that must be right. And after doing that, we are able to estimate the cost parameters.

Now, after those two steps, basically I have the complete description of the game played and the payoffs, payoffs and costs or net payoffs for the players. Now I can go to the third step, which will be simulate some counterfactuals: What would happen if I don't allow supercenters at all, there will be only supermarkets playing? What will happen if I take those costs that I estimated and I increase them for these type of players and make the game more even between the players?

And another thing can be also, what will happen if instead of having four players in the market, I will have just three? I will take one or two players and merge them together, and there will be three players, one of them bigger or the sum of the two previous ones. So

that's another thing that we can do.

So that operation that I just described is from a recent paper just published by Bajari, Benkard, and Levin, often referred to as BBL, the initials of those authors. And the first step and the second step, I just described with words.

So here are some statistics about the data. I won't talk a lot about them. We have data on supercenters and supermarkets in several markets. And those vary a lot. I mean, the supercenters are bigger. And again, I'm not going to repeat.

The other thing that you should look at is the basket, the price of the basket. And you can see that, roughly speaking, the supercenters are cheaper by about 15 percent. So they are farther but cheaper.

So question two describes the demand estimation that we conduct. One of the variables here, sin J, but that's the perceived qualities that we estimate from that equation. And those estimates, again without getting into too much details, make a lot of sense. You see that price affects negatively demand, and other things that should affect quality will do so.

The second part of that first step is to estimate their policy function, their exit decision, their entry decision, their investment decision, both of

the new entrants and those of the incumbents. Again, I'm not going to talk about those numbers, but they're all the right sign and make a lot of sense.

That's not -- I mean, that's something that we should just be happy about because then when you simulate -- okay, that's the same thing for supercenters. When we estimate or when we simulate that model, that second step, that we run a lot of counterfactuals, what would -- that firm will deviate from its optimal strategy. What will that firm deviate from its optimal strategy, and by that, getting enough information to pin down what are the cost parameters.

That operation will make sense because we are estimating -- we are using those estimates from the first step in order to do so, and they make sense themselves.

So I talked about, I think -- so let me just show, rough out how those forward simulations look like in practice. So you see in the first panel of this graph a lot of snakes. Each snake, each color, represent a firm. On the left axis, the Y axis, is their density, number of stores, number of stores per capita. So there are small firms, big firms.

What we see at point zero, it's the starting point of that simulation. And then we know each player, what that player is going to play, and we can proceed to

the period number one, two, three, four. And here there are 100 periods being played.

The one firm that we call it firm 1, that there's a blue line with circles on it, is the firm that we are going to follow. So that firm at this graph is doing what it's supposed to do. It doesn't deviate from the optimal strategy. So that's what it would look like in this specific simulation. That firm survived all hundred periods and was doing pretty well. That's just one scenario.

Here is one that we go and make that firm do something which is not optimal. For this specific situation, it happened that that firm was selling off a lot of stores, and then eventually, around period 15, was exiting altogether.

Now, if we had the right cost parameters, then if we take present value of their profits in this graph versus what they would get in that graph, that should have given them higher profits.

So the cost parameter that would rationalize that, that's what we are after in this step. And we get that by doing a lot of those trials. What if we start from this starting point, and we take that firm, make that firm change by that much, it's optimal, and then get less, and so on and so forth. And we get enough

restrictions on the parameters such that we get the cost parameters hopefully right.

So we get from those estimates the marginal cause of positive investment. And we have also squared the marginal cost of negative investment, and the square of that, both for supermarkets and supercenters. Obviously, they are different. And they're also what you get if you exit. So if you sell off your operation, you get some money out of that, and those estimates reflect that.

So what we can do -- so let me just go back to those pictures and try to describe what we can do with that technique. As I said, one thing you can do is after you have the cost parameters and you know everything they should know about the games or their optimal strategies, the payoff functions of that game, you can then estimate what will be the impact of all sort of policies.

So let's take out one type of player, not allow supercenters to open stores in a certain market. How will that market look like in a hundred years or a hundred periods of time, or less, whatever your horizon. And that can be looked at from several angles. What would be the type of competition? How many stores will be in that market? What will be (heart) prices then and customer surplus, total welfare, and so on and so forth.

That's one scenario that you can think about simulating.

Another scenario that you can think about simulating is taking those parameters, and if the cost of operating is precise, at least, lower for supercenters, let's increase that and make it even. And now the competition will change again, could, and we can use what we estimated or bigger than our estimators to simulate what will be again the market composition in several periods ahead, what will be the consumer surplus prices, and so on and so forth.

And as I mentioned before, you can think about an exercise which will be -- let's say this is an actual market, and this is the starting point for, let's say, Durham, North Carolina. And let's say we allow two firms that now exist in -- well, we take the green line and the purple line and you make one firm out of it.

And we change the starting point to a starting point where we have one firm less. And one of those firms is just a sum of the currently existing firms. And let's simulate the market forward and see what happens again -- prices, competition, consumer surplus, and so on and so forth.

So let me conclude by saying that we provide a simple model of dynamic competition among supermarkets. And we take into account several key and important

features of that market. And that operation, that two-step or three-step operation that I was describing, is going to give you a meaningful answer only if you really take into account the important features of the market that you are looking at.

And we think that we are doing that. And then, again, the next step will be to look at several counterfactuals of the kind that I have described.

MR. ADAMS: Great. Thanks, Arie.

(Applause.)

MR. ADAMS: To discuss, we have Adam Copeland from the Bureau of Economic Analysis.

MR. COPELAND: Thank you for inviting me here. It's been very interesting. Let me just say these are my own view, and not the views of the BEA or the director of the BEA.

So let me start with a quick summary. So the main question they're trying to get at, within the retail grocery sector, what would be the impact of banning supercenters on consumer welfare? And we can also get out things like market structure and profits.

So we've all read about this in the news, about certain -- I think it's mainly smaller towns that are thinking about trying to ban supercenters because they're worried about the impact on Main Street. And so their

methodology, which he portrayed quite well, is BBL, which is the Bajari, Benkard, and Levin approach, which is one of these latest industrial organization techniques that's actually perfectly suited for answering these kind of questions.

You have these complicated dynamic problems that, five years ago, we wouldn't have been able to answer. But given these latest computational techniques, we can now solve these models and figure out exactly how this industry will evolve, who will exit, who will enter, and things like that.

And the results are, well, it's still coming along. We have these initial parameter estimates. They seem reasonable. So do the counterfactuals. But it looks like it's going in the right direction. They are just going to have to finish it up.

So I guess these comments here I have are just pretty general comments, and they're basically going to be about how, when they flesh out this paper and put in all the details, what things I think they should talk about because right now in the paper they just really talk about the technique and the data. So this is more just filling stuff in.

So the first thing is that we saw in the previous paper by Tom Holmes that a lot of the entry

decisions for Wal-Mart seem to be spatially related work. If a Wal-Mart is in a nearby city, it's more likely to open up in this city.

And this current paper, the way it works is you just look at each city by itself. So there's no spatial dimensions where a Wal-Mart in Baltimore is going to affect a Wal-Mart opening in D.C. So they should talk about this. It would actually be really innovative if you put it into the model, but I think that action might be quite hard.

Now, two and three are just more about taking the model to this particular industry and making sure that you sell the paper and this is really capturing what's going on. And one thing that was in my mind was about the fact that supercenters sell more than just groceries. So it turns out -- I've been told that they actually sell a lot of groceries. But I kept wondering about are decisions to open or invest in supercenters really dictated by grocery sales?

So I know -- and in the paper, they do have two different formats. So the entry decisions for supercenters are different than the entry decisions for supermarkets. But I still think at least more explanation needs to be needed about, well, supercenters also sell a bunch of non-grocery-store items, and how are

we accounting for that, or how does it affect our estimates? I think you're going to do fine. You just need to explain it a little bit more.

Then the third question gets at -- the third point gets at the main question of the paper: What happens when you ban a supercenter? And what I think needs to be talked about more is jurisdictions justify these bans based on the fact that these supercenters are going to wipe out a bunch of stores, grocery stores but also hardware stores and bike stores and stuff like that.

So you want to go back and say, look. We're going to estimate what happens to consumer demand when a supercenter gets banned. It obviously is going to affect a lot more than a grocery store. So you just need to talk about how your model is going to talk about an overall effect, or maybe you just need to say, look, we're just looking at groceries. But there needs to be some sort of context here about what exactly a model does talk about and what it can say and what maybe it's missing.

Now, I had another page of comments that were more detailed things about the demand estimation, but actually, I want to talk about something else given what I've heard today.

And what I really want to emphasize is the

potential of this technique that they're using here. And I want to say this is such an interesting paper because it's part of a small and growing literature that's trying to solve or trying to model how industries evolve. And this is a very difficult thing to do. And it takes a lot of time and a lot of effort.

And I think it's going to be particularly interesting for people like the FTC or people who work in courtrooms for the FTC because it can answer a lot of questions that were brought up this morning. I mean, people got up here in the morning and talked about how this is a dynamic industry, and how the current analysis really misses that. They've talked about how exit can be beneficial because the really crappy grocery stores are closing down.

There's a really interesting story about Kroger, how in anticipation of Wal-Mart entering, they cut prices and they invested in their stores. And then the kind of model for that in here can answer those questions and can rationalize them.

So I think there's a lot of potential for these kind of models to help people at the FTC and help people at law firms who advise the FTC to think about what's going to happen with mergers. And so I think it's really encouraging.

In the academic literature, this tool is fast becoming or already has become a standard tool for analyzing these kind of things. And I think it's really encouraging to the FTC -- it's really encouraging to me that the FTC is already thinking about learning about these techniques and investing in them.

So those are my comments, and thank you very much.

MR. ADAMS: Great. Thanks.

(Applause.)

MR. ADAMS: We're going to move straight on to the next session, if we can find Michael. Yes. He stood up. And we're going to have Dennis Carlton, Joe Simons, and Tim Brennan coming up.

MR. SALINGER: Well, I'll just pick up where Adam left off. We've got a really simple problem at the FTC when grocery store mergers are proposed. We just have to figure out whether prices are going to go up. And if they are, then we need to try to block it or seek some modification; and if they're not, we should let the deal go through.

And the question is: How should we do that? Jim Fishkin did a really nice job of describing how traditionally the Commission has done that. But it's subject to criticism, and it's subject to the criticism

that Debbie and Chris talked about. They said that this is a dynamic industry, and that -- and as was documented by Paul in his historical overview of the industry that we started with.

And so the question is whether the guidelines approach that we've traditionally used captures the dynamics of the industry, or whether, as Chris said, it's a Procrustean bed. So we have a really distinguished panel to answer that, or to -- well, to comment on that question.

So we'll begin on my right with Dennis Carlton. Dennis Carlton is one of the great industrial economists of our age. He is currently the Deputy Assistant Attorney General at the Justice Department. He's a professor -- he's on leave from the University of Chicago, where he's been a professor for many years.

He is the author of the leading textbook in industrial economics. And he was recently on the Antitrust Modernization Commission. And, I don't know, what else? What other great things should I say? I'll just leave it at that.

MR. CARLTON: Thank you. It's a pleasure to be here. And I also compliment the FTC for organizing a conference that I think really focuses attention, as Bill Kovacic was saying at lunch, on research methods and

trying to figure out if the research methods we currently use to analyze antitrust questions at the agencies can be improved, and also that it's very good every once in a while to take a time out and look back and say, is what we're doing correct?

I think all of the papers today, which I wasn't able to sit through all of them but I did read through all that were available, were excellent. And I think what they highlight is the development of new sophisticated techniques that allow us not only just to understand static pricing games, but much more complicated games over time.

Now, on the one hand, that's a tremendous benefit because we are studying now how industries evolve. On the other hand, I think you have to keep paramount in your mind whether the questions that are being answered, which are based on structural modeling which give you deep insight into the industry, are the types of models that can answer the type of questions that are posed to an antitrust agency that often, as Michael said, is asked the question: Within a two-year period, are prices going to go up? So let me just try and explain that a little bit.

The issues that were outlined by the speakers that I think distinguish what's going on in the grocery

industry from what I'll also characterize as other industries, but especially the grocery store industry, are the following.

One, we have stores selling overlapping product lines. A huge variety of products in a superstore; they overlap in part with other types of retail establishments. We know that these superstores have or achieve economies of scope by having these multiple products under one roof.

We saw on the cost side that they -- and that's on the demand side, the economies of scope. We saw on the cost side that there are economies of density. And although it wasn't talked about explicitly, sort of implicitly, we know there are these changing technologies as logistics are improving and as information technologies are getting better and better. So that's the characteristics.

The decision variables we have we think are pricing. Well, we heard something about the difference between everyday low pricing and having sales. Oftentimes, we ignore that, or that sometimes can be ignored, and that can lead to improper estimation of demand elasticities, especially in a dynamic context where inventories can be stored. And I've often thought that problem hasn't received enough attention.

It also means, by the way, that when you're thinking about competition between two stores, if most of the time the price is high but there's a white sale ever year in August or whenever it is and most of the stuff is sold in August, that's when you want to really be modeling competition and looking at the effect of a merger.

There wasn't all that much on product choice, although implicitly. So in addition to pricing, there's product choice. What do I want to have in my store? What brands do I want to have in my store? What range of products do I want in my store? What store brands do I want in my store? And that's an important strategic variable as well as how you want to promote and advertise and get people into your store.

We heard a lot about dynamics. And what's important and what was stressed in several of the papers was entry. And what entry involves is a strategic decision not only when to enter but where to enter and how strategically your decision about both when and where to enter will affect what your rivals do.

There wasn't too much talk given about what game is being played. Usually in static games we always assume it's sort of a Bertrand game because we're just looking at prices. But I'll just make the following

point.

When we do merger simulations, we typically solve a Bertrand game, although we don't have to and we could do much better than just assuming they're playing static Bertrand as an approximation. But let's stick with Bertrand.

It could also be the case that in a static game, we analyze the optimal choice of some other variables, like the quality of the product, the range of the products. And if you think about what some of these dynamic models are doing, they've enlarged the strategy space.

Now, it's true some of the choice variables are in the future, so you've got index them with time. But let's forget about the time dimension for a second. Just imagine it's a quality variable or a range of product variable. That's a decision variable.

Now, if you think about it, there are a lot of complications when you do merger simulation. When you do merger simulation, you have to estimate demand curves, which can -- we kind of get that right as long as we are using the right price to the consumer and as long as we've properly modeled whether there is market power at the level of the store. And if we haven't done that right, we can even get our demand estimates screwed up.

But then we do merger simulation. I've not really seen, although conceptually it's easy to figure out how to do it, merger simulations, even static merger simulations, in which you're not only choosing price, but you're choosing these other quality variables. And that just makes the model more complicated.

So if you have misgivings about merger simulation, even though I think it's a very helpful technique for having you figure out what the implications of demand estimates are, if you start putting in these other product characteristics and you start doing merger simulation, I just want to point out that has not yet become the standard type of merger simulation that people do.

And why? Because it's complicated and we're not sure how robust it is. Now, I think it's the right research direction to go in. But the reason I raise this is because that is a step short of doing the more complicated dynamic models.

Now, once you start doing these more complicated dynamic models, I think you should recognize a few things. First, it's absolutely the right way to understand the industry. Understanding how it's going to evolve; understanding the size distribution of firms, which is something industry organization economists

should spend more time on but don't.

And the fact, though, that it's evolving over time means you have to ask yourself the question: How long are these estimates good for, and how accurate are they in the future? So let's just take something like entry over time.

Well, as the entry -- as I was sitting, the last speaker said, I can simulate this out a hundred years. Well, that's certainly forward-looking, I agree. And I think it's very desirable to get an idea of how an industry is going to evolve.

For the questions that antitrust officials and agencies are faced with, if you are basing things on what's going to happen much beyond the two-year horizon, you have to be pretty comfortable that you're making decisions based on variables that you have some confidence in.

Now, I've always thought the reason you focus on two years -- we focus on, I guess; I'm a "we" now -- focus on two years in prices is because we feel more comfortable doing that. And we're a little less comfortable making these predictions of entry when entry are going to occur periods down the road. Doesn't mean that's the right thing to do, but I think we need more experience to see how reliable these models are in

predicting entry decisions.

Now, to go back to the technology changing, I think the fact technologies are changing means that these strategies of entry and how industries are going to evolve over time are important to nail down. But whenever technologies are changing, whether it's in the grocery store industry or any industry, you have a hard problem.

While making a study of the toy industry, we had this characteristic that when Wal-Mart entered an area, if it was first store in the area after, say, Toys "R" Us or it was the biggest competitor to Toys "R" Us, if it was either a Wal-Mart or a target, it had some effect on price -- not a huge effect, necessarily, but some effect.

So the question is, how could you model that? Well, one thing that I did, I noticed, is there were parts of the country where the technology had been implemented; if you think about it as technological change, entry is an entry of a new technology.

You could look at parts of the country where the technology had actually changed, and then you could use that as a basis to predict what's going to happen in those areas of the country that hadn't yet. That strikes me as something I could get some comfort in doing.

When you have giant technological change but you don't have observations yet of how one area is going to behave relative to another because one has incurred the change and one has not, I think you have a greater uncertainty in your productions.

It's kind of like two firms merging, and the argument is going to be, well, we're going to get a lot more R&D. And my view is that's a very hard case when it's about new technologies and the development of new technologies, or even how new technologies play out in inducing entry into the future.

So then I guess the bottom line where I come out is that I think some of these techniques, focusing on dynamics, focusing on location as entry, focusing on density as a key variable, are all very important and necessary to understand how the industry behaves. It's what I would call doing structural modeling, which I think is really key to be able to answer fundamental questions that you couldn't answer using the standard reduced form technique, in which you're just trying to explain price on various variables, including number of firms.

On the other hand, for an antitrust agency, sometimes it's a combination of both techniques that I think will best answer the question. Reduced forms, if

you can do them correctly, and that is that you really are able to treat certain types of entry as exogenous, at least over certain periods of time, or there are some natural experiments in which the number of firms do change so that you can really see what happens to price, those strike me still as very valuable experiments that give you information, especially in the short run, which may be the productive horizon over which we have the greatest confidence.

So I think these are important new techniques we've heard about. I'm sure we'll use them. I hope we use them in conjunction with the other techniques that we commonly use. Thank you.

MR. SALINGER: Thanks.

Our next speaker is Joe Simons. He's the co-chair of the antitrust group at Paul Weiss. Previously he was the director of the Bureau of Competition here at the FTC. And he's well-known for his contribution to our understanding of critical loss.

Did you coin the term?

MR. SIMONS: Yes.

MR. SALINGER: And he coined the term "critical loss."

MR. SIMONS: Yes. I wrote the article with Barry Harris. I had to drag Barry into writing the

article. It was kind of a funny thing. I think a lot of people didn't really understand what it was for quite a while afterwards, even. So it's really interesting to see what's happened to it over the years.

Thanks, Mike, and I'll just echo Dennis and say I think this is extremely important to engage in this kind of exercise. And of course, when you follow Dennis Carlton, it's impossible to follow. So usually what you can just say is, I agree with Dennis.

MR. CARLTON: I've never heard you say that.

MR. SIMONS: Which I pretty much do.

(Laughter.)

MR. SIMONS: Anyway, so just sitting in this conference today, I can just see this thing progressing on two different levels. So on one level, you have kind of the more theoretic and also, then, quantitative economic approach that was characterized the last two panels.

And then you have kind of the in-the-trenches approaches, as Michael referred to it this morning, which involved some folks who have spent a lot of time dealing with real transactions at the FTC. So that's Jim Fishkin, Debbie Feinstein, and Chris MacAvoy.

And so I thought maybe it would be useful if I commented on that to start with. If you sat here and you

listened to the three of them, Jim on one side, who was basically the one prosecuting or investigating those transactions, and Debbie and Chris on the other, representing the companies, the merging parties, you'd think they're at completely different ends of the spectrum. My feeling about what they said is I tend to agree with both of them. How could that be?

Debbie and Chris said that the FTC relied too much on structure for their tastes. And if you went back and you looked at the data that was released a few years ago, you'll see that the data shows that the FTC engaged in enforcement actions at lower levels of concentration in the grocery area, and the oil industry, too, than it did with respect to other areas of the economy.

And I think they would view that as confirmation that their intuition from their own dealings with the Commission is correct. And it may very well be correct.

And they also talked about market definition and the Commission tending to focus really for a long time on what they viewed as more of a narrow market definition, just the big box supermarkets and tending to exclude club stores, convenience stores, and mass merchants.

Now, Jim stood up and said that he looked at

all this stuff, that the other people at the Commission looked at it carefully, and that the Commissioners looked at it carefully every time a transaction came up. And there were lots of transactions.

And having been here myself at two different points in time in the late '80s and then again a few years ago, I agree with Jim. Every time one of the supermarket transactions came up when I was here, it was looked at extremely closely. There were arguments internally about what the market definition should be. And there were arguments internally about what was the implication of the concentration level of any particular transaction.

I think what happened, though, inside the Commission with respect to supermarket transactions is that it lagged behind in terms of the analysis that you tend to see with respect to other parts of the economy. You see more quantitative analysis, more simulations, and my own thing that's near and dear to my heart, you see more use of critical loss.

And you really don't see that, at least in my experience, or haven't seen that -- I haven't seen one of these transactions in a few years -- but you really don't see that in the context of a supermarket transaction.

So you get into these situations where you have

two people who are arguing on either side of the Credit Suisse. One of them says, you know, you look at Kroger and you look at -- I don't know who the other one was; Safeway? No, it wasn't Safeway -- Winn Dixie, and you say, these guys are very close in product space. Yes, they're both mainstream, but they're kind of at the lower end of mainstream. And a merger of those two entities we're worried about.

So that's kind of a theory. It gets at the unilateral issue. But you look at documents really carefully. Who do they price check? How often do they price check? Yes, maybe they look at club stores a little bit, but not too much.

So the staff is doing a lot of work. They're looking at a lot of documentation. They're talking to a lot of people in the industry. But what they're doing is, in kind of a loose way, they're doing an analysis.

It's not very -- I don't really want to say it's not very rigorous; it's rigorous in a sense, but it's not rigorous in another sense, as opposed to a situation where you're either doing a merger simulation or you're doing a critical loss analysis where whatever you think of either of those types of techniques, you actually have to specify assumptions. Right?

You have to say, here's what I'm assuming.

Here's the facts I'm relying on. Given that, here's what the outcome is. The critical loss is exceeded. It's not -- the merger simulation shows a price increase, or it doesn't. In either case, you have assumptions that are clearly spelled out.

When you do what the staff was doing previously, you've got two people talking to each other, debating with each other. But the assumptions are never spelled out. They never talk about exactly, well, gee, yes, they're close. They have the same similar formats. They have a core of customers. But how big is the core? How much of the margin would switch? They never get into a discussion of that type of a thing.

And so what ends up happening is it's not very satisfying, particularly for the people on the outside whose transaction is going to get challenged. And so what they draw from that experience is, I think, that structure is really important, and particularly because, over time, the experience is different with respect to other industries.

So I think one thing that would be really a very good development here is that the grocery industry gets the same type of analysis applied to it that the Commission and the DOJ routinely apply to other industries.

And then I'd, these techniques that were discussed today, I've never seen them before. But they look very promising, too. And given what's going on in terms of the dynamic changes in this business, something like that would be really terrific if that could be developed as well.

And then the other thing I just wanted to say was that in terms of -- particularly in an industry where there's a lot of change, and where what you can see -- Wal-Mart really exposes these efficiencies that come from density and distribution. It's almost like an airline hub. You add another route to an existing hub, it's much cheaper, that type of thing, and how that occurs over time.

One suggestion that I would have for look at that would be to think about the efficiencies and also the potential anticompetitive effects in a risk-adjusted way, and then present-valued, in the sense that what are the chances that the efficiencies are going to be realized, over what period of time? How much are they likely to affect the price or not? Another question is, do we care or not whether they affect the price or not?

And then what are the chances that there's really going to be a price effect, and over what period of time? This industry strikes me as one in particular

where, yes, you may not get entry in a year or two, but in many parts of this country, you're going to get entry at some point.

And so if the price goes up for some period of time, the question is: How long is it likely to exist? And weigh that against the efficiencies that the transaction achieves and what the likelihood is that they will be achieved.

MR. SALINGER: Great. Thanks.

Our final speaker is Tim Brennan. He's a professor at the University of Maryland, Baltimore County. He recently finished a stint as the T.D. MacDonald Chair in Industrial Economics at the Competition Bureau in Canada. He has had a wide variety of government jobs, and has long been a thoughtful observer on antitrust issues. So Tim.

MR. BRENNAN: Thanks a lot, Mike. Thanks to Mike and Chris for inviting me here. It's a real honor to be here.

Because everything I know about the economics of the grocery sector I've learned since 9:15 this morning, and since I'm the only thing standing between now and everybody going out, having a few beers, and making up your own John Holmes and Wal-Mart jokes, I will try to be brief.

Coming back to 30,000 feet, I suppose, to some extent and coming to the question about can antitrust be forward-looking, I want to talk about that, in general, very briefly, and then apply some things, some considerations for that, to the grocery sector.

First, of the three areas of antitrust, mergers is the one that should be the most forward-looking. It's designed to be that way. You've got pre-merger notification. You're looking at the prospect of price increases, asking counterfactuals and market definitions and so on.

And also it's probably the grocery sector which is most responsible for the main empirical innovations and merger evaluation, namely, everything you can do with scanner data and actually getting people to consider the idea of dropping market definition altogether and going straight to a competitive effects analysis.

So this ought to be the most promising sector. But as people have pointed out, there are a number of problems. Let me go through them.

First, something that I don't think has come up today is that to some extent, this is a legal question, not an economic question. Plaintiffs bear burdens of proof. And if the situation is changing very rapidly, that can be a problem.

And just to give a non-grocery example, shortly after the Telecommunications Act was passed, the Justice Department had to consider what to do about the Bell Atlantic Nynex acquisition. And at the time, there was a concern that because these adjacent major telephone companies, they might be competing with each other.

Now, how that was all going to play out, nobody knew. But the point is at the time, nobody knew. But if someone thought that it was a problem, what were they going to do? There was no information, no track record. There's just a difficulty.

So when you have these dynamic considerations, one thing to ask is: What's it going to take to convince a judge to block something if you think that there's a problem?

A second consideration is how well does the process handle innovation? I'm a little pessimistic about that partly, or maybe largely, because of the Microsoft case, which I've looked at to some extent. One of the things that troubled me about the case as it was carried out, not so much whether the case itself was a good idea in some larger sense, was when you called the relevant market in Microsoft Intel-based PC operating systems, when the target, Netscape, was never going to be an Intel-based PC operating system, there's something

about that that says, we have to use markets that are defined today. We can't use markets the way they would be defined in the future. That apparently is a problem.

So if we're looking at something that today we're calling supermarkets when really it is something else in the future that is different from supermarkets, maybe in some sense does this indicate that we're stuck?

A third thing is: What's the role of innovation here? There's a general presumption, I think, or an instinct that some how innovation makes mergers more benign, that, well, okay, these guys are going to be big, but something else is going to happen someplace.

But there's also a possibility that mergers can make two people who were in separate markets now relevant competitors in the future. To take the Microsoft example again, I often wondered sort of hypothetically, suppose Microsoft had never developed Internet Explorer and decided to just buy Netscape in 1996 or something? If you think the Microsoft case was a good idea, you presume it would have wanted to block that merger. On what basis would you have done so? They are not anywhere near anybody in the same market.

And so here I wonder where suppose Wal-Mart had bought Safeway in 1985 or something. Would that have been a problem? What would somebody do? Wal-Mart is

saying, well, there's going to be these things called superstores someday or supercenters someday. What are people going to do about that?

Fourth on the list is something that Dave Scheffman pointed out, is this notion of using snapshots to talk about competitive effects. One has got to be careful here about taking these static pictures, and a lot of analysis we've seen today is a way to get around this problem.

But looking at what people are doing as a snapshot and saying, well, gee, these must compete with this because people are going here and they're going here and they're going there, a related -- a similar sort of consideration has come up in telecommunications deregulation.

When I was in Canada, that was a hot topic. It still is a hot topic. And one of the arguments that came up is, well, wireless is increasingly in the market for local telephone service, competing with wirelines. How do we know? Because the number of people who are dropping their wireline service and going just wireless is growing.

Well, there's an aphorism in the telecommunications industry, apparently, is that wireless is replacing wireline one funeral at a time. But just

because the market is shrinking because people like my dad are never going to get a cell phone, and eventually they're going to disappear, and students at UMBC are never going to get a wireline phone, that doesn't mean that in any given moment wireless constrains the price of wireline.

And the same would be true here. Just because people are doing lots of different things, the question is, as Dennis has pointed out and Joe and others during the course of the day, is what's the marginal effect if you're worried about what might be the effect of a merger for antitrust purposes.

A lot of what people talked about today is efficiencies. Joe just mentioned this. I know Dennis is extremely concerned about this. Is this going to play out differently if you do a consumer welfare standard versus a total welfare standard? Like Dennis, I'm a total welfare person, somewhat instinctively. But in terms of how that plays out in practice, how is that going to work?

On the models that people have mentioned, they're out there. They're very sophisticated. We've learned a lot from them. My concern for antitrust cases is what happens when they're competing? We've heard some great ones here. What happens when someone else comes up

with a great one, and this one says, after a very long, complicated story, the price goes up, and then the other one says, after an extremely long, complicated story, the price goes down? What's the poor judge going to do with those?

So that's that. Just two final points. One is that a lot of the considerations we've talked about today apply outside the merger context, I think. In particular, there are a lot of concerns involving this sector that involve things like tying up shelf space so people can't get in, these sorts of soda stories and things like that.

And to me, a lot of that comes down to essentially the same questions about market definition and grocery sector as what we've been talking about with mergers because if someone has these exclusive contracts with supermarkets, grocery sellers, whatever their A, B, and C, that's only harmful if D, E, and F type stores aren't substitutes.

If they are, then it's not a problem. So the kinds of things we've been talking about here today, questions we've been raising are not restricted to the merger context.

Finally, one takeaway from some of these papers or some of the speeches today has been, I sort of wonder

whether despite all these complications, maybe a good rule for this sector would be that if there's a Wal-Mart within 25 miles, there's no problem.

I'm a big advocate of simple rules. Maybe that's not such a bad idea. If that were the rule, that might take a pretty big chunk out of the incomes of some of the people in this room. And I'll leave it to you to decide whether that enhances social welfare or not. Thank you.

(Applause.)

MR. SALINGER: Well, to bring the day to a close, I'd like to give you a choice of two questions to answer, and ask each of our panelists to answer at least one of the two, which is: If there's one lesson that the FTC can learn that would help us do the merger review better, what would be the one piece of advice, the one takeaway, we could take from today?

Or alternatively, what research question -- if you could give advice to a researcher as to a research question to answer that will help us do things better in the future, what would you do?

I should say that was a completely unfair thing to do to these panelists because I gave them no warning I was going to do that. Any takers? You can decline if you say it's unfair.

MR. CARLTON: What I should have said when I started my comments was start with a disclaimer that these are my views and not those of the Department of Justice. And God only knows how I'll answer this question.

Well, I would say two things. One is I think our reliance on market definition can be helpful in many cases to making sure you don't do things that are illogical. But especially when an industry is changing and when you have this overlap, I think looking at direct competitive effects is quite important. At least, I would try and put more reliance on that.

As far as research questions, I think the right question is asking whether the concentration that occurs when some of these technology change wind up lowering prices. I think there's pretty convincing evidence now that when Wal-Mart goes in an area, prices can often fall significantly. And I think that tells you a lot.

What I noticed from my work in the toy industry was that when there was one big competitor against, say, Toys "R" Us, prices went down -- not all that much, surprisingly, but they went down a little bit. But then when you had other big competitors, big box competitors come in, it ceased going down.

So that I think the important research question

is really to try and focus on what the antitrust authorities need to answer, that is: What's the price effect in the short run? I think on the entry score, which some of these dynamic models properly address, one of the things that comes out of these models is the duration until the time of next entry.

And that's something I would pay attention to. And that's kind of a -- it's implicit in some of the models, but actually you can do some interesting analysis on durations, likelihood of entry, and things like that. And it would be very interesting to see how that squares with our usual notions in the merger guidelines of when someone is going to come in.

And if someone is going to come in, obviously within two years it's within the guidelines. But suppose someone in these dynamic models is going to come in in year three. If you look at how these models work, that can have a large influence on behavior in year two. And maybe we should be paying some attention to that also.

MR. SALINGER: Joe?

MR. SIMONS: I'll stick with the lessons. So a few lessons. One is that I think it's pretty clear from what was going on today, a decision to challenge a supermarket merger of any kind of size is not a no-risk proposition. Given what's going with Wal-Mart and the

other players who are getting big for largely the same reasons, these things have significant efficiencies. And you want to be careful not to get in the way if you don't have to.

Also, one of the points raised today was -- and this has kind of been borne out by the FTC's experience dealing with divestitures of supermarkets -- these assets deteriorate very quickly. When consumers know that the stores are for sale, the half-life shrinks dramatically for these stores. And so getting through the process quickly is really, really important in this business.

The second lesson would be focus on the margin. Yes, they may be close in product space, but the important thing is focus on the margin. How big is the margin? What's going to happen?

And then I agree again with Dennis in terms of let's really pay attention to the competitive effects. And conceivably, given the data that's available in this business, you might not really need to do too much of a rigorous market definition. Rather, you could focus more on the competitive effects.

MR. SALINGER: Tim?

MR. BRENNAN: Sure. The only thing I really could say -- because again, I'm not an expert in the grocery sector -- would be to come back to the first

thing I mentioned, which is: How do we prime the judicial system that has to resolve these things to deal with the fact that we may have to make decisions under great uncertainty, if in fact this is that innovative an industry?

What should the burdens of proof look like? Should we begin to look at questions along those lines? I don't know enough about the grocery sector to know whether it's more innovative than telecommunications or a whole lot of other things out there, where people have to worry about these sorts of questions as well.

But the thing that has troubled me, as you could tell from my comments, in a lot of other sectors and troubles me from what we've heard today is: How are we going to get a handle on this?

And given the enormous complexity of the empirical work in these things, and I think the inevitable speculation that's going to take place if this is that innovative an industry, I think leads us to a situation where either we're not going to be able to do very much except in situations where there really isn't that much innovation going on and we can make pretty confident predictions; or we're going to have to get people to accept the fact that we're taking risks.

MR. SALINGER: Great. Well, I'd like to close

by reiterating the thanks that I've mentioned this morning. So thank you again to the Chairman's office, and also to Commissioner Kovacic, for their tremendous support for the importance of running a day like today. But especially to Chris Adams, who did a tremendous amount of work to pull this off. So thank you all for coming.

(Whereupon, at 4:40 p.m., the conference was concluded.)

C E R T I F I C A T I O N O F R E P O R T E R

CASE TITLE: GROCERY STORY ANTITRUST: HISTORICAL RETROSPECTIVE AND CURRENT DEVELOPMENTS

HEARING DATE: MAY 24, 2007

I HEREBY CERTIFY that the transcript contained herein is a full and accurate transcript of the notes taken by me at the hearing on the above cause before the FEDERAL TRADE COMMISSION to the best of my knowledge and belief.

DATED: 6/13/2007

_____

JAN JABLONSKY