ANTITRUST MODERNIZATION COMMISSION

PUBLIC HEARING

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The hearing convened, pursuant to notice, at 1:15 p.m.

PRESENT:

DEBORAH A. GARZA, Chairperson
JONATHAN R. YAROWSKY, Vice-Chair
BOBBY R. BURCHFIELD, Commissioner
W. STEPHEN CANNON, Commissioner
DENNIS W. CARLTON, Commissioner
MAKAN DELRAHIM, Commissioner
JONATHAN M. JACOBSON, Commissioner
SANFORD LITVACK, Commissioner
JOHN H. SHENEFIELD, Commissioner
DEBRA A. VALENTINE, Commissioner

ALSO PRESENT:

ANDREW J. HEIMERT, Executive Director and General Counsel

WILLIAM F. ADKINSON, JR., Counsel
MICHAEL KLASS, Economist
HIRAM ANDREWS, Law Clerk
KRISTEN M. GORZELANY, Paralegal

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Economists' Roundtable on Merger Enforcement

Panelists:

PROF. LAWRENCE J. WHITE, New York University, Leonard N. Stern School of Business

PROF. DANIEL L. RUBINFELD, University of California at Berkeley, School of Law, Boalt Hall

PROF. PETER C. REISS, Graduate School of Business, Stanford University

PROF. STEVEN NEIL KAPLAN, University of Chicago Graduate School of Business

PROF. TIMOTHY F. BRESNAHAN, Stanford University

These proceedings were professionally transcribed by a court reporter. The transcript has been edited by AMC staff for punctuation, spelling, and clarity, and each witness has been given an opportunity to clarify or correct his/her testimony.

PROCEEDINGS

CHAIRPERSON GARZA: I'd like to begin this afternoon's Economists' Roundtable on Merger Enforcement. For those of you in the audience who have been to the Commission hearings in the past, we'll be proceeding a little bit differently today. We're hoping to get a bit of interaction between and among the economists who have agreed to participate. So we will begin with short, five-minute statements by each of the economists, and then what we hope to have is sort of a roundtable interaction that Commissioner Dennis Carlton has agreed to help moderate and move along. That will be for about an hour and a half, and then we'll take a 15-minute break, and then give each of the Commissioners about five minutes each to ask any questions that they may want to ask of the economists.

This afternoon we have with us Professor Timothy Bresnahan, Stanford University; Professor Steven Kaplan at the University of Chicago Graduate School of Business; Professor Peter Reiss, Graduate School of Business, Stanford University; Professor Daniel Rubinfeld, University of California at Berkeley, School of Law, Boalt Hall; and Professor Lawrence White, New York University, Leonard N. Stern School of Business. We thank each of you for participating this afternoon.

With that, I'll ask each of you, if you'd like, to make a short statement, and, Professor White, we'll start with you and go around, and then I'll let Dennis take over from there. Thank you.

MR. WHITE: Thank you. Thank you first for inviting me and for giving the five of us an opportunity to express our views. I think this is really a very useful and valuable part of the process.

As a bit of background, as I mention in the starred, asterisked footnote at the beginning of my written contribution, I was the Chief Economist, the Director of the Economic Policy Office in 1982-83 when the 1982 version of the Merger Guidelines was developed.

The first part of my presentation is a reminder of what we were thinking at the time that the Guidelines were developed. Basically, we were thinking (in today's language) of coordinated effects. That was the spirit – that was the mind-set that we had. I don't remember any specific discussion of unilateral effects at the time. Even the 35-percent market-share clause in the Guidelines was primarily there as a kind of dominant firm idea: that if you have a dominant firm and it merges with somebody, we ought to be paying attention. This was more along the lines of Professor Stigler's dominant firm and competitive fringe type of model than today's concept of unilateral effects.

As a consequence, unilateral-effects analysis is not easily reconciled with the major drift, the major laying out of the analysis of the Guidelines. You can stretch it a bit, you can shoehorn it in, but it's not very comfortable. And so I'll return to that in just a minute, but that's, I think, one of the major points in the first part of my contribution.

In the second part, I address the issue of what we think we know about the relationship between seller concentration in markets and some measures of performance. I briefly review three bodies of evidence: First, there’s the early evidence on the relationship between industry profit rates and concentration. That kind of study is no longer in fashion. It dropped out of fashion around the middle 1980s. As Professor Carlton points out in the Carlton and Perloff textbook, there are at least eight major problems with those kinds of studies, and there are. Nevertheless, when I look at that body of work, when I look at the pattern of what various pieces of industrial organization theory tell us ought to be having an effect on profitability, sure enough the things ended up having an effect on profitability - things like advertising, barriers to entry, opening up the market to the influence of international trade, the buyer's side of the market and how concentrated it might be, whether there might be a critical concentration ratio where the coordinated would jell - all of those things were accommodated. Again, I understand the problems, but I think that there is value in those profitability studies.

The second body of evidence, which has dominated the empirical studies since the mid-1980s is what some people call "the new empirical industrial organization." These studies look at the relationship between prices and seller concentration. And, again, these studies show that a relationship is present.

Third, there is the evidence from auction markets, where something as simple as the number of bidders who show up at a sealed-bid auction, for example, ought to have an effect on the winning price. And, sure enough, these studies also show that a relationship is present.

And so I look at that large body of evidence, three major sources of evidence, and I see something that says that seller concentration matters.

Unfortunately, what that body doesn't tell us is, where should antitrust bite? Where should Section 7 of the Clayton Act bite? Where's the level of seller concentration, the HHI, Herfindahl-Hirschman Index level, where we ought to be saying, "No more"?

I am an academic economist, of course, and what does an academic always say? We need more research! And so, in the end, I offer three recommendations.

First, we do need more information, more studies to try to figure out where Section 7 should be biting. The place to look is, in a sense, what got left "on the cutting room floor." We don't need to study the mergers that were stopped, because we don't know the counterfactual – what might have happened. But what we ought to be looking at is those mergers that were allowed to proceed, especially the ones that were close – where, for example, a "second request" was made by one of the enforcement agencies. These studies should try to track what happened to prices in the relevant markets subsequent to the merger. Those are studies that, in principle, the enforcement agencies, with the kind of information they have, ought to be able to conduct. We should be able to learn a lot from that.

A second possible set of studies might be a mega-analysis – sorry, meta – it would also be mega, but a meta-analysis that would pull together the various price-concentration studies that have been done, and try to meld them and see what we can distill from that melding. Those two sets of studies are Recommendation No. 1.

Recommendation No. 2: We need to be clearer about unilateral effects. From my perspective a unilateral effects analysis can basically ignore most of the Guidelines. We don't need really to define a market for unilateral effects analysis. All we need to be able to do is make a fairly confident prediction that there are going to be significant price effects unilaterally because of this merger. And as long as these effects pass a *de minimis* test, that's the end of the story. And so I'd like to see that stated clearly.

My third recommendation is slightly off the topic, but still, there's enough of a relationship: though the Merger Guidelines' market definition paradigm works very well for dealing with mergers, especially the coordinated effects version, it is not useful - and in fact leads people astray - when it is used to try to deal with Sherman Section 2 monopolization cases, to try to define a relevant market for Section 2 cases.

I don't have a good solution here. I think some very smart men and women need to get together the way they did at the Antitrust Division 24 years ago, and they need to try to develop a paradigm, a way of thinking sensibly about market definition for monopolization cases. We don't have that now. First, we need to recognize that that is so; too many people are going astray too often in that regard. And then we need to focus a lot of effort on trying to develop something better.

Again, thank you for the opportunity to appear this afternoon.

CHAIRPERSON GARZA: Thank you very much.

Professor, are you ready?

MR. RUBINFELD: Sure. Thank you as well. It's a pleasure to be here. My comments really cover three topics. I want to talk briefly about enforcement, and I want to talk about the Guidelines, and then talk a little bit about the role of economics.

One's view about enforcement is obviously somewhat personal, and mine is influenced heavily by my couple of years with the Clinton administration at the DOJ. My sense is that the merger laws, the Clayton and FTC Acts, really work well and that the level of enforcement has generally been good. Both agencies have been active, as they should have been. Sometimes one is tempted to point to particular examples that we all have of perhaps missteps or cases that were lost by the agencies in the courts. But I think that's, in fact, not the right way to look at it. If the agencies are not out there aggressively pursuing mergers that they think are anticompetitive because they're afraid of losing a case, we're going to be having under-enforcement. It would be like looking around for a tax attorney when you need some advice when you're filing your taxes. You really don't want a tax attorney that's never had a discussion with the IRS, because that person's not being aggressive enough. So even though I personally find cases I disagree with, it doesn't trouble me to see that the agency is not winning them all; I think they're doing a good job.

And I think, just moving on to my second point, the Guidelines overall have been very helpful, starting with the work Larry did in 1982, going through the 1997 revisions. And I'd say particularly the 1992 revisions were extremely helpful. I think the Guidelines work generally well with respect to both coordinated and, I'd say, unilateral effects. But I have to say, when I was with the agency, I did think for a while that I ought to spend what I thought was going to be only a couple of months thinking about revising the Guidelines. I quickly realized it would have been two to five years. And I've now come to the view that we don't really need to sit down and revise the Guidelines. Nevertheless, if I were doing so, there are a couple areas that I would take a hard look at, and I'll mention those briefly.

First of all, I do have a question in my mind as to whether we need to go through a formal market definition exercise in unilateral-effects cases. It seems to me that in some unilateral-effects cases, the market definition exercise, the formal exercise suggested by the Guidelines, leads us down a path that's not very constructive. And I can go into more detail during the discussion period, but the Guidelines actually don't fully tell us exactly how to carry out that exercise. They don't tell us exactly how to sequence the products we add as we go through the SSNIP exercise. And I've seen cases where trying to follow the Guidelines really had been counterproductive. So I would urge some flexibility there.

Secondly, even though the Guidelines allow for this, there's been a tendency in some cases to overweigh measures of current concentration in looking at mergers, and in dynamic industries we all know there are good reasons to think twice about that. We ought to focus more on sort of patterns over time and questions concerning entry rather than just simply looking at current market shares.

Now, having said that, I don't want to overstate it. There have been some folks who think that we ought to just use concentration when we're thinking about coordinated-effects cases. I would argue concentration also is a pretty good indicator in unilateral-effects cases. It's not the only indicator, but it's not something that should be disposed of. Other things being equal, if you have unilateral-effects cases, higher concentration is going to suggest more serious competitive effects.

A third issue I think we ought to take a harder look at is countervailing power. The classic example would be a merger involving sellers where there are significant buyers that have countervailing power. I think I cite in my testimony two prime examples, being the U.S. federal government and Wal-Mart. Wal-Mart now is a buyer, and the broad area in which it buys has something like 20 percent market share, which is much, much greater than any of its competitors. And the Guidelines, again, allow for consideration of countervailing power but really don't flesh out the interesting, difficult issues that arise. There's often a confusion between simply the fact that buyer power changes the bargaining relationship between buyers and sellers, which may have no competitive effects, and the monopsony power that could be generated, which could have -

could have but may not have - adverse competitive effects. And I'd like to see that area fleshed out in more detail.

The third area I want to mention is just the importance of the use of economics. My experience has been, or my sense is, that there's about a 10-year, sometimes even longer, lag between the development of important economic ideas and their application, either in Guidelines or in the law. And that's probably for the best, because we economists are slow; we take time, we have to think through our ideas, and we have to bounce it back and forth and argue and debate. But the fact of the matter is that there's a lot of really important work that has gone on and will go on.

So the fact that certain techniques haven't been fully developed to me is just a sign of progress. And, therefore, for example, just to pick one, there's been some debate about the use and importance of merger simulation. I'm a big fan of merger simulation. I give a lot of credit to people like Greg Werden, Luke Froeb, Jerry Hausman, and others who developed the techniques. There are limitations and flaws with current techniques, but those flaws and limitations really can be improved upon, and I think people are correct to not want to rely simply on any single technique like merger simulation to be definitive and determinative of the outcome of a merger. But that's never the way economics should be used; the economics always should be combined with information from documents, from a lot of testimony, and so on. And if it's used properly, I think the technique is very useful, and I also think that we're going to see a lot more progress in the next five years in making the technique even more helpful.

Thank you very much.

CHAIRPERSON GARZA: Thank you.

Professor Reiss?

MR. REISS: Good afternoon. It's my pleasure to appear before the Commission this afternoon and also to be in the fine company of these other fine economists here.

By way of background, I'm a professor at Stanford's Graduate School of Business. My areas of expertise are industrial organization and econometrics, and I've spent a good deal of my career thinking about, whether entry and exit matter in concentrated markets. So that's the context, if you will, for my written comments. I've largely focused my comments around Section 3 of the Guidelines. Broadly, you've heard a lot about unilateral effects, coordinated effects. You've even had a session on efficiencies. One section that you haven't probably heard much about is Section 3, and that, perhaps, is because I think there's general agreement among academics and practitioners that there should be a safe harbor for Section 3 to the Merger Guidelines. Namely, entry should be something that should be taken into account. And I'm not going to dispute that. I think it should. And so the next obvious question, if there's anything here for us to look at, is the question my MBA students typically ask me at the start of a course, which is, what does it take to pass?

[Laughter.]

MR. REISS: The question here, of course, is, is an entry safe harbor the refuge of scoundrels, or is there something really here that's substantive that can be analyzed with the tools of economics and within the framework of the Guidelines?

So my written remarks, I tried to organize on two levels. One is a conceptual level; what does economics have to say conceptually about the importance of entry and exit in concentrated markets? And then I also wandered into the more dangerous regime of what it means in practice for the Guidelines. So first, some remarks about conceptual items and how the economics literature thinks about whether there should be an entry safe harbor.

I tried to point out that we may take for granted that an entry safe harbor should be allowed in the Merger Guidelines. But if you go back 40 years, it wasn't. Nowhere in the Guidelines was that really addressed, and it's only been a matter of, over time, we have come to allow an entry safe harbor. And I think that's in large part because economists' thinking about the importance of entry has become more sophisticated. We've gone from a regime where we talk about entry barriers to talking more about concepts, such as sunk costs. And so in my remarks I tried to discuss a little bit about what the entry literature thinks about sunk costs.

If you read the Guidelines today, you'll see words like "committed," "uncommitted," and "sunk costs." Those are all terms that have been injected into the Guidelines by economists who think in what's called "the language of game theory."

What we've learned and what Commissioner Carlton has actually commented on in a recent *American Economic Review* article is the idea that, when thinking about why markets are concentrated, we ought to look to things like sunk costs in evaluating whether there are truly entry barriers or whether concentration is in some sense due to technological barriers or whether there's something else going on, strategic behavior, that perhaps is making the market concentrated and is, therefore, something that we should worry about.

In my remarks, I try to go into more detail about why I think the distinctions in the Guidelines between sunk costs, and committed and uncommitted entrants, make good economic sense. One thing that I think is important to realize is that economists' thinking about these concepts is continually evolving. In particular, in 1992, when the term "sunk costs" started to get interjected into the Guidelines as something important to look at when contemplating whether future entry is likely, I don't think economists back then were thinking of sunk costs as broadly as we do today, which is - economists today think of sunk costs as not just fiscal investment costs but option values to delaying decisions. And now there's a large economic literature that says the option value for an entrant to waiting, if the environment in the future is uncertain, could be quite high. And so that has led some economists - Bob Pindyck in particular - to say that, look, taking those types of costs into account would say that entry is even more difficult than we think.

Going against that is some recent work saying that, no, no, while that option value is there, it might not be that large in certain cases, in particular, if there are lots of potential entrants, if the uncertainty about markets in the future is highly correlated or persistent. And so economists' thinking about these sort of sunk opportunity costs as potential barriers to entry, if you will, is evolving.

One thing - not that we're going to revise the Guidelines over this - but one thing I think should be a focus of interest to the agency is thinking about how, in practice, one would measure some costs, particularly the option value of waiting or entrants' delaying the timing of their entry, and how we in some sense project that into the future. And this is a very difficult exercise, as Larry said, one which an academic would say: Let's wait; let's study this more fully. But we're going to see this arise more and more in practice, which is - in terms of thinking about whether entry is likely to be timely in the language of the Guidelines, these sorts of option-value arguments are going to figure prominently.

There are other conceptual issues in Section 3 that I think are important that I've tried to outline in my statement. Basically, the language of Section 3 conceptually most economists would not disagree with, and I don't think most practitioners would. The rub is, we don't know how to implement most of these things in terms of thinking about whether entry is going to be timely, likely, or substantial.

For example, how do we identify potential entrants? What products do we assume are going to be produced? This is a question that marketing people in business schools think about a lot, and they'll tell you we have very little idea in a lot of cases, unless there's an existing firm out there, what they might do. The Guidelines ask us to contemplate such issues, and I'm not sure that academic research is there in terms of having the specifics to say what we should do.

Turning to the practical issues I tried to think about, I talk a little bit in my statement about trying to measure sunk costs, the things that we think matter in terms of entrants' decisions, directly and indirectly. I try to describe what some of the academic literature is doing there. On the indirect side, we don't have very good methods or very sophisticated methods that we can sort of inject into the agency's thought process currently or into the litigation process.

One thing I tried to do, maybe imperfectly, was use the *Staples* case as an example of how entry might figure into both the agency's thinking and the court's thinking. And that example is meant to sort of - to emphasize that a consideration of entry as a safe harbor is going to be conducted typically in a unilateral effects case in the context of some sort of modeling of what the unilateral effects are likely to be, and then entry is going to be an afterthought. And if we're to do it in a quantitative way, we're going to be asking for very sophisticated types of analyses, which I'm not sure the courts are going to have patience with, as they currently do.

So on a practical level, I think the issue that faces the agencies in terms of thinking about the Guidelines is how to actually put some sort of quantitative focus behind the timely, likely, and sufficiency language that is in Section 3.

Thank you.

CHAIRPERSON GARZA: Thank you.

Professor Kaplan?

MR. KAPLAN: Thank you as well for having me here, and I am a little bit - or maybe a lot different from the other people here. I am a financial economist rather than an IO economist. I have almost nothing to do with antitrust. I haven't been a regulator. I have not been an expert witness on any antitrust case. And so I don't know what I'm doing here.

[Laughter.]

CHAIRPERSON GARZA: But you're not excused.

[Laughter.]

MR. KAPLAN: In fact, that was not exactly correct. I think I'm here because, as a financial economist, I study mergers and acquisitions and corporate governance. I also study entrepreneurship. What I have done in my submission is to report what financial economists have discovered empirically about mergers and acquisitions over the years. I will talk about how financial economists evaluate mergers, including short-term event studies or short-term stock performance, long-term stock performance, and operating performance - which tends to revolve around the accounting numbers. There have been some clinical studies as well, and they all try to understand what determines whether mergers succeed or not. I will talk a about what studies have found with regard to the sources of success, and then finally, I will discuss the implications of those studies for antitrust, even though they do not all directly look at antitrust issues.

The first type of study I'll talk about are event studies. Event studies look at the returns to the acquirer and the target around an acquisition announcement. The combined returns to acquirer and target are pretty reliably positive. That is certainly true for cash acquisitions. For non-cash acquisitions, which means acquisitions with stock, the results are more mixed. But you've mixed into those mergers a financing decision to use stock, which typically provides negative information about the acquirer, and affects the interpretation of whether the merger is creating value.

So the bottom line from these studies is that the market views the typical acquisition as a positive value-increasing event.

The next thing to ask is whether these returns mean anything. There are some people who say the stock market is unreliable, even crazy – the reaction on any particular day is all noise. For any particular announcement, that may be true. However, the evidence definitely shows a statistical correlation between the announcement return and the subsequent outcome of the acquisition. There's also a recent paper that shows that there is a statistical relation between the acquisition announcement and whether a CEO loses his or her job. So take Carly Fiorina – she did the HP-Compaq acquisition. The market reacted negatively. It appears to have been a bad acquisition. And she lost her job a few years later, partially because of the acquisition. It doesn't happen every time, but on a statistical basis, the stock's reaction to the merger announcement is informative.

Long-term studies. Long-term studies don't look just at the announcement effect. They look at stock returns over a long period of time. And basically, the long-term returns are zero.

Accounting-based studies consider the accounting numbers, measuring the changes in items like operating income. Again, these yield no clear results. The data are very noisy. These results are a little bit of a puzzle relative to the event-study results, which are positive.

There are general papers that look at the determinants or sources of gains and losses. There's a paper by Houston, James, and Ryngaert that does this best. The paper finds that the market tends to recognize cost cutting; the market does not recognize or believe revenue gains. So when a company says it's going to reduce costs by a certain amount, that tends to be reflected in the stock returns at the merger announcement. When a company says it's going to increase revenues, that tends not to be believed by the market. Now, companies are probably not going to say, "We're going to increase revenues by increasing prices," so it's not clear that has an impact for antitrust but it is clearly the case that the market seems to react to cost cutting.

Related versus unrelated mergers. An interesting paper for antitrust is a paper by Antoinette Schoar, who looked at productivity changes after acquisitions. She finds that acquired plants experience an increase in productivity. The increase is driven by diversified acquirers rather than related acquirers. And while diversifying acquirers drive productivity increases in the plants they acquire, their existing plants decline in productivity. The net effect is a decline in productivity in diversifying acquisitions. What is very interesting in that paper is that productivity gains tend to come in plants of diversifying acquirers. And I'll say why that is important a little later.

The last set of studies I'll talk about are event studies that do look directly for market power, older papers by Eckbo and Stillman, and more recent papers by Fee and Thomas, and by Shahrur. They look at announcement returns to horizontal acquisitions of the acquirers and targets, competitors, suppliers, and customers. If mergers lead to increased collusion and increased prices, competitors should be helped; customers should be hurt. They find that this doesn't occur. There is a positive reaction to the competitors when a merger is announced. When a merger is challenged, those competitors have, if anything, a positive reaction, which is not consistent with a market-power story. They don't find any reaction to customers, there's an insignificant stock-market reaction, and no change in post-merger operating performance, This also doesn't suggest much market power. They find some evidence that suppliers are hurt by horizontal mergers, which could be an indication of monopsony power. The suppliers that are hurt, however, are actually cut out as suppliers, subsequently, by the merged entity, suggesting that it's more of an efficiency story.

I.e., the merged entity is going to the more efficient supplier after the acquisition.

What does all this say for antitrust policy? I would say that, taken as a whole, this literature does not provide any support for a more aggressive antitrust policy. If anything, the evidence suggests a less aggressive one. The event studies don't find any evidence of market power being important. That's pretty striking, given that it is a certain publication—(if you do find evidence of market power). The fact that nobody has been able to find it is pretty telling.

The accounting-based and clinical studies are consistent with this - they do not really show any market-power type results. Instead, they favor cost-cutting and efficiency results. If anything, it's true of the productivity-based study that I mentioned that Schoar did. And so the bottom line is there's little evidence in the finance literature for market power. There's evidence for efficiency gains. That suggests that antitrust policy is either doing well now, or could actually be less aggressive and you might get more efficiency gains. Most of this research is done on deals in the 1980s and 1990s. Arguably, the world has gotten more competitive - the Internet and internationalization - which would lead, again, away from market power and toward efficiency gains.

Thank you.

CHAIRPERSON GARZA: Thank you.

Professor Bresnahan?

MR. BRESNAHAN: I want to thank the Commission for taking up this valuable task and for bringing us here this afternoon.

Fora like this are an invitation to complain about policy, so I thought, you know - in thinking about getting ready, I thought I should be sure to say that in round numbers there's little to complain about in merger enforcement policy. People have mentioned the Guidelines a bunch of times. That is, I think, a shorthand for the edifice consisting of the Guidelines, the antitrust bar, the agencies, the economics consulting houses, which I think have gotten quite good at doing the difficult task of merger review. Or maybe a sharper way to say that is, you know, there's nothing remotely as troubling about merger review in the modern era as there is about, say, the boundary between antitrust and patents.

There's nothing as remotely troubling about merger review today as there was in the early 1980s. I had the experience, in 1984, just two years after those first Guidelines were written, of going to the Justice Department with a unilateral effects theory. I believe I was the first economist to do that. And they were as shocked by me - I got to say, I thought I was speaking for the perfectly - for the vast burgeoning body of economic research about market power in product-differentiated consumer industries when I said this one didn't look like, even though this was a concentrated industry, there'd be any harm to competition. They looked at me like I had two heads. And I have to say that I, in turn, looked at them like they had two heads when they said, "Your story of how this industry works is perfectly compelling; however, we're doing antitrust here."

[Laughter.]

MR. BRESNAHAN: Those days are gone. And I think even if we read - I think I agree that in the narrow area of unilateral effects cases, we have gotten very, very good at figuring out whether there's going to be a substantial competitive effect if there's a database around. You know, even though the Merger Guidelines don't literally accommodate that, I think the bigger organization that uses them - the bigger organization does a good job of making those exceptions. So I would not make radical policy changes in that part.

The other lead question is, what does all the available research tell us about where policy is? And there I think we have to remember the two incredibly difficult things that merger review has to do.

First off, it has to trade off blocking anticompetitive mergers with the very substantial efficiency gains of most mergers that Steve just talked about, and our solution to that problem is to try to stay out of the way of the capital markets and at least do it fast.

The second very difficult problem is that we also ask merger review to at once be predictable - you know, what do we know about the broad sweep of industries that would tell you, if you looked at an industry for a minute and a half, whether it would be likely to present a competitive problem? That's what you need for predictability. It has to be predictable. And, also, it has to accommodate, you know, places where that minute-and-a-half look is a serious error. You know, it has to accommodate the exceptional industry which deviates from the broad general trend of industries. That's an extremely difficult problem.

In the last 20 years, economics has made very little effort to address the first part of that. What's the broad general sweep of industries? If you had to think about all the industries in the economy, which ones are likely to present a competitive problem?

The reason we have worked on that very little is that, in the previous two decades, we launched two gigantic literatures: the structure-conduct-performance literature and the Chicago School of Economics - not to be confused with the Chicago School of Antitrust. Both structure-conduct-performance and Chicago Economics, as efforts to do that broad sweep, were empirical disasters. There's just too much heterogeneity in industries to do that in a really good way.

We have made enormous progress in investigating individual industries and in building a tool kit that allows the policy arena to look at individual industries. We have heavily oversampled concentrated industries in the empirical studies. Automobiles used to be a center of gravity of the literature, and now auctions are.

Concentrated industries in the modern economy have a lot of market power. That would be my bottom line on that literature.

Do we know the functional relationship between concentration and market power? No, I don't think we know that very well at all. But we do know the extreme end of it around the range that modern merger policy would intervene.

So I guess I would say that the available information in the research literature would suggest a policy not unlike the one we have. It would push, I think, somewhat in the direction Larry and Dan suggested of being a little more careful in quantification of competitive effects rather than of market definition *per se*.

I guess I would not be eager to embrace the idea that all kinds of mergers should be held to the standard of quantification that we can now do in a unilateral-effects case. We can do a pretty good job of forecasting in a big, well-studied consumer products industry whether prices are going to go up. I'm not sure we could do that in a coordinated effects area nearly as well, and I am not sure it's useful to ask to hold the policy to that standard.

So if I were going to say what the thing that's most wrong with modern merger policy is - it's actually something that did come out of my time in government, rather than out of my time as an outside observer of government - that's consent decrees. No one has mentioned it so far. You know, the agencies like to encourage the merging firms to spin something off. I'm not sure that the origin of that is in our refined ability to tell exactly whether the widget division is going to make a big contribution to competition or not. There are an enormous number of these consent decrees out there. I think a lot of them don't do very much for competition. My friends in the bar call me up and ask my advice on what horrible divisions to keep around in case they should someday want to do a merger.

[Laughter.]

MR. BRESNAHAN: You know, I think that's the only part that strikes me as seriously off. I think the system basically works.

Thank you.

CHAIRPERSON GARZA: Thank you very much.

Commissioner Carlton?

COMMISSIONER CARLTON: Thank you all for taking the time to both come here and prepare excellent summaries of your views, and for those of you who have submitted papers, and to Tim for the excellent paper that's coming.

[Laughter.]

COMMISSIONER CARLTON: I have really two areas I want to explore. That fits very nicely with this panel's composition, when we have three former enforcers, and then we have two people who have studied entry and efficiencies. And I have general antitrust questions and then specific questions on entry and efficiencies.

Let me start off with some of the questions about general antitrust issues. Several of you made the point, which I agree with, that the Department, the government, does more than just sort of blindly apply the Guidelines or market definition. But market definition does remain, especially when you get to court, an important part of the process. Whether or not, you know, economists think they should be doing that, they do do that, and they do it as a screen, I think, that may be useful to get rid of cases that shouldn't raise antitrust issues.

So here's my question: let's think of the market definition used under the Merger Guidelines, and I want to ask you whether you think it's practical, and let me explain my concern.

The definition under the Guidelines is focused on demand substitution, and it asks the question, start with a product, add some more - other - products as a result of doing the hypothetical monopolist test, in which you ask if a hypothetical monopolist were a monopolist of these products, could he raise price by five percent in a profitable way?

And if he couldn't because there's so much substitution from some product X outside the market, we'll bring X inside the market. And although I think that is a very well defined problem for an economist to articulate, my question is whether it's practical to think that that is how markets are being defined. And, in particular, if you think of the information you need in order to answer that question, you would need to estimate a demand system, both for the products inside the market and outside the market. You need to know the profit function of the firm. And then you have to be doing these experiments. So you have to know really an enormous amount of information.

What worries me is, that's in the Guidelines, and are we happy with that definition? I don't think it's applicable very much. And instead, what people tend to do is ask consumers, if you were faced with a five-percent price increase, what would you do? And they say, "Oh, I'd buy product X; I'd buy product Y." And then you kind of put that in the denominator, and they call that the market.

So what, in fact, people wind up doing a large fraction of the time is something that is practical based on what consumers say, or, in their judgment, what rational and marginal consumers would say. But in practice, therefore, what is being done is quite different than the definition in the Guidelines. And I'm wondering, especially from the enforcers, whether you think that's helpful or harmful. Do we have a definition that economists like? They're happy with it, but it seems to me quite useless most of the time.

MR. RUBINFELD: I'm happy to - you want us to just randomly dig in?

COMMISSIONER CARLTON: Sure.

MR. RUBINFELD: I'll start off, and then you can agree with me.

MR. WHITE: Of course.

MR. RUBINFELD: I think your description is generally apt, but I think I disagree with you, Dennis. I agree that one has to be very careful about doing simple - let's call it simple - surveys where you ask people what they would do in response to a hypothetical five-percent price increase. The support for that view reminds me of something that happened at least once when I was at the Division when we would go out and ask customers what they thought about a five-percent price increase and generate a bunch of subpoenas saying it would be horrible. And the parties would come in, and they would have the same customers telling them exactly the opposite. They would just sign any subpoena, you know, that they were asked to sign to keep people happy.

And, of course, technically they were being asked the right question, but their context was wrong, because they weren't thinking in the hypothetical monopolist's world, and they were thinking about current prices, not competitive prices. So that supports your view.

But overall, I think we, as economists, and I think the staff at the agencies understand that problem, and there's much wider information, I think, available to allow us to really understand the shape of the - the demand curve for the hypothetical market. Really, that's all we need to know, the shape of the curve.

And the information comes not simply by estimating full demand systems, but we can infer it from information that comes out of marketing documents, sales reports, things of that sort, or - and Jon Baker and I have a review article where we talk about all these techniques. Or occasionally, if we don't have that source of information, we can use survey methods, and the conjoint survey methods have been used. The Division used it in *Dentsply* with mixed success, but I think it was the right way to go. The conjoint methods, for the Commissioners, are methods that ask people survey questions, but they pose to the people - the customers are people who ask the questions - conditions that mirror real budget constraints, so people feel like they really have a choice, and they're giving up something when they answer that they'd rather buy good X than good Y. And by varying in a very clever way the sort of set of attributes that people face, you can really infer something about the shape of the demand curve.

So I guess, overall, I do - I don't think that the Guidelines can always be applied fully, and I agree with you that in many private cases I've seen, they've been badly utilized. But I would hate to give up on the principle. I really think there's a lot of promise.

Larry?

MR. WHITE: Yes, I do agree with you, Dan.

First, it's just the right way to formulate the question, and in some sense, it has stood the test of time. Or to use Professor Stigler's phrase, we see the survivorship principle at work. We have almost 24 years of experience of thinking about market definition in merger cases in this way, and it's terrifically useful.

Second, there certainly are instances where the data needed are not the very complicated, hard-to-understand data. And let me refer back to the case that Professor Reiss mentioned earlier, *Staples-Office Depot*. Yes, I know there are some econometric arguments about what was really true in that case, but - at least the way I look at it, and the way Professor Baker looked at it and Professor Ashenfelter looked at it - at the end of the day what you had were price comparisons across a set of metropolitan areas where, when there was a single office superstore, prices were higher; when there were two office superstores, they were somewhat lower; and when there were three, they were lower still. And what that price comparison data at least told me and told many others was that office superstores were a relevant market. The data were saying that office superstore products that were sold by office superstores could be monopolized. A monopolist could step in and consolidate what were otherwise a set of more competitive sellers and succeed in achieving a small but significant non-transitory price increase.

There is a great example of the way the Merger Guidelines focuses our attention on what the relevant market is. One could use the same kind of cross-sectional evidence to say that airline service between a city pair is or is not a relevant market, depending, for example, on distance between the two endpoints.

Again, as I mentioned in my earlier comments and in my written contribution, we now have 20 or so years of price-oriented data and studies that show that concentration matters and that show up as price effects. Again, this kind of evidence says that those are relevant markets for merger analysis.

So, the Merger Guidelines are conceptually the right way to go. And there are certainly instances - my guess is that there are many instances - where the data are there, they're analyzable, they're understandable, and you don't need to get very fancy in the way of econometrics to understand what's going on.

COMMISSIONER CARLTON: I agree with what you're saying, Larry, but what's interesting about what you said, which was kind of my point, which is that the data that allows me, say, in the *Staples* case to determine if the price is high, whether there are two firms or three firms, I don't really need to do this market definition; that is, what's somewhat peculiar is, if you have enough data to define a market according to the Guidelines, then you really do have in your possession the ability to answer directly the question you're interested in. And what's peculiar to me is, I'm going through this exercise in which I take this data - now I can really apply that market definition in the Guidelines, and now I can really figure out if prices are going up. Well, as you just said, I start with the observation prices are going up; I'm done.

So what I'm kind of worried about is, when I don't have the data, I still have to define a market, and then I know I can't do what's in the Guidelines to do these other things.

Now, I think what Dan is saying - I can use other methods to try to get an idea of the demand curve, and that I understand. So I agree with you. So, Tim, I -

MR. BRESNAHAN: So, Dennis, let me partially agree with you. I think there were—certainly, there were hopes from the Merger Guidelines process that haven't been realized. I mean, one hope was that the conference-table methodology - sit a bunch of attorneys around a conference table and have them argue about what the relevant market is - would be replaced by something that was more objective, scientific, and quantitatively grounded. And that has only partially succeeded. I think you now have larger teams of people from two disciplines sitting around those conference tables, arguing with competing statistical things. So I don't think that has gone as well as we hoped.

And I think in the courtrooms - you know, as opposed to the agencies' conference rooms, courtrooms are a very difficult environment for quantitative analysis. So the ability to - you know, in this body we can say you just calculate the competitive effects. That carries with it an enormous pile of intellectual baggage, which would be extremely difficult to get into a courtroom in good order. So those are the two sort of problematic areas here.

On the other side, you know, I have to put, compared to what? It's extremely important that the plaintiff or prosecutor say with precision what competition is being harmed and how. And for better or worse, the Merger Guidelines and market definition are how we do that. We've got to have something in that box. This one works okay. There's a trend inside companies towards more and more quantification of things driven by cheap computing and cheap measurement of what customers, suppliers, and employees do. There's more and more information. I guess I would say that the idea that there's not enough information to answer the SSNIP question is typically false.

So I would be, you know, on balance, pro something like what we now have.

COMMISSIONER CARLTON: Okay. A lot of you talked about the difference between unilateral and coordinated behavior in the Guidelines, and I want to explore whether that really is as big a difference as it appears. And, in fact, I want your reaction to the following: it's not clear that there really is a principled distinction between unilateral and coordinated effects. The Guidelines could just as well have been written without the word "unilateral" in them. “Unilateral” is just a clever way for the Guidelines to have incorporated the possibility that markets are really narrow, and maybe that won't stand up in court.

And the reason I say this is as follows: Stigler's theory, as I think Larry correctly pointed out, sort of was the underpinning for Baxter's revision. But modern oligopoly theory interprets Stigler as just doing a non-cooperative game, maybe with a punishment strategy, over time. And unilateral effects, the way that's been implemented, is a game now. It's a static game; it's a Bertrand game, which is a criticism, but it's a game. And people are using game theory to model both what people used to call coordinated and what people now call unilateral. It's just a game, just a differentiated-product game. You can have degrees of differentiation in product. In fact, semantically, I think people have slipped into calling unilateral "differentiated products" and coordinated "homogeneous products." You don't have to have that. You can have oligopoly games in either case.

So I'm wondering whether we really have a distinction between the two as economists. It seems to me it's the same problem. Generally stated, firms are merging. They're playing a game with each other, a competitive game. What's the outcome? It's not like we should use different methods for coordinated versus uncoordinated. So that's - I'm interested in your reaction. Let me give you a possible answer, okay? The game you play is different from the number of firms playing it. A merger changes the number of firms playing the game. It is also possible that the merger can change the type of game played. You can make new information channels become available, which we know from Stigler can change the type of game.

That's the only distinction I've ever been able to come up with between coordinated and unilateral. I'm curious especially what the former enforcers - and I assure you two guys I'm going to ask you questions, too - what you think about that.

MR. RUBINFELD: Go ahead, Larry.

MR. WHITE: Again, I grew up in the world of "coordinated effects", and it took me a while to understand "unilateral effects." I wasn't at the Antitrust Division when Tim showed up in 1984, but it doesn't surprise me that my successors thought he was speaking Martian to them. I probably would have thought he was speaking Martian. It has taken me a while to understand.

I think there is a useful distinction. Partly, it involves this issue of, do we have to go through the steps of the Guidelines analysis: think about market definition, think about seller concentration, think about conditions of entry, think about the buyer side of the market, *et cetera*? Or can we just go to: Is there likely to be a price effect because these two sellers have a bunch of buyers for whom the preferences are first and second across the two sellers? So, in some sense, the buyers are trapped between the two sellers, and either the sellers can identify them in some way and can practice price discrimination toward them, or these particular buyers' demands are so inelastic that just raising prices generally is going to be worthwhile because these guys are trapped, and you can really stick it to them, and who cares if you lose a bunch of other buyers.

That's a unilateral effects analysis, and, yes, you're right, one can bootstrap it or back-door it into the overall framework by deciding that that's a market under the Guidelines. But we'd be better off if we would recognize it directly. Clearly, this is different; just look for the price effect, and don't worry about the other steps, as I indicated earlier. So there is a difference.

Now, let me mention one more thing: Even in unilateral effects, it might be that these two firms are merging, and then there might be, again, in the Stigler type of framework, some fringe firms that might react passively, raise their prices as a consequence of the two primary merging firms’ raising their prices. So the price effect might go a little bit farther out beyond just the two merging firms, but still, the whole way of thinking about it is still a unilateral way of thinking about it rather than the coordinated effects paradigm.

So I think that keeping the distinction is useful.

MR. RUBINFELD: I agree with a lot of what Larry said. I still find it a useful distinction as well. I think you're right, Dennis. I think we're talking about games in both cases, and perhaps we should be up front about that. But at least in the sort of traditional - what's become the traditional unilateral effects case, we all have in mind the same very specific game. It's a differentiated Bertrand game. Perhaps we should do more of that, but that's sort of where we are, whereas, when we're thinking about coordinated effects - actually, at this point, I think we're really in a much more complex, elusive area, because we're tending to think about - if we're thinking about, say, what amounts to an agreement, which is a very complicated area, we're really asking ourselves what the right repeated game to think about here is. And, you know, there are a lot of possibilities that probably Peter could talk about as well as anyone.

But I just still find - I find it useful because you do think somewhat differently about the Bertrand game than these other games. I think a lot of interesting work in the next ten years will actually be on the coordination side. But I also think, as I said earlier, the distinction allows me to say what I said before, which is, I feel more comfortable skipping the market definition exercise on occasion with the Bertrand game than I would if we were telling one of these repeated coordination games.

MR. BRESNAHAN: I agree with what Larry and Dan said. It's an evidentiary distinction, not an analytical distinction. There's a lot more information in the industry at hand, in what happens in the pre-merger world about how incentives are going to change from the merger in the product-differentiated industries we think are suitable for unilateral effects; whereas, in a coordinated effects case, it's unlikely that there's going to be a lot of information about whether, if there's one fewer, it's going to be possible to maintain a cartel. So it's not a deep analytical distinction; it's a practical evidentiary distinction. And I don't think we should throw away the tremendous success of the research community now in marketing departments as well as in economics departments at pushing forward the tools and techniques that let us do the unilateral effects cases.

COMMISSIONER CARLTON: Okay. I think I understand what you guys are saying. Let me just follow up with Dan and Tim on one point. I think you're exactly right. These unilateral effects have differentiated Bertrand games. It's not so obvious that that's a good thing. In other words, I actually think a lot of the research is going to be broadening those models to have more repeated games, and then I think it's - although for convenience right now we use a static game for unilateral and a more dynamic game for coordinated, I'm not sure that analytically is going to survive. And I think they're going to converge in the research.

MR. RUBINFELD: If I can interrupt, for example, if we start taking into account the possibility of repositioning, you can imagine we're now - we could come into in a repeated game situation with a very different story to tell.

MR. BRESNAHAN: Not on my watch, Dennis. I mean, when I was the only guy doing those differentiated-product models, I didn't assume Bertrand. And that assumption of convenience I think has been a terrible mistake in the follow-on literature. Hallelujah for what you're saying.

[Laughter.]

COMMISSIONER CARLTON: Yes, that's my view.

All right. This is my last antitrust question - I mean general policy question, and it has to do with something I've been worried about for a long time, and Larry actually touched on it, and it has to do with - and I think Dan touched on it in his paper. It has to do with the use of the Merger Guidelines by courts in non-merger cases to define a market. So, it's how you define a market in a Section 2 case. I just want to sort of outline my concerns and then get your reactions.

Courts and attorneys want you to use market power in a Section 2 case so that, basically, they can say there's no market power and throw the case out. So it's clear what the incentive on the attorney's part is. The question is, how should an economist be viewing, in a Section 2 case, the notion of market power and what it means to apply the Guidelines?

Now, here's the problem. There's a bad act that's been alleged. Is there market power? Well, sometimes someone could reason - I'll use the Guidelines. The Guidelines are talking about where the price is going to go up from the pre-merger levels. So, the way to analogize the Merger Guidelines to a Section 2 case is to ask, is price going to go up from the "competitive level"? So now the one question you might have is, is that the competitive level before or after the alleged bad act? Presumably, it should be before the alleged bad act. So now I have to figure out what the price would be before the alleged bad act, and, in particular, I have to figure out what the "competitive price" would be before the alleged bad act. That strikes me as something that's quite difficult, and what I'm worried about is, it's such a vague concept that it's not clear this will help things.

You could ask, is price above marginal cost? Now, you know, a lot of us - people have pointed out and I think - Dan, you point out in your testimony you don't like that, and you would use some measure of average cost. That's okay. Economists know two costs - marginal cost and average cost. Marginal cost strikes me - a price above marginal cost is market power. Price equaling average cost means the profits are zero. And I think it makes perfect sense to say that there's no market power if, for whatever reason, profits are being constrained to the competitive level. But as you point out, we don't want to go down the road necessarily of having to calculate profits because it's so complicated.

So my question is, if you don't want to go down the road of calculating profits, you don't want to use marginal cost as the basis of the competitive price, what should we do in Section 2 cases? Should we tell people it's awfully hard to define markets in a way that an economist can determine whether there's market power? Because to determine "the competitive price," which is what you have to do to apply the Guidelines - Would a deviation, a small but significant increase in price above the competitive level, be frustrated? You have to know what the competitive price is, and that's really a real hard question.

So I'm interested in sort of - actually, anyone's reactions, but I think maybe Larry -

MR. WHITE: Okay. I'll start again. I brought it up in my paper. I agree, we are in a horrible, horrible situation. Too many people - smart economists as well as smart lawyers as well as smart judges - have been led astray by thinking, incorrectly, about applying some kind of five-percent price increase to observed prices. That approach leads in the wrong direction.

There are a few places where we do have some guidance. First, as Greg Werden at the Division has pointed out, suppose we're looking at a prospective act of monopolization: It hasn't happened yet; maybe somebody is asking for an injunction against a proposed exclusive dealing arrangement or a proposed tying arrangement or some proposed act that the plaintiff claims is going to cause the defendant to be able to exercise market power. In this case we are in the world of the Merger Guidelines. Then we are in the world -

COMMISSIONER CARLTON: Right. That's asking the question, which I think is the relevant question for an economist, does the bad act raise price?

MR. WHITE: Will raise prices. Will. Yes, will. Just as, will a merger raise price, will this act raise price? And -

COMMISSIONER CARLTON: I agree with that. But when you get into a court, the first question they might want you to answer is, is there market power? Economists always, and for good reason—they always want to go to the second question. Will the bad act cause price to -

MR. WHITE: Will there be market power? And that's what the Merger Guidelines ask. Will there be -

COMMISSIONER CARLTON: Is there? Is there right now?

MR. WHITE: And I'm saying the supposed action is prospective, and so the right question is, will there be?

COMMISSIONER CARLTON: That's the right question to determine liability, but I'm asking a separate question, which is, as a precondition to a Section 2 case, you must show there's market power. If there's no market power, you throw it out. And I'm saying - I'm agreeing with you entirely. You identified what the ultimate question to determine liability is. You can have market power if the bad act doesn't do any bad thing, or the alleged bad act doesn't do any bad thing. I'm saying, for that first step, *is* there market power?

MR. WHITE: It feels to me like we are talking past each other. I'm addressing a world where, at the moment, this particular practice isn't yet in place, but a firm is proposing to put it into place. I can't tell you what courts do ask. But I do know the right question to ask: Will there be market power?

However, that way of thinking about the problem isn't useful when the vertical restraint is already in place, has been in place for however long, and a plaintiff is there saying, as a consequence of this vertical restraint, I've been frozen out, I've suffered this, and I've suffered that. Then we have this real problem.

The other place where we can get useful guidance is from cross-section information on prices. Let me go back to the *Staples-Office Depot* information. Suppose you believe the argument that office superstores are a relevant market. Suppose further that there is some market where only Staples is present and no other office superstores are present. A plaintiff marches into court and says Staples in this metropolitan area has bought up all the best real estate sites and has frozen me, a potential competitor to Staples, out of the market. In this case, one can use the cross-section price information – or maybe one needs to do it again. If one finds that it is still true that prices are higher where there's only a single superstore, then at least we have covered that first question of, does Staples have market power in the office super store arena in this metropolitan area? Yes; the price information tells you yes.

There’s another area where we have the cross-section price information. I was an expert for the Kansas City Southern Railroad, which challenged the merger of the Union Pacific-Southern Pacific Railroad ten years ago. Again, here's an area where cross-section pricing information could delineate markets: Railroad freight hauls is a relevant market in lots and lots of areas. I thought the evidence said, as a consequence, when we go from three carriers down to two there's going to be substantial price consequences; it’s true even when we go from four down to three. Professor Willig, who was on the other side, disagreed.

Again, this is an area where we have cross-section price information. It's not only useful for mergers, but it's also useful for a Section 2 monopolization case. But where we don't have cross-section price information, that's where we run into big, big difficulties, and we have a lot of trouble figuring out what the right story is for the market and monopolization.

COMMISSIONER CARLTON: Dan?

MR. RUBINFELD: I actually disagree to some extent with what both of you have said, and perhaps this is because I've been teaching antitrust a lot and not IO, so maybe I'm more pragmatic. The fact of the matter is, the courts made it very clear that they want to know what the market is before they consider Section 2 questions. And I think even though it's not - you're quite right; it's quite difficult to answer the Guidelines’ question. I think the exercise of thinking about it is still a practically helpful exercise. I don't think price of marginal cost is typically the right answer; I don't think price equaling average cost is necessarily the right answer. I'll probably rewrite some of the - I think the right answer, as you said, is, what would this market, which is perhaps oligopolistic, be like absent the bad act? And we probably can't know what that is exactly. You'll notice in *U.S. v. Microsoft*, the government never spelled out formally what that price was. It wasn't necessary, in my view. But we can go through the exercise of thinking through what it would be like.

In fact, in some cases it could turn out that the bad act really wouldn't have affected price. It might have affected the rate of innovation, in which case maybe the exercise will be workable. So I wouldn't give it up. I would just not expect, again, a numerical answer that is at all reliable.

MR. WHITE: In the *Microsoft* case, there were some very smart people who are on the record as saying, "How do we know that Microsoft has market power? Well, they could profitably raise the price 5 percent from current levels." And that can't be the right question or right way of thinking about the question, "Does Microsoft have market power?" In principle, if Microsoft is doing the best job for their shareholders and maximizing profits, a five-percent price increase from observed levels should not be a profitable thing for Microsoft to do. And yet these were very smart people who were asking that question, who were putting that idea out there in that particular case. It's not a productive way to be thinking.

COMMISSIONER CARLTON: A smart person who I didn't think was associated –

MR. BRESNAHAN: No, I didn't make that particular mistake.

[Laughter.]

MR. BRESNAHAN: We can whine all we want that, you know, because of the good thing that Section 2 cases are fairly rare, you know, the courts haven't updated this rule from the days when, you know, asking the plaintiff to prove market power was a fairly low bar. You know, that is now a much more difficult and daunting thing for a plaintiff to do than it was when a lot of this law got made. We can whine about that all we want. It's a fact. So I agree with Dan on that.

I think, you know, someone should, at some point in this conversation, say “cellophane”, and, you know, it is -- it's not a conceptual problem to ask is the current price high? You know, it's just an elementary error to ask whether someone who's accused of being a current monopolist could raise it even higher, and, you know, sort of the - you just want to think about the right hypothetical. What if the current firm were two? You know, would incentives change in such a way that prices would be lower?

I agree with Larry that Greg Werden's recent paper on this topic is quite helpful in untangling the issues. And I think, once people get used to the issues, we're going to be fine.

COMMISSIONER CARLTON: Okay. Let me now turn to questions on efficiencies and entry. Let's first talk about efficiencies, and, Steve, I liked your summary of the literature, but I had a few questions.

The whole idea of a merger is changing the structure of a firm, the organizational form that firms are using. And at least I know economists in merger cases haven't paid a lot of attention to the fact that there may be some industries where such change is necessary. And Andrade in that review article with his co-authors emphasized that mergers are occurring in particular areas, and it's not just random, the areas they're occurring in.

It seems like recognizing why mergers are occurring - which I know is something that Larry has actually worried about in a paper a while ago - strikes me as a useful beginning question. And then I guess another question I had for you is the accounting studies that you explained or described are much less successful than the event studies in showing a decided positive influence. One reason might be noise, as you say. I'm curious why the Ravenscraft and Scherer study seems to be the main one that shows decisively negative findings. Findings are usually neutral or slightly positive, but they found negative, and I was curious if it was their sample.

Is there any evidence on these efficiencies that anyone's looked at in the financial literature that are specific to R&D efficiencies as distinct from operating efficiencies?

MR. KAPLAN: Okay, let's try to answer that. The first question about the technology shocks that Mitchell and Mulhern find is likely important. As a general tendency, I would suspect that technology shocks lead to mergers based on cost-cutting and efficiencies. One example would be banking. In banking, you had a change in regulation - Glass-Steagall was relaxed. And you saw a lot of banking mergers. Duplication of systems is costly. You put two banks together, you have one set of systems instead of two. You save a lot of money, whether there's pricing power or not. I think in many cases there are competitive markets in banking, and it's hard to argue there's market power. With regard to R&D efficiencies, I am not sure.

My sense is that it's worth understanding why acquisitions are happening in a particular industry, and my sense is they are often driven by efficiencies and overlap when there's some sort of technological shock.

The second question about accounting, the accounting studies versus the stock studies, I did a clinical paper in the book that I edited with Mark Mitchell and Karen Wruck where we tried to isolate the cash flow changes with a merger and tried to understand whether a couple of mergers were successful. In both those cases, they were not successful. But then when you looked at the accounting numbers in the way that the large-sample studies do, you wouldn't have found that they were unsuccessful given the accounting numbers, and that goes to the fact the accounting numbers are very noisy. There are many other things going on. The announcement return studies are focused on the market reaction on the day of the merger and is more likely, one would think, to pick up the economics of a particular merger.

Now, why did Ravenscraft and Scherer find a particular result that is different from some of the others? They found a decline in accounting performance. One reason may have been that they studies conglomerate mergers. The other reason had to do with depreciation. If you added back depreciation, you actually got no change. But when you didn't add depreciation, you saw a decline. And depreciation often goes up after an acquisition because of purchase accounting. I would have to go back and find that out for sure, but it may be that their results are not so different from everyone else's.

COMMISSIONER CARLTON: Okay. Let me ask Peter a question about entry. In general, one of the findings of these entry studies, really industry studies, has been the enormous heterogeneity in the underlying population of firms in an industry as well as in the entrants. What do we know generally about the effectiveness of entry as a function of the characteristics of the entrant? My general view is that what we know is that the effect of entry varies enormously depending upon these characteristics. Is the person from the same industry? Is it a new entrant? Is it someone who's expanding from a related industry? So that was one question I had.

And then the second question I have really goes to option value. As you were saying, we now understand better that option value is the opportunity cost of waiting, of not entering when there's an industry with sunk costs. And the question is, how valuable that option value is, and that option value is going to be valuable depending upon how many people are competing to take advantage of that value in the way you would get an equilibrium in a competitive model; if you really had a competitive model, how many firms do you need to drive that option value to zero? And what I'm a little concerned about in trying to understand option value and entry and barriers to entry is, in order to know whether there is a barrier to entry, I need to know something about the potential entrants. And if people are heterogeneous, I'm a little worried;, where in the world am I going to get that information?

So if you would comment on both of those questions.

MR. REISS: I think you asked excellent questions, which I'm not sure I am warranted to, but let me start with the heterogeneity point. I think it's fair to say that - and this follows up on a point by Tim - that, over the last 20 years, economists have gone away from sort of broad-brush views of what happens across lots of different industries to looking within industries. And I think it's fair to say that, to the extent that broad-brush studies have gone on, we observe there's just tremendous heterogeneity in the success rate of entrants, the size of entrants, why entrants are coming in. Are they completely new firms, or are they existing firms, diversifying?

I think the problem was, economists got away from sort of doing those cross-industry studies because it was impossible to make generalizations about all of these different facets of why entrants are heterogeneous, and instead, economists, to the extent that they have deep insights, I think have come from these sort of within-industry studies, looking at specific industries and trying to extract from the details of those industries to what extent the technology that the entrant is going to use is new or novel, so looking at the extent to which technical change might drive entry, the importance of patents, the expiration of patents –

So, for example, one very active area of interest to economists is at the entry of generics when drugs come off patents. And we've learned, I think, a number of things there about the importance of technology, how easy it is to replicate, how easy it is, for example, for a generic to replicate the brand capital of the pioneer drugs, so there are a bunch of studies that have tried to look at what is it about the pioneering drug that creates a brand, and how quickly the prices of the pioneering brand respond to the entry of generics.

I think we have sort of lots of insights there about the importance of cost structures, distribution systems in terms of thinking about what might matter if we're looking at a specific industry. So I think there are economists accumulating lists of things, if you will, that we could look at to sort of think about this question, but in terms of saying across all industries how important each of these components are, I don't think we're anywhere close to that.

There is heterogeneity. I think we have ways of looking at a specific industry, for example, drugs, and thinking about what the likely success rate of different entrants might be. But there are other markets where we have a very difficult time doing that.

And this goes back to an earlier question you asked that I would like to comment on. This is the market definition question in the demand substitution case, and this leads me into the second question you asked, which is, imagine trying to define a market - I'm thinking about telecommunications, and I want to know to what extent voice-over-IP is part of wireless or telecommunications more broadly, and, in particular, I'm trying to forecast; in two years, let's say, is it likely that these voice-over-IP technologies are going to be serious competitors with wireless firms?

That's a very difficult question in terms of thinking about what the market definition is. It might be useful to ask customers in that particular case, you know, would you use this technology? What difficulties do you find in using it currently? That sort of thing. And I think that sort of leads me to think about the problem we have in defining markets, thinking about unilateral effects, coordinated effects, since ultimately, the supply side is going to matter here in a dynamic sense. We're going to have to forecast things for the future which might involve what potential entrants would look like, what type of technology they're going to use, and what type of products they're going to produce.

I mean, we could say, look, the technology exists for this, for a generic drug company to come in there, but can they actually produce? Do they have the capability, and will people buy a generic drug in this particular category? Those are all, I think, very difficult questions, which we know in some sense matter, but we have a very difficult time quantifying.

I like the question you asked about the option value of some costs being affected by potential entrants. Think about what's actually being contemplated here. We have to not just forecast whether another firm will come in, but could multiple firms come in, and what technologies would they use? The Guidelines, I think, constructively, ask, in an economic sense, the right questions, timely, likely, sufficiency, but there's almost no guidance there as to how one would in some sense try to quantitatively answer those questions, particularly in markets that might be rapidly evolving, like telecommunications markets, and I think that's a real practical aspect of the Guidelines that needs attention.

Just to hit on option value for a moment, I tried to point this out in my written remarks. I think that, ultimately, the option value question is part of the broader cost question, which is, we're thinking about whether it's difficult for a firm to come in here, we're going to ultimately ask, what is the firm going to put on the table, both in terms of physical investment costs and in terms of opportunity costs of committing capital now versus waiting, or maybe never entering, and I think currently, we have the right framework for thinking about how a potential entrant would make that decision, but we have very little idea of thinking about actually measuring those quantities in a way that I think we could feed them through a quantitative model.

So that's why, in my written remarks, I try to raise the *Staples* case as an illustration while in principle I think we can ask these questions and have a useful framework for asking them, I think in practice it's likely to be more complicated than I think we'll actually seek being done in practice.

COMMISSIONER CARLTON: I want to thank you all very much for putting up with my questions, and as I understand it, we're going to take a break now?

CHAIRPERSON GARZA: In fact, I think we could go to a quarter-to if you had another last question or anyone had any last comments they wanted to make.

COMMISSIONER CARLTON: Well, I have a last question; I have plenty of questions.

[Laughter.]

MR. WHITE: Why am I not surprised?

CHAIRPERSON GARZA: Five minutes, Dennis.

COMMISSIONER CARLTON: If I have five more minutes - Let's see, in trying to assess whether we're doing a good job on policy, on antitrust policy, several of you suggested various types of studies we could do. I think everyone who touched on that topic limited it to a question about merger policy, and in general I think everybody seems to agree around the table that the merger policies that the United States has been engaged in seem pretty sensible, not based on any particular study, but based on sort of everyone's individual judgment.

COMMISSIONER SHENEFIELD: Is that true? Do you agree with that?

MR. KAPLAN: I would say, if anything, you could relax, given that, in the data there doesn't seem to be any evidence of market power, and there is evidence of efficiency gains. I would probably say there is room to relax it. I certainly wouldn't make it more aggressive.

MR. WHITE: And I would say I think the approach is sensible, but right now I don't know whether we're too tough or too lax, and we need those price studies of the near misses, the guys who went through, and if we discover there's no price effect from those mergers, we say, "Ah, we're too tough, we need to back off." If we discover that there are price increases following those mergers, we need to get tougher. But right now, I don't know the answer to those studies.

MR. KAPLAN: And I would agree with them, although my prior would be, given the change in the world, the internet, internationalization, *et cetera*, that if the policy was right the 1980s, it's probably too aggressive today.

COMMISSIONER CARLTON: So my question is, I think I can formulate a study for merger policy - and then Larry's formulated one - easier than I can formulate a study to ask the question, is our policy on vertical correct? Has anyone given any thought to our vertical policies and what types of study you would think about? And it seems to me the difficult question here is not just the litigated cases, but the effect of the litigated cases on the cost of doing business of firms in the economy. I'm wondering if anyone's given any thought to that.

COMMISSIONER VALENTINE: Does your question go to single-firm vertical restraints, or vertical mergers?

COMMISSIONER CARLTON: I think my question would go to anything that's not a horizontal merger.

[Laughter.]

MR. BRESNAHAN: Not a researchable question. You know, it's right that vertical cases are fairly rare, because a series of things have to stack up for a vertical case to have a big impact on competition. You know, you need one of the two markets that are vertically related to be open to change in competition. You need the vertical restriction or the vertical merger to be something that could effect a change in the conditions of competition in one of the two markets. You need the incentives of the firm that's, say, dominant in the other market to be aligned with that. Those are fairly rare conditions, and I think our ability to study - our ability to find out - of the vast sweep of vertical contracts that are efficient - our ability to find the ones that are like horizontal mergers that were consummated but close to the boundary is extremely, extremely difficult.

How are we going to identify the false negatives? There are so few positives.

MR. RUBINFELD: Are you also including Robinson-Patman in your question?

[Laughter.]

MR. RUBINFELD: I was joking. But actually, I agree, your question's too hard and I'll take about a year to think about it.

But I did want to take a moment to respond slightly to Steve, and that really doesn't answer your question. In responding, I don't know all the studies Steve's referring to, so I'm just reacting generally. The study, I presume, includes a broad set of mergers back in the '80s and maybe the '90s. My impression, having had a two-year window where I saw the flow of a lot of mergers, was that if I could have played a card that said, "Stop this merger, because it's a really bad deal," I would have played that card a lot of times, but it would have had nothing to do with antitrust.

[Laughter.]

MR. RUBINFELD: It would have related to the stupidity or the egos of the CEOs of the two companies. But I didn't - I did my job.

CHAIRPERSON GARZA: But no one who would be your client, of course.

[Laughter.]

MR. RUBINFELD: Of course not.

So what I worry about - to make a serious point - what I worry about is that the studies that show that mergers have zero or negative returns may simply prove my point.

COMMISSIONER CARLTON: Let me just chime in. While you're not familiar with many of the studies that Steve has referenced, I'm familiar with none, so I'm free to speak.

[Laughter.]

COMMISSIONER CARLTON: Is the only evidence that you cite for efficiencies? In other words, what proof do we have that these mergers really result in efficiencies? And I've been involved in a couple. Is it the fact that the stock market has gone up? Is that it?

MR. KAPLAN: I rely on three basic findings. First, the event studies and the long-run studies on stock returns on the cash deals tend to be positive. Second is the study in the banking sector in which the market reacted positively to cost cutting. Third, the productivity studies using census data in which the plants that were acquired saw an increase at the plant level in productivity.

COMMISSIONER LITVACK: But I understood you, a decline –

CHAIRPERSON GARZA: Sandy, we want to take a 15-minute break, and you can follow up with your questions after that.

COMMISSIONER LITVACK: Sure.

CHAIRPERSON GARZA: Thank you. So we'll take a 15-minute break and come back and allow some more interaction with the Commissioners. Thank you.

[Recess.]

CHAIRPERSON GARZA: All right. As I indicated, we're going to give the Commissioners an opportunity to ask questions. As you can tell, some of our Commissioners are quite anxious to ask some questions. So we'll begin. Sandy's going to have to wait, because the order is -

COMMISSIONER LITVACK: I've lost my order.

[Laughter.]

CHAIRPERSON GARZA: You'll get it back.

I'm going to bring down the level of smarts here and ask some simple questions. Professor Bresnahan, when you were giving in your opening statement, you identified a couple of important characteristics of sound merger-enforcement policy. Indeed, all antitrust enforcement policy that the Commission has been considering throughout these hearings over the last several months. One is the question of the timeliness of enforcement reviews and action. The other that you mentioned is predictability, or what we have been calling transparency.

Two other important hallmarks of good enforcement policy we have been considering are, one, whether there is a consensus that there's a good sound basis for current enforcement policy, and two is whether current enforcement policy is appropriately calibrated so that it's not obviously over-deterring competitive activity or under-deterring. Those last two are key ones that I think we had hoped that you would be able to help us think about, and that's, I think, consistent with the questions that we published in connection with this hearing.

I think I'm getting a sense from where you all are on certain things of importance, to me at least, but I would like to clarify for the record, and we've actually started to go down this road. But I would like to ask each of you, and you should feel free to answer with yes or no. The first question is, do you believe that the framework of the current Merger Guidelines employed by the Federal Trade Commission, the Justice Department, and, increasingly, the courts, is essentially sound? And if I could start on the left with Professor White.

MR. WHITE: Yes, but I want the unilateral-effects story clarified and cleaned up. But if you force me into a yes or no, I say yes.

CHAIRPERSON GARZA: And on the issue of the unilateral effects theory, is your concern that the current enforcement policy is - may be deficient in some regard, or is your concern more going to the issue of transparency and predictability?

MR. WHITE: The latter.

CHAIRPERSON GARZA: Professor Rubinfeld?

MR. RUBINFELD: My answer is yes. I think it is working, and I think it is sufficiently transparent.

CHAIRPERSON GARZA: Professor Reiss?

MR. REISS: I think I would also answer yes, but I would emphasize that the value of the document is, it's a live document; it's continually subject to scrutiny by analysts such as yourself, by economists, and I think that's its great strength. It's not a perfect document, but it's a document that, as Larry said, has stood the test of time, because it evolved.

CHAIRPERSON GARZA: Professor Kaplan?

MR. KAPLAN: I really don't think I'm in a position to answer that, as not being an antitrust or industrial organization economist. I'll go back to what I said earlier. It seems that I don't see much evidence, systematic evidence that mergers lead to market power, and that suggests that it's certainly not - you wouldn't want to make it more aggressive, whether you leave it where it is, or make it less aggressive. I don't know.

CHAIRPERSON GARZA: I know that Commissioner Litvack and others will probably follow up with you on that.

Professor Bresnahan?

MR. BRESNAHAN: Yes.

CHAIRPERSON GARZA: Then the other question I have is, do you believe - did you want to elaborate on that?

[Laughter.]

CHAIRPERSON GARZA: I'm fine with yes.

Do you believe that the role of market share and market concentration in current merger enforcement policy is correct then? I take it that your answers would all be yes, except for Professor Kaplan, who's abstaining? Is that correct? Is there anyone who would answer that question differently?

[No response.]

CHAIRPERSON GARZA: Okay. And do you believe that the current Merger Guidelines' HHI thresholds are correct? Professor White?

MR. WHITE: And on that one, I don't know until we do the kind of studies that I described earlier.

CHAIRPERSON GARZA: One question, and then I'm going to have to pass, except for going to the rest of you all and getting an answer to that question. But, Professor White, one question I had about the studies you talked about - So if we went and looked at discrete mergers that had been investigated, say, through a second-request procedure, but allowed to happen with or without a divestiture, I guess, if we looked at those mergers on a discrete basis and looked to see whether price increased, whether efficiencies were obtained, *et cetera* - how would that inform our enforcement policy?

Would a case study come out of that that would just be one more piece of information that we could use, or are you suggesting that there be a study that would go to this question of whether there's a correlation between concentration and price, or what exactly would we do?

MR. WHITE: Suppose we "go back to those days of yesteryear," 1982, and look at the HHI levels of 1,000 and 1,800. One could ask, are those the right levels? First, let's take a good hard look at these mergers, and then second, there’s a presumption we're going to challenge a merger if the post-merger HHI exceeds 1,800. How would one know whether 1,800 is - controlling for other things - is the right level?

Well, back in 1982 we thought we knew because we had all those profitability-concentration cross-sectional studies that seemed to indicate that something was going on, and profit levels were higher at concentration levels that were sort of above 1,800, and lower below.

If you don't believe that those studies are relevant, then you've got to look at pricing studies. One valuable direction for research on pricing studies would be, as I indicated earlier, to gather as many of the existing studies as you could, and then try to do the statistical meta-analysis. In addition, we need to do econometric studies of the mergers that were allowed to proceed. At the simplest level, controlling for other things, what was the concentration level in whatever relevant markets were defined in the investigation? And one, two, three years out, what were the price effects in that market as compared with prices before the merger?

If there are no price effects, that would mean that those near misses weren't causing any competition problems. Maybe the enforcement agencies could loosen up a little bit. Maybe they could, instead of 1,800, use 2,200 as the decision point, and we might still be okay.

On the other hand, if we saw that those near misses were causing significant price increases, we would say, “Oh, gee, maybe 1,800 is too lax; maybe the agencies ought to be dropping the decision point down to 1,600, because there are some guys in that near-miss category, maybe it's 1,650 or 1,700, who have been let through, and prices are going up.”

So that's the spirit in which I think we need some quite doable research.

CHAIRPERSON GARZA: One quick follow up. Going back to comparing 1981 and '82 when were you in the Department, and now, over the course of time, I believe that there's a perception at least - -and maybe it's absolutely true - that the level of concentration in mergers that has caused the agencies, one, to take a harder look, and two, to actually seek to challenge a transaction, appear to have gotten higher.

MR. WHITE: I put in my paper: Mark Leddy was telling the antitrust press back in 1986 that the actual enforcement levels were substantially above the 1,000 and 1,800 levels. So from fairly early on the enforcement levels were above the stated Guidelines levels. Has there been a trend? I don't know the answer to that, and I'm trying to think whether one might be able to tease out from the recent FTC release data whether there's been a trend. But the fact that enforcement has been at levels above the stated Guidelines levels - I mean that goes back to the mid '80s.

CHAIRPERSON GARZA: Because my time has expired, I would just ask if anyone wanted to give a quick answer to the last question I asked about the thresholds. Yes, Mr. Rubinfeld?

MR. RUBINFELD: I think they're workable, even though these specific numbers may or may not be as meaningful as we would like, I think the bar is, the antitrust bar is very sophisticated - the bar knows what the practices are and adapts quite well.

I have one suggestion in terms of follow-up studies which would help us be more exact. One of the limitations we have - I shouldn't say "we" - one of the limitations the enforcement authorities have is that, once the HSR authority expires, you can't issue subpoenas to conduct a follow-up study. And it may be worth thinking about the possibility of having a very limited authority that would allow follow ups of selected mergers, because it's very hard to do the studies as economists simply relying on public data, and I think you could do that if you were very selective and very limited, without imposing substantial costs.

CHAIRPERSON GARZA: Thank you.

Professor Reiss?

MR. REISS: I would echo Dan's comments.

CHAIRPERSON GARZA: Okay.

MR. BRESNAHAN: I think I would add the remark that those numerical thresholds are probably not particularly descriptive or accurate of current agency practice. Current agency practice is substantially less aggressive than those numbers suggest. And yet I agree with Dan that the antitrust bar knows what practice is, so there's no serious loss of transparency.

CHAIRPERSON GARZA: Commissioner Shenefield.

COMMISSIONER SHENEFIELD: Thank you, Madam Chairman.

I'm grateful to you all for coming and for participating, for your presentations, and to Dennis for leading you in the Roundtable, and I found the discussion interesting in the extreme.

But we have to make recommendations in the real world, so I'm going to ask you a practical question. Setting aside studies, if you can, what specific, concrete changes in the way cases are tried, the way judges get access to economic sophistication, the way the agencies deal with economic arguments, institutional, procedural, whatever, what specific innovations, techniques, devices, would you recommend the Commission consider recommending to the Congress and the President? Why don't we start with Professor White.

MR. WHITE: Clarify unilateral effects analyses, and clarify it in the way I described earlier.

COMMISSIONER SHENEFIELD: Professor Rubinfeld?

MR. RUBINFELD: I take your question to be very broad, and the one area that concerns me is the ability of courts to manage some of these complex cases, because courts do not typically - judges specifically do not typically have lots of antitrust experience. And my view is that if we could find ways to encourage courts to use court-appointed experts, we could greatly improve the process.

I've served as one myself, and I've been involved in some cases where there have been other court-appointed experts, and not only, if done properly procedurally, can that be helpful to the court, but, most importantly, it changes the incentives of all of the experts who are participating in the litigation. When you have a court-appointed expert, you will produce, I think, a higher quality level of debate on all sides.

COMMISSIONER SHENEFIELD: Sir?

MR. REISS: I was going to actually going to - I'm surprised Dan said that. I would actually vote strongly in favor of that, either trying to follow something like a European system or a special master system, which Dan was referring to, some notion of having an independent third party try to assess for the court, for the judge, what the experts are saying in a very data-intensive, economics-intensive environment. I think that would be of tremendous value in trying to sort out what the economists are saying, and it might make the courts more responsive to things that our economists think should matter today, but won't - so it won't take 10 years for some of that to work its way through the system.

MR. BRESNAHAN: So let me agree with that. John Baker and I recently wrote a detailed proposal for how the use of third-party economists could be implemented in a way that might not get in the way of what counsel want to do. I think that's a good idea.

I would add a different suggestion. This is a vaguer suggestion, but I think from the pretrial process, particularly pretrial process with regard to experts, has gotten out of hand in antitrust cases.

COMMISSIONER SHENEFIELD: In what way?

MR. BRESNAHAN: Daubert hearings, for example, can become almost mini hearings of the whole case on the merits. They don't have a particularly accelerated look if you're in one. And they may be - you guys know much more about procedure than we do. You may have a good idea about whether they are producing effective screens. They seem to be producing a lot of cost as well.

COMMISSIONER SHENEFIELD: Admiral Stockdale, do you want to say anything?

[Laughter.]

MR. KAPLAN: Not at this moment.

[Laughter.]

COMMISSIONER SHENEFIELD: I have no further questions.

CHAIRPERSON GARZA: Thank you.

Commissioner Valentine.

COMMISSIONER VALENTINE: I'm almost ready to pass. I usually have tons of questions, and I'm also struggling, like John, with bringing us down from repeat Bertrand games to something we can tell Congress. And so why don't I try to get at some of Deb's questions in a slightly different way, which is, I think I've essentially heard that there's not much change to our Merger Guidelines that is being advocated strongly on your side of the table.

So now Congress is going to ask you - and they have no money for studies either; they've broken through several deficit ceilings - oh, we just want to talk, all we can do is talk, and we're going to go tell the EU what to do, and we're going to go tell China what to do, and we're going to go tell Singapore what to do - they've got a new antitrust law. What would you tell the EU, China and Singapore? Should they have both unilateral and coordinated effects analyses as part of the merger guides, and should they have concentration thresholds that are about where ours are?

And, Professor Kaplan, you can also, as an option, say they should not have merger enforcement at all if that's where you want to come out.

[Laughter.]

COMMISSIONER VALENTINE: Let's start at Tim's end for a change, instead of having Larry go first all the time.

MR. BRESNAHAN: I think the recent efforts by the EU to move the conceptual foundation of antitrust policy in a U.S. direction were a really good idea. They were slower than we to get rid of mushy theories of liability. I think that encouraging adoption of something like the antitrust injury doctrine on the EU side, along the lines of U.S. law, would be a really good idea. And my ignorance of China and Singapore is total.

[Laughter.]

COMMISSIONER VALENTINE: I'm sorry, what?

MR. BRESNAHAN: I'm absolutely ignorant of China and Singapore, so I have nothing to say.

MR. KAPLAN: I guess I would say, to the extent that, certainly in Europe - and it's harder to say again about the rest of the world - that mergers and acquisitions have been harder to get through, whether it's for antitrust reasons or corporate governance reasons. I think that has probably not served their economies well. The U.S. has been successful in moving assets to their most efficient use, so I would agree with Tim that I'd like to see the EU push more toward what we do in the U.S., and that's not just on antitrust, but on other corporate governance type issues as well.

MR. REISS: I guess what I would emphasize is that the need to coordinate across countries more in terms of when a merger is proposed among global companies, we're potentially in the position of having it trotted around to all these different agencies for approval, and while we may think our process is transparent, it's not transparent how that proceeds, I think, in these rather large cross-border mergers. I think that working on transparency and the process for large, global multinationals would be something that would make a lot of sense.

MR. RUBINFELD: I think you raise a really important question, because I think the spread of antitrust competition as far as that growth industry has potentially very significant positive and negative, possibly negative, effects on the U.S. economy, and we really need to be very active there.

In that growth industry, the EU is generally beating out the U.S. in the sense that a lot of the new authorities tend to be copying EU law more than U.S. law. So we need to - and because I agree that, in terms of the underlying economics and law, the EU actually, I think, lags us. They certainly lag us in terms of economics. They have their first Chief Economist, who's, I think, just finishing his term, and their staff I think is not comparable yet to the staff we have here in the U.S. So I think we really need to focus on trying to help - in a constructive way really - help the EU really make improvements. I think the fact that they've had problems with cases in front of the Court of First Instance is at least in part due to the fact that their cases have not had the same economic foundations as the cases brought here.

So, even apart from process, which I know you've worried about separately, I think in terms of substance this is a really important area to focus on.

MR. WHITE: I am going to echo much of what's just been said. Maybe this is home-market bias, but I think we really do have a leg up. We've got a good way of thinking about mergers, and I would encourage others to continue moving in our direction.

In terms of the specific thresholds, I don't even know what's right for the U.S., and so it's got to be idiosyncratic to a lot of local market conditions.

Let me just add one new note: reduce international trade barriers. That goes for us as well, but certainly for the EU, for China: reduce international trade barriers. That's a great antitrust policy.

MR. RUBINFELD: I just have one quick thing I forgot. I really want to compliment the EU for really making great strides in this area. I know they really are trying very hard. I think their Chief Economist has done an excellent job. I have a personal bias because they hired me a couple years ago to generate a lot of the software they currently use, and I thought that was a good choice on their part.

[Laughter.]

MR. RUBINFELD: Although the pay was about - I think it hit below the minimum wage, but nevertheless, it was worth doing. So they're really making an effort in the right direction. They really need to just recruit a much bigger staff of economists. There are a lot of talented economists over in the EU. They just need to bring more of them into Brussels.

COMMISSIONER VALENTINE: Okay, thanks.

CHAIRPERSON GARZA: Commissioner Litvack.

COMMISSIONER LITVACK: I have what I think are just two questions. I get the sense that we all think that the Merger Guidelines, as they currently are, as they are currently interpreted, as they currently are understood by the antitrust law, subject to, and without whining, as Professor Bresnahan put it, are okay. But I get the sense from you, Professor White, that you're telling us - correct me if I'm wrong - but unless we do these studies, you don't know, isn't that right?

MR. WHITE: The approach is the correct one. But the specific levels at which enforcement should bite? I don't know the answer to that.

COMMISSIONER LITVACK: Well, more than that, if I understood you, you don't know whether or not we have allowed mergers to go through - the so-called close calls, which resulted in prices being raised. You don't know because there are no studies.

MR. WHITE: And I haven't heard anybody say the contrary. I've asked other people, and I haven't heard anybody respond, "Oh, you should be looking at these studies or those studies."

COMMISSIONER LITVACK: Therefore, what I take out of all of this is that, while we all feel very good about it, subject to my talking to Professor Kaplan, there's no evidence that we have, hard evidence, that substantiates the fact that the mergers that have been allowed have been neutral to good, and the mergers that have been prevented would have been bad; isn't that right?

MR. WHITE: Whew. Yeah, I –

COMMISSIONER LITVACK: Just say yes.

[Laughter.]

MR. KAPLAN: Can I now respond to what you asked me earlier?

COMMISSIONER LITVACK: Yes.

MR. KAPLAN: Because there are these two pieces of evidence, right? There's the accounting evidence, which is mixed. Now, if you rely on the accounting evidence, well, then, if there were a lot of market power and price increases, you should see improvements in the accounting. You don't see that. So when I say there's no evidence for that, that's something that is consistent with no evidence for that. So that's sort of the negative or neutral, which maybe is consistent with your priors, that you see these acquisitions - some are good, some are bad, on average, they are zero. Well, you would look at the accounting evidence and say, “Hooray!”

The event study evidence, which to me is more compelling for a couple of reasons - First, it's precisely measuring what the market reaction is to the event; that market reaction is predictive of whether acquirer is taken over later, of whether a CEO is fired later, and of whether the acquisition is divested at a loss. So the market reaction actually has statistically predictive power. While for any particular deal the market may get it wrong, on average, in a statistical sense, it definitely has predictive power. So the reaction has predictive power and the combined returns are positive. I take that as the more convincing evidence and why I say there is a positive reaction.

Now you have to ask, could it be market power? Could it be something else like efficiency gains? And, again, the studies that I went through that try to disentangle - market power versus efficiency gains - and none of them come out for market power. The ones that do come out in one direction come out for efficiency gains, therefore, my conclusion.

COMMISSIONER LITVACK: When you say the event studies, just so I'm sure I understand, are you talking about the market's reaction in a three-day period to the announcement?

MR. KAPLAN: Three or 11-day period around the announcement, correct.

COMMISSIONER LITVACK: So take - since you mentioned it - take the *HP-Compaq* merger, the market didn't like it.

MR. KAPLAN: Didn't like it.

COMMISSIONER LITVACK: The stock today is up 40 percent from the level that it was at at that time. What do you conclude from that?

MR. KAPLAN: I conclude that Carly Fiorina is no longer the CEO, and that -

[Laughter.]

MR. KAPLAN: And part of the reason she's not the CEO is that, at the time, before they brought in Mr. Hurd, I think the view was that that acquisition had not been so successful and that she had not been successful in that job.

Now, I use that example because it is consistent with the general findings. You can pick examples where the stock price went down, but it was a great deal, or the stock price went up, but it was a lousy deal. But what I can tell you is, in the large-sample studies where people look at the reaction and at the outcome, there's a correlation and it is pretty strong in a statistical sense.

COMMISSIONER LITVACK: What I am getting out of this though is that the correlation here was whether or not the CEO was able to execute upon or develop whatever efficiencies or synergies there were thought to be. The market didn't think, presumably, that she could. She couldn't. Someone came in and did it. But what does that tell us as an antitrust panel, if anything, about mergers?

MR. KAPLAN: The first question is, how is the market reacting to the acquisitions? If the reaction on average were zero, if it were zero, which the accounting evidence is saying, I would conclude it's hard to argue mergers are raising prices and making a lot of money. For the combined returns, again, if they were zero, then I would conclude there is not a lot of evidence that people are raising prices and increasing their stock prices. The combined returns are positive on average, so then you have to ask what that means.

That's where I look to the studies that the studies that I mentioned - Fee and Thomas and the Shahrur study. They look at what happens to the customers, what happens to the rivals, what happens to the suppliers, and see whether you can see market power related effects there. They don't see any.

Then, I look at the other studies, one I mentioned on the cost-cutting, one on productivity improvements. You do find evidence that there are improvements there. You do find those are correlated with the combined reactions. And then I look at the whole picture, and as I said before, I see nothing in any of these studies that looks like market power, or - nothing is a strong word - very little. I do see some aspects that look like efficiency gains. And I look at all the evidence, and the totality of the evidence says to me market power doesn't look like a motivating force. Efficiency gains do. And that's how I come to the conclusion.

COMMISSIONER LITVACK: Thank you.

COMMISSIONER JACOBSON: I'm also going to direct most of my questions to Professor Kaplan. We talked about this briefly at the break.

It strikes me that looking at the stock market reaction over a three- or 11-day period or what-have-you, is not going to be that insightful because - it strikes me that looking an event study over a three- or 11-day period in terms of stock market reaction to a merger announcement is not likely to be particularly informative, because the people who are communicating with the market are instructed by the lawyers - having done this myself in every deal I've been involved in, I can say this with some confidence - not to tell the market-power story to the market. The first thing that happens is, when the investment banker is hired, you groan. After you groan, you say, "Have they done their projections yet?" You hope the answer is no, and then you sit down with them, and you tell them that those projections better not show any price increases, or you will ensure that their premium for doing the deal is not paid. So if the market isn't getting that announcement, I think one can discount, at least to some degree greater than zero, the stock market reaction.

Now, when we spoke privately, you said, "Well, yeah, but the investors are smart. They're going to figure it out anyway." But we haven't studied that question, have we?

MR. KAPLAN: I will just fundamentally disagree with you on whether stockholders are smart or not. I think stock market investors are pretty smart. However, let's assume they're not; let's assume you're right. Let's say investors are stupid, they get it wrong, and the prices in the merger’s industry are going up after the acquisition.

Well, then you should see it in the accounting numbers, and you should see it also in the long-run stock performance numbers, and in the accounting numbers. But, it's just not there. And it's not there in the study that looked at the customers and at the suppliers.

You would assume the customer's accounting would get worse. And you might expect the supplier's accounting to get worse, and the only place where you do see something is in the suppliers. With the suppliers though, the accounting gets worse. They have poor accounting if they lost the merged company’s account. But, this is not evidence of market power.

So all of the evidence that there is, is consistent again with the event-study evidence. So you have at least two sources of evidence. You have the overall accounting evidence, which is neutral, and has no evidence for market power. You have the event-study evidence that also has no evidence of market power.

COMMISSIONER JACOBSON: The accounting results that you're talking about are fundamentally looking at the bottom line, looking at profits.

MR. KAPLAN: Correct.

COMMISSIONER VALENTINE: Enron.

COMMISSIONER JACOBSON: So those data have the eight problems identified in Carlton and Perloff, and we can discount them appropriately, fair enough?

MR. KAPLAN: I do not agree with that conclusion.

COMMISSIONER JACOBSON: These studies don't analyze price levels.

MR. KAPLAN: That's correct.

COMMISSIONER JACOBSON: My only - I don't mean - well, I guess I do mean to pick on you, but only because your paper is so excellent, and your analysis is so thoughtful. But one of the things that troubles me, looking at the stock market event study, is that the results vary in terms of the statistical significance, and I gather the sign of the coefficient, based on what you're reporting here, that based on whether the acquisition is financed by cash, which I assume to mean banks loaning money, versus stock, and at least theory says that shouldn't be the case if the data are to be valuable.

MR. KAPLAN: So the cash and stock point is the following - I might have misspoken earlier - cash deals, which are generally financed with debt - the combined returns are positive, unequivocally, and on the stock deals, the combined returns are zero, so the bidder usually goes down, and the target goes up. And then for these large deals that were done in the 1999-2000 period, which may be the deals that you were talking about earlier, the combined returns were negative.

So the interpretation of that is, first of all, the negative combined returns don't suggest market power. Again, the market power story predicts combined positive because the merger is raising prices. Then you have to consider, how do you interpret that? And we do know, pretty reliably, when companies issue their own stock, the stock price goes down, and we think that's because that's a negative signal about the company's own prospects. So when you have a stock acquisition, you have the combination of an investment decision - how good is the acquisition - versus a financing decision, where the acquirer is saying something about its own stock price. So if it ends up being zero, then my interpretation of that is, you've got a negative, which is the information about the acquirer’s stock price, (because it's issued stock) with a positive about the acquisition.

The combined return is zero.

And for the cash deals, when companies borrow money in non-acquisition situations, the market reaction is basically zero. And there you've got a combined positive. You've got a zero, which is the financing decision, with the investment or merger decision, which looks positive.

So in both cases I would conclude it's a positive signal from the market about the combined return of the acquisition itself. But, again, that's an interpretation. You're right, it's zero combined with the stock, and it's positive with the cash.

COMMISSIONER JACOBSON: Was there an effort, to your knowledge, in these studies to distinguish between horizontal and non-horizontal mergers?

MR. KAPLAN: The papers looking for the market-power effects, i.e., the Fee and Thomas, the Shahrur, the Eckbo, and the Stillman studies looked at horizontal mergers. The accounting studies tend to compare related versus unrelated. They tend to look at this at the four-digit level, three-digit level, *et cetera*. The paper that I mentioned that Antoinette Schoar wrote on the productivity increases at the plant level found this unusual result that the productivity actually went up in the unrelated mergers more than it went up in the related mergers, which is more of an efficiency story than it would be market power.

COMMISSIONER JACOBSON: My time's up. Thank you very much. Let me just comment that this is all interesting, but I think even crediting all these analyses at their highest level, we still need to intervene at least in 3-2 mergers, certainly in 2-1 mergers, and maybe in 4-3.

CHAIRPERSON GARZA: Commissioner Burchfield.

COMMISSIONER BURCHFIELD: I'll be very brief. I have one basic question, but it may be answerable by a number of the panelists. Professor Rubinfeld indicated that he had served as a court-appointed expert in prior antitrust litigation. Have any of the rest of you been court-appointed experts? Let me ask you then, Professor Rubenfeld, how many cases did you serve in that capacity?

MR. RUBINFELD: Only once in the formal sense. I once did a mediation, but only once. It was the glass containers antitrust litigation out of the Seventh Circuit.

COMMISSIONER BURCHFIELD: How were you chosen?

MR. RUBINFELD: Judge Rovner, who was sitting on the district court at that time, who is now on the circuit court, conducted a national search actually, and I'm not quite sure how she did it - she'd have to tell you - but I know she interviewed quite a few economists, and from what she told me later, she was just looking for someone who had a good reputation and didn't have any obvious bias, if you will, towards one side or the other.

COMMISSIONER BURCHFIELD: Do you know if she took nominations from the parties?

MR. RUBINFELD: Yes, she did. She did specifically take nominations from the parties. I do not know to this day which, if any, party mentioned my name, but I do know she supplemented that as well.

If I could just add, if this would be helpful, one of the concerns she had - and I know this became a concern later in the government's case against Microsoft - was be very careful to design the process so that the court-appointed expert's role would be seen simply as advisory and limited in its scope so that it did not appear that the expert was really driving the result of the case, and she also chose to have no *ex parte* contact with me, with the expert at all. The only contact we had was in court.

COMMISSIONER BURCHFIELD: Were you subjected, during this proceeding, to examination by the parties, or did you simply provide a report for -

MR. RUBINFELD: Thank you. Actually, there was more than that. I actually conducted discovery of my own because I felt that both parties' experts had avoided a crucial issue in the case, so I conducted my own discovery. I did issue a written report, and I was subject to cross-examination by both sides.

COMMISSIONER BURCHFIELD: In the judge's presence?

MR. RUBINFELD: In the judge's presence, yes.

COMMISSIONER BURCHFIELD: Were you deposed?

MR. RUBINFELD: No, I was not deposed. The parties also wrote written replies, and I responded orally, actually, in court to the replies, and then I was available for cross-examination.

COMMISSIONER LITVACK: I had occasion to have a case where there was, not Professor Rubinfeld, but an expert like that, and one of the dangers is the one that he just mentioned; you end up trying to cater to that expert, not to the judge.

COMMISSIONER BURCHFIELD: Exactly. I mean that's the conventionally cited issue. There are two issues that I think are frequently cited. One is that you end up choosing an expert that may have a predisposition one way or the other, and the second is that you end up vesting a non-judicial officer with a significant amount of power to decide the case.

MR. RUBINFELD: I've spoken to a number of my friends who were on the courts about this issue, and I really believe - and they expressed that concern, which I think is a valid one, given where we are in the law, but I really believe that, if done properly, you can avoid that problem.

I have been in a case where there was a court-appointed expert, the cereal merger between Post and Nabisco, and while there were days when I had my concerns about that, I think, overall it actually worked very well. I mean I think the court-appointed expert, who was, in this, case Alfred Kahn, did an excellent job of posing the really hard important questions to both experts.

COMMISSIONER BURCHFIELD: Helped that you won the case.

[Laughter.]

MR. RUBINFELD: It's true that I was on the winning side.

MR. WHITE: At the risk of leaping in where others may fear to tread, I'm an outsider to this whole process - and I've never been a court-appointed expert - But I learned some of my economics from Carl Kaysen, who was appointed as a clerk by Judge Wyzanski. I don't see the big difference here between a judge who selects clerks, who may well have preconceived notions about various things, and a judge who appoints an economist. I don't see a big difference. If you have no trouble with judges choosing who they may choose as their clerks, why not let them choose an economist every once in a while?

COMMISSIONER BURCHFIELD: There is one fundamental difference. I often did not speak the language of the judge I clerked for, but it was because I didn't know what I was talking about.

[Laughter.]

COMMISSIONER BURCHFIELD: And the economist, I think, brings another dimension to the table, and presumably, the need for the economist is to fill a void in the judge's expertise. A law clerk is learning more than he or she is teaching, I would suggest. It's a very interesting idea, and I can certainly see some pros and some cons to it, and it will be taken - I at least intend to take the proposal under serious consideration.

MR. BRESNAHAN: Commissioner, let me say about the selection issue you raised, that the National Academy of Sciences, which has been successful in nominating third-party experts in other fields, has recently begun to get into the business of nominating economists for this role, which might help enormously in making sure that it's the Fred Kahn kind of guy, and that might actually be a real opportunity to take up.

COMMISSIONER BURCHFIELD: Thank you.

MR. REISS: I would just like to say I've been asked by the National Academy to do this. I didn't do it in the particular case I was asked, but one way they sort of deal with this problem of preaching to the expert is wait until it's gone on for a while. The experts on the other side have had at each other, and then they go seek someone from the outside. So there's no opportunity, at least initially, for the experts to in some sense try to pitch their positions in a way that's going to go after the experts.

COMMISSIONER BURCHFIELD: Although I could imagine using entry theory, it might not be a bad idea, as the experts are formulating their opinion to know that there's another expert that might enter the fray.

[Laughter.]

MR. REISS: But that's the beneficial part of keeping them honest.

COMMISSIONER VALENTINE: Sort of like not knowing who your panel of judges is going to be.

COMMISSIONER BURCHFIELD: Well, thank you very much. This is very interesting, and I appreciate all of you coming.

CHAIRPERSON GARZA: Commissioner Carlton, did you have any?

COMMISSIONER CARLTON: No.

CHAIRPERSON GARZA: Before I let you go and thank you for this, just one thing I want to follow up on. I think Debra asked the question, and I think what she was asking was - but maybe I'm wrong - if we didn't have a Section 7 and the current merger enforcement policy that we have today, and someone came to you and said, "Should we put in place this antitrust enforcement policy, this merger enforcement policy that we have today?" would you feel comfortable, knowing what you know about the evidence and the data and the literature - would you likely advocate that we put in place the policy we have today? Another way of asking the question is, do you think that you could - would you feel comfortable defending the policy to the Wall Street Journal Editorial Board?

[Laughter.]

MR. WHITE: Unequivocally, yes.

CHAIRPERSON GARZA: Professor Rubinfeld?

MR. RUBINFELD: I would say yes as well.

MR. REISS: Yes, because the alternative scares me.

MR. KAPLAN: I would say yes as well.

MR. BRESNAHAN: I would say yes, those guys ought to have to read the front page of the paper sometimes.

[Laughter.]

CHAIRPERSON GARZA: And then anything more, we do appreciate the papers that we've received and that are yet to come, and we certainly do appreciate the time that you've taken to be with us here today. And please feel free, if there are any other additional submissions you would like to make to us on any of the questions that we've raised, please feel free to do so.

Thank you very much, and this concludes the Commission's proceedings for this afternoon.

[Whereupon, at 3:50 p.m., the hearing was adjourned.]