



Testimony

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Competition in the Airline Computerized Reservation System Industry

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Before the Subcommittee on Aviation Committee on Public Works and Transportation House of Representatives





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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to comment on the Department of Transportation's (DOT) recent report on the potential anticompetitive effects of airline-owned computerized reservation systems (CRSs), and on further actions which are needed in response to that report. The development of CRSs has resulted in one of the most significant changes in the structure of the airline industry since it was deregulated in 1978.

Two years ago we reported on the potential anticompetitive effects of CRSs and recommended that DOT conduct a study of these effects and take action if warranted by the study's results.2 DOT's recently completed study provided extensive information about the costs and profits of CRS systems, but did not draw conclusions concerning the potential anticompetitive effects of CRSs or about the need for further action. Based on the results of DOT's study we believe that

-- airline-owned CRSs earn profits exceeding those that could reasonably be expected to be earned in a competitive market and

^{10.5.} Department of Transportation, Study of Airline Computer Reservation Systems (DOT-P-37-88-2, May 1988).

⁻ Nicline Competition: Impact of Computerized Reservation Systems DACVRCED-36-74, May 9, 1986).

-- these profits reduce competition in the air passenger market, because they artificially raise the costs of participating carriers.

We believe, based on these findings, that some remedy by DOT is warranted. Our testimony today discusses several potential remedies.

We reviewed the analyses that had been conducted previously on airline CRSs by the Civil Aeronautics Board (CAB) and by the Department of Justice. We discussed the issues raised by the DOT report with representatives of CRS vendors, other airlines, and travel agents, as well as with DOT staff. We also reviewed legal and economic issues concerning the appropriateness of various remedies.

BACKGROUND

Airlines first began developing internal computerized reservation systems in the 1950s and 1960s. By the mid-1970s, the possibility of developing a subscriber-oriented CRS had become apparent. In such a system, travel agents could communicate on-line to a central reservation computer and book their customers onto airline flights from video display terminals in their offices. These unsuccessful efforts by the airline industry to develop an accessful efforts by the airline industry to developed

their own systems. Within a few years, Delta Airlines, TWA, and Eastern Airlines had developed similar systems.

The five existing CRS systems are:

- -- SABRE (owned by American Airlines), with a 43 percent nationwide share of CRS revenues;
- -- Apollo (owned by a consortium of airlines, but principally by United Airlines), with a market share of 32 percent;
- -- PARS (owned by TWA and Northwest Airlines), with a market share of 10 percent;
- -- System One (owned by Texas Air Corp., which acquired

 Eastern Airlines and its system), with a market share of 10

 percent; and
- -- DATAS II (owned by Delta Airlines), with a market share of 5 percent.

The market shares for these systems vary greatly from city to city. In Atlanta, for example, where Delta has a hub, the market share of DATAS II is 22 percent. In Miami, where Eastern has a hub, System One has a share of 45 percent. In St. Louis, where INA has a hub, PARS' share is 77 percent. In Denver, where United

has a hub, Apollo's share is 76 percent. And in Dallas, where American has a hub, SABRE's share is 91 percent.

The proliferation of airline fares and service offerings after deregulation increased the importance of CRSs, because they made it much easier for a travel agent to review the available service offerings and find the offering best suited to the air passenger's needs. A CRS ranks the flights available and displays them on the agent's video terminal in terms of factors which are intended to reflect the desirability of each flight for the passenger. For example, nonstop flights are ranked higher than one-stop flights, direct flights are ranked higher than connecting flights, and flights leaving close to the passenger's desired departure time are ranked higher than less conveniently scheduled flights. In the past few years, most CRSs have been improved to provide the agent with more up-to-the-minute information on seat availability, and to allow the agent to receive immediate confirmation of booking for each seat selected.

The airline that owns a CRS (the CRS vendor) receives two major direct forms of revenue. First, every time a flight is booked, the CRS vendor receives a booking fee from the airline whose flight is selected. In 1986 these fees were most commonly \$1.35 for each flight segment. Second, the travel agent that uses

PA flight segment is a flight, or a portion of a flight, which takes place on a single airplane. A flight in which the passenger changes planes once consists of two flight segments. Hence, a

a CRS pays a subscription fee to the CRS vendor. These fees are negotiated between the vendor and the agent, and in 1986, ranged from an average of \$5,457 for PARS to \$11,911 for Apollo. The travel agents in turn charge the airlines whose flights they book a commission for each flight booked. These commissions currently average 10.5 percent of the ticket price.

The two major CRSs--SABRE and Apollo--each have shares of the CRS market which considerably exceed their owners' shares of the airline market. 4 Their owners therefore receive more in booking fees than they pay out. The airlines that own the three minor CRSs, whose shares of the CRS market are all smaller than their shares of the airline market, each pay out more in booking fees than they receive.

The airline that owns a CRS is also able to sell more airline tickets by virtue of its CRS ownership. These additional airline passenger revenues are called "incremental revenues." The source of these incremental revenues was quite apparent in the period prior to November 1984. During this period, airlines that owned a CRS typically biased the display of flights on the travel agents' video screens to give preference to their own flights. Travel

flight from New York to Los Angeles for which the passenger changes planes in Chicago consists of two flight segments and would incur may pooking fees of \$1.85 each, or \$3.70 altogether.

tyqule SABRE's CRS market share was 42 percent in 1986, American's a single market share was 14.5 percent. While Apollo's CRS market share was 32 percent, United's airline market share was 17.1 percent.

agents were more likely to book passengers on flights listed high in the display, so the airlines owning CRSs were able to sell more airline tickets and earn incremental revenues. In November 1984, a CAB rule became effective prohibiting biased displays of flight information. However, the DOT report finds that substantial incremental revenues continue to be received. DOT attributes these continuing incremental revenues to a "halo effect," that is, the positive effect on bookings of maintaining "ongoing, mutually supportive business relationships between a vendor and its travel agent subscribers."

The CAB rules have several other provisions. One provision sets a maximum term for the contract between the CRS vendor and the travel agent subscriber of 5 years. Another bars the CRS vendor from prohibiting its subscriber, "directly or indirectly," from using another vendor's system.

Since the CAB rules went into effect, the 5-year maximum specified by the CAB rules has become the industry standard. The two major CRSs have adopted "minimum use" clauses in their contracts which require the travel agent to use the vendor's system for bookings equal to 50 percent (for Apollo) or 75 percent (for SABRE) of the agent's bookings made during a base period at the beginning of the contract.

Another contract provision used by both major vendors is that, should the agent breach the contract prior to its 5-year expiration date, the agent shall be liable to the vendor for "liquidated damages." The contract specifies a formula for calculating these damages, which include all the revenues, including booking and subscription fees, that the vendor would have received over the contract's remaining life. The resulting liabilities are sufficiently great that most travel agents consider it too costly to escape from the contract significantly before its 5-year expiration.

GAO REPORT ON CRS

Two years ago, at your request, we reported on possible anticompetitive effects of CRSs. We focused our attention on two issues—incremental revenues, which could potentially weaken the ability of rival airlines to compete effectively, and booking fees, which if they exceeded costs could have significant anticompetitive effects when paid by one airline to a competing airline. We concluded that we did not have sufficient information at that time to determine whether incremental revenues continued to be received after the CAB's anti-screen-bias rule went into effect in late 1934. We also did not have sufficient information to determine whether booking fees significantly exceeded costs, though the supparent that CRS vendors had sufficient market power to set though fees above costs if they so chose.

Accordingly, we recommended that DOT, which is charged with the responsibility for protecting competition in the air transportation industry, study two issues—the size of persistent incremental revenues and the potential anticompetitive effects of booking fees, including their relation to booking costs. We recommended that DOT's study examine the likely impacts of possible remedies for the anticompetitive effects of booking fees, and that DOT take additional action, if warranted by the results of its study, to enforce compliance or to strengthen the CRS rules. You supported our recommendations and, at your request, DOT has now completed its study.

THE DOT REPORT

The DOT report finds that CRS-vendor airlines have continued to earn substantial incremental revenues even after the CAB's antiscreen bias rule took effect. The report also finds that the major CRS vendors charge booking fees well in excess of the costs of providing the bookings. As a result, about two-thirds of the nation's airline industry transfers substantial revenues—over half a billion dollars annually—to the two major CRS vendors. The DOT report also outlines a variety of provisions in the contracts between travel agents and CRS vendors which can unnecessarily

Finally, the report examines the impact of new technological developments on the future competitive structure of the industry.

Are CRS Vendors Still Receiving Incremental Revenues?

Incremental revenues transfer income both from non-CRS-vendor airlines to CRS-vendor airlines and from minor-CRS-vendor airlines to major CRS vendors. These transfers limit competition in the airline industry by giving major-CRS-owning airlines an artificial competitive advantage. The DOT report estimates that, based on the CRS vendors' own analyses, incremental revenues continued after the CAB screen bias rule went into effect, and increased CRS-vendor airline revenues by 9 to 15 percent over what they would have been in the absence of CRS ownership. Moreover, these incremental revenues had declined only modestly from the 9- to 24-percent levels estimated by the CRS vendors before the CAB rule went into effect.

DOT also conducted its own analysis of incremental revenues, and estimated that, after the CAB rules went into effect, these revenues increased CRS-vendor airline revenues by 12 to 40 percent of what revenues would have been in the absence of CRS ownership. We believe these results indicate that airline-owned CRSs have continued to generate substantial incremental revenues even after the CAB rules were implemented.

Are CRS Vendors Charging Booking Fees That Significantly Exceed Costs?

Booking fees that significantly exceed costs create distortions in the airline marketplace by unnecessarily raising the costs of air travel. The DOT report estimates that, for the two major CRSs, booking fees (\$1.85 average fee for Apollo; \$1.84 for SABRE) were about double the cost of providing the booking (\$0.96 for Apollo; \$0.79 for SABRE), including the costs of capital and a provision for a reasonable profit (15 percent of invested capital). We believe that these results indicate that airline-owned CRSs are using their market power to charge booking fees that exceed those that could reasonably be charged in a competitive market.

As we indicated in our report 2 years ago, and as the Justice Department also emphasized in their 1985 report,⁵ the level of booking fees is not determined in a competitive market. Competing airlines, who pay the booking fees, have little alternative to paying those fees if they wish to remain competitive in the air travel business. Declining to pay a particular CRS vendor's fee would substantially reduce the likelihood that travel agents subscribing to that CRS would book passengers on that airline.

 $[\]frac{5}{1935}$ Report of the Department of Justice to Congress on the Airline Computer Reservation System Industry (Dec. 20, 1985).

For example, in 1984, Continental Airlines declined to pay booking fees to PARS, one of the smaller CRSs, for 6 weeks. Continental believed that the decline in revenues was so great that it was forced to resume paying the fees.

One airline, Southwest Airlines, does not pay full booking fees. Its flights are listed on the CRS, but cannot be booked directly through the CRS. We believe that this strategy has succeeded only because Southwest is a "niche" carrier with an established market reputation, which provides a unique, low-cost service on routes not served by other carriers. An airline competing with other airlines in major routes, particularly a new entrant, could not use this strategy.

By contrast, the level of travel agent subscriptions, the other major source of CRS revenue, is determined in a more competitive market. A travel agent can choose to subscribe to a different CRS if it finds the subscription fee charged by one to be too high. CRS vendors still have significant market power even with respect to travel agents, but this power is more limited than their market power over competing airlines. This differential degree of market power is reflected in the fees charged by the CRS vendors. While DOT found the booking fees of the major CRSs to be about double their costs, travel agent subscriptions for all

Do Booking Fees and Incremental Revenues Cause Substantial Revenue Transfers Between Airlines?

Revenue transfers from non-CRS-vendor airlines to CRS vendors are caused both by booking fees which exceed costs and by incremental revenues. There are also net transfers from minor CRS-vendor airlines (whose booking fee outlays exceed their receipts) to the two major CRS vendors. These transfers, because they exceed the costs of the services provided, reduce competition in the industry by artificially imposing a cost penalty on some carriers and subsidizing others. Such transfers could force non-vendors or minor vendors to exit (or avoid entering) markets where they could otherwise have been competitive.

The DOT study does not report the size of these transfers for each airline paying booking fees. Our estimates, however, of the 1986 aggregate revenue transfers received by each CRS vendor from all airlines, based on DOT data, and including both excess booking fees (net of booking costs and normal profit) and incremental net revenues are

-- SABRE: \$342.9 million

-- Apollo: \$302.6 million

-- System One: \$83.6 million

-- PARS: \$67.3 million

-- DATAS II: \$45.6 million

The data in the DOT report do not permit us to estimate the effect of these transfers in particular markets.

Do CRS Vendors Receive High Profits?

High booking fees and incremental revenues contribute to high profit rates for the major CRSs. The DOT report estimated that the internal rate of return for Apollo through 1986 was between 53 and 109 percent, depending on what percentage contribution incremental revenues make to airline earnings. The range of returns for SABRE was 69 to 130 percent. The major CRS vendors believe that their profits are justified by the risks involved in developing CRSs. Based on our analysis, we do not agree. When the establishment of CRSs was being contemplated in the mid-1970s, only two airlines, United and American, had a sufficiently broad national route structure and a sufficiently large revenue base to make the unilateral development of a CRS for travel agent use worthwhile. We believe that the success of United and American in establishing

The range of rates of return given in the text reflects this conclusion. The basis of this conclusion is discussed in detail in our response to the fourth question posed by Chairman Mineta in his letter of August 11, 1988. DOT suggests that this percentage could be anywhere in the range of 5 to 30 percent, but we celieve that it is likely that the true figure is in the upper tall of this range.

profitable CRSs is due to the inherent advantages provided by the route structure awarded to them by the CAB. All the CRSs are projected by DOT to become increasingly profitable through 1992. This is not surprising in view of the captive relationship between CRS vendors and participating airlines, and the substantial economies of scale in the CRS market which forestall new entry.

Do Provisions in CRS Contracts Unnecessarily Restrict Competition?

Some contract provisions discourage travel agents from switching vendors, reduce competition in the market for servicing travel agents, and also perpetuate the revenue transfers to major CRS vendors cited above. These provisions include the 5-year length of the contract, minimum-use clauses, and liquidated damages clauses. Certain reported major-vendor practices, such as aggressively seeking to roll over contracts years before they expire (and hence beginning a new 5-year period during which the agent cannot change vendors), would exacerbate this problem.

These contract provisions particularly affect competition between major CRS vendors and minor vendors. By discouraging agents from switching vendors, they make it more difficult for the minor vendors to sign up enough travel agents to prevent a net patition of booking fees to the major vendors. As a result, these provisions have a negative effect on the minor vendors' ability to

compete in the airline market with the major vendors. By making the agents captive to a single system for extended periods of time, these provisions also deny the travel agent the opportunity to shop freely in the CRS market.

The DOT report summarizes these contract provisions and provides some data related to their competitive impact. The report notes that, of 24,693 travel agent subscribers, 1,107 switched systems in 1986. Between 1983 and 1986, SABRE's market share declined somewhat (from 49 to 43 percent), as did PARS', while shares for Apollo, System One, and DATAS II all increased.

The report suggests that longer contracts increase certainty and reduce risk. Travel agent representatives, however, have suggested that long-term contracts increase the risk to travel agents that an airline which dominates a city's airline markets when the contract is signed (thus making it an attractive CRS vendor, from the agent's viewpoint) will withdraw from that city in the course of the contract (as Eastern has recently done from Kansas City).

The DOT report also notes that one of the original justifications for the 5-year term permitted in the CAB rules was to allow agents to take full advantage of the investment tax credit. The investment tax credit was repealed in 1986.

The Future Competitive Structure of the CRS Market

DOT's projections of revenues for the CRS vendors show continued high levels of profit, with no expectation of reduced market power due to new entry. 7 DOT also assesses the possibility that technological developments could change the competitive structure of the CRS industry and finds it unlikely that any such changes will occur over the next 2 to 5 years. For example, while personal computers (PCs) are replacing "dumb terminals" in travel agents' offices, the enhancements they provide are unlikely to change the competitive structure of the industry. Simultaneous PC interface with several CRSs, which could significantly break down the vendors' market power, is technologically feasible, but the DOT report indicates that resistance from CRS vendors has prevented its introduction. Some automatic ticketing machines, which could bypass agents, have been installed, but the DOT report indicates that resistance from agents has slowed their use.

POLICY OPTIONS

DOT's report does not discuss a key issue which we recommended that they address, namely what action is appropriate in

Tapollo's internal rate of return was projected by DOT to rise to a range of 58 to 110 percent by 1992, depending on the contribution of incremental revenues to airline earnings, while SABRE's rate of return was projected to rise to a range of 70 to 130 percent.

view of their analysis. We believe, in view of DOT's empirical results, and in view of the analyses conducted over the past 5 years by the CAB, the Justice Department, and GAO, that further action is now warranted to ensure that the benefits of airline deregulation are not nullified by the anticompetitive effects of airline ownership of CRSs.

DOT has the statutory authority to prevent unfair or anticompetitive practices in air transportation, which might result in unreasonable market domination, monopoly power, and other conditions that would tend to allow one or more air carriers to increase prices or exclude competition. We believe that the Department's factual findings warrant DOT's taking additional action to remedy these anticompetitive problems. In the discussion that follows, we outline the major policy options we have been able to identify which we believe DOT should consider, and suggest some of the advantages and disadvantages of each. A more detailed discussion of these policy options can be found in the answers to the Chairman's questions, which we have provided to the Subcommittee separately.

We emphasize that there are several competitive problems in the CRS market, and no one remedy addresses all of them. In fact, a remedy for one problem may exacerbate another. Thus, multiple remedies may be needed.

The Problem of Revenue Transfers Between Airlines

The problem of revenue transfers between airlines can be addressed either by divestiture (requiring airline owners of CRSs to sell them to a non-airline owner) or by establishing an industry-wide airline consortium to operate a common industry system.

Divestiture

Divestiture would, by severing the link between an airline and a CRS, eliminate incremental revenues as well as revenue transfers from one airline to another. Divestiture would not address the problem of high booking fees, because an independent CRS owner would have much the same market power as a CRS-owning airline, and would be in much the same position to extract high booking fees from participating airlines. Divestiture also would not address the problem of travel agent contract terms which discourage switching from one vendor to another.

In the absence of regulatory restrictions, booking fees under divestiture could rise, since the new independent owner would no longer have the opportunity to earn incremental revenues from the airline business, and would therefore be more dependent on booking far ravenue. Without the potential for incremental revenues, the target of CRS vendors could also decline, increasing concentration.

Divestiture could also increase the cost of the overall airline reservation system, if CRS vendors decided to develop their own internal reservation systems in addition to the independent CRSs.

A Common Industry System

Ever since CRSs were first discussed in the late 1960s, there have been proposals to establish a common airline-owned nonprofit system for all travel agents and all airlines to use. These proposals have always failed because of disagreements between airlines on how to establish the system, and because of uncertainty about whether the system would enjoy antitrust immunity. It is apparent that such a system can only be established with government intervention, which would be necessary both to compel the existing systems to be consolidated and to provide assurance of antitrust immunity for the consolidation.

A common system would have many of the same advantages as divestiture. Since all airlines would jointly control the system, incremental revenues and inter-airline transfers would no longer be a problem. And since the system would operate on a nonprofit pasis, high booking fees would also be eliminated.

The major objection to a common system is that there would be no mivalry between competing systems. Travel agents and vendors that rivalry between competing systems has led to

technological improvements in the systems. Agents also feel that they get better service when systems are competing with one another. It is possible that some elements of competition could be incorporated into a common system. For example, independent hardware and software vendors might be able to supply individual travel agents with components of the system, as long as those components were certified as satisfying the specifications of the system.

Restrictions on Booking Fees

There are various ways to limit or reduce excessive booking fees; none of these would address the problem of incremental revenues. All of them, with varying degrees of success, address the problem of inter-airline revenue transfers due to high booking fees. None of them affects contract terms between vendors and agents. By forcing vendors to generate more of their revenues from agent subscription fees, these restrictions would put added pressure on agents to shop for the best financial deal from vendors. Agents would probably pass the cost of higher subscription fees back to the airlines in the form of higher commissions. However, since CRS vendors have less market power in setting subscription fees than they do in setting booking fees, it is likely that the increase in subscription fees would be less than the reduction in booking fees, so that non-vendor airlines that most airline passengers) would be better off.

Cne approach to limiting these revenues to reasonable levels would be to prohibit booking fees entirely, thus forcing the CRS vendors to derive their revenues entirely from the travel agents rather than from the airlines with whom they compete.

Alternatively, instead of requiring that booking fees be reduced to zero, DOT could require that booking fees be reduced to a level approximately equal to the costs of providing the booking. This approach, while less drastic, has the disadvantage of involving DOT in a regular process of administrative price regulation—the sort of rate—setting process that the Congress sought to avoid by deregulating the airlines.

A third approach would be simply to cap booking fees at their present level. This would allow the vendors to continue to receive the booking fees which they now receive, but would not allow them to take further advantage of their market power in the future. This approach has the advantage of simplicity, but results in an arbitrarily chosen maximum booking fee.

Travel Agent Contract Terms

The market between the travel agents and the CRS vendors is more competitive than the market between the CRS vendors and the other airlines, but it is not as competitive as it could be. A

travel agent can choose among five different CRS vendors, but the agent's effective freedom of choice is limited by several factors.

Contract Length

The standard contract in the industry is for 5 years, the maximum permitted by the DOT rules. Minimum-use clauses establish an expectation on the part of the vendor of receiving a stream of booking fees over the life of the contract. This expectation would form the basis of a damages suit if the agent breached the contract. Such provisions make it costly for an agent to consider breaking a contract significantly before the 5 years have expired. An agent in the middle of a 5-year contract, then, has little practical choice about which vendor to use, no matter how attractive a competing vendor's system might be. Any reduction in the maximum length of the contract would mitigate the effects of the other restrictive contract provisions, because an agent could escape from the restrictive contract more quickly and at a lower The American Society of Travel Agents (ASTA) and the European Civil Aviation Conference (ECAC) have recommended reducing the maximum contract term to 3 years. The European Economic Community (EEC) is considering a proposal that agents be allowed to terminate contracts without penalty upon 3 months notice.

Minimum-Use Clauses

Elimination of minimum-use clauses could make it easier for agents to switch vendors. Minimum-use clauses require the agent to make a certain minimum number of bookings on the vendor's equipment. They also create an expectation of a stream of income, in the form of booking fees, from the participating airlines to the vendor. The agent, through the minimum-use clause, guarantees the vendor a minimum level of income from the agent's use of the system. Thus, if the agent breaches the contract, the minimum-use clause causes the agent to become liable for damages that include not only the lease payments, but also the income the vendor would have received from booking fees.

The amount of these damages may discourage the agent from switching systems. In the absence of a minimum-use clause, agents could reduce their use of one system (while continuing to pay subscription fees) and begin using a second system. It is not clear how effective the elimination of minimum-use clauses would be, since it is not certain how many agents would be prepared to have two sets of equipment in their offices.

Liquidated Damages

Travel agents have been particularly concerned about the burden of liquidated damages clauses. These clauses represent an agreement at the time the contract is signed regarding the damages that will be paid in the event the contract is breached. In CRS contracts these clauses generally require the agent to pay a lump sum representing the stream of booking fees anticipated by the contract's minimum-use clause. They also require the agent to pay the vendor 80 to 100 percent of the remaining subscription fees owed, and in some cases any special bonuses paid to induce the agent to sign the contract.

DOT could regulate the provisions of liquidated damages clauses. For example, booking fee revenues, which are generally the largest element in the liquidated damages formulae, could be excluded as a permissible form of damages. DOT could also, as ASTA has proposed, prohibit liquidated damages provisions in the contract, on the presumption that damages assessed by a court would be less burdensome than those specified by current contracts. However, booking fees would still be included in court-awarded camages unless, as ASTA also proposed, minimum-use clauses were prohibited.

CONCLUSION

We are not prepared today to recommend specific action, but, based on the results of DOT's study, we believe the time has come for the Department to review and adopt appropriate remedies for the anticompetitive features of the CRS industry. DOT has a statutory responsibility to protect competition in the airline industry. The airline industry has experienced an increase in concentration over the past three years which may threaten the improvements in fares and service quality that have resulted from deregulation. Several of the airlines we spoke with said that no airline can survive without an ownership stake in a CRS. If existing non-vendor airlines are forced out of the market, and if others are denied entry, competition in the airline industry will deteriorate, fares will rise, and service will suffer. As a result, it is important to take advantage of whatever opportunities exist to enhance competition in the industry.

Mr. Chairman, that concludes my statement. I would be happy to answer any questions you might have.