

Part I: Preface

by

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EXECUTIVE SUMMARY

The Center for Independent Experts (CIE) provided three individuals to evaluate a report (the Excessive Shares Report) commissioned by the National Marine Fisheries Service (NMFS) for setting an excessive share limit in catch share fisheries, and more specifically, the Surfclam and Ocean Quahog ITQ fishery. The CIE provides scientific expertise to conduct independent scientific peer reviews for NMFS based on specific Terms of Reference (TOR's) provided to the reviewers. Both the CIE and the NMFS Office of Science and Technology consider the purpose of the CIE review to be to examine the scientific merit of reports, and not to make policy recommendations. The three CIE reviewers chosen for this study were Dr. Ani Katchova, University of Kentucky, Dr. Ragnar Arnason, University of Iceland, and Dr. Rigeberto Lopez, University of Connecticut. Dr. James Wilen, University of California-Davis was the Mid-Atlantic Council Scientific and Statistical (SSC) Committee representative who chaired the meeting. The panel met June 21-23, 2011 in Falmouth and Woods Hole, MA to conduct a public review of the report, to accept public comment, and to question the consultants who prepared the report.

The CIE review of the excessive shares report presented unanticipated challenges. The topic of excessive shares in an ITQ fishery is relatively new in NMFS, and the economics needed to fully understand the issue are quite complex. Therefore, the discussion at the public meeting was highly technical and covered a great deal of territory. Additionally, the CIE reviewers were given a large amount of information during the meeting that they would need time to fully review outside of the meeting. Near the conclusion of the meeting it became apparent that the reviewers would have a difficult time reaching a consensus on a number of points before the meeting ended. The panelists agreed that they should end the meeting so they could individually review the material which was presented to them, and prepare their reports. The CIE reviewers also agreed that they would send a copy of their individual reports to the Chair, who would then prepare a summary report based on their individual reports. However, the following week it was learned that the CIE Directorate would not allow the CIE panelists' individual reports to be sent directly to the Chair which put the Chair in the position of being unable to produce a summary report.

In lieu of a formal summary report by the Chair, therefore, this Executive Summary simply lists the findings of the individual reports that were submitted by the CIE reviewers for each Term of Reference (TOR). Each CIE report is then included as a separate chapter in this document. This summary makes no value judgments on the findings of the CIE reviewers, and does not attempt to endorse or reject any of their findings.

Each CIE panel member presented their own findings and did not necessarily agree with one another on their responses to each individual term of reference. However, there were four areas that all three reviewers seemed to agree with in their individual reports. They were:

1. The method proposed by the Technical Group is based on the HHI, which means that evaluation of potential market power is consistent with what is done in other industries.
2. The Technical group appropriately modified the application of the HHI to consider competition from non-SCOQ clams as well as the aggregate share held by fringe holders. Within the framework given, the method proposed did not contain any errors. However, in order to apply the method, more data are needed along with a better understanding of the industry.

3. More transparency is needed for quota prices. An auction mechanism would be one method that could be used to reveal quota prices.
4. The Technical Group should have paid more attention to the monopsony problem, which is the ability of processors to exert market power on the harvesting sector. This may be of greater concern than the monopoly problem.

TERMS OF REFERENCE (TOR):

1. Describe the Method or Process used by the NMFS Technical Group for determining the maximum possible allowable percentage share of quota ownership that will prevent an entity from obtaining Market power.

Note: There is no disagreement on this TOR as it merely asks the reviewers to provide a description of the methodology used by each reviewer.

Arneson:

Technical group applied the standard theory of competition and market power to the problem, using Horizontal Merger Guidelines.

Katchova:

Described six part process recommended for determining excessive share limit.

Lopez:

Described the seven part process used to determine an excessive share cap, and also described the corollary rule that there should be at least three firms.

“As with any excessive-share cap, the process requires information on ITQ ownership and control, substitutability of products, and definition of relevant markets or size of the market in order to compute the correct market shares.”

“In the business literature, there is a widely accepted notion that a Rule of Three structure is optimal because three big and efficient companies (e.g., with more than 10% market share) act as a tripod to ensure that neither destructive competition nor collusion prevails (see Sheth, J.N. and S. Sisodia, *The Rule of Three: Surviving and Thriving in Competitive Markets*. New York: Free Press, 2002)

2. Evaluate the strengths and weaknesses of the proposed method developed by the NMFs Technical Group for determining maximum possible allowable percentage share of quota ownership. Review and comment on the data requirements necessary for applying the proposed methods.

Arnason:

Strengths:

1. It is based on the standard theory of monopolistic competition.
2. It is based on the Horizontal Merger Guidelines. This has the advantage of guaranteeing symmetrical treatment with other industries.
3. It is fairly clear and systematic
4. Within its own framework, it does not contain any serious errors.

Weaknesses:

1. Does not deal with the issues in sufficient depth.
2. Does not systematically cover all the key economic factors necessary for deciding a sensible counter-monopoly policy.
3. Puts too much emphasis on the HHI Index.
4. Contains no formal analysis of the fundamental factors affecting monopolistic behavior in the fisheries.
5. Does not consider the monopsony problem.

“In summary: to set the appropriate ‘excessive size’ limit in any given fishery a great amount of empirical information and investigation is needed”

Katchova:

Strengths:

1. Follows horizontal Merger guidelines.
2. Technical group appropriately modified the application of the HHI index to consider competition from non-SCOQ clams as well as the aggregate share held by fringe holders.
3. Additional “three firm” rule has support in the literature, but it is unclear if the rule should still be applied if there is a conflict between the two rules.

Weaknesses: (note that Dr. Katchova did not explicitly list weaknesses. This is my interpretation of her text).

1. In order to determine the boundaries of the relevant market, reliable data on prices and quantities are needed, which are not available. In the absence of reliable data, there needs to be an in-depth understanding of the industry, major players, and products.

2. Excessive Share cap will need to be updated over time.
3. HHI is applicable to homogenous products, and not differentiated products, and qualitative data needs to be available whether processors produce differentiated products.
4. Report did not explore monopsony problem, which may be just as important as monopoly power.
5. Reliable data on quota prices are needed.
6. Costs associated with implementation of an excessive share caps as well as monitoring and enforcement are likely to be substantial.

Lopez:

Strengths:

1. Used the Horizontal Merger Guidelines, and a HHI threshold of 2,500, which is deemed the “Gold Standard” for analyzing competition in the United States and abroad. It brings the problem into a class of more generalizable situations for which ready comparisons can be made across fisheries and non-fishery cases.
2. Inclusion of state fisheries, imports and fringe firms in calculation of the HHI. The larger the relevant market or degree of demand substitution from outside the fisheries area, the greater the allowable excessive-share cap.
3. Requiring three “efficient” processors under the suggested HHI will encourage economies of size as well as ensuring a minimum degree of competition in the geographic region of the fisheries, regardless of the size of the relevant market for processed fishery products.

Weaknesses:

1. Focus exclusively on monopoly power at the expense of monopsony power. A fishery is more likely to face monopsony power than monopoly power.
2. Lack of explicit consideration of harvesting and processing efficiency, which may give room to improve performance of the fishery, particularly if market power effects are weak. Cost reductions may reduce or even reverse a firm’s incentive to elevate price in the monopoly case.
3. Numerator of Market Shares. The current definition of an excessive-share cap separates ownership and control and can yield a situation where a single processor processes 2/3 of the harvest but only officially controls 1/3 of the quota without owning any. In the standard literature, 2/3 purchase of the total volume would be of concern.
4. The relevant product and geographic markets are not defined, although market shares are computed as the ratio of the quota or cap shares divided by the relevant market.

Implementation of the Method Proposed by the Technical group requires at least the following data:

1. Quota ownership and control
2. Processing volumes and capacity.
3. Size of the relevant market.

3. Evaluate applicability of the proposed methods to the Surfclam/Ocean Quahog ITQ fishery. If there is disagreement with what the NMFS Technical Group recommended, clearly state that and your reason why.

Arnason:

1. Method is superficial; Does not go into sufficient depth.
2. It offers little data about the structure of the industry.
3. Ignores possible costs of monopolistic behavior, the benefits of returns to scale, and the cost of imposing and operating “excessive size” limits.
4. Ignores the monopsony problem.
5. Recommended Excessive Share Cap seems “ad-hoc”.
6. Concludes that there is insufficient data to set any cap at this stage, so the prudent course of action is to refrain from doing so.

Katchova:

1. The NMFS have done the best possible analysis given the substantial problems related to data limitations and availability.
2. More transparency is needed for quota prices.
3. There is considerable uncertainty with regards to the size of the market (imports, fringe holders) and market share of participants.
4. The correct determination of post-transfer quota ownership and control is extremely important in the implementation, monitoring and enforcing of the excessive-share cap.
5. Viewed recommendations as general guidelines (perhaps even as lower bounds) for setting an excessive share cap.

Lopez:

1. The approach used by the Technical Group is generic and is applicable to just about any fisheries, provided accurate information is obtained on quota rights and control, boundaries and the relevant market, and efficiency effects of the scale of operation.
2. Although a 30-40% cap may be restrictive if the market is defined too narrowly or if efficiency effects of concentration are ignored, it is likely to be appropriate if there are buying power or monopsony concerns since, for the latter, the relevant market is geographically confined to the fishery in question.
3. Besides the monopsony and efficiency concerns pointed out, the main room for improvement is collecting accurate information about the fishery, the market, and performance indicators such as quota price.
4. The key number emerging from the report is a 40% excessive share cap, which automatically ensures independent harvest supply to sustain at least three processors in the market.
5. There is no constitutional basis to interpret “excessive” solely based on market power, or in this case, monopoly power.

6. In conclusion, an excessive share cap of 30-40 or the two-part cap counterpart might be rather conservative estimates, and that it might not be surprising that, considering efficiency impacts, an excessive share cap of $2/3$ of TAC or eventually a natural monopoly or monopsony might be preferable.

4. Evaluate whether the approach outlined by the NMFS Technical Group is reasonable for setting excessive share limits in fisheries managed through catch shares? As part of this TOR, comment on any constraints that may hinder application of the methods proposed by the NMFS Technical Group.

Arnason:

1. The Approach Outlined is inadequate as a general framework for setting excessive share limits in fisheries in general.

Katchova:

1. The approach outlined by the NMFS technical group is generally applicable to other fisheries managed through catch shares.
2. Several factors are very important to take into consideration when applying these methods to other fisheries. These factors include: whether or not the TAC is binding, whether or not quota prices are transparent and are of significant value, the determination of relevant markets and substitutability with other products, whether ITQ are assigned to vessel owners or not, etc.

Lopez:

1. The approach used by the Technical Group is generic and is applicable to just about any fishery, provided accurate information is obtained on quota rights and control, boundaries of the relevant markets, and efficiency effects of scale of operation.
2. The main constraint remains access to the accurate information needed to appropriately implement the approach. As in any market, full and accurate information is needed for markets to work smoothly. Asymmetric information will generate advantages to those who have access to it and will make the regulator's job more imprecise and difficult.

5) Provide any recommendations for further improvements.

Arnason:

1. To be usable as guidance for setting excessive share limits in the SCOQ fishery and other ITQ fisheries, the procedures need to be complemented by the following:
 - a. A careful general theoretical (discussion) of the factors that influence monopolistic behavior in ITQ fisheries in general
 - b. A clear and well-developed prescription as to how to estimate and update the key relationships that are identified by the theoretical study.
 - c. Additional steps having to do with the assessment of "deadweight loss" of monopolistic behavior, the possible loss of scale efficiencies that might result from "excessive share" limits and the costs of implementing and operating a

system of “excessive share” limits.

“To carry out these additions and improvements requires considerable amounts of high level expertise and will inevitably be quite time consuming and costly.”

Katchova:

1. An open auction or other mechanism to reveal quota prices and make the market for quota transfers liquid and transparent needs to be established.
2. More information can be collected from industry participants regarding market shares, major buyers of processed output, prices paid and received for clam inputs and outputs. There needs to be a general description of all players from crew members to distributors.
3. Further studies need to be done on the cost efficiencies of operating as large processors.
4. Further studies are needed on the monopsonization of the input markets. Monopsonization of the input markets is a larger concern than monopolization of the output markets.
5. Other instruments for controlling market power beyond an excessive share cap should be considered.
6. Monitoring and Enforcement of the excessive share cap will need to be studied and implemented.

“The main challenge is with regards to the application of the proposed methods because of the lack of appropriate data on the size of the market, the major participants and market shares, relevant markets, substitutability of products, and transparency of quota ownership and prices.”
(Conclusion)

“Overall, the NMFS technical group’s study is well executed and provided a good starting point in establishing an excessive-share cap in the Surfclam and Ocean Quahog Fishery.” (Conclusion)

Lopez:

1. Focus more on the potential monopsony power effects rather than just the monopoly power, explicitly considering alternative vertical coordination arrangements.
2. Focus more on potential price effects rather than just the HHI, explicitly considering harvesting and processing efficiency effects.
3. Collecting information on the price of the quota, either through creating an auction mechanism to reveal prices or by soliciting this information explicitly from quota holders.