



**The Developing Carbon Financial Service
Industry: Expertise, Adaptation and
Complementarity in London and New York**

Janelle Knox-Hayes
janelle.knox@green.ox.ac.uk



Geography and The Preeminence of Financial Centers

- ▶ 1992 'O'Brien' declared the death of geography
- ▶ If anything financial centers have seen more agglomeration in the last 20 years (Sassen, 2004)
- ▶ Sociology of Financial Markets (Knorr-Cetina & Preda, 2005)
- ▶ Importance of proximity for social exchange and information transfer most common rationale



Complementarities

Richardson's Seminal Work, Information and Investment (1960). Explored by Clark in the operation of London as a financial center (2003)

- Complementarities reduce transaction costs (variable, fixed, and sunk) and enable markets to function.
- Four Key Types of Complementarities
 - *Type 1*- firms are able to switch resources within or between firms to adjust output without adjusting input.
 - *Type 2* - a group of firms purchasing more of the same input to collectively increase the returns of scale
 - *Type 3*- the purchase of one product is actually comprised leads to the purchase of a closely associated set of products
 - *Type 4* - multiplier effects such that economic activity in one sector will produce income and employment widespread throughout the entire economy



Developing Carbon Markets

- ▶ Carbon markets provide a unique opportunity to analyze the impact of geography, specifically of market complementarity on a developing market.
- ▶ Conducted a series of over 60 interviews with experts from banks, brokerages, intermediaries, legal firms, consultancies, exchanges, regulatory agencies and wire services in London, New York and Chicago who are developing carbon related products and services
- ▶ These interviews provide the insight of the institutions and relationships which are developing the carbon markets

Owing to the sensitive nature of the issues under discussion, all interlocutors are anonymous



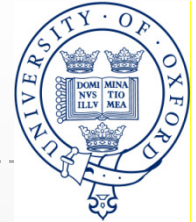
Complementarities Applied to a Developed Market

- Complementarity is critical to the development of new carbon markets.
- Complementarity exists at three levels
 - Information and Expertise
 - Institutions and Services
 - Market Systems



OXFORD UNIVERSITY

CENTRE FOR THE ENVIRONMENT



Complementary of Information and Expertise

- The financial services needed to process the development of carbon markets—project finance, product development and carbon transfer—are provided by Professional Services Firms (PSFs).
- Expertise for performing various market transactions are drawn from these institutions.
- Expertise is embodied as tacit and explicit knowledge, and is transferred through interaction and socialization (Nonaka, 1995).
- Legal expertise and trading expertise come from bulge-bracket financial institutions, and is provided a complementary fashion with other services within the firm.



Complementary Information and Expertise

“We provide legal services for banks and other financial institutions including hedge funds, private funds, utility organizations and governments. Any movement of emissions credits or any constructed contract requires legal assessment. The clients we work with are long-term clients. Our carbon team does the initial work and then the other legal services that are required can be provided in-house.” -- Associate at a legal firm, London

“We are developing products like letters of credit (from banks) in India and forward credits...There is very little new expertise in the market. Most of the services and products are borrowed from already established markets. Portfolio trading is already used in mortgages, letter of credits are applied from wind farms, etc.” —Carbon originator at an investment bank, New York



Complementary of Institutions and Services

- The operations of bulge-bracket firms are complemented by boutique institutions where innovation is required
- In some respects the firms provide competitive, but also complementary services in that they service different segments of the market, i.e. wire services like Reuters, Bloomberg vs. Point Carbon, Ecosystem Marketplace
- In other respects the bulge-bracket and boutique firms offer completely complementary services and form partnerships, i.e. Morgan Stanley and MGM International



Complementarity of Institutions and Services

- “We are primarily supplying information to the financial services industry. However, we also supply policy makers (certainly at the White House) with information...Our services are provided through terminals like computers at institutions that subscribe to distribute information round the clock. There is also a news/information center on the web, and a subscription based service.” —Journalist at a newswire service, New York

- “[Carbon Developer] is the one of the largest publicly traded companies, and the value to [our institution] is its engineers and their expertise. They develop a project, take a company through each of its steps, which is important because the process is very bureaucratic, and they monitor the project. They provide the on the ground project expertise. [Our institution] provides the financial expertise and investment capital, and we work as a team. So we can tell a client that they will invest in a project, but only if the client hires [carbon developer], which helps make a stronger project, and a greater likelihood of expected credit returns.” —Carbon originator at an investment bank, New York



Complementary Market Systems

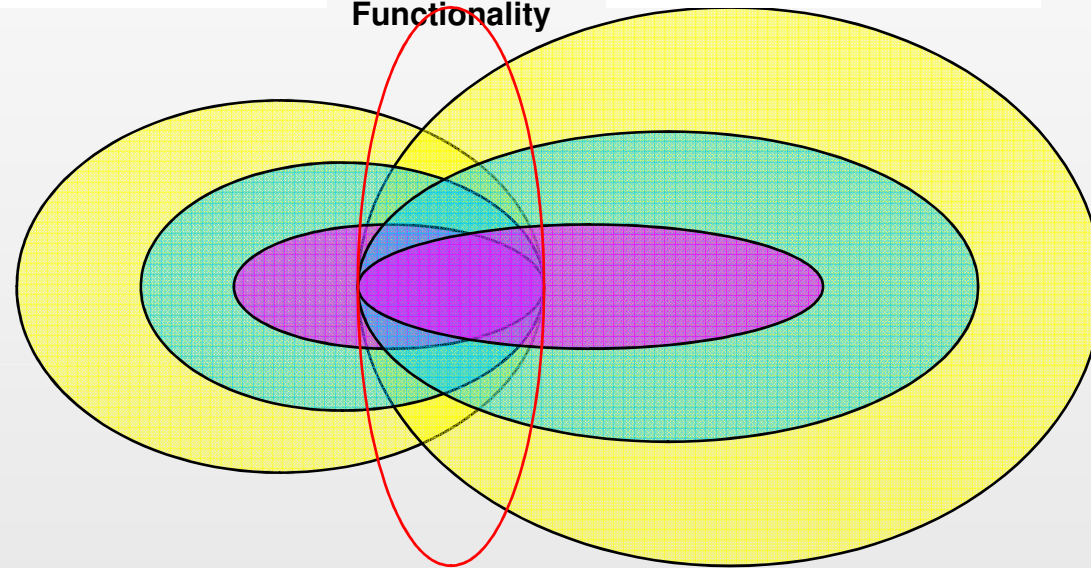
- ▶ As financial centers, London and New York are ideal sites for the development of new markets.
- ▶ Building a new carbon market by borrowing services and expertise from established markets and integrating it into the market infrastructure is the most efficient way to develop the market.
- ▶ The generation of the new market is itself a Type 4 complementarity; it exerts multiplier effects as the purchase and production of carbon products and services add to the overall flow of demand and supply and thus produce income and employment widespread throughout the entire service center.



New Market




Existent Market

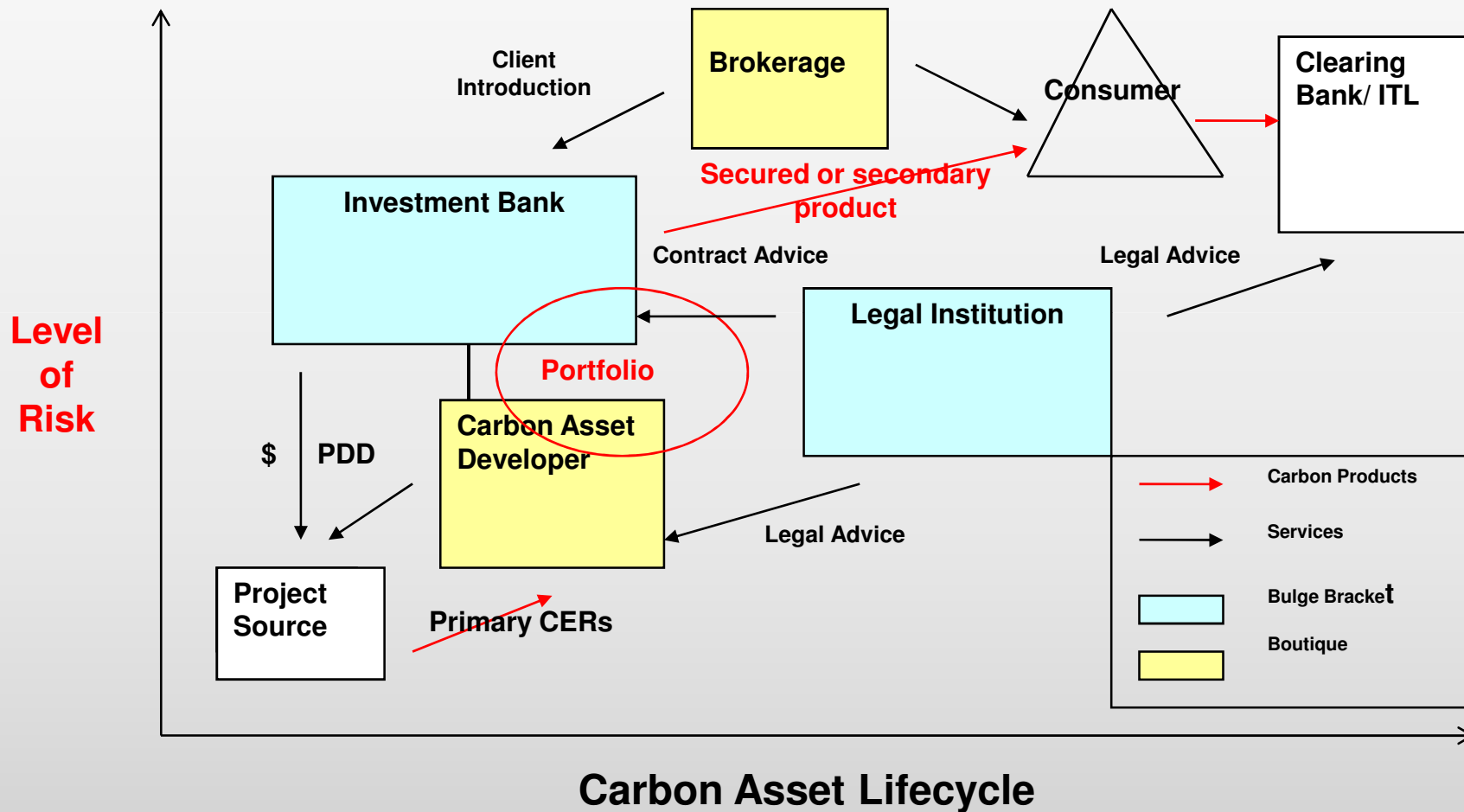
Core
Functionality



Increasing Liquidity

Levels of Complementarity

-  Info and Expertise
-  Services and Institutions
-  Market Systems





Conclusions and Future Direction

- ▶ Developing markets become embedded in the financial centers where they develop
- ▶ This may speed the evolution and development of the market but restricts innovation
- ▶ What is the relationship of the financial centers in time and space?
- ▶ Dynamic tension exists between financial interests and political development. What is the impact?

The Counterfactual: Chicago Climate Exchange???



The Developing Carbon Financial Service Industry: Expertise, Adaptation and Complementarity in London and New York

Thank You!

Janelle Knox-Hayes
janelle.knox@green.ox.ac.uk



References Cited

- Clark, G. L. (2002). London in the European financial services industry: locational advantage and product complementarities. *Journal of Economic Geography*, 2(4), 433.
- Knorr-Cetina, K., & Preda, A. (2005). *The sociology of financial markets*. Oxford: Oxford University Press.
- Nonaka, I. T. (1995). *H. The Knowledge-Creating Company*: Oxford: Oxford University Press.
- O'Brien, R. (1992). *Global financial integration : the end of geography*. London: Royal Institute of International Affairs; Pinter Publishers.
- Richardson, G. B. (1990). *Information and investment : a study in the working of the competitive economy* (2nd ed.). Oxford Clarendon Press.
- Sassen, S. (2004). The Embeddedness of Electronic Markets: The Case of Global Capital Markets. In K. K. C. a. A. Preda (Ed.), *The Sociology of Financial Markets*. Oxford: Oxford University Press.