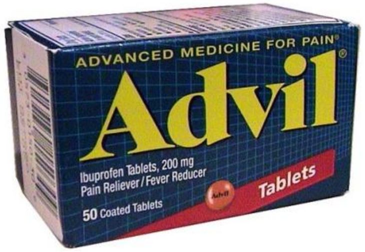
Partnerships

Strategic Partnership (SP)

- What is SP?
  - Idea is to achieve benefits of a vertical organization with independent companies by systematically driving independent players towards a single and common objective
    - » Use contracts to “align the misaligned objectives”
  - It is not exclusive!
- What is SP not?
  - Ownership
    - » Merger/Acquisition scenario
  - Franchising
    - » Franchising is exclusive

Types of SP: Only POS

- **Only POS:** Retailer determines its order sizes and timing but in addition passes POS (point of sales) data to the supplier. POS improves Supplier's forecasts.
  - Recall the Japanese 7-eleven
- Information sharing enhances SC in fundamental ways
  - It enables supplier to respond consumer demand quicker by appropriately scheduling production and replenishing retailer`s inventory
    - » Pre-registration at UTD
    - » Singapore Airport gives flight schedule to taxis to reduce airport traffic
  - It improves accuracy of demand forecast
    - » Collaborative Forecasting and Replenishment (CFAR) facilitates sharing of both short term and long term demand forecasts between manufacturer and retailer
      - Consider the partnership between Kmart and White-Hall Robbins (W-R), produces over-the-counter drugs such as Advil. W-R forecasts were more accurate because they had more extensive knowledge of their products than Kmart did.



  - It informs the downstream partners
    - » Cisco`s e-hub project, Cisco is able to see not only first tier supplier inventories but also second tier supplier inventories

Types of SP: Quick Response

- **Quick Response:** Suppliers receive POS data from retailers and use data to synchronize production and inventory activities. In this strategy, the retailer still prepares individual orders, but the POS data are used by the supplier to *improve forecasting and scheduling.*
  - Good example: Milliken & Company produces performance textiles & chemicals.
    - The lead time from order receipt at Milliken's textile plants to final clothing receipt at several of the stores was reduced from 18 weeks down to 3 weeks.
    - Milliken sells through stores such as
  - Bad example:
    - Ordering a bridal dress from far east;
    - Lead time is 4 months;
    - Customization
      - Fit, embroidery, whitework, needlework, lace, needle lace

Types of SP: Reverse Purchase Order

- **Reverse Purchase Order**: Retailer determines order sizes and timing after discussing with supplier. Suppliers often send their recommendations for order sizes and times, these recommendations are known as reverse purchase order.
  - It is not clear how recommendations are factored in
  - Ambiguity of responsibility to order
  - Not very common
  - Lowes and its suppliers: see http://loweslink.com and 855 Reverse Purchase Order Best Practices and Common Errors
    - » The 855 reverse PO will allow the vendor to create, modify or delete a PO via EDI. The 855 reverse PO is typically used by and has the largest impact on live nursery area. However, other areas use this as well for example: appliance, lumber, and building materials.

Types of SP: Vendor Managed Inventory

- **Vendor Managed Inventory** (VMI):
  - » Example: P&G and Wal-Mart
    - VMI Projects at Dillard Department Stores, J.C. Penney, and Wal-Mart have shown sales increases of 20 to 25 percent, and 30 percent inventory turnover improvements.
  - » **Continuous Replenishment**: Vendors receive POS data and use it to prepare shipments at previously agreed upon intervals to maintain agreed levels of inventory.
    - Wal-Mart, Kmart
  - » **Advanced Continuous Replenishment:** Suppliers may gradually decrease inventory levels at the retailer's store or distribution center as long as service levels are met. Inventory levels are thus continuously improved in a structured way.
    - Kmart

VMI between Wal-Mart and VF

- VF headquartered in Greensboro, NC, engages in the design, manufacture, and marketing of branded apparel and related products, including Lee, Wrangler, Riders, Rustler, Vanity Fair, Vassarette, Bestform, Lily of France, Nautica (sea), Earl Jean, John Varvatos, JanSport (sporty), Eastpak, The North Face (climbing/skiing), Vans, Napapijri (travel), Kipling, Lee Sport, and Red Kap (uniforms) brands.
- Its 2005 revenue is $6.5B.
- VF does VMI with Wal-Mart. VF knows
  - Wal-Mart inventories: VF ships to Wal-Mart when Wal-Mart inventories drop
  - Wal-Mart store models: Each store's demographics and psychographics (psychological characteristics of the consumers).
  - Wal-Mart POS data: Somewhat useful for managing Latin America production, whose LT=4 weeks. Not so useful for far east production whose LT=6 months.
- The North Face places 3 orders in a season to far east producers.
  - 1. is small and it is for samples and sales people.
  - 2. is larger and it is based on field research not POS.
  - 3. if necessary, is based on POS. Therefore, POS data are used to place the last order and to estimate the next season's sales. The use of POS data increases as the lead times become shorter.

Source: "Planning at a Global Scale Pays off for VF corp." in Supply Chain Leader, October 2006 issue, published by i2 corp.: 4-8.

Comparisons of SP Types

SP Type	Decision Maker	Inventory Ownership	New Supplier Skills
POS and Quick Response	Retailer	Retailer	Market demand forecasting
VMI – Continuous Replenishment	Supplier to contractually agreed levels	Either Party	Retailer inventory management
VMI – Advanced Continuous Replenishment	Supplier to contractually agreed & continuously improved levels	Either Party	Retailer inventory management dynamically
+ Promotion planning	Supplier plans promotions	Either party	+ Pricing management

Suppliers [Pilgrim's Pride (chicken meat), Dean Foods (milk)] complain about no joint promotion planning with their retailers [Wal-Mart, Kroger].

Stricter partnerships

Requirements for Effective SP

- Advanced information systems
  - Information Technology (SAP, Oracle, XML) is a mean for SP not an end.
- Common standards and culture
  - Innovative, Fast delivery, Customer centric companies
  - Same language, values, metrics, performance measures
    - » Fill rate, inventory level, inventory turns
- Mutual trust
- Top management commitment

It is not a coincidence that these are the requirements for an effective merger. But who cares?

Important SP Issues

- Inventory ownership: Supplier or retailer owns the goods until sold.
  - Dell's suppliers own the goods which are maintained in a facility rented from Dell and the facility is 15 minutes driving distance.
- Confidentiality
  - Problem: Non-exclusiveness.
    - » P&G partners with both KMart-Sears and Wal-Mart
    - » Newbury Comics (newburycomics.com several stores in New England)
    - » They have the same suppliers as Wal-Mart

  - Solution: Partially-Hiding data smartly
  - Follow-up Problem: Data linking.
    - » Use publicly available records to link databases to makeup the hidden data
      - Real estate agent problem: Reveals that a house (known by address) is for sale. But hides the house owner information to avoid buyer's direct negotiation with the owner. House tax records can be used to link house addresses to owners.
- Communication and cooperation
  - When First Brands (cleaning products such as clorox) started partnering with Kmart, Kmart often claimed that its supplier was not living up to its agreement to always keep 2 weeks of inventory. It turned out that this was due to different forecasting methods employed by these companies.

Incentives to Lie

- Think of a consortium of three companies (A,B,C), which collects data from its members and publicizes industry trends based on this data.

- Let us say that the industry trend is the sum of the sales (SA, SB, SC) made by A,B,C
  - Suppose that these sales are respectively sa, sb, sc
  - But company C lies and reports a sale of $sc+x$, while A and B tell the truth to the consortium
  - The sum now becomes $sa+sb+sc+x$ and that is what is announced by the consortium
  - However, the true sum is $sa+sb+sc$
  - Which of the companies know the correct sum after the consortium's announcement?
  - Does any company have incentive to report the sales truthfully?

- Unanswered questions:
  - What information sharing mechanisms prompt the companies to truthfully share their data?
  - Are there incentive compatible data sharing mechanisms?

Do banks report lower Interbank Loan Rates? Is **Libor** (**L**ondon **i**nter-**b**ank **o**ffered **r**ate) reliable?

- Libor is based on information supplied by 16 banks all over the world. It is a measure of the average interest rate at which banks make 3-month loans to one another.
- Libor=2.71594% on April 15, 2008 from the rates:
  - Top quartile: HBOS 2.75%, Credit Suisse 2.74%, Bank of America 2.73%, JP Morgan 2.72%
  - Libor based on two center quartile

    HSBC 2.72%, Tokyo-Mitsubishi 2.72%, Barclays 2.72%, Norinchukin 2.72%,
    Bank of Canada 2.7175, Lloyds 2.71%, Westdeutsche Landesbank 2.71%, Radobank 2.71%.
  - Bottom quartile: UBS AG 2.71%, Bank of Scotland 2.705%, Deutsche Bank 2.7%, Citigroup 2.7%.
- "Some banks do not want to report the high rates they are paying for 3-month loans because they do not want to tip off the market that they are desperate for cash."
  - C. Mollenkamp, *Bankers Cast Doubt on Key Rate Amid Crisis*, Page A1, WSJ issue **before financial crisis April 16, 2008.**
- Bank for International Settlements (a bankers consortium) is concerned that banks might be reporting inaccurate (low) rates as of Spring 2008.
- A Citigroup analyst predicts that if banks provided accurate data about their borrowing costs, three-month Libor would be higher by as much as 0.3%.
  - 0.3% change in interest rate is not small. For a 30 year mortgage for $200K,
    - $199 K is the total interest payments with 5.3% interest; $186 K is the payment with 5.0% interest
- Bottomline: Banks' misrepresentation could mean that consumers are paying artificially low rates on their loans. … good for borrowers, but could be very bad for the banks.
- Update in August 2012: Barclays agrees to pay $453 Million settlement charges for manipulating Libor since 2008.
    - See ``Who Else Is Under Investigation for Libor Manipulation?" by WSJ Staff, WSJ, July 9, 2012.
    - Also see aside after summary for historical remarks.

SP

Advantages

- Fully utilize system knowledge
- Decrease required inventory levels
- Improve service levels
- Decrease work duplication
  - In apparels, manufacturers prepare garments for sale at the stores: labeling, packaging (case-packs).
- Improve forecasts

Disadvantages

- Expensive advanced technology may be required
- Supplier/retailer trust must be developed.
- Supplier responsibility increases.
- Expenses at the supplier often increase
  - Cost sharing?

Non-traditional SP Example: WalMart's Supplier Alliance Program (SAP)

Supplier —goods / invoice→ WalMart

Invoice paid by WalMart in 60-90 days

Factoring: Invoice is sold to a factor (any bank) by the supplier.

- Supplier immediately receives cash that is less than the face value of the invoice.
- If the supplier's credit rating is low, the supplier receives less cash.
- The debtor (WalMart) pays the factor.
- Supplier does not need WalMart approval for factoring.

SAP: Invoice is sold to a Walmart's partner bank (Wells Fargo or Citigroup) by an approved supplier.

- Supplier receives cash in 10-15 days that is about the face value of the invoice.
- WalMart's high (AA) credit rating pulls up the amount of money the supplier receives.

WalMart program started on Nov 2, 2009. Before that, CIT, provider of credit to small and mid size suppliers, declared bankruptcy. Similar program is in place at Kohl's since July 2009. KOHL's SAP is offered to 41% of suppliers, 11% signed on since then.

Summary

- Strategic Partnerships
  - POS
  - Quick Response
  - Reverse Purchase Order
  - Vendor Managed Inventory
- Trust and Truth

Steps in SP Implementation

- Contractual negotiations
  - Ownership
  - Credit terms
  - Ordering/pricing/promotion/markdown decisions
  - Performance measures
- Reengineer SC operations
- Develop or integrate information systems
- Develop effective forecasting techniques
- Develop a tactical decision support tool to coordinate inventory/price management and transportation policies

Aside: History of Libor

- 1969: First loan pegged to Libor.
  - Minos Zombanakis, a Greek banker running the London Branch of Manufacturers Hanover, organized a loan of $80 M for the shah of Iran. The loan was pegged to what he named as London InterBank Offered Rate.
- Early 1970s: "Geopolitical forces, especially the Vietnam War, coincided with the emergence of global trade imbalances and restrictive legislation in the U.S. resulted in the unexpected and sudden creation of the Eurodollar market in London …," says David Clark, a banking veteran.
- 1986: First official Libor rates published in $, £, ¥, meeting demand for global benchmarks.
- 2008 Sep: Libor rates spike after the collapse of Lehman Brothers at the height of the financial crisis. Rate setting at this time is central to investigations of rigging.
- 2012 Jun: Barclays fined $455 M in a settlement regulators over rigging Libor.

Motivation to Rig: Barclays and other banks preferred a lower Libor, which sounds counterintuitive for banks. Banks traditionally earn revenue by loaning money and should prefer a higher Libor. Circa 2008, this traditional role was replaced by a role of trader where banks were borrowing as much as they were loaning, if not more. Hence they preferred a lower Libor.

David Potter, banking veteran, in 2012: "In more recent times, there was a temptation to rig rates because there is such a huge derivatives market with billions and billions of pounds of trades linked to Libor. So with just a 0.001 percent tweak, that can make serious money."

Zombonakis in 2012: "We started something which was practical and convenient. We never had in mind that this rate would spread to mortgages and things like that."

Based on K. Ridley and H. Jones. 2012. How a benchmark was born. Aug 15 news release from GARP.
Also see www.garp.org/risk-news-and-resources/risk-headlines/story.aspx?newsid=51269